



**NORTH CAROLINA**  
Department of Transportation

# North Carolina Rail Service

Jason Orthner, P.E., CPM  
Rail Division Director

July 12, 2025

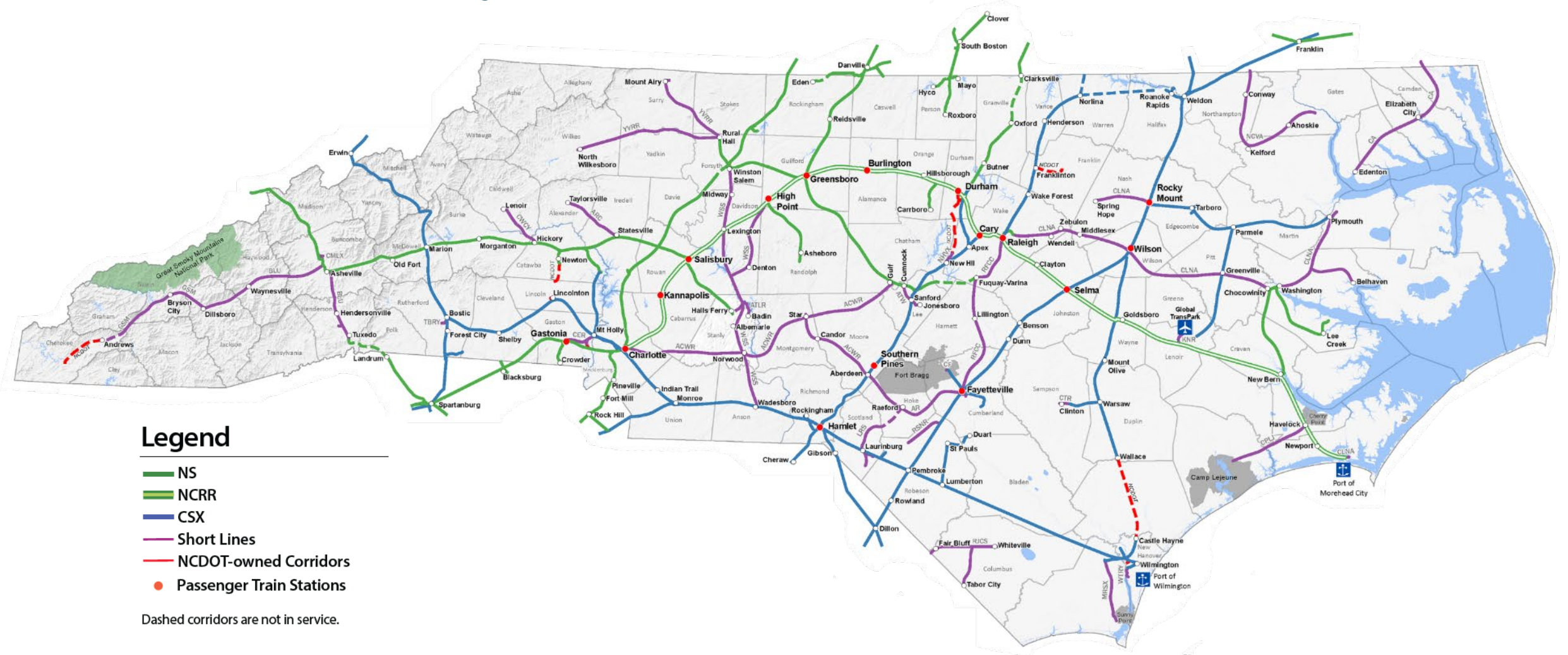
Connecting people, products and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina

## NCDOT Rail Division Mission



The safe and efficient movement of people and goods on  
North Carolina's railroads through freight, passenger and safety programs,  
supporting job creation and economic growth.

# North Carolina Rail System



## NCDOT Rail Division Programs & Services



### Planning & Development

- Intermodal & Freight Planning
- STI & Project Development
- Freight & Logistics
- Program Management
- Passenger Rail Planning
- Environmental Documentation



### Engineering Coordination & Safety

- Crossing Safety Studies
- Crossing Surfaces & Rail Encroachments
- Grade Separation Design
- Inventory & Data
- RR/Transit Safety Oversight
- Safety Outreach & Training



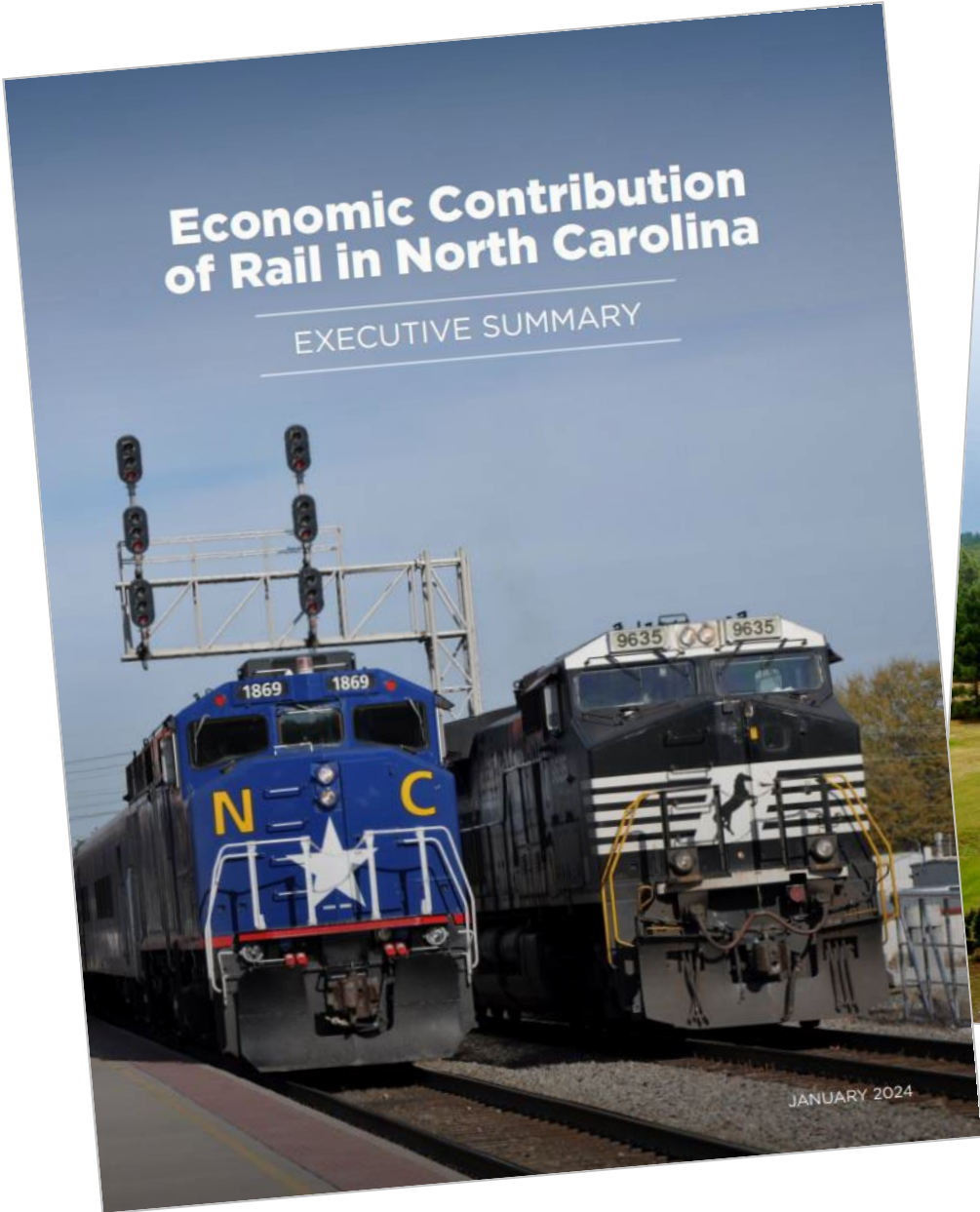
### Engineering Design & Construction

- Rail Project Engineering & Design
- Construction Management
- Highway Project Delivery Support
- Signals & Devices

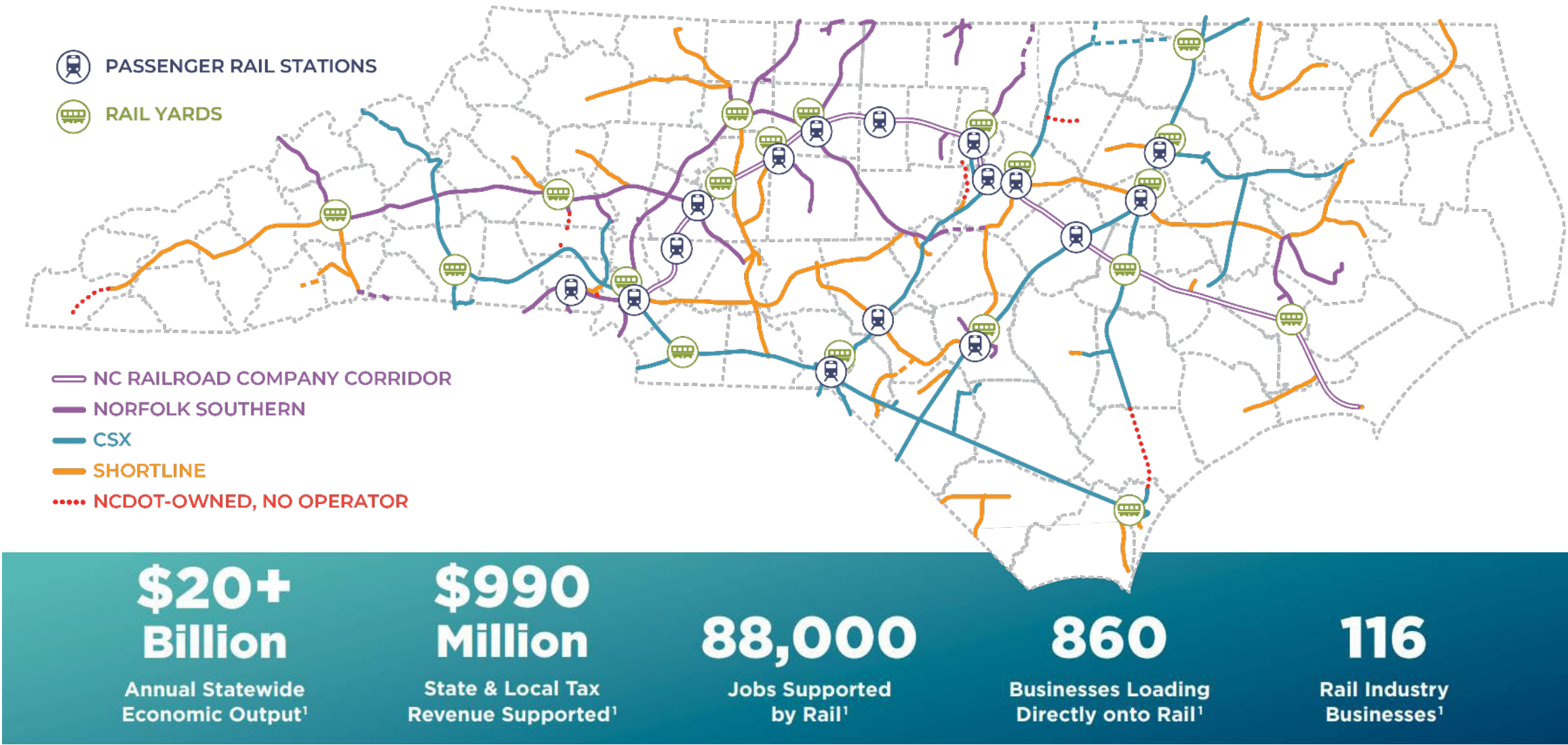


### Operations & Facilities

- Passenger Operations
- Equipment, Facilities & Stations
- Customer Service
- Rail Corridor Preservation

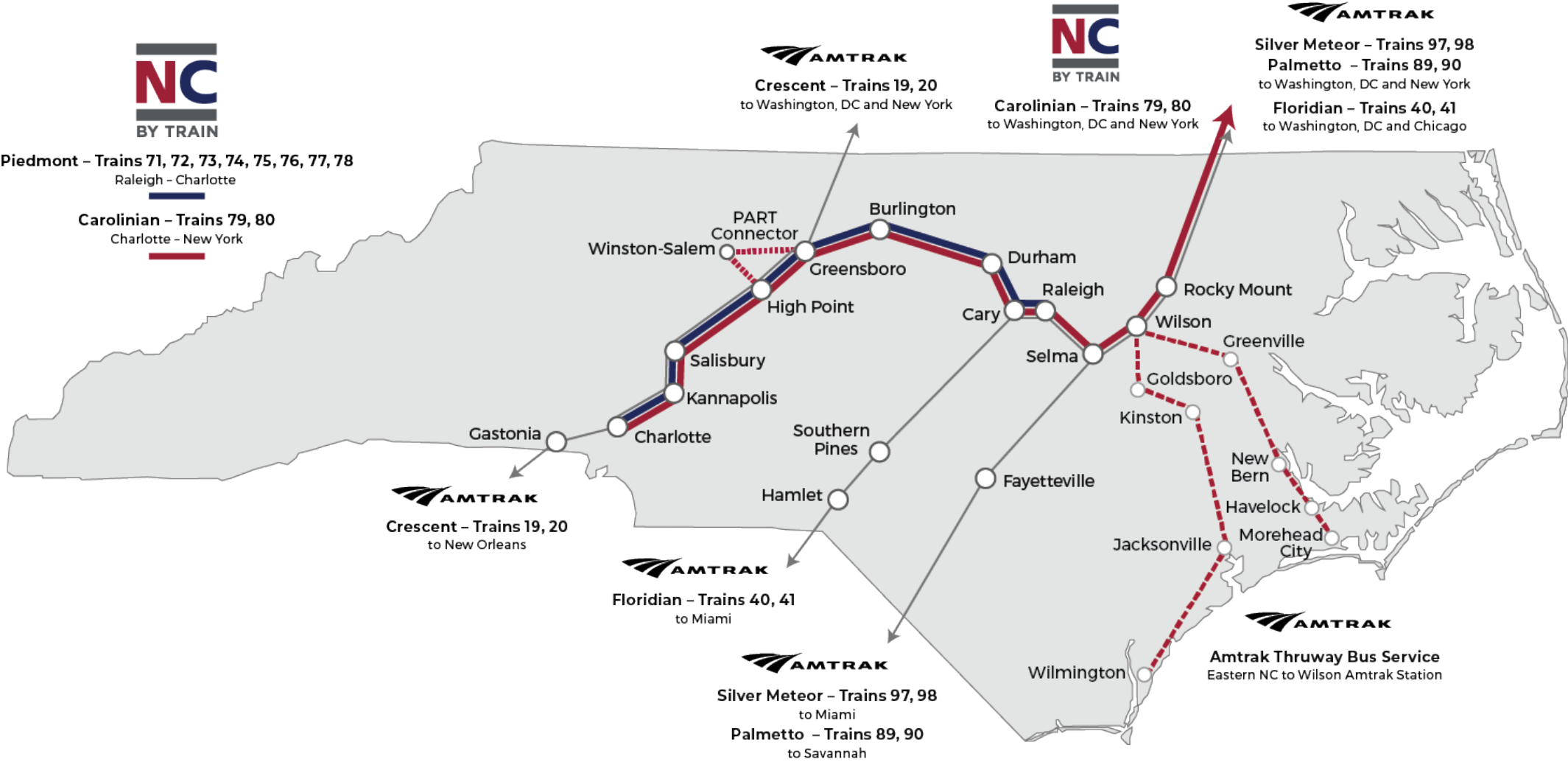


# The Economic Impact of Rail in North Carolina





















Source: ITRE analysis utilizing IMPLAN® model

# NC Intercity Passenger Rail Service



# Ten Daily Trips Between Raleigh & Charlotte

## EFFECTIVE JAN. 13, 2025

<b>SOUTH-BOUND</b>	<b>TRAIN 71</b> Piedmont	<b>TRAIN 73</b> Piedmont	<b>TRAIN 75</b> Piedmont	<b>TRAIN 77</b> Piedmont	<b>TRAIN 79</b> Carolinian	<b>NORTH-BOUND</b>	<b>TRAIN 80</b> Carolinian	<b>TRAIN 72</b> Piedmont	<b>TRAIN 74</b> Piedmont	<b>TRAIN 76</b> Piedmont	<b>TRAIN 78</b> Piedmont
 <b>Raleigh</b>	6:30 AM	10:00 AM	12:45 PM	3:15 PM	5:30 PM	 <b>Charlotte</b>	6:45 AM	10:25 AM	2:20 PM	5:00 PM	7:45 PM
 <b>Cary</b>	6:42 AM	10:12 AM	12:57 PM	3:27 PM	5:43 PM	 <b>Kannapolis</b>	7:10 AM	10:50 AM	2:45 PM	5:25 PM	—
 <b>Durham</b>	7:02 AM	10:32 AM	1:17 PM	3:47 PM	6:04 PM	 <b>Salisbury</b>	7:28 AM	11:06 AM	3:01 PM	—	8:22 PM
 <b>Burlington</b>	—	11:08 AM	1:55 PM	4:26 PM	6:48 PM	 <b>High Point</b>	8:02 AM	11:40 AM	3:35 PM	—	8:56 PM
 <b>Greensboro</b>	8:01 AM	11:35 AM	2:20 PM	4:51 PM	7:16 PM	 <b>Greensboro</b>	8:24 AM	11:59 AM	3:54 PM	6:25 PM	9:15 PM
 <b>High Point</b>	—	11:52 AM	2:37 PM	5:08 PM	7:32 PM	 <b>Burlington</b>	8:46 AM	12:21 PM	4:15 PM	—	9:37 PM
 <b>Salisbury</b>	—	12:25 PM	3:11 PM	5:41 PM	8:06 PM	 <b>Durham</b>	9:27 AM	1:02 PM	5:01 PM	7:23 PM	10:17 PM
 <b>Kannapolis</b>	8:59 AM	12:42 PM	3:27 PM	—	8:23 PM	 <b>Cary</b>	9:47 AM	1:28 PM	5:22 PM	7:45 PM	10:38 PM
 <b>Charlotte</b>	9:28 AM <sup>ar</sup>	1:10 PM <sup>ar</sup>	3:55 PM <sup>ar</sup>	6:21 PM <sup>ar</sup>	8:56 PM <sup>ar</sup>	 <b>Raleigh</b>	10:13 AM	1:41 PM <sup>ar</sup>	5:36 PM <sup>ar</sup>	7:59 PM <sup>ar</sup>	10:52 PM <sup>ar</sup>

- Schedules are subject to change.
- Times are departure times unless indicated by (ar) for arrival times.
- Carolinian Trains 79 and 80 continue service to DC and NY.

 **Checked Baggage**

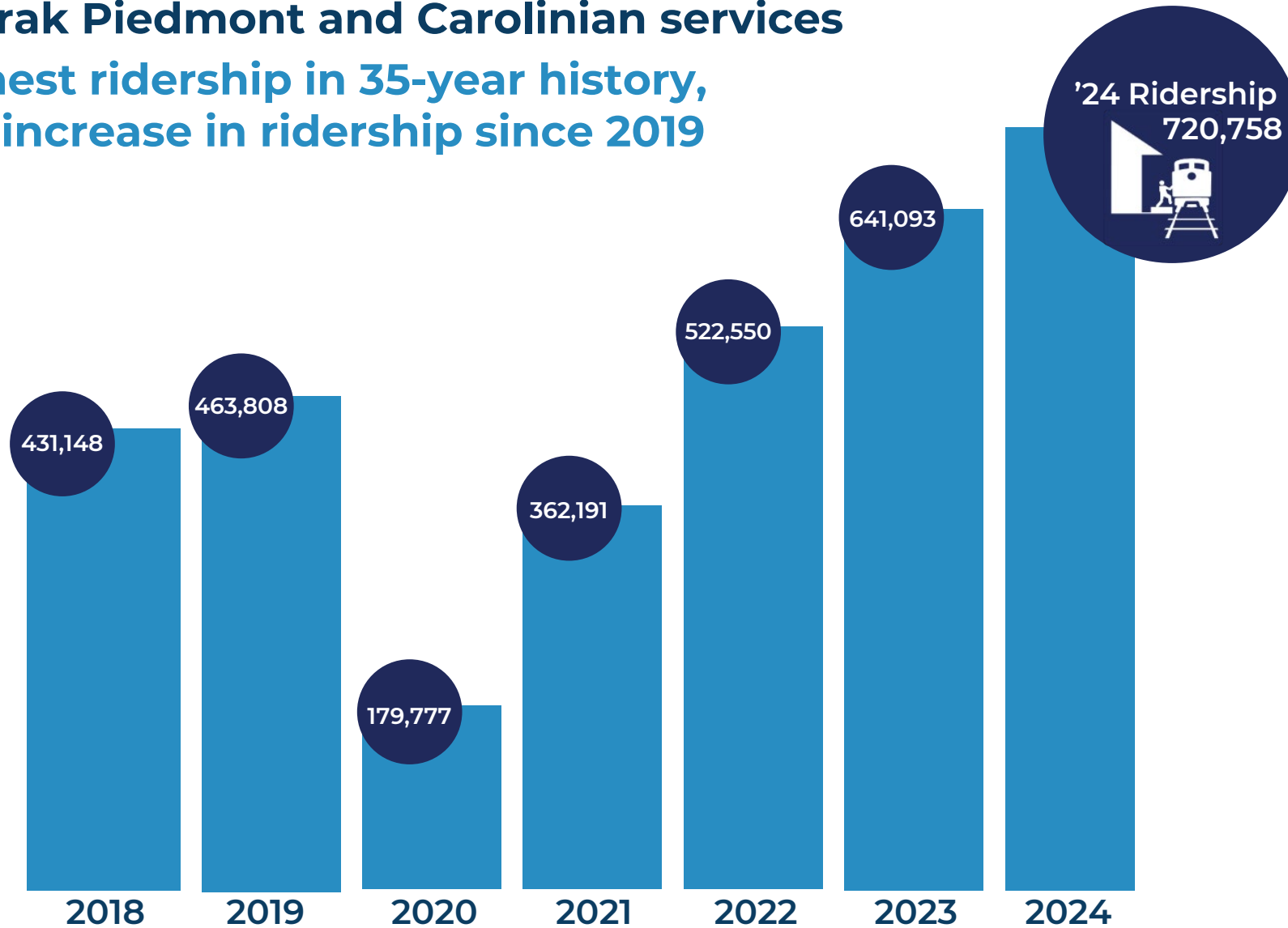
 **Connecting bus service to and from Winston-Salem**

2,000 copies of this public document were printed at a cost of \$976.20, or \$0.1632 per copy. (02/25) Visit **NCByTrain.org** or call **1-800-By-Train** for more information



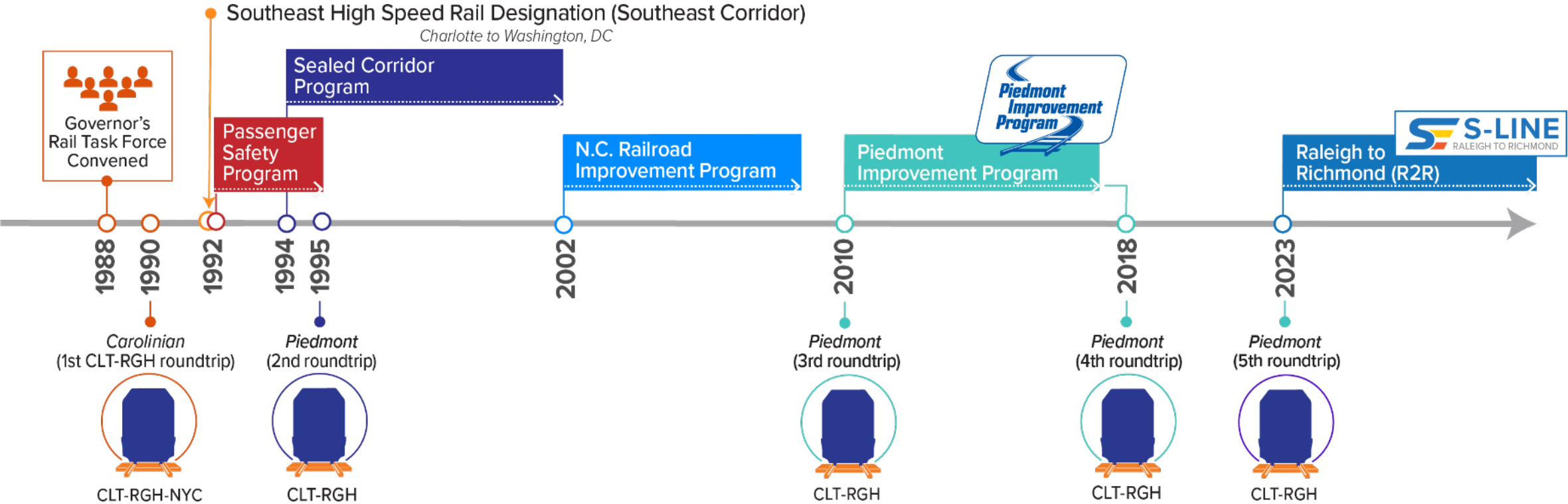
## NC Intercity Passenger Rail Service – Amtrak Piedmont and Carolinian services

Highest ridership in 35-year history,  
55% increase in ridership since 2019



# NC Intercity Passenger Rail Service Timeline

## 1990 to Present



## North Carolina Rail Service – History and Partnerships

- Began with Gov. Jim Martin (R) Task Force on Passenger Rail in 1988
- Task force included bipartisan experts in rail; recommendation for Carolinian and Piedmont Services
- Appropriations by NC General Assembly to NCDOT
- Services began under the Rail Passenger Act of 1970, section 403(b); transitioned to PRIIA 209
- Unique partnerships with Norfolk Southern, North Carolina Railroad Company, and Amtrak:
  - NS is operator of freight and dispatches and maintains railroad
  - NCRR owns right of way and tracks
  - Amtrak is passenger service provider
  - For Piedmont Service, NCDOT owns and maintains equipment, yards
- CSX is a partner for operation in Raleigh area and Carolinian on lines north of Raleigh



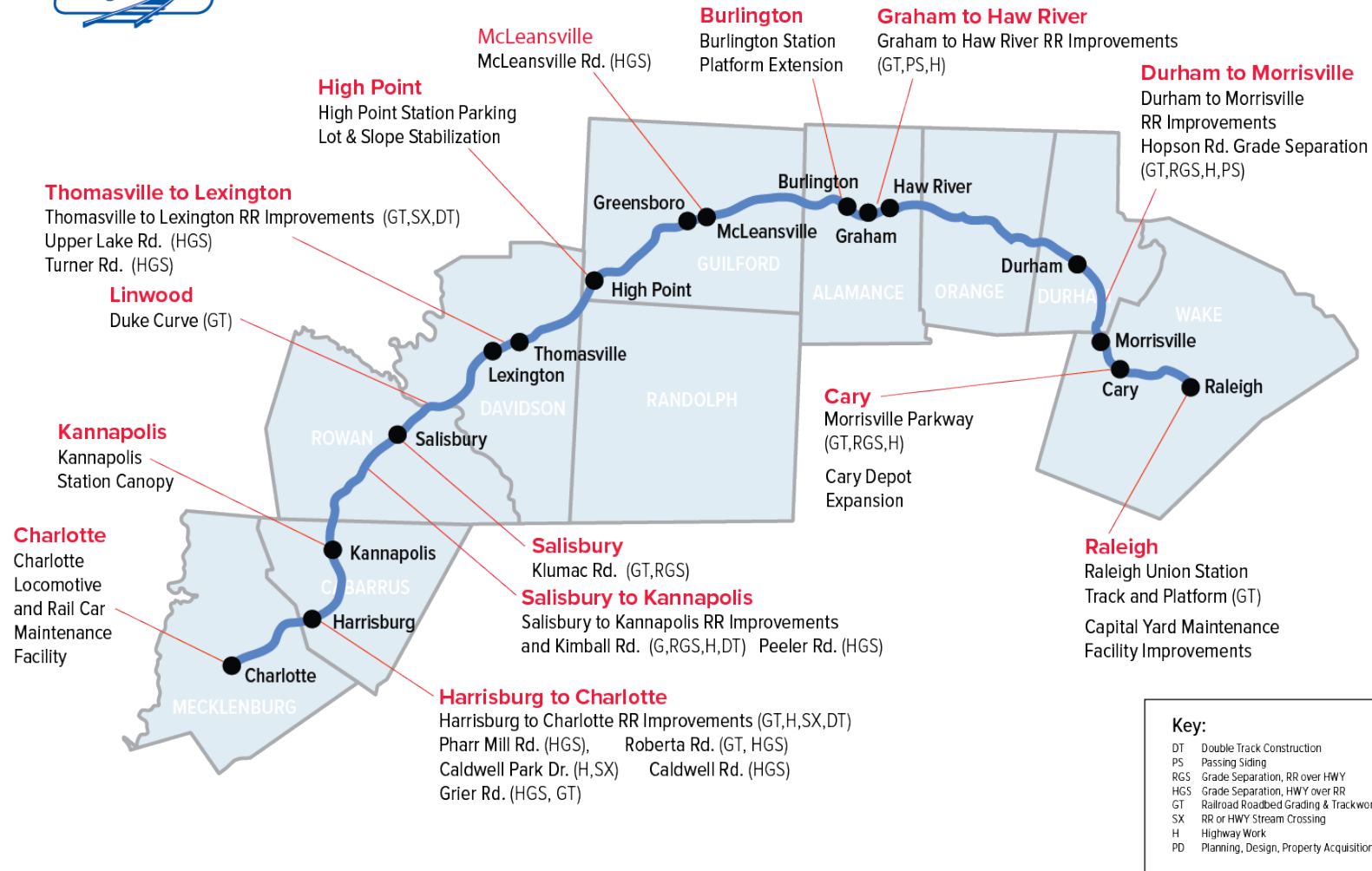
## North Carolina Rail Service – Important Considerations

- North Carolina used an incremental approach to bringing on passenger rail
- Passenger rail one component of the freight, safety, and passenger responsibilities of NCDOT
- Infrastructure improvements led to additional frequencies over time
- Looked for win-win opportunities with the freight railroads; benefits to passenger and freight:
  - Improved safety
  - Improved capacity
  - Modernization
- Goal of growth over time
- Ridership/use of the system has been the primary measure of success in NC





## Piedmont Improvement Program Projects



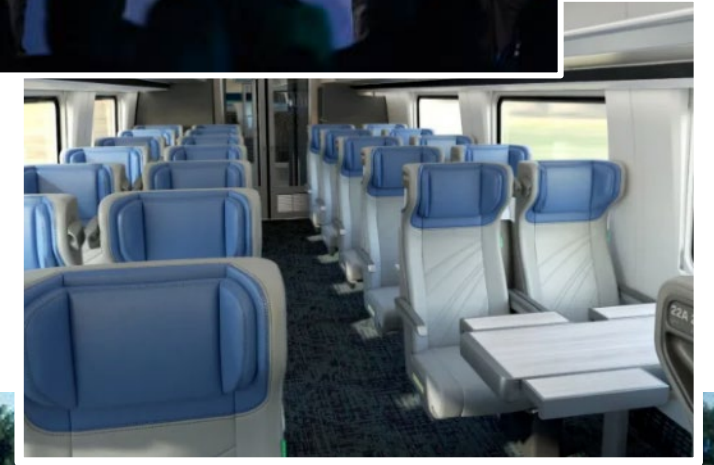
- Federally funded under ARRA
- Managed by NCDOT
- Completed in 2017 on time and on budget
- Fully double tracked Greensboro to Charlotte with five new universal high-speed crossovers
- Over 5 miles of new passing sidings
- Closed more than 40 at-grade crossings
- Designed to keep the railroad fluid for all trains
- Allowed third and fourth *Piedmont* round trip and pathway to fifth

NC By Train – Piedmont Equipment – 7 Locomotives, 11 Railcars, 2 Cab Control Units



## Rail Equipment and Economic Development

- New Airo equipment for NC by Train services coming
  - Carolinian and Piedmont – 2027-2032
- Siemens Mobility plant under construction in Lexington, NC
- \$220M manufacturing and rail services east coast facility will add >500 North Carolina jobs
- High-tech factory to build the nation's intercity passenger trains of the future



Amtrak Airo Trainset

# North Carolina Intercity Rail Expansion Opportunities

## Seven Corridors in FRA CID Program

- ✓ Charlotte to Washington, DC
- ✓ Salisbury to Asheville
- ✓ Raleigh to Wilmington
- ✓ Charlotte to Kings Mountain
- ✓ Raleigh to Fayetteville
- ✓ Raleigh to Winston-Salem
- ✓ Charlotte to Atlanta

### Future CID Applications:

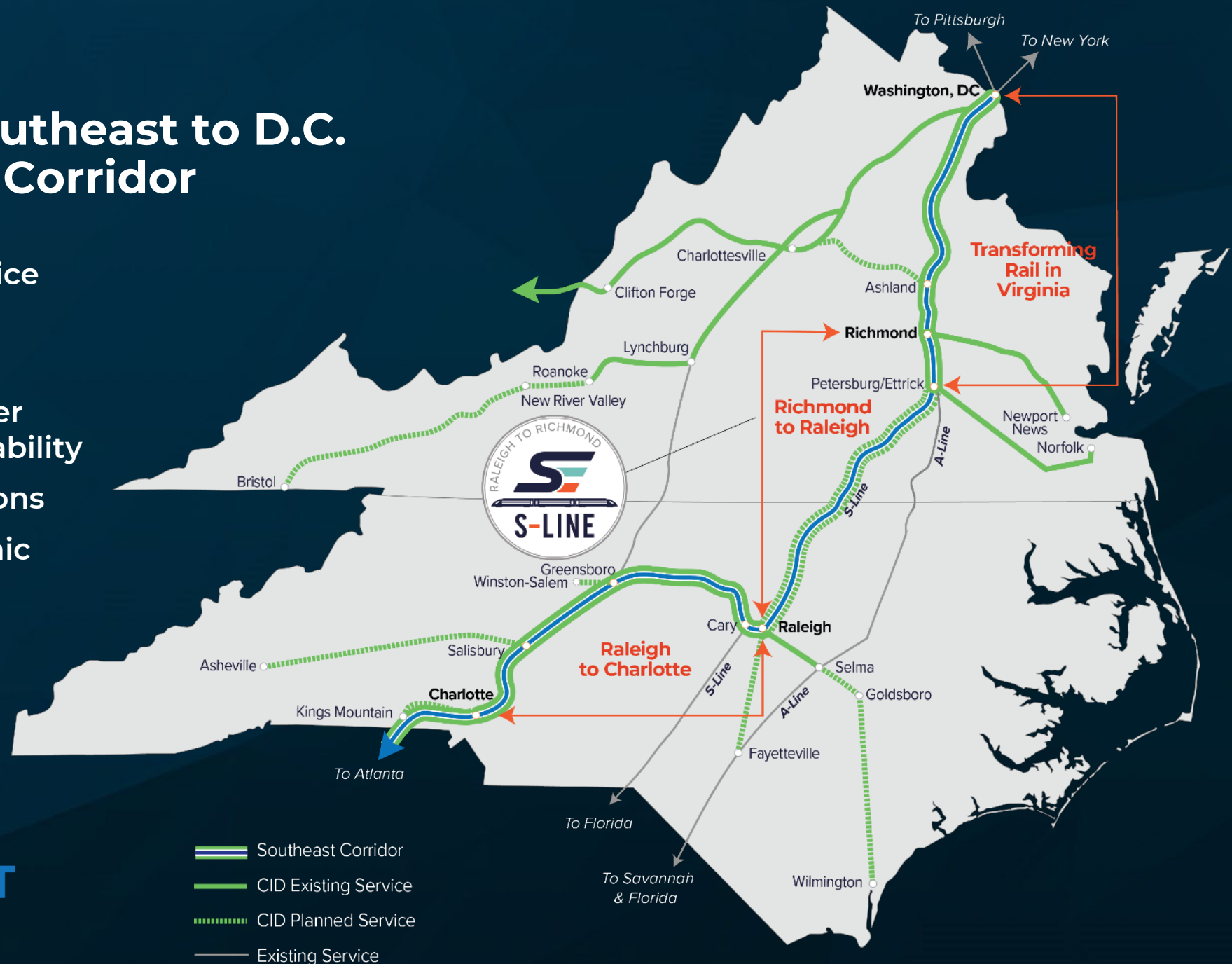
- Raleigh to Greenville
- Raleigh to Hamlet
- Raleigh to Morehead City
- Winston-Salem to Charlotte
- Raleigh to Weldon



Towns shown are for geographical reference only and do not represent station locations.

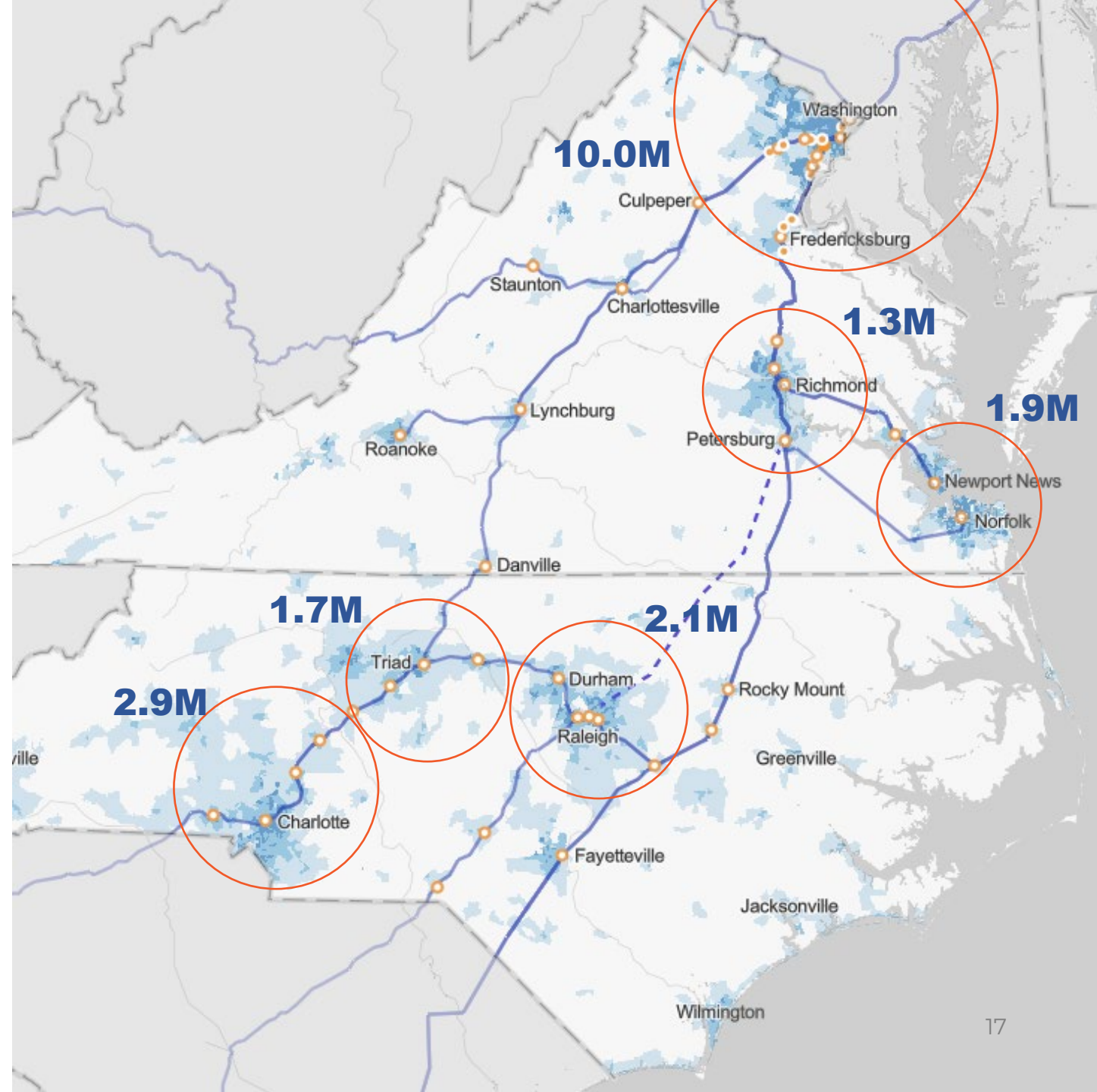
# Connecting the Southeast to D.C. and the Northeast Corridor

- Improved passenger service and travel time savings
- Freight resiliency
- New freight and passenger capacity and on-time reliability
- Urban and rural connections
- Opportunities for economic development
- Safety benefits
- Highway system benefits



## DC to Charlotte Corridor via S-line

- Direct connection between rural and urban centers – 20M people – estimated to be 25M by 2040
- Additional capacity for more trains
- Over an hour in travel time saved between NC, VA, and the Northeast
- Backbone of a regional multi-modal network
- Support across state lines
- Business Community, Industry, Public and Elected Leaders Support



Congress of the United States  
Washington, DC 20515

From Congress

We write to express support for the *Raleigh to Richmond Engineering & Safety Program* application for the Federal Rail Administration Consolidated Rail Infrastructure and Safety Improvements (CRISI) grant program. This is a joint venture between the North Carolina Department of Transportation (NCDOT) and the Virginia Passenger Rail Authority (VPRA), spanning eight counties across the two states, and benefiting the entire region.

This grant would advance the development of the federally designated Southeast Corridor by providing preliminary engineering for rehabilitation and construction of the S-Line, a critical missing link in the Southeast network. Along with preliminary engineering design for the approximately 162 miles of S-Line from Raleigh to Richmond, the *R2R Corridor Infrastructure Engineering & Safety Program* would address some immediate safety concerns through the construction of an important grade separation on the active S-Line in North Carolina's fast-growing Wake County.

Ultimately, completion of the R2R Corridor will lead to economic development, job growth, and improved transportation equity through enhanced mobility opportunities to currently under-served communities in both states. It would support additional service frequencies and reduce passenger rail travel times by over an hour between Raleigh and Richmond, offering a more efficient and environmentally friendly alternative to travel than vehicular use on interstates I-85 and I-95 once the program is fully constructed.

We appreciate the years of cooperation between the Federal Railroad Administration and our two states to advance this critical project. This grant would build upon previous federal and state investments, including North Carolina and Virginia's respective right-of-way acquisitions, as a logical next step to support planning efforts that have been established through the Virginia-North Carolina Interstate High Speed Rail Compact and the Southeast Corridor Commission.

Thank you for your consideration of the *R2R Corridor Infrastructure Engineering & Safety Program*, and we urge you to give this application all due consideration.

Sincerely,



Richard Burr  
United States Senator



Thom Tillis  
United States Senator



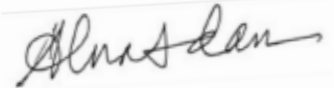
Tim Kaine  
United States Senator



Deborah K. Ross  
Member of Congress



David Rouzer  
Member of Congress



Alma S. Adams, Ph. D.  
Member of Congress



Abigail D. Spanberger  
Member of Congress



Robert C. "Bobby" Scott  
Member of Congress

# Connecting the Southeast to Washington, D.C. and the Northeast Corridor

## Completing the “missing link”

The S-Line corridor between Richmond and Raleigh will connect North Carolina to Washington, DC and the NEC with frequent, reliable, and faster passenger service.

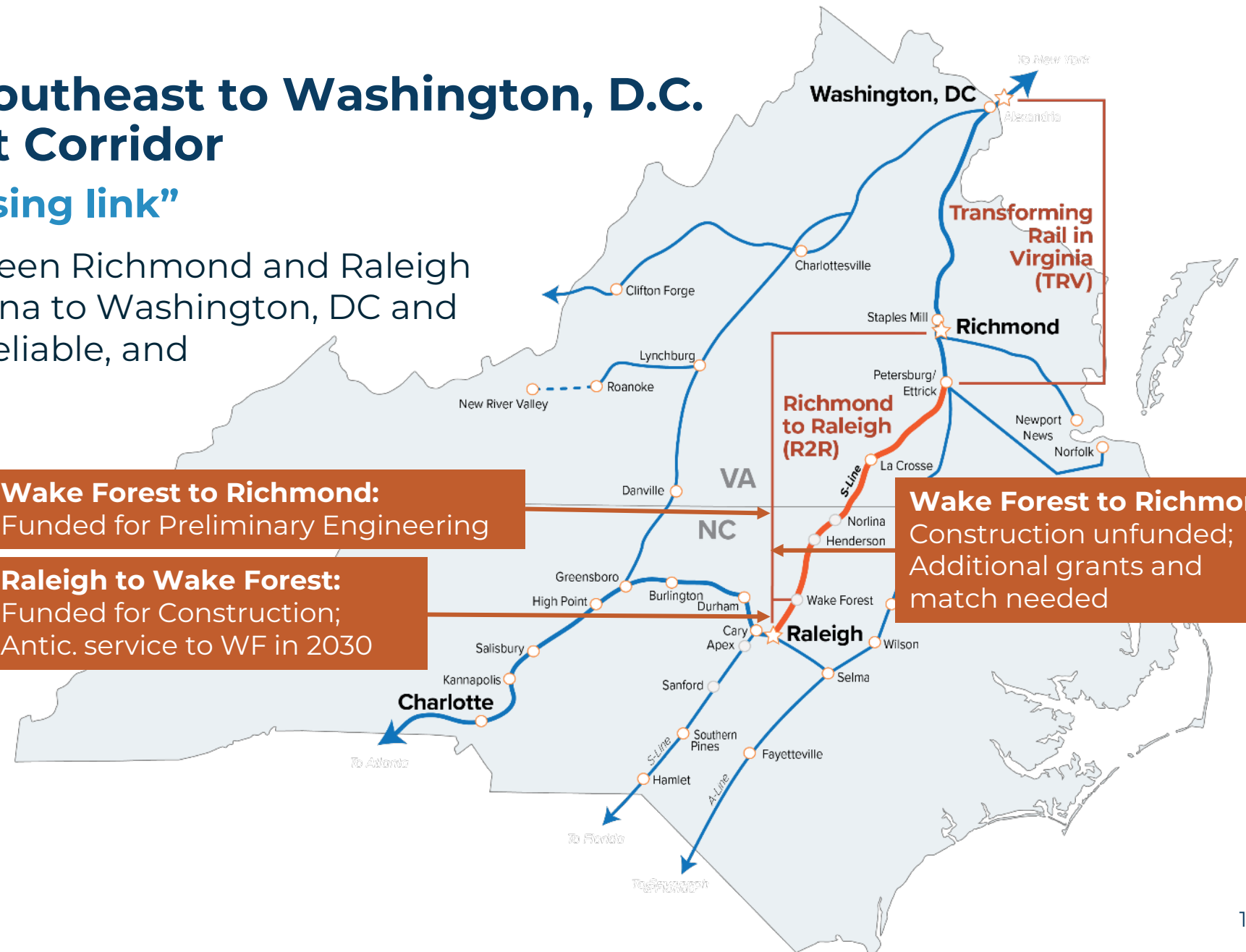
**\$1.2B**

Federal grants to NC to plan, design, and build this project thus far

**Wake Forest to Richmond:**  
Funded for Preliminary Engineering

**Raleigh to Wake Forest:**  
Funded for Construction;  
Antic. service to WF in 2030

**Wake Forest to Richmond:**  
Construction unfunded;  
Additional grants and match needed



# Economic Impact Assessment – Raleigh to Wake Forest

## R2R Phases 1A and II Design and Construction



**\$1.38  
Billion**

In economic output  
through 2033



**8,022  
Job Years\***



**\$42.5  
Million**

In state and local  
tax revenue

**Phase IA:**

- Construction of three grade separations in Raleigh
- 60% design and partial Right of Way acquisition from Raleigh to Wake Forest, NC

**Phase II:**

- Final design, construction, and service implementation from Raleigh to Wake Forest, NC
- Design and construction of eight additional grade separations in Wake County, NC

\* Job-year = employment of 1 individual for 1 year

# Station/Mobility Hub Concepts

Apex



Franklinton



Wake Forest



Norlina



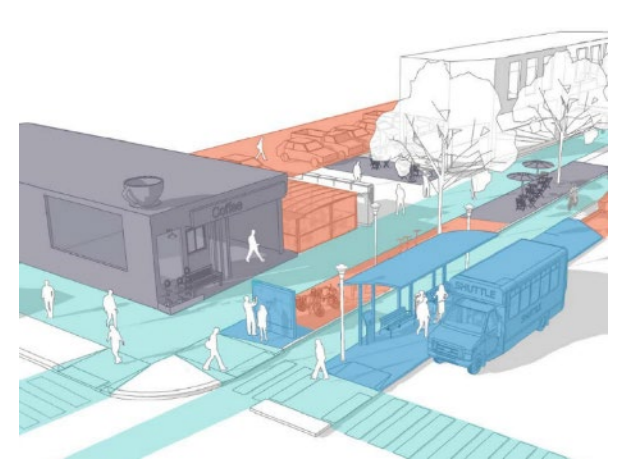
Henderson



Sanford



Youngsville



## Special Event Trains

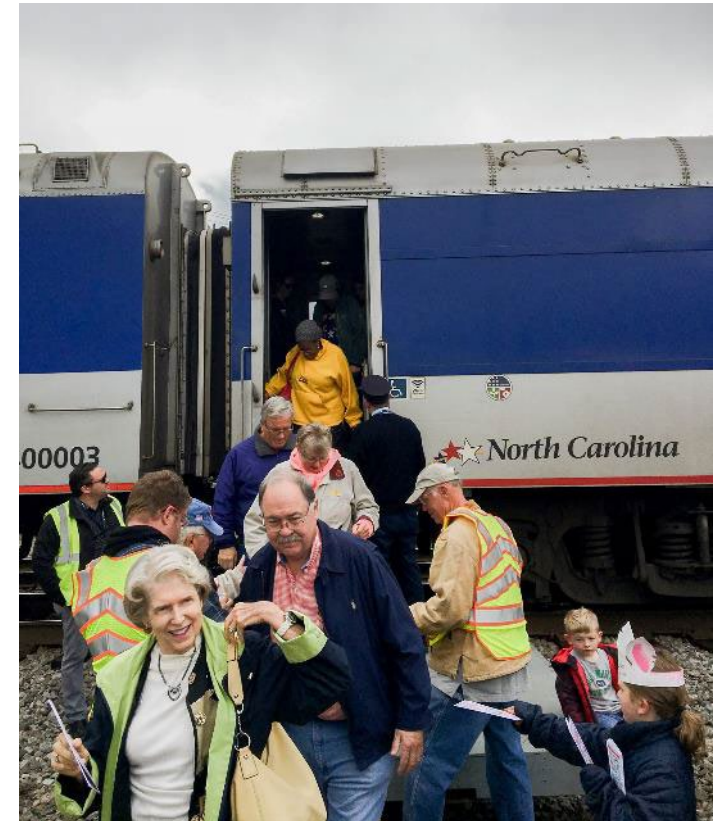
NC By Train has provided transportation to events throughout the state



NC State Fair



NCDOT Santa Train



Lexington BBQ Festival

## Special Event Trains in Partnership with Shortline Railroads

First US Open Express was a sellout



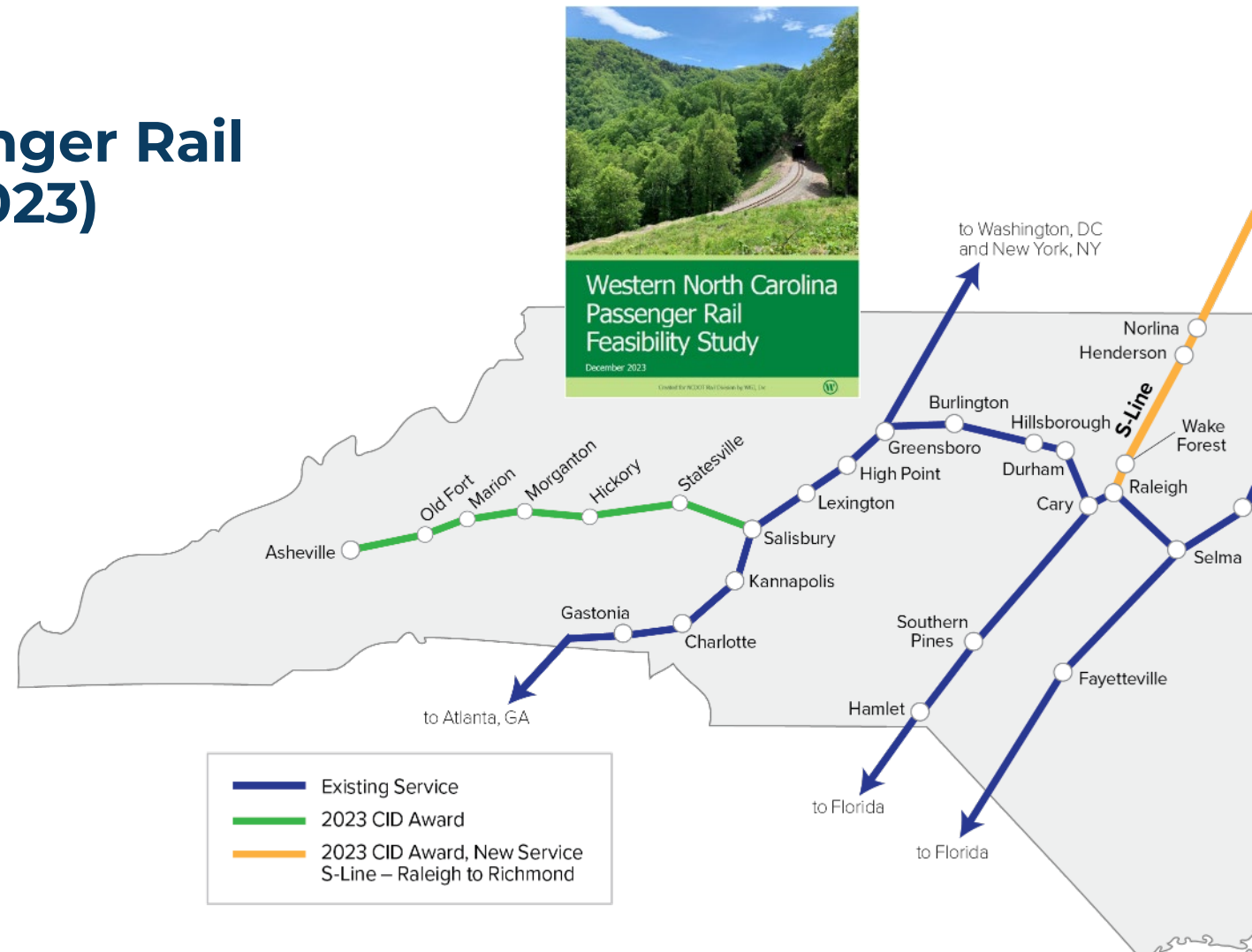
NC By Train takes NASCAR fans to The Rock

## Western North Carolina Passenger Rail Feasibility Study (December 2023)

- 139-mile route connecting Salisbury and Asheville, connects to Piedmont Corridor
- Three round trips daily (6 trains)
- 2045 Target Ridership Analysis:
  - Approx. 100k local trips on new corridor
  - Approx. 225k-450k additional connecting trips (Piedmont and S-Line connections are important)

### Estimated Costs and Schedule:

- \$665M capital cost including equipment and infrastructure
  - 20% non-federal match needed: \$133M
- Estimates are in 2023 dollars



- Connects Wilmington and eastern NC communities to Raleigh
- Two routes evaluated; final report posted on [NCDOT.gov](https://www.ncdot.gov)
- Study considers three round trips per day

- \$810M capital cost including equipment and infrastructure
  - Local and state match needed: \$162M
- \$12-14M estimated annual costs
- Estimates are in 2023 dollars



# Freight Rail & Rail Crossing Safety Improvements (FRRCSI)

## Nearly Half of NCDOT Rail Division budget



- Crossing safety improvements
- Modernize track infrastructure
- Support economic development
- Freight diversion to rail
- Increase freight capacity
- Rail corridor preservation

Established in 2013 under NCGS § 124-5.1

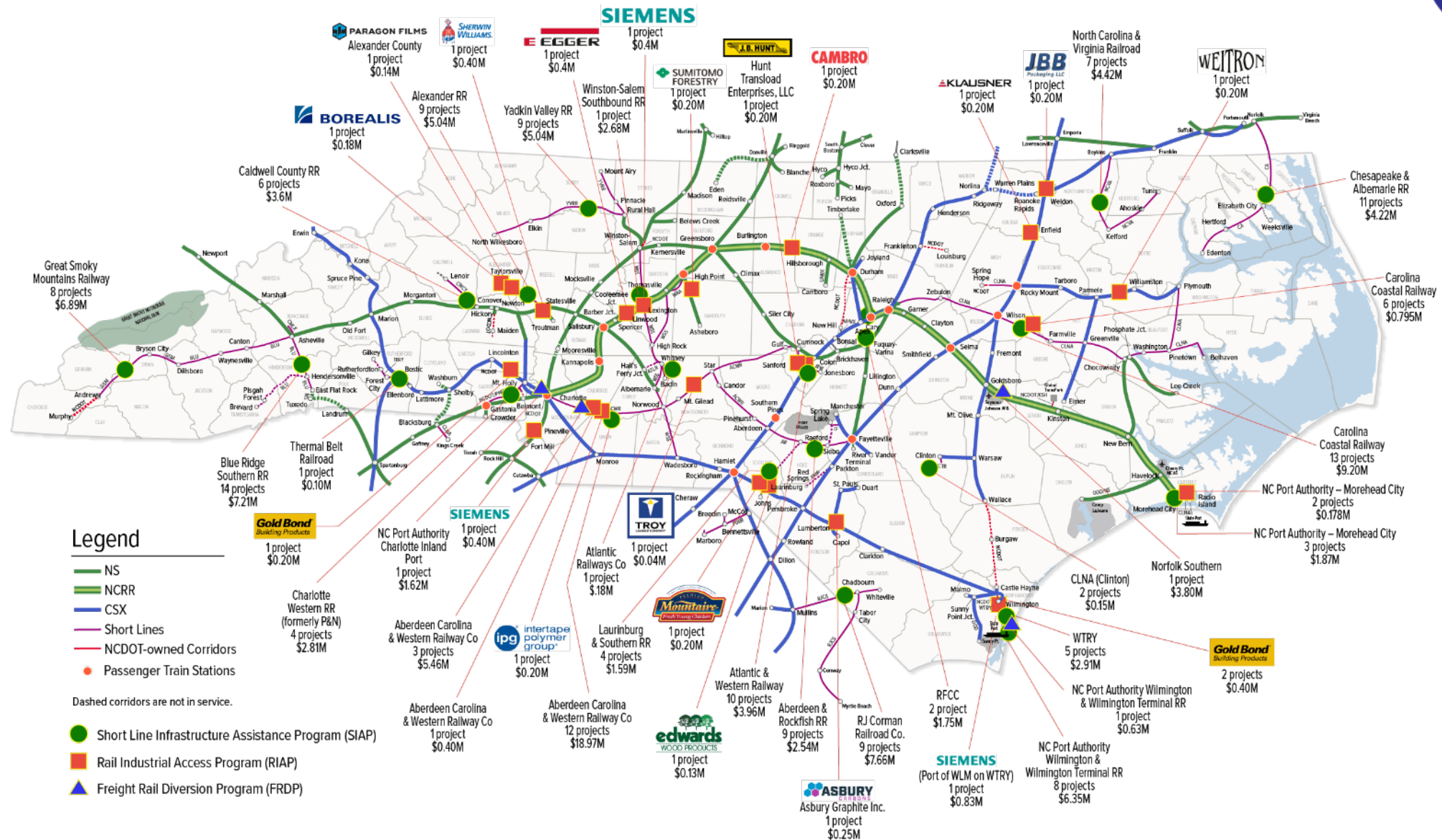




## FRRCSI Accomplishments to date

- Private Capital Investment – **\$1.25B**
- Supported **36** new industry expansion projects
- Created over **2,500** jobs
- Upgraded **342** miles of railroad
- Modernized **204** bridges
- Improved over **1,100** railroad crossings
- Removed **13** railroad crossings
- FRRCSI invested **\$19M** in NC Ports





## Ongoing Safety Improvements

Continuing to aggressively address crossing safety

- **3,490** public crossings
- **314** crossings closed since 1993

### Ongoing Projects (STIP/ federal)

- **20** crossing consolidations/closures
  - **16** grade separations
  - **65** grade crossing warning device projects
- 
- Continuing to inventory approximately **1,200** crossings per year per USDOT requirements for prioritization of improvements



# Contact Us

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919-707-4714

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**Thank you!**

