



NORTH CAROLINA
Department of Transportation

S-Line: Building A Transformational Rail Corridor

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Rail Division Director

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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



Legend

- NS
- NCRR
- CSX
- Short Lines
- NCDOT-owned Corridors
- Passenger Train Stations

Dashed corridors are not in service.

Rail Division Programs & Services



Planning & Development

- Intermodal & Freight Planning
- STIP Project Development
- Freight Improvement 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

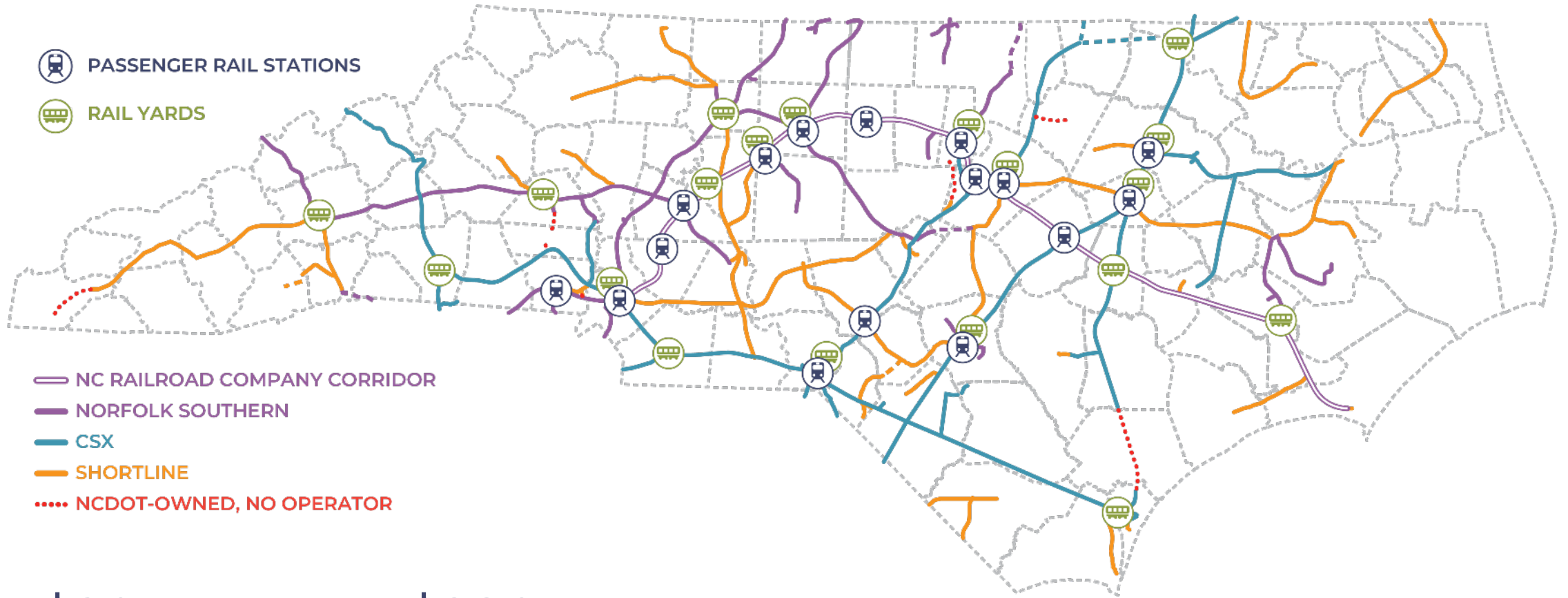
- Rail Project Engineering & Design
- STIP Project Delivery
- Construction Management
- Highway Project Delivery Support
- Signals & Devices



Operations & Facilities

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

The Economic Impact of Rail



\$20+ Billion
Annual Statewide Economic Output

\$990 Million
State & Local Tax Revenue Supported

88,000
Jobs Supported by Rail

860
Businesses Loading Directly onto Rail

116
Rail Industry Businesses

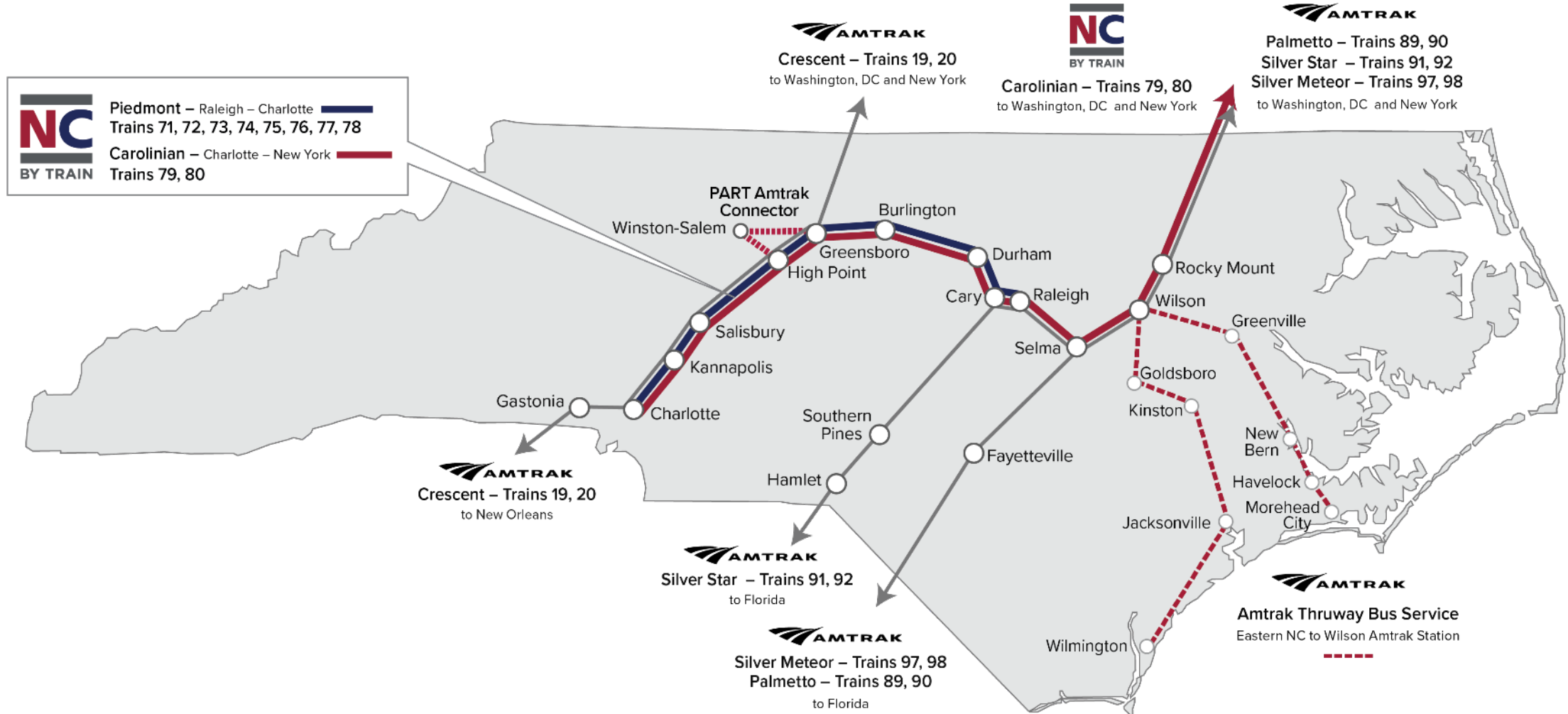
Source: ITRE analysis utilizing IMPLAN® model

Types of Passenger Rail Service

- **Intercity Passenger Rail (Typically FRA supported)**
 - *NCDOT NC By Train Service operated by Amtrak in North*
 - Connecting the centers of cities and towns
 - Longer distances between stations
 - Longer trip durations
 - Baggage and food service typical
- **Commuter Rail (Typically FTA supported)**
 - Connecting outlying areas and urban centers
 - Peak hour service is historically typical
 - Closer station spacing
 - Shorter trip durations
- **Light Rail (Typically FTA supported)**
 - Urban area
 - Separate rail system (not part of national rail network)

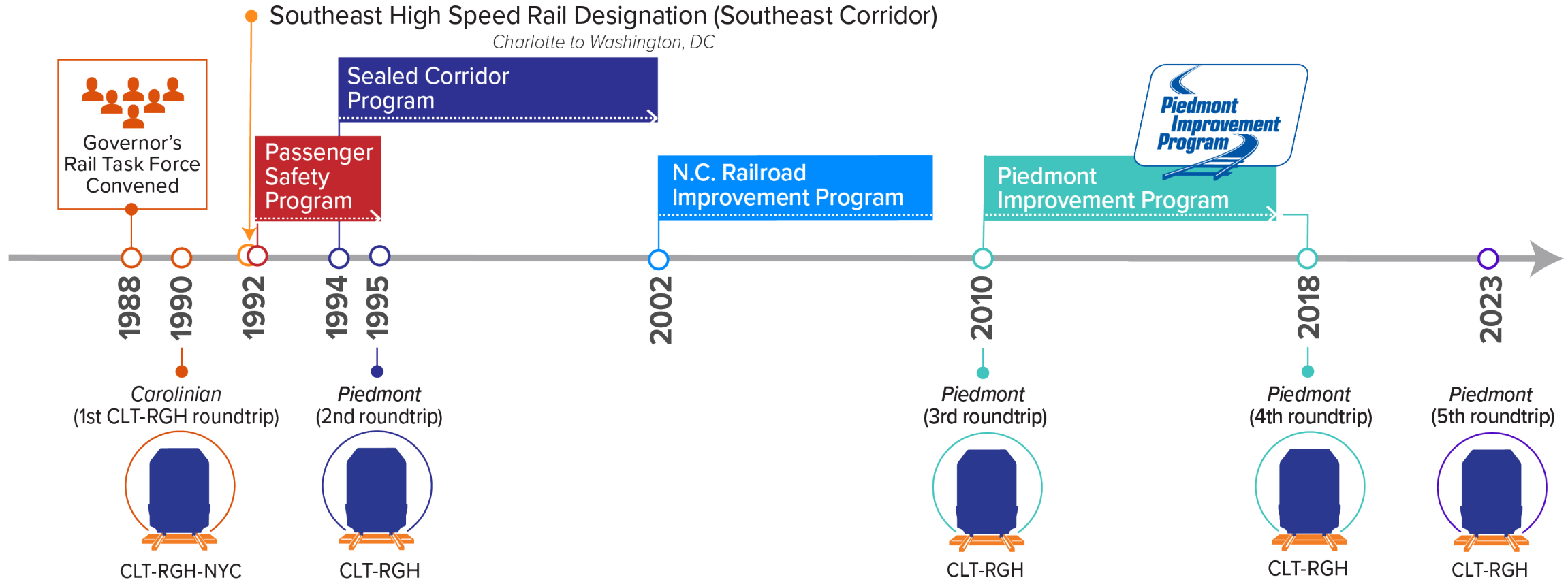


Existing NC Intercity Passenger Rail Service



Passenger Rail Service Timeline

1990 to Present

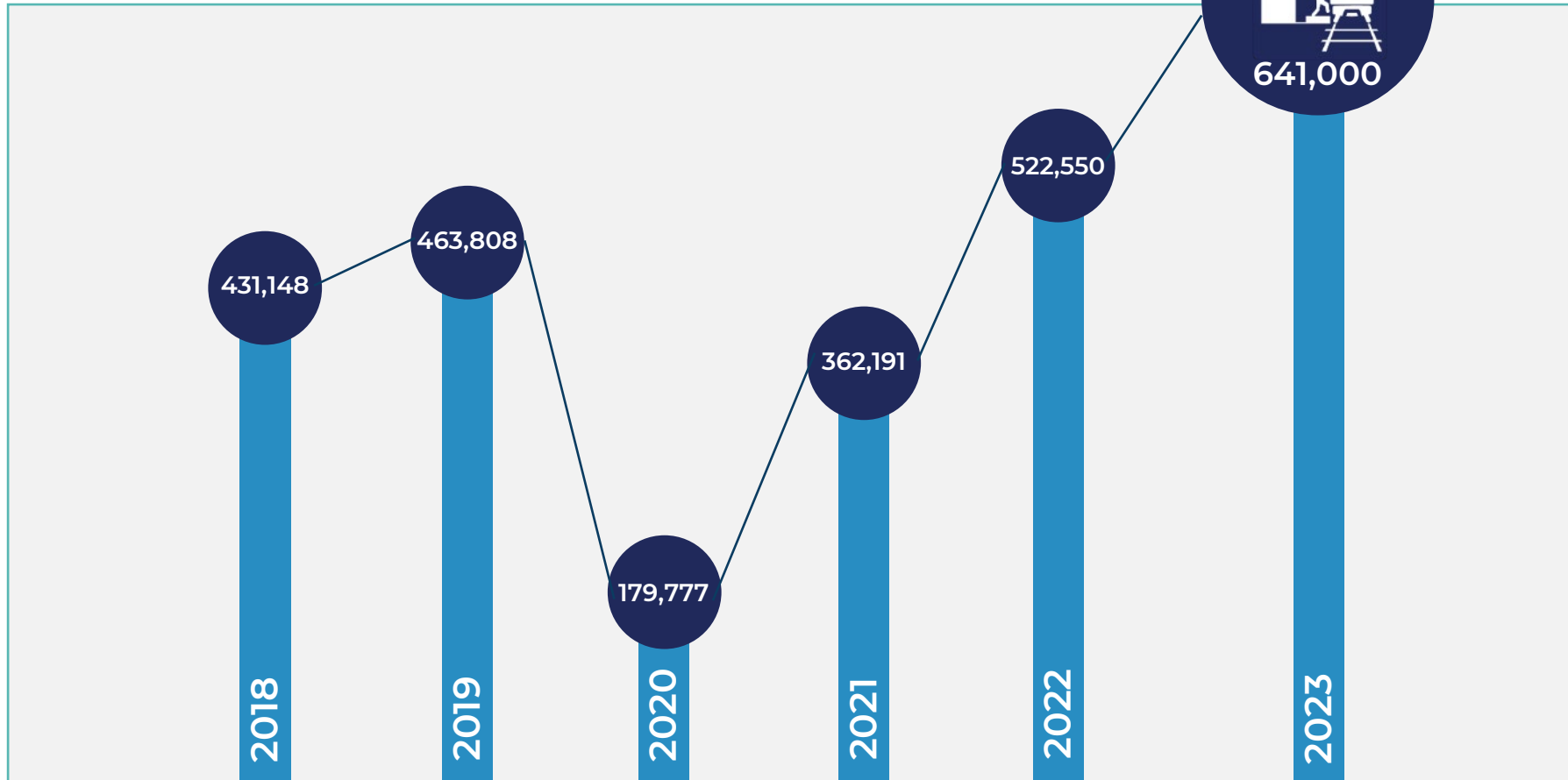




NC Intercity Passenger Rail Service – Piedmont and Carolinian services

Highest ridership in 33-year history

38%
ridership
growth over 2019
pre-pandemic
levels



Rail Equipment Developments

Siemens Mobility plant to be built in Lexington, NC

- \$220M manufacturing and rail services east coast facility will add >500 jobs
- High-tech factory to build the intercity passenger trains of the future



Federal-State Partnership for State of Good Repair Grants

- New trains for existing services funded by Bipartisan Infrastructure Law
 - Carolinian in 2027
 - Piedmont in 2032



Amtrak Airo Trainset

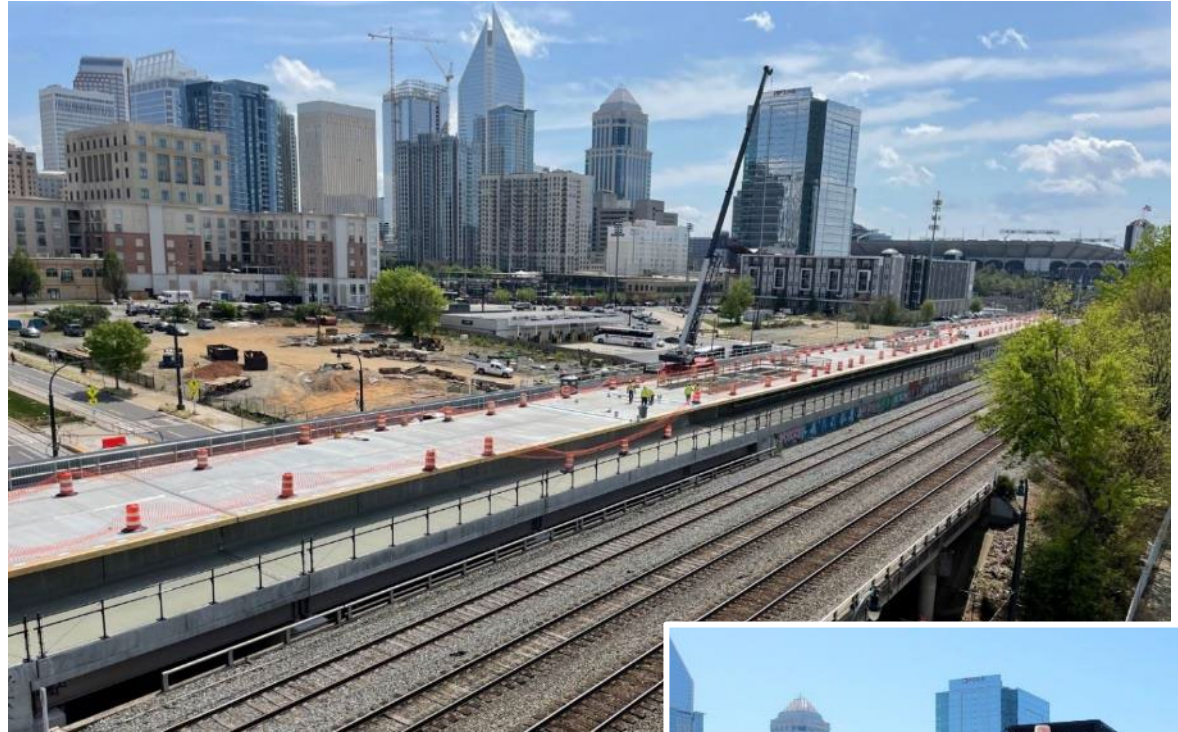
Charlotte Gateway Station

Phase 1 Railroad Infrastructure and Platforms Complete

- NCDOT Rail Division-led project; completed on time and on budget in 2022

Phase 2 Station and Multi-use Development

- City leading with private developer Gateway Partners LLC
- Direct access to Uptown residential, business and entertainment destinations

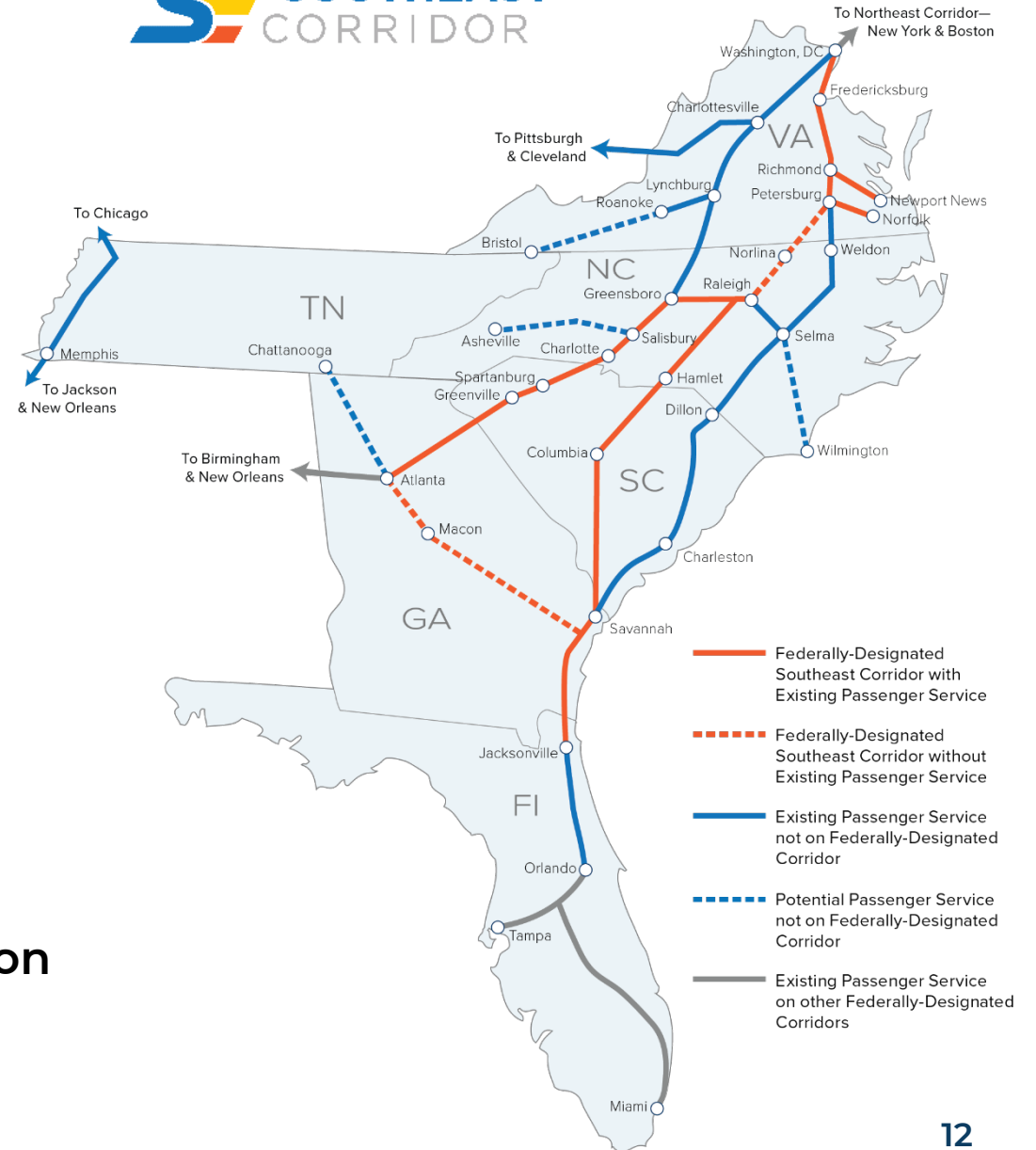




The S-Line – Gateway to the Southeast

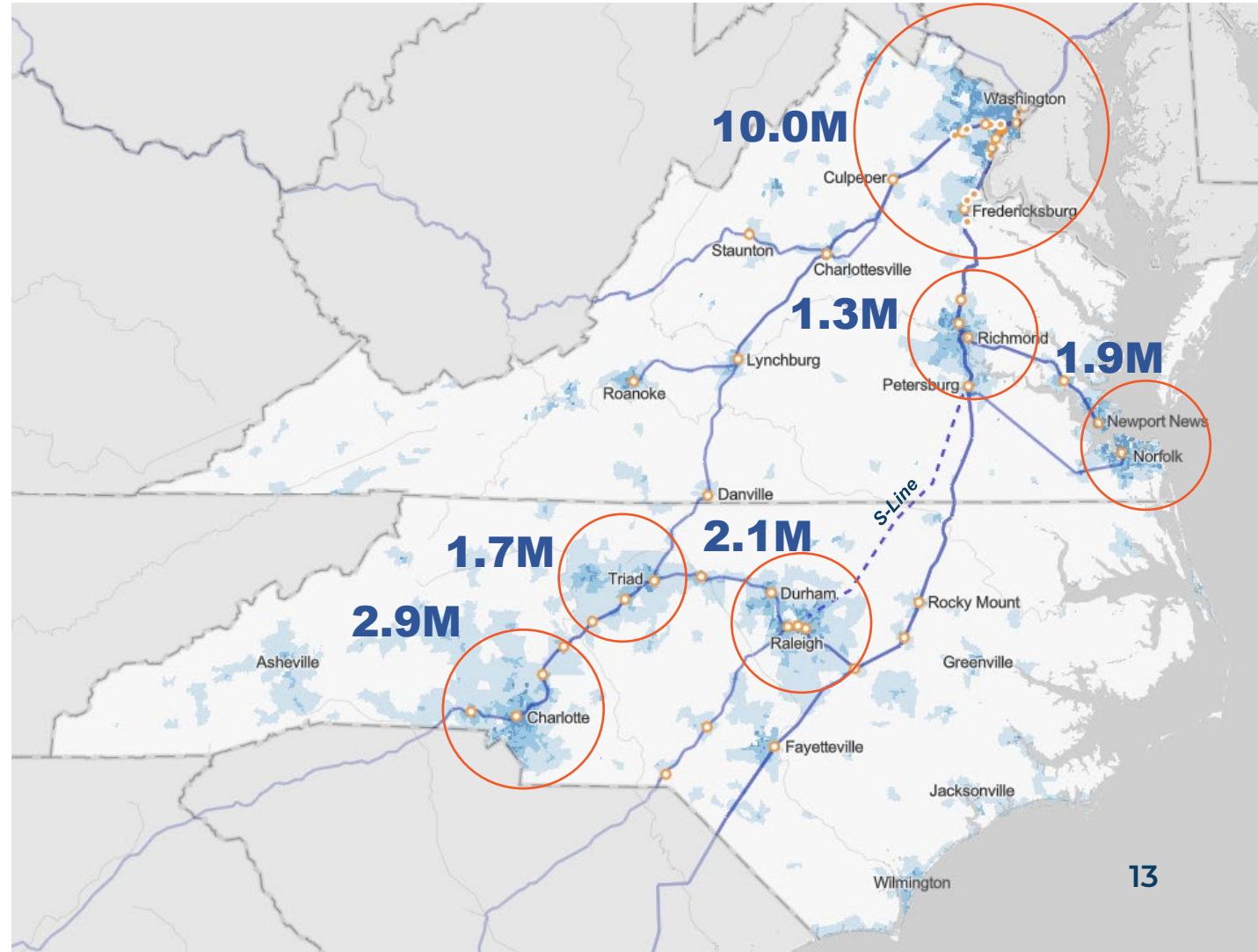
The S-Line corridor represents the only opportunity to create additional capacity and connect the Southeast and Northeast with regular high performance rail service.

- 1992** FRA designated the Southeast Corridor
- ↓
- 2002** Charlotte to DC Tier I Record of Decision
- ↓
- 2017** Raleigh to Richmond Tier II Record of Decision



Charlotte to DC via the S-Line Corridor – the Benefits

- Direct connection between regional centers – 20M people – estimated to be 25M by 2040
- Additional capacity and over an hour in travel time saved between NC and VA
- Backbone of a regional multi-modal network
- Critical to further expanding the NC passenger rail system
- Provides rail network resiliency
- Environmental benefits
- Expands service to disadvantaged and underserved regions




Completing the Southeast Corridor

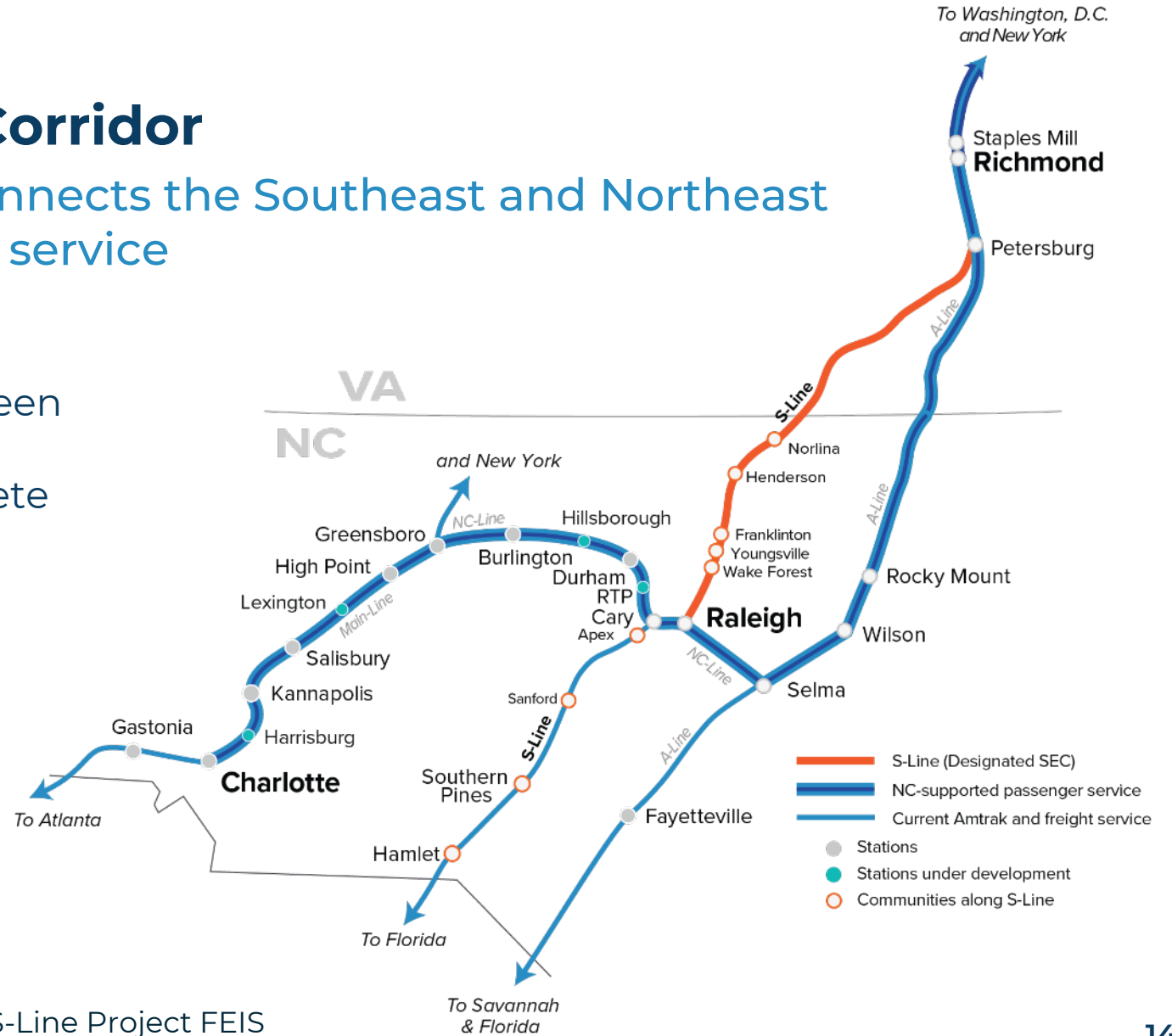
Creates additional capacity and connects the Southeast and Northeast with regular high performance rail service

Ridership Impact:

- Projected ridership on NC trains between Charlotte and New York is 2.5 million by 2040 when S-Line project is complete



*** 2.5M**
Passengers
Annually



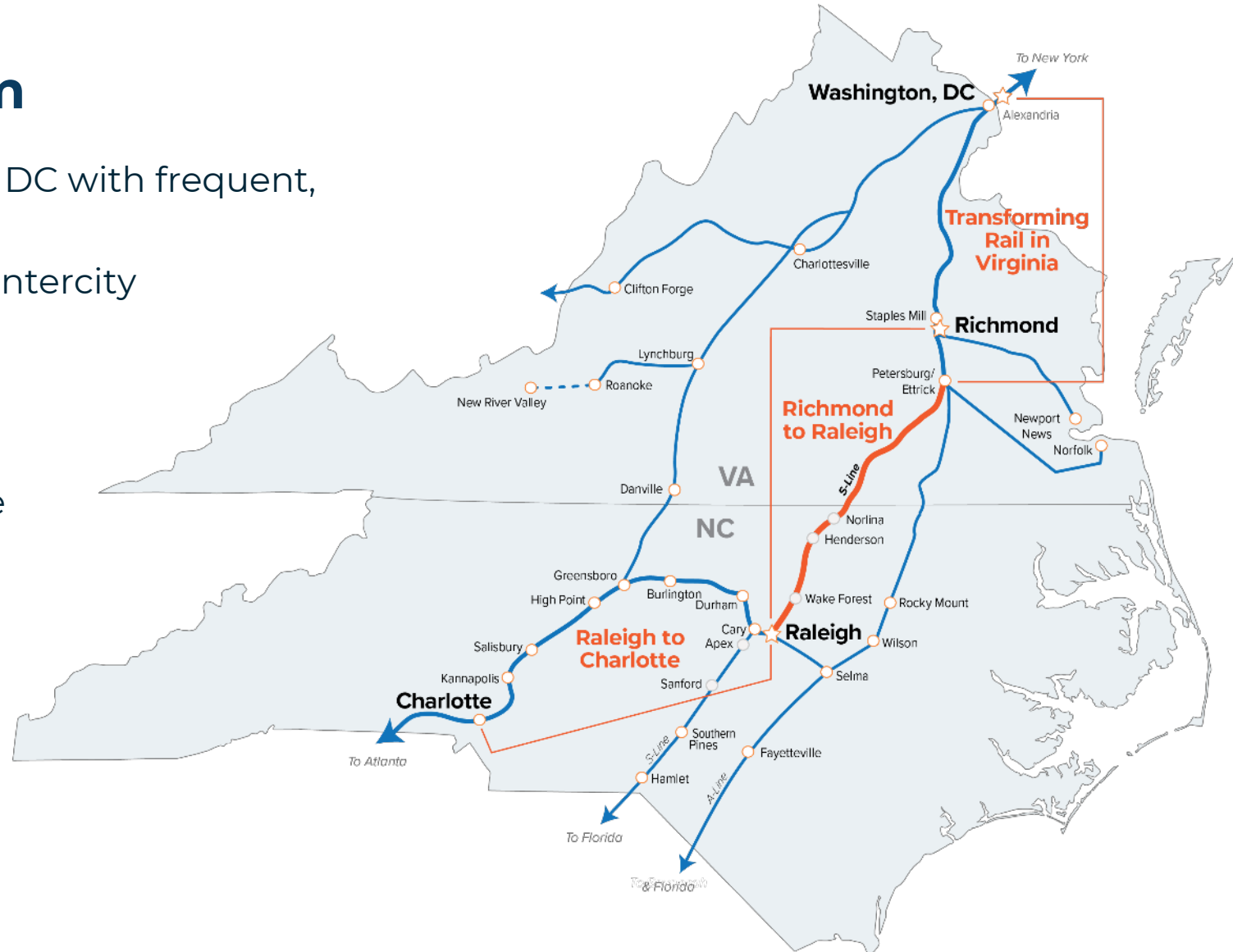
*Based on analysis completed by AECOM for the R2R S-Line Project FEIS and does not include Amtrak Long Distance service

Goals of the S-Line Program

- Connect North Carolina to Washington, DC with frequent, reliable, and faster service
- Grow urban/rural connections through intercity passenger rail statewide

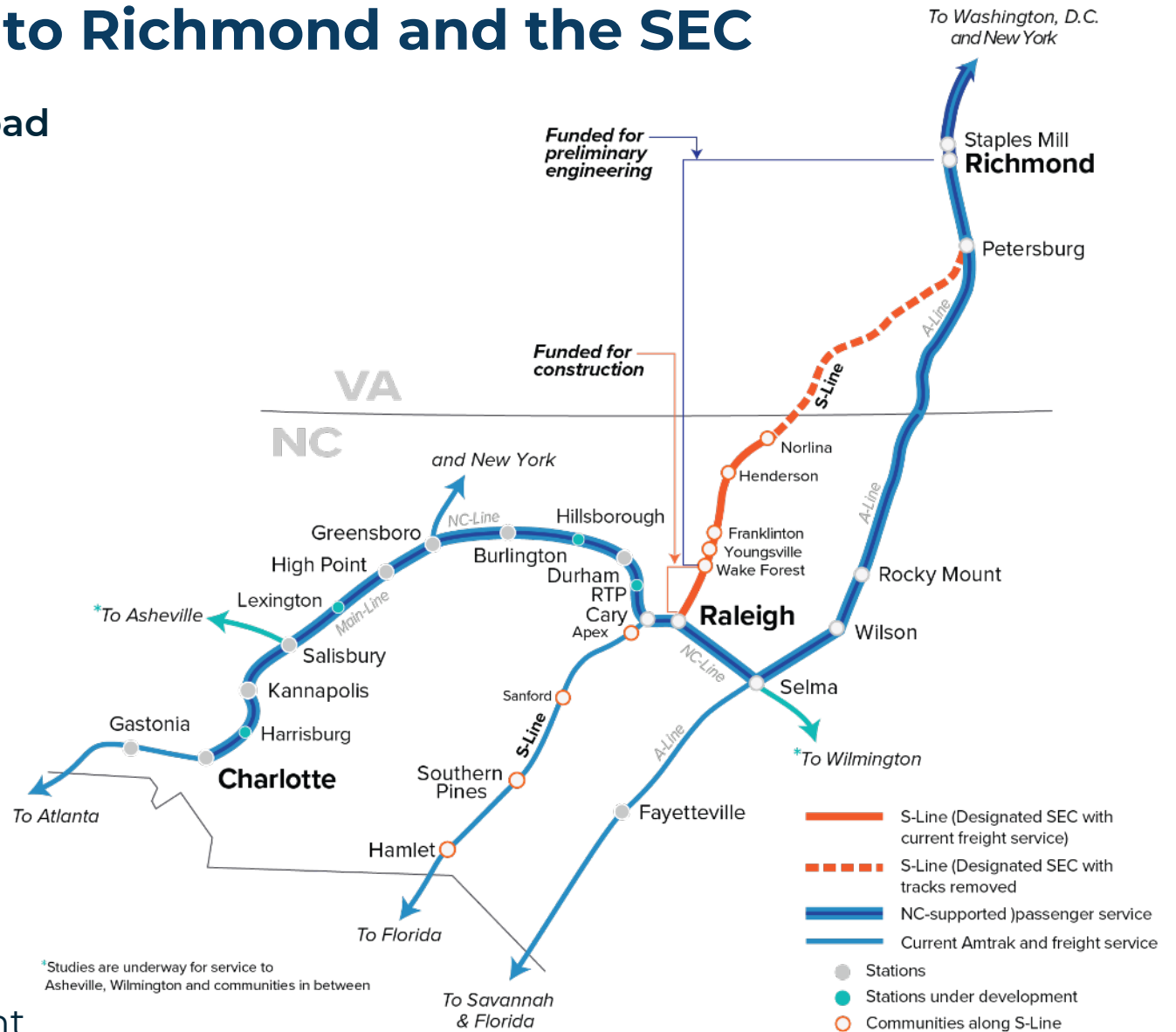
Strategy

- Control S-Line operational and schedule decisions into the future through acquisition of CSXT corridor
- Leverage state and local resources to capture federal funds
- Assist communities with growth plans



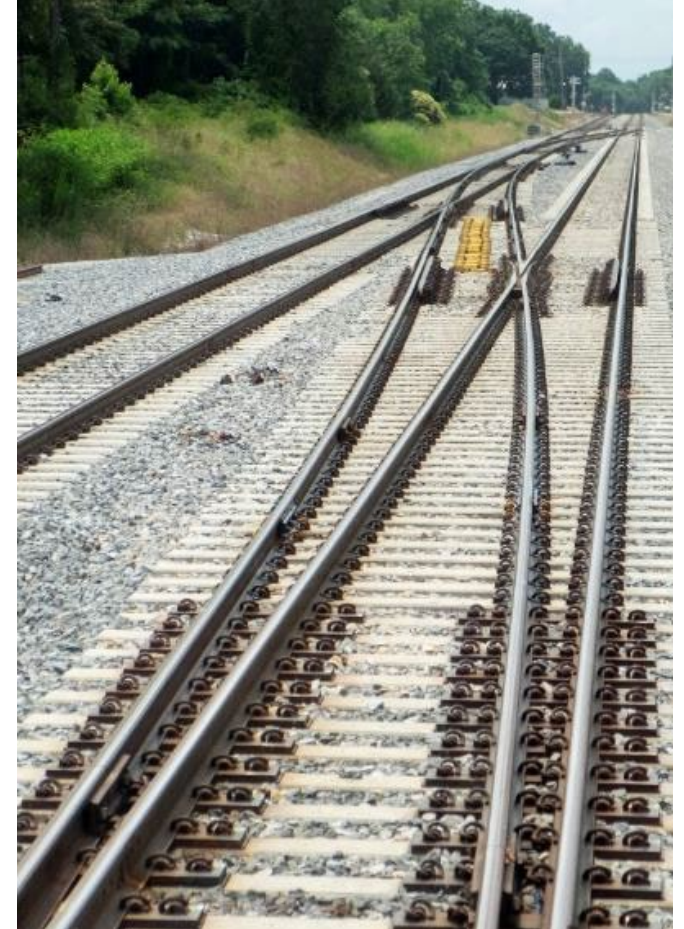
Grant Awards: S-Line, Raleigh to Richmond and the SEC

- ✓ NEPA Complete – 162 miles rail / 82 miles road
- ✓ (FY '20) \$47.5M FRA CRISI grant
 - NC S-Line corridor acquisition underway
- ✓ (FY '21) \$57.9M FRA CRISI grant
 - Land surveying, prelim. engineering (Raleigh to Richmond)
- ✓ \$900K FTA TOD Study grant
 - ✓ TOD Study (complete)
- ✓ \$3.4M RAISE grant
 - Mobility Hub Plans underway
- ✓ (FY '22-23) \$1.09 Billion – FSP grant
 - Engineering, ROW, and construction (Raleigh to Wake Forest)
- ✓ Corridor ID grant \$500,000
 - Service Development Planning (Charlotte to DC)
- **Upcoming FY 24' FSP grant opportunity**
Apply for Wake Forest to Henderson segment



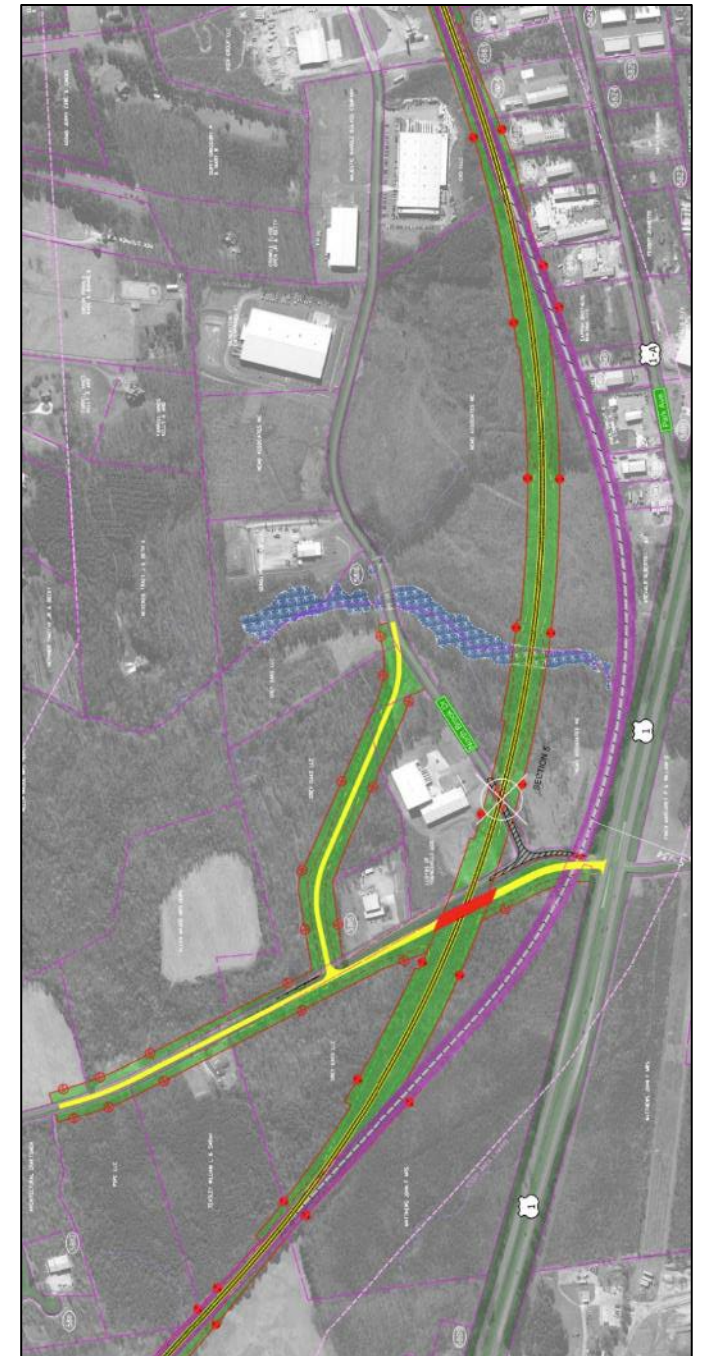
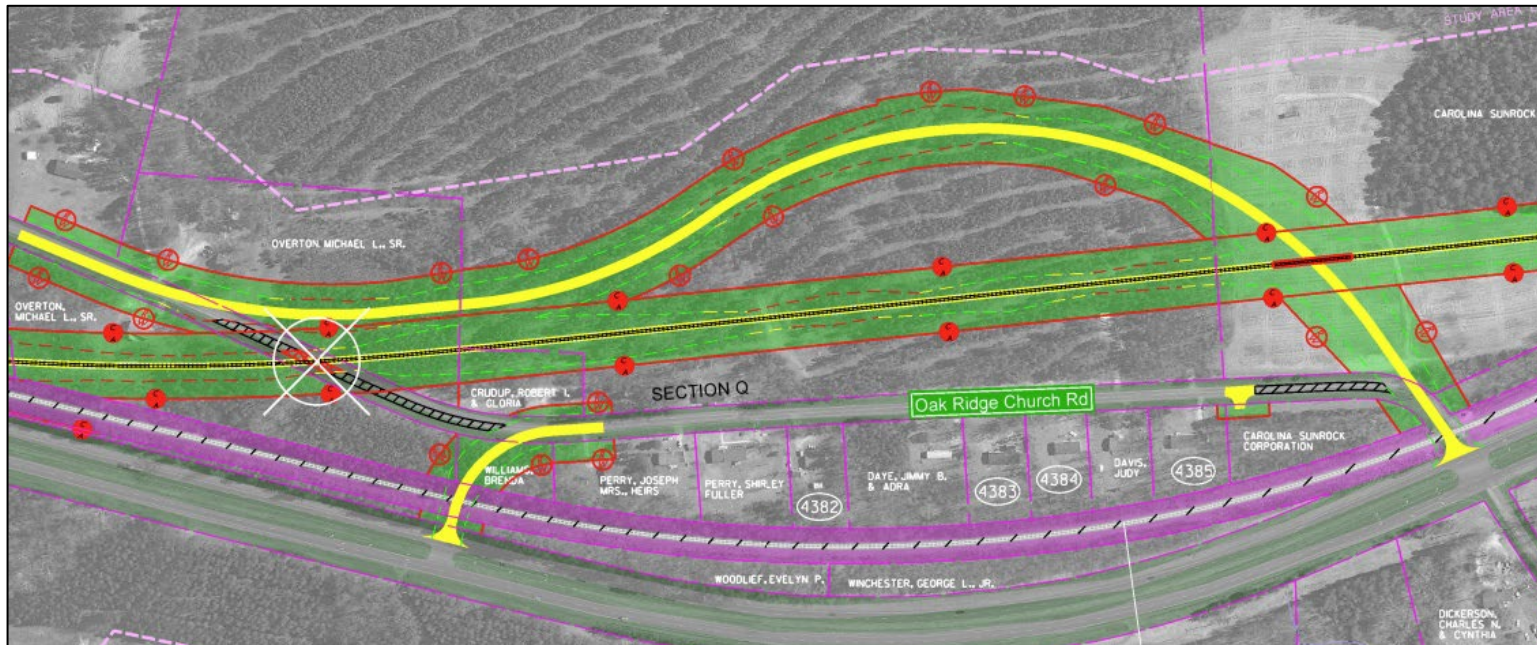
The S-Line Corridor will be one of the most technologically advanced railroads in the Southeast

- 110 MPH passenger rail speeds
- Fully grade separated road/rail
- Concrete cross-ties
- High speed switches
- High level platforms
- Freight bypass tracks
- Positive Train Control
- Advanced signal systems



Why Not Use the Existing Alignment?

- Straighten curves to allow for high speeds
 - Operate up to 110 mph
- Remove at-grade crossings to create “sealed corridor”
 - Realignment required at some locations



Raleigh to Wake Forest – Now Funded for Construction

FRA FSP (FY '22-23) Grant Award

- Final Design, ROW, Construction
- **Grade separations**, including:
 - Maynard Road
 - Trinity Road
 - Wolfpack Lane
 - New Hope Church Road
 - Millbrook Road
 - Gresham Lake Road
 - Durant Road
 - Ligon Mill Road
 - Holding Avenue
- ~5 miles of roadway corridor work
- ~1 mile of railroad structures
- ~18 miles of rail corridor
- Structures, clearing, grading, paving, erosion control, traffic control, signalization, RR control systems, drainage, track construction, facility construction, utilities relocation and construction, etc.

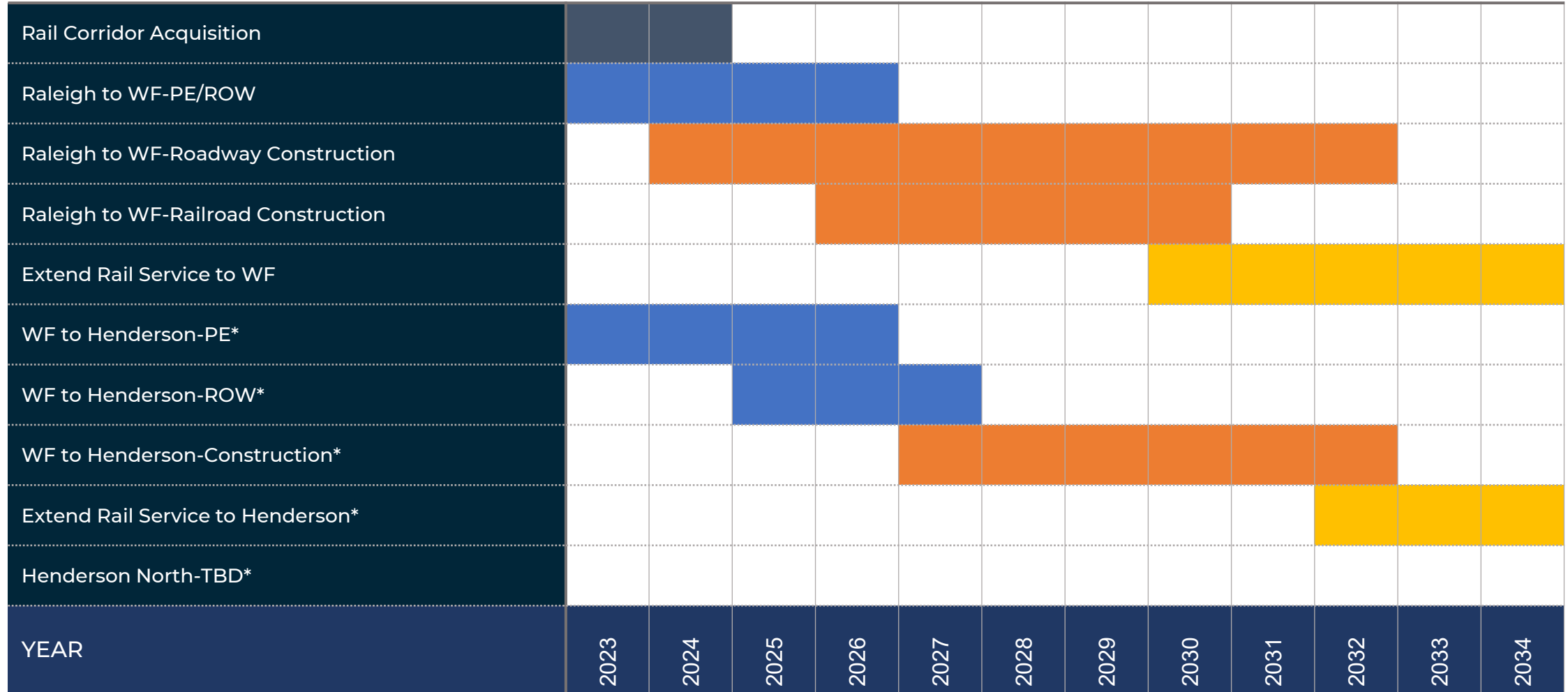


Upcoming S-Line Grade Separation Construction Projects

Sealing the Corridor between Raleigh and Wake Forest



Conceptual Program Schedule



* Schedule dependent on funding



Economic Impact Assessment

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

Source: ITRE

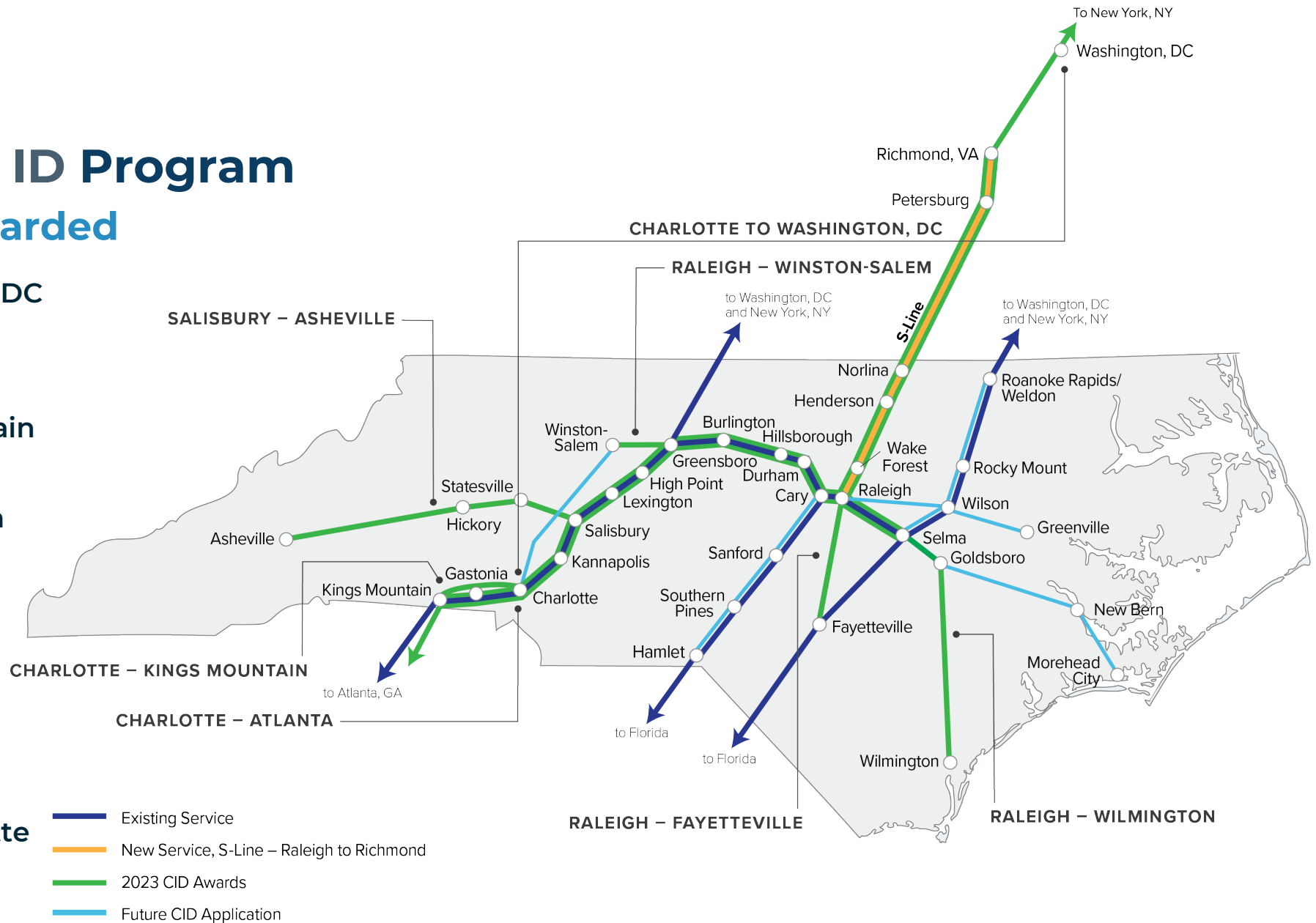
NC FRA Corridor ID Program

Seven Corridors Awarded

- ✓ 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:

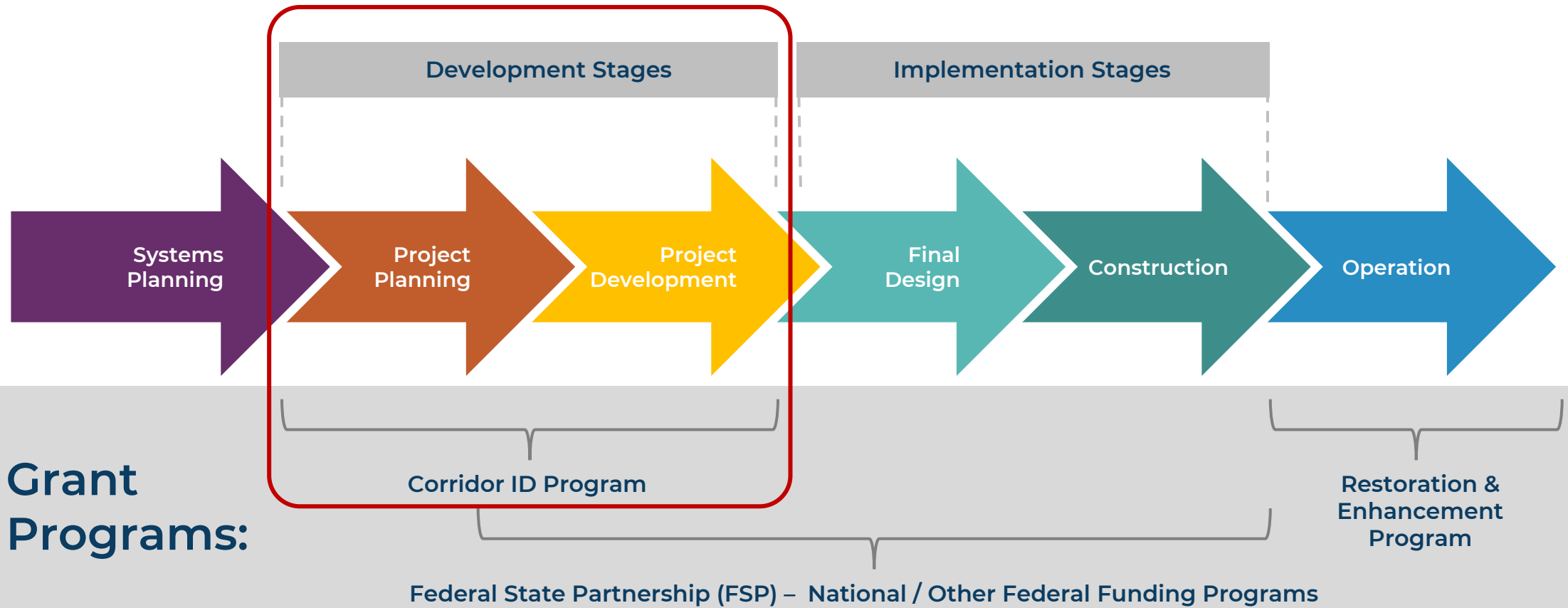
- Raleigh to Greenville
- Raleigh to Hamlet
- Raleigh to Morehead City
- Winston-Salem to Charlotte
- Raleigh to Weldon



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

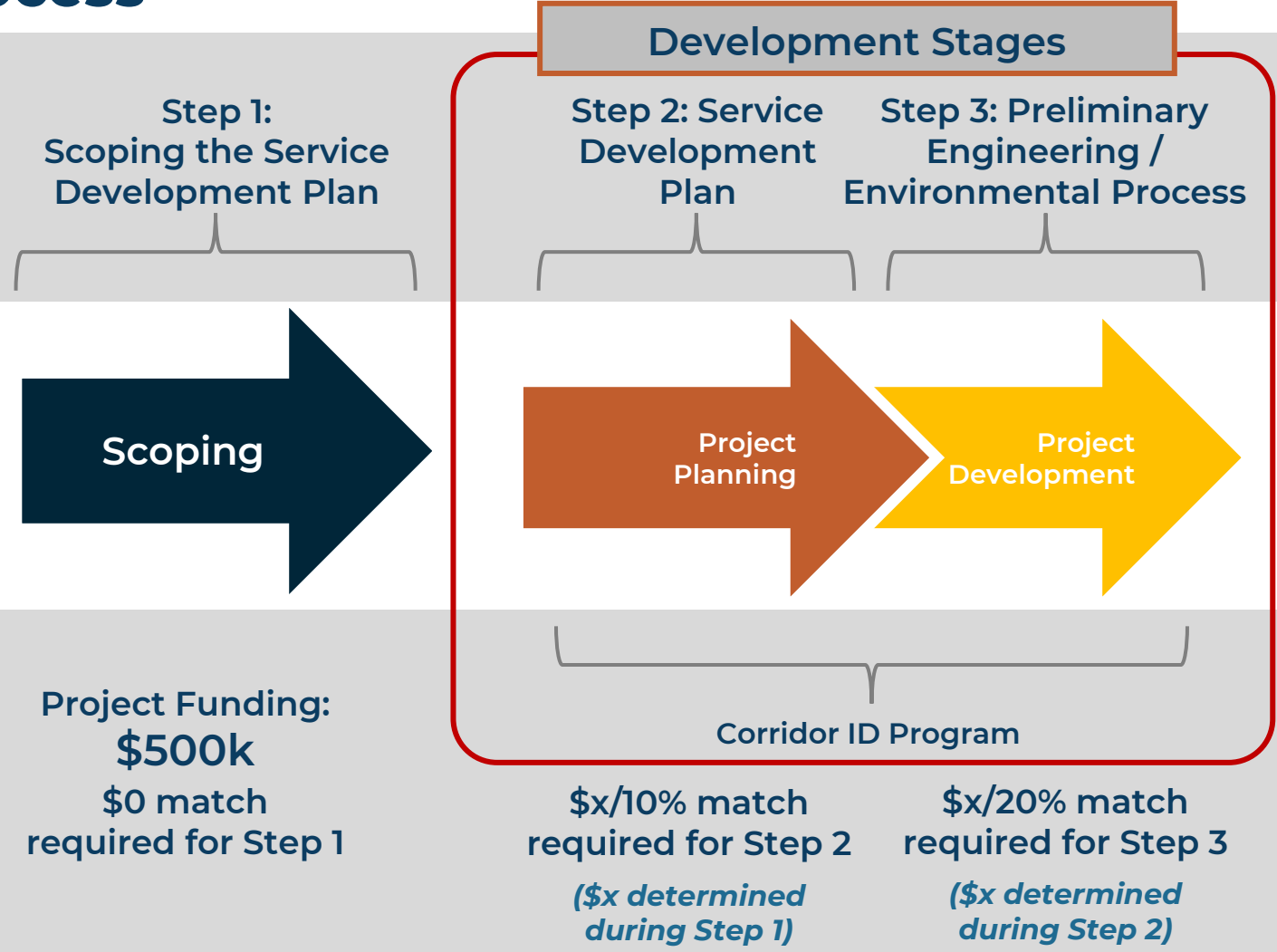
Corridor ID Process

FRA Project Lifecycle Stages and Corresponding FRA Funding Programs



Corridor ID Process

Each Step will have a separate grant agreement



Service Development Plan (SDP) Outcomes

Results of Study

Operational Plans
for how
service works

List of projects
that must be built

Feeds the next
steps for NEPA



List of projects and
cost estimates



Bipartisan Infrastructure Law – FRA Perspective

[ADVANCED APPROPRIATIONS]

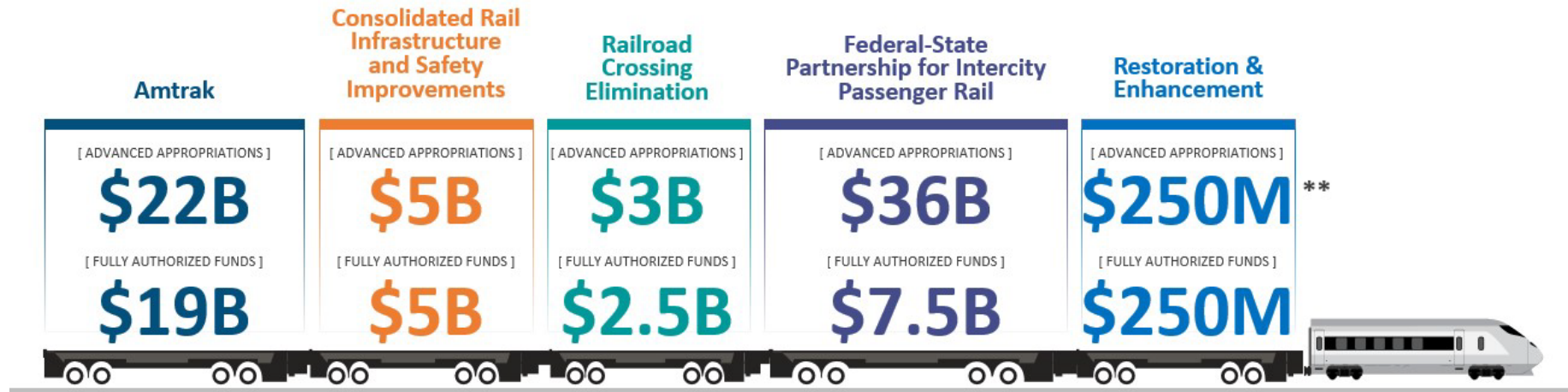
From FY22-FY26

\$66B in total funding

[FULLY AUTHORIZED FUNDS]

From FY22-FY26

\$36B* in total funding



* \$34.5 billion for grant programs; additional \$1.5 billion is authorized for FRA operations and R&D – not included in this graphic.
** Grants for Restoration & Enhancement (advanced appropriations portion) are funded through “takedowns” from Amtrak NN account; not included in totals to avoid double-counting.

Key to Success is Community Engagement

Priorities



Local Goals

Corridor-Wide Conversations

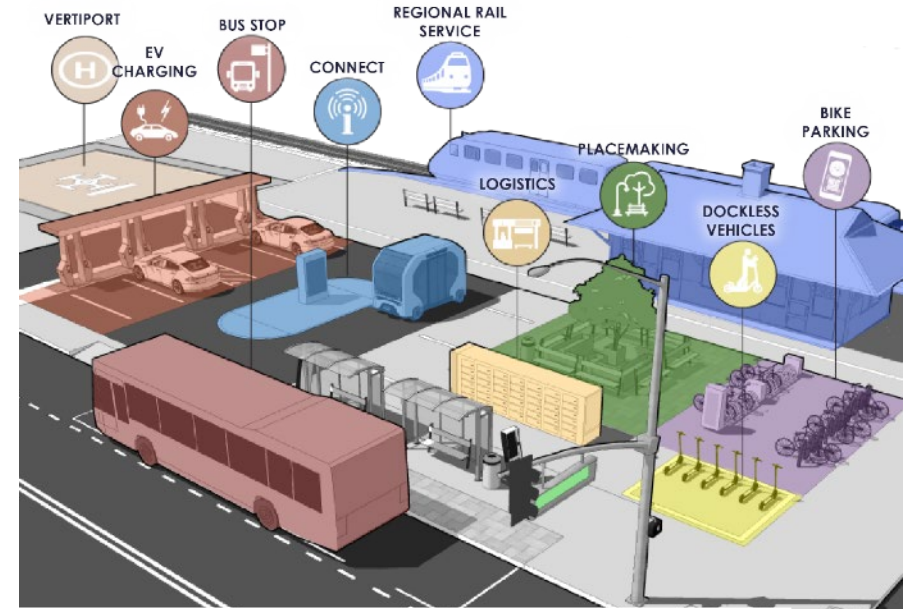
Partnerships



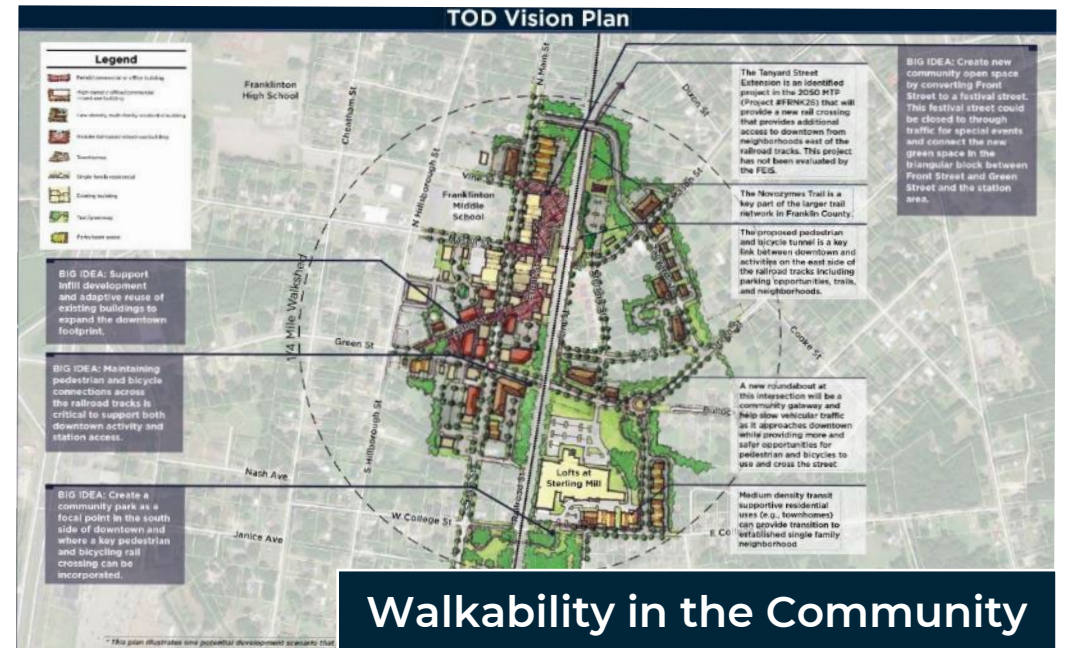
Transit-Oriented Development and Mobility Hub Planning

Engaging municipalities in conversations to use rail investments to achieve broader city/town goals

Coordinated Placemaking and Mobility



Multimodal Options and Connections



Walkability in the Community

FY 2022 RAISE Grant Awarded

North Carolina Regional S-Line Mobility Hub Plan

Plan will focus on defining the scope, physical location and potential hub layout. Whether built for intercity and/or commuter rail service, future stations will be ready for last-mile solutions

Mobility Hub Location	Task	Team
Sanford*	Feasibility/Site Assessment NEPA Preliminary Engineering	Stantec
Apex	Feasibility/Site Assessment	McAdams
Wake Forest	Feasibility/Site Assessment NEPA Preliminary Engineering	Stantec
Youngsville	Feasibility/Site Assessment	Alta
Franklinton*	Feasibility/Site Assessment	Kittelson
Henderson*	Feasibility/Site Assessment NEPA Preliminary Engineering	Kimley-Horn
Norlina*	Feasibility/Site Assessment NEPA Preliminary Engineering	Kimley-Horn

*Rural area pursuant to the NOFO definition

What is a mobility hub?

- Accessible space to connect high-frequency transit to an individual's origin of destination
- Offers integrated suite of mobility services, amenities, supporting technologies
- A place of connectivity where different travel options come together
- Intercity trains, commuter rail service, pedestrian, bicycle, transit, microtransit, and shared mobility

Location: 7 North Carolina communities along the S-Line

Estimated Completion: December 2024

Local Match: \$850,000 (20%)

RAISE Funding: \$3.4 million (80%)

Total Project Cost: \$4.25 million

Clear and significant benefits:

- Immediately and easily implementable with low cost and high return
- Connections of key rural and urban communities
- Community buy-in & partnerships
- Sustainable growth for a rapidly growing region in the face of alternative transportation enhancement
- Advances transnational, nationally significant, passenger rail service
- Unique regional approach that maximizes connections and access
- Roadiness of the region for innovative multimodal transportation investment
- Support for historically disadvantaged populations

888,000 residents live in the study corridor (336,000 new residents since 2010)

5 of the 7 communities identify as Transportation Disadvantaged Communities

Congratulations!
Thank You to all Partner Communities and Supporting Organizations.

NORTH CAROLINA REGIONAL S-LINE MOBILITY HUB PLAN
2022 RAISE Grant

NORLINA HENDERSON FRANKLINTON YOUNGVILLE WAKE FOREST APEX SANFORD

APEX Franklinton NORLINA Henderson Youngsville Wake Forest Apex Sanford



State and local leaders celebrate S-Line RAISE grant

Next Steps

- ✓ Project Industry Day forthcoming – targeting April / May 2024
- ✓ Expedite Raleigh to Wake Forest final design/construction program
- ✓ Finalize agreements between NCDOT and stakeholders
- ✓ Continue intentional coordination with industry, communities, Virginia, railroads, and other key stakeholders
- ✓ Continue preparation and submittal of grant applications for next construction segments

Contact Us

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Thank you!

