

COMMUTER RAIL UPDATE




Durham Board of County Commissioners
February 3 Work Session

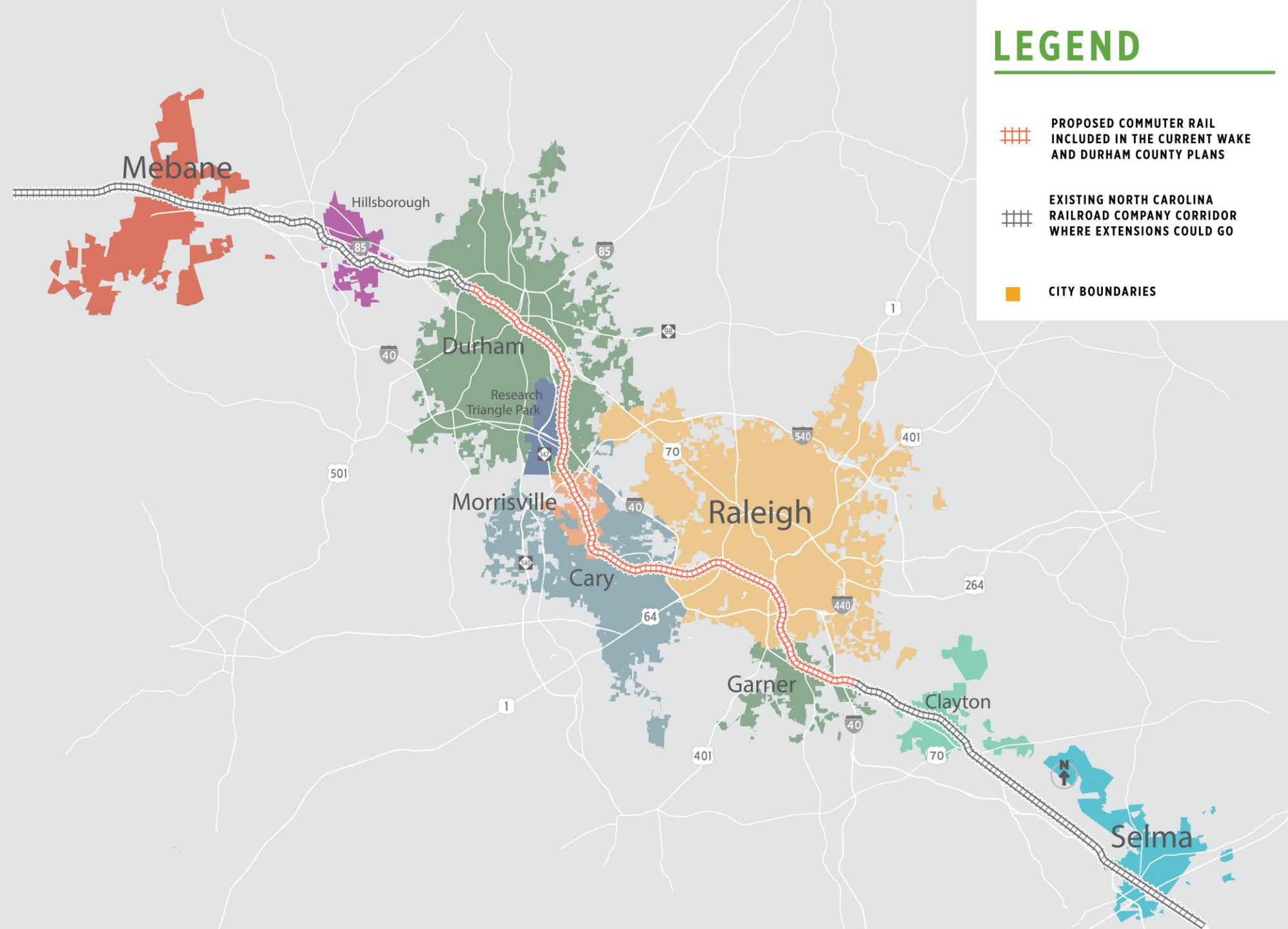
GO FORWARD

A COMMUNITY INVESTMENT IN TRANSIT



LEGEND

-  PROPOSED COMMUTER RAIL INCLUDED IN THE CURRENT WAKE AND DURHAM COUNTY PLANS
-  EXISTING NORTH CAROLINA RAILROAD COMPANY CORRIDOR WHERE EXTENSIONS COULD GO
-  CITY BOUNDARIES



PROPOSED COMMUTER RAIL PROJECT



- The Commuter Rail Transit project, as included in the current Wake and Durham county plans, would run 37 miles along the North Carolina Railroad Corridor between Garner and West Durham with stops at downtown Raleigh, N.C. State, Cary, Morrisville and Research Triangle Park.
- The project in the county transit plans calls for up to eight trips in each direction during peak hours with up to two trips each way during midday and evening hours, for a total of 20 weekday roundtrips.

WORK ON THE PROJECT TO DATE

- A project team that includes Durham County, Wake County, Orange County, Johnston County, CAMPO, DCHC, the North Carolina Railroad Company, NCDOT, the Research Triangle Foundation and GoTriangle is working together on preliminary feasibility studies.
- Through these studies, the team is trying to understand whether there is a viable commuter rail project to bring forward for public input and continued refinement and whether any scenario is likely to qualify for federal funding, which could fund up to 50 percent of the project.

PREVIOUS STUDY: CRT MAJOR INVESTMENT STUDY

This study of the 37-mile corridor completed in May 2019 showed:

- Taking commuter rail in the corridor would be faster and more reliable than driving at rush hour or taking a bus.
- The operating scenario providing service every 30 minutes in peak periods and limited service midday and evenings was the most productive among the scenarios studied.
- 16 potential candidate station zones would be appropriate for further analysis
- Ridership results would be consistent with those from similar commuter rail systems.
- Additional analysis would be needed to refine ridership estimates and to identify infrastructure required to support any commuter rail operating plans.

CURRENT STUDY: GREATER TRIANGLE CRT STUDY

What do we hope to take away from this study?

- Provide elected officials the data needed to decide whether to take the project to the next phase of development
- Examine scenarios adding Johnston County/Selma and Orange County/Mebane
- Refresh and update ridership estimates, infrastructure assumptions, and cost estimates that were included in prior high-level planning studies
- Identify additional activities necessary before initiating project design and implementation

EXISTING RAIL CORRIDOR

Freight Rail – Heavy Rail

- Freight operation constitutes the movement of goods and cargo in freight rolling stock (e.g., boxcars, flatcars), which are typically hauled by diesel-powered locomotives.
- The North Carolina Railroad Company (NCRR) owns the 317-mile corridor and Class I freight rail provider Norfolk Southern operates and maintains the railroad through a long-term lease with NCRR



Intercity Rail – Heavy Rail, Shared Track

- Intercity transit mode services covering longer distances than commuter or regional trains
- The main provider of intercity passenger rail service in the U.S. is Amtrak
- Four intercity passenger service routes run on the North Carolina Railroad including the Carolinian and the Piedmont which are sponsored by NCDOT



The North Carolina Railroad is built for the service it currently offers

Added capacity, including commuter rail, would require additional infrastructure, including added tracks

All Scenarios Studied Necessitate Another Track

Existing/Planned Traffic

- 27 freight and intercity passenger trains per day

Scenario 1: Three round trips in the peak periods

- +14 commuter trains per day (7 round trips)

Scenario 2: Five round trips in the peak periods

- +24 commuter trains per day (12 round trips)

Scenario 3: Eight round trips in the peak periods

- +40 commuter trains per day (20 round trips)

Evaluated Eight Scenarios

End Points	Weekday Round Trips	Service Pattern	Range of Cap. Cost* [YOE\$]	O&M Cost [2019\$]	Range of Ridership**
Durham-Garner	20	8-2-8-2	\$1.4B – \$1.8B	\$29M	7.5K – 10K
Durham-Garner	12	5-1-5-1	\$1.4B – \$1.8B	\$20M	5K – 7.5K
Durham-Garner	7	3-1-3	\$1.4B – \$1.7B	\$13M	4.5K – 6K
Mebane-Selma	20	8-2-8-2	\$2.5B – \$3.2B	\$57M	8K – 11.5K
Mebane-Selma	12	5-1-5-1	\$2.5B – \$3.2B	\$40M	6K – 9K
Mebane-Selma	7	3-1-3	\$2.3B – \$3.1B	\$26M	5K – 7.5K
Hillsb.-Clayton	20	8-2-8-2	\$1.8B – \$2.4B	\$44M (+\$15M)	8K – 11.5K
Durham-Clayton	20	8-2-8-2	\$1.6B – \$2.1B	\$37M (+\$8M)	7.5K – 10K

- Current Wake Transit Plan assumes \$1.33B capital cost for Durham-Garner 8-2-8-2

*Cost: Year-of-Expenditure Dollars (YOE\$)

**Daily Ridership: Average of Current Year and Horizon Year Forecast

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FUNDING CAPACITY



Needs federal funding to be affordable

Orange: Incremental cost to include Hillsborough and/or Mebane is large relative to est. ridership

Johnston: Would require significant additional new revenue

Durham and Wake: Affordability will depend on:

- Cost share
- Prioritization versus other investments
- Ability to control costs

LOWER COST AND MORE SERVICE SCORES HIGHER

End Points	Weekday Round Trips	Service Level	Expected Score	“Upside” Score	“Downside” Score
Mebane-Selma	20	8-2-8-2	Medium-Low	Medium	Medium-Low
Mebane-Selma	12	5-1-5-1	Medium-Low	Weak Medium	Medium-Low
Mebane-Selma	7	3-1-3	Medium-Low	Weak Medium	Medium-Low
Durham-Garner	20	8-2-8-2	Medium	Medium	Medium-Low
Durham-Garner	12	5-1-5-1	Weak Medium	Weak Medium	Medium-Low
Durham-Garner	7	3-1-3	Weak Medium	Weak Medium	Medium-Low
Hillsb.-Clayton	20	8-2-8-2	Weak Medium	Medium	Medium-Low
Durham-Clayton	20	8-2-8-2	Medium	Medium	Medium-Low

To be eligible for federal funding, project must score a Medium rating

Note: Scenarios rated as “Weak Medium” are projected to score at the low end of the Medium range, meaning that if any single component score is reduced, the overall score would fall below the eligibility requirements

CRITICAL NEXT STEPS



Public board meetings with County boards and MPOs

- Local decision-making on next steps

Memorandum of Understanding for next phase of work (early project development activities):

- NCRR, GoTriangle, Counties, MPOs

FOCUS ON RISK MANAGEMENT

Requirements Risk:

- Difficulty of succinctly and fully developing project requirements
- Differences in project stakeholder goals

Design Risk:

- Design-related assumptions change
- Situations where unknown factors cause designs to change

Market Risk:

- Open market pricing and/or contract packaging strategies

Construction Risk:

- Site activities
- Coordination of contractors

NEXT PHASE OF STUDY: KEY FOCUS AREAS

Local Engagement: Build a foundation for sustained regional cooperation

Further Refine Project Concept: Define infrastructure and frequency of trains

Metrics: Provide monetary costs, non-monetary costs, and benefits

Railroad Buy-in: Rail network modeling, determine necessary requirements

Capacity Building: Develop management plan and procure consultant support

FTA Funding Eligibility: Ridership modeling and economic development potential

Cost Share: Obtain commitment of 100% of non FTA funds



Questions and Comments