Executive Summary

The results of the Greater Triangle Commuter Rail feasibility study identify challenges and opportunities for implementation of regional passenger rail service connecting Durham, Research Triangle Park, Morrisville, Cary, Raleigh, Garner, and potentially Clayton. Updated schedules and estimates indicate that regional passenger rail service implemented between West Durham and Garner or Clayton could have a start date between 2033 and 2035, could provide 12,000 to 18,000 trips per day by 2040, and would cost between $2.8 and $3.2 billion in year of expenditure.

Consideration of whether or how to implement regional passenger rail service should take into account study findings that implementation challenges are not distributed equally across the corridor. Significant challenges exist to the west of Raleigh Union Station, especially west of the Ellis Road Station throughout central Durham. The study found:

- The Plum Street crossing in East Durham would need to be closed due to the East Durham Station.
- The Driver Street crossing in East Durham would need to be closed, unless railroad partners could accept an alternative to infrastructure identified during railroad capacity modeling.
- Complex agreements will be required to implement regional passenger rail service west of Raleigh Union Station. New service would share this area of the corridor with Norfolk Southern and CSX freight trains, existing and planned Piedmont intercity passenger trains, and long-distance Amtrak trains.

Financial planning for project implementation poses additional challenges. The increased cost of the project exceeds the available funding identified for commuter rail implementation in the Wake Transit Plan and the Durham Transit Plan. Availability of federal funding is uncertain. To implement the full project, additional funding must be identified.

Initial implementation of regional passenger rail service in a portion of the corridor would allow service to begin sooner, while challenges are addressed. The feasibility study contemplates opportunities for initial implementation in the eastern, central, and western portions of the corridor:

- The eastern option would implement about 10 miles of passenger rail service from the Auburn Station in Garner to Raleigh Union Station. This option is estimated to take around 8 years to build at a cost of $600 to $700 million. Ridership projections for this option show roughly 4,000 daily boardings by 2040.
- The central option would implement about 20 miles of passenger rail service from Raleigh Union Station to the Ellis Road Station in Durham. This option is estimated to take around 10 years to build at a cost of $800 million to $1 billion. Ridership projections for this option show roughly 4,000 daily boardings by 2040.
- The western option would implement about 10 miles of passenger rail service from the RTP Station in Durham to the West Durham Station. This option is estimated to take around 12 years to build at a cost of around $1.6 billion. Ridership projections for this option show roughly 3,000 daily boardings by 2040. The estimated cost of this option exceeds the financial capacity of the Durham Transit Plan.

Motion

To receive the presentation from GoTriangle on the Greater Triangle Commuter Rail feasibility study.

Background

Voters in Durham County and Wake County passed a one-half-cent transit sales tax in 2011 and 2016 respectively. Transit plans in Wake and Durham Counties include commuter rail service connecting Garner, Raleigh, Cary, Morrisville, Research Triangle Park, and Durham. A Memorandum of Understanding for completion of the feasibility study and early project development activities was executed between GoTriangle, North Carolina Railroad Company, North Carolina Department of Transportation, North Carolina Capital Area Metropolitan Planning Organization, Durham Chapel Hill

Carrboro Metropolitan Planning Organization, Wake County, Durham County, and Johnston County in April 2020. The parties acknowledged that funding for the study would include $6 million from the Wake Transit Plan, $2.7 million from the Durham Transit Plan, and $250,000 from Johnston County.

Issues and Analysis

Wake, Durham, Orange, and Johnston counties collectively add more than 32,000 residents a year, resulting in crowded roads and ever-lengthening commute times. The region's population is expected to grow by over 1,000,000 people by 2050. The region is projected to add over 800,000 jobs by 2050, and over 350,000 of these jobs are projected to be near the proposed commuter rail corridor. As the foundation of a robust regional transit network, a commuter rail line would allow the Triangle to manage and sustain projected growth.

An analysis of the proposed commuter rail corridor studied opportunities related to affordable housing, travel markets, land use, and economic impact. Key findings of this opportunity analysis include the following:

- Even though the rail corridor is only 4% of the region's area, it contains 27% of the region's legally binding affordability restricted housing and 30% of the region's jobs.
- 56,000 workers both live and work near the rail corridor.
- The rail corridor is forecast to hold 20% of the region's households and 45% of the region's jobs by 2050.
- The corridor is forecast to add 100,000 housing units and 370,000 jobs by 2050, and there will still be room for another 100,000 housing units and 330,000 jobs beyond 2050.
- Commuter rail would save each rider 88 hours per year. Given current ridership projections, this would help generate $210 million in personal income and $160 million in gross regional product by 2050.

In addition to the opportunity analysis, technical analysis completed as part of the feasibility study included:

- Ridership estimation for various operating scenarios and fare policies.
- A corridor screening for potential risks related to implementation of the project.
- A more detailed engineering feasibility analysis of key risk areas in Durham and Cary.
- A corridor screening and search for potential rail maintenance facility and park and ride sites.
- Rail network modeling completed in partnership with Norfolk Southern.
- Capital and O&M cost estimation for various operating scenarios.
- An analysis of implementation options, schedules, and federal grant strategies.

Staff Contacts

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Attachments

1. Greater Triangle Commuter Rail Feasibility Study Summary Presentation