

Wake Transit Update



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Purpose for Today's Presentation

- Receive Update on Commuter Rail
 - The BOC will be asked to provide feedback for next steps, including whether to consider approval of a Memorandum of Understanding at its March Board Meeting
- Review Draft FY 2021 Wake Transit Work Plan
 - The BOC will be asked to provide feedback to submit to the TPAC at its February 17th Meeting
- Receive Information from NCDOT on S Line Corridor
 - The BOC will be asked to adopt a Resolution of Support for the S Line Corridor at its February 17th Meeting

Wake Transit Plan: Four Big Moves

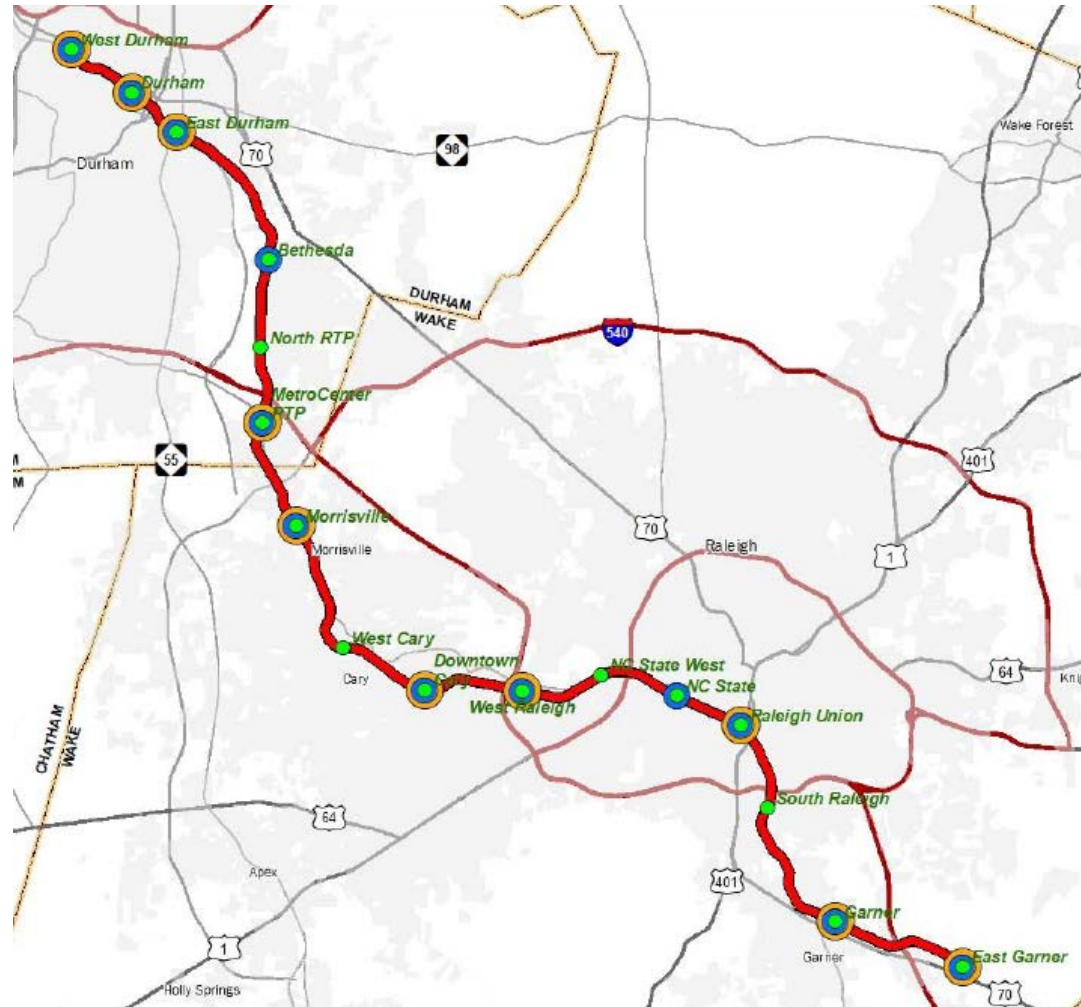
In November 2016, Wake County voters approved a transit-dedicated half-cent sales tax investment.



Commuter Rail Background

The Commuter Rail Transit project, as originally included in the Wake and Durham county transit plans, would run 37 miles from **Garner** to downtown **Raleigh, N.C. State, Cary, Morrisville** and the **Research Triangle Park** continuing to downtown **Durham**.

The current plan calls for:
Evaluating 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 **twenty weekday round trips**.



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

Prior Updates to BOC

- October 2017:
 - BOC approved cost share agreement for CRT portion of Major Investment Study
- January 2019:
 - BOC approved amended cost share agreement to do additional study for CRT
- August 2019:
 - Growth and Sustainability Committee Reviewed Results of Major Investment Study for CRT
 - Peer commuter rail systems
 - Created evaluation framework
 - Examined station candidate zones
 - Tested service scenarios for ridership productivity
 - Discussed Current Study to Better Prepare the Project for Entry into Project Development

Greater Triangle Area Commuter Rail Study Purpose

- Give 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
 - Understand if updated estimates and assumptions would potentially qualify for FTA funding
- Identify additional activities necessary before initiating project design and implementation

Finding: Additional Track Needed

All Scenarios Necessitate Another Track; Impacts Capital Estimates


- 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)



North Carolina Railroad at Carpenter Rd. in Morrisville, 2019

Findings Ridership and Cost:

- Ridership Modeled with FTA Methodology Consistent with Prior Results
- Cost Ranges on High End Significantly Exceed Prior Estimates



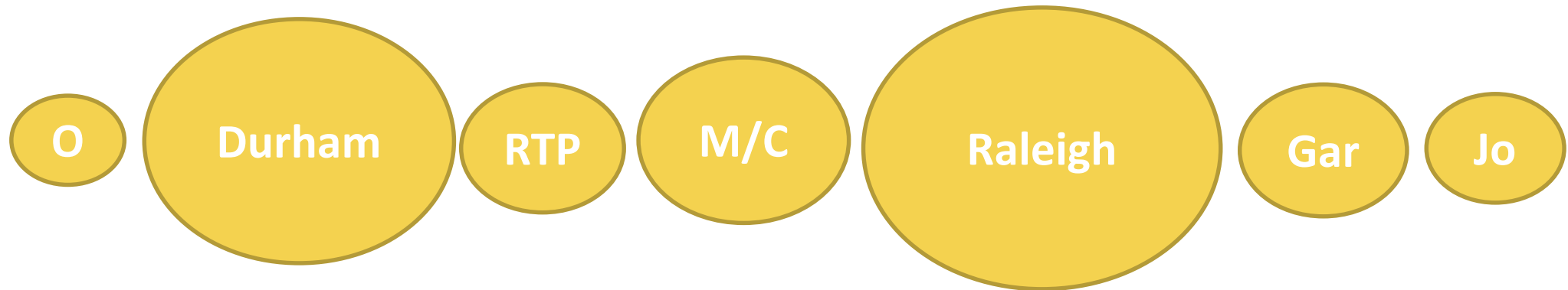
End Points	Weekday Round Trips	Service Pattern	Range of Cap. Cost* [YOE\$]	O&M Cost [2019\$]	Range of Ridership**
Durham-Garner	20	8-2-8-2	\$1.4B – \$1.8B	\$29M	7.5K – 10K
Durham-Garner	12	5-1-5-1	\$1.4B – \$1.8B	\$20M	5K – 7.5K
Durham-Garner	7	3-1-3	\$1.4B – \$1.7B	\$13M	4.5K – 6K
Mebane-Selma	20	8-2-8-2	\$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\$)

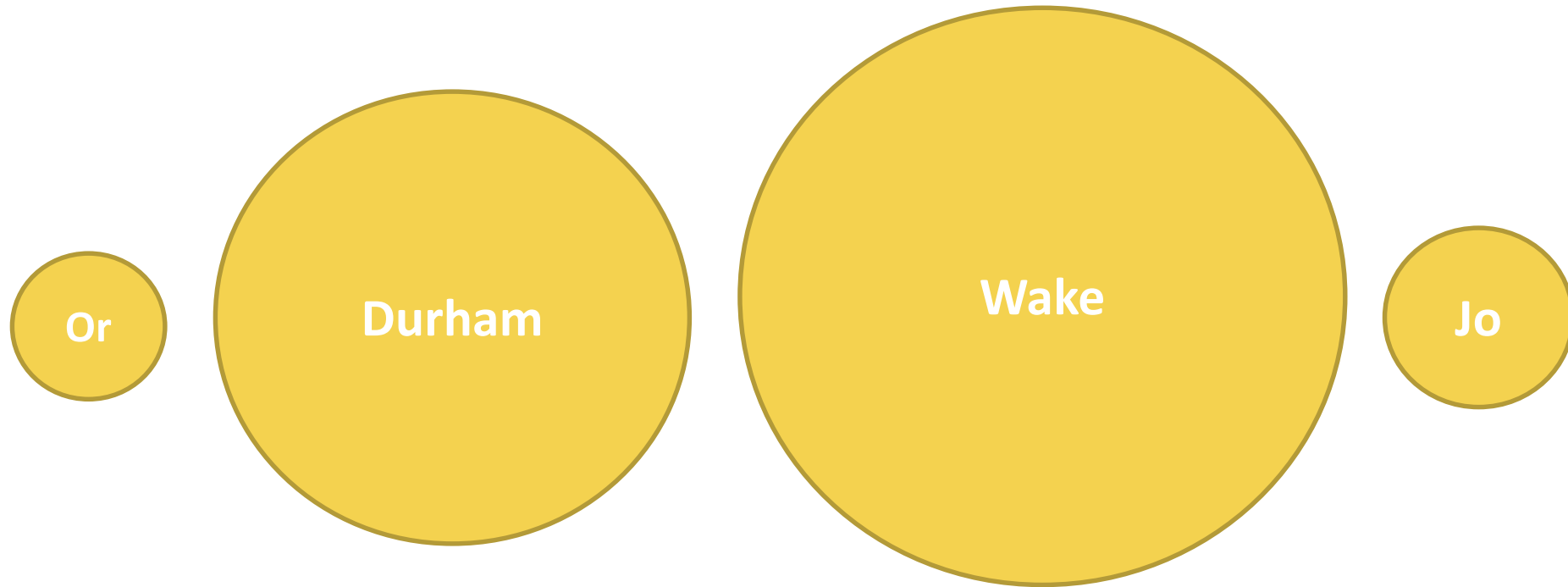
**Daily Ridership: Average of Current Year and Horizon Year Forecast

Busiest Stations in Raleigh and Durham



Note: circle sizes are relative to the number of boardings at stations within each jurisdiction

Busiest Stations in Wake and Durham Counties



Note: circle sizes are relative to the number of boardings at stations within each county.

Finding: CRT May Potentially Qualify for Federal Funds

- Two Scenarios Potentially Score Well Enough to Qualify for Federal Funds
- Lower Service and Higher Cost Scenarios Do Not Score Well

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 Medium

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

Finding: More Work Needed before Entry in Federal Pipeline

- **This Study has shown that there is more work to do before we are ready to apply to enter FTA Project Development**
 - **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

Several Key Focus Areas in Next Year

- Railroad Coordination
 - Obtain buy-in from the operating railroads and define the requirements and design risks
- Local Engagement
 - Proactive and comprehensive community engagement to share information and get feedback from the public needed to update transit plans in all three counties
- Decision-Making Metrics
 - Need consistent basis for evaluation of monetary costs, non-monetary costs, and benefits amongst all partners

Key Focus Areas in Next Year (Continued)

- Preliminary Engineering Needed
 - Further information on termini, station number and locations, grade separations, street closures, location of additional tracks and improvements, frequency of trains, fleet size and composition, train storage and maintenance requirements
- Land Use
 - Work with local governments to evaluate and consider strategies to bolder land use and economic development scores
- Cost-Share Negotiation
 - Need 100% of non federal funds identified with an agreed upon methodology of how these costs will be shared
- Capacity for Implementation
 - Develop strategy so that project sponsor has sufficient capacity and capability to execute project

Feedback Asked of BOC

- What additional information do you need to be informed as to where we are at with CRT?
- What feedback do you have for GoTriangle and the Project Partners?
- Are you supportive of approving a memorandum of understanding for the next phase of the project and acknowledging a cost share methodology for the next phase of work?

Looking Ahead

Your feedback needed
on proposed investments
- Fiscal Year 2021 -

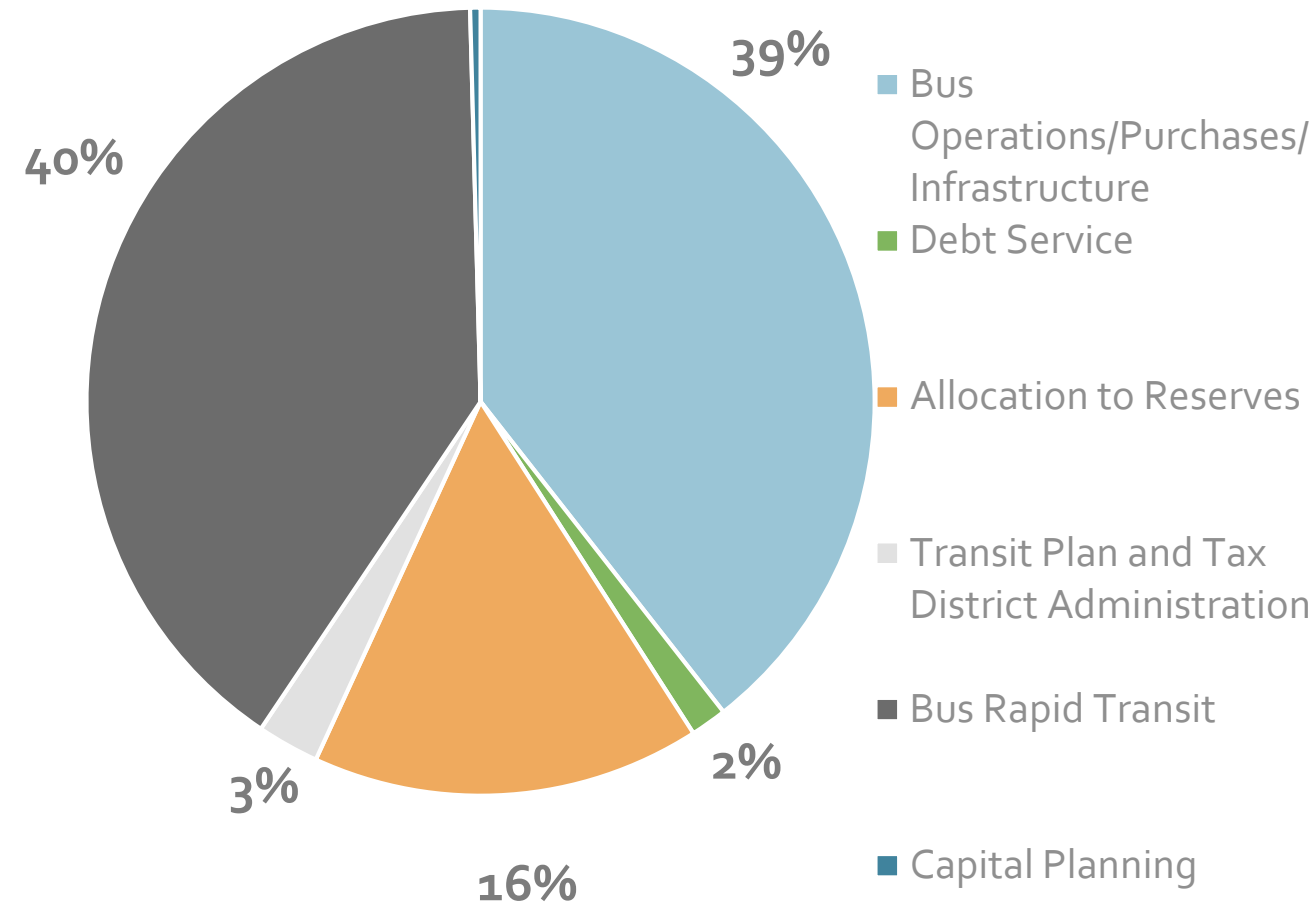
Anticipated Revenues & Expenditures

July 1, 2020 – June 30, 2021

Revenues

Half-cent local option sales tax	\$99.3 million
Vehicle rental tax	\$4.5 million
\$7 vehicle rental fee	\$6.8 million
\$3 vehicle rental fee	\$2.9 million
Total Local	\$113.5 million
Other (Federal, state, fares, prior year funds, debt proceeds)	\$64.9 million
TOTAL	\$178.4 million

Expenditures



Advancing Bus Rapid Transit

- The transit work plan proposes to allocate \$67 million for carrying the **New Bern Corridor** in East Raleigh through completion. \$35 million is assumed to be funded through the FTA Small Starts program.
- The plan also includes \$4.5 million to **continue work** on the other three BRT corridors – Northern, Southern (connecting to Garner), and Western (connecting to Cary).





Project Status

Wake BRT: Northern Corridor

Project Milestones:

- Initiate route selection in Fall 2020

Wake BRT: Western Corridor

Status:

- Currently working on route selection

Project Milestones:

- Initiate Project Development in Summer 2020

Wake BRT: New Bern Avenue

Status:

- Currently in design phase (10%)

Project Milestones:

- 30 % design by Spring 2020
- Final design by Summer 2021
- Revenue service by end of 2023

Raleigh BRT: Equitable Development Around Transit

Status:

- Creating policy for land use along all BRT corridors
- Final report, proposed regulatory changes in Spring 2020

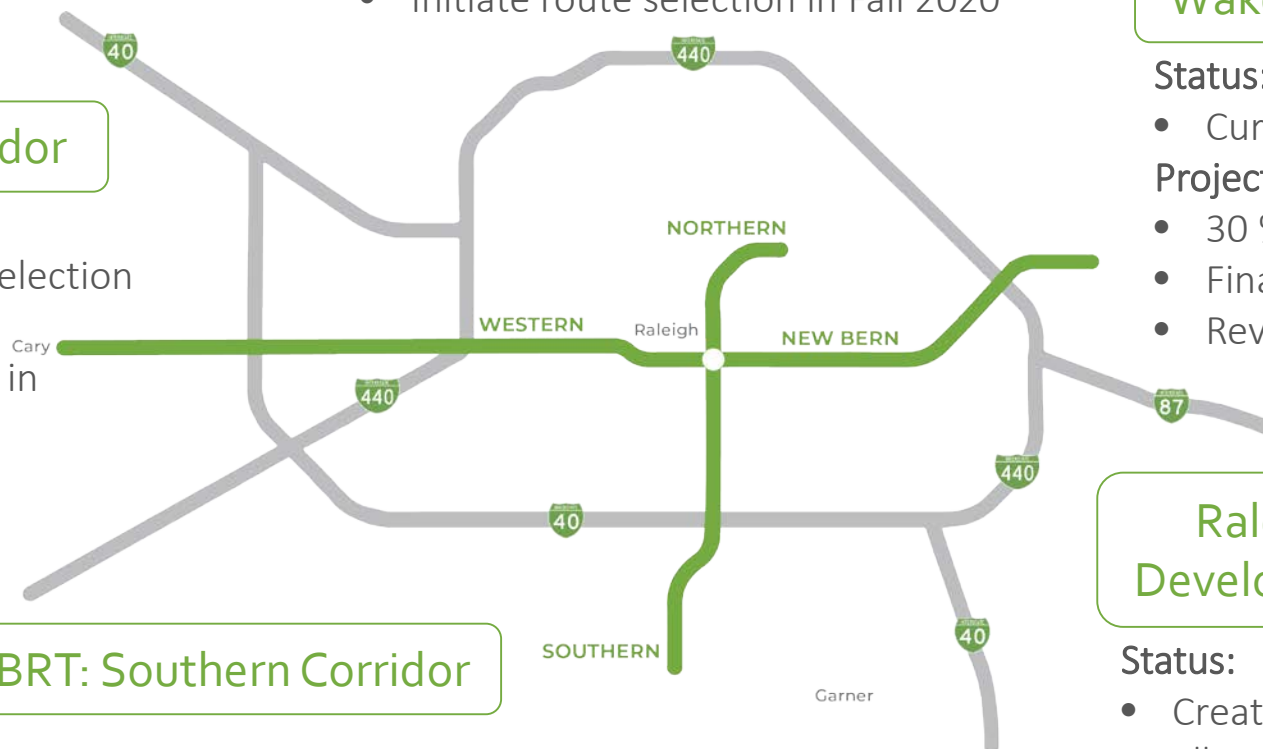
Wake BRT: Southern Corridor

Status:

- Currently working on route selection

Project Milestones:

- Initiate Project Development in Summer 2020





Wake BRT: New Bern Avenue

Project Statistics



GoRaleigh Station to New Hope/New Bern (East Raleigh Transit Center, P&R)



Total 5.1 miles, **3.3 miles of dedicated lanes**



Ten (10) station pairs, in addition to GoRaleigh Station



Mon-Fri from **4am to midnight** and Sat-Sun from **5:30am to midnight**



Target revenue service/opening year – end of **2023**



\$71.4 Million (YOE)



\$2.5 Million – estimated operating cost in first full year of operations



Wake BRT: New Bern Avenue

Current Observations / Public Focus

- Station access information: universal design, safety and ADA (offset median stations)
- System "look and feel"
 - Branding
 - Vehicles
 - Station design
- Corridor context specific public engagement





Next Steps

Future Public Engagement

February 2020

Wake BRT: Southern Corridor Kick Off & Design Open House #1

- February 20th – Garner Senior Center 4-7pm
- February 24th – Victory Church 4-7pm

Raleigh Equitable Development Around Transit Design Open House #3

- Two meetings (tentative dates February 27th and 29th)

April 2020

Wake BRT: Western Boulevard Corridor Study Open House #2

Wake BRT: New Bern Avenue Design Open House #3

FY 2021 Wake Transit: Proposed Service Improvements

- **Enhance Glenwood Avenue Service** serving Crabtree Valley Mall, Downtown Raleigh and Brier Creek Commons (GoRaleigh)
- **Add frequency on Route 21:Caraleigh**, creating 30-minute service all day from 6 a.m. to 7 p.m. and extending hourly service to midnight.

- **Fifth High Frequency Network:** extend portion of Route 6 from downtown Raleigh to Duraleigh Road

- **Route 70X: Glenwood North** provide hourly service north of Duraleigh Road to Brier Creek.



- **Add all-day service to GoTriangle Route 305** between Apex and Raleigh with 30-minute service at peak times and hourly service during the middle of the day, evenings and weekends.
- **Expand GoTriangle Route 310** to continue to Cary Train Station.
- **Start Holly Springs Express** serving Holly Springs and Apex, during peak travel times Mon-Fri.
- **Start express service between Apex and Cary:** during peak hours Monday-Friday

FY 2021 Wake Transit: Plans for Easier Connections

NEW East Raleigh Transfer Facility (GoRaleigh)

Construction dollars to establish a park-and-ride for up to 100 spaces and connect up to four routes, including the New Bern Avenue bus rapid transit route.

NEW Midtown Raleigh Facility (GoRaleigh)

Buy land and begin design work for a facility near North Hills and I-440 to create opportunities to travel east to west without having to go into downtown Raleigh.

Transfer Point Enhancements (GoRaleigh)

Updates could include larger shelters, lighting, passenger information systems, benches, trash cans and bike racks. Locations:

- Cross Link Road and Rock Quarry Road
- Hillsborough Street and Gorman Street
- Hillsborough Street and Jones Franklin Road
- Hillsborough Street at NC State Fairgrounds
- Capital Boulevard and Millbrook Road and WakeMed North

FY 2021 Wake Transit: Enhancing Access to Transit

- **Paratransit Operations and Maintenance Facility (GoRaleigh/GoWake Access):** Buy land and beginning design for a facility that would accommodate 100 vehicles and provide space for administrative and management functions, including dispatch and scheduling, call center operations, training facilities and driver break rooms.
- **Eastern Wake Microtransit Study:** GoWake ACCESS would study whether microtransit options would be feasible to serve rural, elderly and disabled residents in the eastern part of the county, which is not served by fixed-route transportation.
- **Community Funding Areas:** \$864,414 will be put in reserve to match funds for community-based public transportation projects to help with planning, capital, or operating expenses.
 - Apex and Morrisville have applied for Wake Transit matching funds.



FY 2021 Wake Transit: Improving the Transit Experience



Before and After: Capital Blvd. at Fenton Street

Bus Stops

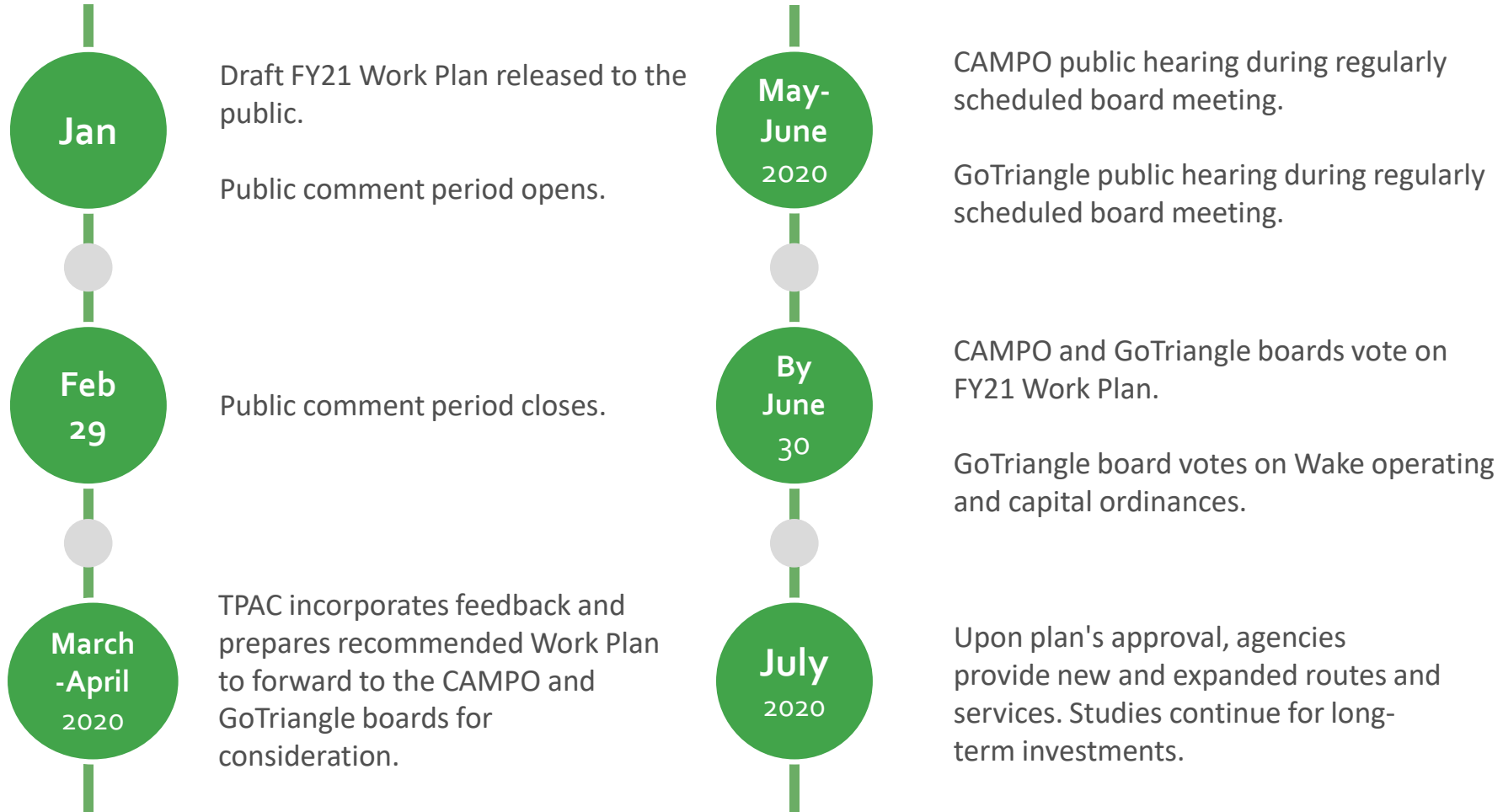
Investments in benches, shelters, signage, lighting and ADA access ramps at new and existing GoRaleigh, GoCary and GoTriangle bus stops.



Park-and-Ride Lots

Investments to enhance, renovate and add GoTriangle park-and-ride lots serving North and West Raleigh.

FY 21 Work Plan Approval Timeline



How the Public Can Comment

Help shape your community investment in transit



For more information and to review the detailed draft work plan, go to goforwardnc.org/waketransit.



Submit your comments online at goforwardnc.org/waketransit.



Or mail them to:

GoTriangle, Attn. Juan Carlos Erickson
4600 Emperor Blvd., Suite 100, Durham, NC 27703



Follow us on Twitter to stay up-to-date [@waketransit](https://twitter.com/waketransit).

BOC Feedback

- What comments do you have on the Draft FY 2021 Wake Transit Work Plan?
- Are there any particular areas you want our partners to focus on for the coming year?



NORTH CAROLINA

Department of Transportation



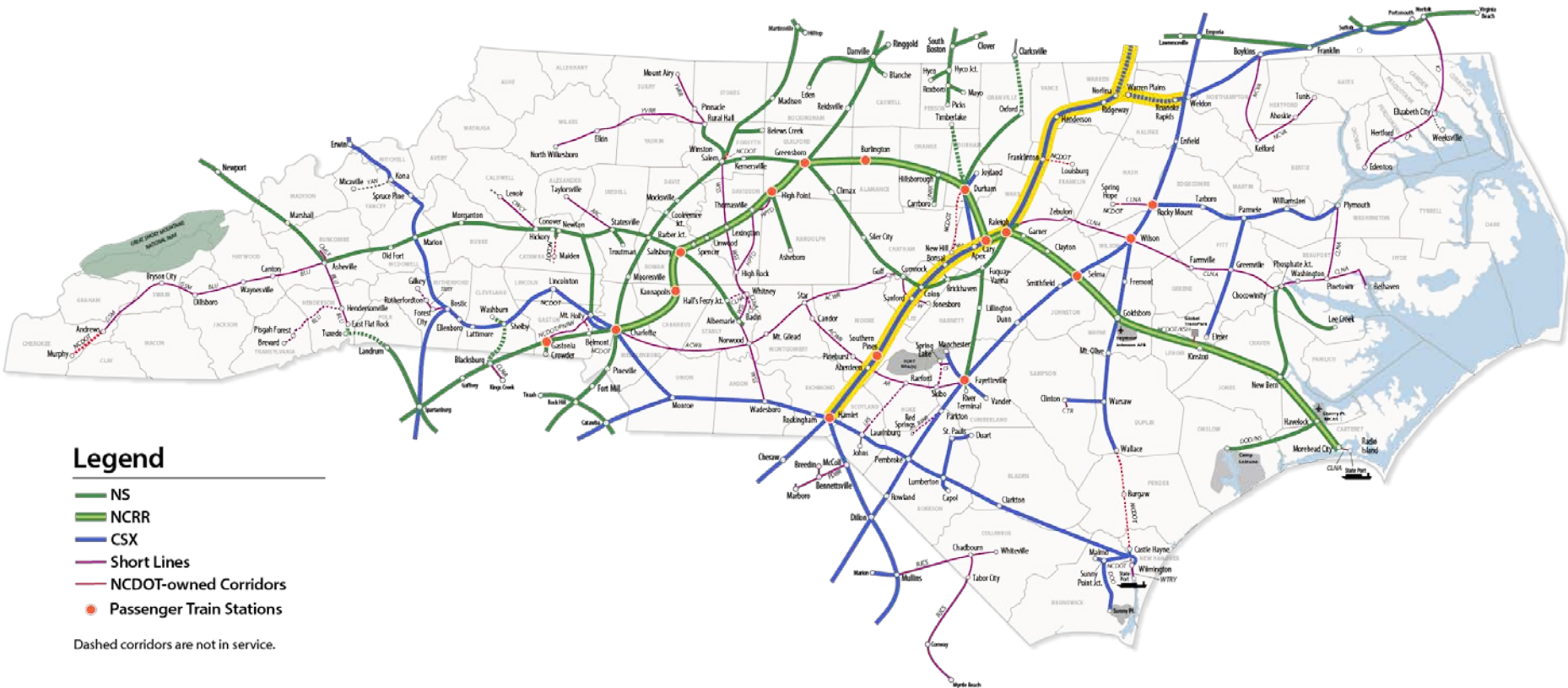
S-Line Opportunity

Julie White

Deputy Secretary for Multimodal Transportation

February 10, 2020

North Carolina Railroad System



History of the S-Line

The S-Line was once a primary rail route.



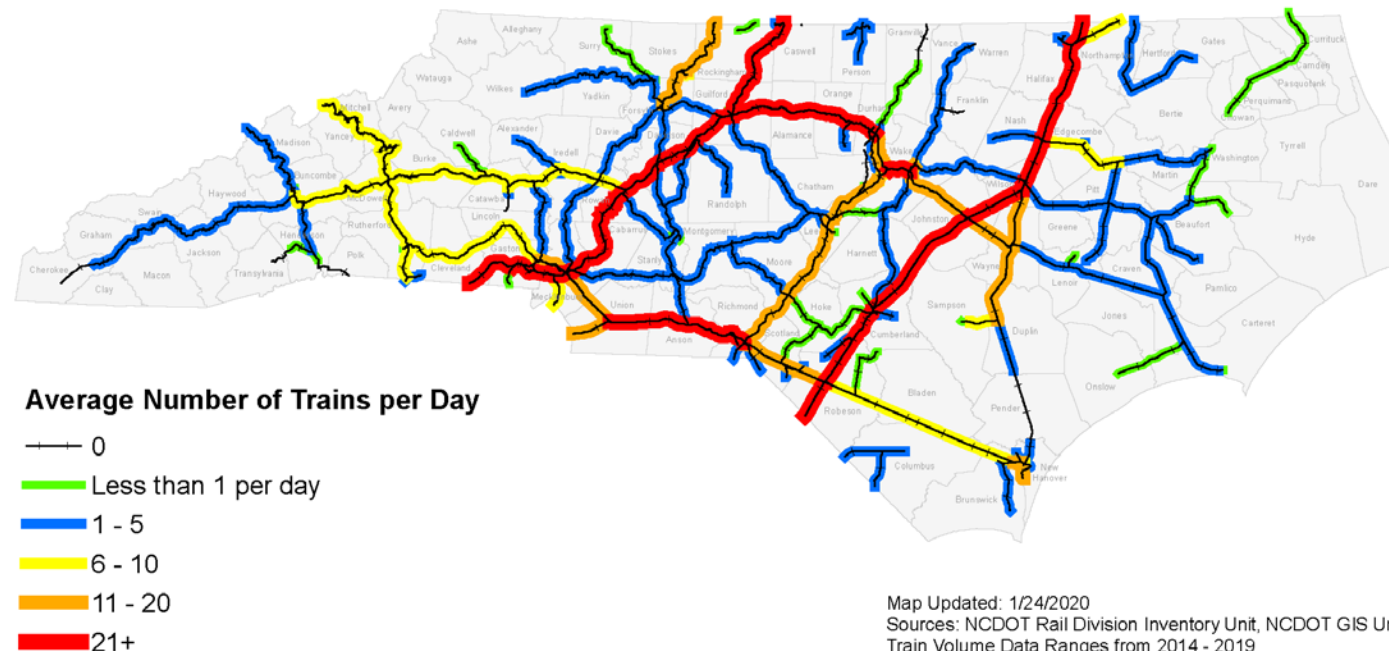
Passenger train near present day Spring Forest Road



Freight train north of Franklinton

Class I Railroads “Rationalizing” Their Networks

- Focusing on core routes that carry large volumes of through freight trains
- Selling off stub ended and redundant rail corridors
- Lower-volume lines need to be preserved to serve existing and prospective industries and provide passenger rail expansion opportunities



Connectivity

Economic Development

Congestion

Population Growth

What problems in our
region can be **solved** by
multimodal transportation?

Mobility

Affordable Housing

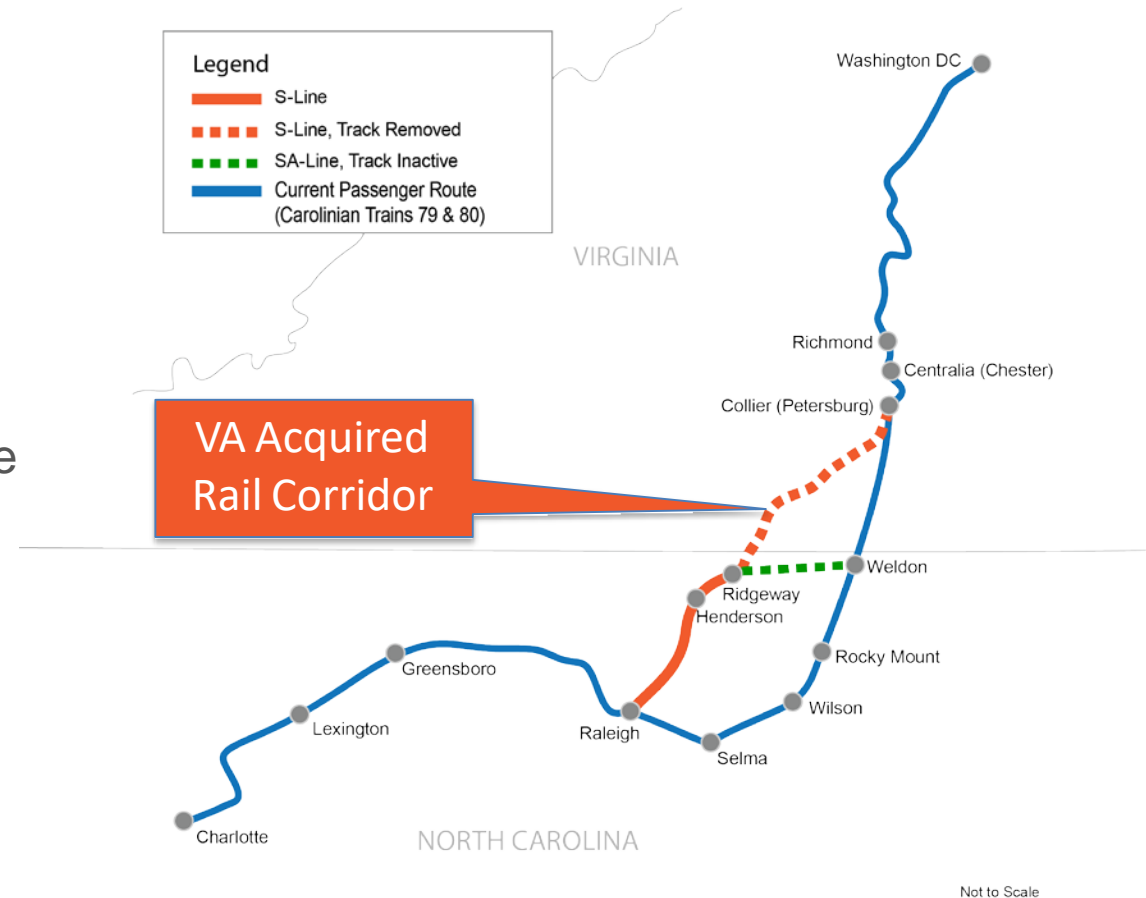
Infrastructure

Jobs

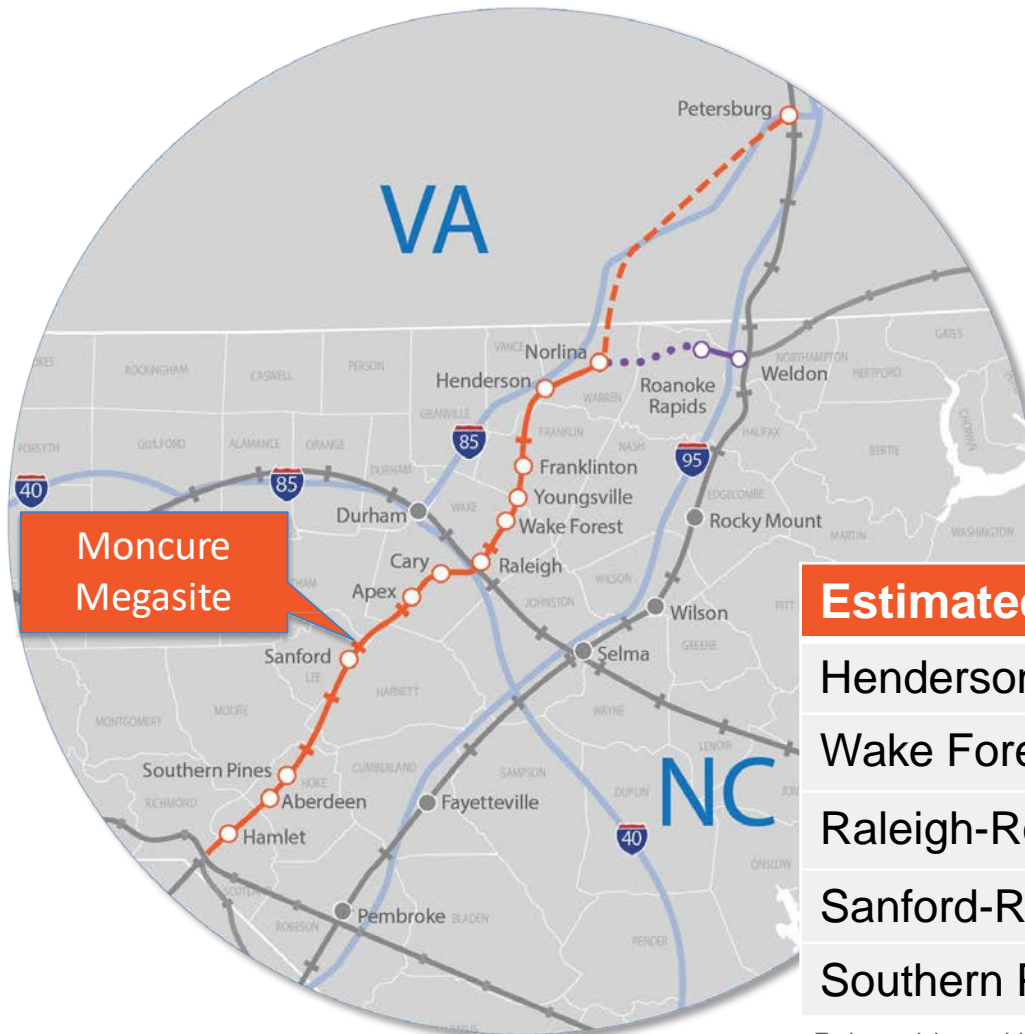
Improving Urban/Rural Connections

Virginia & CSX Landmark Rail Agreement

- State of VA purchased 350 miles of railroad right away and 225 miles of track
- State ownership allows for:
 - Control of land and access
 - On-time service
 - Implementation of future technologies
 - Economic development along the corridors



S-Line Opportunities



- Connect rural and urban communities
- Expand access for freight and megasites
- Provide economic development opportunities



Estimated Travel Times

Henderson-Raleigh	40 minutes
Wake Forest-Raleigh	20 minutes
Raleigh-Roanoke Rapids	90 minutes
Sanford-Raleigh	40 minutes
Southern Pines-Cary	58 minutes

Estimated time subject to further analysis.

Existing Conditions on the S-Line

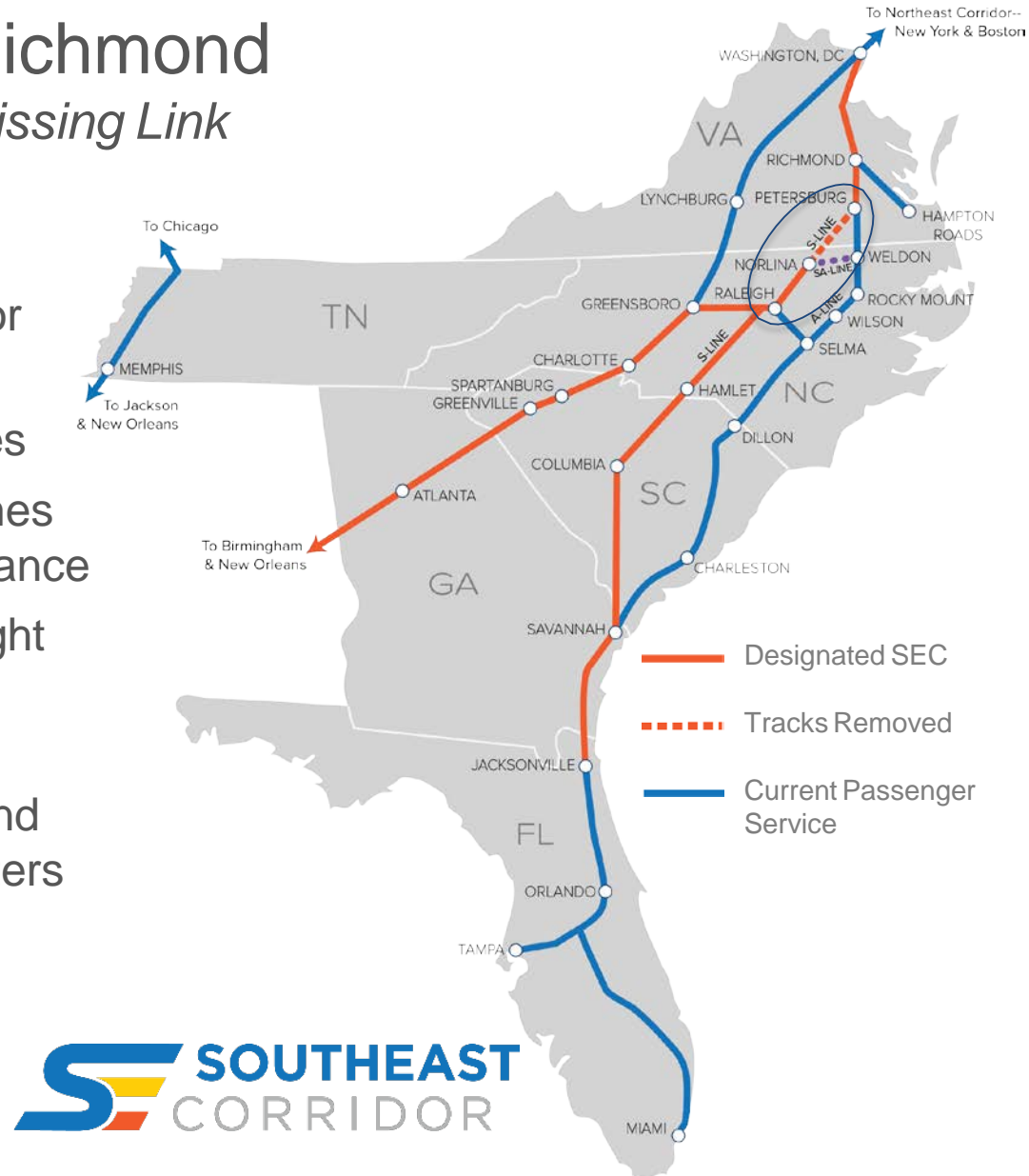
- **Petersburg to Ridgeway**
 - Out of service, tracks removed
 - Recently purchased by State of Virginia
- **Ridgeway to Raleigh**
 - 25 mph, local freight traffic only
 - NC will apply for CRISI 2020 grant to purchase
- **Raleigh to Hamlet**
 - 60 mph, local freight and passenger service



Raleigh to Richmond

S-Line is the Missing Link

- Critical link in the federally-designated Southeast Corridor
- Will expand and improve passenger and freight services
- Will reduce passenger trip times and improve on-time performance
- Will increase north-south freight capacity and rail network resiliency
- Will connect manufacturing and job centers to population centers



CRISI Program Background

- Consolidated Rail Infrastructure & Safety Improvements Program created as a part of the FAST Act and administered by FRA
- Individual project awards have ranged from:
 - \$58K to \$10M (FY 17)
 - \$157K to \$34M (FY 18)
- NCDOT Awards: \$10M (FY 17) and \$34M (FY 18)
- Funding Preferences
 - Projects with < 50% federal share
 - Projects with multiple non-federal sources



Anticipated CRISI Features for FY 2020

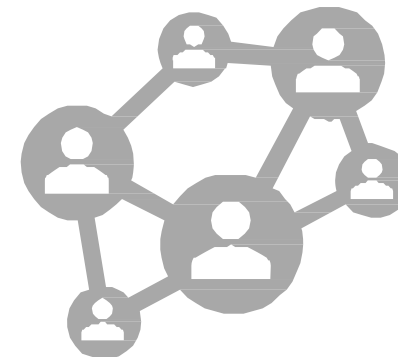
- All previous features
- Additional funding category for Right of Way (ROW)
 - \$45 Million reserved for projects that require ROW acquisition, track, or track structure
- Late Spring / Early Summer Release of Funding Opportunity



\$325M
available
funding

Stakeholder Meetings

- Local, State, and Federal Elected Officials
- City and County Engineering, Planning, and Development Staff
- Transit Agencies, MPOs, RPOs, Advocacy Groups, Chambers of Commerce
- Economic Development Professionals, Developers, Financial Consultants, Rail Advisory Industry Leaders, Railroads



Next Steps

Building on Virginia's Success

- Encourage local government and others to pass resolutions of support
- Seek matching non federal funds for CRISI application
- Compete for CRISI 2020 for the S line
- Partner with MPOs, RPOs, and communities to progress corridor development and planning
- Secure funding for incremental projects through STI and federal discretionary grants to improve rail infrastructure for new rail services



BOC Feedback

- Does the BOC want to issue a resolution of support at the February 17, 2020 Meeting?

Appendix: Additional CRT Slides

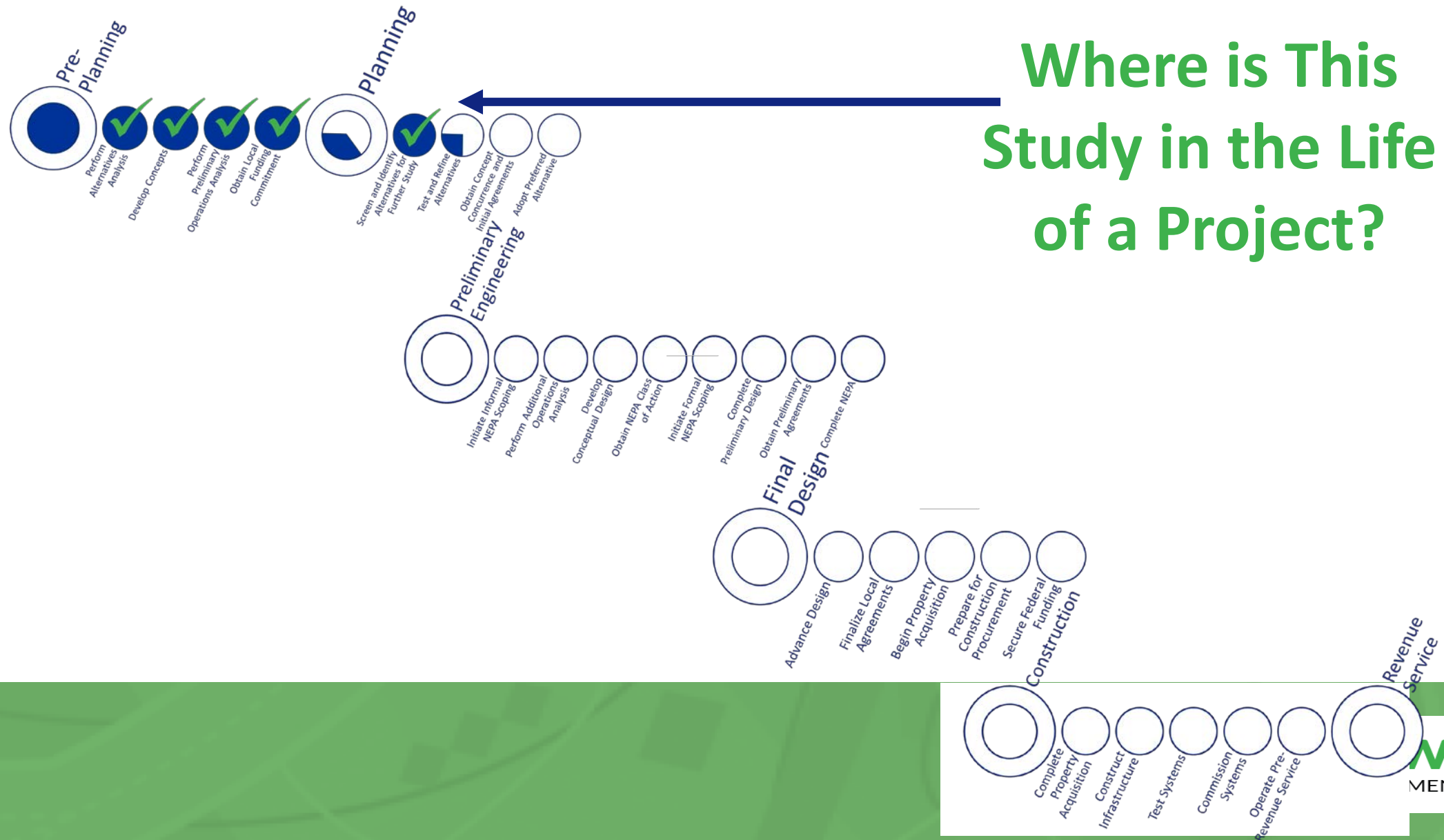


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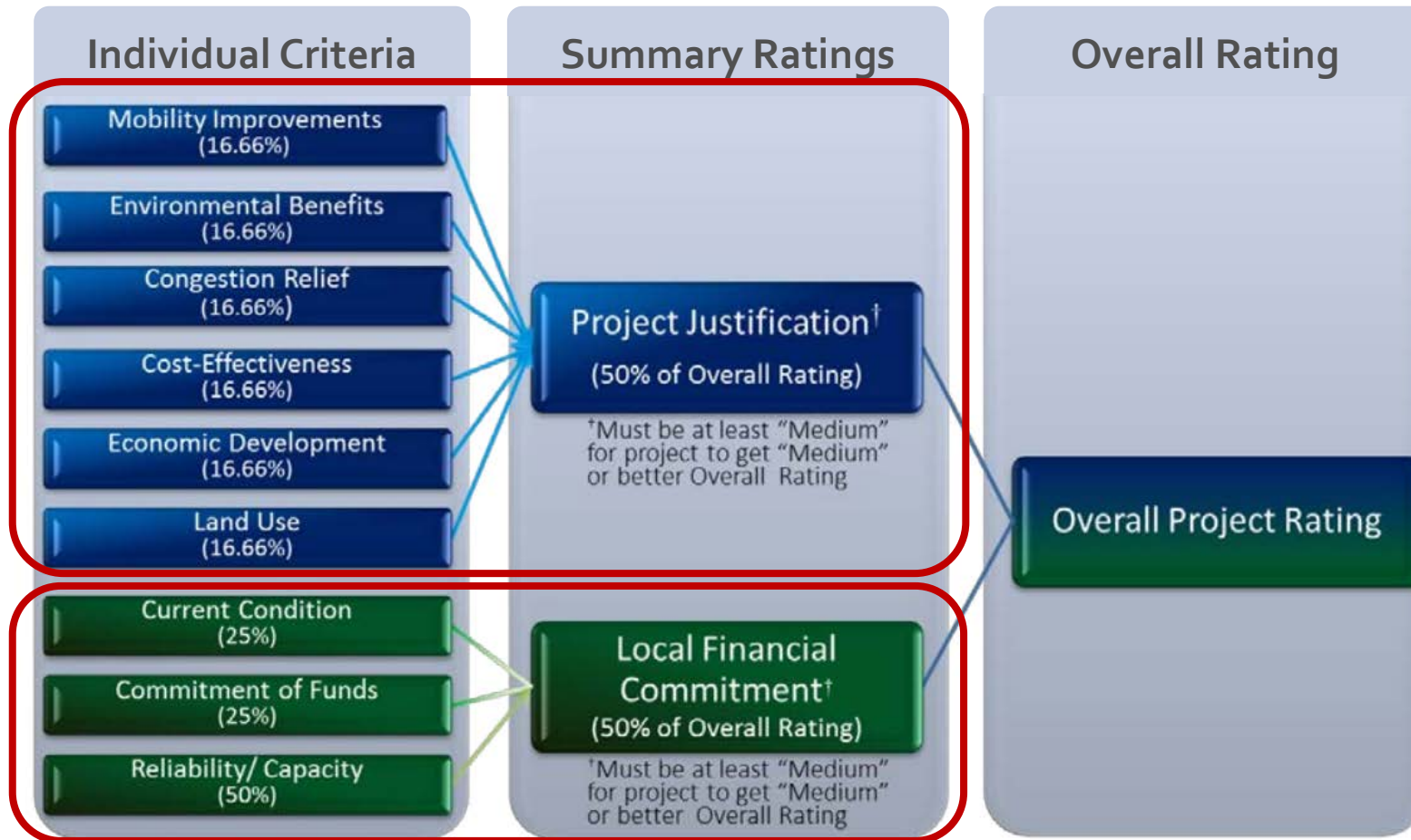


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Where is This Study in the Life of a Project?



Must Score Medium in Both Categories to Qualify for Federal Funds



FTA Six Project Justification Factors

Criterion	Description
<u>Criteria Based on Cost Estimates and Ridership Modeling</u> <i>Calculated Based on Average of Current Year (2018) and Horizon Year (2040) Models</i>	
Mobility Improvements	Total annual trips on the project, with trips of riders from zero-car households doubled
Environmental Benefits	Monetized benefit of change in vehicle miles traveled, divided by annualized cost (capital and O&M)
Congestion Relief	New weekday trips on the project
Cost Effectiveness	Total annual project trips divided by annualized cost (capital and O&M)
<u>Criteria Based on Corridor Characteristics</u>	
Economic Development	Qualitative score based on city and county- adopted plans and policies, their performance, the potential of the project to impact development patterns and affordable housing plans and policies.
Land Use	Quantitative and qualitative score based on existing station area population density, jobs, affordable housing, central business district parking ratio and cost, and built environment characteristics

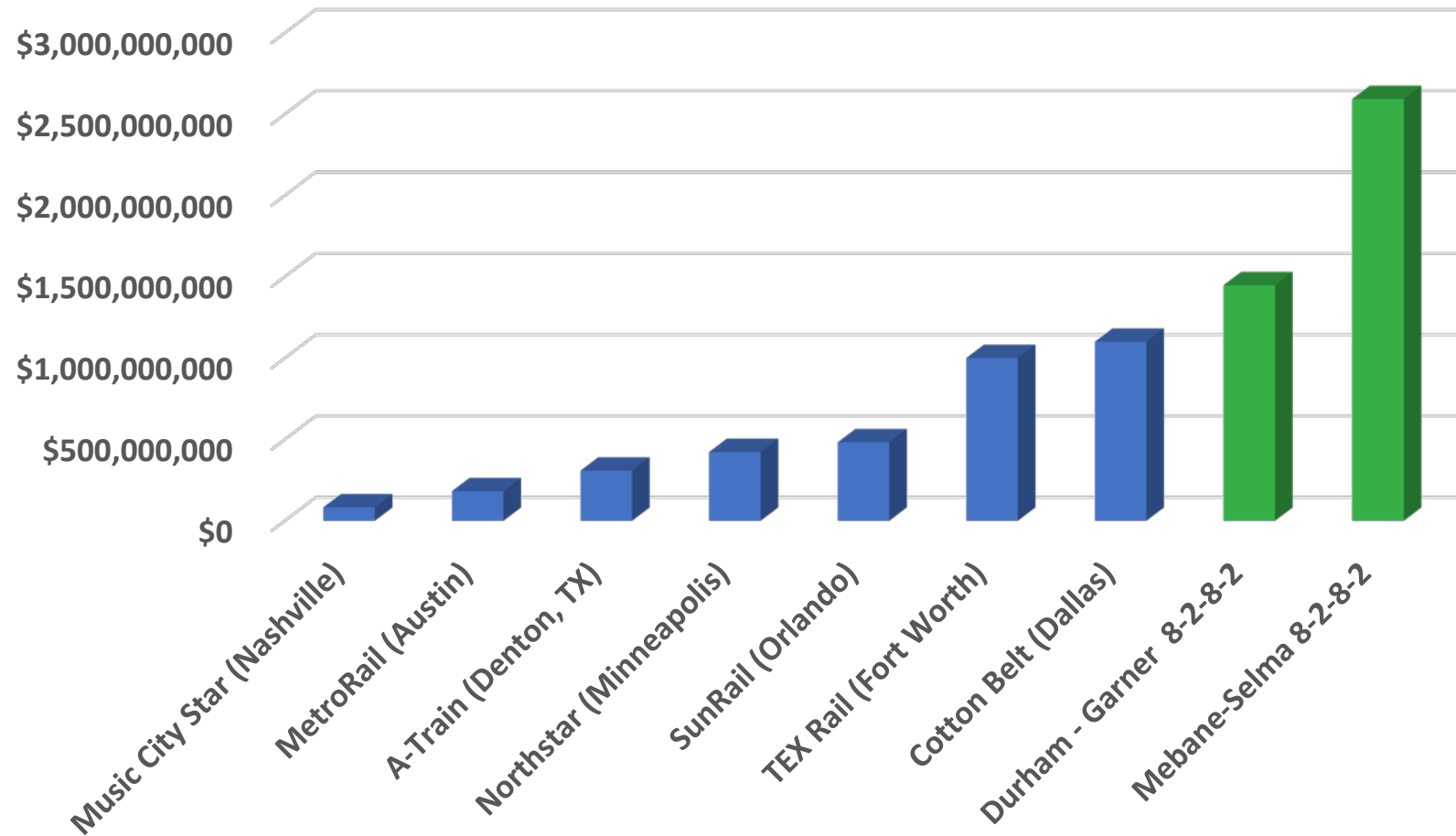
CRT Peer Comparison

- Prior Major Investment Study identified peer systems for comparison of key metrics:
 - System Capital Cost
 - Capital Cost Per Mile
 - Average Weekday Trips
 - Average Trip Length
 - Capital Cost Per Passenger Mile Traveled
 - Operating Cost Per Passenger Mile Traveled

note: not all data were available for each peer system

CRT System Cost Comparison

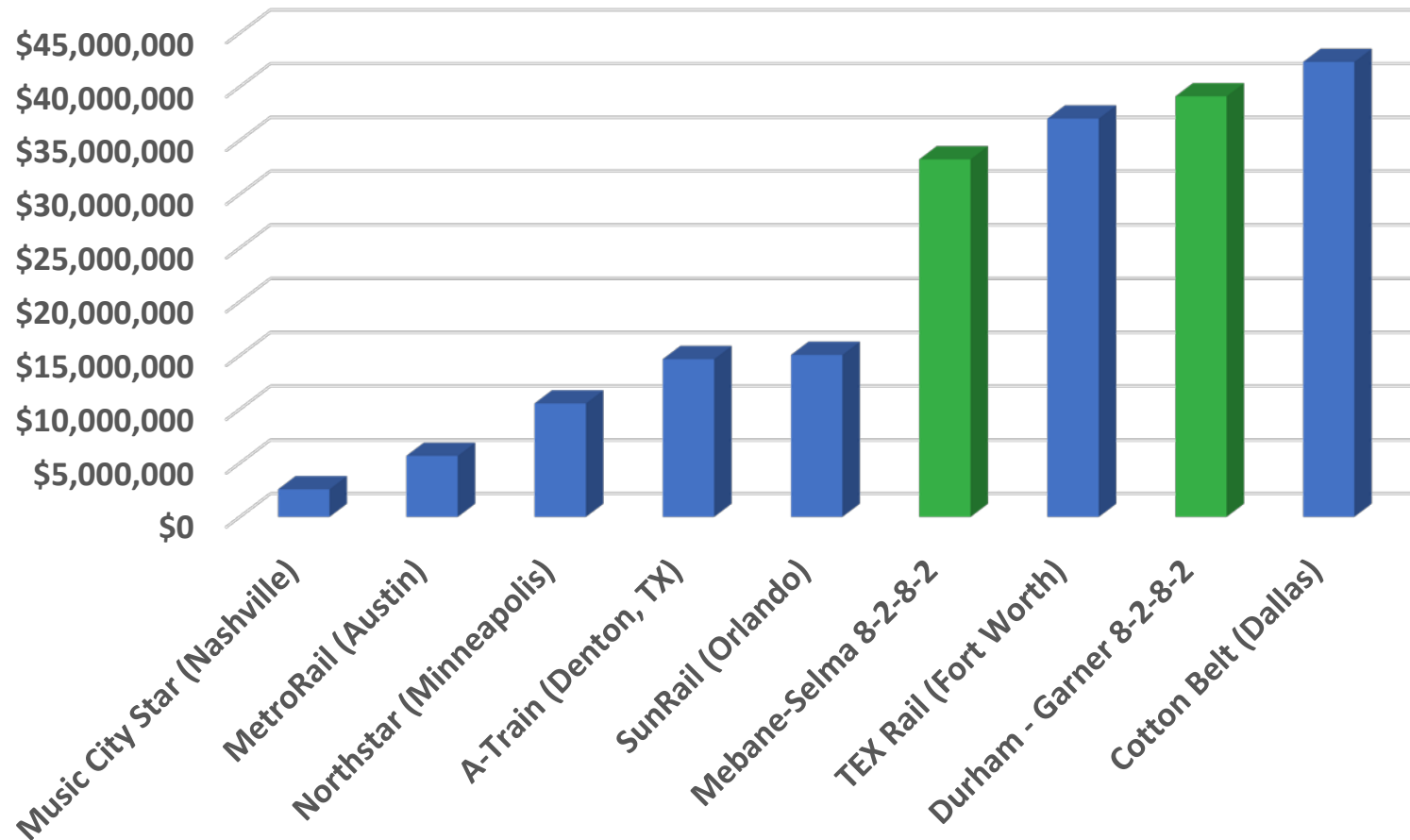
System Capital Cost (2020\$)



System Capital Cost in 2020\$
Source: 2019 CRT MIS Report

CRT Peer Cost Per Mile

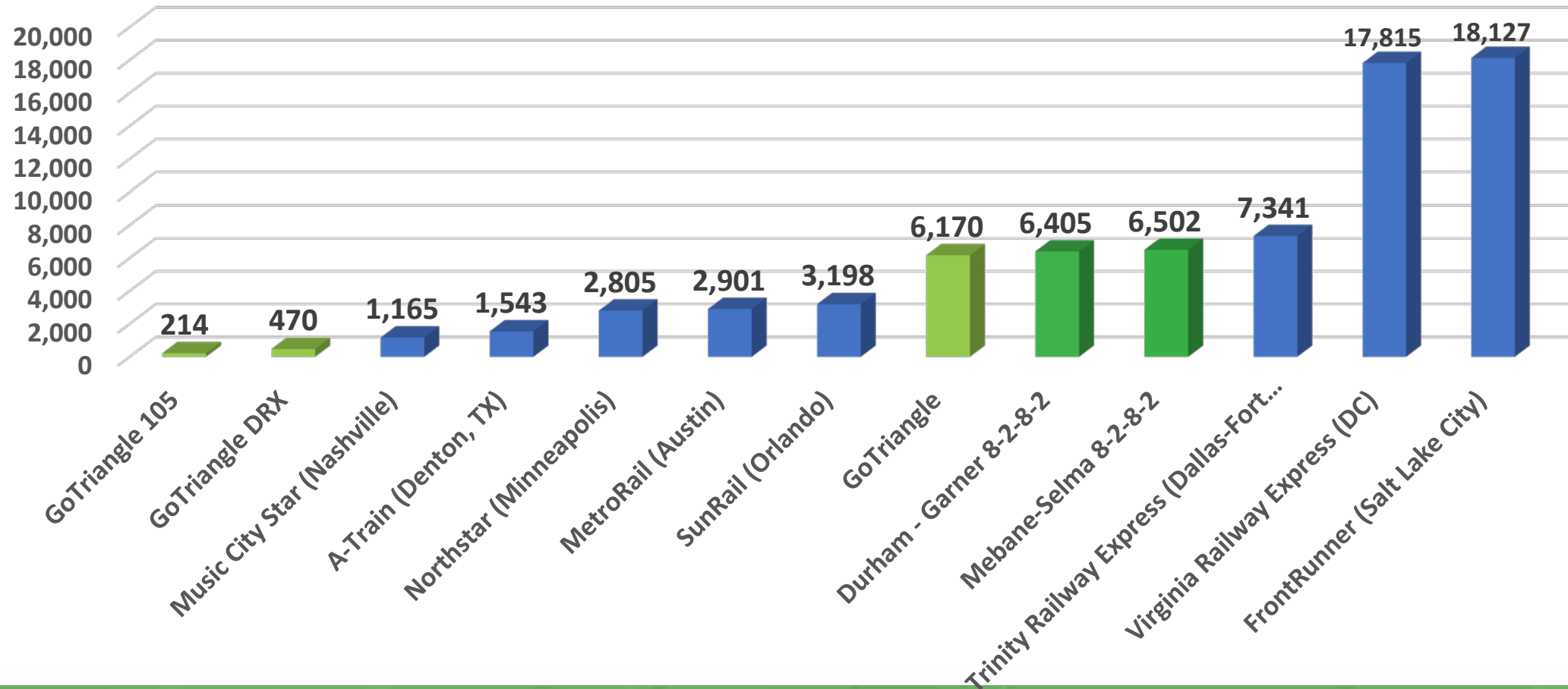
Capital Cost (2020\$)/Mile



System Capital Cost in 2020\$ divided by length of system.
Source: 2019 CRT MIS Report

CRT Weekly Ridership Comparison

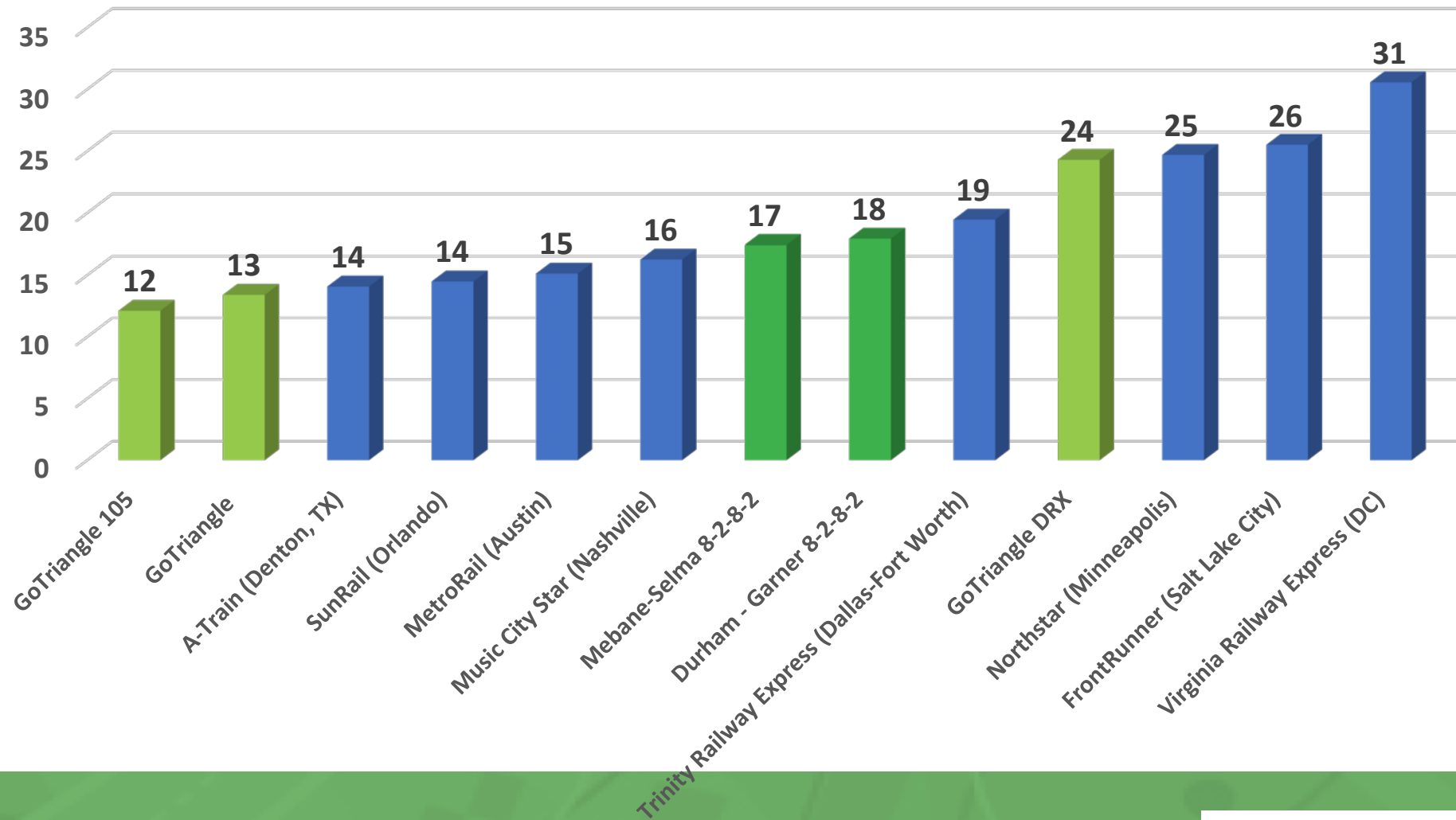
Average Weekday Trips (2018)



Average Weekday Ridership for 2018.
Source: NTD 2018 and GoTriangle FY2018 Bus Performance Report.

CRT Average Length

Average Trip Length (miles)

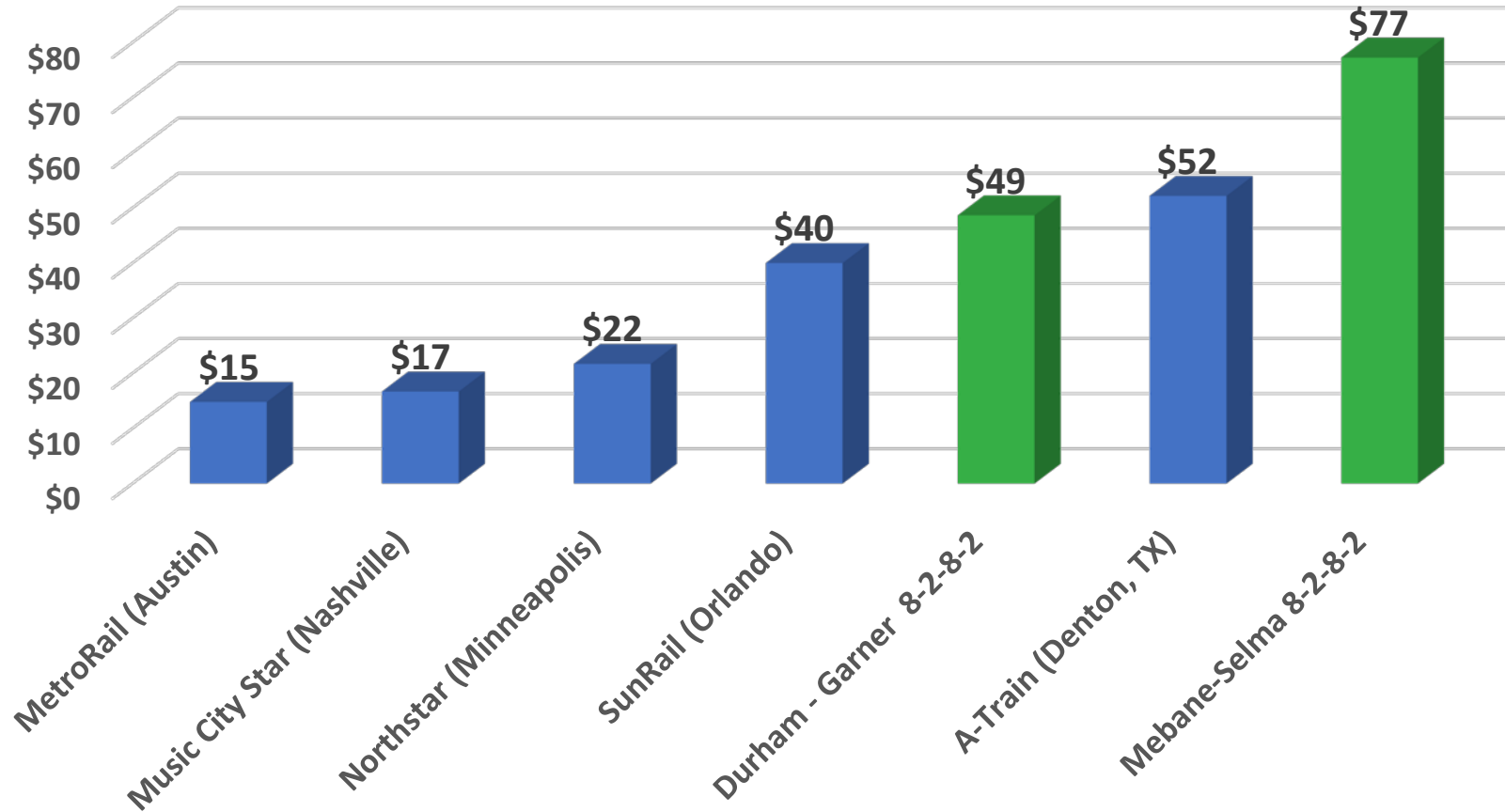


Average Unlinked Trip length.

Source: NTD 2018 and GoTriangle FY2019 Bus Operations Report.

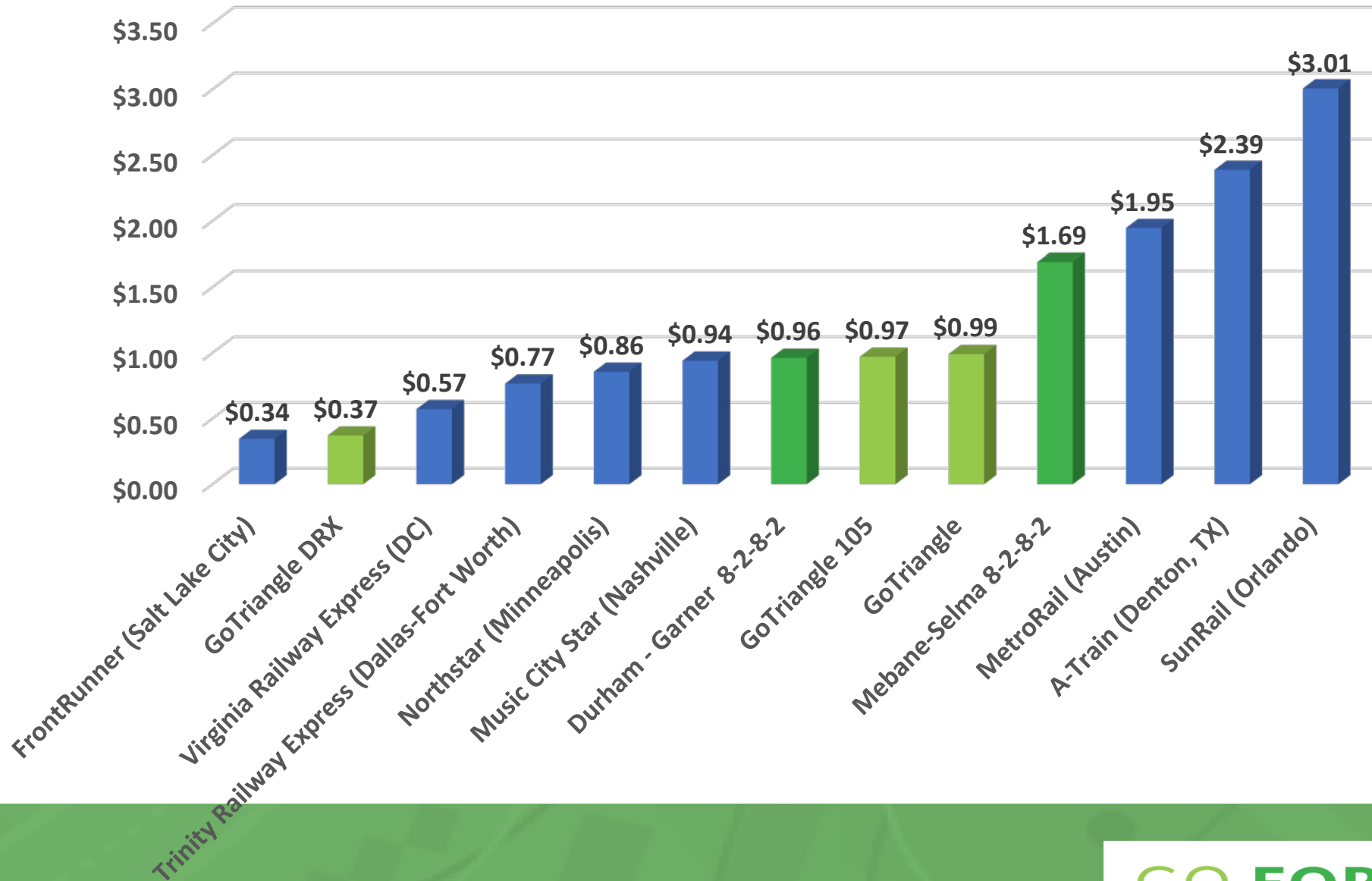
Capital Cost Per Passenger Mile

Capital Cost (2020\$) / Annual Passenger Miles Traveled (2018)



Average System Capital Cost in 2020\$ divided by total annual passenger miles traveled
Source: NTD 2018 and 2019 CRT MIS Report.

Operating Cost (2019\$) / Annual Passenger Miles Traveled (2018)



Average System Operating Cost in 2019\$ divided by total annual passenger miles traveled
Source: NTD 2018, and GoTriangle FY19 Bus Operations Report