



Regional Transportation Alliance 2020 Transportation Breakfast

Presented by the Research Triangle Foundation of NC

Tuesday, Aug. 4 | 8 a.m.



@RTATriangle
#RTAbfast20

WELCOME

Joe Milazzo II
RTA executive director

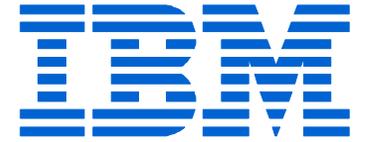
WELCOME

Maeve Gardner, RTA chair
GlaxoSmithKline

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RTA Gold and Sustaining Gold Members



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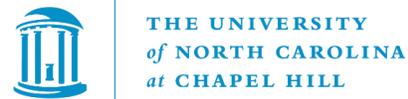
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Event Sponsors

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INTRODUCTIONS

Joe Milazzo II
RTA executive director

Regional FAST study

VHB



FAST

Freeway And Street-based Transit network

Presented By:
VHB Team

RTA Breakfast, August 4, 2020

Preliminary Findings Update





Taruna Tayal, PMP
VHB | Project Manager



Don Bryson, PE
VHB | Principal-in-Charge



Chris Brasier, EI
VHB | Transit Planner



Roberta MK Fox, AIA, ASLA
Catalyst Design | Stakeholder Engagement
and Implementation



Sasha Pejicic, PMP
Stantec | Innovative Solutions



- **Advance ideas for improving and accelerating regional connectivity**
- Accelerate effective, all-day mobility along our freeway and street-system that can expand and improve over time
- Complement existing and emerging travel options
- Serve as a valuable template for other regions of the state

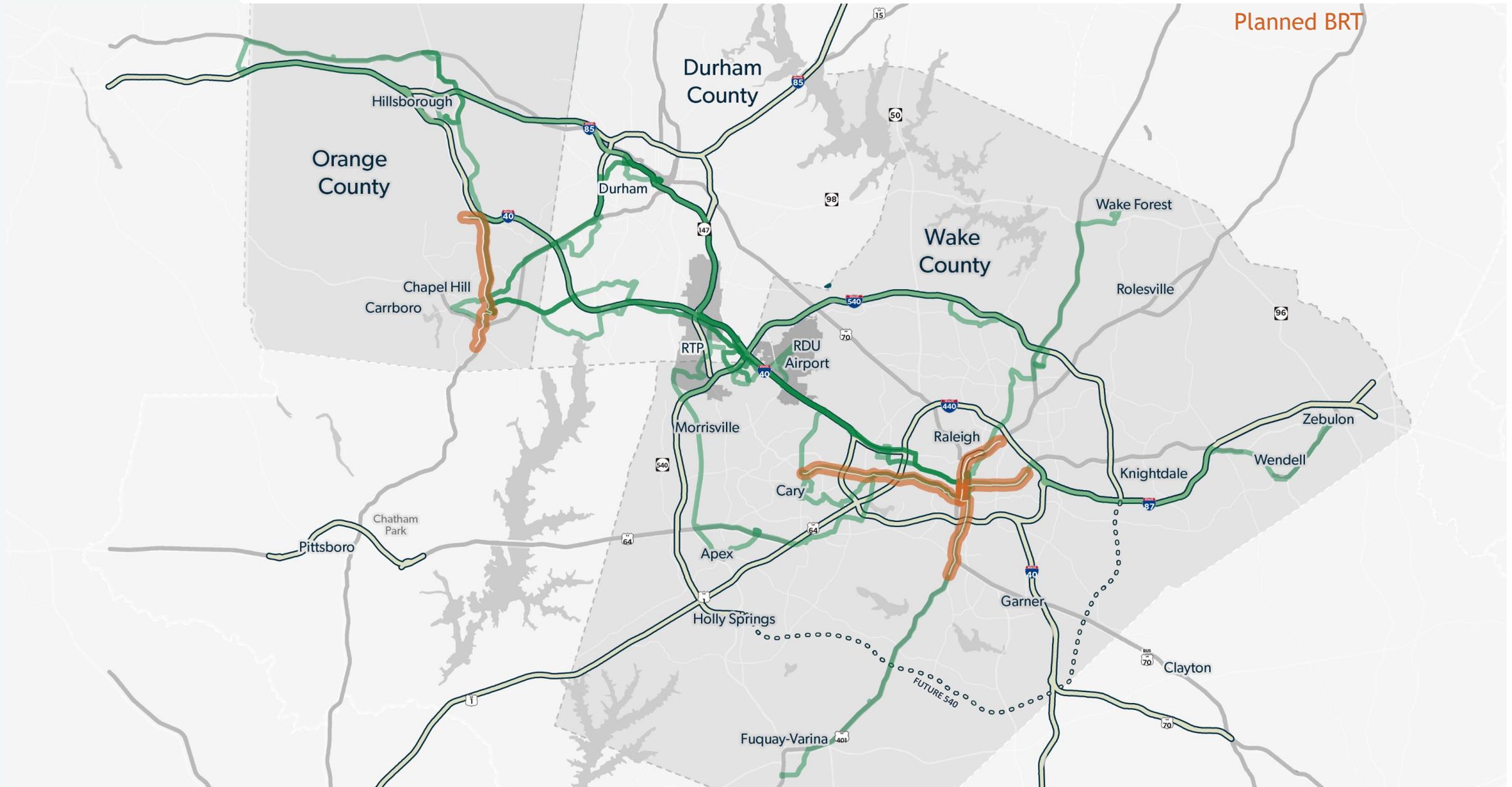
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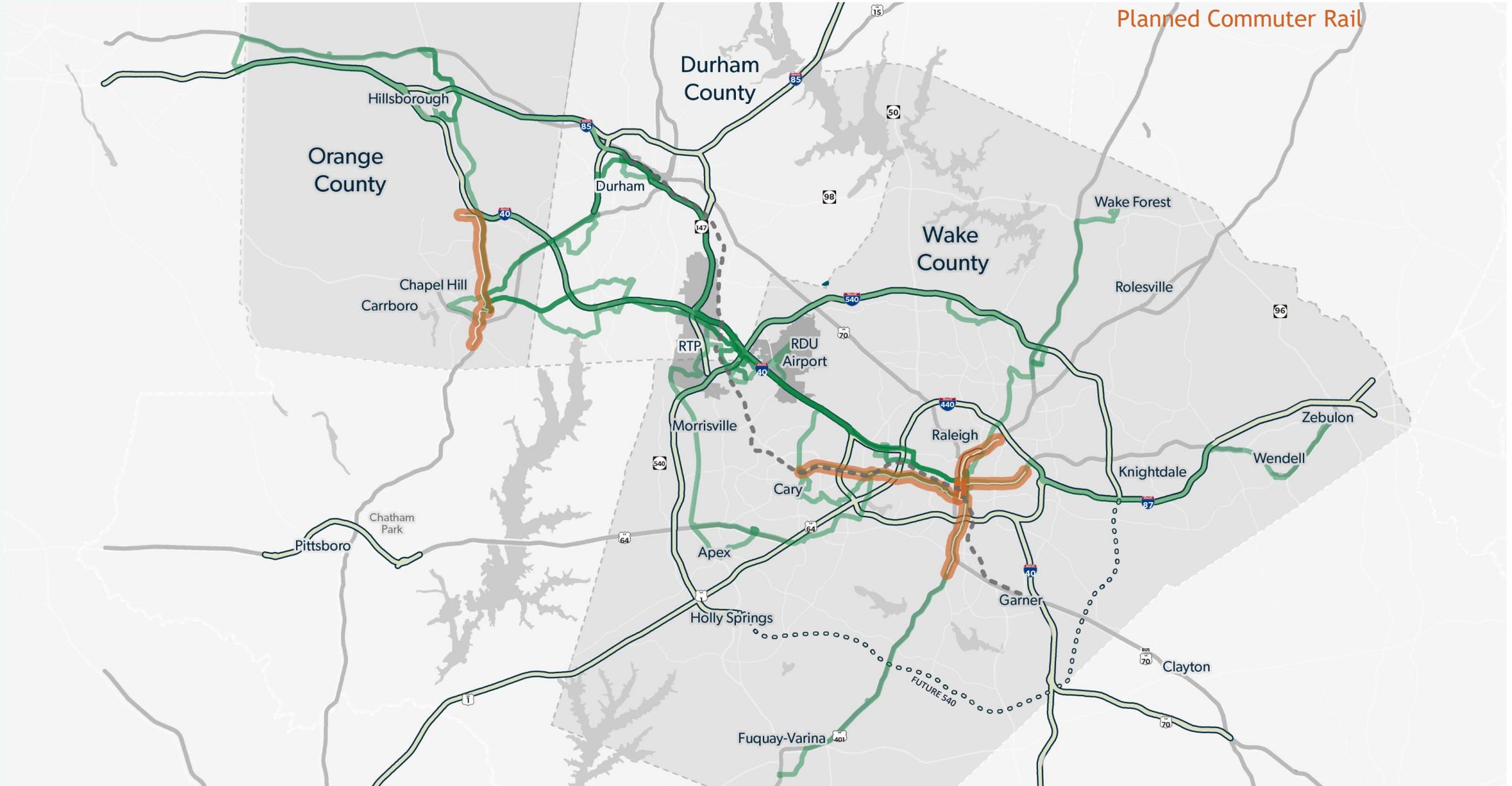
FAST

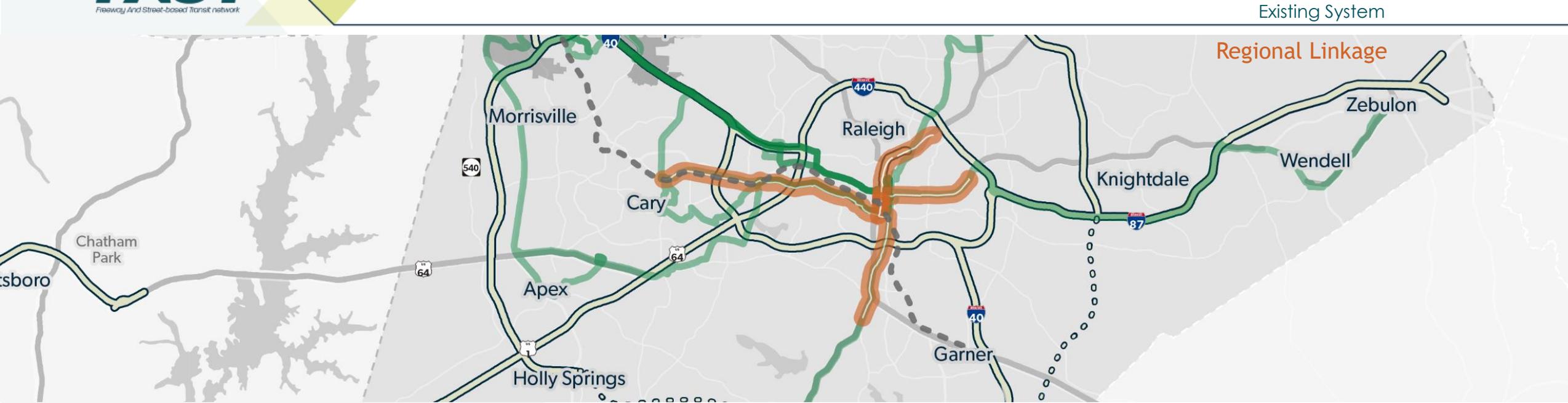
Freeway And Street-based Transit network

FAST study approach

Planned BRT







- **BRT corridors:** High-frequency, high quality, subregional connections
- **Commuter rail:** Express, regional, low/moderate frequency connection
- **FAST:**
 - Assumes completion of BRT, multiple linkages to commuter rail
 - Provides complementary, effective, regional connections
 - **Accelerates creation of true regional transit network**

Creating a regional FAST network

- **Bigger** network – more routes
- **Better** network – more frequency, new service patterns
- **Faster** network – more “transit advantages”

FAST mindset:

Add improvements quickly, then scale them over time

Mobility criteria

- Travel Demand
- Transit Performance
- Traffic Performance
- Context

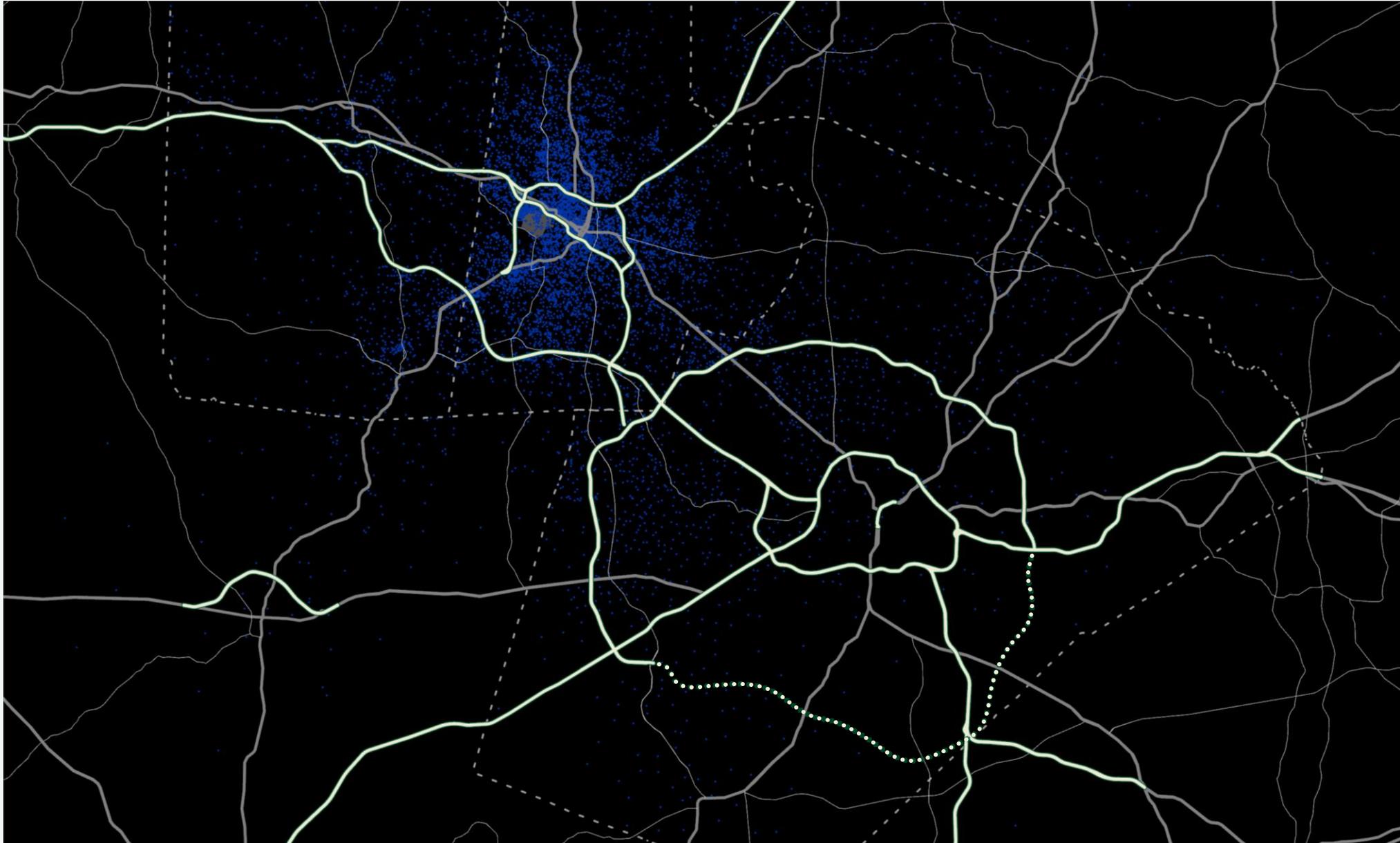
Accessibility criteria

- Access Equity
- Planned Projects
- Missing Links

2030 Trip Origins to Chapel Hill



2030 Trip Origins to Durham and Duke



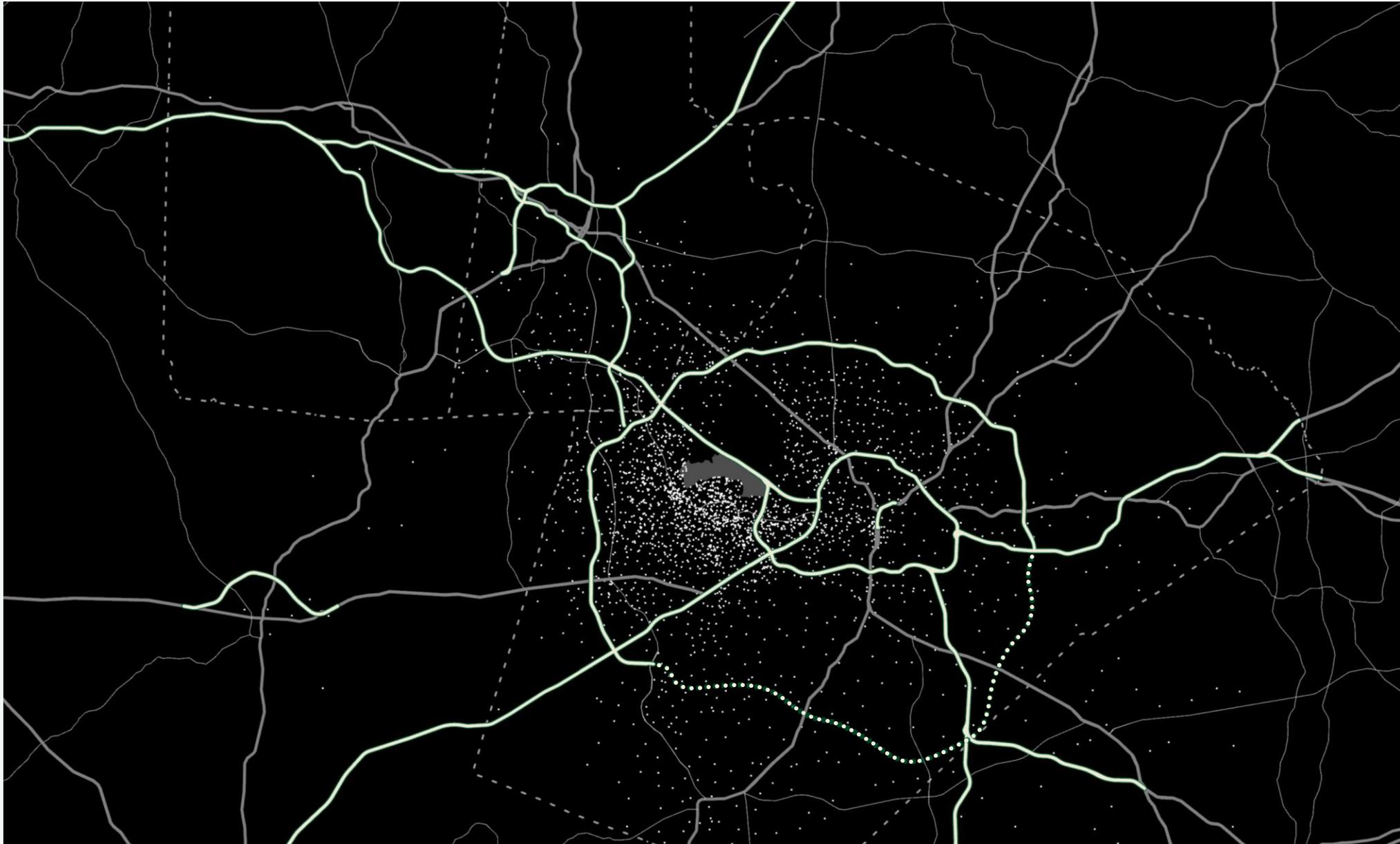
2030 Trip Origins to South Durham





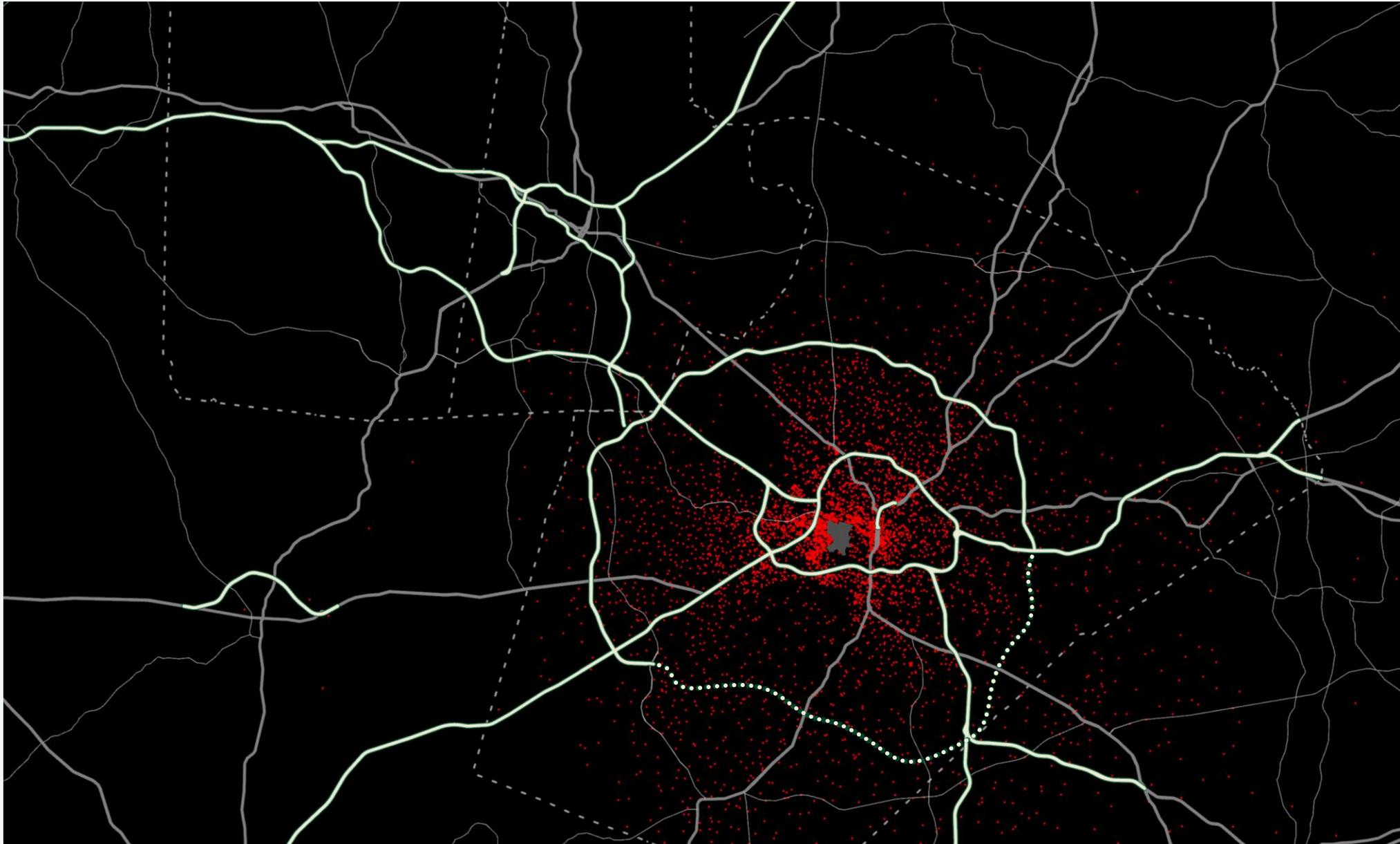


2030 Trip Origins to North Cary



2030 Trip Origins to Blue Ridge/Crabtree





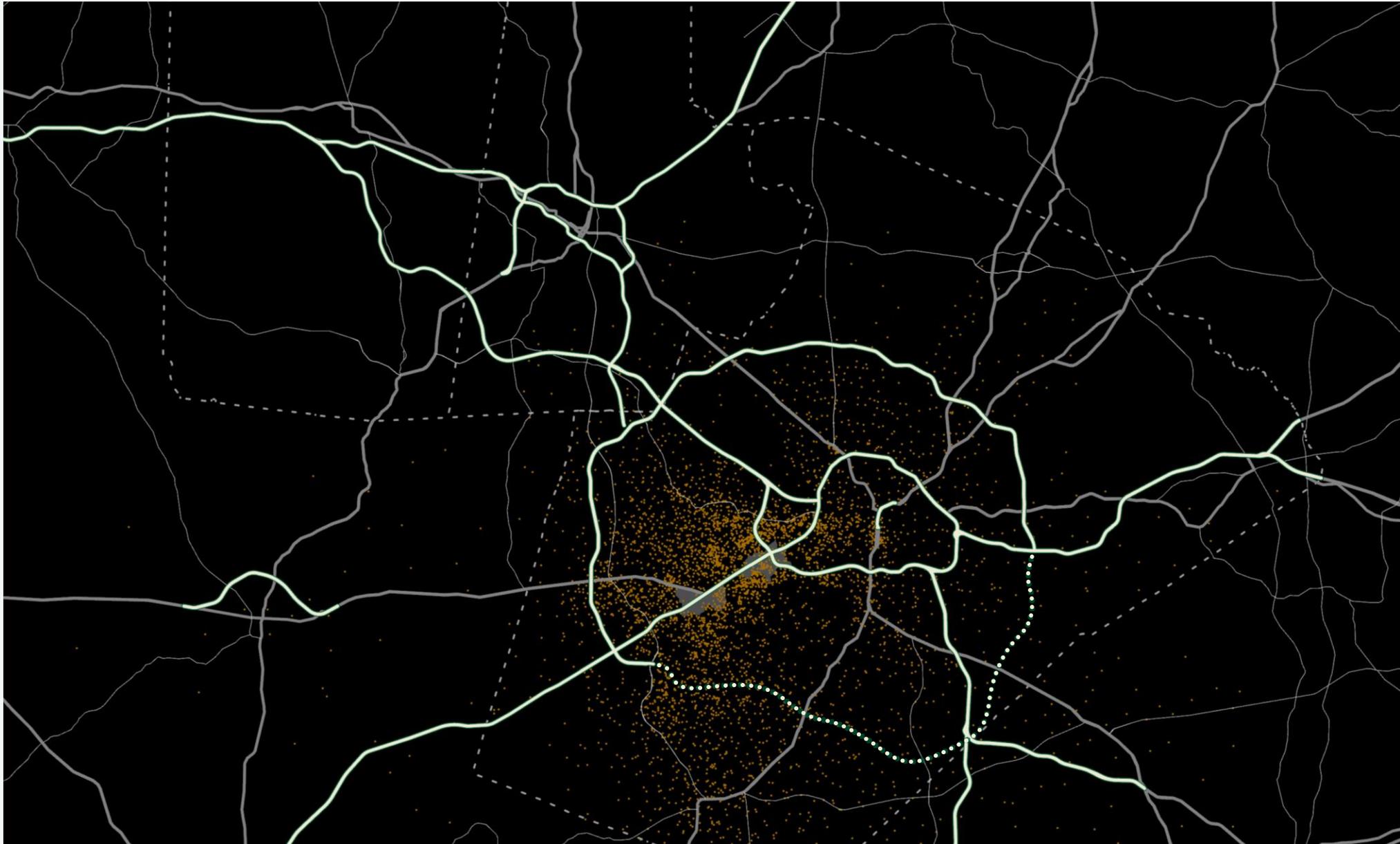
2030 Trip Origins to Downtown Raleigh



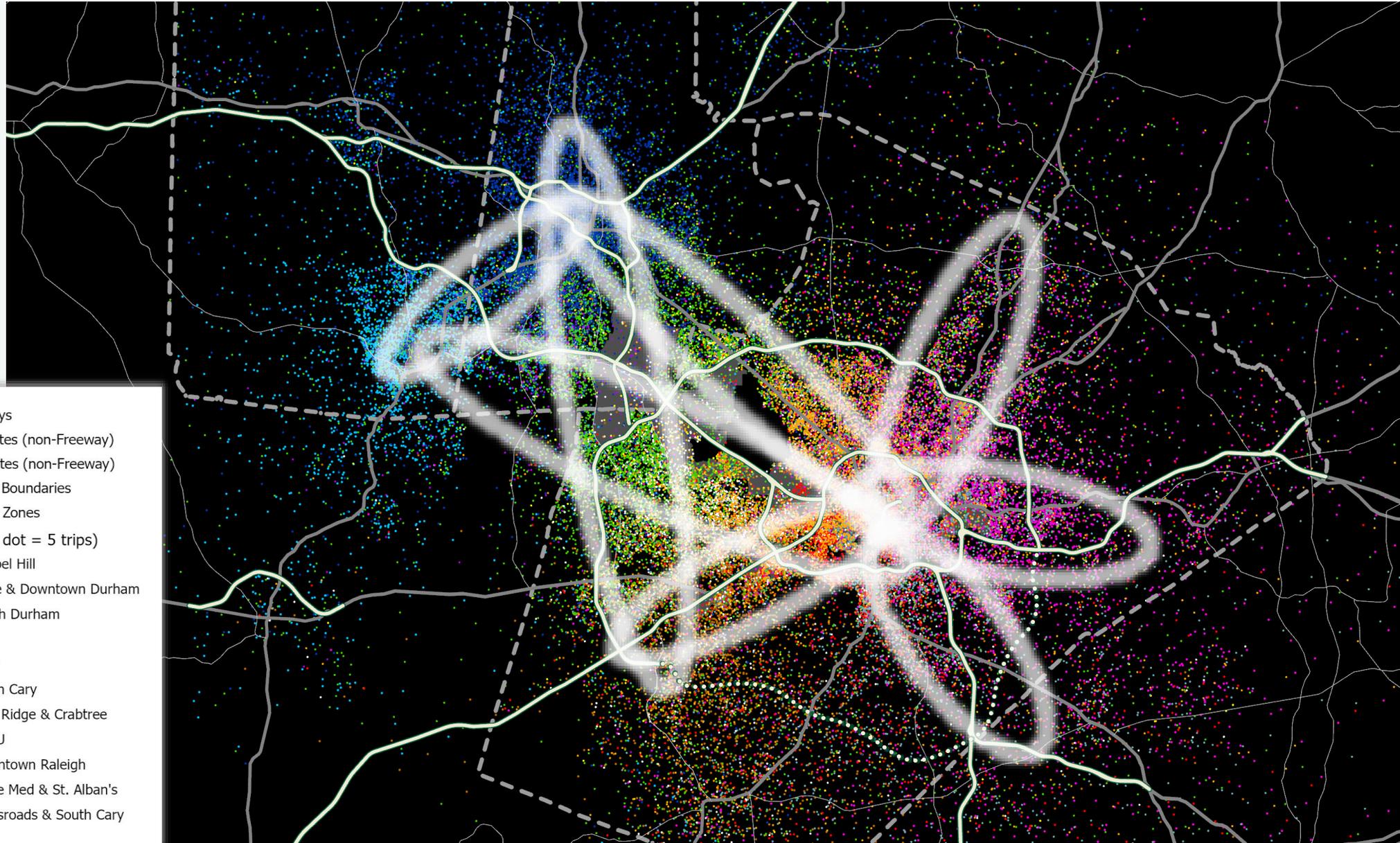
2030 Trip Origins to WakeMed/St. Albans



2030 Trip Origins to Crossroads/S Cary



2030 Trip Origins to All Zones



-  Freeways
-  US Routes (non-Freeway)
-  NC Routes (non-Freeway)
-  County Boundaries
-  Activity Zones

Trip Origins (1 dot = 5 trips)

-  to Chapel Hill
-  to Duke & Downtown Durham
-  to South Durham
-  to RTP
-  to RDU
-  to North Cary
-  to Blue Ridge & Crabtree
-  to NCSU
-  to Downtown Raleigh
-  to Wake Med & St. Alban's
-  to Crossroads & South Cary

The background features a central white diamond shape with a metallic gradient, set against a dark teal background. Four lime green triangles are positioned at the corners, meeting at the center. A white line with small yellow circular nodes runs through the diamond, connecting the text on the left to the text on the right.

FAST

Freeway And Street-based Transit network

Potential transit advantages

Low-cost transit advantages -- Freeways

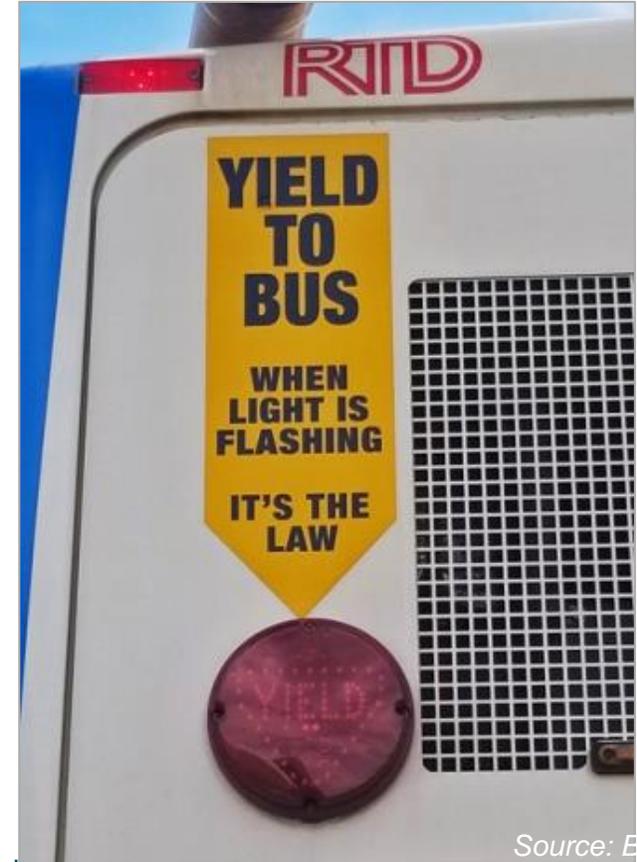


Source: SounderBruce

On-ramp signal bypass



Bus On Shoulder System (BOSS)



Source: E

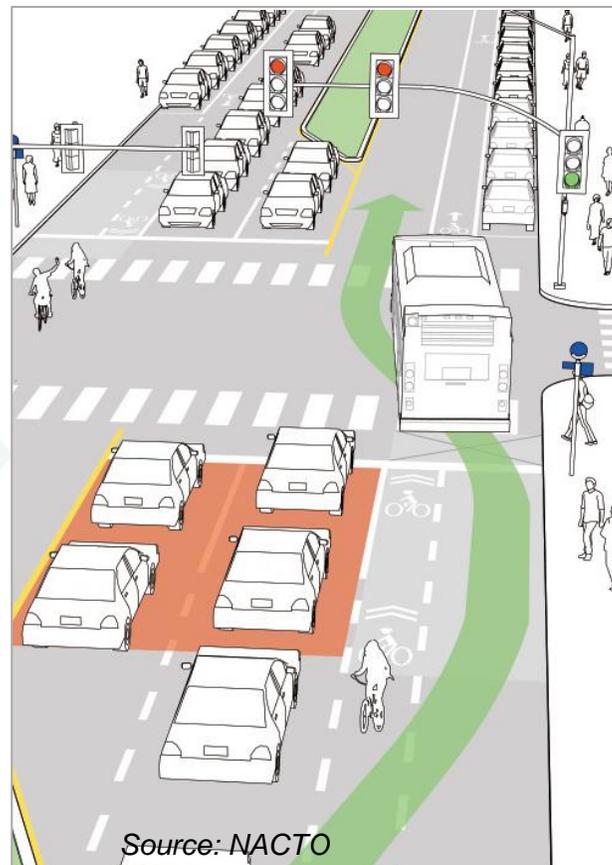
Yield-to-Bus

Prioritize corridor features where they are anticipated to have the greatest impact.

Low-cost transit advantages - Streets



● Transit Signal Priority



● Queue Jump Lanes



● RED Lanes

Prioritize corridor features where they are anticipated to have the greatest impact.

Stop Features



Source: Metropolitan Council

● Level Boarding



Source: KCATA

● Enhanced Bus Stop



Source: Oran Viriyincy

● "Floating" Bus Stop

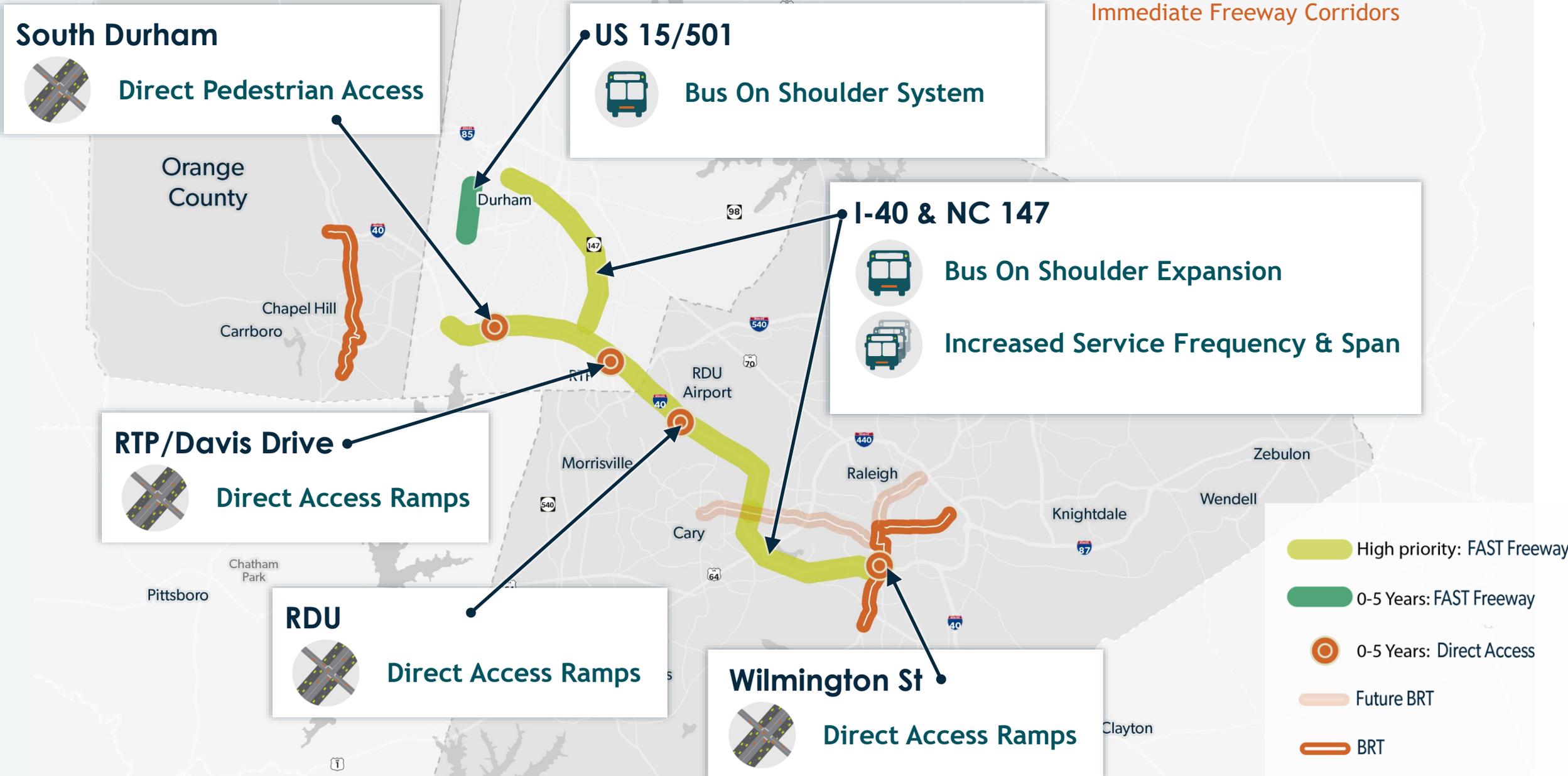
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FAST

Freeway And Street-based Transit network

Proposed 2025 FAST network

Immediate Freeway Corridors



South Durham
Direct Pedestrian Access

US 15/501
Bus On Shoulder System

I-40 & NC 147
Bus On Shoulder Expansion
Increased Service Frequency & Span

RTP/Davis Drive
Direct Access Ramps

RDU
Direct Access Ramps

Wilmington St
Direct Access Ramps

-  High priority: FAST Freeway
-  0-5 Years: FAST Freeway
-  0-5 Years: Direct Access
-  Future BRT
-  BRT



Identify Freeway & Street Corridors

US 15/501

- Traffic Signal Priority
- Queue Jump Lanes
- Enhanced Access/Stops/Boarding

Holloway/Main/Erwin

- Traffic Signal Priority
- Queue Jump Lanes
- Enhanced Access/Stops/Boarding
- Floating Bus Stops

Six Forks Rd

- Traffic Signal Priority
- Queue Jump Lanes
- Enhanced Access/Stops/Boarding
- RED Bus Lanes (portion)
- Floating Bus Stops

Capital Blvd

- Traffic Signal Priority
- Queue Jump Lanes
- Future Through Lanes

NC 54/Raleigh Rd

- Traffic Signal Priority
- Queue Jump Lanes
- Enhanced Access/Stops/Boarding
- RED Bus Lanes (portions)

Glenwood Ave (west of I-440)

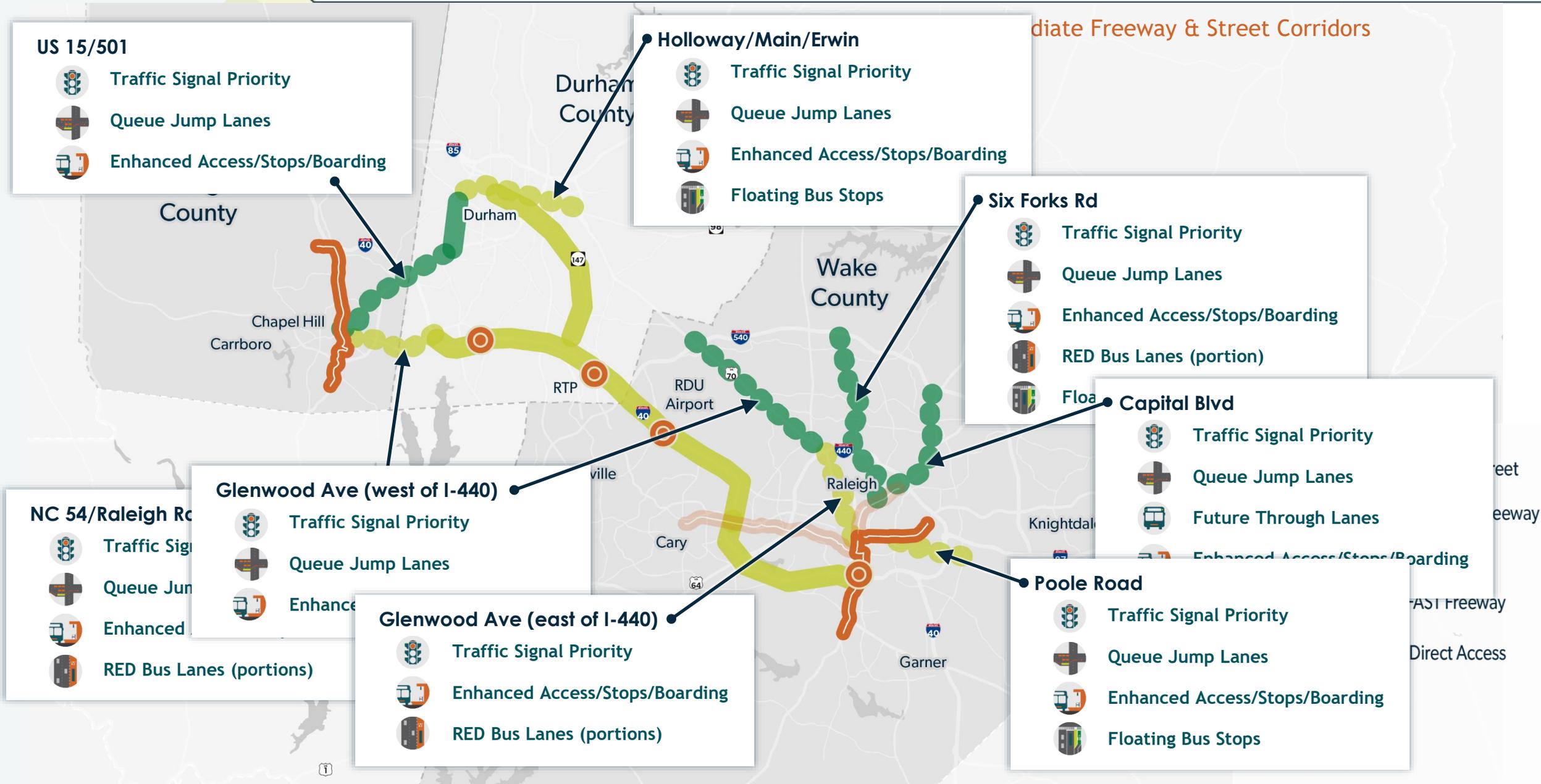
- Traffic Signal Priority
- Queue Jump Lanes
- Enhanced Access/Stops/Boarding

Glenwood Ave (east of I-440)

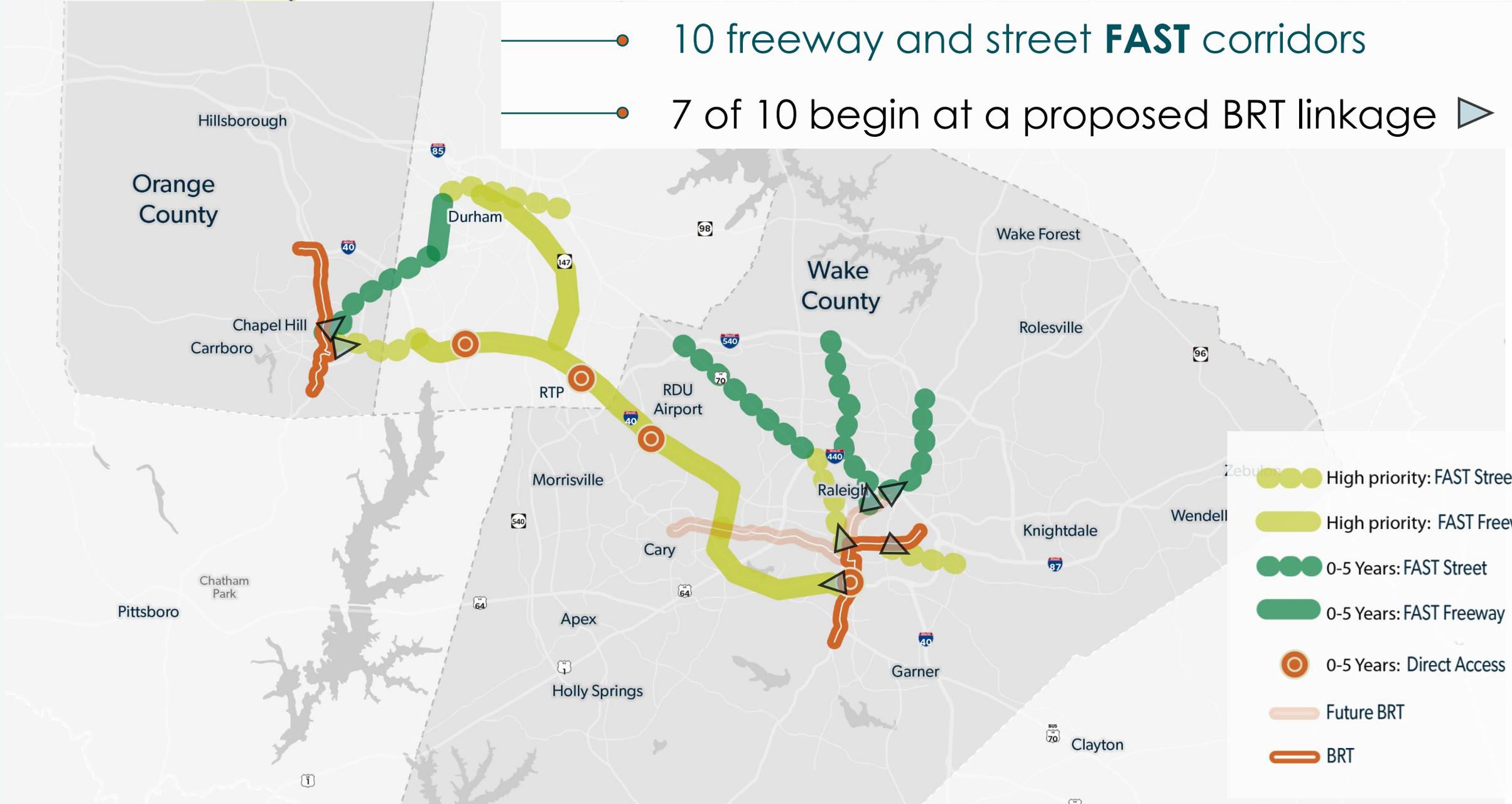
- Traffic Signal Priority
- Enhanced Access/Stops/Boarding
- RED Bus Lanes (portions)

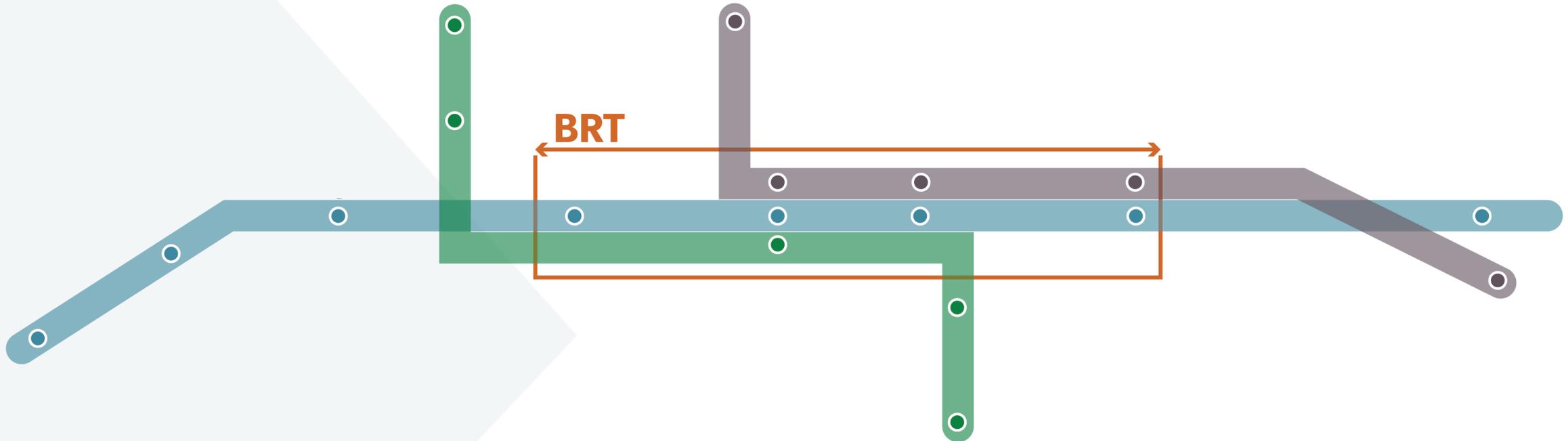
Poole Road

- Traffic Signal Priority
- Queue Jump Lanes
- Enhanced Access/Stops/Boarding
- Floating Bus Stops



- 10 freeway and street **FAST** corridors
- 7 of 10 begin at a proposed BRT linkage ▶





"Interlining" with 2+ routes along part of a BRT lane (e.g.)

- Increased speed and reliability
- Higher frequency
- Multiple travel options

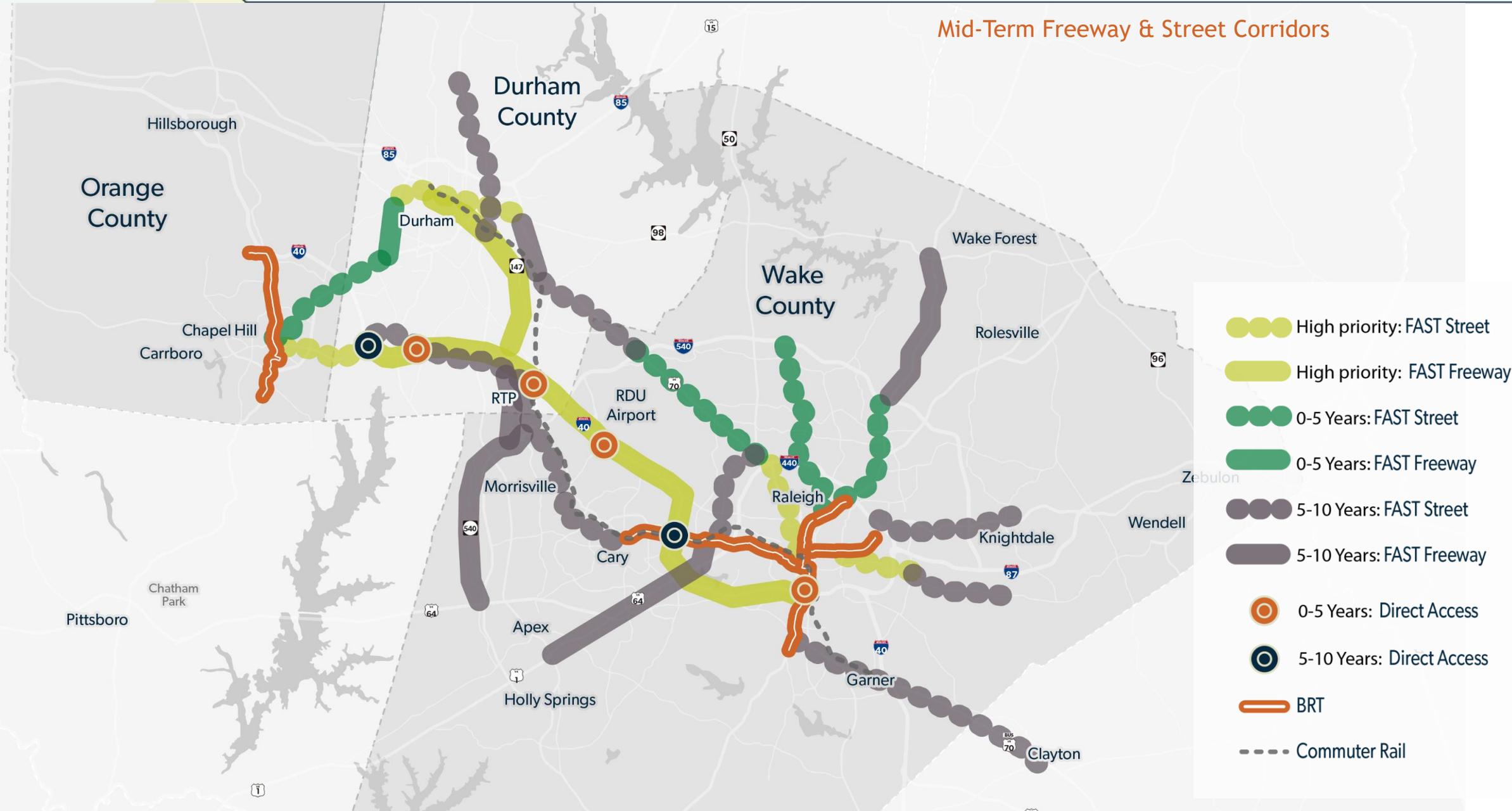
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FAST

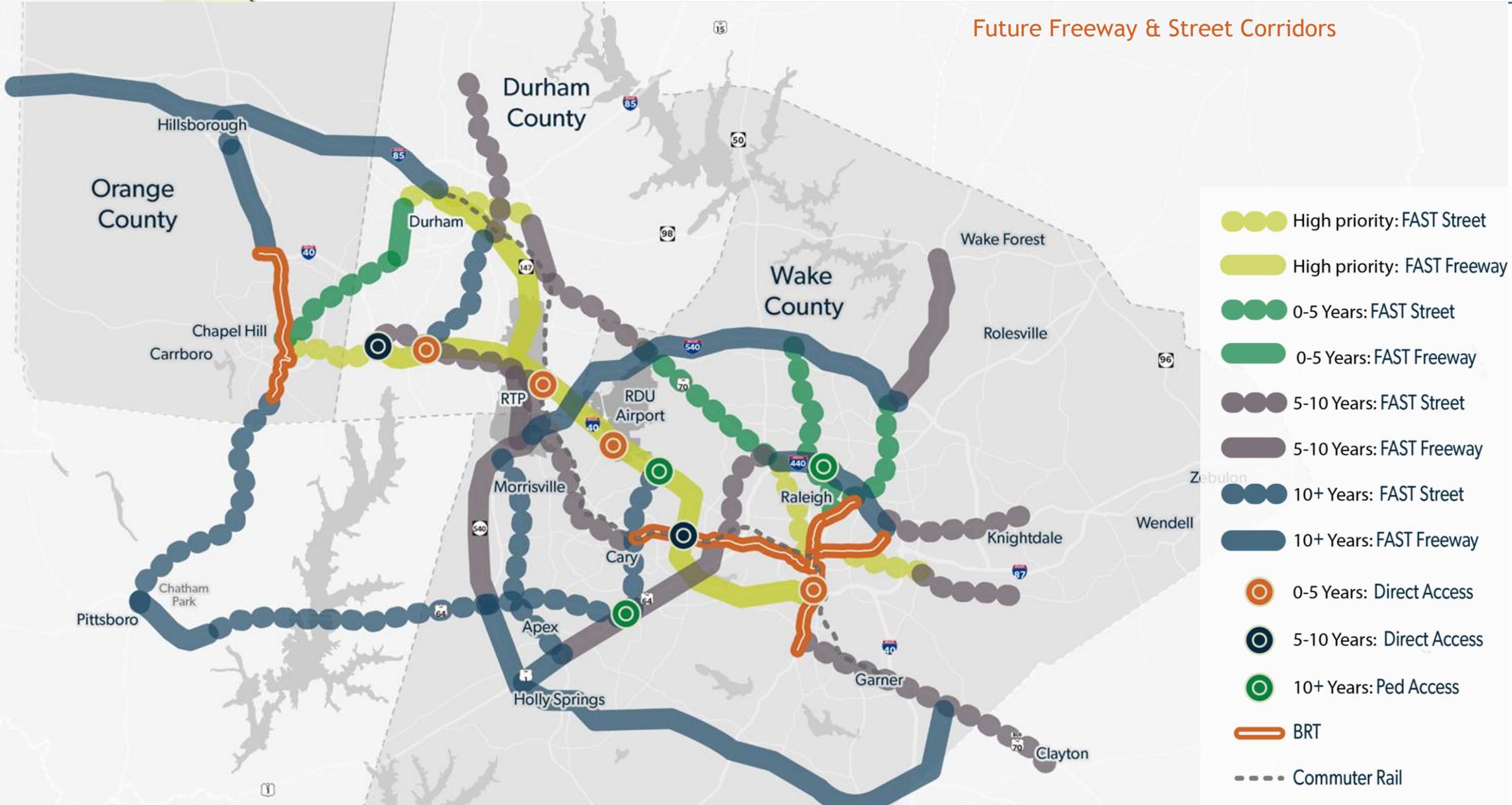
Freeway And Street-based Transit network

Example future FAST corridors

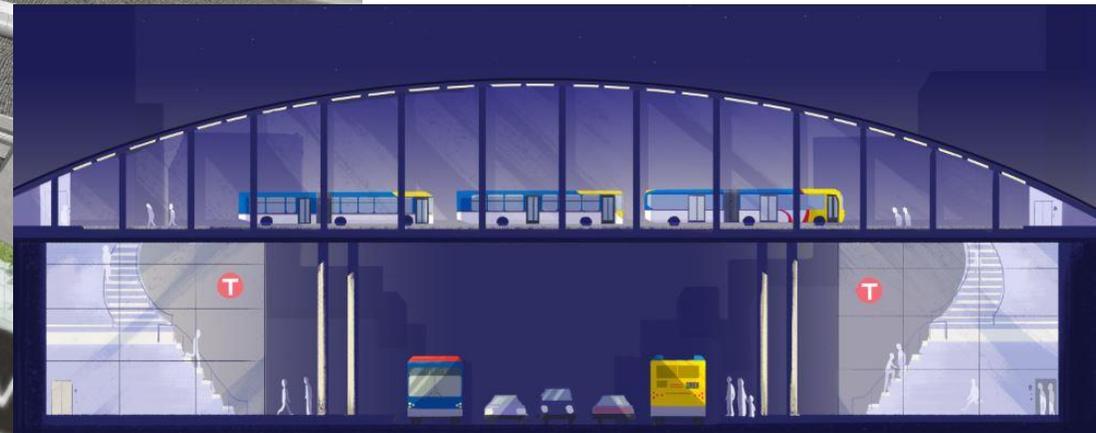
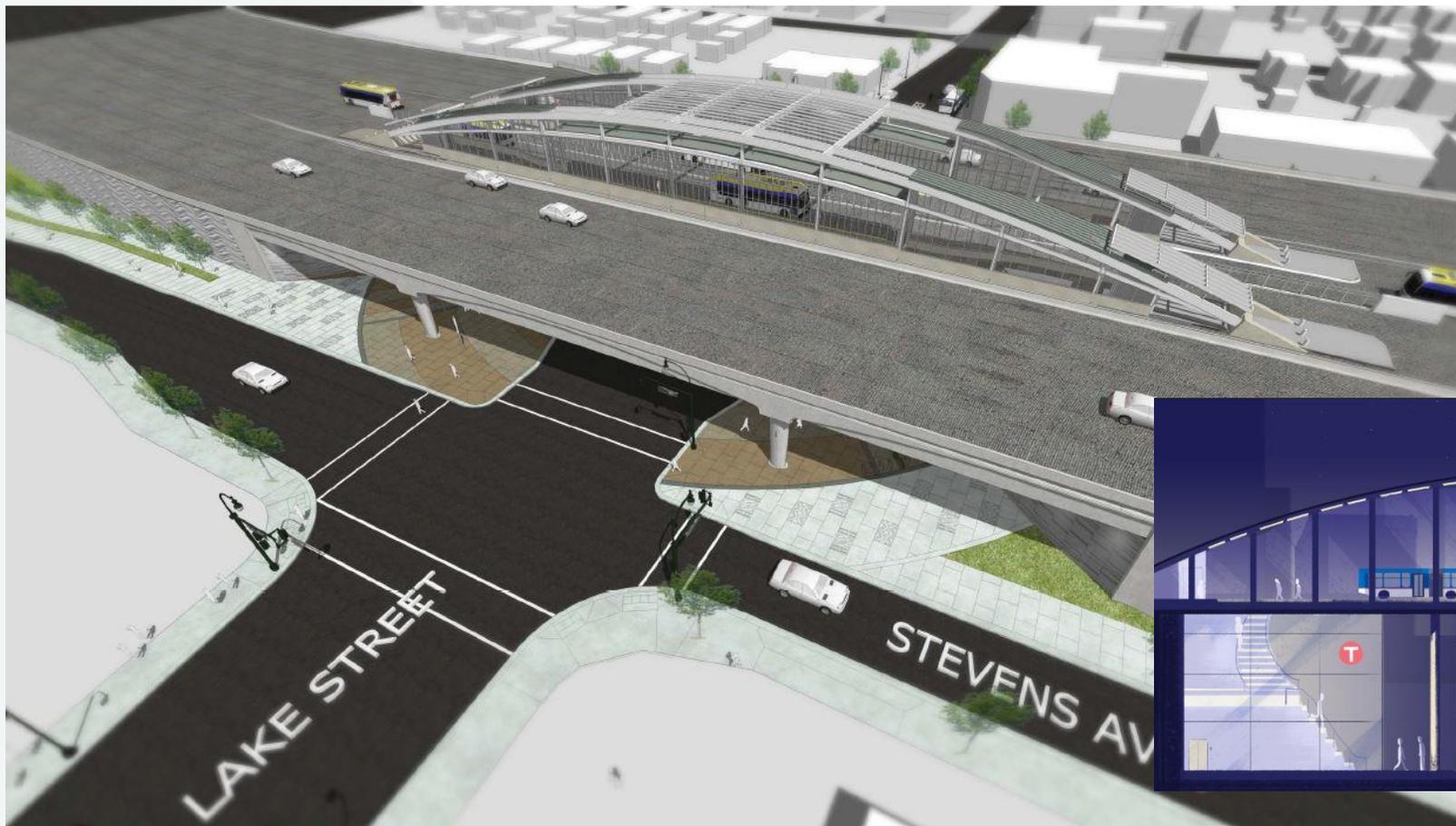
Mid-Term Freeway & Street Corridors



Future Freeway & Street Corridors



Minneapolis: I-35W Lake Street Station



FAST

Freeway And Street-based Transit network

Wrap Up

Public Comment Period

- Download a version of this presentation at letsgetmoving.org/FAST
- Email comments to FAST@letsgetmoving.org
- 45-Day Comment Period
July 16-August 31



Next Steps

- Review ongoing/upcoming highway projects for potential transit advantage incorporation opportunities
- Develop implementation playbook for several illustrative examples
 - High priority projects
 - 0-5 year projects

The graphic features a dark teal background with a grid of four quadrants. The top-left quadrant contains the text "Capitalize on the Great Work already being done" with a faint city skyline icon. The top-right quadrant contains "Improve Accessibility" with a faint bus icon. The bottom-left quadrant contains "Complement Existing Investments" with a stack of coins icon. The bottom-right quadrant contains "Leverage Future Opportunities" with a document icon. The word "FAST" is written in large white letters across the center, with the full name "Freeway And Street-based Transit network" below it. The words "Connect", "Capitalize", and "Champion" are stacked vertically in the center, overlapping the quadrants.

Capitalize on the Great Work already being done

Improve Accessibility

FAST
Freeway And Street-based Transit network

Connect
Capitalize
Champion

Complement Existing Investments

Leverage Future Opportunities

- Taruna Tayal | ttayal@vhb.com | 919.741.5525
- Don Bryson | dbryson@vhb.com | 919.334.5615

www.vhb.com





FAST

Freeway And Street-based Transit network

Presented By:
VHB Team

RTA Breakfast, August 4, 2020

Preliminary Findings Update



Zero Fare pilot study

HDR



**Getting Everyone
On Board:
Recommended
Options
for the Triangle's
next Zero Fare Pilot**

Zero Fare for Everyone Pilot Study

Preliminary Findings Update

RTA 2020 Transportation Breakfast

August 4, 2020



HDR Study Team



Jorge Luna
Project Manager
Senior Transit Planner



Patrick McDonough
Senior Transit Planner



Kate Ko, Ph.D.
Senior Economist



What is Zero Fare?

A transit agency **policy** whereby transit patrons are not required to make a fare payment or display a pass



Why “Zero Fare” and not “Fare free”?

Nothing is “free”

In fact, some transit elements will actually cost an agency more to provide when fares are eliminated

Low-Fare Fare-Free TRANSIT

Some recent applications by
U.S. Transit Systems



Prepared for:
U.S. DEPARTMENT OF TRANSPORTATION
URBAN MASS TRANSPORTATION ADMINISTRATION
Office of Transportation Management and Demonstrations
Office of Service and Methods Demonstrations
Washington, D.C. 20590

Business Leadership on Zero Fare

- RTA has supported expanding zero fare since Jan. 2018
- Regional business community focus on equity, accessibility, mobility, shared prosperity



RTA Zero Fare Pilot Study

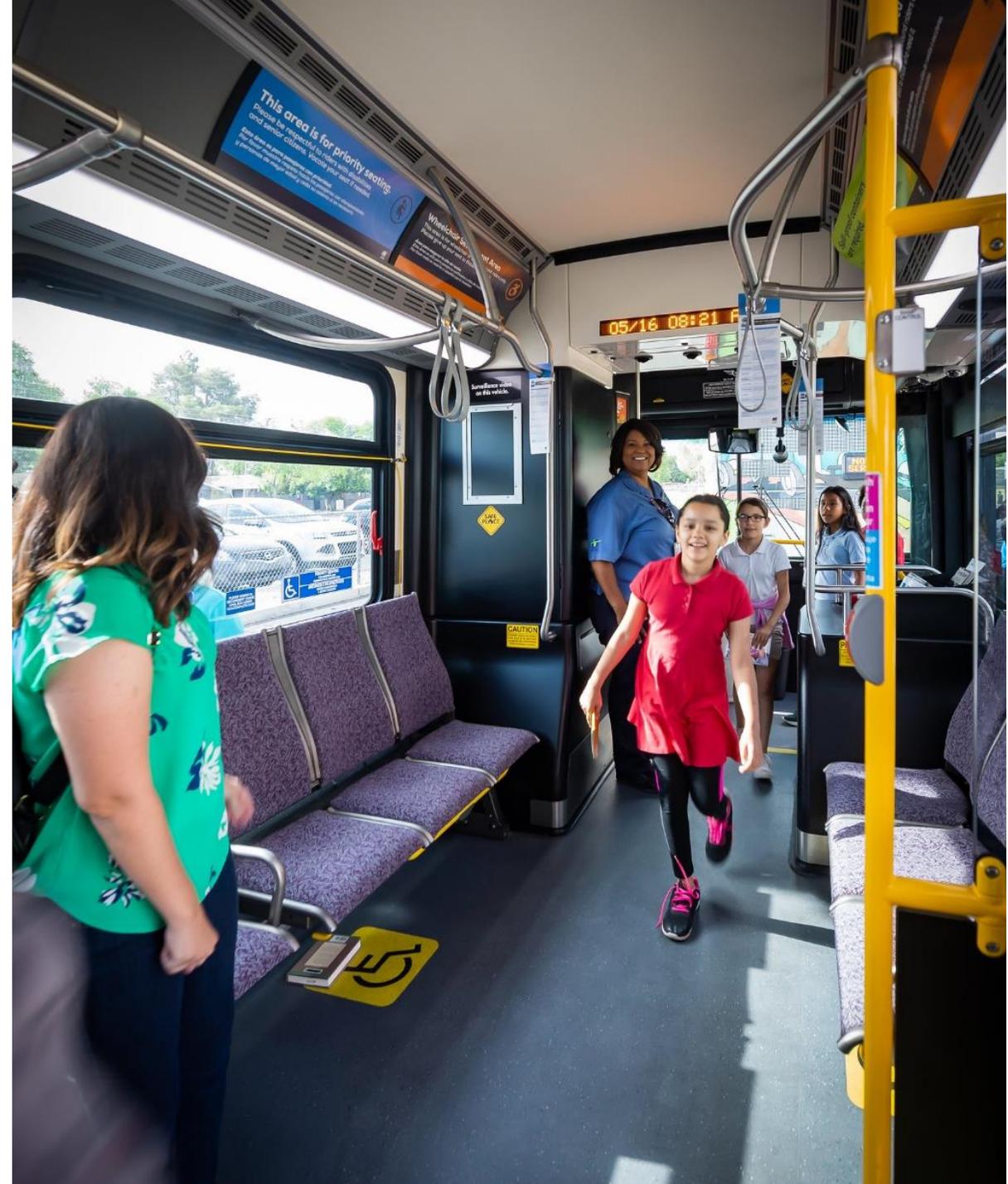
- RTA requested HDR to examine possible pilot options for expanding zero fare
- Study goal: identify potential candidates, promising service options, issues to resolve



Removing Barriers with Zero Fare

Zero Fare transit removes barriers to using, and *considering* using, transit

- Financial barriers
- Mental barriers
- Physical barriers



Benefits of Zero Fare

- Reduces travel costs for users
- Enhances equity and shared prosperity
- Increases ridership
- Improves accessibility
- Economic competitiveness
- Attracts, retains talent in region
- Faster travel times
- Lowers administrative costs
- Reduced public outreach costs
- Improves driver morale and safety
- Reduces maintenance, operating, capital costs
- Environmental sustainability



Benefits of Zero Fare

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- Reduces maintenance, operating, capital costs
- Environmental sustainability

Zero Fare Issues to Address

Loss of fare revenue

Capacity impacts

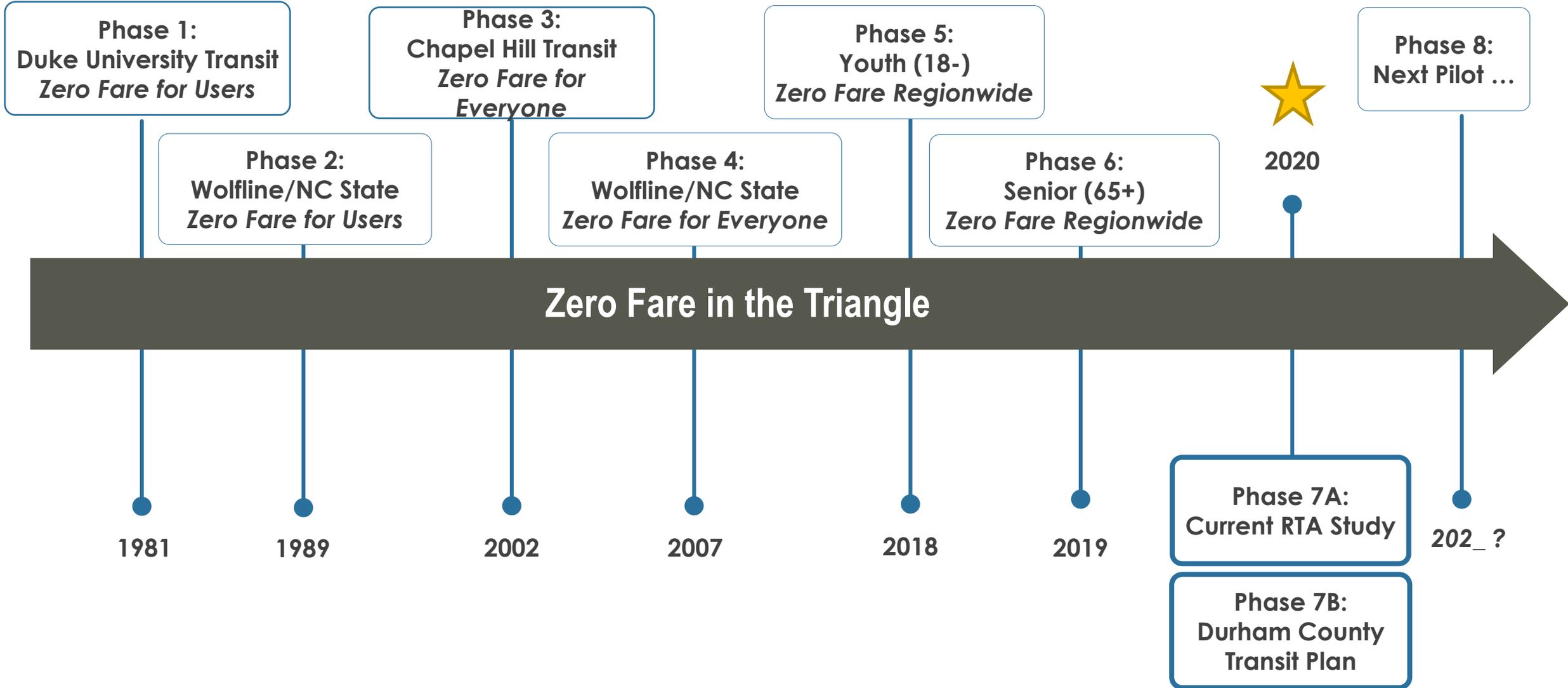
Increases paratransit usage

Slower travel time – operational challenges

Can induce “non travel” use of transit vehicles

Increases maintenance, operating, capital costs?

History of Zero Fare in Triangle



Zero Fare Study Methodology

- Local agency interviews
- Peer agencies elsewhere
- Literature review
- Ridership and economic analysis



Local Agency Engagement

- Receive local data
- Understand areas of interest
- Hear concerns
- Identify potential peer agencies



Zero Fare Peer Agency Interviews

Zero Fare policies, implementation, impacts, and lessons learned

- Olympia, WA
- Summit Stage, CO
- Rock Hill, SC
- Lawrence, MA
- Kansas City, MO



My Ride
ROCK HILL

INTERcity
TRANSIT

→ kCATA

MVRTA
MERRIMACK VALLEY REGIONAL TRANSIT AUTHORITY

Benchmark Analysis

- Review of FY2018, pre-COVID data
- Comparison with “synthetic” or median peer agency



Zero Fare Research Findings

Benefits

- 20-30% ridership increase
- Higher travel speeds
- Fare collection savings
- Fewer conflicts with customers

Issues to address

- Crowding on certain routes
- Paratransit usage and costs
- Funding, partnerships



How Zero Fare Peer Agencies are Replacing Fare Revenue

- Olympia, WA - Sales tax, \$550k annual savings on collection costs
- Summit Stage, CO - Sales tax
- Kansas City, MO - Sales tax, considering parking surcharge
- Lawrence, MA - City of Lawrence reimbursing regional transit authority
- Rock Hill, SC - General fund, institutional contributions (university, health system, credit union)



COVID19 and Crowding

- Typical transit bus has 30 to 37 seats
- Social distancing protocols limit capacity to 10 to 16 passengers
- Zero Fare could increase ridership by 30%; but, buses with lower capacity can fill faster, potentially leaving some people behind; additional buses could be deployed but it may raise operating cost



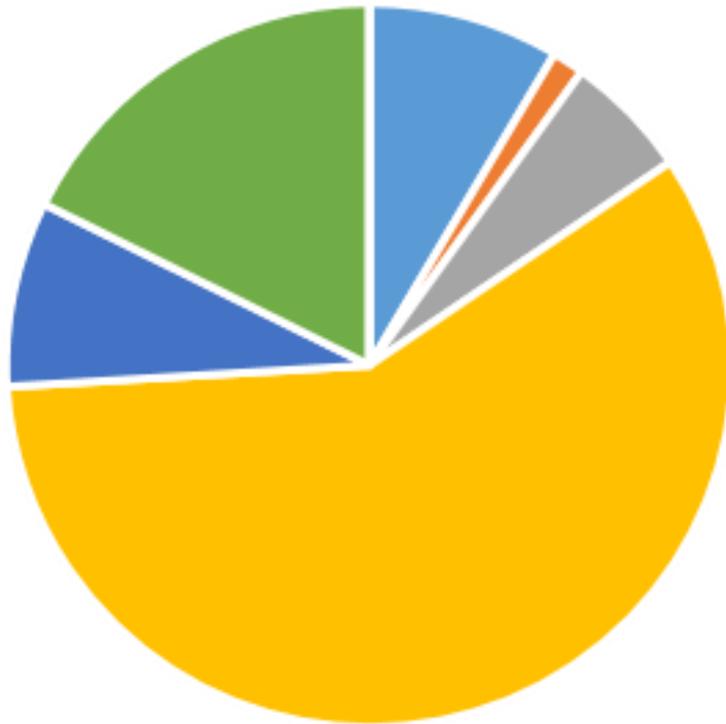
Pilot Options to Consider for Triangle Area

- GoCary – 7-days Zero Fare –OR– Zero Fare weekends
- GoRaleigh – Zero Fare weekends
- GoDurham – Zero Fare weekends
- GoTriangle – Zero Fare weekends

Chapel Hill Transit – continues with their program

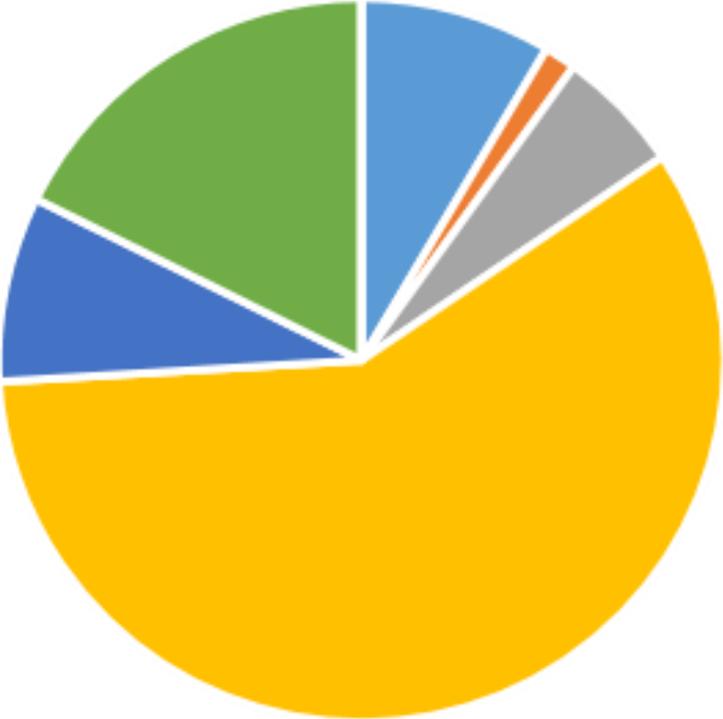


Representative Agency Revenue Sources



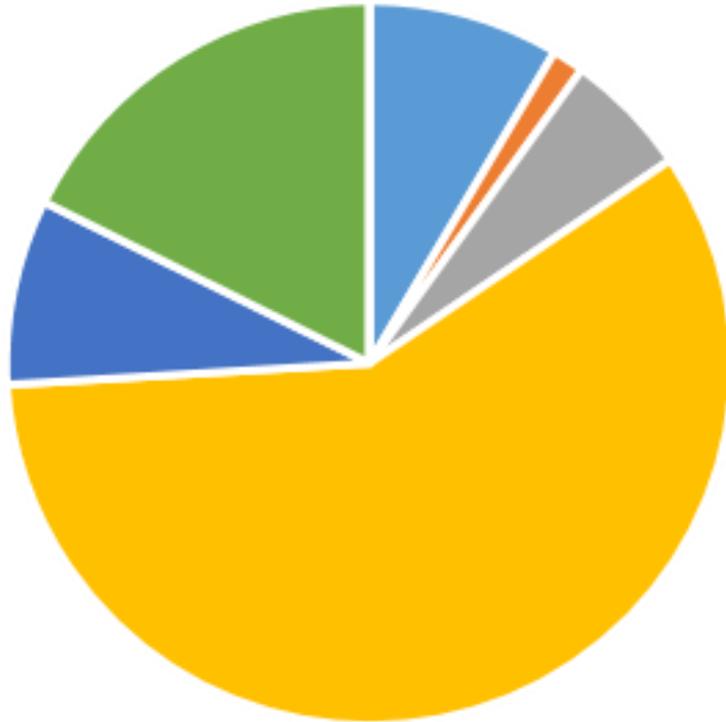
- 55% - Local Funding
- 15% - Federal Funding
- 10% - State Funding
- 10% - Misc. Revenue
- 8% - Weekday Fare Revenue
- 2% - Weekend Fare Revenue

Representative Agency Revenue Sources



- 55% - Local Funding
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Representative Agency Revenue Sources



- 55% - Local Funding
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- 10% - State Funding
- 10% - Misc. Revenue
- 8% - Weekday Fare Revenue
- **2% - Weekend Fare Revenue**

6-month (1/2 year) Zero Fare Weekends pilot:

= 1% of Annual Agency Operating Revenue

Why Focus on Zero Fare Weekends Pilot?

- Lowers cost risk due to ridership, paratransit increase
- Mitigates crowding risk
- Easier to fill revenue gap
- Equity / lower income population
- “Zero Fare Weekends” easy to explain





**Getting Everyone
On Board:
Recommended
Options
for the Triangle's
next Zero Fare Pilot**

Zero Fare for Everyone Pilot Study

Preliminary Findings Update

RTA 2020 Transportation Breakfast

August 4, 2020



REGIONAL BUSINESS PERSPECTIVES

Joe Milazzo II
RTA executive director

Does RTA believe a Zero Fare Weekends pilot has promise?



Does RTA believe a Zero Fare Weekends pilot has promise?

Yes...



Does RTA believe a Zero Fare Weekends pilot has promise?

Yes...

- Opportunity for 30% ridership increase
- Meaningful impact on recovery, equity
- Other areas are implementing zero fare
- Only 1% of agency revenue for a 6-month weekend pilot

Zero Fare Weekends can de-risk pilot, still be meaningful



Are agencies ready to do a Zero Fare Weekends pilot today?



Are agencies ready to do a Zero Fare Weekends pilot today?

No...



Are agencies ready to do a Zero Fare Weekends pilot today?

No...

- State funding concerns
- Capacity constraints (coronavirus)
- Low ridership = low fare revenue
- Safety, pandemic cleaning costs

Definition of success, amidst other changes (mobile ticketing, new routes).

Current actions

- HDR will complete preliminary findings report
- Partner transit agencies have until late August to comment
- RTA requesting feedback from members - zerofare@letsgetmoving.org



Next Steps – Zero Fare weekends pilot options

- **RTA will commission follow-up study**

Examine recommended weekend pilot options in more detail, challenges, how to address

- **Seek 1+ agencies willing to consider scalable zero fare weekends pilot**

Develop pilot concept, plan, metrics in concert with each participating agency

- **Elevate the conversation regionally – revisions to county transit plans underway**



Concluding thoughts – zero fare

- Zero fare weekends opportunity is real and compelling
- Legitimate funding, capacity concerns by agencies
- RTA will commission phase 2 study to address risks, tradeoffs, seek scalable* pilot

** We passed county transit referenda over 3 different years, and prior zero fare over 3 decades*

Risk of **not** doing a zero fare pilot – reduced accessibility, mobility, opportunity, and equity.

Concluding thoughts – FAST study and enhanced transit

- Opportunity to leverage freeway and street network
- Implement scalable “transit advantages” – keep buses moving, make them attractive
- Connect 5 bus rapid transit lines opening in 7 years, link to future commuter rail

Goal: create true, viable regional transit network by 2027



REGIONAL BUSINESS OBSERVATIONS

Jay Irby, RTA transit chair
First Citizens Bank

EXECUTIVE BUSINESS PANEL DISCUSSION

Executive Business Panel Discussion



Jay Irby
First Citizens Bank
RTA regional transit chair



Maeve Gardner
GlaxoSmithKline
RTA regional transit chair



Pete Marino
Smith Anderson
RTA freeways chair



Julia Wright
Dominion Energy
RTA policy chair



Scott Levitan
Research Triangle Park
President and CEO



Joe Milazzo II
RTA
Executive Director

MEMBER ENGAGEMENT

Natalie Ridout
RTA policy and member
engagement director

Engagement Opportunities

View the presentations

letsgetmoving.org/breakfast

Email FAST@letsgetmoving.org

letsgetmoving.org/FAST

Email zerofare@letsgetmoving.org

letsgetmoving.org/zerofare

Aug. 11 – 12th Annual I-40 Partnership

letsgetmoving.org/i40

Jan. 22 – RTA 19th Annual Meeting

letsgetmoving.org/stateofmobility



CLOSING REMARKS

Joe Milazzo II
RTA executive director



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