

# 2023 DURHAM COUNTY TRANSIT PLAN

MAY 2023



The 2023 Durham County Transit Plan was \_\_\_\_\_ by the Durham County Board of Commissioners by a vote of \_\_\_\_\_ on \_\_\_\_\_.

**ATTEST:**

**DURHAM COUNTY, NORTH CAROLINA**

BY: \_\_\_\_\_

BY: \_\_\_\_\_

TITLE: Clerk to the Board  
Commissioners

TITLE: Chairperson, Board of County

The 2023 Durham County Transit Plan was \_\_\_\_\_ by the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization Board by a vote of \_\_\_\_\_ on \_\_\_\_\_.

**ATTEST:**

**DURHAM-CHAPEL HILL-CARRBORO  
METROPOLITAN PLANNING ORGANIZATION**

BY: \_\_\_\_\_

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

TITLE: Chairperson, Durham-Chapel Hill-Carrboro  
Metropolitan Planning Organization Board

The 2023 Durham County Transit Plan was \_\_\_\_\_ by the Research Triangle Regional Public Transportation Authority d/b/a GoTriangle by a vote of \_\_\_\_\_ on \_\_\_\_\_.

**ATTEST:**

**RESEARCH TRIANGLE REGIONAL PUBLIC  
TRANSPORTION AUTHORITY D/B/A GOTRIANGLE**

BY: \_\_\_\_\_

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

TITLE: Chairperson, Board of Trustees

2023 DURHAM COUNTY TRANSIT PLAN GOVERNING BOARDS

DURHAM COUNTY BOARD OF COMMISSIONERS

Brenda Howerton, Chair  
Wendy Jacobs, Vice Chair  
Nida Allam  
Nimasheena Burns  
Heidi Carter  
Dr. Kimberly J. Sowell, County Manager

DURHAM-CHAPEL HILL-CARRBORO  
METROPOLITAN PLANNING ORGANIZATION  
POLICY BOARD

Jenn Weaver, Chair  
Karen Howard, Vice Chair  
Nida Allam  
Jamezetta Bedford  
Mark Bell  
Camille Berry  
Javiera Caballero



Mike Dasher  
Mike Fox  
Sally Greene  
Pam Hemminger  
Dr. Monique Hosley-Hyman

Brenda Howerton  
Wendy Jacobs  
Valerie Jordan  
Lisa Mathis  
Danny Nowell  
Michael Parker  
Damon Seils  
John Sullivan  
Leonardo Williams  
Doug Plachcinski, Executive Director

GOTRIANGLE BOARD OF TRUSTEES

Sig Hutchinson, Chair  
Brenda Howerton, Vice Chair  
Mary-Ann Baldwin  
Corey Branch  
Mike Fox  
Sally Greene  
Vivian Jones  
Valerie Jordan  
Elanie O’Neal  
Michael Parker  
Jennifer Robinson  
Stelfanie Williams  
Charles Lattuca, Chief Executive Officer



2023 DURHAM COUNTY TRANSIT PLAN

Members of the Staff Working Groups and other staff participants in the preparation of the Plan.

CITY OF DURHAM

Sean Egan, Transportation Director  
Laura Biediger  
Erin Convery  
Tom Devlin  
Brian Fahey  
Jennifer Green  
Bill Judge  
Laura Khalil  
Evian Patterson  
Evan Tenenbaum

DCHC MPO

Doug Plachcinski, Executive Director  
Filmon Fishastion  
Andy Henry  
David Miller  
Felix Nwoko  
Anne Phillips  
Yanping Zhang

TRIANGLE J COUNCIL OF GOVERNMENTS

Erika Brown  
John Hodges-Copple

GOTRIANGLE

Chuck Lattuca, Chief Executive Officer  
Rocio Antelis  
Paul Black  
Katharine Eggleston  
Saundra Freeman  
Jay Heikes  
David Jerrido  
Elisabeth Raskopf  
Brianna Reece  
Steven Schlossberg  
Meg Scully  
Praveen Sridharan  
Katie Urban

DURHAM COUNTY

Ellen Beckmann, Transportation Director  
Jay Gibson  
Claudia Hager  
Maurice Jones  
Brandi Minor  
Susan Tezai

DURHAM CITY/COUNTY PLANNING

Sara Young, Director  
Aaron Cain  
Lisa Miller  
Brooke Roper  
Scott Whiteman

2023 DURHAM COUNTY TRANSIT PLAN

The Consultants that assisted in the preparation of the Plan.





# TABLE OF CONTENTS

1 EXECUTIVE SUMMARY .....13

PARTNERS.....14

CORE PRINCIPLES .....15

GOALS AND OBJECTIVES .....16

SUMMARY OF PLANNING PROCESS .....17

PUBLIC ENGAGEMENT .....18

FINAL RECOMMENDED PLAN .....20

IMPLEMENTATION PLAN .....22

2 EXISTING CONDITIONS.....25

CURRENT NETWORK .....26

NEEDS AND GAPS ANALYSIS.....33

EQUITABLE DISTRIBUTION OF TRANSIT SERVICE.....38

FUTURE TRANSIT DEMAND.....40

PEDESTRIAN SAFETY AND BUS STOP ACCESSIBILITY .....42

PREVIOUS PLAN REVIEW .....46

COVID-19 IMPACTS ON TRANSIT FOR GOTRIANGLE AND GODURHAM .....48

3 PUBLIC OUTREACH .....51

EQUITABLE ENGAGEMENT APPROACH .....52

LISTENING AND LEARNING OUTREACH .....58

PHASE I - GOALS AND OBJECTIVES .....60

PHASE II - OPTION EVALUATION .....62

PHASE III - PREFERRED OPTION EVALUATION .....66

4 SCENARIO DEVELOPMENT & EVALUATION .....73

SCENARIO DEVELOPMENT .....74

ALTERNATIVE SCENARIOS .....76

SCENARIO EVALUATION.....80

PREFERRED SCENARIO DEVELOPMENT .....83

5 IMPLEMENTATION PLAN.....85

FINAL PREFERRED TRANSIT SCENARIO .....86

NEW CAPITAL AND OPERATING PROJECTS.....90

PROGRAMMED PROJECTS .....98

LOCAL AND FEDERAL FUNDING ASSUMPTIONS .....108

PROGRAMMING ASSUMPTIONS .....110

UNFUNDED PRIORITY TRANSIT PROJECTS .....111

RISK ASSESSMENT .....116

PLAN MANAGEMENT AND OVERSIGHT .....118

IMPLEMENTATION AND PERFORMANCE METRICS .....119

6 FINANCIAL PLAN .....123

FINANCIAL PLAN .....124

DEDICATED TAX DISTRICT REVENUES.....124

SUMMARY OF REVENUE AND EXPENDITURES .....127

FINANCIAL ASSUMPTIONS .....130

7 APPENDIX .....135



# LIST OF FIGURES

FIGURE 1: 2020 DURHAM FIXED ROUTE SERVICE NETWORK (PRE-PANDEMIC) .....	27
FIGURE 2: HIGH RIDERSHIP STOPS.....	32
FIGURE 3: DURHAM COUNTY 2018 POPULATION DENSITY .....	34
FIGURE 4: DURHAM COUNTY 2018 EMPLOYMENT DENSITY .....	35
FIGURE 5: TRANSIT PROPENSITY .....	37
FIGURE 6: AFFORDABLE HOUSING UNITS .....	39
FIGURE 7: 2045 POPULATION AND EMPLOYMENT DENSITY .....	41
FIGURE 8: BUS STOP ACCESSIBILITY .....	43
FIGURE 9: MONTHLY BUS RIDERSHIP BY TRIANGLE REGION SERVICE OPERATOR JANUARY 2020 - SEPTEMBER 2021 .....	48
FIGURE 10: RESPONSES TO PRIORITY SETTING QUESTION FROM PHASE I .....	61
FIGURE 11: TRANSIT SCENARIOS .....	63
FIGURE 12: RESPONSES TO ADDITIONAL FUNDING QUESTION FROM PHASE II OUTREACH .....	64
FIGURE 13: RESPONSES TO QUESTION FROM PHASE III OUTREACH .....	68
FIGURE 14: RESPONSES TO ADDITIONAL FUNDING QUESTION FROM PHASE III OUTREACH .....	69
FIGURE 15: FOUR MAJOR PROJECT THEMES .....	86
FIGURE 16: RECOMMENDED TRANSIT PLAN.....	88
FIGURE 17: TAX DISTRICT REVENUES ALLOCATED TO BUS OPERATING PROJECTS BY AGENCY .....	99
FIGURE 18: UNFUNDED TRANSIT PROJECTS.....	115
FIGURE 19: ILLUSTRATIVE EXAMPLES FOR TRACKING METRICS .....	119
FIGURE 20: PROJECTED DURHAM COUNTY TAX DISTRICT REVENUES BY SOURCE (FY22 - FY40) .....	129
FIGURE 21: PROJECTED DURHAM COUNTY TAX DISTRICT REVENUES BY YEAR (FY22 - FY40) .....	129
FIGURE 22: TAX DISTRICT CASH BALANCE IN DURHAM COUNTY (YOE) .....	132

# LIST OF TABLES

TABLE 1: GODURHAM FIXED ROUTE SERVICE TABLE .....	28
TABLE 2: GOTRIANGLE FIXED ROUTE SERVICE TABLE .....	29
TABLE 3: GODURHAM AVERAGE DAILY BOARDINGS BY ROUTE (2019) .....	31
TABLE 4: GOTRIANGLE AVERAGE DAILY BOARDINGS BY ROUTE (2019) .....	31
TABLE 5: TRANSIT PROPENSITY ADJUSTMENT FACTORS .....	36
TABLE 6: BUS STOP INVENTORY .....	42
TABLE 7: SERVICE CHANGES IN DURHAM COUNTY DUE TO COVID-19.....	49
TABLE 8: SURVEY RESPONSES BY PHASE .....	55
TABLE 9: TRANSIT SCENARIO EVALUATION.....	80
TABLE 10: TRANSIT SCENARIO EQUITY ACCESS EVALUATION.....	81
TABLE 11: TRANSIT SCENARIO JOB ACCESS EVALUATION.....	82
TABLE 12: CAPITAL AND OPERATING PROJECTS.....	90
TABLE 13: PROGRAMMED PROJECTS .....	98
TABLE 14: LOCAL AND FEDERAL FUNDING ASSUMPTIONS.....	108
TABLE 15: UNFUNDED BRT PROJECTS .....	111
TABLE 16: OTHER UNFUNDED PROJECTS .....	114
TABLE 17: RISK ASSESSMENT .....	116
TABLE 18: IMPLEMENTATION METRICS .....	120
TABLE 19: PERFORMANCE METRICS.....	121
TABLE 20: FISCAL YEAR 2017 REVENUE (YEAR OF EXPENDITURE (YOE) IN THOUSANDS) .....	127
TABLE 21: FISCAL YEAR 2018 REVENUE (YOE IN THOUSANDS) .....	127
TABLE 22: FISCAL YEAR 2019 REVENUE (YOE IN THOUSANDS) .....	127
TABLE 23: FISCAL YEAR 2020 REVENUE (YOE IN THOUSANDS) .....	128
TABLE 24: FISCAL YEAR 2021 REVENUE (YOE IN THOUSANDS) .....	128
TABLE 25: FISCAL YEAR 2022 REVENUE (YOE IN THOUSANDS) .....	128
TABLE 26: FISCAL YEAR 2023 REVENUES (YOE IN THOUSANDS) .....	128
TABLE 27: INPUT ASSUMPTIONS FOR GOTRIANGLE FINANCIAL MODEL FOR THE DURHAM COUNTY TRANSIT PLAN .....	130
TABLE 28: PHASE I STUDY - INPUT ASSUMPTIONS FOR COMMUTER RAIL .....	131
TABLE 29: PHASE II STUDY - UPDATED ESTIMATES FOR COMMUTER RAIL .....	131

# ABBREVIATIONS

The following abbreviations are used throughout this document.

Abbreviation	Definition
ACS	American Community Survey
ADA	Americans with Disability Act
BIPOC	Black, Indigenous, and People of Color
BOMF	Bus Operations and Maintenance Facility
BPAC	Bicycle and Pedestrian Advisory Committee
BRT	Bus Rapid Transit
CAD/AVL	Computer-Aided Dispatch/Automated Vehicle Location
CAGR	Compound Annual Growth Rate
CAMPO	Capital Area Metropolitan Planning Organization
CIG	Capital Investment Grants
CIP	Capital Improvement Program
CTP	Comprehensive Transportation Plan
DCHC	Durham-Chapel Hill-Carrboro
DOLRT	Durham-Orange Light Rail Transit
EJ	Environmental Justice
FTE	Full Time Equivalent
FY	Fiscal Year
GDP	Gross Domestic Product
ICE	Increased Cost of Existing Services
ILA	Interlocal Agreement
LBAR	Legally Binding Affordability Restricted
LEHD	Longitudinal Employer-Household Dynamic
LEP	Limited English Proficiency
M	Million
M/WBE	Minority-Owned and Women-Owned Business Enterprise
MPO	Metropolitan Planning Organization
NCCU	North Carolina Central University
NCDOR	North Carolina Department of Revenue
NCDVM	North Carolina Division of Motor Vehicles
NCGS	North Carolina General Statutes
NEPA	National Environmental Policy Act
NOAH	Naturally Occurring Affordable Housing
O&M	Operations and Maintenance
RTC	Regional Transit Center
RTP	Research Triangle Park
SRTP	Short Range Transit Plan
SUV	Sport Utility Vehicle
TBD	To Be Determined
TJCOG	Triangle J Council of Governments
TPA	Transit Plan Administrator
TRM	Triangle Regional Model
TSP	Transit Signal Priority
YOE	Year of Expenditure







# 01

## EXECUTIVE SUMMARY

PARTNERS

INTRODUCTION

CORE PRINCIPLES

PLAN GOALS

SUMMARY OF PLANNING PROCESS

PUBLIC ENGAGEMENT

FINAL RECOMMENDED PLAN

IMPLEMENTATION PLAN



# PARTNERS

The co-signatories of this Plan are the Durham-Chapel Hill-Carrboro (DCHC) Metropolitan Planning Organization (MPO), Durham County, and GoTriangle. The governing board of the DCHC MPO includes local, elected officials from the City of Durham, Town of Chapel Hill, Town of Hillsborough, Town of Carrboro, Durham County, Orange County, and Chatham County, as well as representatives from GoTriangle and the State Board of Transportation. The GoTriangle Board consists of appointed representatives from Durham, Orange, and Wake Counties, and the State Board of Transportation. The Project Team consists of DCHC MPO, Durham County, and City of Durham.



# INTRODUCTION

The Durham County Transit Plan, also referred to as the “Plan,” “updated Plan,” “2023 Plan,” and/or “Plan update,” contains a program of transit services and projects to be funded by the dedicated local revenues for transit in Durham County through 2040. There are four dedicated revenue streams used toward funding the local share of projects and services in this Plan, referred to throughout the Plan as Tax District Revenues. These four dedicated Tax District Revenue streams are as follows:

- Article 43: Half-Cent Sales and Use Tax
- Article 50: Five-Percent Vehicle Rental Tax (portion allocated to Durham County by GoTriangle Board of Trustees)
- Article 51: Three-Dollar increase to GoTriangle Regional Vehicle Registration Fee
- Article 52: Seven-Dollar County Vehicle Registration Fee

According to the 2013 Interlocal Agreement (ILA), a Staff Working Group was created that included representatives from Durham County, GoTriangle, and DCHC MPO to review the Plan and prepare updates as needed, or at least every 4 years. These Staff Working Group representatives, and representatives from the City of Durham and City-County Planning Department, worked collaboratively as the Project Team in developing this plan update. The last updated Durham County Transit Plan was in 2017 and included funding for the Durham-Orange Light Rail Transit (DOLRT) project, which was discontinued in 2019. The funds previously allocated for the DOLRT project are reallocated as part of this updated Plan.

This Plan will provide over \$1 billion of local transit dedicated dollars to spend on transit improvements in Durham through 2040. About half of the funding in this Plan will be used to continue the bus service improvements that were approved in the 2017 transit plan; no service improvements will be stopped because of the adoption of this Plan (GoDurham Route 20 was suspended in 2020 and permanently discontinued in 2022 due to low ridership). The other half of the funds will support new transit initiatives and projects throughout the County, as identified through the public involvement process.

# CORE PRINCIPLES

The Project Team recognizes that certain groups of people have historically been underserved or disproportionately burdened by transportation decision-making outcomes. In an effort to intentionally include underserved communities while developing this Plan, two core principles to guide planning efforts were crafted based on the Listening and Learning sessions in held with the public in Winter of 2019: Equity and Community Trust. Below are the core principles and associated actionable steps to be taken by the Project Team.

## EQUITY

*Investing in underserved and transit-dependent communities.*

- Prioritize transit access and investment for Environmental Justice (EJ) communities, including, but not limited to, minority race and ethnic populations (i.e., Black, Indigenous, Hispanic/Latinx, all racial and ethnic minorities), elderly populations, low-income households, Limited English Proficiency (LEP) communities, and zero-car households.
- Provide transit options and access to affordable housing developments.
- Improve access for people with mobility challenges.

## COMMUNITY TRUST

*Providing transparency throughout the planning and decision-making processes.*

- Be transparent about how community feedback affects transit decisions.
- Account for how transit funds are spent and the cost of different types of services.
- Address what happened to recently discontinued or reduced services.
- Actively engage residents and empower them to influence decisions.
- Provide real opportunities for residents to impact service design.



# GOALS AND OBJECTIVES

As the core principles guide the development of this Plan with overarching commitments to Durham County residents, the Plan’s goals and objectives provide further direction for the Plan’s development and final recommendations for transit improvements. The goals and objectives were based on community comments and vetted by the Plan’s Technical and Outreach Committees. Below are a list of the Plan’s goals and objectives:

## ACCESSIBILITY

*Providing opportunities for all users to access transit.*

## CONNECTIVITY

*Providing a well-connected, multimodal transportation network.*

## CONVENIENCE

*Creating reliable transit options and providing dependable information to riders.*

## SUSTAINABILITY

*Creating resilient infrastructure to meet the needs of existing and future populations.*

# SUMMARY OF PLANNING PROCESS

This overview of the planning process describes the major milestones of the Plan’s development. This holistic planning process is the culmination of meaningful community engagement, analysis by passionate and experienced transit professionals, and direction from dedicated community leadership. At each major milestone in developing the Plan, public feedback was synthesized and incorporated.

## GOALS AND OBJECTIVES ..... 2019



The planning process started by establishing the Plan’s principles, goals and objectives, shown on page 12. These were created using transit-related input gathered from annual on-board transit rider surveys, the Comprehensive Plan Update Listening and Learning Sessions, Phase I of the City of Durham Participatory Budgeting Process, and resident focus groups from the City of Durham’s 2019 Annual Resident Survey.

## EXISTING CONDITIONS ..... 2020



The next step was gaining an understanding of the transit needs and gaps in Durham County by performing in-depth existing conditions analysis.

## TRANSIT OPTION PLANNING ..... 2021



This step involved developing three different illustrative transit options (or scenarios) that each addressed identified transit needs. Each transit option contained varying levels of investment in different types of projects and demonstrated benefits and tradeoffs associated with each. These options were presented to the public for feedback.

## RECOMMENDED TRANSIT PLAN ..... 2022



This step involved building a single, cost-constrained, recommended transit Plan with the projects that were chosen as the highest priorities, based on public feedback on the options. This draft recommended transit plan was then presented to the public for feedback prior to finalizing.

## FINAL PLAN AND APPROVAL ..... 2023



The final step of developing the Durham County Transit Plan was documenting the entire planning process and final recommendations, and presenting the final Plan to the approving bodies. The participating agencies will continue to work together implementing the recommended service improvements and projects identified in the Plan.



# PUBLIC ENGAGEMENT

This Plan’s development was centered on intentional, equitable, and representative public engagement and input. An Outreach Committee made up of staff from DCHC, City of Durham, Durham County, GoTriangle, and consultant team members led the planning and execution of three phases of engagement. Additionally, Aidil Ortiz of Aidilisms, a local public engagement specialist, led the recruitment, training, and management of the Engagement Ambassador Program. Engagement Ambassadors were intentionally recruited to be members of, or have direct access to people within one or more of the following communities:

- Low-income people and people who are housing insecure
- Justice-involved people
- Hispanic/Latinx
- Youth
- People with disabilities
- Seniors
- Transit riders

Engagement Ambassadors helped reach community members that staff and consultants are usually unable to reach. The following describes the three phases of engagement throughout the Plan development process, which the Engagement Ambassadors assisted with.

## PHASE I

Phase I of public engagement focused on the existing system and confirming transit service improvement priorities previously expressed by Durham residents.



## PHASE II

Phase II of public engagement presented three transit options to illustrate how funds could be invested differently. The public was presented the potential benefits of each transit option and asked to prioritize the capital and operating projects and varying levels of transit service.



## PHASE III

Phase III of public engagement shared the draft recommended transit scenario containing the final recommended capital and operating transit improvements with the public, and asked for feedback.



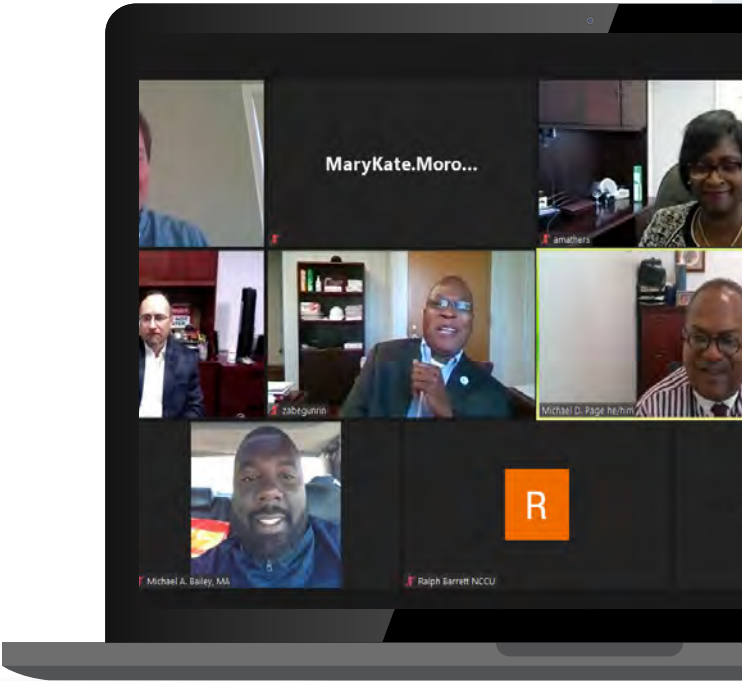
Public engagement was conducted before, during, and after the height of the COVID-19 pandemic using a mix of virtual and in-person outreach events, with an emphasis on transparency of the process. Community leaders, key stakeholders, and elected officials were also consulted throughout each major milestone of the engagement process.

All surveys published online were available in print, in English and Spanish. Links to the survey were posted on buses and at Durham Station to encourage the participation of transit riders.



*“As I read the plan it looks as if the planners really listened to the underserved neighborhoods.”*

*- Durham Transit Plan Public Comment*





# FINAL RECOMMENDED PLAN

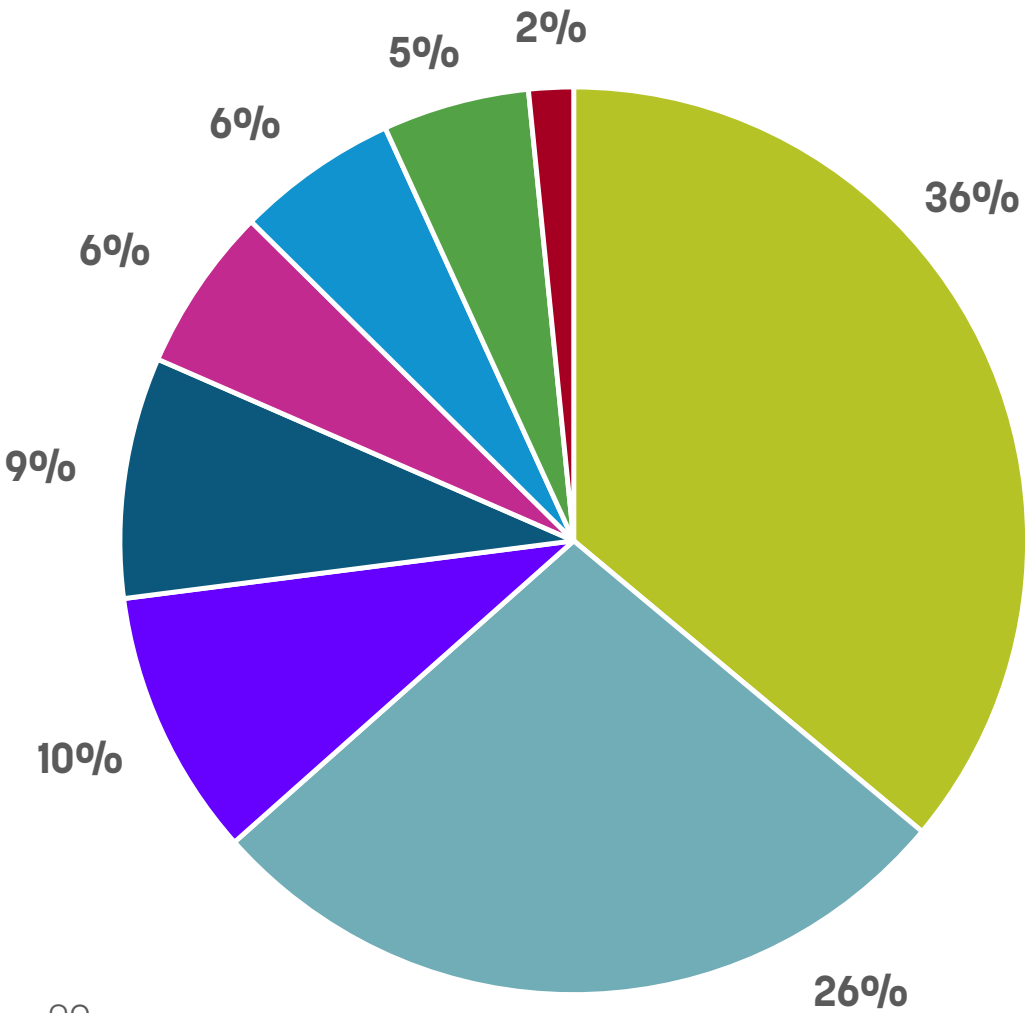
The final recommended Durham County Transit Plan contains capital and operating projects that address the needs identified and the priorities of the public. These priorities were gathered during intentional and in-depth stakeholder and public outreach. The needs and priorities were translated into key improvement themes used in the development of the final transit recommendations.

## KEY IMPROVEMENT THEMES

- Improve the current bus system
- More transit projects sooner
- Connecting the region with quick and reliable service
- Better experience at stops and stations

In addition to key improvement themes, detailed project types were also developed. The following graphic breaks down the funding allocation by project type:

## PERCENTAGE OF TOTAL FUNDING



## PROJECT TYPES



### ENHANCE AND EXTEND SERVICE

These projects allow all GoDurham routes to come every 30 minutes or sooner (some routes every 15 minutes), extends service to run later at night during the week and weekends, and allows certain GoTriangle routes come more often and run later at night.



### QUICK AND RELIABLE REGIONAL TRANSPORTATION CONNECTIONS

Includes Durham County's financial contribution to build and begin running the commuter rail between Durham County and Wake County or provide other regional, fast, and reliable service improvements.



### BUS STOP IMPROVEMENTS AND TRANSIT CENTERS

Enhances existing bus stops and transit centers with accessible landing pads at all stops. Also includes adding benches, shelters, signage, lighting, and/or sidewalks at certain bus stops.



### MORE ROUTES GOING MORE PLACES

Adds new crosstown routes to go more places in Durham, adds vanpools, and adds GoDurham Connect (microtransit) zones.



### ADMINISTRATION AND ACCOUNTABILITY

Adds dedicated staff positions to administer the Plan, implement projects, enhance equitable contracting, and lead transit-oriented development efforts.



### FASTER, MORE RELIABLE BUS SERVICE

Includes projects to help buses stay on schedule, using methods such as traffic signal improvements and bus-only lanes. Also includes a study for potential bus rapid transit (BRT) routes to be identified.



### OPERATIONS AND MAINTENANCE

Includes bus maintenance facility improvements and expansions, additional bus purchases and replacements (including new electric buses).



### PARATRANSIT IMPROVEMENTS

Includes a GoTriangle and GoDurham paratransit (ACCESS) service improvement study, ACCESS service improvements/expansion, and a food access for seniors shuttle.

# IMPLEMENTATION PLAN

The implementation of projects identified in the final Durham County Transit Plan will happen over the course of the Plan’s 20-year lifespan. Operating and capital projects will begin in an order that meets the highest needs and priorities that can be afforded in that year. Projects that were identified as a high priority through the public input process were designated for early implementation when funding and delivery schedules allowed.

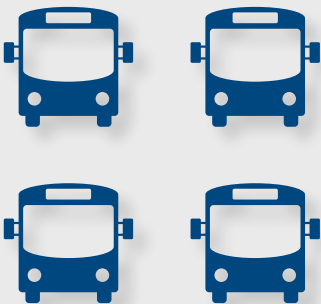
*Over \$140 million is planned to be spent on new projects in Durham County by 2027.*

This Plan includes funding for the following projects to be delivered in the next 4 years (by 2027):

- New East Durham/The Village to NCCU Crosstown Route
- Extend Sunday service to midnight
- 30-minute service on all GoDurham routes in the evenings and Sundays
- Improve Route 4 to run every 15-minutes and extend to Danube/Hebron
- Improve Route 9 to run every 15-minutes
- Provide 15-minute all day service on the 15-501 corridor from Durham to Chapel Hill with Routes 400/405
- The Village and North Duke Crossing Transit Centers
- GoTriangle ACCESS and GoDurham ACCESS Improvement Study
- Construction of Durham Station Improvements
- Construction of Route 3 (Holloway) and Route 5 (Fayetteville) Bus Transit Corridors
- BRT and Bus Speed and Reliability Infrastructure Study

## 2023 DURHAM COUNTY TRANSIT PLAN FUNDING

This Plan includes much more funding for bus service than the 2017 Durham County Transit Plan. More than 70% of the 2023 Durham County Transit Plan funds will be used for bus projects.



**74%**  
of funding for  
Bus Projects



**26%**  
of funding  
for Quick and  
Reliable Regional  
Transportation  
Connections

## PLAN OVERSIGHT

Consistent with the principle to focus on community trust, the partner agencies—Durham County, DCHC MPO, and GoTriangle—are committed to tracking and reporting Plan implementation in a way that is easily accessible to the public. The partners will develop a performance monitoring program to track progress on project implementation and Transit Plan goals. This Plan, along with the annual Transit Work Programs, will serve as the foundation documents for tracking the implementation of the proposed projects.

The annual Transit Work Program outlines the specific transit services, programs, and infrastructure projects that will be funded in the upcoming fiscal year (July to June). It also includes the multi-year investment strategy, which lists the service and infrastructure investments planned to be funded in future years covered by the Durham County Transit Plan. The partner agencies will review and update the progress of project implementation at least twice per year. The first scheduled update will occur in July/August at the start of the fiscal year. This update cycle will ensure that the elements of the Transit Work Program, adopted in June, are accurately represented. The second cycle will occur in January/February to capture any needed updates. Implementation metrics for tracking the progress of this Plan are described in Chapter 5.







# 02

## EXISTING CONDITIONS

CURRENT NETWORK

NEEDS AND GAPS ANALYSIS

EQUITABLE DISTRIBUTION OF TRANSIT SERVICE

FUTURE TRANSIT DEMAND

PEDESTRIAN SAFETY AND BUS STOP ACCESSIBILITY

PREVIOUS PLAN REVIEW

COVID-19 IMPACTS ON TRANSIT FOR GOTRIANGLE AND  
GODURHAM



# CURRENT NETWORK

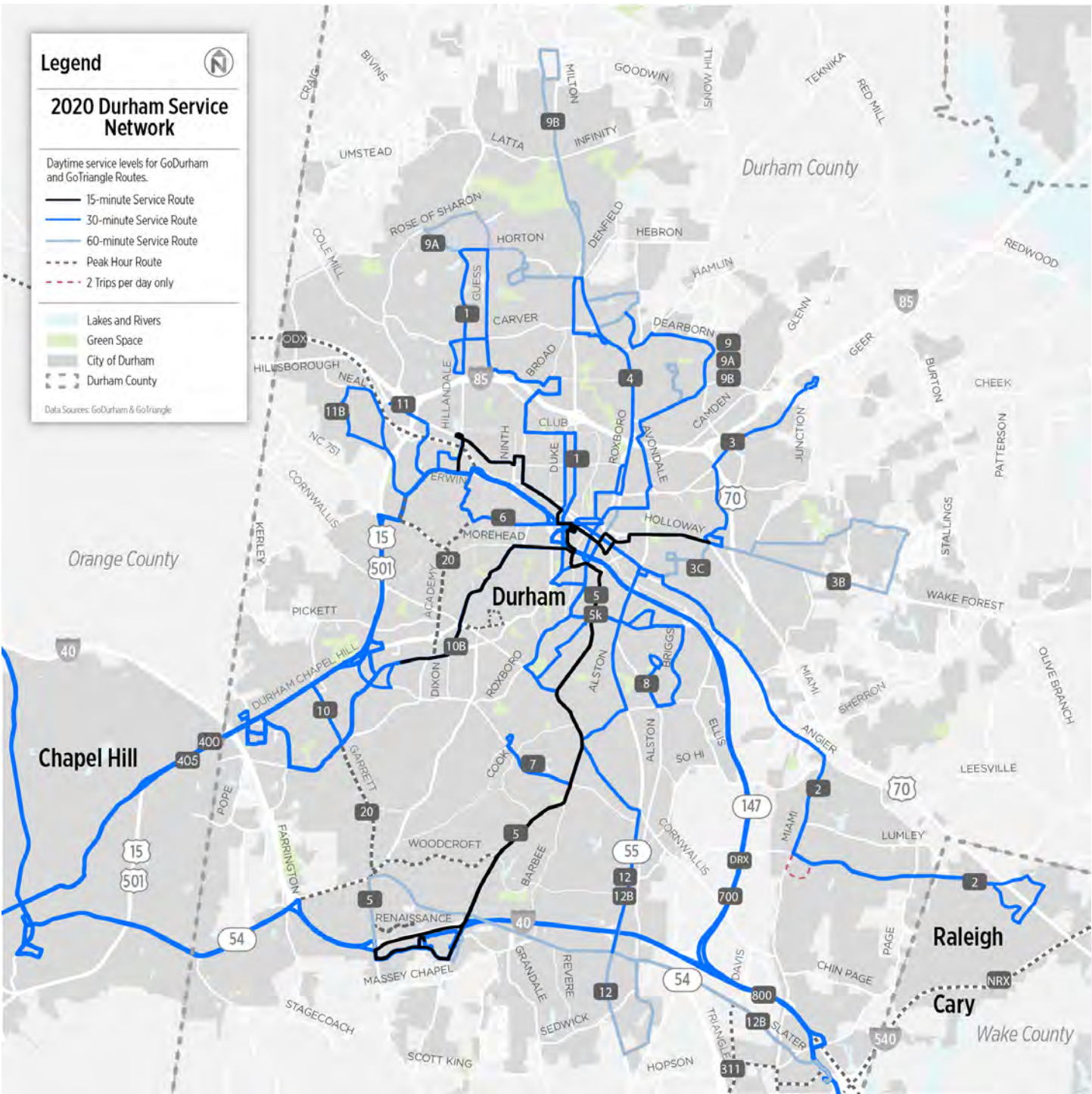
This section provides an overview of the Durham County transit network and technical analysis performed during the documentation of existing conditions. Documenting existing conditions accomplishes two things:

- 1. Establishes baseline conditions of transit service in Durham County
- 2. Assists in understanding and contextualizing service needs and gaps as a first step in the process of developing recommendations for improvements

Current transit service levels, service performance, pedestrian safety conditions, bus stop conditions, and major destinations are examples of data collected within the network to tell the story of how the existing service network is being used by passengers, where the service is most effective, and where service could be improved or changed to match usage patterns. This information, combined and mapped with socioeconomic and demographic data, provides context for whether the current location, type, and level of service provided meets the needs, as well as the estimated current and future propensity for transit in any given area within Durham County. Documenting this information helps identify transit service needs and gaps in the County and provides the basis for initial transit improvement recommendations.

Durham County is served by two transit agencies: GoDurham and GoTriangle. GoDurham operates local, fixed-route bus service within Durham’s city limits and County. Fixed route service has a posted timetable/ schedule and designated stops where riders get on and off the bus. GoTriangle serves Durham County with regional and express fixed-route services to and from major destinations like Durham Station, Duke Hospital, Durham VA Hospital, Research Triangle Park (RTP), the City of Raleigh, and Orange County. GoDurham and GoTriangle Routes operate seven days a week, with the majority of service running every 30 minutes and four frequent routes (every 15-minutes) serving high demand destinations and employment centers like Duke Hospital, Downtown Durham, Southpoint Mall, Wellons Village, and South Square.

FIGURE 1: 2020 DURHAM FIXED ROUTE SERVICE NETWORK (PRE-PANDEMIC)



*"I'm excited about the changes in Durham, and I hope we can be an example in the South. I also hope this leads to strengthening and creating communities."*

- Durham County Transit Plan Public Comment



TABLE 1: GODURHAM FIXED ROUTE SERVICE TABLE

Route	Mon - Fri Hours	Mon - Fri Frequency	Sat Hours	Sat Frequency	Sun Hours	Sun Frequency
1	6:00am - 12:00am	30 min	6:00am - 12:00am	30 min	7:00am - 9:00pm	30 min
2	6:00am - 12:00 am	30 min	6:00am - 12:00am	30 min	7:00am - 9:00pm	30 min
3	6:00am - 12:00 am	30 min	6:00am - 12:00am	30 min	7:00am - 9:00pm	30 min
3B	6:00am - 12:00 am	60 min	6:00am - 12:00am	60 min	7:00am - 9:00pm	60 min
3C	6:00am - 7:00 pm	60 min	6:00am - 7:00pm	60 min	None	None
4	6:00am - 12:00 am	30 min	6:00am - 12:00am	30 min	7:00am - 9:00pm	30 min
5	6:00am - 12:00 am	15 min	6:00am - 12:00am	15 min	7:00am - 9:00pm	30 min
6	6:00am - 12:00 am	30 min	6:00am - 12:00am	30 min	7:00am - 9:00pm	30 min
7	6:00am - 12:00 am	30 min	6:00am - 12:00am	30 min	7:00am - 9:00pm	30 min
8	6:00am - 12:00 am	30 min	6:00am - 12:00am	30 min	7:00am - 9:00pm	60 min
9	6:00am - 12:00 am	60 min	7:00pm - 12:00am	60 min	7:00am - 9:00pm	60 min
9A	6:00am - 6:30 pm	60 min	6:00am - 6:30pm	60 min	None	None
9B	6:00am - 6:30 pm	60 min	6:00am - 6:30pm	60 min	None	None
10	6:00am - 12:00 am	30 min	6:00am - 12:00am	30 min	7:00am - 9:00pm	30 min
10B	6:00am - 12:00 am	30 min	6:00am - 12:00am	30 min	None	None
11	6:00am - 12:00 am	30 min	6:00am - 12:00am	30 min	7:00am - 9:00pm	30 min
11B	6:00am - 12:00 am	30 min	6:00am - 12:00am	30 min	7:00am - 9:00pm	30 min
12	6:00am - 12:00 am	60 min	6:00am - 12:00am	60 min	7:00am - 9:00pm	60 min
12B	6:00am - 7:00 pm	60 min	6:00am - 7:00pm	60 min	None	None

Note: Information based on 2020 (pre-pandemic) service.

TABLE 2: GOTRIANGLE FIXED ROUTE SERVICE TABLE

Route	Mon - Fri Hours	Mon - Fri Frequency	Sat Hours	Sat Frequency	Sun Hours	Sun Frequency
100	6:30am - 10:30pm	30 min (am) 60 min (pm)	7:30am - 10:30pm	30 min (am) 60 min (pm)	7:30am - 10:30pm	60 min
400	6:30am - 10:30pm	30 min (am) 60 min (pm)	7:30am - 10:30pm	30 min (am) 60 min (pm)	7:30am - 10:30pm	60 min
405	6:00am - 9:00am 3:30pm - 6:30pm	30 min	None	None	None	None
700	6:30am - 10:30pm	30 min (am) 60 min (pm)	7:30am - 10:30pm	30 min (am) 60 min (pm)	7:30am - 10:30pm 7:30am - 10:30pm	60 min
800	6:30am - 10:30pm	30 min (am) 60 min (pm)	7:30am - 10:30pm	30 min (am) 60 min (pm)	7:30am - 10:30pm 7:30am - 10:30pm	60 min
800S	7:00am - 9:30am 3:20pm - 6:15pm	30 min	None	None	None	None
805	6:00am - 9:00am 3:10pm - 7:05pm	30 min	None	None	None	None
CRX	6:00am - 8:50am 3:00pm - 6:40pm	30 min	None	None	None	None
DRX	6:00am - 9:00am 3:00pm - 7:10pm	30 min	None	None	None	None
ODX	6:00am - 9:00am 4:00pm - 7:00pm	60 min	None	None	None	None

Note: Information based on 2020 (pre-pandemic) service.



“While I would personally love passenger rail throughout the Triangle, I feel really strongly that bus improvements that can happen faster and make the bus more reliable are way more important, particularly from an equity perspective.”

- Durham County Transit Plan Public Comment

ADDITIONAL SERVICES

GoDurham and GoTriangle provide the following additional non-fixed route services:

**GoDurham ACCESS** GoDurham ACCESS is a demand response transit service for the City of Durham and Durham County providing curb-to-curb (or door-to-door, upon request) ADA paratransit service for eligible riders to all locations within the City of Durham and to any location outside the City that is within three-quarters of a mile from any fixed-route bus route operated by GoDurham. This also provides services to residents who are disabled, 60 years of age or older, transportation disadvantaged, or live in rural areas of the County.

**GoDurham Connect Pilot** GoDurham Connect is a pilot program with Lyft allowing riders to take a ride (up to \$25 value) between their homes or bus stops and shopping centers, schools, and libraries within the service zone identified. The east and north zones are currently in operation. Riders also are connected to the Village bus stop, providing access to a frequent service network where there is a bus arriving or departing every 15 minutes on Routes 3, 3B, and 3C.

**GoTriangle RTP Connect Pilot** GoTriangle RTP Connect is a pilot program for commuters who are traveling to Research Triangle Park (RTP) through the Regional Transit Center (RTC) by bus and want to use a Lyft or Uber to get to their final destination. Through RTP Connect, GoTriangle will subsidize up to \$10 on any Uber or Lyft trip within the service boundaries when a passenger begins or ends at the RTC or Boxyard RTP.

**GoTriangle ACCESS** GoTriangle ACCESS (previously called T-Linx) is a regional curb-to-curb (or door-to-door, upon request) ADA paratransit service (or door-to-door, upon request) for eligible residents of Wake, Durham, and Orange Counties. The service is designed for people with disabilities that prevent them from using the GoTriangle fixed-route bus service.

**GoTriangle Vanpool** Vanpool is a program that matches people who live in close proximity to each other, and provides access to minivans and SUVs for the purpose of commuter carpooling for a reduced cost to the drivers.

RIDERSHIP

Existing transit ridership levels are a reliable indicator of transit demand, show where transit trips are currently concentrated, and help illuminate areas where transit demand may exceed available service. Typically, routes with higher ridership warrant more frequent, consistent service to meet the demand of that ridership. Fall 2019 ridership data was collected for both GoTriangle and GoDurham, as shown in Tables 3 and 4.

TABLE 3: GODURHAM AVERAGE DAILY BOARDINGS BY ROUTE (2019)

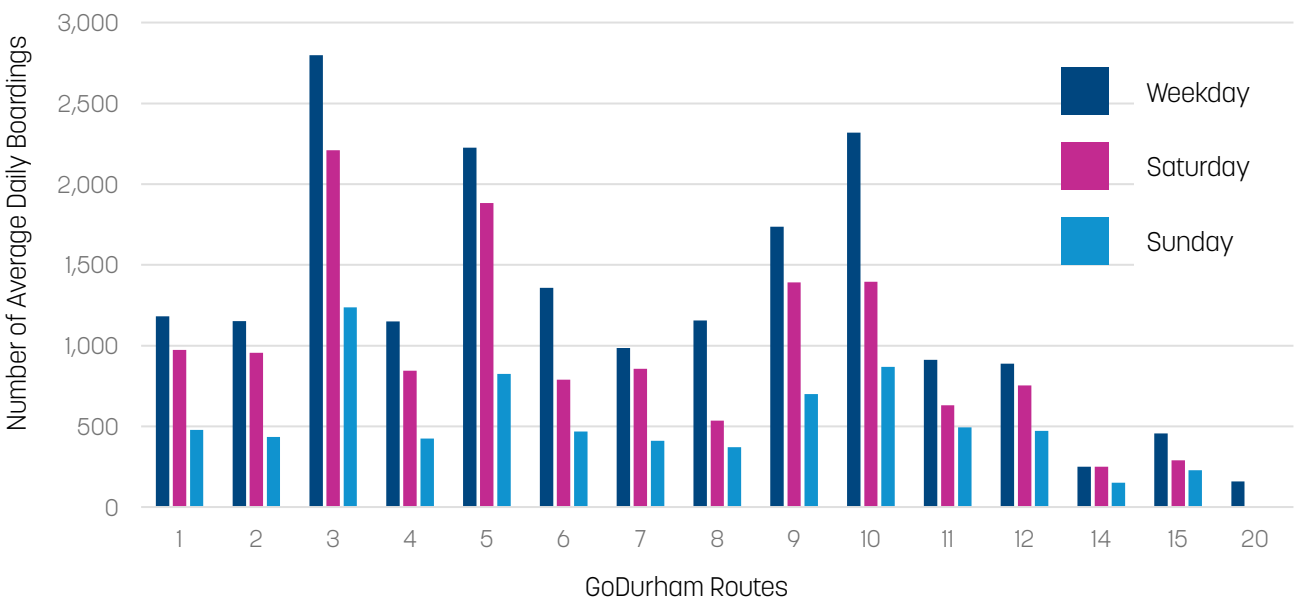


TABLE 4: GOTRIANGLE AVERAGE DAILY BOARDINGS BY ROUTE (2019)

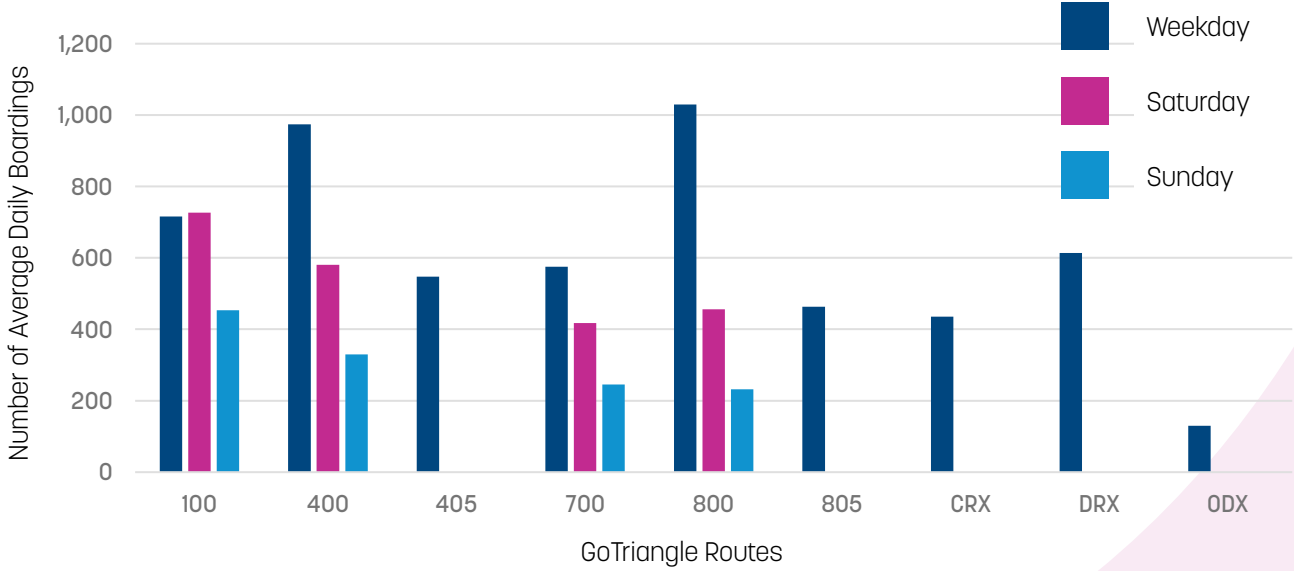
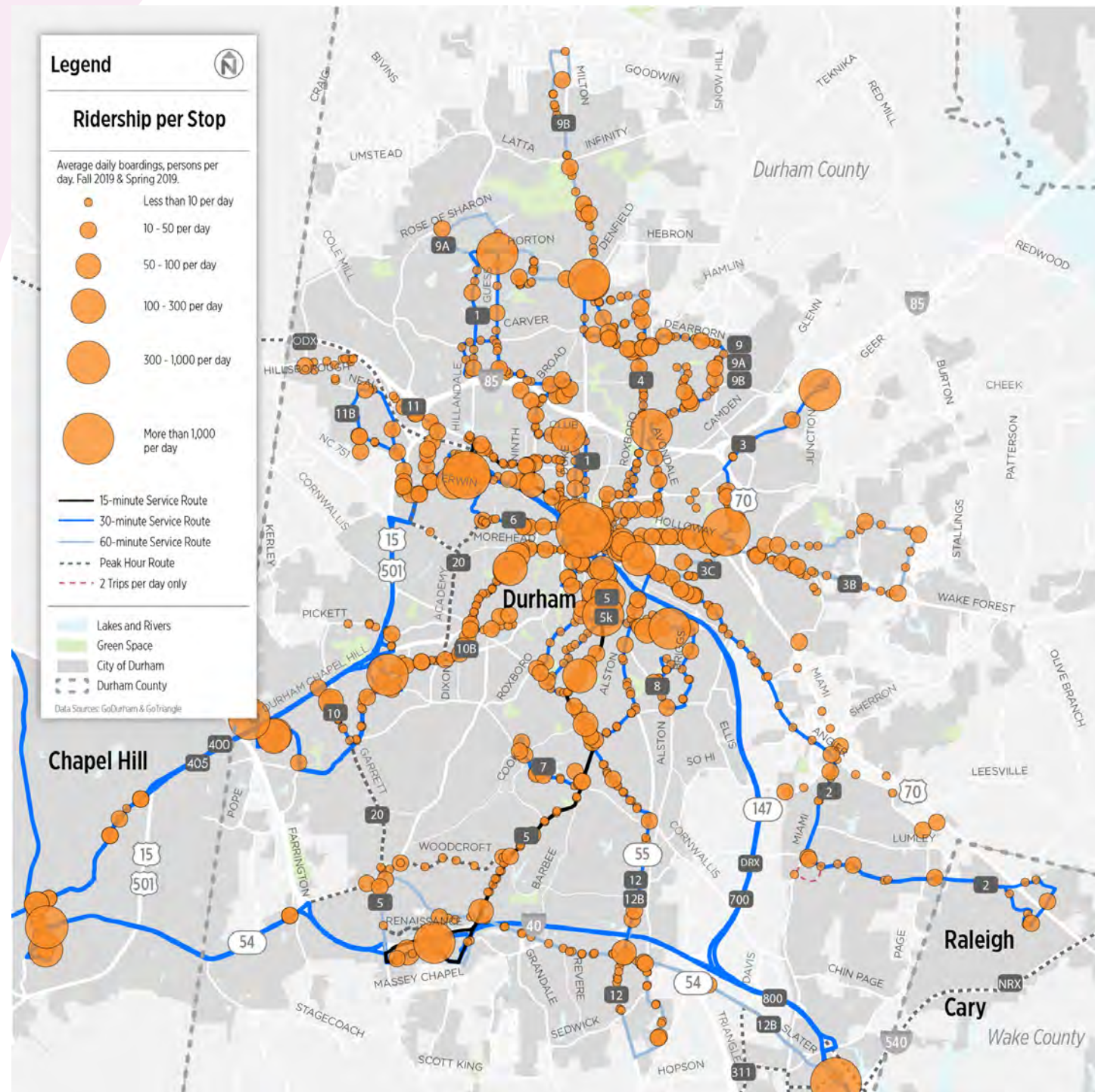




Figure 2 shows the highest utilized stops in Durham County and the frequency of the transit routes serving the stop.

### FIGURE 2: HIGH RIDERSHIP STOPS



## NEEDS AND GAPS ANALYSIS

Population density, employment data, and the demographic characteristics of an area help create a clearer, fuller picture of the need for transit. By combining current transit service coverage with socioeconomic, employment, and population data, the areas with transit needs and any gaps in the service network can be geographically highlighted.

## TRANSIT PROPENSITY

Transit propensity is a measure to describe how likely a person is to take transit. A transit propensity analysis identifies locations where the demographics indicate a higher propensity to use transit than other areas. For example, if a significant number of people from a certain demographic group that use transit often live in a clustered area, the transit demand in that area will likely be higher. Conversely, in areas where transit-reliant groups have lower representation, the transit demand may be lower than what is captured purely by population and employment density.

Population and employment densities are assessed within a defined geographic area, census block in the case of this analysis. Transit service is most efficient when serving the largest number of people with the fewest number of trips, which is more easily achieved with a higher level of population or employment density.

Using 2018 Longitudinal Employer-Household Dynamics (LEHD) data and 2014-2018 American Community Survey (ACS) data, population and employment densities were mapped, with the highest densities of population being 10 or more people per acre and the highest employment densities being 10 or more jobs per acre. Results are shown in Figures 3 and 4.





FIGURE 3: DURHAM COUNTY 2018 POPULATION DENSITY

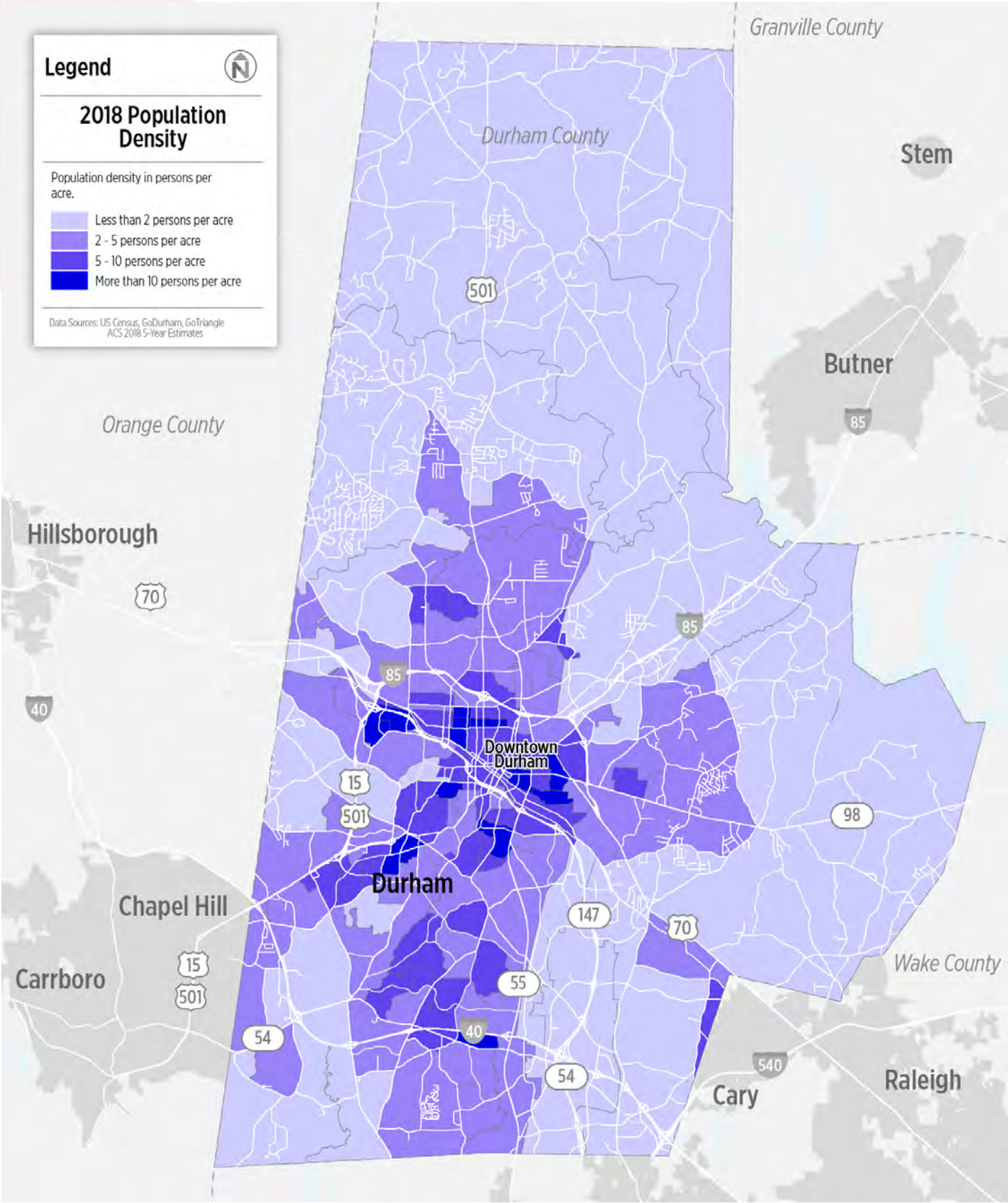
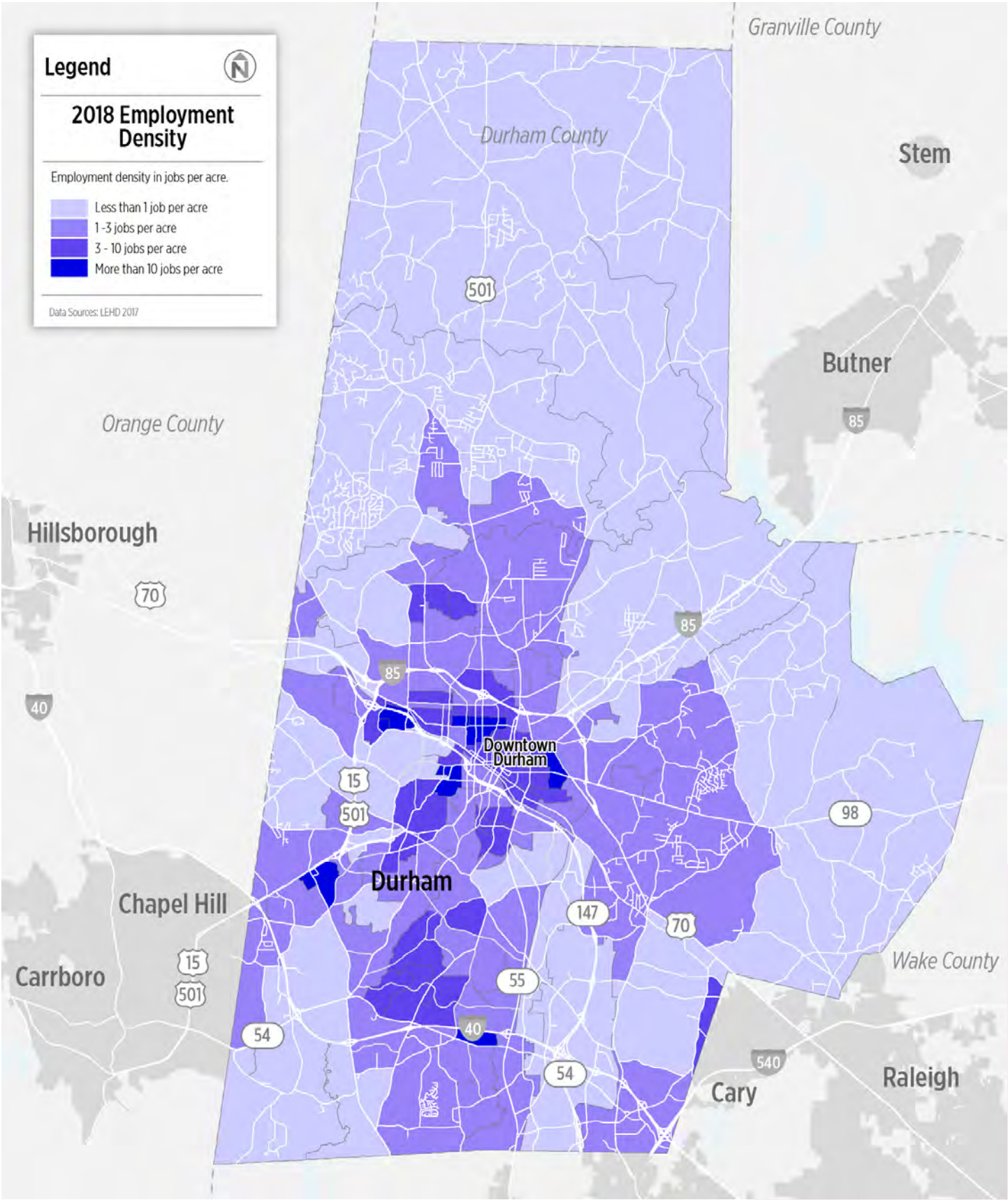


FIGURE 4: DURHAM COUNTY 2018 EMPLOYMENT DENSITY





The transit propensity analysis performed for Durham County included transit propensity adjustment factors which measure the relative demand for transit in different areas of the region based on demographic characteristics. Transit propensity adjustment factors are calculated by finding the ratio between the transit mode share of the demographic group and the transit mode share of the general population. For example, the transit propensity adjustment factor for foreign-born residents is found by dividing the percent of foreign-born residents who commute to work via transit by the percent of all residents who commute to work via transit.

Table 5 shows the transit propensity adjustment factors used for this analysis. A factor of greater than 1 means that the group is more likely to use transit than the population as a whole. The larger the number, the greater the transit propensity. Conversely, a number less than 1 indicates a transit propensity less than that for the entire population. The transit propensity adjustment factors used for this analysis were: race, native/foreign born, income compared to the poverty level, and number of vehicles per household.

The transit propensity adjustment factors were determined using the American Community Survey (ACS) 2019.

The final transit propensity (Figure 5) map illustrates where demand and need for transit is the highest, where transit service is currently provided and where there are potential needs for service, service expansion, and/or improvements. Areas shown in the darkest shades of red have the highest population, employment, and demographic/ socioeconomic characteristics overlapping in a single census block group, which indicates the highest propensity for transit use.

These areas include:

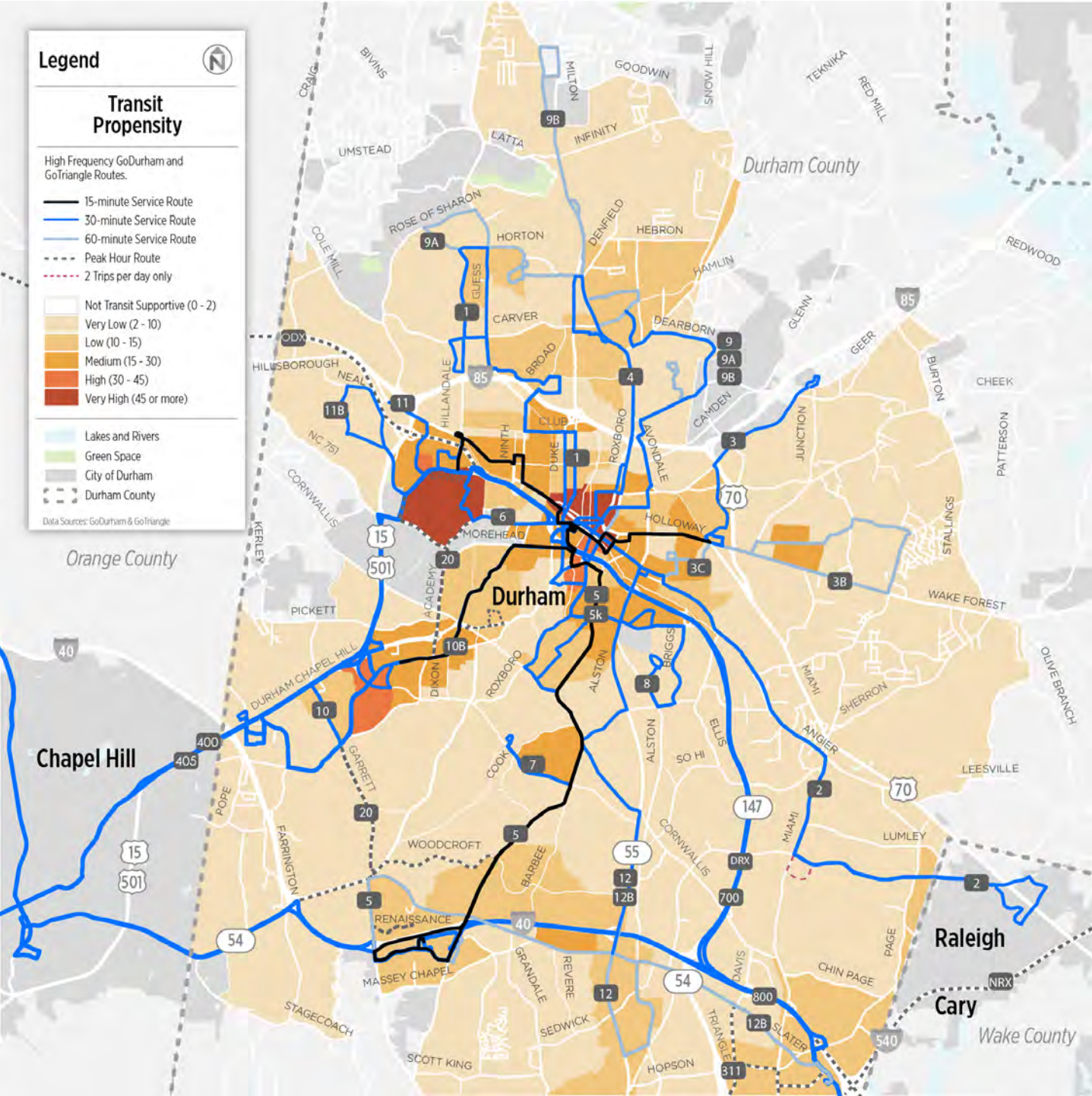
- VA Hospital, Duke Hospital, and Duke University's east campus
- Downtown Durham
- North Carolina Central University (NCCU)

TABLE 5: TRANSIT PROPENSITY ADJUSTMENT FACTORS

Demographic Group	Adjustment Factor
<i>Race</i>	
White	0.6
Black	1.4
Native American	4.3
Asian	1.8
Other	0.8
<i>Native/Foreign Born</i>	
Native Born	1.0
Foreign Born	1.1
<i>Poverty Level</i>	
< 100%	3.1
100% - 149%	1.4
> 149%	0.8
<i>Vehicle Availability</i>	
No Vehicle	10.8
1 Vehicle	1.2
2 or More Vehicles	0.4

- Wellons Village and East Durham
- South Square

FIGURE 5: TRANSIT PROPENSITY





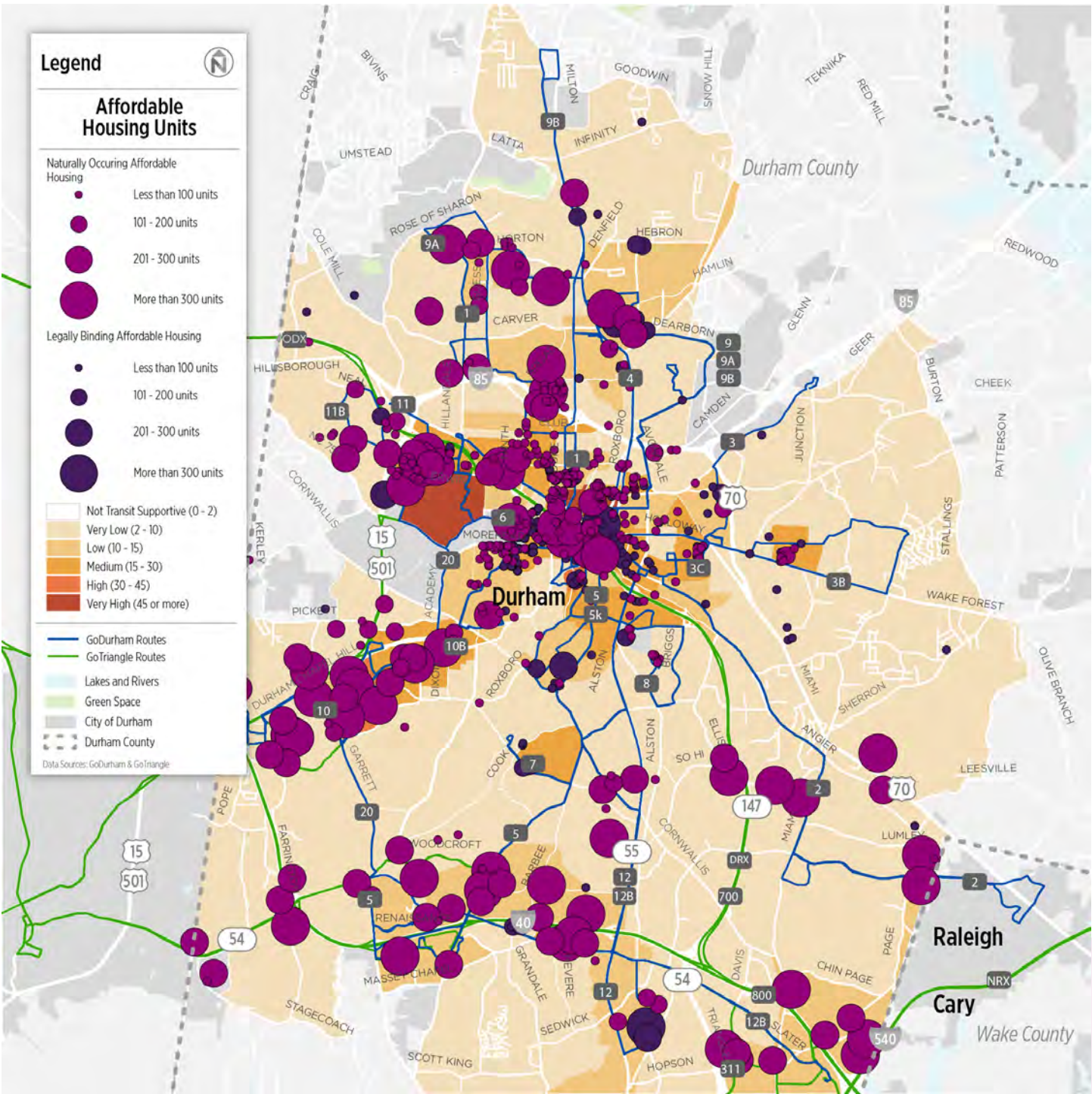
# EQUITABLE DISTRIBUTION OF TRANSIT SERVICE

In coordination with staff, the public, key stakeholders, and community leaders, equity was established as one of the core principles of the Durham County Transit Plan. This refers to equity in the planning process itself and making sure input from historically disadvantaged populations was incorporated, but also equity in the delivery of transit service improvements and projects. Providing access to employment, education, healthcare, and other crucial services to low-income, Environmental Justice, and affordable housing communities is one measure of equitable distribution of public transit service. Figure 6 shows the location and number of units for Legally Binding Affordable Restricted (LBAR) housing and Naturally Occurring Affordable Housing (NOAH) based on 2020 affordable housing data administered and provided by Triangle J Council of Governments (TJCOG) overlaid on the transit propensity analysis map.

For LBAR housing, affordability is tied to its funding source and is only available to households that meet specified income limits. It restricts the cost in order to be affordable to renters or owners with incomes below a defined percent of the area median income. NOAH is affordable to low- and moderate-income households but is not income-restricted and has no guarantees that it will remain affordable.

The largest cluster of LBAR housing is off US 15-501 Business (Lakewood Avenue) and West Chapel Hill Street at Duke University Road. Other LBAR housing clusters occur in east Durham between US 70 Business (Holloway Street) and NC 147 (Durham Freeway). The NOAH is spread out across Durham but remains fairly close to areas immediately surrounding existing transit routes. These clusters line up with areas of high transit propensity, including areas in the downtown core, Erwin Road, and South Square. However, a number of affordable housing communities are currently concentrated around lower frequency transit routes areas in northern Durham. These instances suggest the potential need for service improvements in areas where there are concentrations of NOAH, indicating a need for a more equitable distribution of service improvements.

FIGURE 6: AFFORDABLE HOUSING UNITS





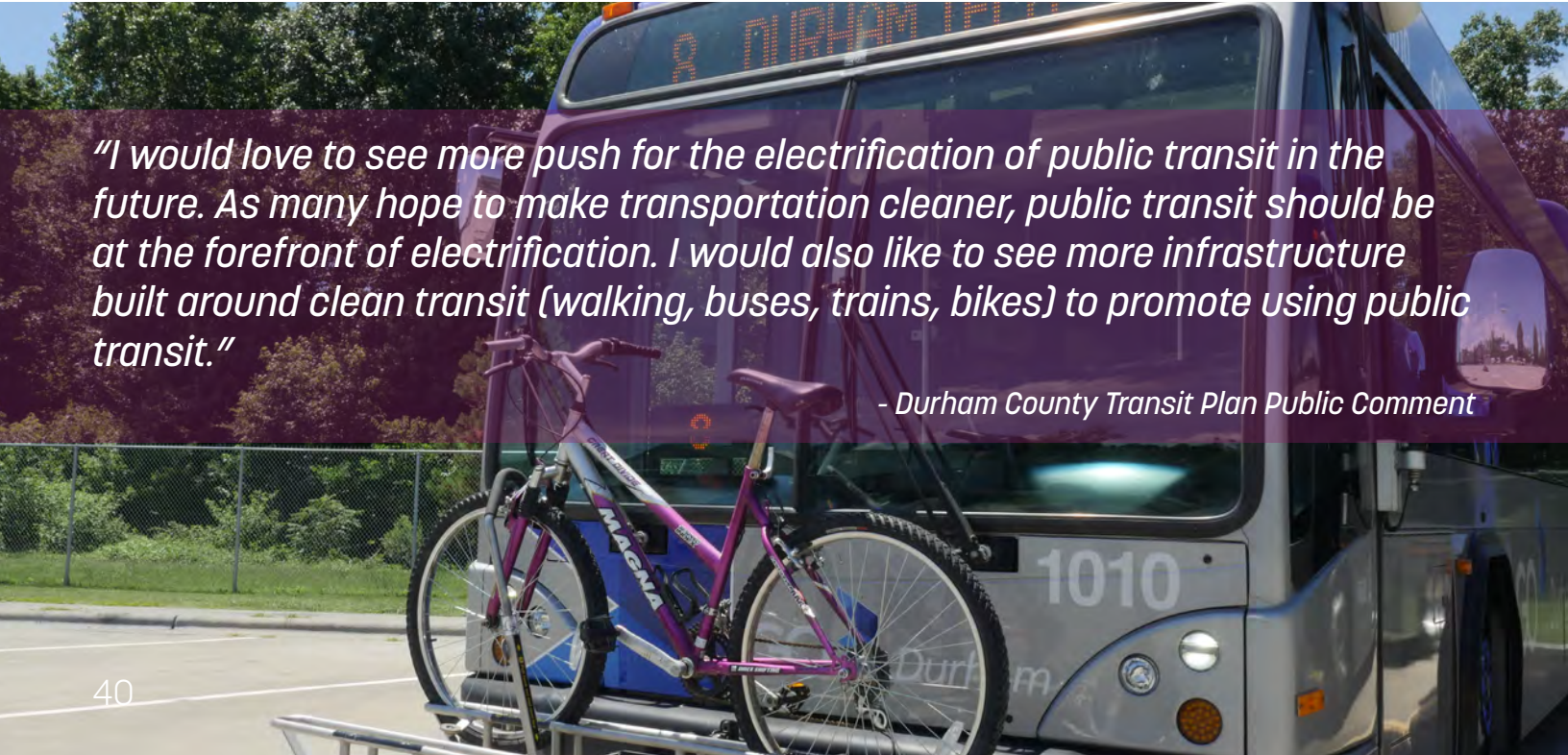
# FUTURE TRANSIT DEMAND

The Durham County Transit Plan has a 20-year planning horizon. As a result, it is important to go beyond identifying areas with high transit propensity within the current Durham service network to also consider future population and employment trends. This will better ensure solutions identified for current needs will still be relevant as the area grows and changes. The Triangle Regional Model (TRM) population and employment densities were combined to illustrate key areas of future growth in Durham County. Future population and employment density shown in Figure 7 indicates that although many areas within Durham County will continue to have relatively low density, urban areas will continue to have an increased need for transit as well as communities where much of the growth is projected.

The largest future increases in population are projected to be seen along the US 15-501 corridor in areas surrounding and south of Patterson Place, throughout and adjacent to the downtown core as well as south Durham. Northern Durham also sees an increase in population density near Roxboro Road and Carver Street.

Population and employment densities are projected to be concentrated in the following areas in the future:

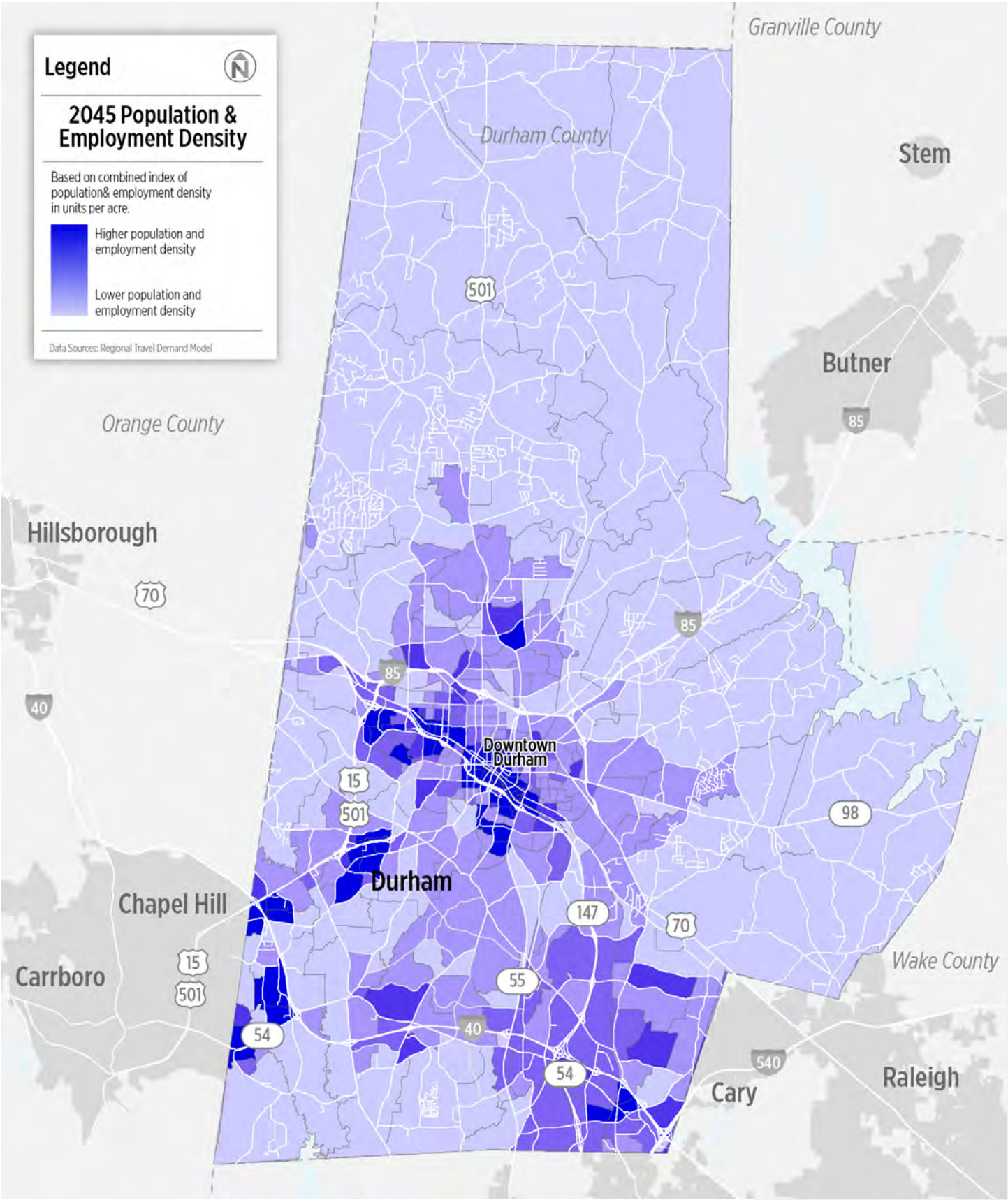
- Central Durham including the Erwin Road corridor, downtown Durham, east Durham, and the area near NCCU
- Southeast Durham south of I-40 approaching the I-540 interchange
- South Square
- Patterson Place and the immediately surrounding areas
- Northern Durham, south of Hebron Road



*"I would love to see more push for the electrification of public transit in the future. As many hope to make transportation cleaner, public transit should be at the forefront of electrification. I would also like to see more infrastructure built around clean transit (walking, buses, trains, bikes) to promote using public transit."*

- Durham County Transit Plan Public Comment

FIGURE 7: 2045 POPULATION AND EMPLOYMENT DENSITY





# PEDESTRIAN SAFETY AND BUS STOP ACCESSIBILITY

In addition to identifying transit service needs and gaps within the existing service network in Durham, it is important to also examine needs and gaps associated with pedestrian facilities. Pedestrian amenities can have a major impact on the usability and perceived quality of a service. For transit users, trips do not simply begin or end at the transit stop, therefore general pedestrian safety, the accessibility of transit stops, as well as the quality of the pedestrian environment can impact the ability and choice of residents to utilize transit. As a result, general pedestrian safety—the accessibility of transit stops, as well as the pedestrian environment—can impact the ability and choice of residents to use transit. For example, an investment in sidewalk accessibility improves the convenience and accessibility of transit service, while also increasing the likelihood of transit usage. Pedestrian access to transit is crucial when planning a service network that will allow for safe paths to and from transit stops. Improving pedestrian access and safety also provides benefits to the Durham community as a whole encouraging residents to walk for exercise or other trips.

In fall 2020, a bus stop inventory was conducted by GoTriangle for all GoDurham and GoTriangle bus stops to document which bus stops had infrastructure/amenities associated as contributing to safe pedestrian access to transit.

Based on the inventory data, locations with bus stop landings are defined by having an eight-by-five-foot concrete pad for boardings and alightings per ADA requirements. Locations with sidewalks are defined by having existing sidewalks on the same side of the street as the bus stop, sidewalks on the opposite side of the street, or sidewalks on both sides of the street. Locations with crosswalks include bus stop locations where a crosswalk is within sight of the stop or within 100-feet of the stop.

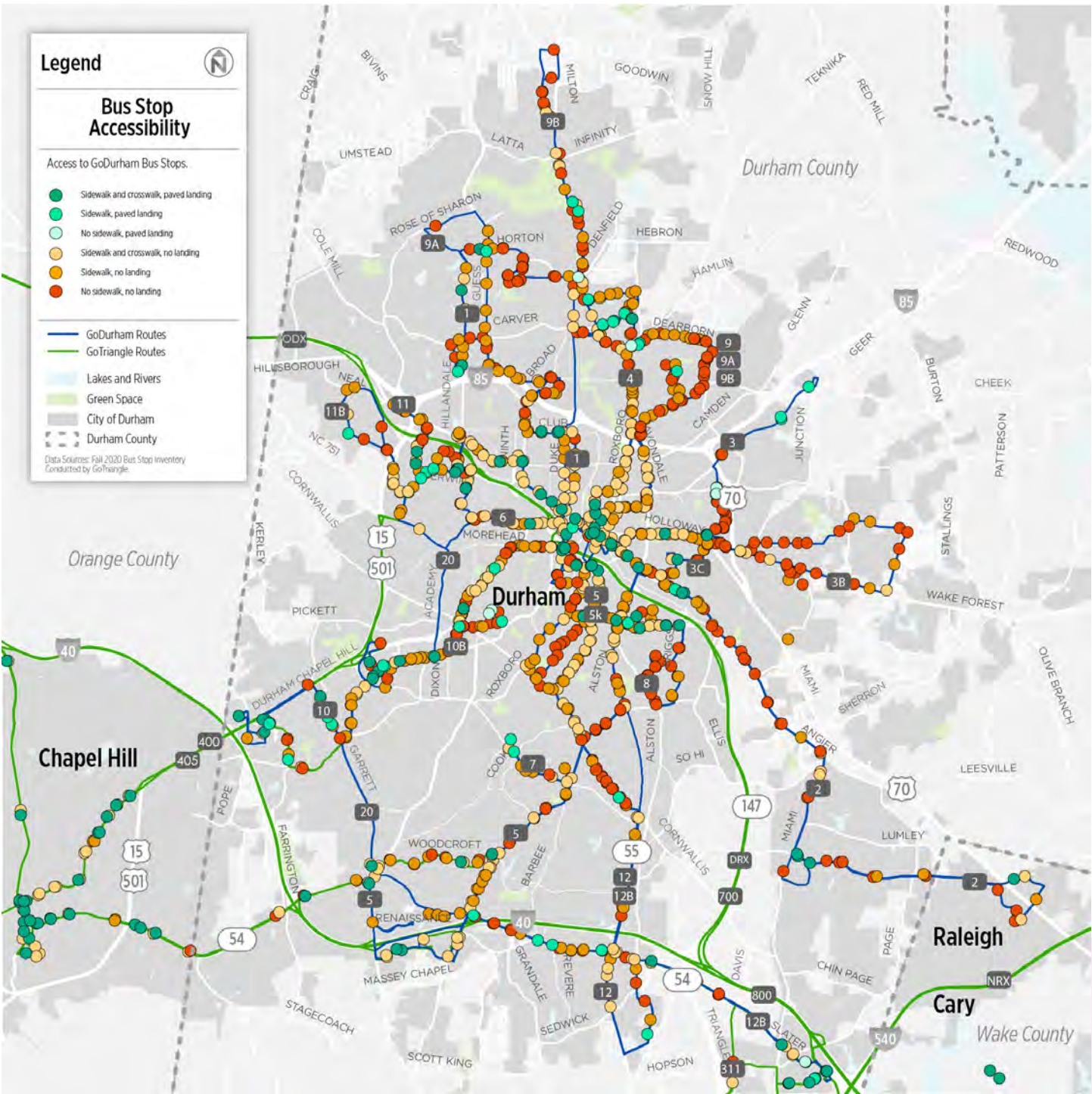
The results of this analysis for the total of 1,324 GoDurham and GoTriangle bus stops (the majority of which are shared) at the time of analysis are shown below:

TABLE 6: BUS STOP INVENTORY

	Sidewalk and Crosswalk	Sidewalk and No Crosswalk	No Sidewalk or Crosswalk	Total
Paved Landing	178	69	13	260
No Paved Landing	404	314	346	1,064

A total of 260 bus stops have paved bus stop landings and 1,064 stops do not have paved bus stop landing pads per ADA requirements. Figure 8 illustrates these findings.

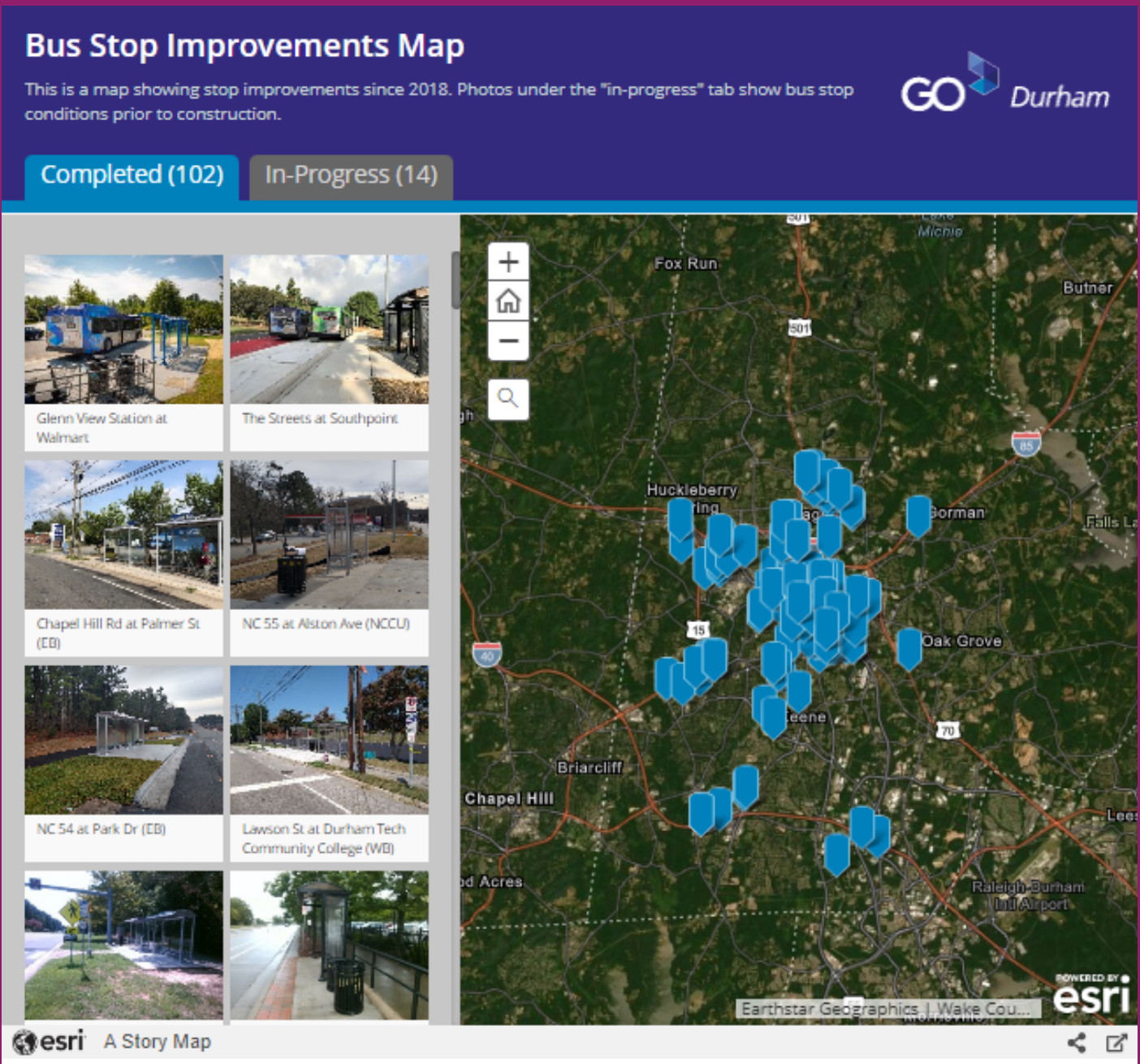
FIGURE 8: BUS STOP ACCESSIBILITY







The high number of bus stops lacking paved landing pads as well as amenities associated with safe pedestrian access to transit service was identified as essential for improvements. Many of the roadways that lack sidewalks are in historically disadvantaged neighborhoods or in suburban areas of the City, and these roadways have not been improved as Durham’s population has grown. Constructing sidewalks on these roadways will entail significant effort and may be costly. The City of Durham has many sidewalk construction projects underway and routinely plans for and seeks funding for future sidewalk and pedestrian safety projects. NCDOT also maintains many of these roadways and has recently updated its Complete Streets policy to ensure that future highway projects include safe facilities for pedestrians, bicyclists, and transit users. Working together, the Durham County Transit Plan, the City of Durham, and NCDOT can help improve sidewalk access for transit users as well as the Durham population as a whole.



GoDurham is working with GoTriangle and the City of Durham to continuously improve bus stops by providing the appropriate amenities for riders as they board and depart the bus. GoDurham is actively improving stops throughout the system to meet Durham’s standards for accessibility, shelter, seating, security, and lighting. Each year, local funding is dedicated to bus stop improvements around the City. A combination of Durham County Transit Plan funds along with the City’s Participatory Budgeting program will help pay for the improvements.

As part of our commitment to transparency and accountability, the GoDurham website includes an online web-map that inventories these bus stop improvements. [Click here to see the bus stop improvements map.](#)



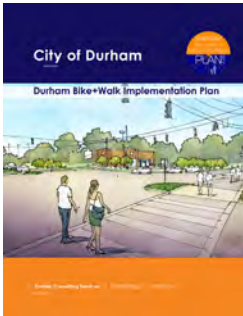
## PREVIOUS PLAN REVIEW

A review of relevant, recently completed plans and studies that could impact transit service in Durham was inventoried prior to beginning this Plan. Projects that were still relevant and could address a need identified in the existing conditions and needs and gaps analysis were added to the list of projects to be considered in the scenario development process, in addition to new projects identified through the needs and gaps analysis, coordination with staff, and the public outreach. This exercise provided a starting point to identify projects to be incorporated into the Plan. Relevant transit recommendations were documented by project name, type (park and ride, transit center, extending existing routes, improving frequency, etc.), status, primary and secondary mode, and cost information (if available). In coordination with the Technical and Outreach Committees, the list of potential projects continued to be edited until the development of the final Preferred Transit Scenario. A summary of previous plans and studies referenced can be found below.



### DURHAM COUNTY TRANSIT PLAN (2017)

The 2017 Durham County Transit Plan was an update to the previously developed and approved 2011 Bus and Rail Investment Plan, adopted by the governing boards of Durham County, the DCHC MPO, and GoTriangle. The goal of the 2017 Durham County Transit Plan was the same as the 2011 Durham Transit Plan: to develop an exceptional public transportation system in the region that provides greater transportation options for Durham residents and employers, positively impacts traffic congestion and air quality, and supports local development policies.



### DURHAM BIKE+WALK IMPLEMENTATION PLAN (2017)

The Bike+Walk Implementation Plan builds off of two previous plans: the Durham Walks! Plan (2011) and the 2006 Durham Comprehensive Bicycle Transportation Plan. The plan identified and prioritized more than 450 miles of bicycle facility needs, 400 miles of sidewalk needs, and 480 intersection improvements based on public input and geospatial analysis. Priority bicycle and pedestrian focus corridors were identified to help develop a comprehensive active transportation network.



### COMPREHENSIVE TRANSPORTATION PLAN (2017)

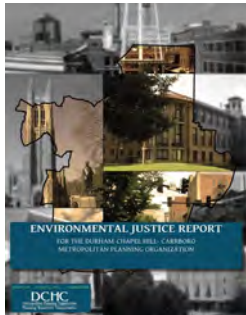
The DCHC MPO includes Carrboro, Chapel Hill, Hillsborough, the City of Durham, and Chatham, Durham, and Orange Counties. The Comprehensive Transportation Plan (CTP) provided a financially unconstrained perspective of the MPO's long-range transportation needs. The ultimate goal of the CTP was to identify deficiencies in the network and work to create holistic multimodal transportation recommendation for the MPO planning area.



### GODURHAM SHORT RANGE TRANSIT PLAN (2019)

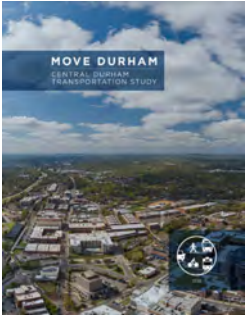
The GoDurham Short Range Transit Plan (S RTP) was adopted in June 2019 by the Durham City Council and identifies transit issues specific to operational and service improvements. The final S RTP recommendations aimed to increase system reliability, extend the 15-minute frequency service network, simplify complicated route alignments and patterns, add 30-minute frequency to Sunday and weekend evening services, and provide more direct connections to major destinations.

Though the S RTP was cost-constrained, a "Vision Plan" was also developed as part of the planning effort, identifying potential high-priority improvements if additional transit funding was to become available in the future.



### ENVIRONMENTAL JUSTICE REPORT (2020)

The Environmental Justice (EJ) Report was prepared by the DCHC MPO to evaluate the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income during the development, implementation, or enforcement of environmental laws, regulations, or policies. All agencies receiving federal assistance need to demonstrate compliance with Title VI of the Civil Rights Act of 1994, Executive Order 12898 of 1994, and the National Environmental Policy Act (NEPA) to ensure certain populations are not disproportionately impacted. The report defines what populations are considered EJ communities and identifies those communities within the MPO.



### MOVE DURHAM TRANSPORTATION STUDY (2020)

The Move Durham Transportation Study examines the multimodal network needs, supportive policies, and funding to improve the way people travel in and around central Durham. Move Durham studied access and mobility in central Durham and developed recommendations for all modes of transportation. The main priorities based on the outreach were better bus stops, frequent and reliable transit, more sidewalks and safer crossings, better lighting, better traffic claiming, and connected bicycle facilities.



### METROPOLITAN TRANSPORTATION PLAN 2050 (2022)

The Metropolitan Transportation Plan (MTP) is the guiding document for future transportation investments in roads, transit service, pedestrian and bicycle facilities. The 2050 MTP is a joint transportation decision-making document for the Capital Area Metropolitan Planning Organization (CAMPO) and the DCHC MPO. The plan attempts to anticipate regional transportation needs using the Triangle Regional Model, robust public involvement, and an analysis of inter-regional transportation deficiencies.



# COVID-19 IMPACTS ON TRANSIT FOR GOTRIANGLE AND GODURHAM

On March 27, 2020, North Carolina Governor Roy Cooper enacted a stay-at-home order to slow the spread of COVID-19. Bus ridership dropped rapidly soon after the statewide order. In May 2020, bus ridership across the Triangle reached its lowest point with only 548,000 trips on GoCary, NC State, GoRaleigh, GoTriangle, GoDurham, and Chapel Hill services.

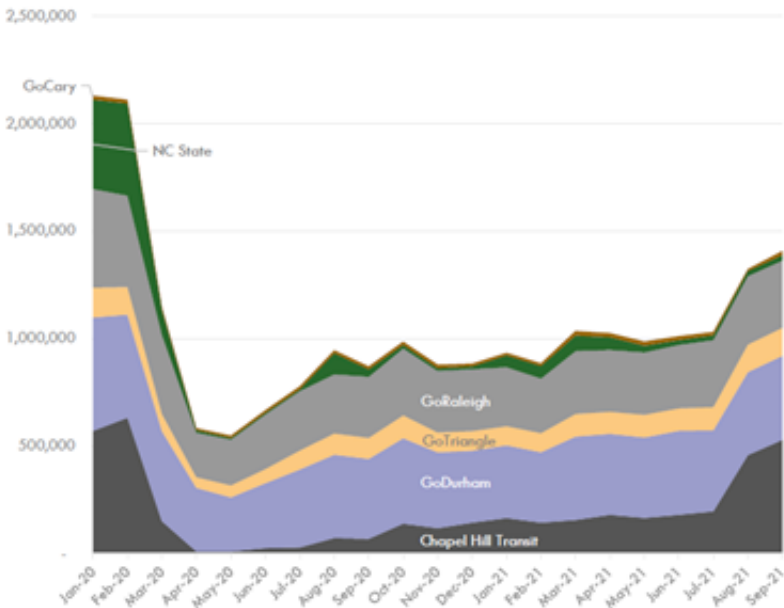
## RIDERSHIP PRE- AND POST-COVID-19

Since 2021, ridership has steadily increased. Recent ridership numbers show that in September 2021, approximately 1,387,000 transit trips were taken across the Triangle. Ridership in 2020 was shown to be about 65% of the pre-COVID numbers. A COVID-19 Impact Analysis was completed by GoTriangle to further analyze the full effect of COVID-19 on bus service operations in the Triangle region.

Key findings of the Impact Analysis include:

- Despite the rapid and sustained decline in ridership that occurred due to COVID-19 across the nation, those who continued to ride transit were primarily essential workers.
- Widespread shortages of bus operators have affected the ability of some agencies to maintain schedule service levels.
- Since agencies must reduce service due to operator shortages, low-frequency and coverage services are typically the first cuts agencies across the nation make. Transit agencies focus resources on maintaining and strengthening the all-day, frequent network.

FIGURE 9: MONTHLY BUS RIDERSHIP BY TRIANGLE REGION SERVICE OPERATOR JANUARY 2020 - SEPTEMBER 2021



Those who continued to ride transit are more likely to be individuals that fall into one of the following demographic categories: low income households, lower level of education, person of color, and/or no access to a vehicle.

Source: GoTriangle COVID-19 Impact Analysis

## SERVICE AND FARE CHANGES

Typically, GoTriangle and GoDurham implement major service changes in August of each year and smaller service changes in January. With lingering impacts of COVID-19 and operator shortages, the changes to services were shifted.

The service changes on GoTriangle and GoDurham routes that serve Durham County include:

TABLE 7: SERVICE CHANGES IN DURHAM COUNTY DUE TO COVID-19

Agency	Route	Service Change	Date
GoTriangle	800S (Chapel Hill - Southpoint)	Suspended	June 2021
GoTriangle	805 (Chapel Hill - RTC via Woodcroft)	Reduced frequency from half-hourly to hourly	June 2021
GoTriangle	DRX (Raleigh - Durham)	5 out of 37 trips suspended	June 2021
GoDurham	Routes 6, 7, 8, 11, and 11B	Reduced frequency from half-hourly to hourly	July 2021
GoDurham	Route 5	Reduced frequency from 15-minute to half-hourly	July 2021
GoDurham	Routes 10B and 12B	Suspended	July 2021
GoDurham	Route 5K	Reintroduced	November 2021
GoDurham	Route 10B	Reintroduced with hourly service	November 2021
GoTriangle	800 (Chapel Hill - RTC)	Reduced frequency from half-hourly to hourly on Saturdays	November 2021
GoDurham	Route 6	Alignment and schedule modification	February 2022
GoDurham	Route 20	Permanently canceled	

In March 2020, both GoDurham and GoTriangle suspended fare collection on all services. This fare suspension sought to help ease financial burdens for frontline workers and community members relying on transit to get to critical jobs or food and health care. Passengers were also asked to board the bus using the rear doors in an effort to maintain social distancing protocols, which made approaching the farebox more difficult. GoDurham and GoTriangle have both elected to continue the fare suspension through June 30, 2023.





# 03

## PUBLIC OUTREACH

- EQUITABLE ENGAGEMENT APPROACH
- LISTENING AND LEARNING OUTREACH
- PHASE I - GOALS AND OBJECTIVES
- PHASE II - OPTION EVALUATION
- PHASE III - PREFERRED OPTION EVALUATION

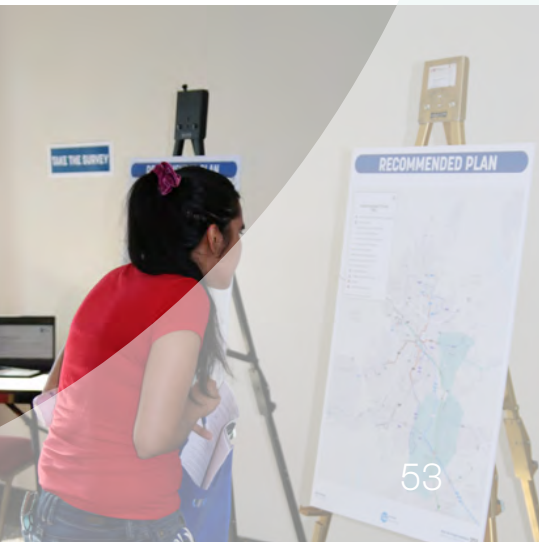
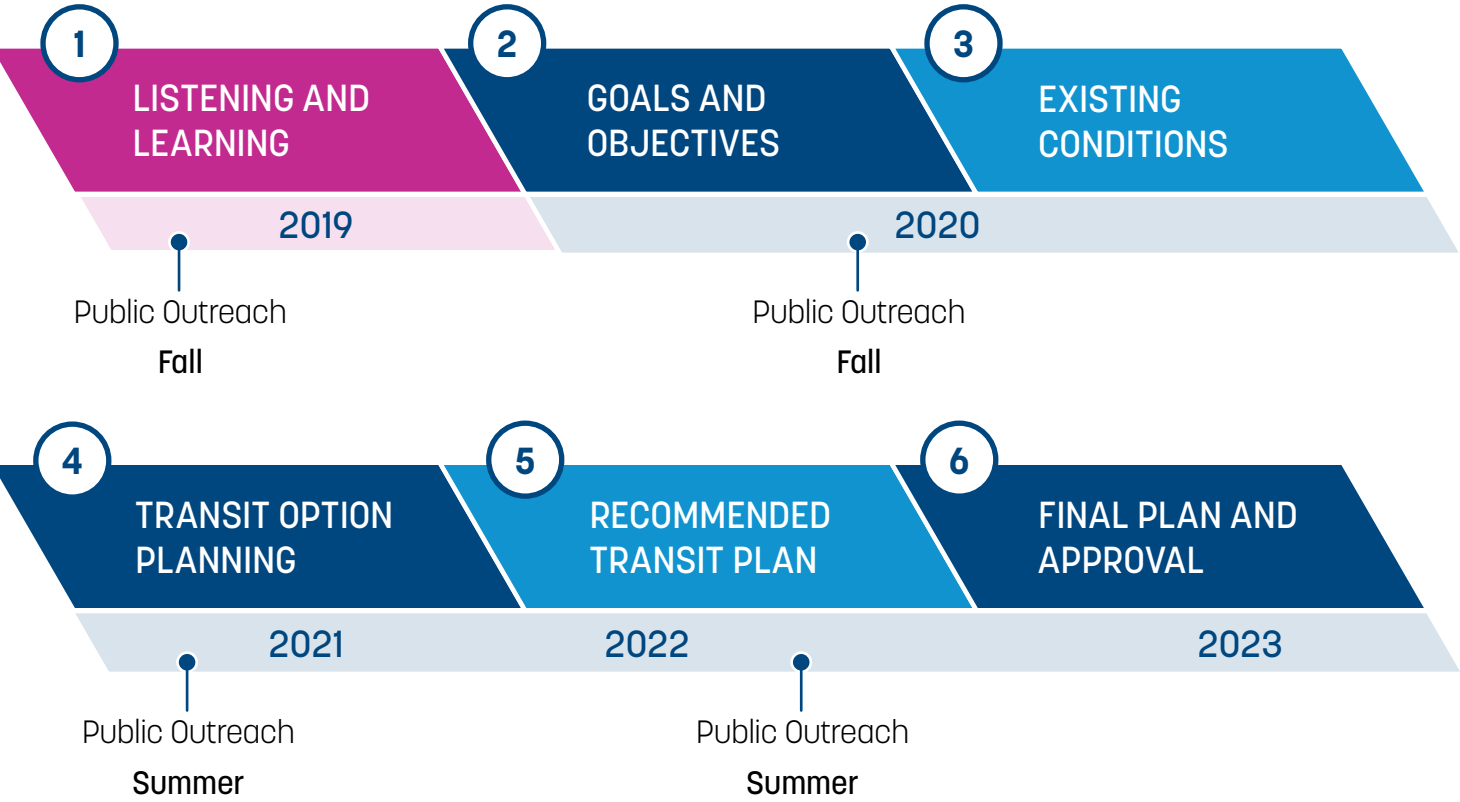


# EQUITABLE ENGAGEMENT APPROACH

The City of Durham's [Equitable Community Engagement Blueprint](#) was the foundation for the Durham County Transit Plan. The Plan is a community-driven plan with a focus on intentional equitable engagement and representative feedback. The Project Team began the public engagement process in 2019 with the Listening and Learning Workshops to develop Plan goals and objectives that the public has for transit in Durham County. Next, three additional phases of targeted public outreach were conducted at major milestones throughout the Plan's development process. An Outreach Committee made up of staff from DCHC, City of Durham, Durham County, GoTriangle, and consultant team members led the planning and execution of the three phases of outreach.

Phase I focused on confirming previously expressed priorities for transit improvements from the Listening and Learning Workshops and goal setting. Phase II presented various combinations of potential transit improvements and highlighted the trade-offs between the varying investment focuses. Phase III presented the draft Preferred Transit Scenario to confirm desired projects, improvements, and preliminary implementation timelines.

Public outreach throughout the Plan's development included in-person events, stakeholder interviews, Engagement Ambassador-led focus group meetings, online and paper surveys (in English and Spanish), pop-up events, virtual presentations, online materials, and more. This helped maximize the opportunity for transit riders and historically underrepresented residents to provide input and ensured their voices would be reflected in the final Plan. Input received during each phase of outreach was used to confirm, refine, and provide context alongside the technical analysis to create a feasible and cohesive Plan rooted in values held by Durham residents. The equitable engagement approach also entailed disaggregating input from focus groups, acknowledging differences in priorities, and being transparent with the public about how data was used to inform decision-making. This chapter provides further detail into the specific engagement strategies used during each phase of outreach as well as the results.





OUTREACH SUMMARY

As a core principle of the Durham County Transit Plan, the Project Team committed to equitable community engagement from the onset of the planning process. The Equitable Community Engagement Blueprint was the foundation for the Plan’s outreach strategy and outlines the foundations of the Plan’s approach to community engagement.

Challenges associated with COVID-19 made conducting outreach through traditional methods difficult. To collect representative, meaningful feedback, it was imperative that the public engagement strategy be flexible and intentional. The three phases of outreach combined various in-person events with virtual materials and presentations to provide a variety of options for varying comfort levels and availability.



ONLINE SURVEYS

Survey tools made available on the Project website as well as via QR code on flyers, posters, and postcards, handed out at in-person events and transit centers (in English and Spanish).



VIRTUAL PRESENTATIONS

Narrated presentations shared on the Project website.



POP-UP EVENTS

Project-Team-led events (15 total) conducted at transit centers and other major community locations/events.



ENGAGEMENT AMBASSADOR EVENTS

Community-member-led virtual and/or in-person events where Durham residents were presented with the same information contained in the virtual presentations and given surveys (both online and paper versions were made available to Engagement Ambassadors).



STAKEHOLDER ENGAGEMENT

Key stakeholders were contacted during each phase of engagement and provided with the opportunity to participate in an interview with the Project Team and/or respond to the survey associated with that particular phase of outreach.

Based on the principles in the Equitable Community Engagement Blueprint, the Engagement Ambassador program was utilized. The Engagement Ambassador program involves recruiting residents with connections to marginalized communities in Durham to directly engage their neighbors, friends, and family members in outreach efforts. Engagement Ambassadors were recruited based on their existing connections to important key groups in Durham. Ambassadors receive a stipend for their work to help remove some of the barriers that marginalized communities in Durham face when engaging with local government. Another focus of the program is to continuously seek input from Ambassadors on how to conduct outreach and how to make sure that outreach materials are understandable and use accessible language. The majority of the in-person and virtual events for the Durham County Transit Plan were led by Engagement Ambassadors.

All surveys were available in print and online in English and Spanish. Links to the survey were posted in buses and at Durham Station to encourage the participation of transit riders. To be able to measure how successfully key groups or “focus groups” were being engaged, demographic questions were asked at the end of each survey, and respondents were asked questions related to their age, race, ethnicity, household income, English proficiency, home location, work location, and questions related to their transit usage (frequency and specific routes). Below is a summary of the number of responses by phase.

TABLE 8: SURVEY RESPONSES BY PHASE

	TOTAL NUMBER OF RESPONSES	PERCENT OF RESPONSES FROM PEOPLE OF COLOR	PERCENT OF RESPONSES FROM TRANSIT RIDERS
PHASE I	673	38.9%	50.1%
PHASE II	2,342	49.2%	51.0%
PHASE III	2,152	60.5%	48.0%

Percentages rounded to the nearest tenths.

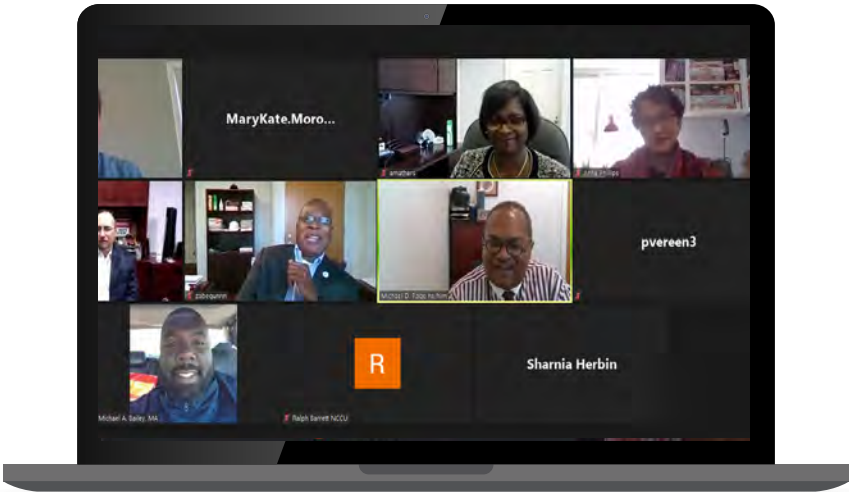




STAKEHOLDER GROUPS

Stakeholders were asked to participate in virtual focus group meetings to inform different aspects of the plan based on their specific involvement with different communities. The chosen stakeholders include community groups; local businesses; neighborhood organizations; education groups, such as local schools and universities; religious institutions; medical institutions; and nonprofits, among others. The following stakeholder groups participated in the development process of the Plan:

- Vision Insights
- Durham Public Schools
- Made in Durham
- Church World Services
- Regional Transportation Alliance
- Hayti Heritage Center
- Research Triangle Foundation
- American Cancer Society
- Durham Human Relations Committee
- Transit Equity Campaign including:
  - Bike Durham
  - Durham Committee for the Affairs of Black People
  - Coalition for Affordable Housing and Transit
  - Durham Congregations in Action
  - People's Alliance
- NC Central University
- Duke University
- UNC Chapel Hill
- Durham Tech
- Durham Bicycle and Pedestrian Advisory Committee (BPAC)
- Downtown Durham, Inc.
- NCDOT
- Chapel Hill Transit
- Capital Area Metropolitan Planning Organization (CAMPO)
- Orange Public Transportation
- Durham Youth Listening Project
- The Greater Durham Chamber of Commerce



ENGAGEMENT AMBASSADORS

Aidil Ortiz of Aidilisms, a local public engagement specialist, led the recruitment, training, and management of the Engagement Ambassador program throughout the Durham County Transit Plan process. The Engagement Ambassadors were intentionally recruited to be members or have direct access to parts of the Durham community that have been underrepresented in the past. Throughout each phase of the process, Engagement Ambassadors used their existing connections in the community to distribute information about the Plan and engage their neighbors, families, coworkers, peers, etc., to make sure they were involved at key milestones in the process and that their voices were heard. The Engagement Ambassadors received a stipend for their work and were crucial to the success of outreach efforts in both the number of responses and the representative feedback received from the community. Engagement Ambassador recruitment focused on the following communities:

- Low-income people
- People who are housing insecure
- Justice-involved people
- Hispanic/Latinx
- Youth
- People with disabilities
- Older adults
- Transit riders
- Residents of Bahama, Rougemont, and of rural or unincorporated parts of northern Durham County

Engagement Ambassadors conducted both focused meetings with 1-10 people and larger virtual and/or socially distanced group sessions with 10+ people. Aidil Ortiz led training sessions with each Engagement Ambassador to familiarize them with the outreach materials and survey questions prior to the beginning of each phase of outreach. The training sessions helped answer any questions these groups might have about the materials and ensured that Engagement Ambassadors understood the purpose of the outreach materials and the input needed from the public. Through the training sessions, the Engagement Ambassadors were also provided with resources including Zoom links, social media advertisements, and virtual invitations to distribute to their contacts. The Engagement Ambassador program proved extremely helpful in reaching previously marginalized community members throughout the Plan process.



Aidil Ortiz of Aidilisms





# LISTENING AND LEARNING OUTREACH

In winter 2019, the Durham Transit and the Comprehensive Planning teams carried out the Listening and Learning phase of engagement which included in-person community workshops, Engagement Ambassador sessions, and an online survey. Between November 2019 and February 2020, more than one thousand Durham County residents participated in these events. Community residents were asked two questions:

- What does your ideal Durham look like?
- What is on your mind about Durham?

The comments received during the Listening and Learning sessions were compiled and organized based on overarching themes. Many of the comments were related to improving public transportation or transit. In addition to the Listening and Learning responses, there were two other public engagement efforts that helped with the development of the Plan’s goals and objectives:

## LISTENING & LEARNING

Comment themes from these outreach efforts included improved bus frequency, geographic coverage, affordability, and expanding paratransit service.

## PARTICIPATORY BUDGETING

Comment themes from this outreach exercise included more bus shelters, sidewalk connections to bus stops, and crosswalks.

## ANNUAL RESIDENT SURVEY

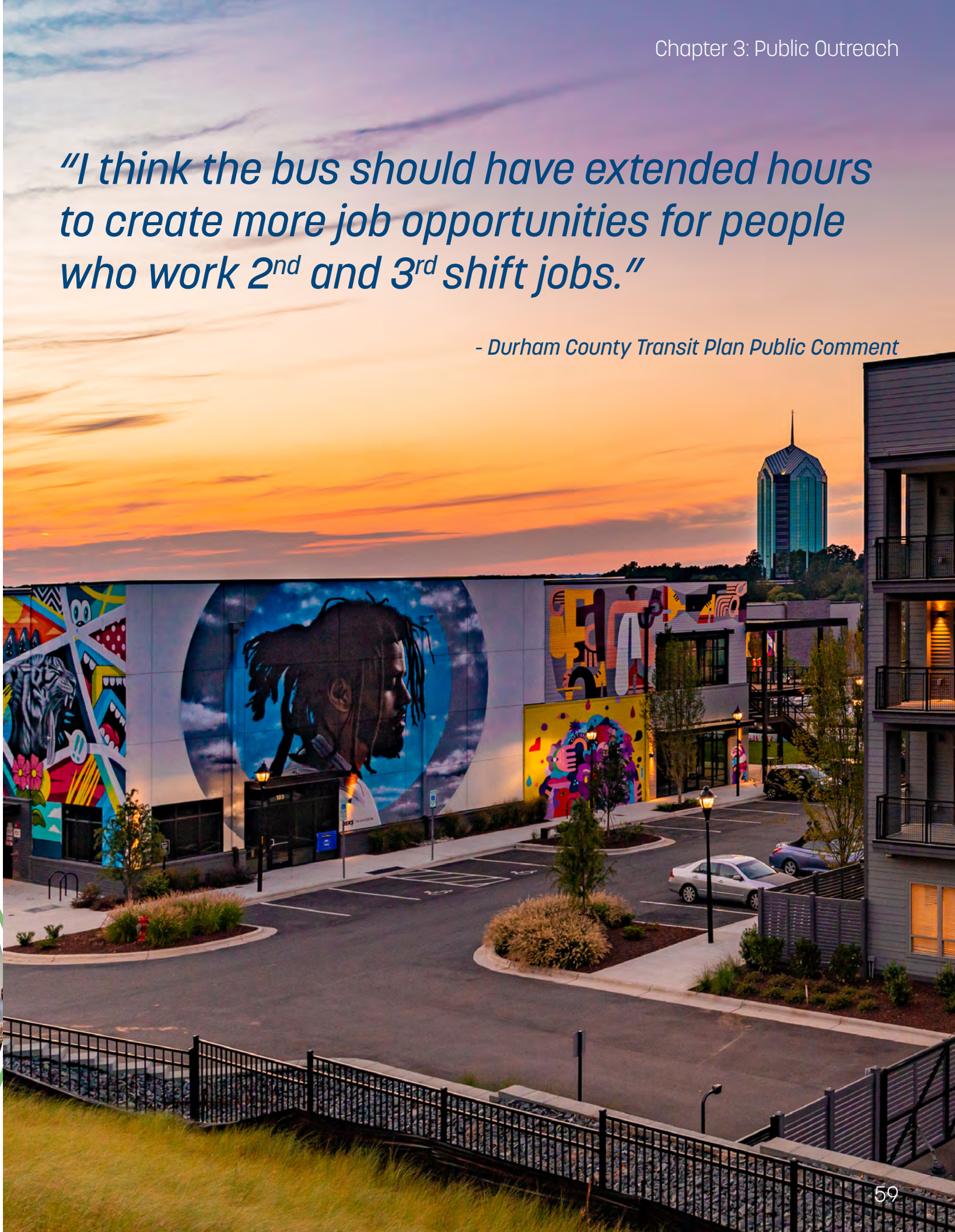
Comment themes from this survey include enhanced bus reliability, bus frequency, the need for later service, and access to bus stops.

Collaboration between the City, the County, and the MPO prior to the start of the Durham County Transit Plan allowed residents to meaningfully contribute to a variety of planning efforts. This coordination helped the Project Team understand the larger context of priorities of Durham residents.



*“I think the bus should have extended hours to create more job opportunities for people who work 2<sup>nd</sup> and 3<sup>rd</sup> shift jobs.”*

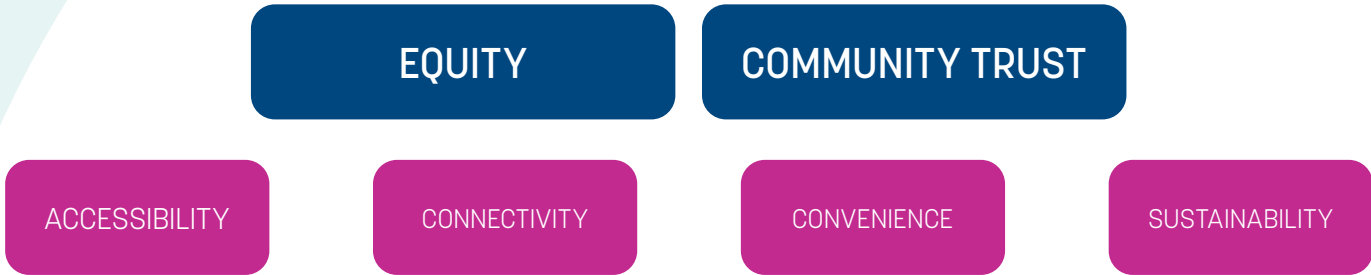
*- Durham County Transit Plan Public Comment*





# PHASE I - GOALS AND OBJECTIVES

Public Outreach Phase I focused on confirming the draft goals and objectives developed using input gathered from fall 2019 through winter 2020 and hearing the types of projects Durham residents felt were most important to be included in the Plan. The following goals and objectives for the Plan were confirmed during Phase I outreach:



In the survey conducted in Phase I, Durham County residents were asked to prioritize high-level project and improvement types. The key highlights from Phase I, shown below, highlight the priority that residents place on improving the current bus service, pedestrian safety, transit amenities, and more investment in ADA accessibility. These high-level priorities for improvements informed the project team’s efforts in developing potential projects to eventually develop a preferred transit scenario.

## PHASE I - KEY HIGHLIGHTS

Across all methods of outreach, there was consistent interest in the following transit improvements:

- More 15-minute service
- Improved bus stops
- Increased sidewalk access
- Crosstown service
- More transit access to jobs
- More bus stops
- Affordability

## PHASE I SURVEY RESPONSES



**+670**  
Total Responses



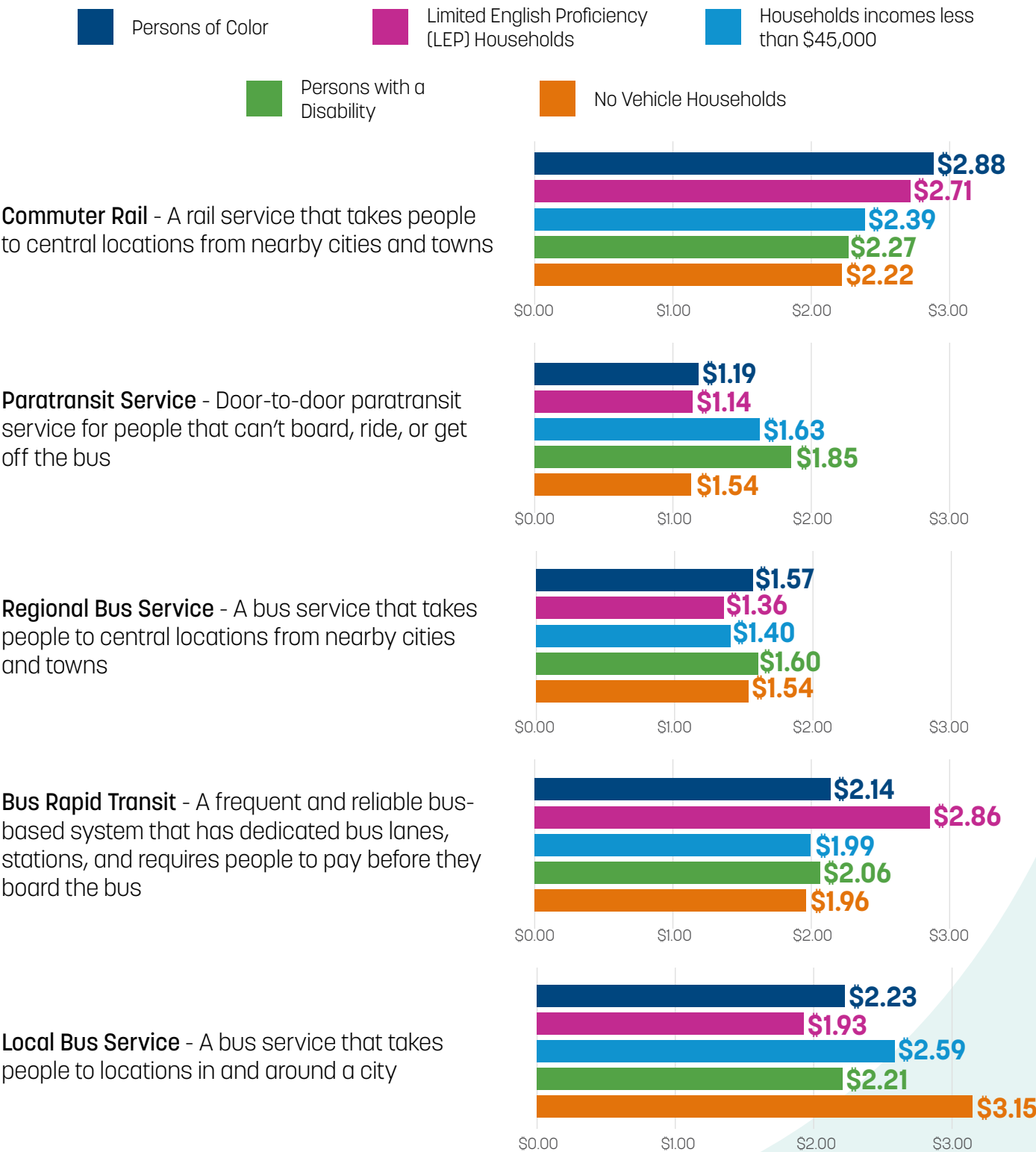
**+340**  
Transit Rider Responses



**+470**  
Written Comments

To further understand the public’s priorities, the survey included in Phase I outreach asked participants to allocate money to different public transportation services. Participants were asked, “You have \$10. How much money would you spent on each type of public transportation?” Figure 10 illustrates the results based on key demographic results.

FIGURE 10: RESPONSES TO PRIORITY SETTING QUESTION FROM PHASE I





# PHASE II - OPTION EVALUATION

During Public Outreach Phase II, residents were presented with three cost-constrained transit options (Options A, B, and C) that each demonstrated varying investment levels in different transit service types, frequencies, and capital projects. The options were designed to demonstrate benefits and associated tradeoffs with the different improvements. For example, would a Durham resident prefer that more money be spent on crosstown bus service to more places in Durham or spent on services like a passenger train from Durham to Raleigh?

Durham residents were not asked to choose between Options A, B, or C; rather, they were asked what they did and did not like about each of the transit options in order to inform which improvements and new services should be included the final Plan. Each transit option presented focused on the following high-level goals:



## OPTION A

Improve and expand bus service in Durham and to places outside of Durham. Get more bus service improvements faster.



## OPTION B

More money spent on projects to make bus service faster and more reliable, like BRT and other infrastructure improvements. Improvements would take longer.



## OPTION C

Money spent on commuter rail (passenger train) connections from Durham to Raleigh. Improvements would take longer.

### PHASE II SURVEY RESPONSES



+2,340

Total Responses



+1,190

Transit Rider Responses

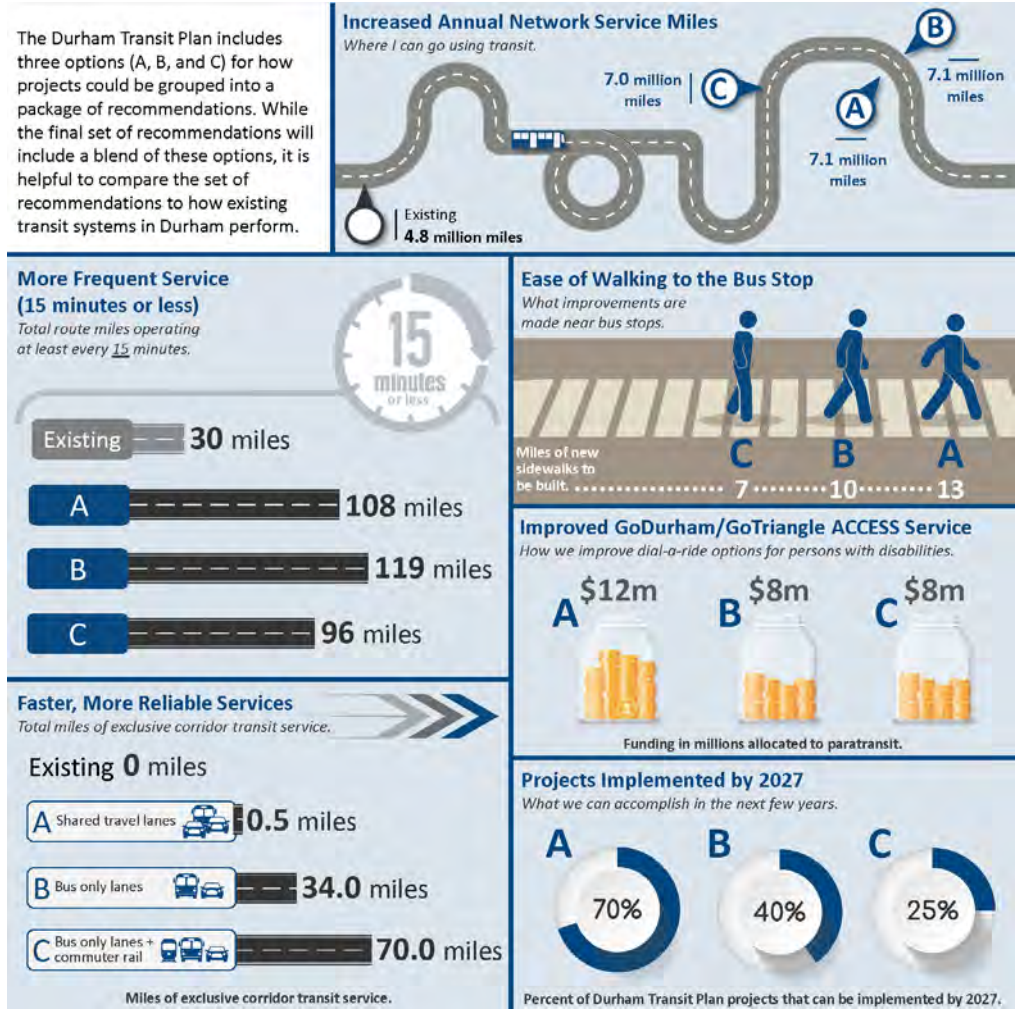


+2,019

Written Comments

Options A, B, and C were evaluated based on performance and equity metrics developed by the Project Team. Evaluation results were included in the outreach materials presented to the public. Similar to Phase I, online and in-person surveys were collected, Engagement Ambassadors facilitated virtual and/or in-person sessions, and stakeholder interviews were conducted.

FIGURE 11: TRANSIT SCENARIOS



## PHASE II - KEY HIGHLIGHTS

- People of color and transit riders consistently identify later/weekend bus service, more bus frequency, and more reliable bus service as their highest priorities
- All respondents support getting more improvements more quickly
- All respondents support BRT or the elements of BRT, such as 15-minute service, bus-only lanes, and traffic signal priority
- Passenger train service has support, but it is not the highest priority for any group. The passenger train has less support from people of color and daily transit riders



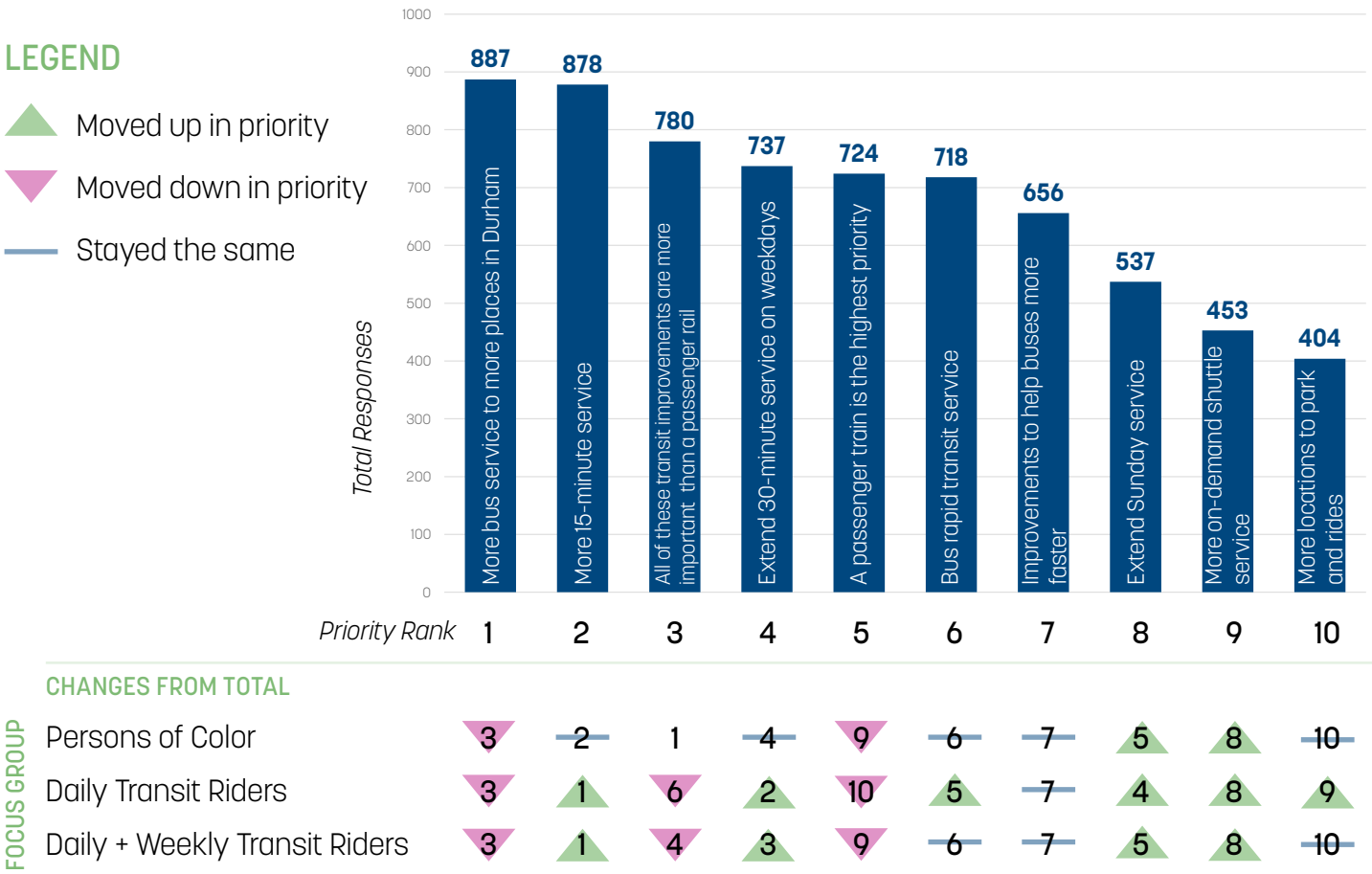
A key goal of Phase II outreach was to determine what additional projects were of highest priority to the public, should commuter rail be funded. With limited financial resources, the Project Team wanted to communicate that not all project improvements were financially possible with the inclusion of commuter rail. With that understanding, survey participants were asked what other projects were essential if commuter rail was included in the preferred transit option. The results of that question are shown below in Figure 12.

Final Phase II outreach results were analyzed and documented by the Project Team. Specific projects and improvements from each of the three separate transit scenarios were compiled to create a cost-constrained preferred option to be shared with the public during Phase III.

The development of draft transit scenarios as well as the final transit option are discussed in more detail in Chapters 5 and 6.

FIGURE 12: RESPONSES TO ADDITIONAL FUNDING QUESTION FROM PHASE II OUTREACH

IF PASSENGER RAIL IS INCLUDED, WHAT ELSE DO WE NEED TO FUND? (CHOOSE UP TO FIVE)



*“I really would love to see rail included as a viable option. It would also make it easier and safer to travel with kids around the Triangle, especially for parents who may not be able to easily drive.”*

- Durham County Transit Plan Public Comment



# PHASE III - PREFERRED OPTION EVALUATION

The purpose of Public Outreach Phase III was to present the cost-constrained, preferred option to the public in order to confirm the priorities for improvements expressed throughout the process. A survey was distributed through a mix of online and in-person events conducted by staff and the Engagement Ambassadors.

An in-person public workshop was held on July 28, 2022 at Durham Station in downtown Durham. The workshop was a collaborative effort that highlighted projects around Durham County that would be included in the Plan. Representatives from GoDurham, GoTriangle, the City of Durham, Durham County, and DCHC MPO were in attendance to provide further details on specific elements of the preferred transit option. Information collected at the workshop was used to help revise the preferred transit option as well as inform community members about ongoing or concurrent planning processes happening around the County.

Durham residents were asked to react to the projects included in the preferred option. The images on the following page show project categories or buckets that were included in the draft final Plan.

## PHASE III SURVEY RESPONSES



+2,150

Total Responses



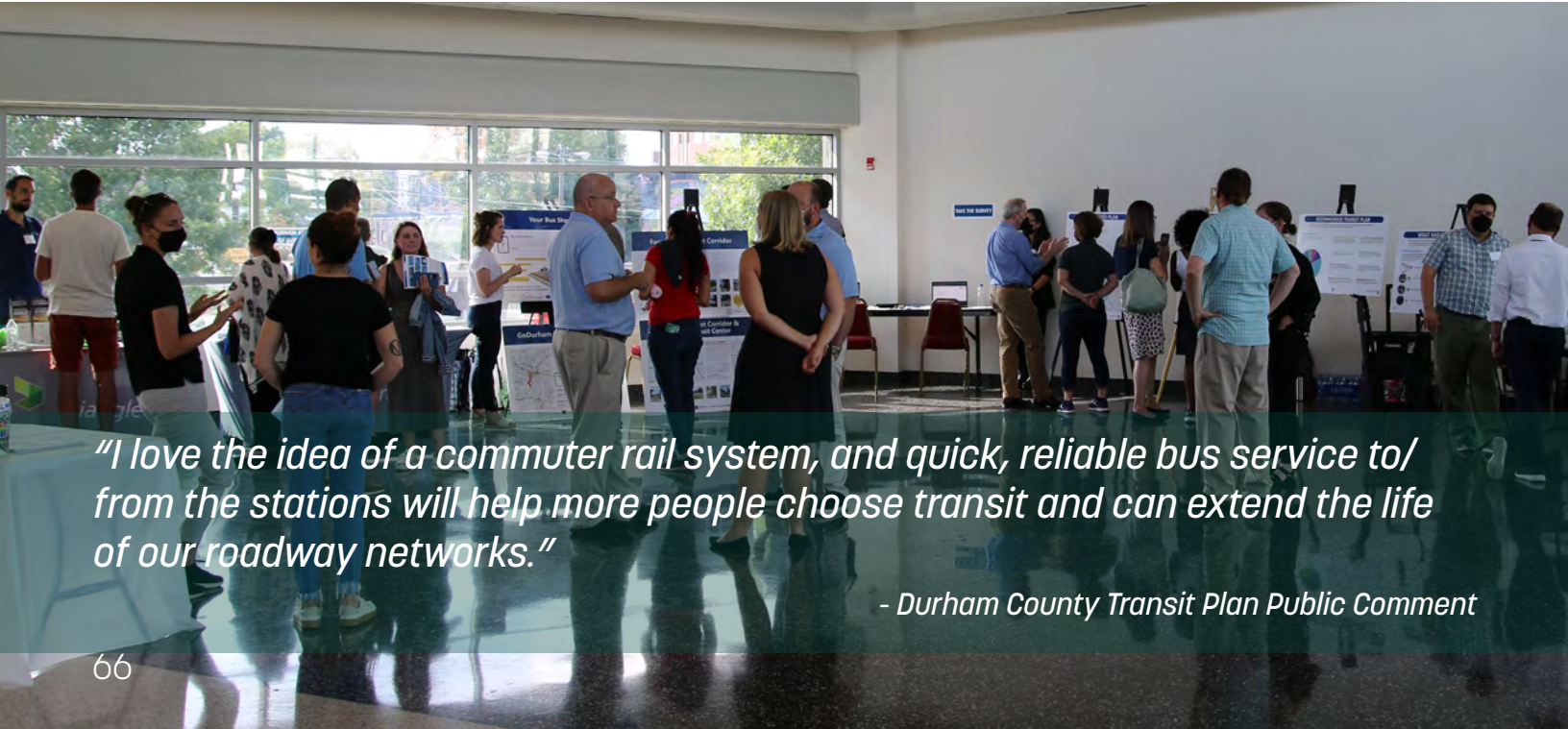
+1,030

Transit Rider Responses



+350

Written Comments



*"I love the idea of a commuter rail system, and quick, reliable bus service to/ from the stations will help more people choose transit and can extend the life of our roadway networks."*

- Durham County Transit Plan Public Comment

## PROJECT CATEGORIES / BUCKETS



### ENHANCE AND EXTEND SERVICE

These projects allow all GoDurham routes to come every 30 minutes or sooner (some routes every 15 minutes), extends service to run later at night during the week and weekends, and allows certain GoTriangle routes come more often and run later at night.



### QUICK AND RELIABLE REGIONAL TRANSPORTATION CONNECTIONS

Includes Durham County's financial contribution to build and begin running the commuter rail between Durham County and Wake County or provide other regional, fast, and reliable service improvements.



### BUS STOP IMPROVEMENTS AND TRANSIT CENTERS

Enhances existing bus stops and transit centers with accessible landing pads at all stops. Also includes adding benches, shelters, signage, lighting, and/or sidewalks at certain bus stops.



### MORE ROUTES GOING MORE PLACES

Adds new crosstown routes to go more places in Durham, adds vanpools, and adds GoDurham Connect (microtransit) zones.



### ADMINISTRATION AND ACCOUNTABILITY

Adds dedicated staff positions to administer the Plan, implement projects, enhance equitable contracting, and lead transit-oriented development efforts.



### FASTER, MORE RELIABLE BUS SERVICE

Includes projects to help buses stay on schedule, using methods such as traffic signal improvements and bus-only lanes. Also includes a study for potential bus rapid transit (BRT) routes to be identified.



### OPERATIONS AND MAINTENANCE

Includes bus maintenance facility improvements and expansions, additional bus purchases and replacements (including new electric buses).



### PARATRANSIT IMPROVEMENTS

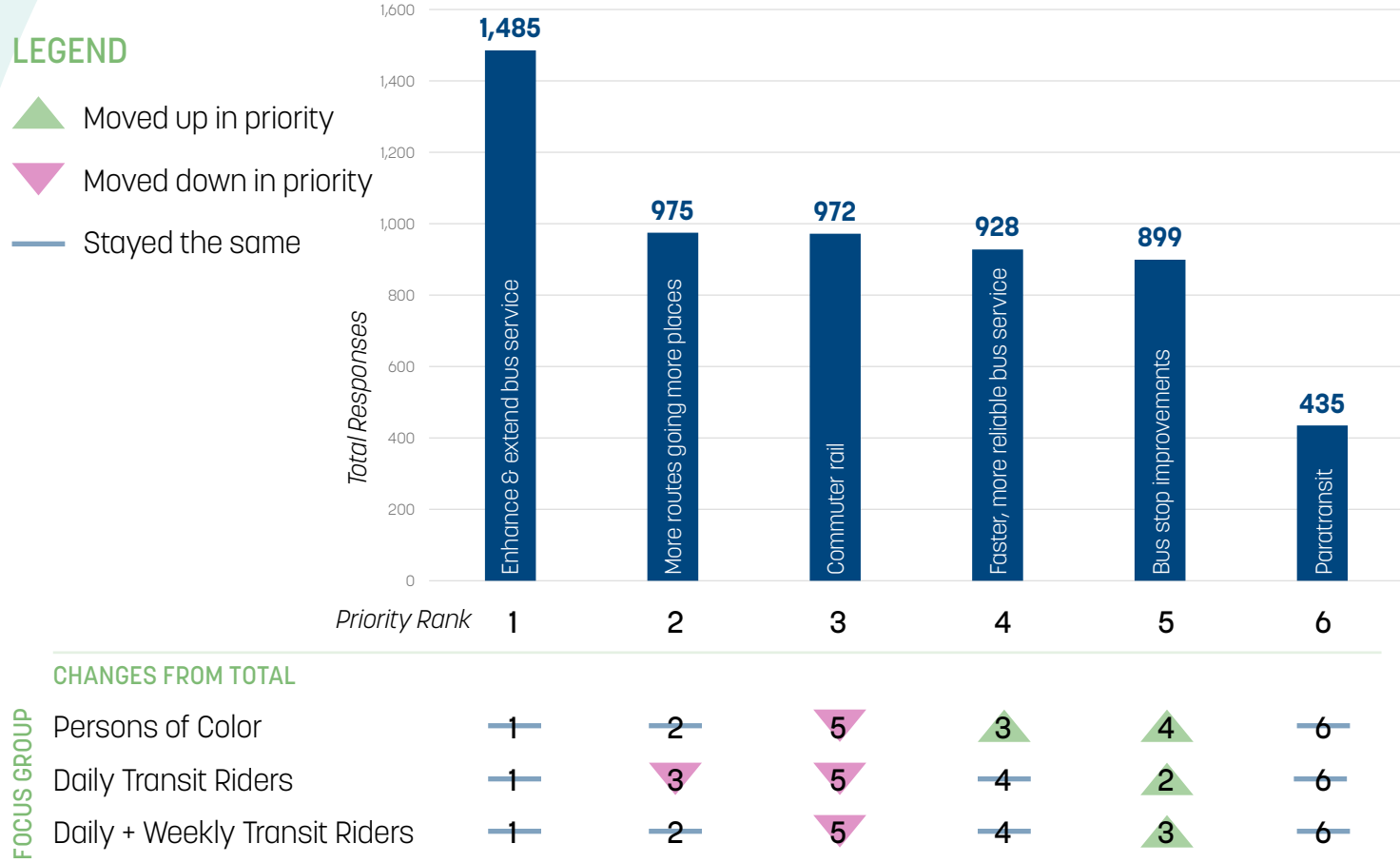
Includes a GoTriangle and GoDurham paratransit (ACCESS) service improvement study, further service improvements/expansion, and food access for seniors shuttle.



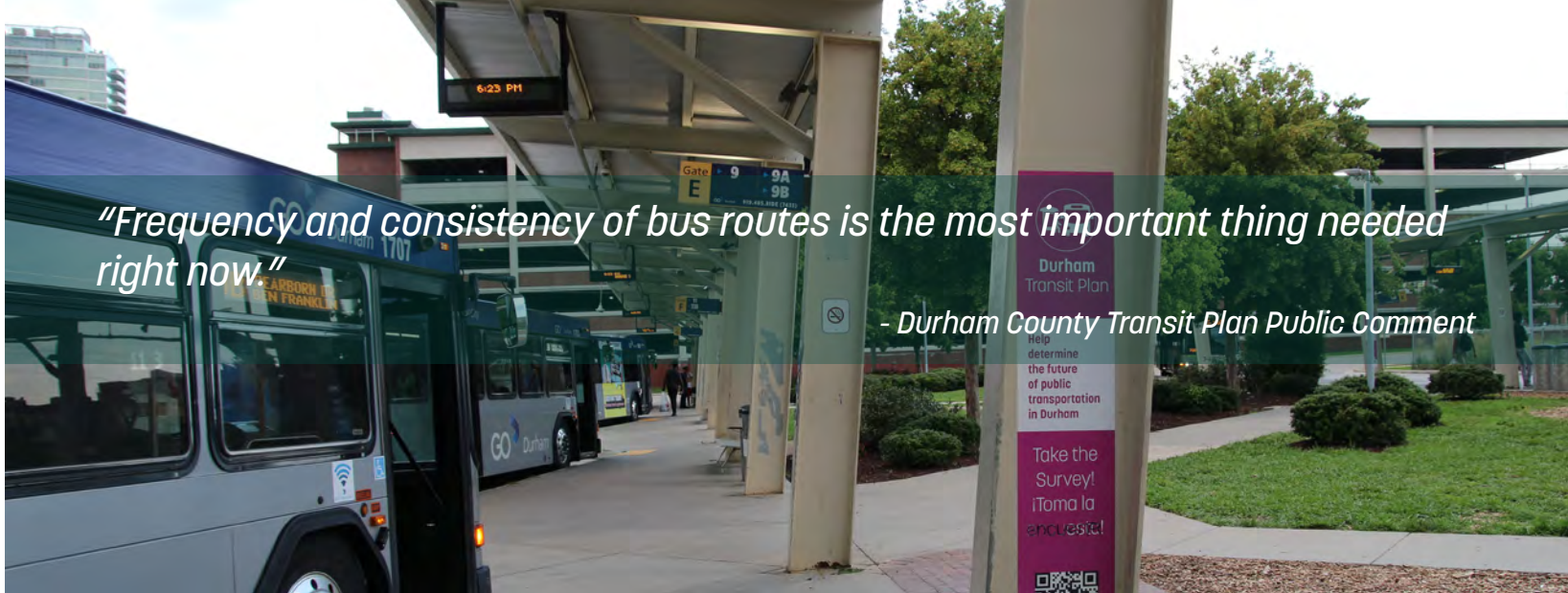
Enhanced bus service, more routes going more places, and commuter rail were expressed as the top improvements by survey respondents overall, while the key focus groups prioritized faster, more reliable service and bus stop improvements over commuter rail.

FIGURE 13: RESPONSES TO QUESTION FROM PHASE III OUTREACH

WHAT DO YOU LIKE THE MOST ABOUT THE RECOMMENDED TRANSIT PLAN? (CHOOSE UP TO THREE)



*"In general, I appreciate the increased focus on bus service; that feels like the most value for the money to be spent."*  
- Durham County Transit Plan Public Comment



*"Frequency and consistency of bus routes is the most important thing needed right now."*  
- Durham County Transit Plan Public Comment

A second goal of Phase III outreach was to confirm which types of projects the public identified as a high priority if additional funding were to become available and more projects could be added in the future. As shown in the results in Figure 14, all respondents, as well as transit riders and persons of color, prioritized "even more frequent service on existing routes" and "creating new local bus routes" as the top two priorities.

Survey responses and public comments received during this phase were used to make final adjustments to the projects and improvements ultimately included Preferred Scenario (for more details, see Chapter 6).

FIGURE 14: RESPONSES TO ADDITIONAL FUNDING QUESTION FROM PHASE III OUTREACH

IF ADDITIONAL FUNDING BECOMES AVAILABLE IN THE FUTURE, WHAT ELSE SHOULD BE CONSIDERED? (CHOOSE UP TO FIVE)





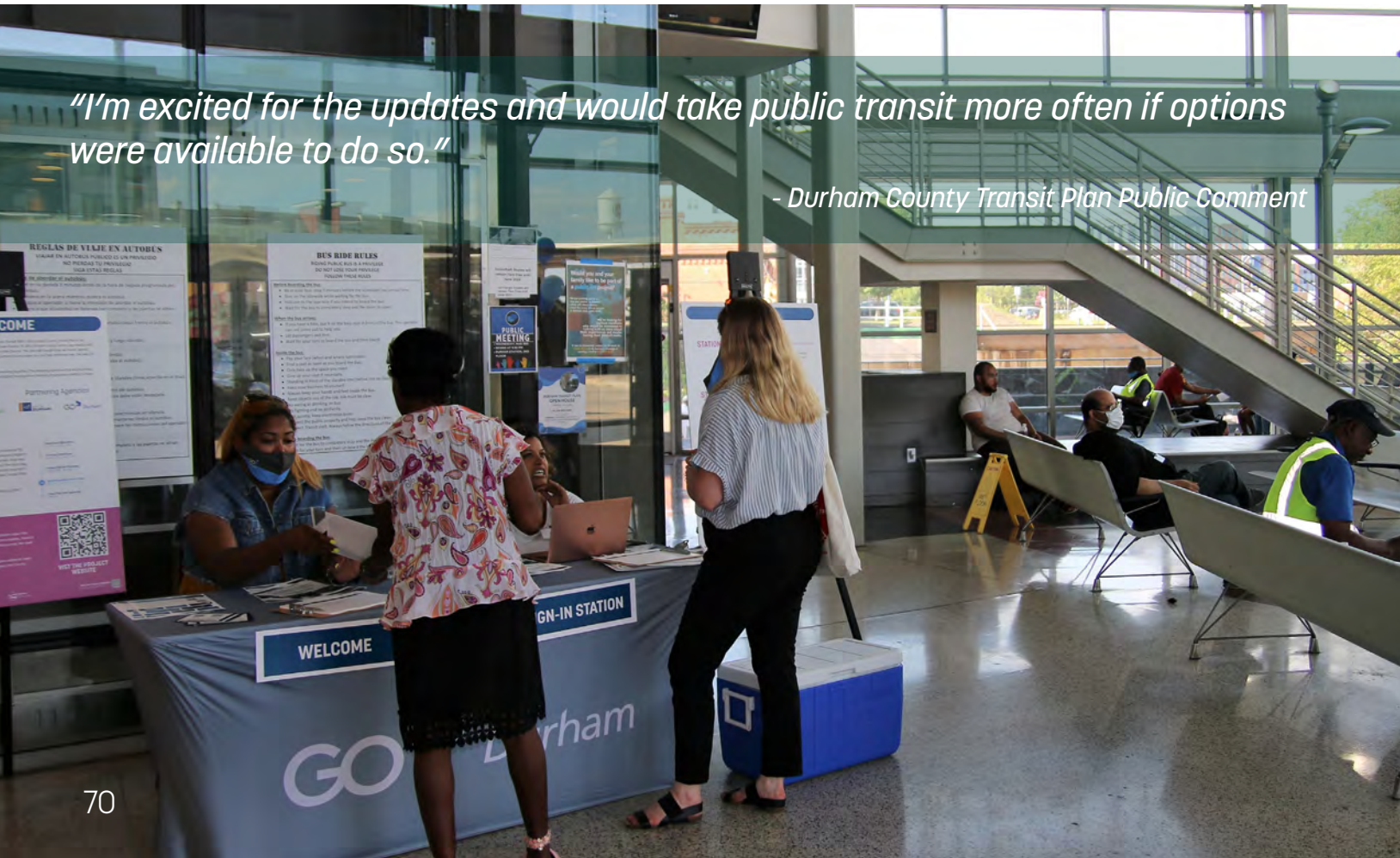
PHASE III - KEY HIGHLIGHTS

Consistent with Phases I and II, the feedback gathered from Phase III of outreach reaffirmed the following priorities of the community:

- All respondents identified enhanced and extended bus service as the highest priority of the preferred transit plan
- Passenger train service has support, but it is not the highest priority for any group. The passenger train has less support from people of color, daily transit riders, and daily and weekly transit riders than from all respondents as a whole
- More routes going more places, faster more reliable bus service, and bus stop improvements all also had support from the general public and focus groups. All respondents stated that if more funding became available in the future, adding even more frequent service on existing bus routes is the top priority
- All respondents stated that a secondary priority is to create new local bus services over other public transportation improvements

*“I’m excited for the updates and would take public transit more often if options were available to do so.”*

- Durham County Transit Plan Public Comment



*“Good to see bus stops and bus shelters are continuing to be made ADA compliant and accessible. Thank you!”*

- Durham County Transit Plan Public Comment







# 04

## SCENARIO DEVELOPMENT & EVALUATION

SCENARIO DEVELOPMENT  
ALTERNATIVE SCENARIOS  
SCENARIO EVALUATION  
PREFERRED SCENARIO DEVELOPMENT



# SCENARIO DEVELOPMENT

The Plan process included developing three **transit scenarios**, also referred to as **transit options**, to illustrate how projects could be grouped into a package of recommendations. While the final set of recommended projects (the final recommended scenario) included a blend of these options, it was helpful to compare the various alternative scenarios that would meet the identified needs and priorities in different ways.

Using the community-verified goals and objectives and public feedback from the Listening and Learning and Phase I of public outreach, the Project Team identified various categories of transit improvement types including operating and capital projects to address the needs and public priorities. These project categories included:



MORE ROUTES GOING MORE PLACES



ADA PARATRANSIT SERVICE IMPROVEMENTS



MORE FREQUENT SERVICE



FASTER, MORE RELIABLE SERVICE



BUS STOP IMPROVEMENTS



BETTER REGIONAL CONNECTIONS



LATER SERVICE ON NIGHTS AND WEEKENDS

Next, a financially unconstrained list of specific transit projects was developed, including operating and capital projects to use as a starting point for scenario development. The list of projects was developed using the following inputs:

- Ridership distribution
- Areas of high transit demand
- Route design, directness, and deviations
- Operational issues
- Corridor/street characteristics
- Customer requests and comments
- Proximity and access to high-density residential areas and ridership generators
- On-board survey findings
- Schedule reliability/on-time performance
- Feedback obtained from public outreach
- Socioeconomic characteristics
- Needs and gaps analysis

Recognizing that the needs for enhanced transit options in the County often exceed the funding available to address them, it was important to evaluate and identify the most effective projects for advancement and determine whether the projects could be implemented within reasonable financial constraints. Using the list of projects developed, as well as certain financial assumptions regarding local transit sales, tax funding, and federal sources of funding, three cost-constrained transit scenarios were created. The three scenarios were developed to demonstrate various investment strategies that would meet the identified needs and priorities in different ways and presented to the public during Public Outreach Phase II for input.



*“All of the plans are great. I love seeing the compare and contrast graphs during this present day to the future.”*

*- Durham County Transit Plan Public Comment*



# ALTERNATIVE SCENARIOS

Each alternative scenario sought to improve mobility within Durham County and show options for accommodating the travel needs of this rapidly growing area. While each scenario had a specific set of projects included, there were several shared elements. The scenario elements common across all the scenarios addressed needs that were identified as the highest priorities through data analysis and public input as well as projects that were already funded or underway. All three scenarios included:

- Improvements for Bus Access, Stop Amenities, and Speed and Reliability
- New Transit Routes
- Improving the Current System
- Programmed Projects

## BUS ACCESS, STOP AMENITIES, AND SPEED AND RELIABILITY

Bus access, stop amenities, and speed and reliability improvements, were included in all three scenarios at various investment levels. Improvements included constructing ADA-accessible paved landing pads at each bus stop and sidewalk improvements to the nearest corner to improve access to transit. All scenarios included some level of bus speed and reliability enhancements, such as bus-only lanes, queue jumps, or transit signal priority (TSP), which allow buses to travel through intersections faster.

## NEW TRANSIT ROUTES

More routes going more places was also a high priority for Durham County residents based on public input. All three scenarios added new crosstown routes to help address recent and projected residential and commercial growth, and provide connections that would not require transit riders to transfer to another route. An emphasis was placed on connecting growing and/or low-income areas with job centers, such as Duke University and North Carolina Central University (NCCU). All three scenarios included new crosstown routes connecting North Durham and Duke, North Durham and Geer Street/Glenview Station, and East Durham to NCCU. Additionally, on-demand service was included in all scenarios to provide access to transit in areas with lower population densities.

## IMPROVING THE CURRENT SYSTEM

Frequency and service span (how often and how long the buses operate) improvements on existing routes in the current system also were among the highest priority for Durham transit riders. All scenarios included some level of frequency improvements for the highest ridership GoDurham routes, including having some routes operate every 15 minutes, and having all routes operate at least every 30 minutes, and expanding Sunday service until midnight.

## PROGRAMMED PROJECTS

Programmed projects have funding already identified—locally or through state or federal level matches—and have already begun or are planned to begin soon. Programmed projects may already be in planning, design, right-of-way acquisition, or construction. This includes bus projects funded through the previous Transit Plan (except for Route 20).

# OPTION A

*Improve and expand bus service in Durham sooner*

Option A focuses on adding more bus service that runs every 15 minutes or better.

- Increases the number of bus routes that run every 15 minutes
- Increases all GoDurham routes to run every 30 minutes or better until midnight
- Extends Sunday service from 9:00pm to midnight
- Makes traffic signal improvements that help buses stay on schedule
- Adds sidewalks to connect to neighborhood stops
- Improves GoDurham/GoTriangle ACCESS (door-to-door service for eligible riders)

The emphasis of Option A was to spend operating dollars on delivering bus service improvements as early as possible—with 70% of proposed projects being implemented by 2027. Transit riders would also benefit from better connections with more crosstown routes, more frequent service, and later evening service. Additionally, multiple new routes would be added, including a route connecting RTP with East Durham. Regional service connecting Durham with Chapel Hill and Raleigh operated by GoTriangle would also be more frequent and operate later.





# OPTION B

*Bus rapid transit (BRT) in Durham to Chapel Hill and RTP, with connections to Wake County*

Option B focuses on making bus service more reliable with BRT, creating bus-only lanes, and implementing other improvements that help buses move through traffic faster.

This option includes BRT that would run every 15 minutes--connecting UNC-Chapel Hill, South Square, Duke University, Downtown Durham, NCCU, and Durham Tech--using bus-only lanes and traffic light improvements to help buses go faster and stay on schedule.

Option B included upgrading service on the six highest ridership corridors in Durham to either BRT corridors or bus transit corridors. This included capital projects that would add bus lanes, included signal improvements, and created stations that would allow buses to travel with fewer delays, regardless of traffic conditions. While there would be some additional crosstown routes to serve growing job centers, expanded bus service later into the evening, and some frequency increases, there are fewer of these improvements than in Transit Scenario A. Only 40% of projects would be implemented before 2027.



# OPTION C

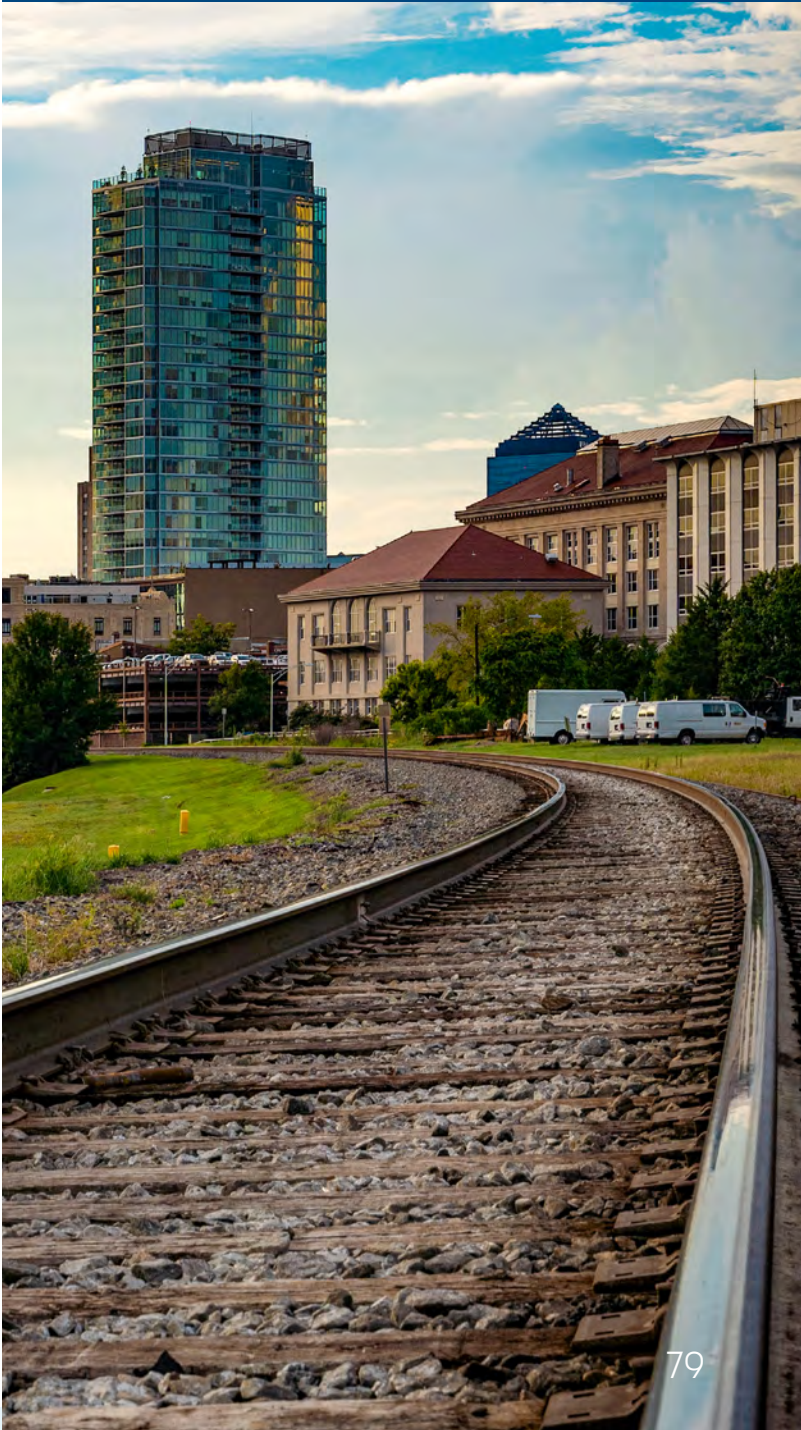
*Commuter rail connections from Durham to Raleigh*

Option C focuses on connecting major destinations across the Triangle region with faster and more reliable service.

This includes full implementation of a commuter rail that connects Durham, RTP, Cary, and Raleigh, primarily during morning and evening rush hours.

Additionally, Option C includes dedicated bus routes designed to meet trains and get passengers to their destinations, called rail feeder routes. Aside from rail feeder routes, there are fewer additional routes and improvements to later evening and weekend service in Option C. Project implementation would take longer in Transit Scenario C, with only 25% of proposed improvements taking place before 2027.

For the purposes of scenario development, the Project Team used the best available cost estimate for commuter rail at the time, which was \$1.95 billion for capital and \$41 million annual operating costs. The Project Team also assumed that the project would receive 50% federal funding and that Durham would provide 20% of the non-federal share.





# SCENARIO EVALUATION

Evaluation metrics were developed to measure the benefits and effectiveness of each scenario in achieving the established Durham County Transit Plan goals. The evaluation metrics were developed using the goals and objectives created during the initial round of public outreach so that selected scenarios reflect the desires of the community. The metrics were designed to provide a measurable way to document the tradeoffs of each investment scenario for the public and ultimately provide the Project Team and decision makers the tools to create a preferred alternative. The following evaluation metrics were used to assess all three scenarios.

TABLE 9: TRANSIT SCENARIO EVALUATION

Goal	Evaluation Metric	Option A	Option B	Option C
Access	Miles of sidewalk to be built	13 miles	10 miles	7 miles
Access	Additional funding for ACCESS (paratransit)	\$12M	\$8M	\$8M
Access	Public on-demand service	Three zones	Five zones	Five zones
Connectivity	Annual network service miles	7.1 million miles	7.1 million miles	7.0 million miles
Connectivity	Jobs within 1/4 mile	2013: 268,800 2045: 503,800	2013: 268,000 2045:503,000	2013: 281,700 2045: 542,000
Connectivity	Population within 1/4 mile	2013: 198,400 2045: 324,800	2013: 200,000 2045: 325,000	2013: 209,000 2045: 352,000
Connectivity	Commuter Rail	No	No	Yes
Convenience	New miles of 15-minute service	78 miles	89 miles	66 miles
Convenience	Miles of exclusive corridor transit service	0.5 miles	34.0 miles	70.0 miles
Convenience	Increase evening frequency	All routes	All routes	All routes
Convenience	Extend Sunday service to midnight	All routes	All routes	All routes
Convenience	Improvements to keep buses on time	Signal upgrades	Corridor improvements, bus lanes, and signal upgrades	Signal upgrades
Community Trust	Percent of improvements by 2027	70%	40%	25%

# EQUITY ANALYSIS

The Durham County Transit Plan partner agencies are committed to racial equity. The Plan seeks to include the voices of people of color and low-income communities in the planning process. The Durham County Transit Plan evaluated how projects improve access to jobs from the area’s most vulnerable residents. Table 10 identifies how many jobs are within a 45-minute transit trip from each of the six locations. The six locations were selected because they represent places around the County with affordable housing locations. The analysis demonstrated that the recommended blend of projects would benefit some of Durham’s most vulnerable residents. Table 10 indicates the change in access between the current, existing transit network and the three transit options.

TABLE 10: TRANSIT SCENARIO EQUITY ACCESS EVALUATION

	McDougald Terrace	Oxford Manor	Damar Court	Shannon Road Apartments	Greens of Pine Glen	519 East Main Street
	East Durham	North Durham	West Durham	Southwest Durham	South Durham	Downtown Durham
	Jobs accessible within 45-minute transit trip from affordable housing locations					
Option A						
Option B						
Option C						

# LEGEND

Illustrative change from the existing transit network

Low increase

Moderate increase

High increase







































JOB ACCESS ANALYSIS

Table 11 illustrates the increased access to major employment centers in Durham and to other areas of the Triangle. Areas like Duke/VA Hospital and Downtown Durham already have greater access to bus service and are centrally located in Durham. Therefore, the increase in access from these areas is not as great when compared to areas with less existing bus service.

All three options generally increase access to jobs for Black, Indigenous, and people of color (BIPOC) populations when compared to the general population.

TABLE 11: TRANSIT SCENARIO JOB ACCESS EVALUATION

Total Population				BIPOC Population		
Populations within a 45-minute transit trip to the following job centers						
Option A	Option B	Option C		Option A	Option B	Option C
			Downtown Durham			
			Duke/VA Hospital			
			South Square			
			RTP			
			UNC			
Populations within a 60-minute transit trip to the following job center						
			Downtown Raleigh			

LEGEND

Illustrative change from the existing transit network



Low increase



Moderate increase



High increase

PREFERRED SCENARIO DEVELOPMENT

Based on feedback gathered during public outreach, the Project Team developed a cost-constrained Preferred Transit Scenario to reflect the most highly supported elements from each of the three alternative scenarios. This approach involved prioritizing specific improvements based on their level of public support, the critical need that would be addressed with the implementation of the proposed improvement, and the ability of the project or improvement to fit within anticipated revenue streams as identified in the Financial Model.

Consistent with public feedback, the Preferred Transit Scenario focuses on and includes:

- Implementing high priority improvements to the current network as quickly as financially and operationally reasonable.
- Frequency improvements, later weekend service, and a new crosstown route in the first 5 years.
- Commuter rail as it received support during outreach and provides fast, reliable service to major regional destinations.

During the development of the Preferred Transit Scenario, there were many iterations that had to be vetted to help ensure that financial assumptions in the Financial Model reflected the most current projected conditions in Durham County. These updated financial assumptions impacted the overall transit sales tax revenues and also increased operating costs based on recent and projected increases due to market conditions. More details on the financial assumptions can be found in Chapter 6.

Once the financial assumptions were updated, certain aspects of the Preferred Transit Scenario needed to be updated to fit within the financial constraints. Some of these updates included adjusting the implementation years of specific projects, updating federal funding amounts based on recent federal awards that were announced, and more. The resulting Final Preferred Transit Scenario is discussed in more detail in Chapter 5.







# 05

## IMPLEMENTATION PLAN

- FINAL PREFERRED TRANSIT SCENARIO
- NEW CAPITAL AND OPERATING PROJECTS
- PROGRAMMED PROJECTS
- LOCAL AND FEDERAL FUNDING ASSUMPTIONS
- PROGRAMMING ASSUMPTIONS
- UNFUNDED PRIORITY TRANSIT PROJECTS
- RISK ASSESSMENT
- PLAN MANAGEMENT AND OVERSIGHT
- IMPLEMENTATION AND PERFORMANCE METRICS



# FINAL PREFERRED TRANSIT SCENARIO

As described in Chapters 1–4, the resulting Final Preferred Transit Scenario is included in this 2023 Durham County Transit Plan. The Plan represents the County’s transit vision through 2040 and proposes a set of transit services, infrastructure, facilities, and planning efforts to meet the variety of transit needs that exist Countywide. The Plan focuses operating dollar expenditures on implementing high-priority transit service as quickly as possible. The majority of improvements, including upgrades to 15-minute service frequency, later Sunday service, a new crosstown route, and others, are funded in the first 5 years of the Plan. The Plan also includes a financial contribution towards fast, reliable service to regional destinations through the commuter rail or other projects. In addition, the Plan will continue to fund existing transit services that were previously funded with transit sales tax and fees revenues (with the exception of Route 20, which is currently suspended and recommended for elimination due to low ridership).

The capital and operating investments presented in this chapter reflect the community values and high priority needs identified through extensive public engagement and technical analysis. To help ensure the Plan is responsive to these priorities, several types of projects are included that address four major themes. A summary is shown in Figure 15.

The GoTriangle Financial Model (described in Chapter 6) was used to help ensure these capital and operating investments will be financially feasible over the entire 20-year lifespan of the Plan. The following page shows the project types and descriptions for the projects included in the Plan. Figure 16 is a map of the proposed projects included in the Plan and Tables 12 - 13 describe the projects in greater detail.

FIGURE 15: FOUR MAJOR PROJECT THEMES

Improve the Current System	More Projects Sooner	Connect the Region with Quick and Reliable Service	Better Experience at Stops and Stations
More 15-Minute Bus Service	Bus Stop Improvements	Next Steps for Regional Service	Bus Stop Improvements
Evening/Weekend Service	GoDurham and GoTriangle Paratransit (ACCESS) Study and Improvements	Better On-Time Performance of Buses	Safer Access to Bus Stops
More Crosstown Routes	GoDurham Connect (Microtransit) Zones	Transit Signal Priority for Buses	Transit Centers Improvements

## PROJECT CATEGORIES & DESCRIPTIONS

The projects included in the Plan were grouped into categories based on public priorities. The images below show the project categories with a brief description of the types of projects included in each.



### ENHANCE AND EXTEND SERVICE

These projects allow all GoDurham routes to come every 30 minutes or sooner (some routes every 15 minutes), extends service to run later at night during the week and weekends, and allows certain GoTriangle routes come more often and run later at night.



### QUICK AND RELIABLE REGIONAL TRANSPORTATION CONNECTIONS

Includes Durham County’s financial contribution to build and begin running the commuter rail between Durham County and Wake County or provide other regional, fast, and reliable service improvements.



### BUS STOP IMPROVEMENTS AND TRANSIT CENTERS

Enhances existing bus stops and transit centers with accessible landing pads at all stops. Also includes adding benches, shelters, signage, lighting, and/or sidewalks at certain bus stops.



### MORE ROUTES GOING MORE PLACES

Adds new crosstown routes to go more places in Durham, adds vanpools, and adds GoDurham Connect (microtransit) zones.



### ADMINISTRATION AND ACCOUNTABILITY

Adds dedicated staff positions to administer the Plan, implement projects, enhance equitable contracting, and lead transit-oriented development efforts.



### FASTER, MORE RELIABLE BUS SERVICE

Includes projects to help buses stay on schedule, using methods such as traffic signal improvements and bus-only lanes. Also includes a study for potential bus rapid transit (BRT) routes to be identified.



### OPERATIONS AND MAINTENANCE

Includes bus maintenance facility improvements and expansions, additional bus purchases and replacements (including new electric buses).

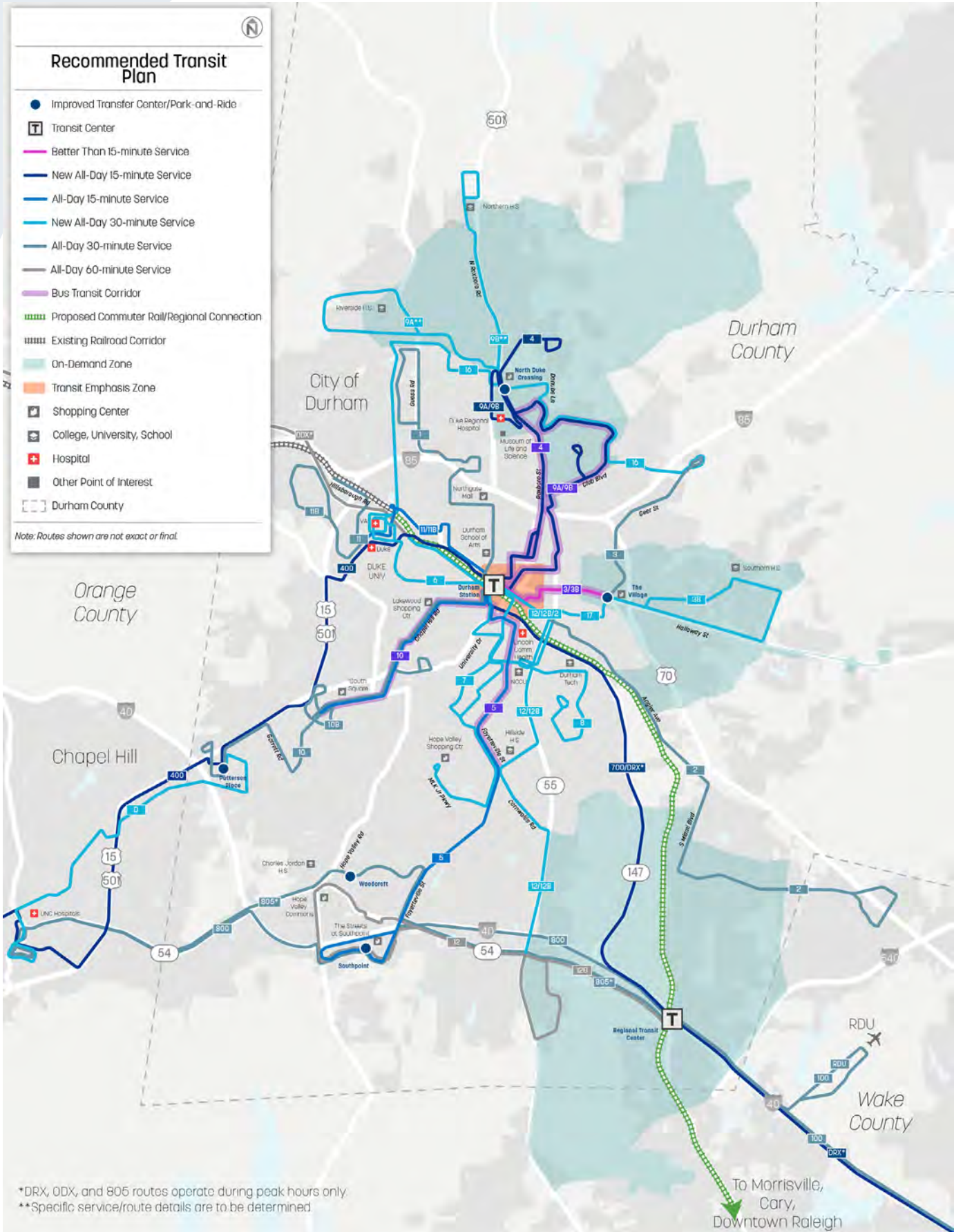


### PARATRANSIT IMPROVEMENTS

Includes a GoTriangle and GoDurham paratransit (ACCESS) service improvement study, further service improvements/expansion, and food access for seniors shuttle.



FIGURE 16: RECOMMENDED TRANSIT PLAN



Approximately \$1.12 billion is programmed for transit in Durham County between 2022-2040, including new and improved transit centers, 15-minute frequency bus routes, bus transit corridors, later evening and weekend bus service, and improved bus stops.





# NEW CAPITAL AND OPERATING PROJECTS

The projects included in the Plan were grouped into categories based on public priorities. The following table shows the project categories and descriptions. Unless otherwise stated, the Implementation Year in the table is the first year that any funding is budgeted to be spent on the project. Capital projects often take many years to plan, design, and construct. Implementation may also be delayed based on the factors described in the Risk Assessment.

TABLE 12: CAPITAL AND OPERATING PROJECTS

Implementation Year (Fiscal Year)	Agency	Project Name	Project Category	Project Description	Total Durham Transit Plan Cost
CAPITAL PROJECTS					
2024	City of Durham/GoDurham	Bus Stop Access Improvements - 1 Mile of Sidewalk	Bus Stop Improvements & Transit Centers	Design and construction of approximately 1 mile of sidewalk improvements in Durham. These can be spot improvements at bus stops and do not have to be completed in one location.	\$1,671,721
2024	To Be Determined (TBD)	Transfer Centers and Park and Rides - North Duke Crossing Transfer Center	Bus Stop Improvements & Transit Centers	Design and construction of a new transit center in North Durham.	\$579,530
2024	GoTriangle	Transfer Centers and Park and Rides - Woodcroft Lease Agreement	Bus Stop Improvements & Transit Centers	Annual lease agreement for use of park and ride spaces at the Woodcroft Shopping Center Park and Ride.	\$224,690
2024	GoTriangle	Transfer Centers and Park and Rides - Patterson Place Lease Agreement	Bus Stop Improvements & Transit Centers	Annual lease agreement for use of park and ride spaces at the Patterson Place Park and Ride.	\$337,035
2024	City of Durham/GoDurham	Bus Speed and Reliability Durham Station Transit Emphasis Zone	Faster, More Reliable	Bus transit emphasis zone surrounding Durham Station with improvements like traffic signal priority (TSP), enhanced bus stops, queue-jumps, bus only lanes, etc. to improve speed and reliability of fixed route bus service operating in Downtown Durham.	\$13,445,094
2024	City of Durham/GoDurham	Additional Vehicles - East Durham/The Village to NCCU	More Routes Going More Places	One additional vehicle in order to operate the new crosstown route operating between The Village and NCCU for 19 hours Monday-Saturday and 17.5 hours on Sunday. The cost shown includes replacement vehicles after 12 years.	\$1,498,965
2025	City of Durham/GoDurham	Additional Vehicles - Route 4 Extension to Danube/Hebron	More Routes Going More Places	One additional vehicle to operate the extension of Route 4 to Danube/Hebron Road for 19 hours Monday-Friday and 17.5 hours on Sunday. The cost shown includes replacement vehicles after 12 years.	\$1,545,433
2025	TBD	Bus Stop Improvements - Extend Route 4 to Danube/Hebron (11 stops)	Bus Stop Improvements & Transit Centers	Eleven additional bus stops along the extension of Route 4.	\$662,982
2026	TBD	Bus Transit Corridor - Route 10*	Bus Stop Improvements & Transit Centers	Funding for bus stop improvements, pedestrian crossing improvements at bus stops, and bus speed and reliability infrastructure on Route 10 from Westgate Drive to Durham Station (4 miles).	\$11,533,480
2026	City of Durham/GoDurham	Additional Vehicles - Improve Route 4 to 15-Minute Service	Enhanced and Extended Service	Two additional vehicles for Route 4 and 15-minute service for 13 hours a day on weekdays and Saturdays. The cost shown includes replacement vehicles after 12 years.	\$3,186,683

\*This project requires additional funding sources outside of the transit plan funds. See Table 14.  
\*\*This project cost also includes previously implemented, continuing service described in the Programmed Projects table and has additional sources of funding in addition to Durham County Transit Plan funds.  
\*\*\*See Chapter 6 for an explanation of the financial assumptions for this project.



Implementation Year (Fiscal Year)	Agency	Project Name	Project Category	Project Description	Total Durham Transit Plan Cost
2026	City of Durham/GoDurham	Additional Vehicles - Improve Route 9 to 15-Minute Frequency	Enhanced and Extended Service	Additional vehicles necessary to increase Route 9 frequency to every 15 minutes. The cost shown includes replacement vehicles after 12 years.	\$4,780,025
2031	City of Durham/GoDurham	Additional Vehicles - Hebron/Danube to Geer Street Walmart	More Routes Going More Places	Two additional vehicles to operate the new crosstown route operating between Danube Lane/Hebron Road to Geer Street Walmart for 19 hours Monday-Saturday and 17.5 hours on Sunday.	\$1,519,864
2031	City of Durham/GoDurham	Bus Stop Improvements - Hebron/Danube to Geer Street Walmart (16 stops)	Bus Stop Improvements & Transit Centers	Additional 16 bus stops on Hebron Road/Danube Lane to Geer Street Walmart Crosstown route.	\$1,220,195
2031	TBD	Bus Speed and Reliability Infrastructure Phase 1	Faster, More Reliable	Construct improvements to help buses stay on schedule, such as traffic signal improvements, bus-only lanes, and adjusting bus stop spacing. The improvements will be identified in the Bus Speed and Reliability Study.	\$13,750,000
2032	TBD	Bus Speed and Reliability Infrastructure Phase 2	Faster, More Reliable	Construct improvements to help buses stay on schedule, such as traffic signal improvements, bus-only lanes, and adjusting bus stop spacing. The improvements will be identified in the Bus Speed and Reliability Study.	\$19,000,000
2034	TBD	Bus Speed and Reliability Infrastructure Phase 3	Faster, More Reliable	Construct improvements to help buses stay on schedule, such as traffic signal improvements, bus-only lanes, and adjusting bus stop spacing. The improvements will be identified in the Bus Speed and Reliability Study.	\$11,250,000
2034	City of Durham/GoDurham	Bus Transit Corridor - Route 9*	Bus Stop Improvements & Transit Centers	Funding for bus stop improvements, pedestrian crossing improvements at bus stops, and bus speed and reliability infrastructure on Route 9 from Elizabeth Street to Carver Street (6 miles).	\$23,676,546
2034	City of Durham/GoDurham	Bus Transit Corridor - Route 4*	Bus Stop Improvements & Transit Centers	Funding for bus stop improvements, pedestrian crossing improvements at bus stops, and bus speed and reliability infrastructure on Route 4 from Geer Street to Carver Street (3 miles).	\$11,838,273
TBD	GoTriangle	Commuter Rail Transit Capital***	Quick and Reliable Regional Transportation Connections	Durham County's financial contribution to build commuter rail connecting Durham to Wake County.	\$194,862,299
STUDIES					
2023	TBD	Bus Speed and Reliability Study Phase 1	Faster, More Reliable	Study to identify potential corridors for BRT or bus speed and reliability infrastructure.	\$1,081,600
2024	TBD	Mobility and Paratransit Improvements - GoDurham and GoTriangle Access Study	Paratransit Improvements	GoDurham and GoTriangle Access improvement study to identify service improvements.	\$449,946
2028	TBD	Bus Speed and Reliability Study Phase 2	Faster, More Reliable	Study to identify potential corridors for bus rapid transit or bus speed and reliability infrastructure.	\$1,315,932
OPERATING PROJECTS					
2023	City of Durham/GoDurham	Microtransit Zones - North Durham	More Routes Going More Places	Shared ride service to provide transportation within the microtransit zone.	\$7,510,262
2023	City of Durham/GoDurham	Mobility and Paratransit Improvements - Food for Seniors	Paratransit Improvements	Provide approximately 4.5 hours of fare-free service connecting selected senior housing complexes to a major grocery store to address the problem of food access and food insecurity.	\$1,277,117

\*This project requires additional funding sources outside of the transit plan funds. See Table 14.

\*\*This project cost also includes previously implemented, continuing service described in the Programmed Projects table and has additional sources of funding in addition to Durham County Transit Plan funds.

\*\*\*See Chapter 6 for an explanation of the financial assumptions for this project.



Implementation Year (Fiscal Year)	Agency	Project Name	Project Category	Project Description	Total Durham Transit Plan Cost
2024	City of Durham/GoDurham	Frequency and Service Span - Additional Frequency for Sunday Service	Enhanced and Extended Service	Improvement of service from hourly to 30-minute service on Sunday for Routes 6, 7, 8, 9, and 12.	\$12,178,721
2024	City of Durham/GoDurham	Additional Evening Service - Extend 30-Minute Service to 12:30 a.m.	Enhanced and Extended Service	Additional 5 hours of additional service span to routes 3, 6, 7, 8, 11, and 12 on weekdays and Saturdays. No additional vehicles required to extend service span later into the evening.	\$32,158,310
2024	City of Durham/GoDurham	Additional Sunday Span - Extend Sunday Service to Midnight	Enhanced and Extended Service	Additional 3 hours of service span to routes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11/11B, and 12 on Sundays. No additional vehicles would be required to extend service span later into the evening.	\$14,052,371
2024	GoTriangle	Additional Sunday Span - Route 700	Enhanced and Extended Service	Additional 2 hours of Sunday service on Route 700 (9:00pm–11:00pm) to provide matching transfer opportunity to GoDurham Routes at Durham Station. Service would continue to operate hourly during these two hours and would require no additional vehicles.	\$355,997
2024	City of Durham/GoDurham	Crosstown Routes - East Durham/The Village to NCCU	More Routes Going More Places	Implement the planned Route 18 as identified in the Long Range Plan operating along Holloway Street, Alston Avenue, Lawson Street, Fayetteville Road, Pekoe Avenue, and Concord Street. Requires one additional vehicle and operates for a 19-hour span Monday-Saturday and 17.5-hour span on Sundays. Assumes service operates every 30 minutes from 5:30am–12:30am Monday-Saturday and 6:30am–12:00am Sunday.	\$20,505,051
2024	TBD	Transit Plan Administrator (TPA) - 1.5 FTE's Governance Study Recommendations	Administration	Additional staff to implement the recommendations of the Transit Governance Study, including improved accountability, equitable contracting, and transit-oriented development efforts.	\$5,038,725
2024	TBD	TPA - Project Implementation Staff 1.5 FTEs	Administration	1.5 FTEs to provide project implementation activities for Durham County Transit Plan capital projects focused on Bus Speed and Reliability including Bus Rapid Transit.	\$3,929,645
2025	City of Durham/GoDurham	Microtransit Zones - East Durham	More Routes Going More Places	Shared ride service to provide transportation within the microtransit zone.	\$6,830,907
2025	City of Durham/GoDurham	Crosstown Routes - Extend Route 4 to Danube/Hebron	More Routes Going More Places	Extension of Route 4 an additional 1.5 miles each direction. This would add one additional vehicle to the route for 19 hours Monday-Friday and 17.5 hours on Sunday. Assumes service operates every 30 minutes from 5:30am–12:30am Monday-Saturday and 6:30am–12:00am Sunday.	\$20,351,323
2025	City of Durham/GoDurham/GoTriangle	Mobility and Paratransit Improvements - Access Improvements	Paratransit Improvements	Additional funding for GoDurham and GoTriangle Access service improvements identified in the future GoDurham and GoTriangle Access Study.	\$8,556,857
2026	City of Durham/GoDurham	Frequency and Service Span - Improve Route 4 to 15-Minute Service	Enhanced and Extended Service	Increased frequency on Route 4 from 30-minutes to 15-minutes for 13 hours per day on weekdays and Saturdays.	\$21,570,511
2026	City of Durham/GoDurham	Frequency and Service Span - Additional Frequency - Route 9	Enhanced and Extended Service	Increased frequency of Route 9 to every 15 minutes (previously every 30 minutes).	\$32,355,766
2026	GoTriangle	Additional Midday - Route 405**	Enhanced and Extended Service	Additional 6 hours to Route 405 during the midday period on weekdays (9:00am - 3:00pm).	\$15,354,288
2026	GoTriangle	Additional Sunday Span - Route 400**	Enhanced and Extended Service	Additional 4 hours of Sunday evening service to Route 400.	\$14,784,117

*\*This project requires additional funding sources outside of the transit plan funds. See Table 14.*

*\*\*This project cost also includes previously implemented, continuing service described in the Programmed Projects table and has additional sources of funding in addition to Durham County Transit Plan funds.*

*\*\*\*See Chapter 6 for an explanation of the financial assumptions for this project.*



Implementation Year (Fiscal Year)	Agency	Project Name	Project Category	Project Description	Total Durham Transit Plan Cost
2026	Chapel Hill Transit	Chapel Hill Transit Route D Extension*	Enhanced and Extended Service	Chapel Hill Transit would operate the route extension to Patterson Place. Cost will be shared between Orange County and Durham County with a 60/40 split in FY26.	\$5,037,200
2028	City of Durham/GoDurham	Frequency and Service Span - Add Peak Frequency to 15-Minute Routes	Enhanced and Extended Service	Increased frequency during peak for 10 hours per weekday on the highest demand routes to help address capacity constraints and schedule maintenance. There is flexibility in how these hours may be allocated, and the likely candidates include Routes 5 and 11.	\$17,239,433
2031	City of Durham/GoDurham	Crosstown Routes - Hebron/Danube to Geer Street Walmart	More Routes Going More Places	Extending the new Route 16 further south and east along Horton Road, Denield Street, Hebron Road, Danube Lane, Old Oxford Road, Dearborn Drive, Club Boulevard, and Geer Street. The route would require two additional vehicles and operates for a 19-hour span Monday-Saturday and 17.5-hour span on Sundays.	\$25,619,674
2031	GoTriangle	Additional Midday - Route 700	Enhanced and Extended Service	Increased midday service frequency on Route 700 to operate every 15 minutes for 7 hours per weekday during the midday period.	\$6,965,523
TBD	GoTriangle	Commuter Rail Transit Operating***	Quick and Reliable Regional Transportation Connections	Durham County's financial contribution to begin running commuter rail connecting Durham to Wake County.	\$98,113,681

*\*This project requires additional funding sources outside of the transit plan funds. See Table 14.*

*\*\*This project cost also includes previously implemented, continuing service described in the Programmed Projects table and has additional sources of funding in addition to Durham County Transit Plan funds.*

*\*\*\*See Chapter 6 for an explanation of the financial assumptions for this project.*



# PROGRAMMED PROJECTS

Programmed projects already have funding appropriated in the FY23 Work Program or in previous year Work Programs. Programmed capital projects may already be in the planning, design, right-of-way acquisition, or construction phase. Programmed operating projects include continuing services that have previously been implemented using transit sales taxes and fees.

Figure 17 shows the tax district revenues allocated to bus operations projects for GoTriangle and GoDurham (this includes new operating projects as well as programmed operating projects). This demonstrates an increase from approximately \$3M to \$19M for GoDurham and approximately \$1.5M to \$5M for GoTriangle between 2020 and 2026. Between 2026 and 2040, GoDurham increases to \$32M and GoTriangle increases to \$8.7M. The programmed projects are shown in Table 13.

FIGURE 17: TAX DISTRICT REVENUES ALLOCATED TO BUS OPERATING PROJECTS BY AGENCY

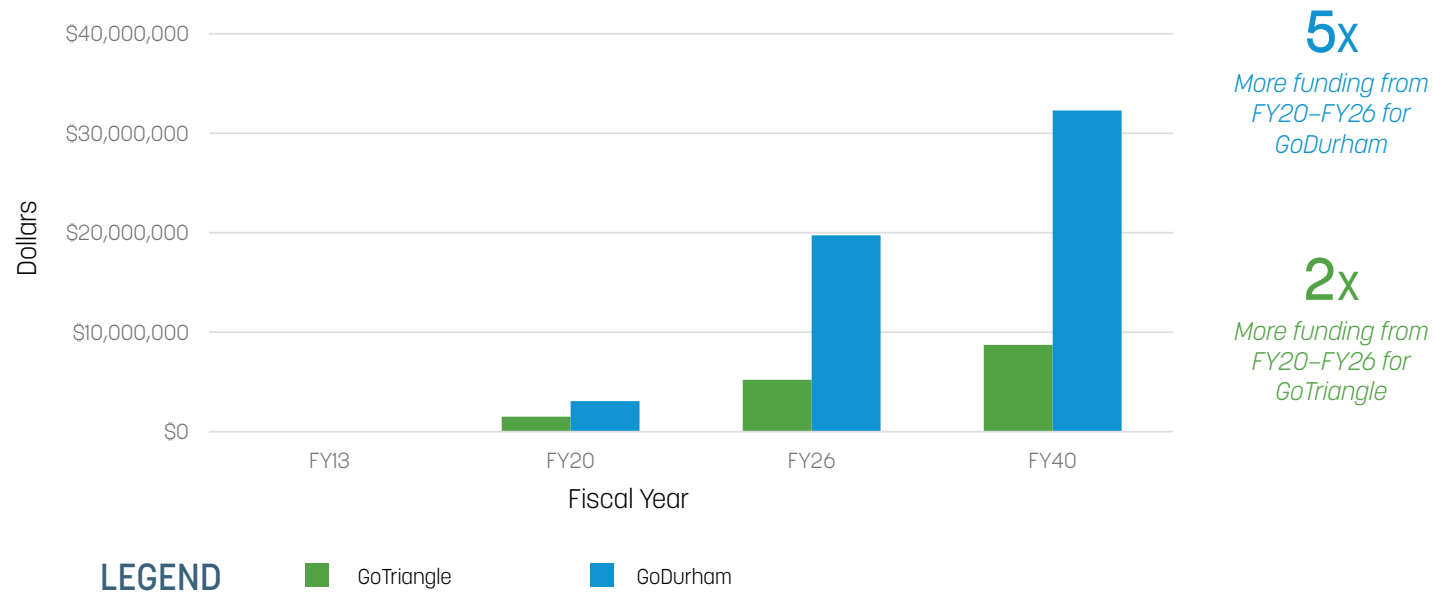


TABLE 13: PROGRAMMED PROJECTS

Project Name	Agency	Project Category	Project Descriptions	Total Durham Transit Plan Cost
CAPITAL PROJECTS				
Patterson Place Improvements	GoTriangle	Bus Stop Improvements & Transit Centers	Funds additional amenities and other elements to improve the operational efficiency of the GoTriangle and GoDurham routes that serve this stop.	\$356,703
Bus Stop Improvements (Durham County)	GoTriangle	Bus Stop Improvements & Transit Centers	Multi-year improvement program for GoDurham and GoTriangle bus stops in Durham County.	\$191,163
Vehicle Acquisition and Replacement	GoTriangle	Operations and Maintenance	GoTriangle replacement vehicles.	\$1,821,912
GoTriangle Bus Maintenance Facility*	GoTriangle	Operations and Maintenance	Design and construction of a short-term/quality of life renovation for Nelson Road bus operations and maintenance facility (BOMF).	\$12,500,000
New Regional Transit Facility (Durham County Share)*	GoTriangle	Bus Stop Improvements & Transit Centers	This is Phase II of the regional transit center (RTC) relocation project, which consists of land acquisition, design, and construction of a new RTC.	\$2,850,000
Village Transit Center	City of Durham/GoDurham	Bus Stop Improvements & Transit Centers	Construct sidewalks and install transit amenities at the Village Transit Center in Northeast Central Durham.	\$442,221
Durham Bus Stop Improvements	GoTriangle	Bus Stop Improvements & Transit Centers	The multi-year program includes funding to improve all bus stops in Durham. Cost assumes up to \$10,000 per stop for design and up to \$40,000 per stop for construction. At a minimum, all stops will be upgraded to include a paved, ADA accessible pad.	\$34,325,223
Bus Transit Corridor - Route 3	City of Durham/GoDurham	Bus Stop Improvements & Transit Centers	Funding for bus stop improvements, pedestrian crossing improvements at bus stops, and bus speed and reliability infrastructure on Route 3 from Roxboro Street to US-70 (2 miles).	\$3,500,000

\*This project requires additional funding sources outside of the transit plan funds. See Table 14.  
\*\*This project cost also includes previously implemented, continuing service described in the Programmed Projects table and has additional sources of funding in addition to Durham County Transit Plan funds.



Project Name	Agency	Project Category	Project Descriptions	Total Durham Transit Plan Cost
Bus Transit Corridor - Route 5	City of Durham/GoDurham	Bus Stop Improvements & Transit Centers	Funding for bus stop improvements, pedestrian crossing improvements at bus stops, and bus speed and reliability infrastructure on Route 5 from South Roxboro Street to Riddle Road (3 miles).	\$6,900,000
Durham Station Improvements*	City of Durham/GoDurham	Bus Stop Improvements & Transit Centers	Improvements to Durham Station will include expanding shelter canopies for increased weather protection for passengers, and installing solar panels, additional seating, new restrooms, a customer service security kiosk, eight additional bus bays, redesigned bus lanes, new pavement, and space for future electric bus charging.	\$2,700,000
DIGI Modems for GoDurham	City of Durham/GoDurham	Operations and Maintenance	Modems for vehicle tracking on buses.	\$100,000
GoDurham CAD/AVL	City of Durham/GoDurham	Operations and Maintenance	Purchase and installation of Computer-Aided Dispatch/Automated Vehicle Location (CAD/AVL) technology for GoDurham buses.	\$1,836,000
GoDurham Bus Maintenance Facility/Paratransit Addition	City of Durham/GoDurham	Operations and Maintenance	Design for GoDurham Paratransit relocation and land acquisition for Paratransit relocation. Relocating Paratransit will open up expansion and renovation opportunities for GoDurham Fixed-Route maintenance.	\$5,000,000
Electric Vehicle Acquisition	City of Durham/GoDurham	Operations and Maintenance	Six GoDurham battery electric buses.	\$6,103,255
Bus Speed and Reliability	City of Durham/GoDurham	Faster, More Reliable	Identifying locations where buses experience delays, slow travel speeds, safety concerns, conflicts with other vehicles or infrastructure, etc., and planning, designing, and constructing treatments to enable improved bus speed and reliability. Funds will be used to design improvements, conduct reviews, pay for installation (labor and materials) such as signage, pavement markings, flexible delineator posts, or equipment needed for vehicles, traffic signals, or other infrastructure to enable improved bus performance. Includes transit signal priority implementation.	\$2,525,772
OPERATING PROJECTS				
Tax District Administration - Financial Oversight Staff	GoTriangle	Administration	Continues Durham County Transit Plan contribution.	\$3,082,800
TPA - Performance Data Processing and Visualization Tool	GoTriangle	Administration	Continues Durham County Transit Plan contribution.	\$2,894,600
Customer Surveys (GoTriangle and GoDurham)	GoTriangle	Administration	Developing and implementing annual transit customer surveys that help to continually evaluate user experiences as additional services are implemented. All GoDurham and the applicable share of GoTriangle Regional Routes surveyed include the 700, 800, 880S, 805, DRX, and the ODX.	\$2,454,500
TPA - Regional Technology and Administration - Support Staff	GoTriangle	Administration	GoTriangle will continue to allocate 0.4 full time equivalent (FTE) of Regional Technology and Administration support staff. Staffing includes budgeted time for the Regional Technology Manager, Contract and Grants Coordinator and Contract Administrator.	\$1,785,900

*\*This project requires additional funding sources outside of the transit plan funds. See Table 14.*  
*\*\*This project cost also includes previously implemented, continuing service described in the Programmed Projects table and has additional sources of funding in addition to Durham County Transit Plan funds.*



Project Name	Agency	Project Category	Project Descriptions	Total Durham Transit Plan Cost
TPA - Marketing, Communication and PE - Support Services	GoTriangle	Administration	GoTriangle is requesting funds for support services that will be used for marketing, communications, and public engagement related to the Plan. Funding also will support capacity to use creative consultant services, or expand the scope of service through current consultants, to support materials for community outreach, public meetings, marketing campaigns, information kits, web elements, translation and interpretation, etc.	\$1,719,900
TPA - Marketing, Communication, and PE - Support Staff	GoTriangle	Administration	GoTriangle is requesting funding for 1.5 FTEs that will be dedicated to public engagement. The Public Engagement Specialist will work under the Community Engagement Manager in the Communications & Public Affairs department at GoTriangle, directly collaborating with project teams to plan and execute public involvement activities related to developing and implementing the Plan.	\$4,657,600
TPA - Legal and Real Estate - Support Staff	GoTriangle	Administration	GoTriangle will continue to allocate 1.6 FTE of Legal and Real Estate support staff to the Durham County Transit Plan.	\$6,506,895
TPA - Transit Planning - Support Service	GoTriangle	Administration	GoTriangle will continue to provide ongoing support costs that benefit the Durham County Tax District. The Support Consultant costs are split 50% Durham County and 50% Orange County, which include regional contracts.	\$738,600
Tax District Administration - Financial Oversight - Support Services	GoTriangle	Administration	GoTriangle will continue to provide 1.5 FTEs from the finance and administration support staff functions.	\$6,871,100
TPA - Program Management Staff	GoTriangle	Administration	GoTriangle will continue to allocate 0.5 FTE of GoTriangle program management staff to the Plan.	\$3,195,300
TPA - Project Implementation Staff (GoTriangle)	GoTriangle	Administration	GoTriangle will continue to allocate 2.4 FTE for project implementation activities for the Plan.	\$11,418,400
TPA - Project Implementation Staff (GoDurham)*	City of Durham/GoDurham	Administration	Three FTEs to provide project implementation activities for the Plan capital projects. This includes bus transit corridors, bus stop improvements, access to transit, Durham Station improvements, and transit center projects. The City of Durham will provide a 50% share for these three FTEs.	\$2,870,055
Route 405 Improvements**	GoTriangle	Enhanced and Extended Service	Continues Durham County Transit Plan contribution.	\$15,354,288
Route DRX Improvements*	GoTriangle	Enhanced and Extended Service	Continues Durham County Transit Plan contribution.	\$7,217,008
Route 700 Improvements	GoTriangle	Enhanced and Extended Service	Continues Durham County Transit Plan contribution.	\$10,445,732
Route 800 Improvements*	GoTriangle	Enhanced and Extended Service	Continues Durham County Transit Plan contribution. Costs are allocated 50% to Durham and 50% to Orange Counties.	\$9,788,230
Route 400 Improvements**	GoTriangle	Enhanced and Extended Service	Continues Durham County Transit Plan contribution. Costs are allocated 50% to Durham and 50% to Orange Counties.	\$14,784,117
Route ODX - Orange-Durham Express*	GoTriangle	Enhanced and Extended Service	Continues Durham County Transit Plan contribution. Costs are allocated 50% to Durham and 50% to Orange Counties.	\$4,585,345
Route DRX Improvements*	GoTriangle	Enhanced and Extended Service	Continues Durham County Transit Plan contribution. Costs are allocated 50% to Durham and 50% to Wake Counties.	\$7,217,008

*\*This project requires additional funding sources outside of the transit plan funds. See Table 14.*  
*\*\*This project cost also includes previously implemented, continuing service described in the Programmed Projects table and has additional sources of funding in addition to Durham County Transit Plan funds.*



Project Name	Agency	Project Category	Project Descriptions	Total Durham Transit Plan Cost
Route 405 Improvements*	GoTriangle	Enhanced and Extended Service	Continues Durham County Transit Plan contribution. Costs are allocated 50% to Durham and 50% to Orange Counties.	\$15,354,288
Youth GoPass	GoTriangle	Operations and Maintenance	Continued Youth GoPass offer for youth ages 13-18.	\$584,800
Fare Collection Improvements (D)	GoTriangle	Operations and Maintenance	Annual costs associated with updated mobile ticketing technology for GoTriangle buses.	\$545,000
Paratransit expansion*	GoTriangle	Paratransit Improvements	Continues Durham County Transit Plan contribution. Costs are allocated 64% to Durham and 36% to Orange Counties.	\$968,087
Late Sunday Service (until 9:00pm)	City of Durham/GoDurham	Enhanced and Extended Service	Continues Durham County Transit Plan contribution.	\$6,466,425
Route 10 Improvements	City of Durham/GoDurham	Enhanced and Extended Service	Continues Durham County Transit Plan contribution.	\$22,809,603
Route 5 Improvements	City of Durham/GoDurham	Enhanced and Extended Service	Continues Durham County Transit Plan contribution.	\$31,346,726
Route 12 Improvements	City of Durham/GoDurham	Enhanced and Extended Service	Continues Durham County Transit Plan contribution.	\$17,966,500
New Year's Eve Service	City of Durham/GoDurham	Enhanced and Extended Service	Continues Durham County Transit Plan contribution.	\$282,531
Route 1 Improvements	City of Durham/GoDurham	Enhanced and Extended Service	Continues Durham County Transit Plan contribution.	\$7,223,054
Route 2 Improvements	City of Durham/GoDurham	Enhanced and Extended Service	Continues Durham County Transit Plan contribution.	\$23,128,620
Route 4 Improvements	City of Durham/GoDurham	Enhanced and Extended Service	Continues Durham County Transit Plan contribution.	\$7,455,162
Route 8 Improvements	City of Durham/GoDurham	Enhanced and Extended Service	Continues Durham County Transit Plan contribution.	\$2,131,640
3X - Route 3 Additional Services	City of Durham/GoDurham	Enhanced and Extended Service	Two additional departures per hour along the corridor for 10 hours a day Monday-Friday.	\$10,941,186
North Durham Improvements - GoDurham Routes 9/9A/9B, and Crosstown	City of Durham/GoDurham	Enhanced and Extended Service	Northern Durham transit service improvements, including a new crosstown service from Duke Regional Hospital to Duke VA/Medical Center and increased frequency on Route 9A/9B to every 30 minutes at night, Monday-Sunday.	\$53,166,023
Increased Cost of Existing Services (ICES)	City of Durham/GoDurham	Operations and Maintenance	Continues Durham County Transit Plan contribution. Capped at 50% of the annual revenue provided by the seven-dollar County Vehicle Registration Fee.	\$20,259,598
Youth GoPass	City of Durham/GoDurham	Operations and Maintenance	Continued Youth GoPass offer for youth ages 13-18.	\$2,088,100
Fare Collection Improvements	City of Durham/GoDurham	Operations and Maintenance	Annual Costs associated with updated mobile ticketing technology for GoDurham buses.	\$5,674,900
GoDurham Connect Pilot	City of Durham/GoDurham	More Routes Going More Places	Operation of the GoDurham Connect Microtransit pilot in East and North Durham through fiscal year (FY) 2023.	\$776,434

*\*This project requires additional funding sources outside of the transit plan funds. See Table 14.*  
*\*\*This project cost also includes previously implemented, continuing service described in the Programmed Projects table and has additional sources of funding in addition to Durham County Transit Plan funds.*



Project Name	Agency	Project Category	Project Descriptions	Total Durham Transit Plan Cost
Durham Transportation Alternatives	TBD	More Routes Going More Places	Programs to encourage and subsidize the use of transit, carpool, vanpool, and other non-single occupant vehicle modes to provide access to employment and educational opportunities identified for priority by the Durham County Board of Commissioners.	\$1,614,103
TPA - Durham County Transportation Management and Administration	Durham County	Administration	Durham County staff that provide oversight and development of the Durham County Transit Plan, implement the Governance Study, serve on the Staff Working Group, and advise the Board of Commissioners on transportation issues.	\$4,929,900
Durham County Access Service	Durham County	Paratransit Improvements	Continues Durham County Transit Plan contribution.	\$4,695,830
TPA - Staff Working Group Administrator*	Currently DCHC MPO; Future TBD	Administration	Staff Working Group Administrator to organize meetings and agenda materials, assist in the development and approval of the annual work program, and conduct public and board engagement efforts	\$1,394,500

*\*This project requires additional funding sources outside of the transit plan funds. See Table 14.*  
*\*\*This project cost also includes previously implemented, continuing service described in the Programmed Projects table and has additional sources of funding in addition to Durham County Transit Plan funds.*



# LOCAL AND FEDERAL FUNDING ASSUMPTIONS

The following projects shown in Table 14 assume additional local funding from the City of Durham or federal funding from various grant programs as noted in millions (M) unless otherwise noted.

TABLE 14: LOCAL AND FEDERAL FUNDING ASSUMPTIONS

Project Name	Agency	Funding Assumptions	Total Durham Transit Plan Cost	Total Project Cost
CAPITAL PROJECTS				
Durham Station Improvements	City of Durham/GoDurham	80% of total cost Federal and 20% Durham County Transit Plan	\$2.7M	\$13.5M
GoTriangle Bus Maintenance Facility	GoTriangle	\$10M Federal, \$50M Local Split: 65% Wake County, 25% Durham Transit Plan, 10% Orange County	\$12.5M	\$60M
New Regional Transit Facility (Durham County share)	GoTriangle	60% Federal; 40% Local. Local Split: 70% Wake County, 20% Durham Transit Plan, 10%, Orange County.	\$2.85M	\$34M
Bus Transit Corridor - Route 3	City of Durham/GoDurham	\$2.3M/mile (FY22\$) Durham County Transit Plan Cost; Total Project Cost TBD	\$3.5M	See note below**
Bus Transit Corridor - Route 4	City of Durham/GoDurham	\$2.3M/mile (FY22\$) Durham County Transit Plan Cost; Total Project Cost TBD	\$11.8M	See note below**
Bus Transit Corridor - Route 5	City of Durham/GoDurham	\$2.3M/mile (FY22\$) Durham County Transit Plan Cost; Total Project Cost TBD	\$6.9M	See note below**
Bus Transit Corridor - Route 9	City of Durham/GoDurham	\$2.3M/mile (FY22\$) Durham County Transit Plan Cost; Total Project Cost TBD	\$23.7	See note below**
Bus Transit Corridor - Route 10	City of Durham/GoDurham	\$2.3M/mile (FY22\$) Durham County Transit Plan Cost; Total Project Cost TBD	\$11.5M	See note below**
Commuter Rail Capital***	GoTriangle	See note below***	\$195M	See note below***

\*This project cost also includes previously implemented, continuing service described in the Programmed Projects table.

\*\*The Plan programs \$2.3M/mile (FY22\$) for these five corridors as an estimate of the cost to the Transit Plan. Additional city, state, or federal funding may be required to accommodate project elements that address general community needs, not specific to transit riders.. As these projects are developed, project partners will agree on the scope and specific funding shares needed for each project.

\*\*\*See Chapter 6 for an explanation of the financial assumptions for this project.

Project Name	Agency	Funding Assumptions	Total Durham Transit Plan Cost	Total Project Cost
OPERATING PROJECTS				
Commuter Rail Operating***	GoTriangle	See note below***	\$98.1M	See note below***
Route 800 Improvements	GoTriangle	50% Durham County Transit Plan, 50% Orange County	\$9.8M	\$19.6M
Route 400 Improvements*	GoTriangle	50% Durham County Transit Plan, 50% Orange County	\$14.8M	\$29.6M
Route DRX Improvements	GoTriangle	50% Durham Transit Plan, 50% Wake County	\$7.2M	\$14.4M
Paratransit Expansion	GoTriangle	64% Durham Transit Plan, 36% Orange County	\$968,087	\$1.5M
Route 405 Improvements	GoTriangle	50% Durham County Transit Plan, 50% Orange County	\$15.4M	\$30.7M
Chapel Hill Transit Route D Extension	Chapel Hill Transit	40% Durham Transit Plan, 60% Orange County	\$5M	\$12.6M

\*This project cost also includes previously implemented, continuing service described in the Programmed Projects table.

\*\*The Plan programs \$2.3M/mile (FY22\$) for these five corridors as an estimate of the cost to the Transit Plan. Additional city, state, or federal funding may be required to accommodate project elements that address general community needs, not specific to transit riders.. As these projects are developed, project partners will agree on the scope and specific funding shares needed for each project.

\*\*\*See Chapter 6 for an explanation of the financial assumptions for this project.



# PROGRAMMING ASSUMPTIONS

The Plan focuses operating dollar expenditures on implementing high-priority service improvements as quickly as possible. Frequency improvements, later Sunday service, and a new crosstown route are funded in the first 5 years of the Plan. The Plan also includes a financial contribution towards proposed commuter rail or other fast, reliable, regional transit service. Currently, the Plan does not include any state funding; however, if state funding opportunities become available, these should be explored as well.

The Plan is fiscally constrained and relies on estimates and assumptions that have been developed by the Project Team using current information and forecasting expertise. To calculate the cost of operating improvements, net new revenue hours have been converted to dollar costs using assumed operating costs per revenue hour and inflation for each transit service provider. For capital projects, the lead agency developed cost estimates based on the most current information available as well as forecasting assumptions. Each agency also developed administrative costs based on current and projected cost assumptions.

The scope, cost, and financing assumptions of the projects included in the Plan are preliminary. Each recommendation requires further study and evaluation to determine appropriate alignments, stations/stops, project elements, and corridor investments. The list of projects and implementation timeframes are subject to change. All projects must be consistent with the identified priorities of the Durham County Transit Plan. Changes in scope and budgets may require amendment to the Plan as determined by the plan governance processes. For example, if upon further study, a project is more costly than originally anticipated, or funding available from federal, state, local, or transit sales tax revenue sources does not match the assumptions in this Plan, the cost of operating service is higher than previously anticipated, or other changes occur that do not match the financial assumptions of the Plan, then project implementation may be delayed or scope may be reduced. Alternatively, if an agency's cost of providing service or project implementation is lower than anticipated, federal funding exceeds expectations, transit sales tax revenues exceed projections, or additional funding opportunities arise, there may be an opportunity to provide additional projects and services or implement already proposed projects earlier than initially planned.

An agency's projected hourly cost to operate service may fluctuate for a variety of reasons, including changes in labor costs or fuel costs. The Durham County Transit Plan does not add any operating or administrative cost items to the agency's hourly cost calculation. Agencies are required to use a consistent method for calculating their hourly cost from year-to-year. Any changes in the bus service hourly cost or bus service hours provided under the Plan will be accounted for in the annual Work Program. As set forth in Chapter 6, the Staff Working Group will produce an annual updated financial plan incorporating revised assumptions and an annual Work Program that identifies projects, services, and activities to be implemented in the upcoming year.

Following the adoption of the Plan, project sponsors will continue to refine the scope of capital projects to produce more accurate cost estimates, seek other sources of funding, and make changes to service plans based on the outcome of short-term planning efforts. In addition, actual project expenses and revenues will vary from the assumptions in this Plan, which may require changes in the scope, schedule, or need for any particular project. The Interlocal Implementation Agreement for the Durham County Transit Plan establishes the implementation process that the governing boards and staff will follow to ensure that the annual approval of services and facilities is consistent with the identified priorities of the Durham County Transit Plan.

# UNFUNDED PRIORITY TRANSIT PROJECTS

The following projects were identified throughout the planning process as priority transit projects in Durham County. However, due to the other projects in the Plan being a higher priority and financial constraints, these projects could not be afforded at this time. If additional funding becomes available, these projects should be a priority to be added to the next update of the Plan.

## BUS RAPID TRANSIT (BRT)

As shown in Table 12 on pages 88 and 89, two studies have been included in the Plan to assess and identify potential corridors for BRT and/or bus speed and reliability infrastructure. The following two unfunded BRT projects are expected to be evaluated in this study. Any resulting proposed BRT projects that are identified through these studies are currently unfunded. However, there are funded Bus Speed and Reliability Infrastructure improvements (also shown on pages 88 and 89) that may be encompassed within any future BRT project. Financial constraints limit the ability to fully fund BRT improvements using the current funding assumptions in the Plan. As described in Chapter 6, the current funding assumptions for commuter rail should be considered representative of Durham's financial capacity to support a fast, reliable, and regional service initiative such as commuter rail. However, if commuter rail does not prove to be a feasible option, then regional partners are committed to finding an alternative fast, reliable, and regional transit service (such as BRT) to meet the needs and desires of the community, and this Plan will be amended to reflect that change.

TABLE 15: UNFUNDED BRT PROJECTS

Project	Description
BRT - RTP-Durham-Chapel Hill**	BRT route for approximately 15 miles from UNC Hospital to the RTC, via Duke, Downtown Durham, and NCCU. This project would likely be implemented in segments.
BRT - Durham Tech - NCCU - Downtown - Duke**	BRT route for approximately 5 miles connecting Durham Tech, NCCU, Downtown Durham, and Duke.

\*\* This project fulfills the need for fast, reliable regional service.





EXAMPLE: GORALEIGH NEW BERN AVENUE BRT PROJECT

Wake County is also implementing multiple BRT corridors, which are included in the Wake County Transit Plan Update adopted in April 2021. The description, implementation timeline and estimated cost for the first BRT corridor being implemented is shown below for reference to gauge the level of funding, staff resources, and time commitment required for a BRT project in Durham County.

**Project Description:** The project is 5.1 miles long and includes 3.3 miles of exclusive bus lanes, with the other 1.8 miles operating in mixed traffic. The project also includes 10 BRT stops, transit signal priority, off-board fare payment, and six electric battery-powered or compressed natural gas buses. The service is planned to operate every 10 minutes during peak periods, 15 minutes during off-peak periods and every 20 minutes on weekends. Concurrent with the development of the project, the City of Raleigh also initiated an Equitable Development Around Transit effort to encourage affordable housing and transit-oriented development on BRT corridors.

**Cost and Funding:** The estimated total cost for the project is \$96.7 million (\$18.96 million per mile) which includes \$35 million (36%) in federal grant funding from the Federal Transit Administration's (FTA) Capital Investment Grants (CIG) Small Starts Program. The remaining funding sources include Wake County Transit tax proceeds and City of Raleigh funds.

SCHEDULE:

- 2018 – 2019: Major Investment Study & New Bern BRT Locally Preferred Alternative (LPA) Selected
- 2019 – 2020: 30% Design, Federal Small Starts Application
- 2020 – 2022: Final Design, NEPA Documentation
- 2022 – 2023: Right of Way & Easement Acquisition Complete
- 2023 - 2025: Anticipated Construction Start



OTHER UNFUNDED PRIORITY TRANSIT PROJECTS

ELECTRIC VEHICLES

The Durham County Transit Plan includes more than \$6.1 million in funding for the purchase of six (6) zero-emissions, battery-electric buses that have been ordered and are scheduled to arrive and begin service by the end of 2023. The funding that is currently programmed for replacement vehicles in future years is only for the purchase price of diesel-powered replacement buses, approximately half the cost of electric buses. However, the City of Durham has recently been awarded nearly \$10 million in federal funding to support the replacement of diesel-powered buses with battery-electric buses and the City plans to continue to pursue future federal funding opportunities. Competitive awards may not be a reliable and sustainable funding source for electrification long-term. A portion of the \$10 million in awarded competitive funding was used to purchase two (2) GoDurham zero-emissions, battery-electric buses that began service in 2021 and the balance will be exhausted over the next few years as 25 diesel-powered buses purchased in 2008-2010 require replacement. The Durham County Transit Plan will be updated every four years, and the annual work program development process provides an opportunity to re-evaluate needs and priorities in the context of available revenues. Electric vehicles may be considered as part of those processes.

GoTriangle has been awarded federal grant funding to increase its electric bus fleet from two vehicles to seven vehicles within the next few years. As part of the Regional Fleet and Facilities Study (funded in part by the Durham Transit Plan) GoTriangle is currently performing a fleet composition analysis and developing a longer-term fleet transition plan and evaluation of charging needs to support a larger electric bus fleet. Additional details will be available upon completion of this Study.

FARE FREE TRANSIT SERVICE

The Durham County Transit Plan includes nearly \$2.1 million for GoDurham Youth GoPass fares and nearly \$5.7 million for GoDurham mobile ticketing technology through 2040, however, this funding will only be provided to operators if fare collection is resumed. Currently there is a proposal to the Durham City Council that proposes continuing fare-free service through June 30, 2024, subject to City Council approval. At present, the City of Durham has not developed a long-term fare policy for GoDurham. Annual fare revenue is estimated at \$2.7 million annually. As the City considers future fare policy decisions, along with seeking contributions from institutional and private sector partners, changes to the Transit Plan can be considered in the context of available revenues to support fare free transit initiatives. Community engagement has shown support for fare-free transit and it aligns with the plan's Core Principle of Equity and Goal of Accessibility for all.

GoTriangle's Board of Trustees is considering the possibility of returning to fare collection in FY2024. Board members have indicated their interest in ensuring that fares are not a burden to low-income individuals while at the same time ensuring that the agency has long-term sustainable revenues to maintain and expand high quality bus service. GoTriangle is currently investigating regional and local funding options and partnerships.

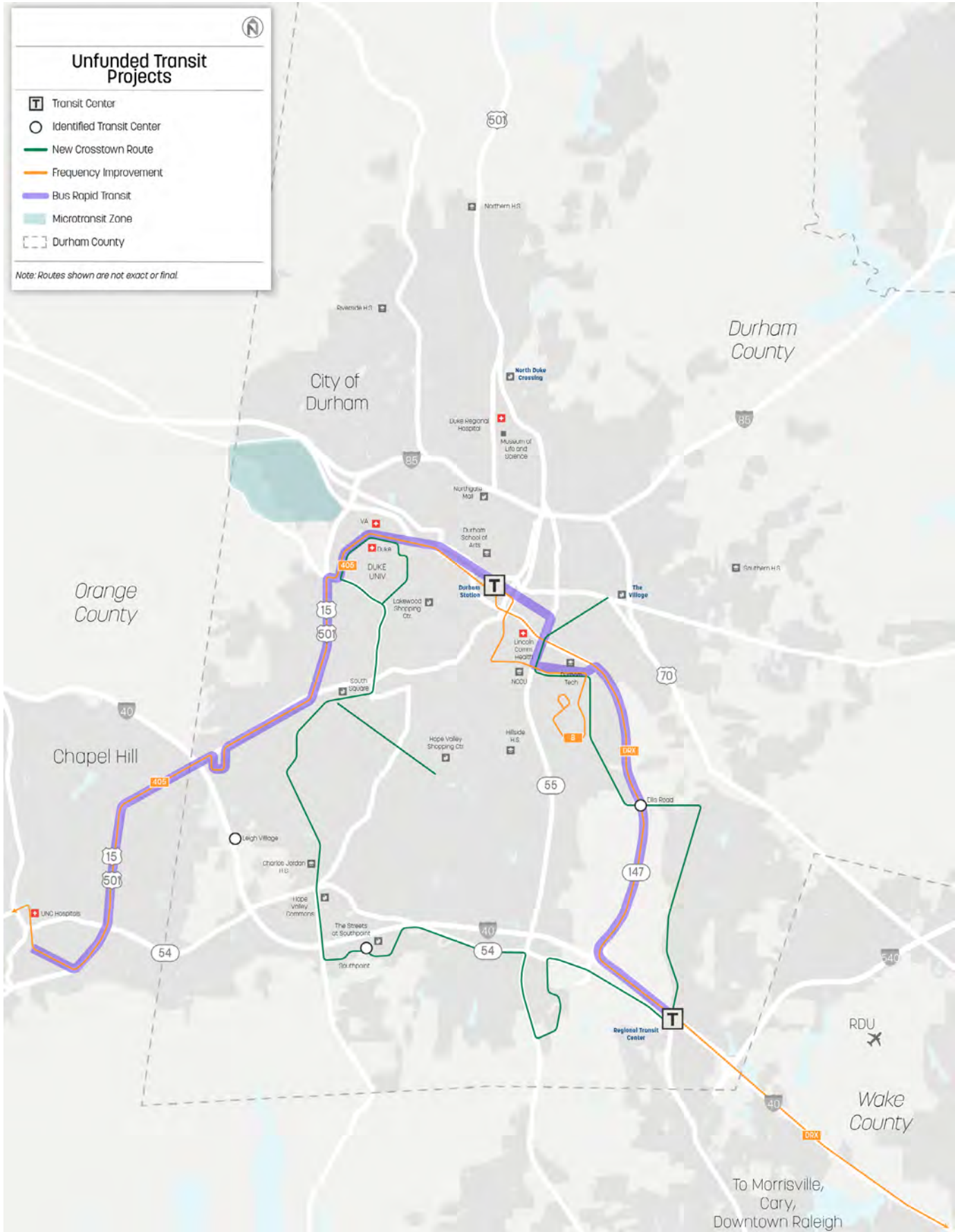


TABLE 16: OTHER UNFUNDED PROJECTS

Project	Description
Microtransit Zones - West Durham	Shared ride service to provide transportation within the microtransit zone.
Crosstown Routes - South Durham to Duke/VA Hospital	New route between Duke Hospital and South Point. Would add 12 hours of service span on weekdays, 19 hours of service span on Saturdays, and 15 hours of service span on Sunday for three vehicles. Assumes service operates every 30 minutes from 5:30am–12:30am Monday–Saturday and 6:30am–12:00am Sunday.
Crosstown Routes - South Durham to South Square	Extension of Route 7 from MLK and Kroger to South Square. Requires one additional vehicle and operate for a 19 hour span Monday–Saturday and 17.5-hour span on Sundays. Assumes service operates every 30 minutes from 5:30am–12:30am Monday–Saturday and 6:30am–12:00am Sunday.
Crosstown Routes - East Durham to RTP	New route between The Village and RTP operating along Holloway Street, Alston Avenue, Lawson Street, Briggs Avenue, Riddle Road, Ellis Road, Miami Boulevard, I-40, Page Road, Emperor Boulevard, and Slater Road. Requires four additional vehicles and operate for a 19-hour span Monday–Saturday and 17.5-hour span on Sundays. Assumes service operates every 30 minutes from 5:30am–12:30am Monday–Saturday and 6:30am–12:00am Sunday.
Frequency and Service Span - Improve Route 8 to 15-minute Service	Increased frequency on Route 8 from 30-minutes to 15-minutes for 13 hours per day on weekdays and Saturdays. This service improvement would require two additional vehicles.
Additional Midday - Route DRX**	Additional five hours of service span to Route DRX during the midday period. This route requires six vehicles to operate at a 30-minute frequency but would not require any additional vehicles.
Additional Evening Service - Route 405**	Extension of the service span of Route 405 to operate for an additional five hours later in the evening (7:00pm–12:00am). The route currently requires four vehicles to operate every 30 minutes. This service would continue to operate every 30 minutes and would not require any additional vehicles.
Additional Evening Service - Route DRX**	Extension of the service span of the DRX to operate for an additional four hours later in the evening (8:00pm–12:00am). This route currently requires three vehicles to operate hourly service and would not require any additional vehicles.
Transfer Centers and Park and Rides - Ellis Road Park and Ride Lease Agreement	Annual lease agreement for use of park and ride spaces at the Ellis Road Park and Ride.
Transfer Centers and Park and Rides - South Point Transfer Center	Construct an expanded passenger transfer center at South Point Mall on Renaissance Boulevard.
Transfer Centers and Park and Rides - Leigh Village	Construct a new permanent park and ride facility at Leigh Village at Farrington Road at I-40.

\*This project is included in the 2050 DCHC MTP.  
\*\* This project fulfills the need for fast, reliable regional service

FIGURE 18: UNFUNDED TRANSIT PROJECTS





# RISK ASSESSMENT

The project team has analyzed the potential risks to the Plan. A mitigation approach has been recommended to address many of the risks associated with planning, procurement, funding, and politics associated with each potential risk. A summary of risks and their mitigation strategy are summarized in the table below.

TABLE 17: RISK ASSESSMENT

Description of Possible Risk	Mitigation Strategy
Securing Federal Funding	The Plan is primarily reliant on locally generated funding to support implementation; however, there are assumptions for securing federal funding for certain projects. If that funding is not secured, mitigations that may be needed to address this include delayed implementation, design changes to reduce project cost, splitting a project into phases, savings from property donations, additional financial contributions by project partners, new revenue commitments, and canceling or delaying projects.
Actual Transit Sales Tax and Fee Revenues Do Not Match Projections or Actual Project Costs Exceed Estimates	This is a fiscally constrained plan, developed using reasonably conservative assumptions. However, even when assumptions are conservative, there is a risk that not all forecasted revenues will be fully realized, or that project costs may exceed estimates. Mitigations that may be needed to address this include delayed implementation, design changes to reduce project cost, splitting a project into phases, savings from property donations, additional financial contributions by project partners, additional federal funding, new revenue commitments, and canceling or delaying projects.
Workforce Shortages for Transit Operators	Increased wages for operators has been incorporated in the operating cost per hour to help facilitate hiring more transit operators. However, if workforce shortages continue, partners will need to reevaluate the operating cost per hour in the annual work program and through other local funding sources for operations.
Agency Staff Shortages for Administration and Project Implementation	Anticipated staffing needs are included in the Plan. However, if these positions are not able to be filled, partners will need to reevaluate this in the next update of the Plan (every 4 years) and through other funding sources for local agency staff. Administrative staffing shortages and turnover may delay project implementation timelines. Project sponsors will proactively manage projects and will utilize consultant support for project management to mitigate this risk.
Lack of Political Support	The Durham County Transit Plan governing boards have been working together through many iterations of this Plan and continued coordination will be prioritized as the Plan moves forward. The new Interlocal Implementation Agreement provides for greater collaboration between boards and staff and more transparency and accountability to the boards and the public.
Lack of Public Support	The new Interlocal Implementation Agreement provides for more transparency and accountability to the boards and the public, and the Plan's proposed Implementation and Performance Metrics will be used to monitor implementation and customer satisfaction. Project partners will need to continue communication with the community on the implementation of the Plan and keep the community involved.

TABLE 17: RISK ASSESSMENT CONTINUED

Description of Possible Risk	Mitigation Strategy
Commuter Rail Project Does Not Move Forward	The commuter rail project is a large, complex, and expensive project that carries several of the above-mentioned risks. Should commuter rail not advance or should be delivered on an extended, phased timeline, the Unfunded Priority Transit Projects section of Chapter 5 provides more information on several projects that provide fast, reliable, regional transit service that could be advanced as an interim or substitute alternative.



# PLAN MANAGEMENT AND OVERSIGHT

Concurrent with this Plan’s development, the transit governing partners, Durham County, DCHC MPO, and GoTriangle, are developing a new Interlocal Implementation Agreement (ILA) to govern plan updates, develop and approve the annual work program, and implement projects. The new ILA is expected to be approved before or with the approval of this Transit Plan.

The new ILA designates a Staff Working Group with representatives from Durham County, the DCHC MPO, GoTriangle, and the City of Durham to oversee the plan implementation and to make recommendations to the governing bodies.

The Staff Working Group is charged with producing a recommended Durham Annual Transit Work Program (Work Program), comprised of annual operating and capital budgets, including future assumptions of spending on those operating and capital projects. The Durham County Fiscal Year (FY) 2023 Work Program, adopted in June 2022, operates under the 2017 Durham Transit Plan, adopted in 2017 by the GoTriangle Board of Trustees, the DCHC MPO Board, and the Durham County Board of Commissioners. The FY23 Work Program incorporated high-priority projects identified through the planning process for this updated 2023 Durham County Transit Plan. Those projects that required an amendment to the 2017 Plan, per the existing ILA, underwent that process prior to adoption of the FY23 Work Program.

The new ILA is expected to be approved ahead of the development of the FY24 Work Program.

Each year, the Staff Working Group will continue to develop the Work Program that sets forth the program of transit capital and operating improvements to be undertaken using Tax District Revenue. The Work Program includes:

- The Annual Budget
- The Multi-Year Capital Improvement Program
- The Multi-Year Operating Program

The new ILA requires that the Staff Working Group’s recommended Work Program be approved by the Durham County Board of Commissioners and the GoTriangle Board of Trustees.

The annual Work Program outlines the specific transit services, programs, and infrastructure projects that will be funded in the upcoming fiscal year (July to June). It also includes the multi-year investment strategy, which lists the service and infrastructure investments planned to be funded in future years covered by the Durham County Transit Plan. The new ILA requires GoTriangle to produce quarterly financial reports, an enhanced quarter two report with project implementation metrics, and an annual report. The Durham County Transit Plan recommends that a website be developed to track and report on project progress for governing boards and the public.

# IMPLEMENTATION AND PERFORMANCE METRICS

Consistent with the principle to focus on community trust, the City of Durham, Durham County, DCHC MPO, and GoTriangle are committed to tracking and reporting Plan implementation and performance in a way that is easily accessible to the public. This means maintaining a transparent and accountable reporting process for implementing projects, in addition to measuring the effectiveness of the projects after implementation. These partner agencies will develop an implementation and performance monitoring program to track progress on project implementation and Plan goals. The Durham County Transit Plan will serve as the foundation document for tracking the implementation of the proposed projects. The Plan recommends developing a website to track and report on plan progress for governing boards and the public. Additionally, detailed websites and reports may also be provided for individual projects such as the [GoDurham](#) and [GoTriangle](#) bus stop improvements tracker.

The implementation metrics are based on public priorities expressed during the three phases of outreach. As the Plan is implemented, tracking performance enables stakeholders to evaluate project effectiveness, risks, and uncertainties, enabling operations and services to adapt based on the current realities. Developing implementation and performance metrics is an iterative process. These are not an exhaustive or complete set of implementation and performance metrics; however, they serve as a starting point for monitoring the Plan over time. New data and measurements can easily be incorporated as needed, resulting in a Plan that remains current and responsive to the community.

FIGURE 19: ILLUSTRATIVE EXAMPLES FOR TRACKING METRICS

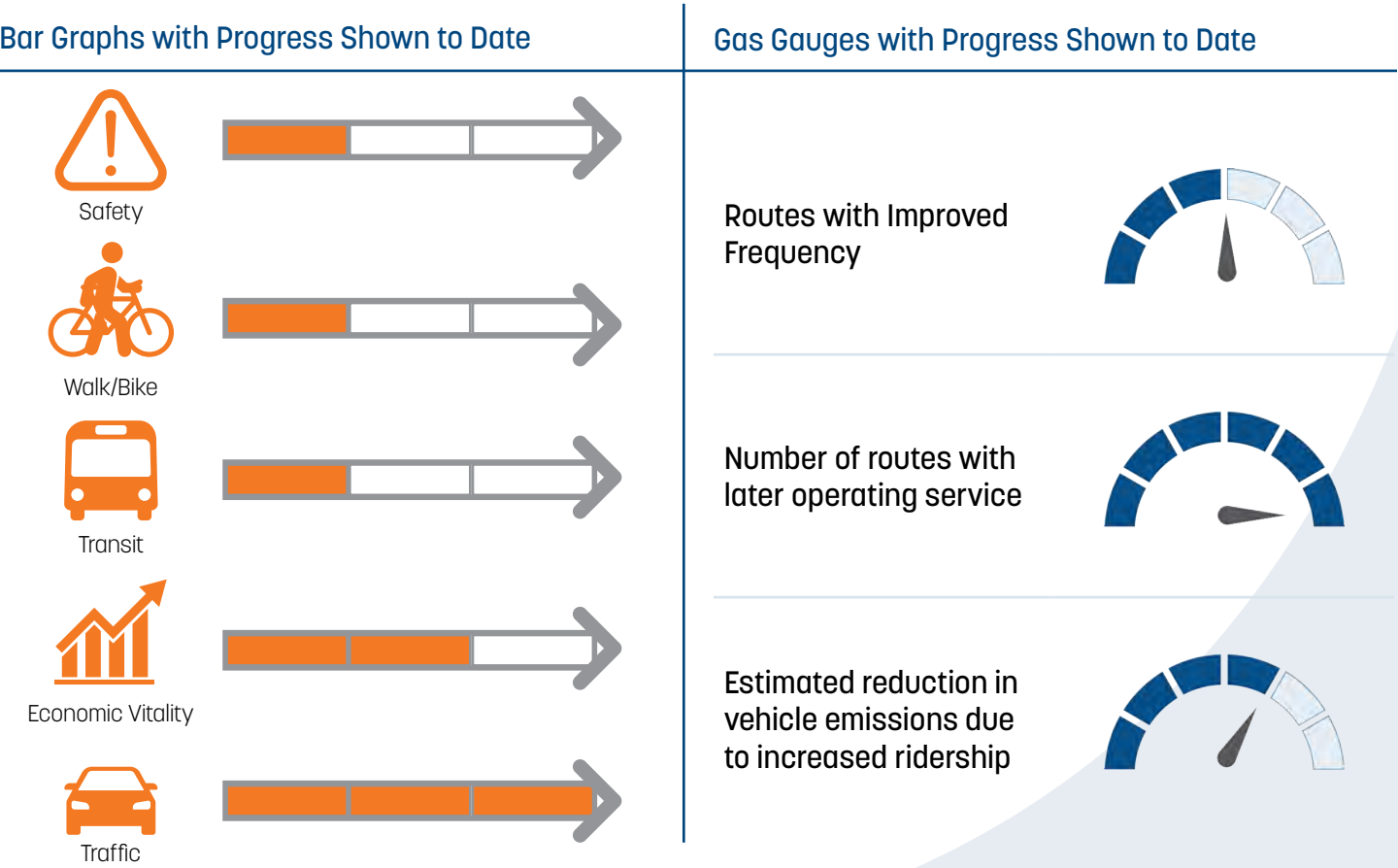




TABLE 18: IMPLEMENTATION METRICS

Goal	Implementation Metric	2027 Target
Improve the Current System	Increase in number of routes with improved frequency	9 routes
	Increase in number of miles with improved frequency	68 miles
	Increase in number of routes with later operating service	15 routes
	Increase in number of new crosstown routes	4 routes
	Paratransit service improvements	Study - 2024/2025 Implementation - 2026/2027
	Bus operations and maintenance facility (BOMF)	Planning and Engineering - 2023/2024
	Total additional service coverage for microtransit	39 miles
Connect the Region with Quick and Reliable Service	Increase in number of intersections with TSP	TBD
	Increase miles of corridor with speed and reliability improvements	TBD
	Commuter rail project progress or progress on projects that provide fast, reliable regional service	Study - 2023 Implementation - TBD
	BRT study progress	Study - 2023/2024
Better Experience at Bus Stops	Increase in number of bus stop upgrades	75 stops/year (and all stops in Durham by 2030)
	Increase in miles of sidewalk for access to transit constructed	No target set due to complexity of estimating. Track output
	Increase in number of crosswalks at bus stops constructed	No target set due to complexity of estimating. Track output
	Project tracker for bus station improvements (Durham Station, Village Transit Center, etc.)	Durham Station Planning and Engineering - 2023 Construction - 2024 Schedule of other station projects TBD
Funding and Contracting	Total actual expenditures versus planned expenditures	Tracked with Q2 and annual report
	Total revenues collected	Tracked with Q2 and annual report
	M/WBE participation in contracts	Tracked with Q2 and annual report

TABLE 19: PERFORMANCE METRICS

Goal	Implementation Metric
Improve the Current System	Improved customer satisfaction survey results
	Total ridership on routes with increased frequency and extended service
	Estimated reduction in vehicle emissions due to increased ridership
	Total ridership on new crosstown services
	Improved paratransit customer satisfaction survey results
	Increased in on-time performance of paratransit services
	Number of unique users within each microtransit area
Connect the Region with Quick and Reliable Service	Increase in on-time performance of routes
	Estimated travel time saved for riders
	Population (total and BIPOC) within a 45- or 60-minute transit trip to job centers
	Jobs within a 45- and 60-minute transit trip from affordable housing locations
Better Experience at Bus Stops	Improved customer satisfaction survey results
	Total ridership at bus stops with sidewalk improvements
	Pedestrian crashes within 200 feet of a bus stop
	Improved safety and security at bus stations





# 06

## FINANCIAL PLAN

FINANCIAL PLAN

DEDICATED TAX DISTRICT REVENUES

SUMMARY OF REVENUE AND EXPENDITURES

FINANCIAL ASSUMPTIONS



# FINANCIAL PLAN

This section explains how funds are collected and allocated to support improvements, expansions, and enhancements of transit service in Durham County, as well as the assumptions used to estimate expenses, costs, and revenues over the life of the Transit Plan. Inputs and assumptions included in the financial plan were developed for the purpose of building a financial model to forecast available transit sales tax revenues and fees, anticipated federal funding, proposed operating and capital expenditures, and other financial assumptions. These assumptions will evolve as information is modified and projections are updated to reflect actual results. The projects included in the transit plan will continue to be studied and new information may influence their cost and timing. Additionally, overall inflation assumptions, availability of local sources of revenue and growth assumptions, federal funding award, and regional partnerships will continue to influence the overall financial outlook of the Transit Plan. The following sections detail the current assumptions for the financial model.

## DEDICATED TAX DISTRICT REVENUES

There are four dedicated revenue streams used to fund the local share of projects and services in this Plan. These revenues are collected in Durham, Wake, and Orange counties; the revenues included in this Plan are those collected in Durham County. The four dedicated revenue streams used to finance this Plan are referred to throughout this document as “Tax District Revenues.” The Tax District Revenues include the following as authorized by the North Carolina General Statutes (NCGS) Chapter 105:

- Article 43: One-half percent (half-cent) sales and use tax
- Article 50: GoTriangle five percent vehicle rental tax (portion allocated to Durham County by the GoTriangle Board of Trustees)
- Article 51: Three-dollar increase to GoTriangle vehicle registration fee
- Article 52: Seven-dollar County vehicle registration fee

This section describes the available revenues and financial obligations throughout the lifespan of the Durham County Transit Plan. The available funding levels directly influence the operating and capital projects included in the implementation plan shown in Chapter 5.

## HALF-CENT SALES TAX (NCGS 105 ARTICLE 43)

The largest of the four dedicated Tax District Revenue sources is NCGS 105 Article 43, a half-cent sales and use tax collected in Durham County. A half-cent sales tax means when individuals spend ten dollars on certain goods and services, an additional five cents is added to the transaction and dedicated to the transit services funded under this Plan. Revenue from the half-cent sales tax can be used for financing, constructing, operating, and maintaining local public transit systems. The funds can be used to supplement but not replace existing funds or resources for public transit systems.

GoTriangle has statutory authority to levy this tax in Durham, Orange, and Wake Counties. To levy this tax, each County was required to develop a financial plan for the funds, have it approved by the County Commissioners, and pass a referendum for the tax. Durham County voters passed their referendum in November 2011, and the Durham County Board of Commissioners passed a resolution authorizing GoTriangle to levy the tax and began collecting revenues in 2013. Orange County subsequently passed and authorized this sales tax in 2012. The North Carolina Department of Revenue (NCDOR) began collecting taxes in both counties in April 2013.

The forecast for Durham County’s half-cent sales tax used in this updated Plan was developed by Moody’s Analytics in November 2016, using County-level personal disposable income and metro area housing completions as the main explanatory variables for revenue growth. This analysis provided year-by-year growth rates for 2017 through 2046, incorporating assumptions about economic cycles. This Plan assumes the year-by-year growth rates for years 2023 through 2040. The compound annual growth rate (CAGR) over the 17-year period is projected at 4.71%. The Moody’s Analytics Sales Tax Forecast document is included in the Appendix.

## VEHICLE RENTAL TAX (NCGS 105 ARTICLE 50)

The second dedicated revenue source is a vehicle rental tax, which is imposed at the rate of five percent on the gross receipts derived by a retailer from the short-term rental of “U-drive-it” vehicles. GoTriangle has statutory authority to levy this tax in Durham, Orange, and Wake Counties, and has since November 1997. GoTriangle collects this tax directly from rental vehicle vendors in each of the three counties. GoTriangle’s Board of Trustees implemented a policy in 2013 that allocates 50% of these vehicle rental tax revenues to the transit plans of Durham, Orange, and Wake counties, with the remaining 50% reserved for GoTriangle’s general use. The amount identified for the County transit plans is allocated as follows: 68% to Wake County, 21.5% to Durham County, and 10.5% to Orange County. The financial plan includes these rental car tax revenues through 2040. If there is a GoTriangle Board decision to remove or amend the rental car tax, this will require an update to the financial plan.

The forecast for GoTriangle’s vehicle rental tax was originally developed in October 2014 by Dr. Michael Walden, an economist at North Carolina State University, using enplanements at RDU International Airport and annual real Gross Domestic Product (GDP) as the main explanatory variables for revenue growth. The analysis provided a recommendation of year-by-year growth rates of 2.5%. This Plan assumes a similar methodology for year-by-year growth rates for years 2023 through 2040.

*Note: The vehicle rental tax is allocated by the sole authorization of the GoTriangle Board of Trustees.*



THREE-DOLLAR VEHICLE REGISTRATION FEE (NCGS 105 ARTICLE 51)

The third dedicated revenue source is a three-dollar increase in vehicle registration fee from GoTriangle's five-dollar vehicle registration fee. Since 1991, GoTriangle has been collecting a five-dollar vehicle registration fee in Durham, Orange, and Wake Counties; those revenues fund GoTriangle's general operations. To fund the Durham and Orange Transit Plans, GoTriangle exercised its statutory authority to increase the five-dollar fee by three dollars in Durham and Orange Counties, and it dedicated those incremental revenues to the county transit plans. GoTriangle needed to create the Durham-Orange Tax District (distinct from the Western Triangle Tax District) and receive approvals from GoTriangle's Special Tax Board and both Boards of County Commissioners. GoTriangle created the Durham-Orange Tax District, its Special Tax Board approved the fee in February 2014, and the Counties approved the fee in March 2014. GoTriangle began levying the fee shortly thereafter. The revenues from the three-dollar fee that are collected in Durham County are included in this Plan.

The forecast for the vehicle registration fee was also originally developed by Dr. Walden in October 2014, using annual real Gross Domestic Product (GDP) as the main explanatory variable for revenue growth. The analysis provided a recommendation of year-by-year growth rates of 1.5%. This Plan assumes a similar methodology for year-by-year growth rates for years 2023 through 2040.

SEVEN-DOLLAR VEHICLE REGISTRATION FEE (NCGS 105 ARTICLE 52)

The fourth dedicated revenue source is a seven-dollar vehicle registration fee levied by Durham and Orange Counties. The counties have the statutory authority to levy the fee, and since levying the fee they have authorized the North Carolina Division of Motor Vehicles (NCDMV) to distribute the revenues directly to GoTriangle for the purpose of funding the county transit plans. The NCDMV collects the fees and distributes them to GoTriangle quarterly. The revenues from the seven-dollar fee collected in Durham County are included in this Plan. The 2013 Durham County Interlocal Implementation Agreement among Durham County, GoTriangle, and the Durham-Chapel Hill-Carrboro MPO established that the City of Durham could use up to one-half of the seven-dollar vehicle registration fee revenues to cover the increased cost of existing GoDurham transit. A growth rate projection of 1.5% annually was applied to both the three-dollar and seven-dollar vehicle registration fees since they have the same tax base.

SUMMARY OF REVENUE AND EXPENDITURES

Tax District Revenues have been generated in Durham County since 2013. This section describes the total revenues collected, and total expenditures to date. Through the end of fiscal year 2021, Tax District Revenues in Durham County generated \$258.1 million. Financial model for this Plan starts in FY22 which is why the numbers are reported starting in this year through FY40. To date, Tax District Revenues are generally consistent with expectations. From 2011-2021, \$173 million has been spent. A portion of that funded the Durham-Orange Light Rail project, which alone cost Durham more than \$126 million. The other \$47 million was spent to provide on-going bus service and completing other projects. The total fund balance as of June 30, 2022 is \$107 million.

Tables 18-23 contain the actual year-by-year collections from 2017-2022 for each of the four dedicated revenue streams, compared to the projections contained in the 2017 Plan.

TABLE 20: FISCAL YEAR 2017 REVENUE (YEAR OF EXPENDITURE (YOE) IN THOUSANDS)

Tax-District Revenue	Actual	Projected	Difference
Half-Cent Sales Tax	\$27,147	\$26,914	\$233
GoTriangle Vehicle Rental Tax	\$1,222	\$1,667	[\$445]
\$7 Vehicle Registration Fee	\$1,612	\$1,624	[\$12]
\$3 Vehicle Registration Fee	\$691	\$696	[\$5]
Total Revenues	\$30,672	\$30,901	[\$229]
Percentage Projected vs. Actual			99%

TABLE 21: FISCAL YEAR 2018 REVENUE (YOE IN THOUSANDS)

Tax-District Revenue	Actual	Projected	Difference
Half-Cent Sales Tax	\$29,890	\$28,580	\$1,310
GoTriangle Vehicle Rental Tax	\$1,255	\$1,220	\$35
\$7 Vehicle Registration Fee	\$1,617	\$1,676	[\$59]
\$3 Vehicle Registration Fee	\$693	\$718	[\$25]
Total Revenues	\$33,456	\$32,194	\$1,262
Percentage Projected vs. Actual			104%

TABLE 22: FISCAL YEAR 2019 REVENUE (YOE IN THOUSANDS)

Tax-District Revenue	Actual	Projected	Difference
Half-Cent Sales Tax	\$29,477	\$30,664	[\$1,187]
GoTriangle Vehicle Rental Tax	\$1,346	\$1,274	\$72
\$7 Vehicle Registration Fee	\$1,630	\$1,718	[\$88]
\$3 Vehicle Registration Fee	\$699	\$736	[\$37]
Total Revenues	\$33,153	\$34,393	[\$1,240]
Percentage Projected vs. Actual			96%



TABLE 23: FISCAL YEAR 2020 REVENUE (YOE IN THOUSANDS)

Tax-District Revenue	Actual	Projected	Difference
Half-Cent Sales Tax	\$30,299	\$32,519	[\$2,290]
GoTriangle Vehicle Rental Tax	\$1,155	\$1,328	[\$173]
\$7 Vehicle Registration Fee	\$1,607	\$1,760	[\$153]
\$3 Vehicle Registration Fee	\$689	\$4754	[\$65]
Total Revenues	\$33,680	\$36,361	[\$2,681]
Percentage Projected vs. Actual			93%

TABLE 24: FISCAL YEAR 2021 REVENUE (YOE IN THOUSANDS)

Tax-District Revenue	Actual	Projected	Difference
Half-Cent Sales Tax	\$34,067	\$33,627	\$440
GoTriangle Vehicle Rental Tax	\$986	\$1,383	[\$397]
\$7 Vehicle Registration Fee	\$1,737	\$1,801	[\$64]
\$3 Vehicle Registration Fee	\$744	\$771	[\$27]
Total Revenues	\$37,535	\$37,582	[\$47]
Percentage Projected vs. Actual			100%

With economic uncertainty with the global COVID pandemic, the FY2022 Work Program included lower revenue projections than previous years. Below is a comparison of the FY2022 Work Program projections to the actual revenues.

TABLE 25: FISCAL YEAR 2022 REVENUE (YOE IN THOUSANDS)

Tax-District Revenue	Actual	Projected	Difference
Half-Cent Sales Tax	\$40,301	\$31,181	\$9,119
GoTriangle Vehicle Rental Tax	\$1,442	\$885	\$556
\$7 Vehicle Registration Fee	\$1,678	\$1,654	\$24
\$3 Vehicle Registration Fee	\$719	\$709	\$9
Total Revenues	\$44,141	\$34,430	\$9,710
Percentage Projected vs. Actual			\$128%

TABLE 26: FISCAL YEAR 2023 REVENUES (YOE IN THOUSANDS)

Tax-District Revenue	Assumed Balance
Half-Cent Sales Tax	\$35,500
GoTriangle Vehicle Rental Tax	\$1,262
\$7 Vehicle Registration Fee	\$1,737
\$3 Vehicle Registration Fee	\$744
Total Revenues	\$39,183

FIGURE 20: PROJECTED DURHAM COUNTY TAX DISTRICT REVENUES BY SOURCE (FY22 - FY40)

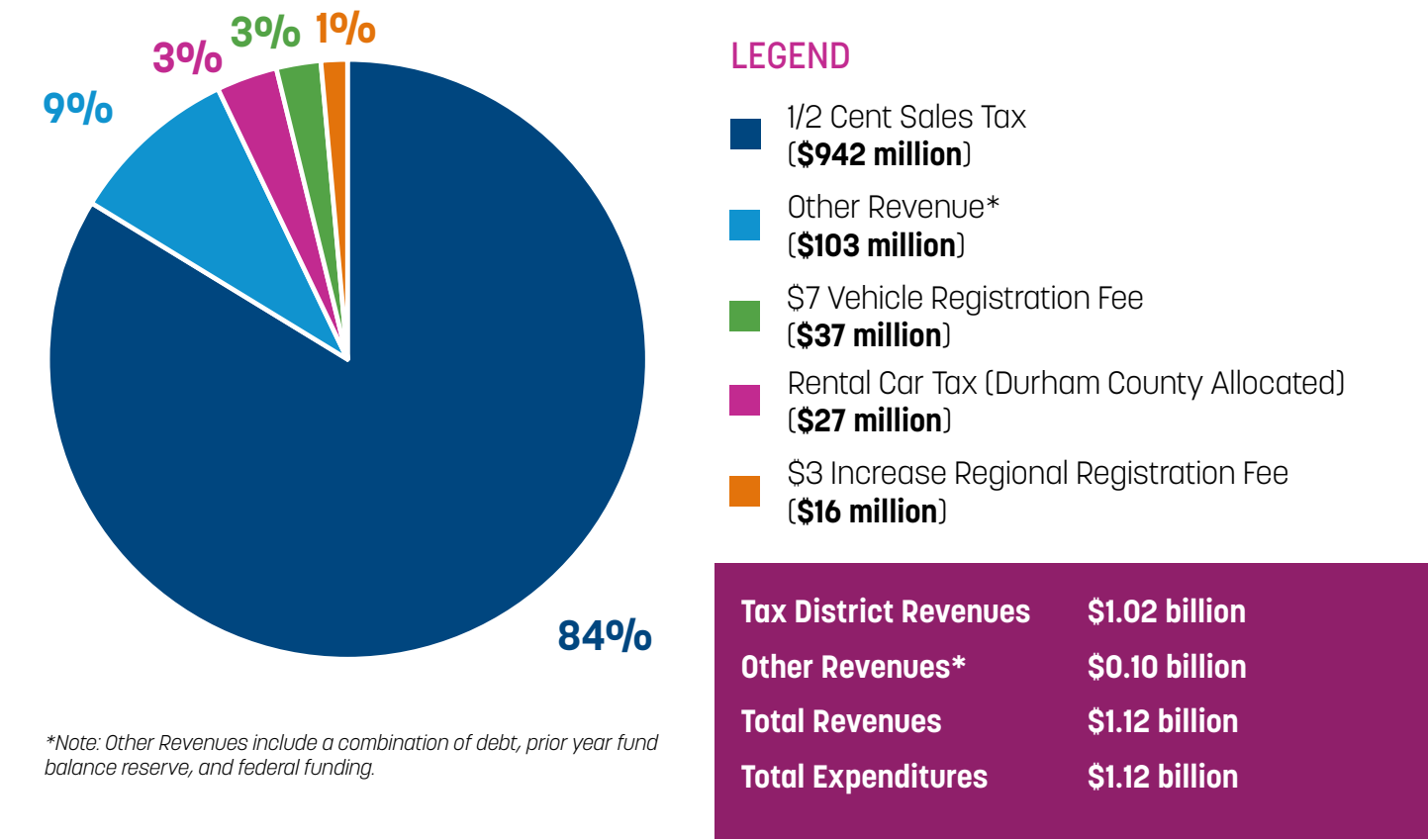


FIGURE 21: PROJECTED DURHAM COUNTY TAX DISTRICT REVENUES BY YEAR (FY22 - FY40)





FINANCIAL ASSUMPTIONS

The Durham County Transit Plan is fiscally constrained and relies on estimates and assumptions that have been developed by staff using current information and forecasting expertise. As time passes and new information is gathered, these estimates and assumptions may evolve. It will be important to monitor the potential effect of new information on the cost and timing of the projects included in this Plan. In addition, factors such as inflation, revenue growth, competition for federal funding and access to capital markets, and regional partnerships will influence the overall financial outlook of the Plan.

TABLE 27: INPUT ASSUMPTIONS FOR GOTRIANGLE FINANCIAL MODEL FOR THE DURHAM COUNTY TRANSIT PLAN

Input	Assumption
Sales Tax Compound Annual Growth Rate - Durham County	4.71%
Vehicle Rental Fee Annual Growth Rate	2.50%
Vehicle Registration Fee Annual Growth Rate	1.50%
Inflation Rate - Capital Cost Vehicle / Capital Cost Infrastructure / Operating Cost	3.10% / 4.00% / 2.50%
Target Minimum Debt Service Coverage Ratio	1.25
GoDurham (FY23 cost per hour)	\$140.40
GoTriangle (FY23 cost per hour)	\$143.50
Durham County GoDurham ACCESS (FY22 actual cost per trip)	\$36.14
Minimum Operating Fund Balance	3 months (90 days)
Capital Projects Fund Balance	5.00% of 10-Year Capital Projects
Excess Capital Liquidity	\$10 million

Note: No state funding shares are assumed in any project.

DEBT SERVICE

The Plan anticipates that debt service will be used for commuter rail or other fast, reliable, and regional projects. The financial model for the Plan includes debt service beyond the 2040 horizon of the Plan. This is subject to change based on the regional decision-making for the commuter rail project. In addition, a debt policy will be developed as part of the Transit Plan Governance Study that will provide further guidance on how debt will be issued and any necessary reserve funds required.

COMMUTER RAIL

Commuter rail is included as a capital and operating project in this Plan. Throughout the Plan's development, the Durham Transit Team used the cost estimate from the Phase I Commuter Rail Study performed by GoTriangle.

TABLE 28: PHASE I STUDY - INPUT ASSUMPTIONS FOR COMMUTER RAIL

Input	Assumption
Capital Cost	\$1.8 billion - \$2.2 billion
Operating Cost	\$42 million
Project Development and Construction Period	FY24 - FY30

During the Plan's development, GoTriangle conducted a Phase II Commuter Rail Study and developed an updated cost estimate that is significantly higher than cost estimates developed in the Phase I Study and adjusted the year of implementation to 2036. The Phase II study has concluded that the 50% federal funding assumption is not viable at this time (through Capital Investment Grant (CIG) funding) and new funding strategies are being developed.

TABLE 29: PHASE II STUDY - UPDATED ESTIMATES FOR COMMUTER RAIL

Input	Assumption
Capital Cost	\$2.8 billion - \$3.2 billion
Operating Cost	\$55 million
Project Development and Construction Period	FY24 - FY36

Several phasing, segmentation, and financing options have been proposed for the commuter rail project that would have different cost implications for the Durham County Transit Plan. One of the many options being considered includes proposed incremental rail infrastructure improvements on the North Carolina Railroad (NCRR) corridor, where the commuter rail is planned to operate. These are numerous federal funding opportunities for these types of incremental rail infrastructure improvement through the Federal Railroad Administration (FRA) as well as the Bipartisan Infrastructure Law (BIL) that may be explored. The State Transportation Improvement Program (STIP) process similarly provides access to state funding for freight, passenger rail, and safety improvements that may be considered for these type of improvements as well. These incremental rail infrastructure improvements could include projects such as separate grade crossings, grade crossing improvements, and other rail corridor improvements.

At the time of this Plan's publication, the regional partners had not yet decided how (or whether) to proceed with the commuter rail project. As a result, the financial model for this Plan includes commuter rail capital and operating cost estimates from the Phase I Commuter Rail Study, which assumed 50% federal funding and an implementation year of 2030. The Durham County contribution was calculated based on a 20% share of the 50% non-federal funding for capital and operating costs. These funding assumptions should be considered representative of Durham's financial capacity to support a fast, reliable, and regional service initiative such as commuter rail. However, if commuter rail does not prove to be a feasible option, then regional partners are committed to finding another fast, reliable, and regional transit service to meet the needs and desires of the community and this Plan will be amended to reflect that change.

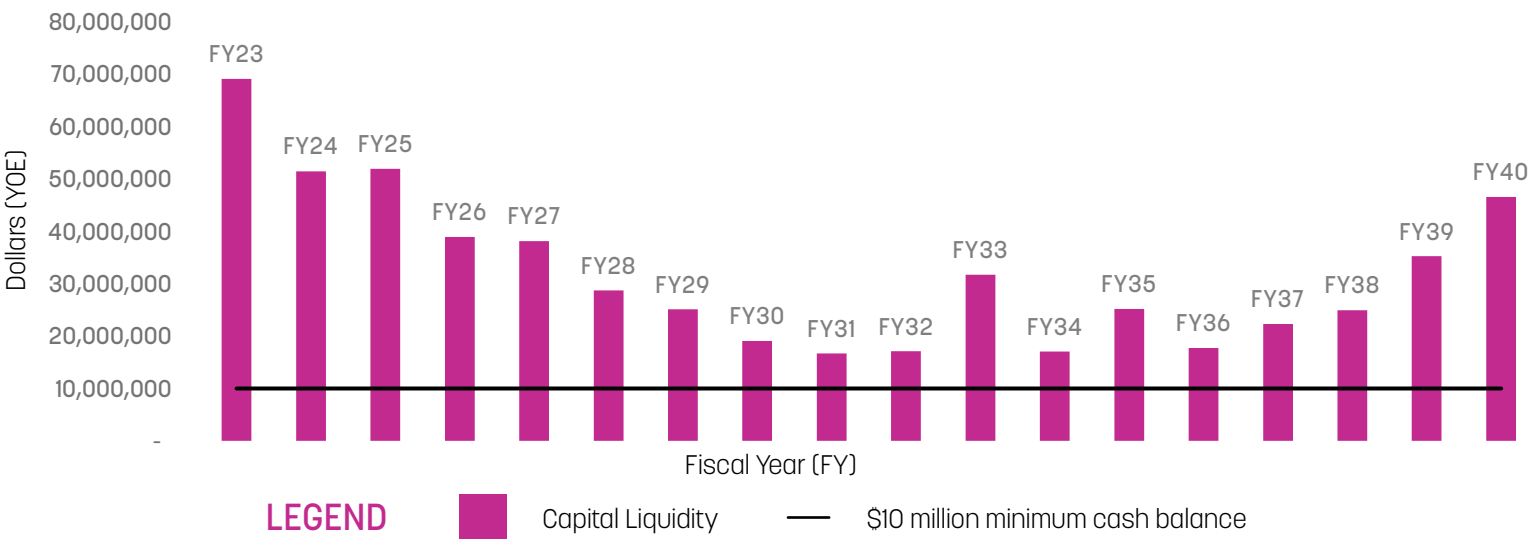


CASH BALANCE AND RESERVES

The Durham County Transit Plan includes financial policy guidelines consistent with the Wake County transit plan to ensure uniformity when presented to debt issuers for regional projects as the Commuter Rail. The Transit Plan will maintain capital reserves equivalent to 5% of the 10-year capital improvement program (CIP). The financial policy also includes a minimum of \$10 million excess liquidity to serve as an additional reserve to offset tax revenue volatility due to uncontrollable financial conditions. Figure 22 illustrates the projected excess capital liquidity (cash balance after reserves) of the Plan from fiscal year 2023 through fiscal year 2040.

The Durham County Transit Plan will also maintain reserves for operations and maintenance (O&M) and debt service using Tax District Revenue. This Plan assumes cash reserves for O&M equivalent to three months of its annual system operating budget, including allocations made by the Tax District, to the transit providers for bus operations and maintenance. This reserve can be used to accommodate unexpected increases in operating costs or temporary revenue shortfalls, as well as for any debt instrument utilized

FIGURE 22: TAX DISTRICT CASH BALANCE IN DURHAM COUNTY (YOE)



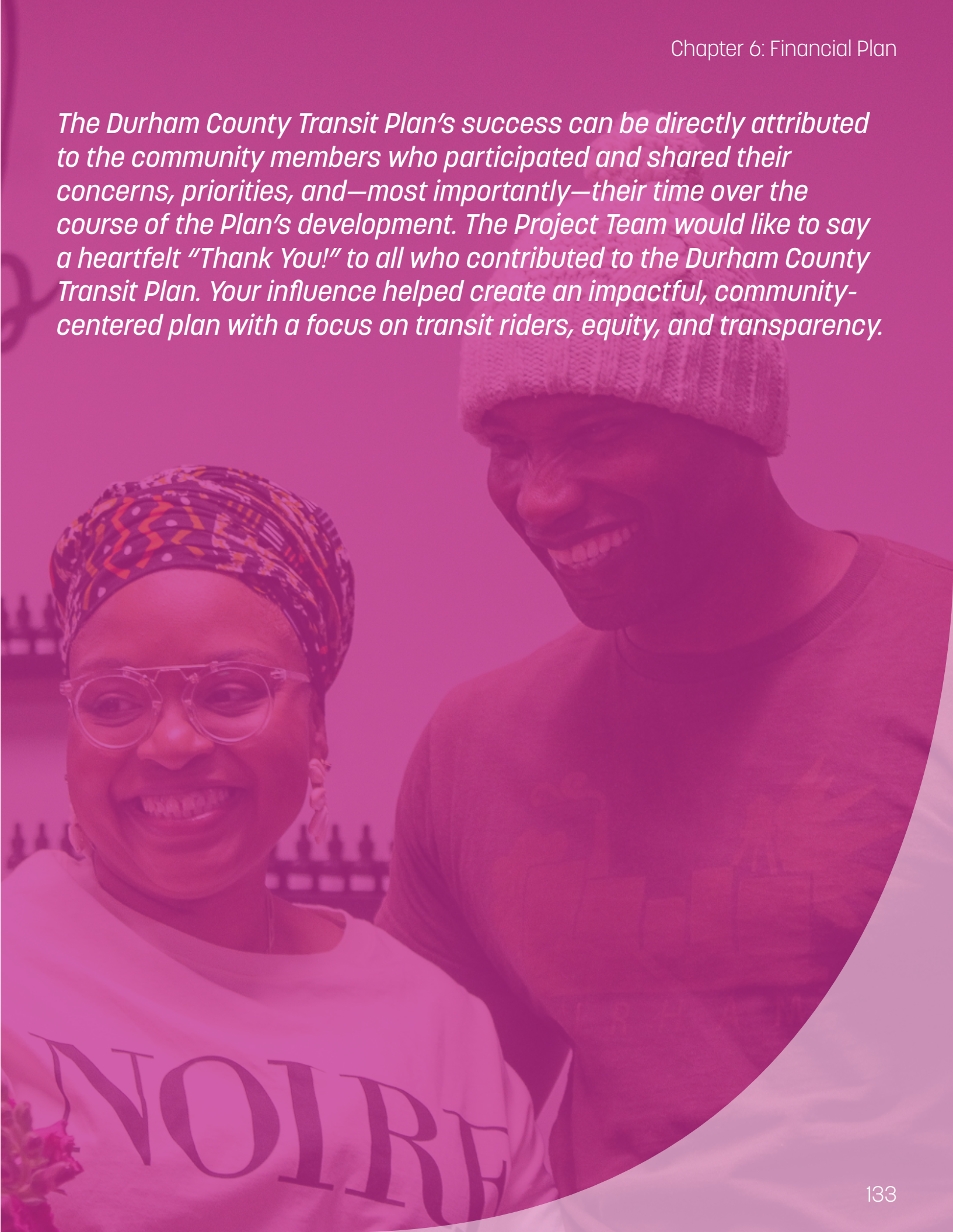
OPERATING COST GROWTH

The Durham County Transit Plan modeled significantly higher operating costs per hour in FY23, per estimates from each transit agency. These increased costs account for increased fuel prices, as well as increased bus operator wages that are required due to the recent operator shortages most transit agencies have been experiencing. The operating costs included in the Plan are estimates to use for budgeting purposes. Each agency will be reimbursed for the actual costs to provide the transit services and will be required to report these cost annually. The Plan does not propose the shifting of any new additional cost elements to be paid for by the Tax District Revenues. Additionally, each agency must use a consistent operating cost per hour across all three Orange, Wake, and Durham County Transit Plans.

CAPITAL COST GROWTH

The Durham County Transit Plan includes a 4% annual growth rate for capital costs for infrastructure. Individual project cost estimates include reasonable contingencies that reflect uncertainty at various stages of project development that may vary by project type. For example, a large, complex capital project may have a higher contingency to reflect uncertainties and risk factors than smaller, routine projects.

*The Durham County Transit Plan’s success can be directly attributed to the community members who participated and shared their concerns, priorities, and—most importantly—their time over the course of the Plan’s development. The Project Team would like to say a heartfelt “Thank You!” to all who contributed to the Durham County Transit Plan. Your influence helped create an impactful, community-centered plan with a focus on transit riders, equity, and transparency.*







# 07

## APPENDIX

SUMMARY OF OUTREACH RESULTS (PHASES I, II, AND III)

PUBLIC COMMENTS

ANNUAL REVENUE, EXPENDITURES, AND FUND BALANCE PROJECTIONS

MOODY'S SALES TAX FORECAST



SUMMARY OF OUTREACH RESULTS (PHASES I,  
II, AND III)

PUBLIC COMMENTS



ANNUAL REVENUES, EXPENDITURES, AND  
FUND BALANCE PROJECTIONS

MOODY'S SALES TAX FORECAST