Wake County Transit Plan Update

Wake County's Transit Investment Strategy (2021-2030)

February 2021 – PUBLIC REVIEW DRAFT

GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT

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Foreword

Our population of some 1.1 million continues to grow rapidly, adding some 62 people per day, or roughly 22,000 people per year. As Wake County continues to grow into one of America's most dynamic and desirable urban areas, transportation needs also grow.

Population growth is outpacing the capacity of our infrastructure, leading to impacts such as:

- Worsening congestion – Wake County has increased its investments in roadways but cannot keep pace with the demand for travel. Public transportation offers an alternative to move people efficiently.
- Increasing demand for public transit – The demand for urban lifestyles in places like downtown Raleigh is creating densely populated neighborhoods and areas suited to public transit. Indeed, many people are moving to urban spaces because they offer a convenient lifestyle that is not dependent on car travel.
- Widening accessibility gap between opportunities and certain segments of Wake County's population - Many jobs, educational opportunities, and services are only accessible by car, making them difficult or impossible to access for people who are not able to drive or don't own a car. Investments in public transit work to ensure the opportunities and benefits of the region's growth are available to all residents of Wake County.

People want and need more ways to travel. The original Wake County Transit Plan, adopted in 2016, and this first update to the plan (the Wake Transit Vision Plan Update) lay out a strategy to expand travel choices and options. Wake County is home to an economically, socially, and demographically diverse population, and the needs of residents and employees in the County are equally varied. The original Wake County Transit Plan and this subsequent update provide a strategy to diversify the region's transportation investments, increase travel choices to improve access to jobs and educational opportunities, and improve the overall mobility of Wake County residents.

The Wake County Transit Plan and this 2021 update are built around four "Big Moves" that collectively connect the region across county lines; link Wake County communities to the transit network; provide frequent, reliable urban mobility to the densifying areas of the county; and enhance access to transit across Wake County. Achieving the Big Moves requires significant investment – roughly tripling bus service in Wake County, investing in bus rapid transit (BRT) infrastructure to enhance speed and reliability for transit customers, building commuter rail, and improving the transit customer experience.

Transit investments were designed to ensure Wake County remains one of the best places to live and work in the country. Both the Wake County Transit Plan and this plan update use transit investment to create long-term benefits. High-quality transit service encourages people to locate near these services, which creates more efficient development patterns such as mixed-use neighborhoods with clusters of housing, retail and office space, and a range of travel choices. Access to high-quality transit means these neighborhoods will have access to regional employment, educational opportunities, and critical services like medical and recreation facilities. Combined, the transit investments will help Wake County remain competitive in a global economy by making it easier for employees to get to their jobs, thus helping businesses attract and retain talent.

The original Wake County Transit Plan, adopted in 2016, programmed a total investment in transit expansion of approximately $2.3 billion in the first 10 years of implementation, from 2018 through 2027. The primary funding source for these investments is a half-cent sales tax increase that was approved by voters in November of 2016. The transit revenue package also includes additional taxes, such as vehicle registration and vehicle rental tax revenues. Regional transit investments will also be supported by federal and state funding programs, local revenues that were invested in Wake County's pre-existing transit services, and fares paid by passengers.

This first update to the Wake County Transit Plan extends the financially constrained horizon of the plan an additional three (3) years through 2030. Following this first update to the plan, the Wake County Transit Plan will be

updated every four (4) years to continue to extend its planning horizon during which further investments that have been identified as needs can be made. This first update to the Wake County Transit Plan can be considered a relatively minor update that takes stock of the transit investments and projects originally planned through 2027, considers the impacts and performance of investments accomplished to date, and reevaluates the remaining transit investments in light of:

- Available financial resources and schedule feasibility through the extended 2030 horizon;
- Priorities and attitudes toward expected outcomes from transit investments that are informed by transit implementation partners and robust public and stakeholder input; and
- The current and future market demand and associated need for transit investments.

This first update to the Wake County Transit Plan is not a wholesale re-visioning of the transit investments envisioned in the original 2018-2027 plan. While the plan update revisited certain project delivery assumptions for new investments identified in the original Wake County Transit Plan, as well as market assumptions that drive transit propensity and that have the effect of redirecting priorities for planned investments, this plan update does not change the overarching goals that drive the four Big Moves established in the original plan.

This plan is divided into the following chapters:

- Chapter 1: Background and Plan Development Process - Summarizes the purpose of and processes undertaken to develop the plan and this subsequent plan update.
- Chapter 2: Wake County Transit Plan Update - Details the transit plan's investment mix and associated goals, objectives, and targets.
- Chapter 3: 2020 Market Reassessment - Describes the most recent population, employment, and transportation trends in Wake County and what they mean for further transit investment.
- Chapter 4: Financial Plan - Discusses the implementation and funding strategy for the next 10 years of the plan.

Chapter 1: Background and Plan Development Process

The original Wake County Transit Plan was commissioned in 2014, developed throughout 2015, and adopted by the Capital Area Metropolitan Planning Organization (CAMPO), GoTriangle, and Wake County governing boards in May and June of 2016.The primary funding source for the plan (a countywide ½% sales tax) was approved by the voters of Wake County via referendum on November 8, 2016. The original Wake County Transit Plan and voters' approval of the sales tax set into motion a community-transformative vision that was developed as part of a comprehensive and participatory process that included an assessment of the type and scale of transit services needed in Wake County, as well as the values and priorities of residents, employers, and regional stakeholders. The Plan was successful, in part, because it was built with extensive community involvement and with active participation in prioritizing the underlying trade-offs associated with transit service development. Once priorities were clear, the Wake County Transit Plan identified transit investment decisions that reflected these goals.

The original Wake County Transit Plan covered a financially constrained period of ten (10) years from 2018 through 2027. It is anticipated that updates to the plan will occur every four (4) years to continue to extend the plan's horizon, refine assumptions for financial conditions and project delivery, reassess plan goals and priorities that are informed by robust community and stakeholder engagement, and identify further investments to be made with available financial capacity in light of those reassessed goals and priorities.

As depicted in **Figure 1**, this first update to the Wake County Transit Plan extends the financially constrained plan horizon through 2030. This update to the Wake County Transit Plan can be considered a relatively minor update that was designed to re-evaluate the recommended mix of transit investments and associated implementation schedules set out by the original plan within the context of updated community development patterns and demographic trends; changing project cost assumptions and overall financial conditions, particularly as a result of the COVID-19 pandemic; project performance and the region's experience implementing the plan through fiscal year (FY) 2020; investment priorities informed by robust community engagement; and available financial resources through 2030.

Figure 1 Extension of Wake Transit Plan Horizon

WAKE COUNTY TRANSIT PLAN

As mentioned, the original Wake County Transit Plan focused on establishing community priorities for transit service. This approach reflects an underlying understanding that there is not one right way to build an enhanced transit system. Instead, investment decisions were centered around two primary trade-offs:

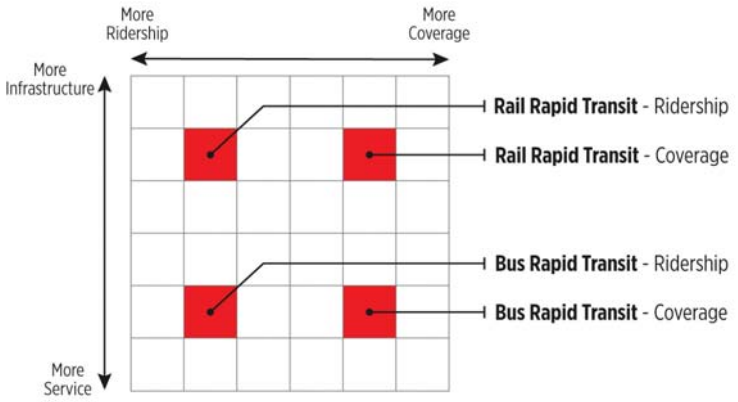
- **Ridership versus Coverage.** A ridership goal designs a system that would carry the maximum number of people. This involves focusing service in areas with higher densities and communities with higher concentrations of individuals more likely to use transit (i.e., individuals with lower incomes, racial minorities, individuals with disabilities and older adults, households with no vehicle available, etc.). A coverage goal designs a system to provide access to as broad an area as feasible. It focuses on making sure most parts of the region have access to transit service, even if service is less convenient because it is operated with low frequencies.

- **Infrastructure versus Service.** An infrastructure goal designs a system where more money is spent on up-front capital expenditures like dedicated bus lanes, rail infrastructure, newer vehicles, and more passenger amenities. Spending on infrastructure competes, to a degree, with funding for transit services resulting in lower investments in service operations (i.e., service frequency and hours of operations). The infrastructure versus service trade-off can be partially mitigated if the infrastructure is focused on making service faster and more reliable, because faster service is less expensive to operate.

Public and Stakeholder Input and Scenario Development

As part of developing the original Wake County Transit Plan, these choices and trade-offs were shared with the public and stakeholders via a survey that asked residents and employers to reflect on where Wake County is on the spectrum of each question. This survey revealed some preference for ridership over coverage (70% ridership, 30% coverage) and an even balance between infrastructure and service (50% each). Rather than building a transit plan based on one (1) round of input, the plan development team developed four (4) intentionally different transit investment scenarios that offered different ways for how the two (2) sets of trade-offs can be applied within Wake County. Each scenario balanced the trade-offs between the ridership/coverage and infrastructure/service spectrums in different ways (see **Figure 2**). The scenarios also gave citizens a second chance to consider their priorities. As part of these conversations, Wake County residents and stakeholders were asked to give their opinions on the best direction for the county's transit future. People did not vote on any particular scenario but rather questioned and voiced support for individual elements of the scenarios. Through this exercise, Wake County residents and stakeholders confirmed the ridership/coverage and infrastructure/service investment targets as reflected in the prior survey.

Figure 2 The Four Scenarios



Corridor Assessment

Another premise of the original Wake County Transit Plan was that transit investments should consider existing development plans and future development patterns, including transit-oriented and transit-conducive development. The 2016 Wake County Transit Plan team prepared a detailed "transit suitability analysis" that looked at historic (2010) and estimated future (2040) conditions for population, employment, zero-car households, income, congestion, and major activity centers across Wake County.

This analysis considered existing congestion levels, existing trip frequency and design of land uses and used a mapping and numeric scoring for potential enhanced transit routes. This process allowed the team to evaluate individual corridors and evaluate their propensity for transit services both now and in the future. This evaluation helped inform the planning process by supporting an analysis and evaluation of alternative corridors for both infrastructure and service. While this evaluation identified corridors that were ripe or were projected to be ripe for more intensive transit investment as of the 2015-2016 timeframe, the 2021 Wake Transit Plan Update market reassessment reconfirmed the most notable corridors identified through that process and identified additional corridors that may be ripe for more intensive transit investment in the future beyond the 2030 plan update horizon.

Plan Development Outcome

Final recommendations of the 2016 Wake County Transit Plan reflected extensive outreach, education, and input on these trade-offs, including two (2) rounds of public outreach, a statistically valid survey, feedback from a 76-member advisory committee, and a series of small group meetings with stakeholders representing various demographic groups. Trade-off data was combined with Wake County travel data, development patterns, socio-economic and demographic characteristics, and financial analyses that examined the relationship between different revenue streams and "affordability" of different investment scenarios.

Ultimately, the Wake County Transit Plan created a transit investment framework centered around four (4) "Big Moves" that balance the trade-offs and structures the transit plan around community priorities. More detail on the Wake County Transit Plan Four Big Moves is provided in Chapter 2.

WAKE COUNTY TRANSIT PLAN UPDATE

Plan Update Goals and Purpose

As part of developing the original Wake County Transit Plan, community leaders reserved opportunities for stakeholders and residents to revisit their priorities for transit investments based on progress to date, changes to underlying assumptions, and/or changes in community priorities and values, particularly as the plan is continually updated every four (4) years to consider additional investment beyond the original 10-year horizon. This update to the plan is the first of these opportunities. It reflects an 18-month planning process that re-assessed the underlying assumptions for transit investments included in the original Wake County Transit Plan, development patterns, investment priorities, and available funding. The planning process also reconsidered the appropriate trajectory of project implementation in light of the aforementioned and within the context of the region's four (4) years of experience implementing the Wake County Transit Plan. With these goals in mind, the Wake County Transit Plan Update followed an effort focused on seven (7) themes:

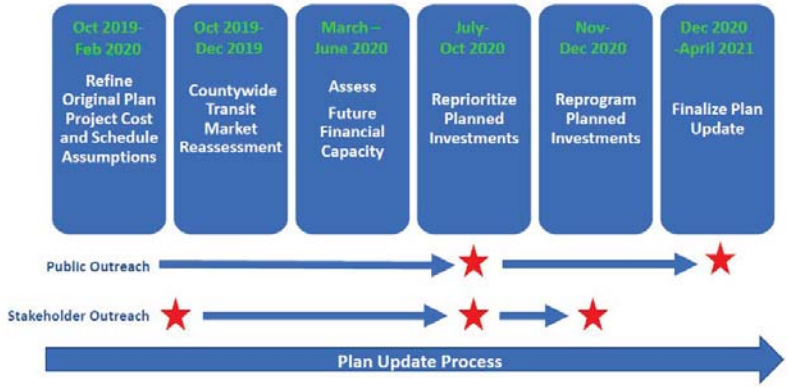
The following terms will be used to describe investments in this transit plan update:

- Bus Rapid Transit (BRT): A range of speed and reliability improvements such as dedicated busways and fixed stations with off-board fare collectors.
- Commuter Rail Transit (CRT): A train operating on shared tracks with freight and Amtrak vehicles in the freight right-of-way.
- Fixed-route: Transit routes that operate on the same route on a published schedule.
- Demand-responsive/On-demand: Transit service that varies each trip based on the need of the individual users.

1. Extending the Wake County Transit Plan's investment schedule to 2030, three (3) years beyond the original plan horizon that ends in 2027.
2. Updating the transit market analysis to reflect the region's understanding of the demand and need for transit services based on the most recent demographic, socioeconomic, and transportation data (travel patterns, congestion, transit ridership, and intersection density) (see Chapter 3 and **Appendix B: Transit Market Reassessment Report**).
3. Updating and re-evaluating the schedule and cost feasibility of major capital projects associated with the original Wake County Transit Plan's five (5) major capital investments (Commuter Rail and four [4] BRT lines). This process updated assumptions for project costs and implementation schedules within the context of impacts to the overall financial capacity of the Wake County Transit Plan. More information on this reevaluation is included in **Appendix A: Major Capital Cost and Schedule Feasibility Memo**.

4. Reassessing anticipated revenues through 2030, particularly in light of the economic impacts of the COVID-19 pandemic on assumed local revenue collections. More information is included in Chapter 4 and **Appendix C: Recommended Financial Assumptions for Wake County Transit Plan Update**.
5. Revisiting stakeholder and community priorities for transit service and infrastructure investments. More information is included in **Appendix F: Community Engagement Report**.
6. Reprioritizing the full range of investments recommended by the original plan and subsequent implementation plans using community input, as well as guidance developed throughout the first three (3) full years of implementation, to inform priorities. This update to the plan was the first such effort to reprioritize all planned investments relative to one another. More information is included in **Appendix D: Project Prioritization/Reprogramming Guidance Memo**.
7. Reprogramming the transit implementation schedule based on reassessed priorities, the updated assessment of project cost and schedule feasibility, project implementation performance to date, and available Wake Transit Plan revenues. More information is included in **Appendix E: FYs 2021-2030 Programming of Wake Transit Plan Update Investments**.

Figure 3 Wake Transit Plan Update Process



The Capital Area Metropolitan Planning Organization (CAMPO), working closely with a number of local government, state, and transit agency partners, led the development of the update to the Wake County Transit Plan. It was guided by a Core Technical Team (CTT) comprised of representatives from individual Wake County municipalities, local and regional transit agencies, North Carolina Department of Transportation (NCDOT), North Carolina State University, and other regional stakeholders. The team also engaged members of the public and regional stakeholders to comment on progress to date, consider and evaluate priorities, and weigh in on investment decisions. A summary of the plan update process is depicted in **Figure 3**.

Plan Update Development Process

Plan Update Kickoff

The Wake County Transit Plan Update was heavily informed by participation and input from members of the public and community stakeholders as it strived to refine priorities for Wake County's transit vision. The community engagement process began in the fall of 2019 with plan development partners (CAMPO, transit agencies, and members of the Wake County Transit Planning Advisory Committee [TPAC]) holding a plan update kickoff event at the Raleigh Union Station with a set of targeted stakeholders representing a range of community interests from throughout the county. This kickoff event was a showcase of progress made toward the first two (2) years of implementation of the original Wake County Transit Plan and the efforts that would be undertaken to update the plan and extend its horizon an additional three (3) years through 2030. As part of the kickoff meeting, participants were asked to submit open-ended questions or comments regarding plan implementation efforts to date and plan development partners' approach toward executing the ensuing plan update.

Following the initial kickoff event, the plan development team completed a countywide transit market reassessment, updated schedule and cost assumptions for the plan's most significant capital projects, and reassessed financial conditions, including identifying projected financial capacity for additional investment through 2030. These steps, as well as the initial

conversations with community stakeholders in the fall of 2019, occurred before the onset of the COVID-19 pandemic and its associated economic impacts left broad and deep impacts on Wake County, including reductions to anticipated sales tax revenues available to support transit expansion.

Preceding the onset of the pandemic, financial forecasting by the plan development team indicated potential capacity for additional investment in the years added to the planning horizon beyond what the 2016 plan committed. However, the impacts of the pandemic led the plan development team to revisit assumptions for sales tax collections and other local revenue sources through the new 2030 horizon that were tempered by the immediate and potential lasting impacts of the pandemic. This resulted in a set of planning scenarios that foretold that it is very unlikely there will be funding available to support investments beyond what the 2016 plan committed and that it is likely that some investments originally envisioned in the original Wake County Transit Plan and through subsequent implementation planning would need to be deferred from the 2030 horizon of the plan update.

Community Priorities Input

Within this vein, plan development partners refocused their attention toward better understanding investment priorities amid limited available financial resources and launched a campaign in the late summer of 2020 to solicit input on these priorities from the Wake County community. The pandemic and associated public health concerns impacted the study team's methodology for community engagement. Plan update engagement relied on a combination of an online survey and virtual meetings to collect feedback. The plan development team published a survey that was available throughout August; in total, the team collected 1,704 survey responses, with over 2,500 views to the Wake Transit Priorities Survey Site. Of the survey respondents, 48% and 39% identified themselves as transit users (have used transit within the previous year) or possessed a characteristic of a disadvantaged, underrepresented, or vulnerable group (i.e, racial minority, individuals with low incomes, individuals with disabilities, and people aged younger than 18 or older than 65), respectively.

The survey was deployed as a check-in with the Wake County community to confirm and better understand goals and investment priorities from the original Wake County Transit Plan and to help understand the community's preferences and priorities for outcomes of transit investment that can be linked to specific projects. Survey responses received from the public demonstrated preferences for:

- Ridership, or productivity-oriented services, over coverage-oriented services;
- Speed and directness of travel over greater access to transit service with more stops;
- Regional service (between cities and towns) over local service (within cities and towns); and
- Investment in service over investment in infrastructure.

When prompted to prioritize among a list of five (5) types of potential service investments that could be implemented under the plan, both coverage- and frequency-related service improvements scored very high, while improvements associated with the span of service (i.e., times services are available throughout the day) ranked lowest. When prompted to prioritize among a list of five (5) types of potential infrastructure investments, those investments that would improve transit speed and reliability (e.g., dedicated bus lanes, rail transit, traffic signal priority to buses at intersections, etc.) and that would more safely and comfortably connect users to transit opportunities (e.g., sidewalks, crosswalks, bike paths) scored highest, while investments in transit vehicle upgrades and facilities (e.g., new/upgraded bus stops, transit centers, park-and-rides, etc.) scored lower. More detailed information on those reached through the summer engagement and on the survey results is provided in **Appendix F: Community Engagement Report**.

Stakeholder Priorities Input

A set of three (3) virtual stakeholder meetings held in September of 2020 included representation from Wake County municipalities, county government, higher education institutions, the business community, citizens, and non-profit organizations. These meetings consisted of the plan

development team presenting information about the plan update process, sharing the results of the August community survey, and posing a series of interactive polling questions similar to those asked in the community survey. The polling results showed that stakeholders prioritized investment tradeoffs very similarly to the public at large with one notable exception. Based on aggregate results, stakeholders slightly prioritized investments in infrastructure over investments in service.

When prompted to prioritize among the same list of potential service investments as provided through the public survey, frequency-related service improvements ranked highest, while investments in locally- or community-oriented service improvements, as opposed to regionally-oriented service improvements, scored lowest. When prompted to prioritize among the same list of potential infrastructure investments as provided through the public survey, investments that would improve speed and reliability scored highest, while vehicle upgrades scored lowest, which substantially matched the public input results.

An additional question posed to stakeholders in the September meetings asked them to prioritize among specific modal investments, including BRT, commuter rail, high-frequency bus services, and coverage bus services. Among these modes, in the aggregate, stakeholders prioritized BRT the highest, followed by commuter rail. Coverage bus services ranked slightly higher than high-frequency bus services, but the spread between their rankings was nominal. More detailed information on stakeholder participation and on the results from the aforementioned polling exercises is provided in **Appendix F: Community Engagement Report**.

Prioritizing and Rescheduling Investments

Following the community and stakeholder engagement campaign to solicit input on investment priorities, the plan development team developed an investment prioritization and reprogramming (rescheduling) methodology that was heavily informed by the input received. It was also heavily informed by input from those designated to implement various investments (i.e., transit providers, municipalities, etc.) based on goals and needs represented by their constituents. Further, it was also heavily informed by adopted program-level prioritization policies and guidance developed through implementation planning undertaken since the adoption of the original Wake County Transit Plan. Other influences included prior performance toward the delivery of Wake County Transit Plan investments implemented to date, readiness for certain investments to move forward, and cost-benefit analyses of various investments relative to one another. This methodology was the primary driver for determining the investments to include, along with their implementation schedules, within the new 2030 financially constrained planning horizon amid more constrained assumed financial resources. A full explanation of this prioritization and reprogramming guidance is included as **Appendix D: Project Prioritization/Reprogramming Guidance Memo**. The ultimate results of this prioritization and reprogramming effort are portrayed throughout Chapter 2 and are further detailed in **Appendix E: FYs 2021-2030 Programming of Wake Transit Plan Update Investments**.

Following the plan development team's reprioritization and rescheduling of investments, additional virtual stakeholder meetings were held in November of 2020 to solicit participants' level of satisfaction with the plan development team's proposed priority and programming framework and its impact on investment rescheduling. In response to the priority framework, all participating stakeholders voted that they were very satisfied, satisfied, or neutral. In response to the framework's impact on investments associated with the Wake County Transit Plan's Four Big Moves, all participating stakeholders voted that they were very satisfied, satisfied, or neutral with respect to Big Moves 1-3 (i.e., Connecting Regionally, Connecting All Wake County Municipalities, and Frequent and Reliable, Urban Mobility). Most participating stakeholders voted that they were very satisfied, satisfied, or neutral with respect to Big Move 4 (i.e., Enhanced Access to Transit), with the exception of 8% of the participants, who were unsatisfied. This result was not unexpected, given that the Big Move most impacted by the results of the reprioritization of investments was Enhanced Access to Transit, primarily because some limited reductions to previously planned bus service expansion would need to be made under the new 2030 financial constraint. More investment emphasis on productivity-oriented services, local services, and infrastructure was cited as the source of unsatisfaction. More detailed

information on the November stakeholder outreach is included in **Appendix F: Community Engagement Report**.

TRANSIT INVESTMENT IMPLEMENTATION IN WAKE COUNTY

Wake County is served by five (5) independent public transit providers: GoCary (operated by the Town of Cary), GoRaleigh (operated by the City of Raleigh), GoTriangle, GoWake Access (operated by Wake County), and North Carolina State University's Wolfline service. The Wake County Transit Plan brought the public transit agencies together and encouraged collaboration and cooperation through a shared transit investment plan, revenue stream, and implementation schedule. While each of the public agencies continue to conduct their own transit planning and community engagement, they also collaborate and coordinate on both transit planning and community engagement strategies with regards to refining and advancing the Wake County Transit Plan.

Plan Implementation Governance

Along with the adoption of the original Wake County Transit Plan in 2016 was the simultaneous adoption of a structure that would govern the ongoing implementation and management of the plan. This structure was institutionalized through an interlocal agreement executed among CAMPO, Wake County, and the Research Triangle Regional Public Transportation Authority (GoTriangle). The interlocal agreement created the Wake County Transit Planning Advisory Committee (TPAC), which is a 22-member staff-level advisory committee comprised of representatives from all transit agencies operating and local governments with jurisdiction in Wake County. The TPAC is charged with coordinating planning and implementation aspects of the Wake County Transit Plan, such that all investment decisions made using local revenues that support the plan are reviewed and vetted by the TPAC before they are forwarded to the CAMPO and GoTriangle governing boards. The interlocal agreement made the CAMPO and GoTriangle governing boards responsible for ongoing technical and financial decisions related to plan implementation.

Annual Wake Transit Work Plans

Wake Transit Work Plans are the vehicle created by the interlocal agreement for more detailed and immediate transit plan investment decisions to be made and are created and considered on an annual basis. Annual Wake Transit Work Plans are created by the TPAC in cooperation with two lead agencies, CAMPO and GoTriangle, assigned to manage and coordinate the overall implementation of the plan and to guide investment decisions. Work Plans are comprised of annual operating and capital budgets for transit investments, updates to financial assumptions guiding the solvency of the plan, multi-year operating and capital programs guiding the planning for investments to be made in future years, and project-level agreements. These Work Plans are substantially developed and are released for public review and comment every winter preceding the ensuing fiscal year that they are intended to cover. Feedback received through the public review process is considered and incorporated into a final Work Plan that is recommended by the TPAC and considered for adoption by the CAMPO and GoTriangle boards in the spring and early summer of each year. Annual Wake Transit Work Plans have been produced and adopted for FYs 2018, 2019, 2020, and 2021 to date, and the Work Plan development, review, and adoption process is anticipated to continue through the years covered by this plan update.

Implementation Planning to Date

The interlocal governance agreement also charged the TPAC and its supporting lead agencies with the development of a number of deliverables designed to flesh out more granular implementation details for the transit plan. These include, but are not limited to:

- A bus service implementation and capital improvements plan to strategically phase bus service expansion investments recommended by the transit plan;
- Alternatives analyses and feasibility study (i.e., major investment study) for the BRT corridors and commuter rail corridor identified in the transit plan;
- A program management plan to establish policy and to govern the administration of a Community Funding Area Program that provides

transit funding assistance to municipalities in Wake County outside of Raleigh and Cary;

- A public engagement policy to guide and coordinate efforts to engage the Wake County community in making ongoing investment decisions;
- A project prioritization policy to guide investment decisions over the course of plan implementation;
- Periodic updates to the Wake County Transit Plan; and
- A verification of compliance process for implementation of significant infrastructure projects to manage risks associated with interjurisdictional requirements and interests.

These implementation planning and program management tools were developed shortly after adoption of the original transit plan and have been put to substantial use over the past couple of years. Further, various agencies designated as project sponsors to deliver the investments included in the transit plan have undertaken further project-specific planning to better define projects, understand their cost and schedule feasibility, identify risks, and position them for delivery. This includes additional feasibility study and alternatives analyses for BRT, commuter rail, transit centers, and other facilities. Results from multiple years of plan implementation to date that have been guided by this range of deliverables have heavily informed the direction of investment recommended by this Wake County Transit Plan Update as further described in Chapter 2.

Chapter 2: Wake County Transit Plan Update

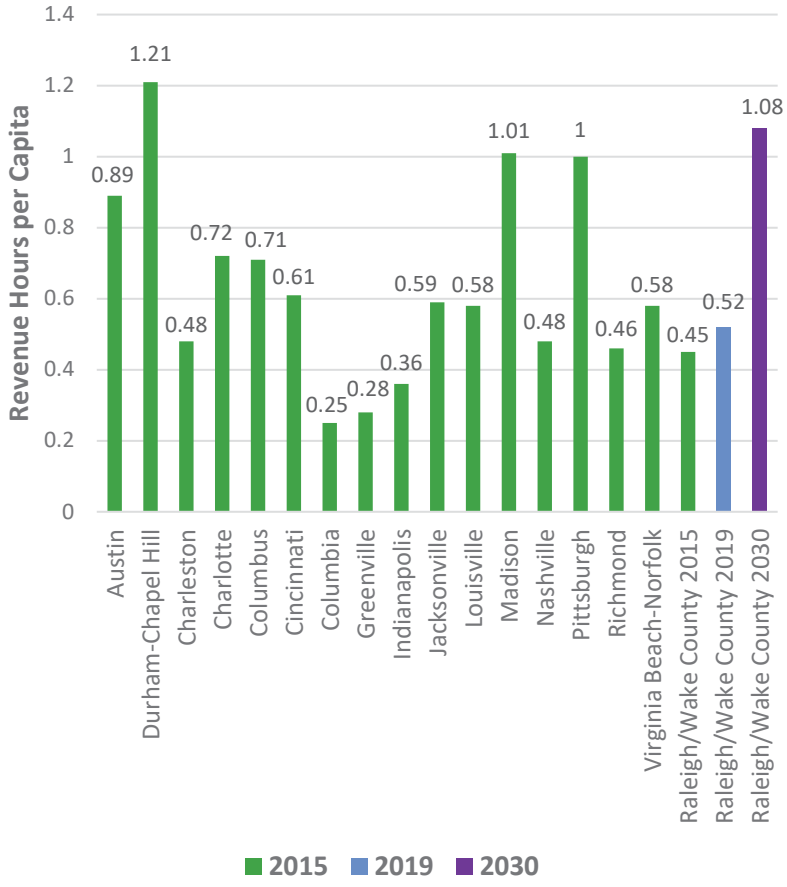
As discussed, the Wake County Transit Plan is built around Four Big Moves, which collectively create the framework for transit investment in Wake County. This section describes these Big Moves (including the type of investment and recommended modal technologies associated with each) and also compares the outlook for future transit services to existing services. Further, this section notes the progress made in the first four (4) years of implementation between 2016 and 2020 and any changes being made between the original Wake County Transit Plan and this plan update.

BIG MOVES: ENHANCED TRANSIT IN WAKE COUNTY

Wake County has had various forms of transit service over the years, with bus services operating in the County since the 1950s. As the region grew and developed, residents consistently expressed a desire and need for additional transit investment to make services more convenient, easier to use, and easier to understand. The Wake County Transit Plan responded to these needs with a funding and transit development plan to substantially expand and enhance the system and allow the County to catch up with current demand, anticipate future demand, and make notable improvements to the user experience. As shown in **Figure 4**, prior to the Wake County Transit Plan, Wake County was in the bottom range of its peers in terms of service hours provided per capita.

As shown in **Figure 4**, implementation of the Wake County Transit Plan through 2019 has increased Wake County's per capita transit service output from 0.45 to 0.52, or by 15.6%. The Wake County Transit Plan is anticipated to change its standing in terms of per capita investment in transit relative to peer regions by 2030. The recommended plan makes four Big Moves—major improvements in four (4) key areas, shown in the next four (4) sections.

Figure 4 Peer City Transit Abundance (Annual Revenue Hours per Capita)



Big Move 1: Connect Regionally

Cross-county connections will be strengthened with a variety of bus and rail investments. The Wake County Transit Plan will fund the Wake County share of a new commuter rail service from near Duke University in Durham to Garner in the North Carolina Railroad (NCRR) corridor. This commuter rail line may be extended to Clayton and other areas farther into Johnston County to the east with state, federal, and/or Johnston County support.

The Transit Plan will also enhance connections to Orange County, Raleigh-Durham International Airport (RDU), and other key destinations with more frequent express bus routes. Additionally, by 2030, Wake BRT is planned to extend to Research Triangle Park (RTP) and Clayton, furthering regional connections with all-day frequent service. These BRT extensions are additional investments beyond those envisioned in the original Wake County Transit Plan that were made possible with the acquisition of competitive state funding for regional high-capacity transit projects. Other agencies in adjacent counties and municipalities will participate in funding the interregional connections. **Figure 5** illustrates major elements of each connection across the region that are proposed to be implemented through 2030.

Unlike investments completely within Wake County, funding many of the investments for this Big Move will involve agreements with other counties. Although this plan makes reasonable assumptions about a Wake County share, the agreements are not yet in place, and the Wake County shares used in this plan should be viewed as approximate.

BIG MOVE 1: CONNECT REGIONALLY

Key Benefits:

Pre-Wake County Transit Plan (2016) – If you planned a trip from Durham to Raleigh at 5PM using NC 147 and I-40, an online mapping tool would indicate that the trip would take between 35 and 80 minutes. The variation in time and the potential for delay has huge impacts.

Proposed with Transit Plan – Traveling at peak times, the Commuter Rail will travel between Durham and Raleigh on a consistent and reliable 45-minute or faster schedule and with more stops along the corridor than existing express bus services.

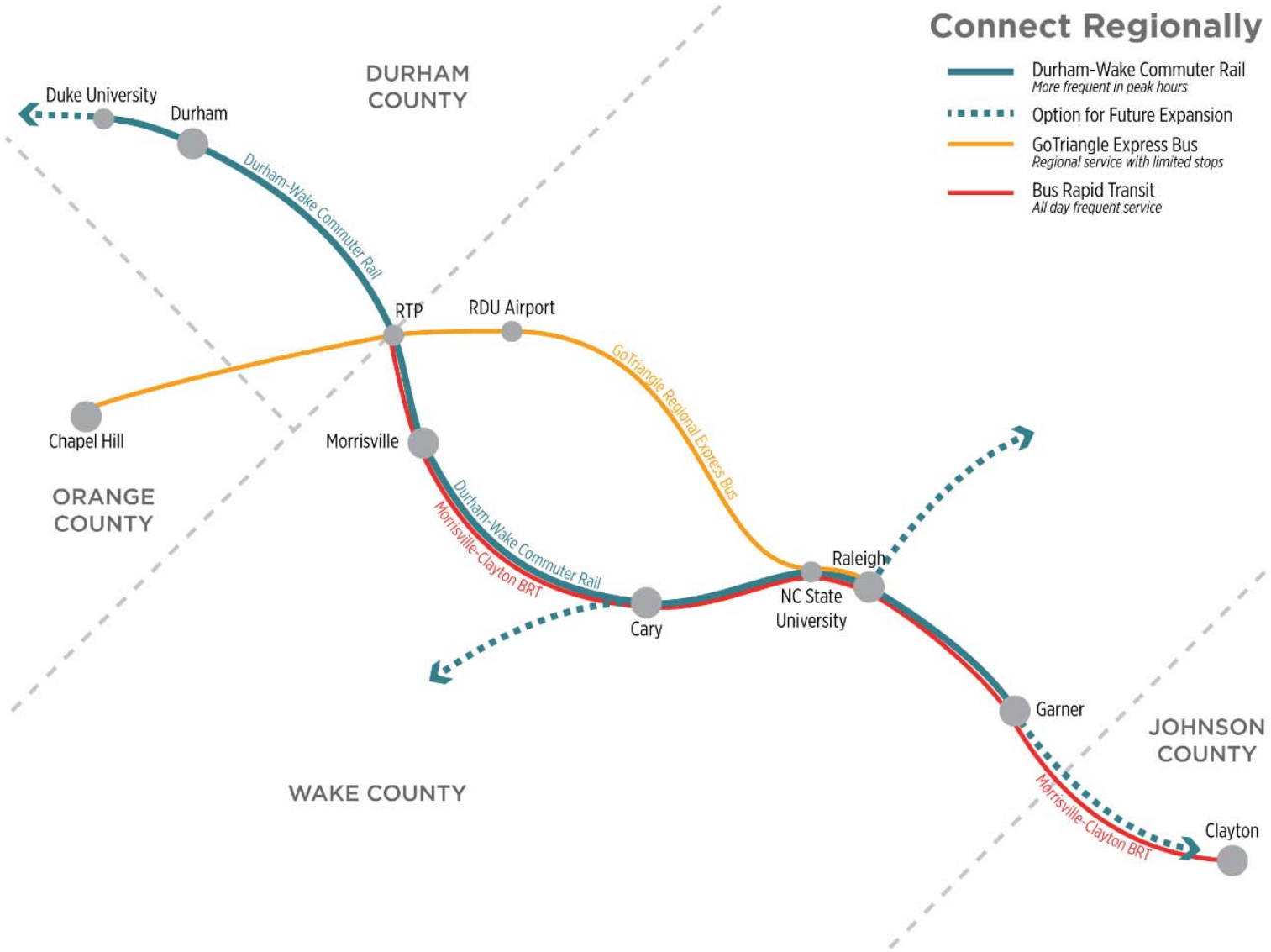
Key Investments:

- 37-mile commuter rail connecting Garner, Raleigh, North Carolina State University, Cary, Morrisville, RTP, Durham, and Duke University
- Enhanced connections to RDU and Chapel Hill

Transit Plan Updates:

- Improvements to express bus service between Wake and Durham Counties completed as of 2020
- Improvements to service to RDU completed as of 2020
- Commuter rail construction planned to be completed in the 2028-2030 timeframe, with potential extension to Clayton and operations beginning by 2030
- Wake BRT extensions to Research Triangle Park and Clayton added to plan to begin operations in the 2028-2030 timeframe

Figure 5 Big Moves: Connect Regionally



Big Move 2: Connect All Wake County Municipalities

The Wake County Transit Plan will connect all 12 municipalities in Wake County with transit service connections between individual communities and downtown Raleigh. Big Move 2 also includes connections between Wake County municipalities/communities and Research Triangle Park (RTP), the airport, and other major destinations (see **Figure 6**). New links are also provided between some of the smaller communities for employment, shopping, and medical trips. Connecting services will be provided through a combination of 30- and 60-minute all day service, peak-only service, and commuter rail.

Bus rapid transit services are planned to connect RTP, Morrisville, Cary, Raleigh, and Garner. Thirty-minute all-day services will connect RTP, the airport, Garner, and the Wake Tech campus on the northern edge of Fuquay-Varina. Apex will receive service that operates every 30 minutes during rush hour and 60 minutes the rest of the day. Sixty-minute all-day services will connect to Knightdale and Wake Forest. Peak-focused services, including the regional commuter rail, are provided to and between other communities and destinations. Additionally, BRT infrastructure such as dedicated busways, will benefit all buses using those routes. As the communities grow and change over time, it is anticipated that the transit connections will also change and grow.

BIG MOVE 2: CONNECT ALL WAKE COUNTY COMMUNITIES

Key Benefits:

- Network supports each municipality in Wake County with transit service
- Roadmap for how transit services can grow as communities grow
- Links communities to make multiple trips possible

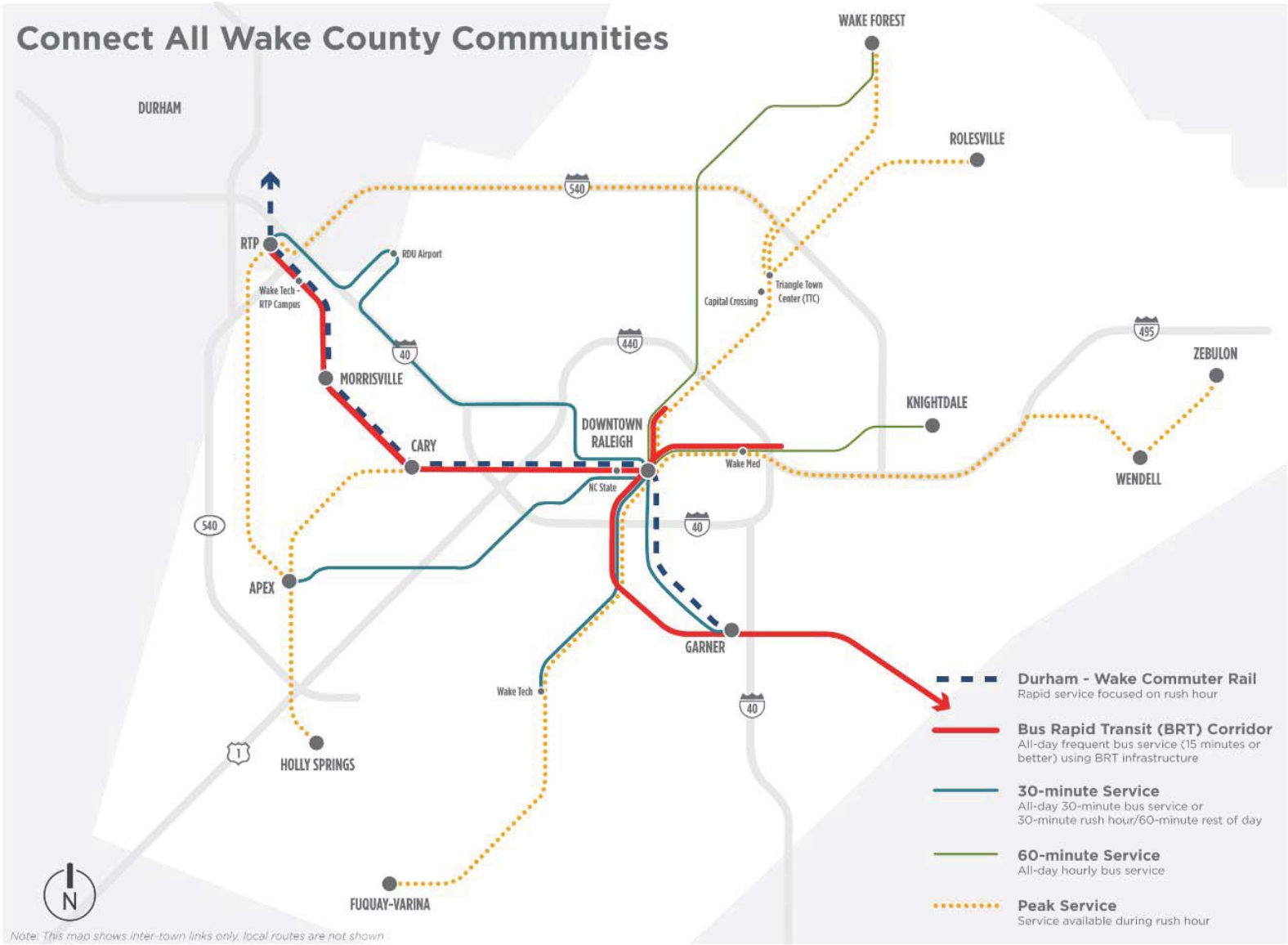
Key Investments:

- Service to all 12 municipalities, to RDU and RTP, and to Durham and Chapel Hill

Transit Plan Updates:

- As of 2020, all Wake County communities have been connected with fixed-route bus service
- Increased service to RTP and RDU has been implemented
- Further span and frequency improvements are planned for connections to Apex, Morrisville, and RTP
- Due to funding constraints identified through the transit plan update process and the overall desire of the Wake County community to fund the signature components of the original plan, a very small number of routes may not reach their originally planned buildout levels of service (e.g., full span and/or frequency) by 2030

Figure 6 Big Moves: Connect All Wake County Communities

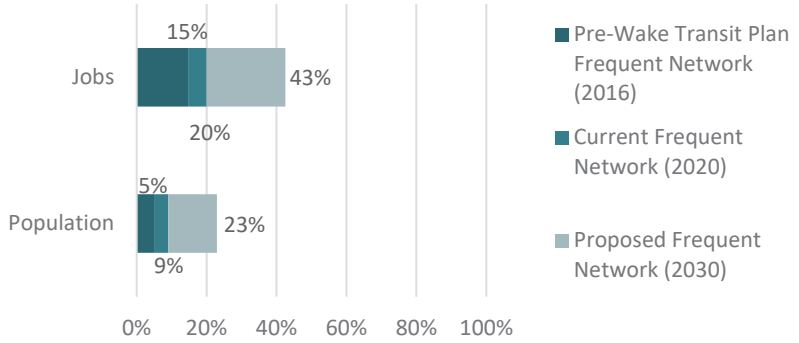


Big Move 3: Frequent, Reliable Urban Mobility

The size of the frequent transit network—service every 15 minutes or better all day—in Raleigh and Cary will increase from 17 miles to approximately 99 miles. The original Wake County Transit Plan invested in an increase from 17 to 83 miles. However, an additional frequent network route (Avent Ferry), as well as an extension of the originally planned network along Glenwood Avenue, were included through more in-depth implementation planning since the adoption of the original plan. Further, an extension of one of the BRT corridors envisioned in the original plan that is planned to operate at high frequencies has also been added to the planned frequent network (i.e., BRT from Cary to RTP). Frequent service generally follows patterns of high transit demand, characterized by higher densities, walkability, linearity, and proximity. Weekend and evening service hours will expand throughout the county, which is particularly important to people working in the service sector and other jobs that do not follow a traditional 9-to-5 weekday schedule. **Figure 8** shows the BRT and frequent transit network to be implemented by 2030.

BRT is a key element of enhancing urban mobility in the Transit Plan. Infrastructure investments include exclusive busways in many locations, as well as priority treatment at traffic signals and fixed stations with off-board fare collection to speed boarding. With these investments, the Wake County Transit Plan will increase the number of people and jobs with access to frequent transit by more than double and more than four times pre-Wake County Transit Plan levels, respectively (see **Figure 7**).

Figure 7 Population and Jobs within ¾ Mile of Frequent Service



BIG MOVE 3: FREQUENT, RELIABLE URBAN MOBILITY

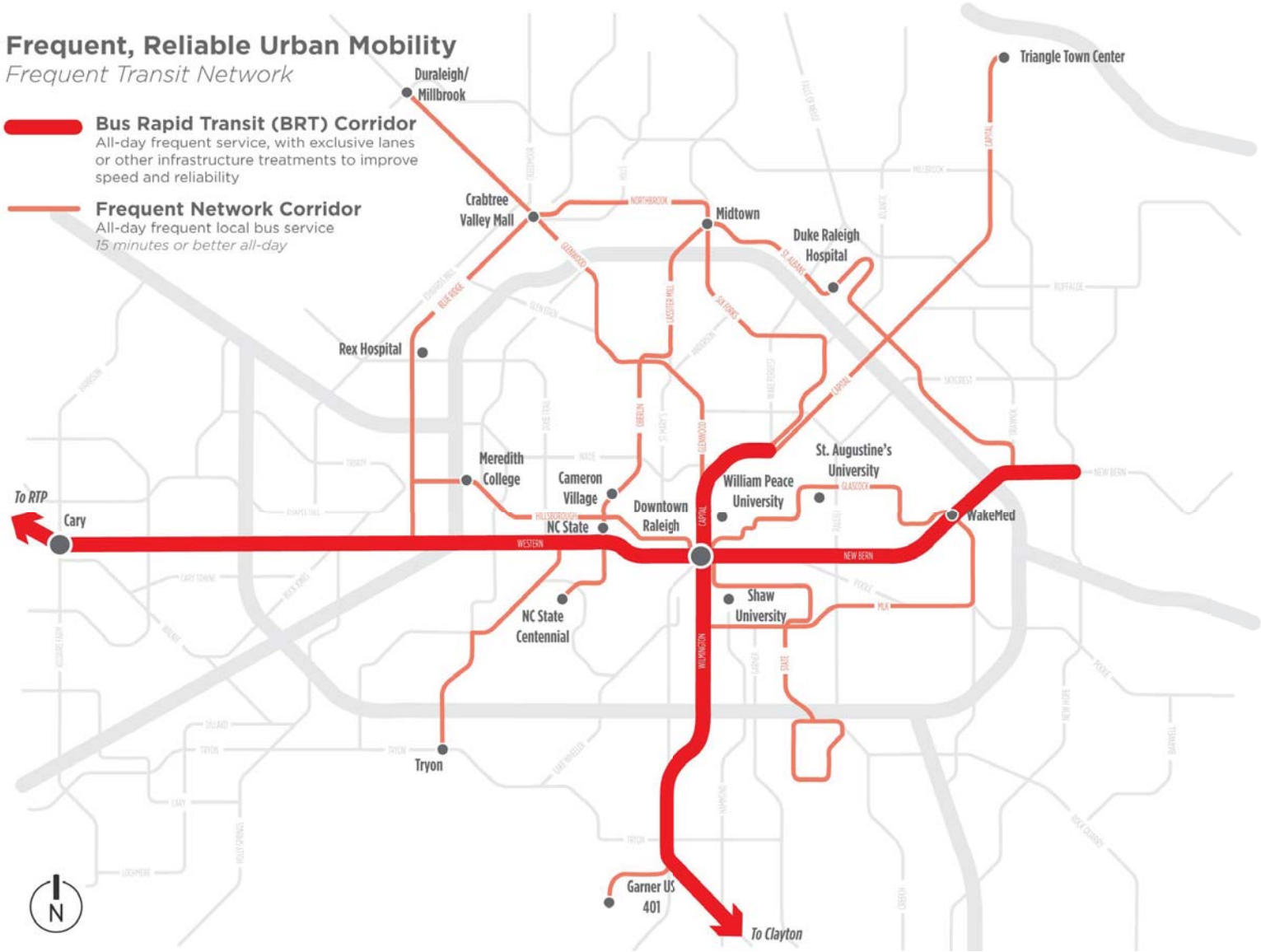
Key Investments:

- Approximately 99 miles of frequent network and up to 47 miles of BRT infrastructure

Transit Plan Updates:

- Expanded frequent and BRT networks beyond 83 miles to approximately 99 miles as a result of further study conducted after the adoption of the original Wake County Transit Plan, such as frequent service on GoRaleigh Route 11 Avent Ferry, extension of frequent service along Glenwood to Duraleigh Road, and the inclusion of a BRT extension to RTP
- New Bern BRT to begin operations in the 2023-2025 timeframe, Western BRT in the 2026-2028 timeframe, Southern BRT in the 2027-2029 timeframe, and Northern BRT in the 2028-2030 timeframe
- Wake BRT extensions to RTP and Clayton to begin operations in the 2028-2030 timeframe

Figure 8 Big Moves: Frequent, Reliable Urban Mobility

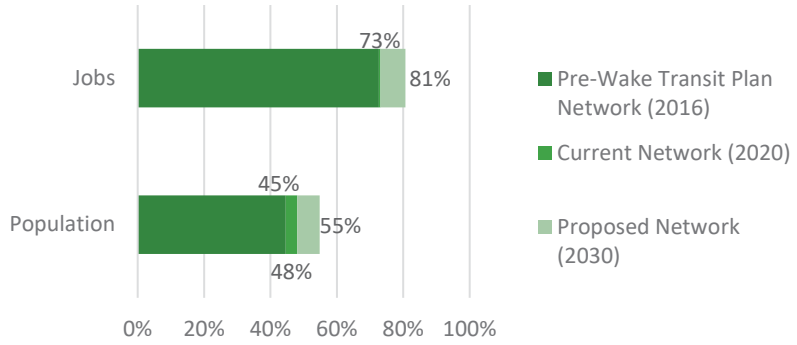


Big Move 4: Enhanced Access to Transit

The Transit Plan will improve fixed-route service by increasing span (hours of operation) on weekdays and weekends, increasing frequency, and expanding the extents of many fixed routes, especially in Raleigh and Cary. For non-fixed route service, the Plan will increase funding for GoWake Access and paratransit services. The Plan also includes a Community Funding Area Program that provides a 50% match for 10 Wake County towns and the RTP to plan, design, and operate transit services designed to meet local needs. The blue-shaded regions in **Figure 10** represent areas with relatively close access to transit service (within ¾ mile), and the green areas represent municipalities that are eligible for 50% match funding for local service through the Community Funding Area Program.

The Wake County Transit Plan increases access to transit through increased investment in Wake County demand-response service provided by GoWake Access, as well as increased investment in passenger and on-street infrastructure in the county. These investments include more and better stops, shelters, and access to stop facilities. The combined impact of these investments is measured by the number of people and jobs with access to all-day fixed-route transit services (see **Figure 9**).

Figure 9 Population and Jobs within ¾ Mile of All-Day Service



BIG MOVE 4: ENHANCED ACCESS TO TRANSIT

Key Benefits:

Pre-Wake Transit Plan (2016) – Some routes did not operate on weekends, many routes stopped operating at 6PM on weekdays, and many routes provided infrequent service in the middle of the day.

Proposed with Transit Plan – To date, many local routes have been improved to operate seven (7) days a week, hours of operation for many routes have been extended until later in the evening, and frequency of service on many local routes has been improved during midday periods. These improvements will be made to most other local routes by 2030.

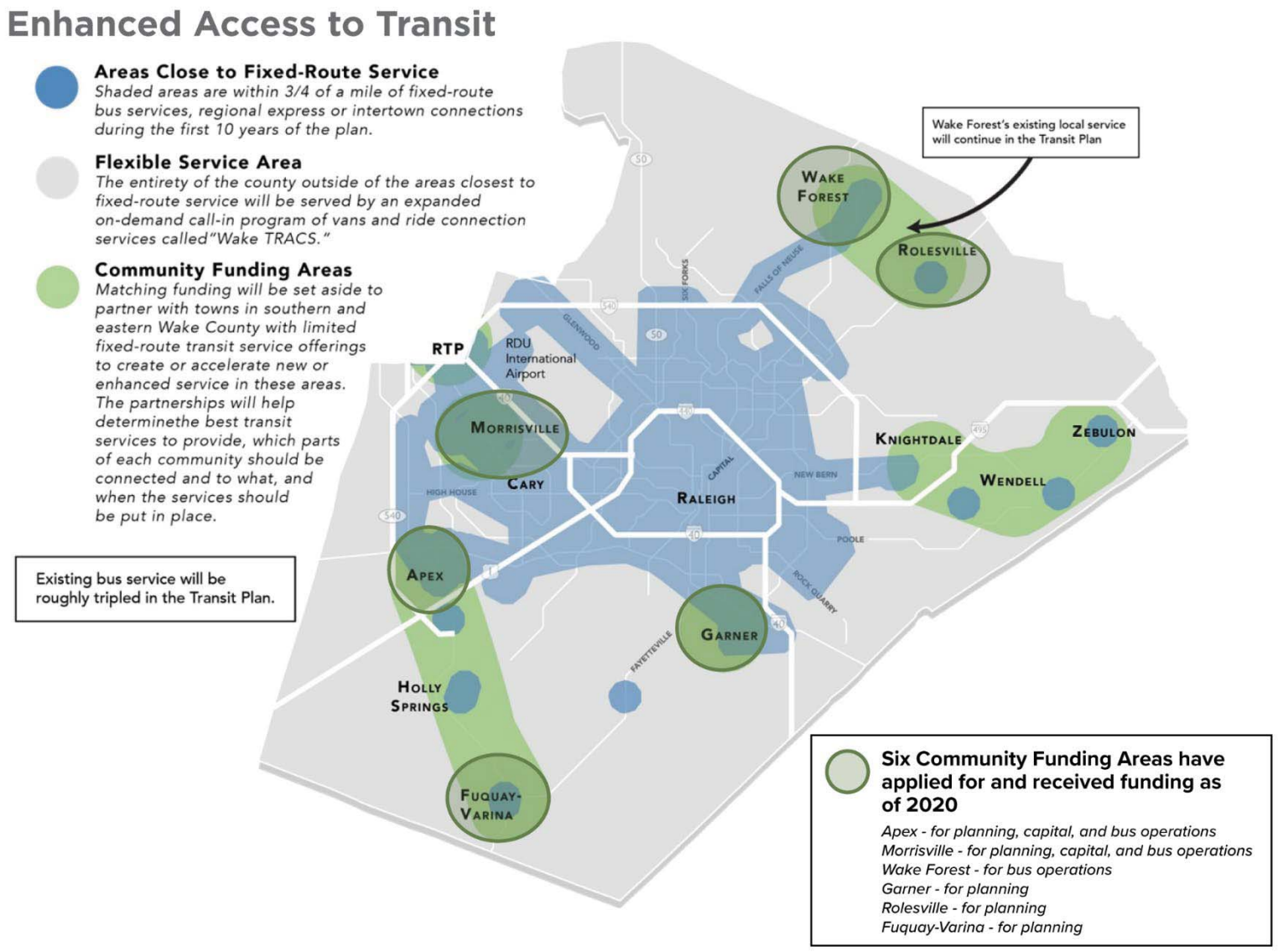
Key Investments:

- Roughly triple the amount of bus service available to residents of Wake County
- Increased hours of service on weekdays and weekends across the network
- Matching funds for community-based transit services in smaller municipalities

Transit Plan Updates:

- To date, 47% of all bus service expansion investment, measured in terms of the total amount of funding for expansion of bus service programmed for the original Wake County Transit Plan, has been implemented
- 100% of originally planned funding for Community Funding Area Program and GoWake Access services are still included
- Allows for over 90% of originally planned bus service expansion, measured in terms of total spending, to be funded within the 2030 horizon. Funding constraints identified through the transit plan update process and the overall desire of the Wake County community to fund the signature components of the original plan (e.g., BRT and commuter rail) resulted in some very limited reductions to originally planned bus service expansion.

Figure 10 Big Moves: Basic Lifeline Access to Transit



WAKE COUNTY TRANSIT PLAN INVESTMENT PRIORITIES

As discussed, the Wake County Transit Plan was developed through a process that first clarified and then asked Wake County residents and stakeholders to prioritize a series of trade-offs. The investment schedule reflected a balancing of these priorities that ultimately guided development of the Four Big Moves. The Wake County Transit Plan Update revisited these trade-off decisions by posing similar trade-off questions to residents and stakeholders. The plan update generally reaffirmed the region's 2016 priorities with a renewed commitment to focus significant investment on ridership- and productivity-oriented services with continued support for high-capacity and frequent-network transit investments, including commuter rail and bus rapid transit.

The plan update retains these trade-offs as a reference to the fundamental framework guiding and supporting the Wake County Transit Plan.

Ridership versus Coverage

The original Wake County Transit Plan balanced ridership goals (maximum ridership, directness and speed of travel, fare revenue, vehicle trip reduction) with coverage goals (improved access and lifeline services, including access to every town). Recommendations for the Four Big Moves included devoting about 70% of the Transit Plan's operating dollars to services justified by high ridership and productivity and about 30% to coverage services.

- **Ridership-justified routes include commuter rail, key regional express bus routes, BRT services, and the frequent local bus network in Raleigh and Cary.** These types of routes serve areas with higher population or employment density and often are designed to bypass congestion and other motorist delays.
- **Coverage routes are generally lower frequency routes that extend across the County, serving lower-density places where high transit ridership is not a realistic outcome.** These services include links to outer towns, coverage of low-density areas, paratransit services, and more community-centric local services. It is understood that coverage services will not have high ridership as that is not their purpose. Instead, their purpose is to provide basic access across the County, even in areas of low demand.

This Wake County Transit Plan Update retains the same ratio of ridership-oriented services to coverage-oriented services as an overarching goal for transit expansion throughout the county.

Infrastructure versus Service

The second trade-off balanced investments in infrastructure with service. The Wake County Transit Plan placed equal emphases on infrastructure that improves the speed and reliability of operations, as a strategy to maximize the impact of service investments, and on service.

- **Infrastructure investments primarily focused on the CRT and BRT corridors.** Additional funds are designated for park and ride lots, bus stops and signs, sidewalks, and other supporting infrastructure.
- **Service-focused expenditures help increase span and frequency of service (the number of hours the transit vehicles operate and how often transit serves locations, respectively) across the network.** Investments allow for additional frequency on many existing and new routes.

Regional versus Local Service

An additional tradeoff that was examined through the process to update the Wake County Transit Plan was an investment focus on regional services versus local services. Engagement with targeted stakeholders and the Wake County community at large revealed a slightly higher preference or emphasis on regional services over local services.

- **Regional service investments are those that connect different cities and towns throughout the county and to locations in surrounding counties and/or serve longer distance trips.** Commuter rail, BRT services, and regional and express bus routes generally fall within this category.

- **Local services operate within cities and towns and/or tend to serve shorter distance trips.** Local bus routes connecting different neighborhoods within cities and towns generally fall within this category.

Speed/Directness of Travel versus Greater Access/More Stops

Another trade-off examined through the process to update the Wake County Transit Plan was an investment focus on speed and directness of travel versus greater access with more stops. Routes and services can be designed to make travel times between origins and destinations as short as possible and doing so requires routes and services to travel along direct or straight alignments and to have limited stops, which can slow the pace of travel between those origins and destinations. Routes and services can also be designed to collect as many people as possible by serving more neighborhood streets and by providing more stops or points of access. However, this approach jeopardizes the speed and directness of travel between origins and destinations. Engagement with stakeholders and the Wake County community at large revealed a stronger preference or emphasis on services that are faster and more direct versus those that provide greater access and more stops.

- **Investments that are designed to provide faster and more direct trips are frequent-network and express bus routes, BRT, and commuter rail.**
- **Investments that are designed to provide greater access with more stops are local bus routes, some inter-community bus routes, and demand-responsive services.**

Transit Modes, Technologies, and Infrastructure

The Wake County Transit Plan recommends a range of technologies and service modes. Some of these are part of the existing Wake County transit system, but several are improvements above and beyond the pre-Wake County Transit Plan 2016 network. Following are descriptions of the service modes to be delivered under the plan and progress updates on their implementation to date:

- **Commuter Rail Transit (CRT) is a train operating on shared tracks with freight and Amtrak vehicles in the freight right-of-way. Within the 2030 horizon of this plan update, it is envisioned to operate eight (8) trips each way in each direction during each four (4)-hour peak period, with two (2) trips during the midday and evening hours.** CRT would be expected to have a speed advantage over bus transit, but the initial operating scenario identified through further study and that is assumed for this plan update would not run as frequently as many bus routes. CRT stations would generally be spaced 2-5 miles apart to boost speed of service, although more closely spaced stations may be necessary to serve key neighborhoods and activity centers if future study indicates it would boost ridership.

  The plan recommends 37 miles of CRT on the NCRR corridor from Garner, Raleigh, NC State, Cary, Morrisville, RTP, and through Durham to near Duke University. The plan also acknowledges a possible extension into Johnston County. For the purposes of establishing an assumed cost for this plan update, approximately two-thirds of the total assumed cost for the commuter rail mileage between Garner and Durham is considered the Wake County share, and 50% of eligible costs are assumed to be supported by federal funds. This cost share is based on approximately two-thirds of the proposed mileage for a Garner to Durham extent being in Wake County. The actual Wake Transit Tax revenues needed will depend on: 1) The final scope of the investment that is selected, 2) The federal funds that can be acquired, and 3) Agreement on a fair allocation of costs between the counties and other possible funding partners that are served. The CRT line from Durham to Garner is planned to be built as one complete project to provide the greatest usefulness and link to the existing and planned transit network in Durham.

  Robust planning to identify the best way to deliver the commuter rail project to serve the corridor most competitively and to refine cost and implementation schedule feasibility information has occurred to

date. More intensive planning and design for the commuter rail corridor will continue over the next two (2) to three (3) years before a multi-year period of construction can begin. This Wake County Transit Plan Update assumes operations may begin in the 2028-2030 timeframe.

Figure 11 Typical Arterial Today

Figure 12 Arterial with Potential Center-Running BRT

- **Bus Rapid Transit (BRT) includes a range of speed and reliability improvements, including but not limited to dedicated busways, priority treatment at traffic signals, and fixed stations with off-board fare collectors to speed boarding.** Frequency is typically every 15 minutes or better in the peak and off-peak periods, and speed is dependent on the level of capital improvements and distance between stops. Stations are generally located farther apart than for local bus routes, typically about every ½ to ¾ miles. A simulation of what BRT infrastructure might look like is shown in **Figure 11** and **Figure 12**.

  The Wake County Transit Plan includes approximately 47 miles of varying levels of BRT-related infrastructure improvements. The BRT network would be built incrementally. Four (4) initial BRT routes, totaling approximately 20 miles, were identified in the original Wake County Transit Plan. With further study, these four (4) corridors are now planned to total approximately 24 miles. Two (2) extensions, to be supported by competitive state funding and totaling approximately 23 miles, were added through this Wake County Transit Plan Update. Each of these is an independent project, although longer routes that connect to more destinations typically are more successful when applying for federal grants. Within each BRT corridor, some of the improvements can be made incrementally. For example, priority treatment at traffic signals can be implemented separately from dedicated busways, or dedicated busways can be built in phases.

  To date, a preferred alternative has been selected and preliminary design has been completed for one of the four (4) initial BRT corridors, the New Bern Avenue corridor. The New Bern Avenue BRT corridor is expected to begin operations in the 2023-2025 timeframe. A preferred alternative has been selected for a second corridor, the Wake BRT: Western Corridor, with preliminary design commencing at the beginning of 2021. Further planning and design for the remaining two (2) initial corridors and the BRT extensions to RTP and to Clayton in Johnston County continues.

- **Frequent Network.** While all BRT routes are expected to provide frequent transit service, many other bus lines will provide frequent service within the highest density areas of the community, including links among colleges and universities, employment centers, hospitals, dense residential areas, and major downtowns. **The plan dramatically increases the Wake County year-round frequent network from 17 miles to approximately 99 miles.** To date, six additional miles of frequent service have been implemented since 2016, totaling approximately 23 miles countywide.
- **Conventional Local Bus Service. Routes running every 30 to 60 minutes provide coverage across Raleigh, Cary, and any other municipalities.** Some of these routes have the potential to grow into Frequent Network services in the future. Where possible, these routes would make timed connections with each other to minimize waiting. To date, approximately 47% of all bus service expansion investment, including all types of bus service and measured in terms of the total amount of funding for expansion of bus service programmed for the original Wake County Transit Plan, has been implemented.
- **Intertown Links, connecting every town in the County to the core, minimally with peak express service.** To date, all towns in Wake County have been connected with peak-period fixed-route service.
- **Express bus service, similar to what GoTriangle operates today.** These routes are geared toward commuters during typical rush hours. They travel relatively long distances with few stops along the route. To date, a number of frequency improvements to existing express bus services have been made, and new express services have been implemented.
- **Expanded demand-responsive service, for increased access across the lower density areas of the county.** Additional funds will be available for GoWake Access, which provides demand-responsive paratransit service mostly within unincorporated Wake County. Also, GoRaleigh's and GoCary's ¾-mile demand-responsive Americans with Disabilities Act (ADA) paratransit service areas will widen as new routes venture into unserved territory, and service hours will be extended to match expanded service hours for fixed-route operations. To date, GoWake Access has received sustained funding to support approximately 10,000 additional demand-response trips annually.

WAKE COUNTY TRANSIT PLAN AND COMMUNITY GOALS

The Wake County Transit Plan (2016) and the Wake County Transit Plan Update (2021) incorporated other community goals emphasized by citizens, stakeholders, and elected officials:

- Ensuring a safe and comfortable rider experience is a critical part of the Wake County Transit Plan. This goal will be met with investments at individual bus stops and improvements to fare payment and customer information systems.
- Providing safe and comfortable pedestrian connections to bus stops and transit stations and centers (identified as an emphasis through transit plan update process).
- Improving service reliability and speed through investments in dedicated bus lanes and rail tracks. Service frequency is also a key part of improving transit speed and reliability. Investments include increased service frequency during peak hours.
- Creating an extensive frequent network sufficient to change how people travel in the urban core, making it easy to reach many Raleigh and Cary destinations from anywhere in the County.
- Investing in high-capacity transit to promote denser land uses and economic development in areas that already have strong demand and promote development in new areas.
- Strengthening connections to major destinations such as universities and colleges, hospitals, the airport, and major employment centers.
- Providing more frequent rail service or increased frequency for passenger rail may be considered as part of Wake County's future

transit planning studies along with possible rail service toward Wake Forest and into Johnston County.

- Identifying and taking advantage of opportunities to invest in transit-supportive infrastructure that provides operational benefits for transit along roadways that are otherwise targeted for capacity improvements (identified as an emphasis through transit plan update process).
- Ensuring financial sustenance for certain infrastructure, facilities, and resources that are needed to support future expansion of the transit system or to maintain a general state of good repair and operations as the foundation and backbone of the transit system. Such infrastructure resources, and facilities may include replacement vehicles, transit operations and maintenance facilities, critical transit centers and transfer hubs, etc. (identified as an emphasis through transit plan update process).

IMPLEMENTATION AND MEASURING SUCCESS

Transit investments are typically measured according to a handful of performance measures, including service productivity (such as cost per rider or riders per hour). Experience with transit investment demonstrates that new or expanded transit routes require a 'ramp up' period before their expected productivity is reached. As new routes are added, ridership will start off slow but will grow as people change their travel patterns. As frequency and span increase, riders will begin to consider using the expanded system for more of their needs. Success of the recommended Wake County Transit Plan will be measured in a range of ways, with individuals and stakeholders (riders, transit agencies, municipalities, other taxpayers) prioritizing these criteria differently. The key ideas are:

- Ridership and Productivity
- Coverage and Access
- Speed and Reliability (facilitated by investment in infrastructure)
- Enhanced Customer Experience

It is important to note that the governing boards for implementation of the Wake County Transit Plan, the CAMPO Executive Board and GoTriangle Board of Trustees, adopted bus service standards for Wake Transit-funded bus services, including standards and targets for riders per hour, cost per rider, farebox recovery, and on-time performance, in 2018.

Key Idea: Ridership and Productivity

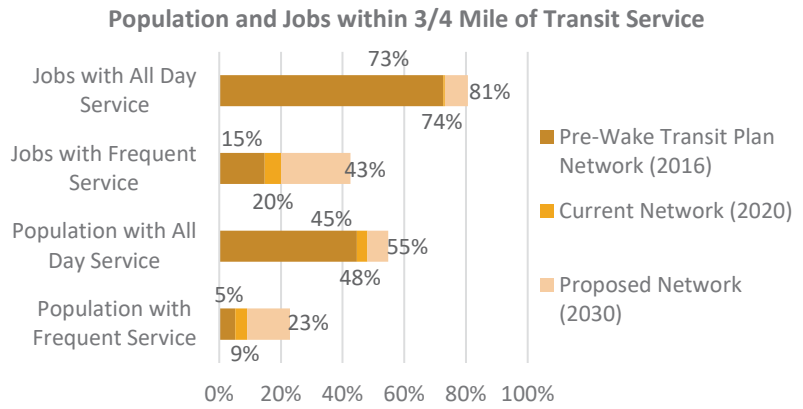
Align service investments with underlying demand (commuter service and frequent network).

One way of measuring the system's ability to attract riders over time is the accessibility of the service to residents and jobs. The Wake County Transit Plan examined the proposed network's reach or coverage via the same criteria used to evaluate the four (4) proposed network alternatives/scenarios referenced in Chapter 1:

- How many people and jobs are near any all-day transit service? This tells us how extensive the total reach (thus coverage) of the system is.
- How many people and jobs are near Frequent Network service? This tells us how many people are close to the most useful services, which are most competitive with other modes.

The Wake County Transit Plan measured access by comparing the current network to the region's distribution of population and jobs. This update to the Wake County Transit Plan further examined progress to date toward increased accessibility of the transit network in terms of access to both all-day service and frequent service. Accessibility was measured for the original service level (pre-Wake County Transit Plan), the current network (2020), and the network proposed for 2030 (see **Figure 13**). Before the Wake County Transit Plan, transit services in Wake County were largely coverage-oriented (approximately 70% of total investment versus approximately 30% for ridership-oriented services). As a result, while Wake County Transit Plan investments are increasing access to jobs and for residents, they are having the most significant impact on access to frequent service. This is true for the 2020 network and investments scheduled through

Figure 13 Proposed Network Coverage



2030. While the impact of the planned investments on providing better proximity to population and jobs to all-day service is less profound than their proximity to frequent service, compared to 2016, those services are likely to come more often, operate for more hours, and run in both directions on the same street.

Wake County contains a vast range of development types, from dense urban cores to rural areas. These differences imply dramatically different transit needs and demands. The Wake County Transit Plan and this update to the plan include investments that reflect these diverse needs and demands. Where high or increased ridership is the objective, the Wake County Transit Plan has focused investment on the following services:

- Peak-hour commuter express service is successful when it bypasses congestion and provides access to major employment centers. The Wake County Transit Plan includes commuter service investments, including commuter rail and regional express services. While commuter rail will address the Raleigh-NC State-RTP-Durham express market, express buses remain important to connect RDU to all the major cities of the region and to provide long-distance commuter services within Wake County. GoTriangle will continue to provide express services between Wake County and adjacent major destinations such as RTP, Durham, and Chapel Hill.
- All-day Frequent Network routes (service every 15 minutes or better all day, operating late into the evening and on weekends) following development patterns that provide an abundant market. These patterns tend to feature:
  - Density – higher density means more potential customers around each stop.
  - Walkability – transit functions well only where people can walk to the stop.
  - Linearity – operating straight, direct routes means traveling along the fastest path between destinations and allows transit agencies to focus service investments on a smaller number of routes and operate these routes with higher frequencies.
  - Proximity – frequent transit functions well when areas of high density are close together. Towns with moderately high density but that are far away from other dense areas can run local services that connect people to the frequent network.

Many transit agencies are now branding their Frequent Networks as a distinctive layer in the larger system (see **Figure 14**).

Frequent Service has many distinct benefits, including the following:

- It transforms the experience of using transit, from “I have to build my life around the schedule” to “transit is there whenever I need it.”
- Where frequent lines cross, transferring between them is fast. Frequency allows local routes to feed into a network.
- Frequent service to places with other favorable land-use indicators (density, walkability, mixed uses, proximity to established desirable markets) is compelling enough to attract investments, further strengthening ridership.

Figure 14 Transit Agency Frequent Network Branding Examples from Portland, Minneapolis, and Bellingham, WA

- Larger cities find that Frequent Network service is sufficient to support densification and is augmented by policy changes such as fewer parking requirements, reflecting lower car ownership rates in areas with high quality transit.

Although the Frequent Network focuses on urbanized areas in Raleigh and Cary, it can be extended as areas develop the necessary density and pedestrian infrastructure. Proposed transit service with 30-minute service is provided on many routes across Raleigh, Cary, Morrisville, and Garner, recognizing that these corridors have the potential to densify and attract additional transit investments.

Key Idea: Coverage and Access

For coverage, provide essential links and support local initiatives.

Coverage services exist to ensure that all communities are served and do not necessarily anticipate high ridership. Because only 30% of plan resources are devoted to coverage service, the Transit Plan is careful to apportion this service equitably, as well as to meet the greatest need. To this end, the plan provides:

- Links from the outer towns not served by other service (Holly Springs and Rolesville) and increased frequency and hours of operation for

others into the Raleigh-Cary core. Since the adoption of the original Wake County Transit Plan, both Holly Springs and Rolesville have been connected by peak-period, fixed-route service.

- Lower frequency routes retaining current coverage to lower density parts of Raleigh and Cary (using, in part, City of Raleigh and Town of Cary funds already devoted to this purpose).
- A Community Funding Area match program for towns other than Raleigh and Cary. Under this program, the plan makes available sufficient funds to provide half the cost of a local bus service in each town with participating towns paying the other half. Each local government will be free to pursue the program or not. Since the adoption of the original Wake County Transit Plan, the Towns of Wake Forest, Apex, and Morrisville have received funding to augment or initiate new community-centric transit services. Further, the Towns of Garner, Rolesville, and Fuquay-Varina have completed in-depth planning to support future investment in community-centric transit services.
- Expanded funding for GoWake Access demand-responsive service for lifeline needs to all the rural areas of the County.

Key Idea: Speed and Reliability (Spending on Infrastructure)

Capital expenditures improve transit trip speed and reliability.

Commuter rail transit (CRT) is train service focusing primarily on longer-distance travel, predominantly for commuters and mostly serving the peak hours. Trains operate on multiple tracks shared with freight and Amtrak services. Commuter rail has speed advantages over bus transit but does not operate at the same level of frequency as most of the bus services in the Transit Plan.

BRT encompasses a wide range of tools that can help keep buses on schedule. The most intensive form of BRT provides dedicated lanes for buses. Other interventions might include:

- Modifications at intersections that allow buses to bypass traffic stopped at signals.
- Signal timing adjustments that give a small advantage to a bus when it is present; an advantage often undetectable by motorists.
- Station-like stops with tools to speed boarding such as ticket machines that allow customers to pay before they board. Some of these stations also provide easier boarding for wheelchairs and other mobility devices.

The Transit Plan envisions that these tools would be deployed along the following corridors:

- Western Boulevard/Western Boulevard extension/Cary Towne Boulevard/Maynard Road/Chatham Street between downtown Raleigh and downtown Cary
- On or near Capital Boulevard between downtown Raleigh and Crabtree Boulevard (this short segment would be used by several converging bus routes from the north)
- Along New Bern Avenue between downtown Raleigh and New Hope Road
- Along South Wilmington Street between downtown Raleigh and Garner Station

This update to the Wake County Transit Plan includes further BRT investments in the next decade, extending Wake BRT from downtown Cary towards Morrisville and RTP to the west and from Garner towards Clayton to the south.

In each case, the mix of tools to be used would be based on a segment-by-segment analysis of each street, with the goal of achieving the greatest possible reduction in bus delay at the lowest cost. Where large numbers of boarding passengers are expected, stations or stops would be designed to increase the safety and comfort of waiting passengers, as well as the speed at which they can board transit vehicles.

Key Idea: Enhanced Customer Experience

Capital and service expenditures to enhance the customer experience.

Both the 2016 Wake County Transit Plan and this update to the plan envision a system in Wake County where the following principals are held as paramount: Accessibility, Comfort, Security, Reliability, Cleanliness, Courtesy, Convenience, and Communication/Wayfinding. Funding is provided in the plan to support all of these measures, including enhanced stop amenities, better access to stops, better lighting, new vehicles, more drivers, new customer-friendly technologies, and additional signage.

In the first few years of Wake County Transit Plan implementation, robust investment has been made across the system to improve bus stops with additional passenger amenities and better connect them with pedestrian infrastructure, acquire new and more comfortable energy-efficient vehicles, standardize fare structures, and introduce improved fare technologies (i.e., mobile ticketing). This update to the plan continues these investments. Further, considerable investment has been made in new programs that incentivize and make transit more accessible and convenient to youth populations (i.e., Youth GoPass) and older adults (i.e., free rides for seniors).

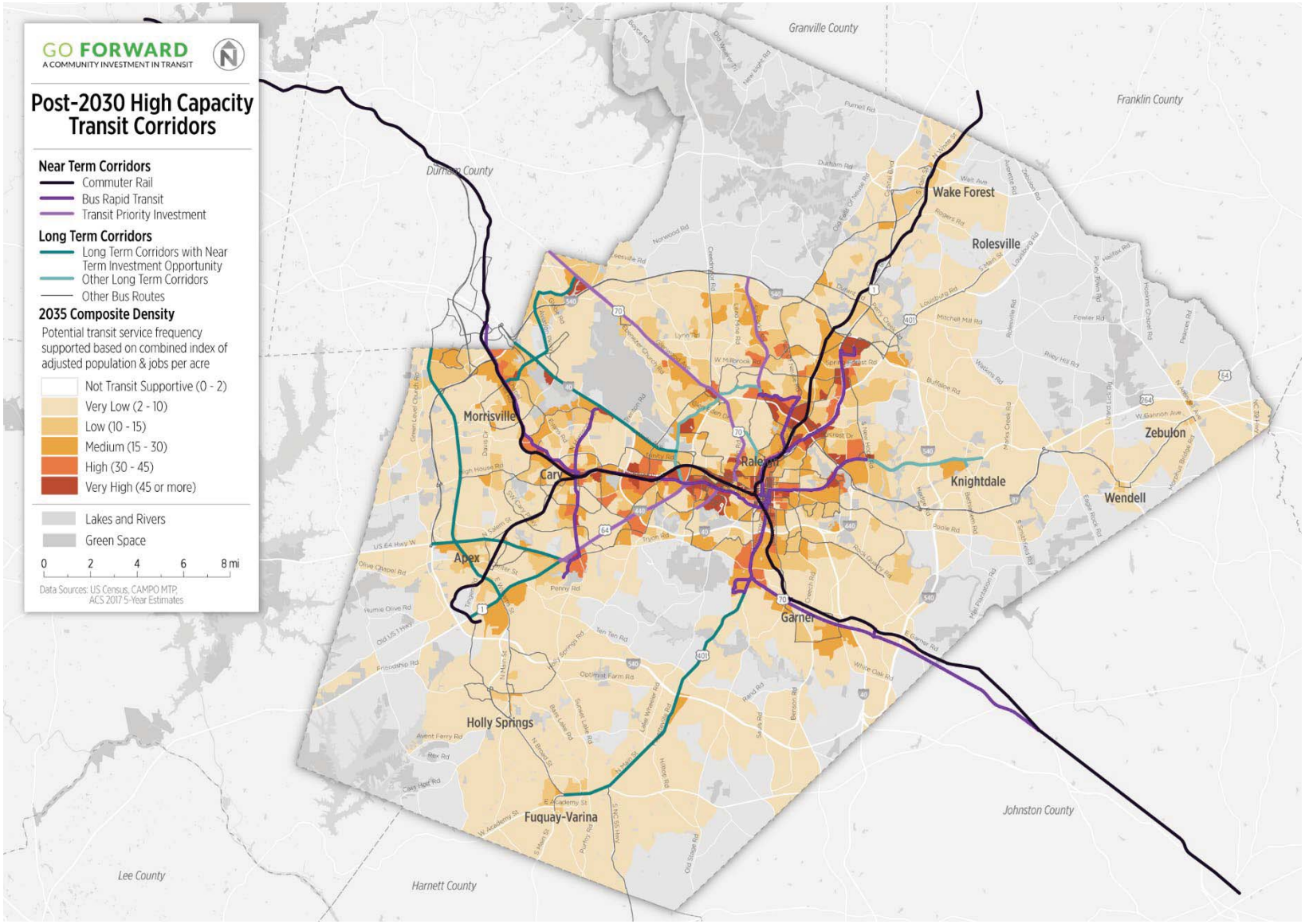
VISION FOR THE FUTURE: BEYOND 2030

As part of the original Wake County Transit Plan, residents and stakeholders expressed a need for ongoing transit investment beyond the initial 10-year plan horizon and the horizon of this update to the plan, which extends the investment schedule through 2030. The Wake County Transit Plan created a sustained dedicated revenue stream to strengthen and improve transit in response to demand and need. As Wake County Transit Plan investments—CRT, BRT, and expanded frequent network—are successful, the county's transit providers will be able to leverage their success to secure additional state and federal funds to increase regional transit investments.

This Wake County Transit Plan Update does not include a detailed investment schedule after the 2030 horizon. However, the planning process suggested the following elements:

- Improve corridors with 30-minute headways to add them to the Frequent Network (15 minutes or better). Likewise, corridors and routes with 60-minute services could be improved to 30-minute routes.
- Add new bus routes within the county and increase frequency and duration of connections to municipalities.
- Add commuter rail service on the northern (CSX) rail corridor, potentially as far north as Wake Forest (may be constrained due to freight operations).
- Increase frequency on the east-west rail corridor (may be constrained due to freight and Amtrak operations if infrastructure assumed to be funded within the 2030 financial constraint for the first phase is not or cannot be sized to permit service expansion).
- Extend the east-west (NCRR corridor) CRT line past Garner into Johnston County (Wake County funds would be spent only for the County's share), and/or past Durham into Orange and Alamance Counties.
- Extend BRT improvements further along the first four (4) corridors or make additional infrastructure improvements on the initial corridors and add BRT improvements along other candidate corridors. In the immediate post-2030 term, candidate corridors include, but are not limited to: 1) extensions of BRT infrastructure to Triangle Town Center and BRT infrastructure and service to North Hills in northern Raleigh; and 2) BRT infrastructure and service on Harrison Avenue and Kildaire Farm Road from I-40 to the WakeMed Cary campus at U.S. 1/64 in southern Cary.
- Continue to improve bus stops and access to bus stops (identified as an emphasis through the transit plan update).

Figure 15 Potential Post-2030 High-Capacity Transit Corridors



- Continue to Identify and take advantage of opportunities to invest in transit-supportive infrastructure that provides operational benefits for transit along roadways that are otherwise targeted for capacity improvements (identified as an emphasis through transit plan update process).

While extensions of BRT infrastructure to Triangle Town Center and BRT infrastructure and service to North Hills have been identified as possible post-2030 investments, the actual extent of the Wake BRT: Northern Corridor to be implemented by 2030 may incorporate one or some part of one of these extensions. Further study for the Wake BRT: Northern Corridor, which is scheduled to occur within the next couple of years, will determine the actual extent of both BRT service and infrastructure.

This update to the Wake County Transit Plan also identified specific corridors, at a regional scale, for additional high-capacity transit services or associated improvements. These corridors were identified through stakeholder input, reviews of other regional and sub-regional plans with transit recommendations, and by analyzing projected population and job density growth along major corridors (see **Figure 15**). High-capacity transit investments may include a range of technologies, including CRT and BRT, as well as various elements of speed-and reliability-enhancing infrastructure such as dedicated transit lanes, signal priority, bus on shoulder, queue jumps for transit vehicles, transit use of managed lanes, and transit access points on limited access highways.

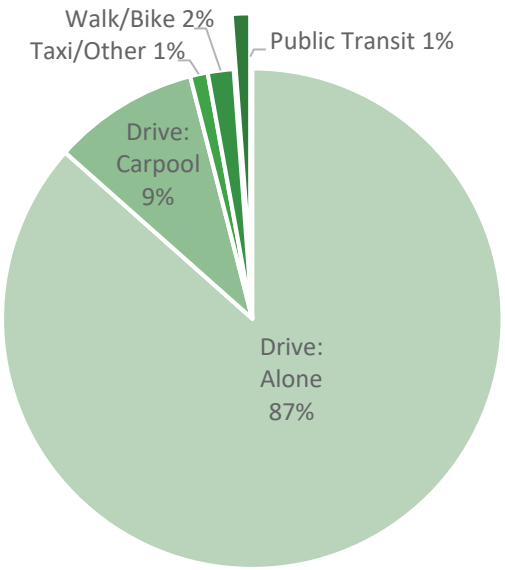
While they are not identified in **Figure 15**, it is important to note that a number of other facilities that serve more local, rather than regional, needs will likely also be ripe for investment in speed- and reliability-enhancing infrastructure improvements, such as RED lanes. RED lanes are bus priority lanes adjacent to general purpose travel lanes, typically in more constrained urban environments, that provide speed and reliability benefits to transit vehicles while facilitating right and left turns from adjacent land uses for regular traffic. A number of streets in the urban core of Wake County, particularly in Raleigh, have been identified for this potential type of investment.

Additional detail on the regionally serving corridors identified for post-2030 investment is included in **Appendix G: Post-2030 Unconstrained High-Capacity Transit Corridors**. These corridors will be considered for potential investment in the both the near-term and long-term through the development of the transit elements for the 2050 CAMPO Metropolitan Transportation Plan and comprehensive transportation plan updates, respectively.

Chapter 3: 2020 Market Reassessment

Because of Wake County's rapid population and job growth, the transit market throughout the county has the potential change very quickly. As the county grows, certain areas grow denser and become more amenable to supporting higher intensity transit service. Other previously undeveloped areas are developed, creating new origins and destinations to serve throughout the county. Accordingly, periodic updates to the Wake County Transit Plan require a refreshed look at the countywide transit market with the most recent available data to stay apprised of these changes and their implications for transit investment.

Figure 16 Means of Transportation to Work in Wake County



Source: ACS 2017 5-Year Estimates

Wake County, like much of the United States, was developed around a transportation network reliant on private automobiles. Reliance on this single mode of travel shapes current travel patterns. In 2017, 87% of Wake County residents drove alone to work, 9% carpooled, 2% walked or biked, and 1% took transit (see **Figure 16**). Though much of the county is rural or suburban, transit can be an attractive and reliable option in denser areas or between dense areas.

The Wake County Transit Plan and this plan update used a transit market analysis to understand where there is demand and need for public transit to ensure that investments continue to be matched with need and to identify any emerging markets that are ripening for more intensive investment in transit. The analysis also helps identify areas where improvements can encourage more people to use transit services. The complete analysis can be found in **Appendix B: Transit Market Reassessment Report**.

TRANSIT DEMAND BASED ON DENSITY

Population and employment density are the most important factors that determine the underlying demand for transit due to the following reasons:

1. Most people are willing to walk between one-quarter and one-half of a mile, or five to ten minutes, to get to a transit stop, and potentially longer distances to heavy rail services.[1] The travel market is directly related to how many people live and work close to transit stops.
2. In order to serve the greatest number of people, transit service levels must be matched with demand. Providing frequent service in the areas with the highest demand can get more people to their destinations faster and more reliably.

[1] **FHWA Pedestrian Safety Guide for Transit Agencies 2013**

3. To attract travelers who often drive, transit must be able to get most people to the places with the highest demand in a cost- and time-competitive manner.

Additionally, the street environment affects people's access to transit. Transit services are most effective when paired with sufficient and well-lit sidewalks and crosswalks that allow people to safely reach bus stops. Even in the places with the highest density, people may not use transit services if stops are not in a walkable environment.

Lastly, it is important to recognize that areas without some level of population and employment density may not provide an environment where fixed-route transit can generate enough ridership to succeed.

Figure 17 Land Use and Supported Types of Transit

LAND USE			TRANSIT	
Land Use Type	Residents per Acre	Jobs per Acre	Appropriate Types of Transit	Frequency of Service
Downtowns & High Density Corridors	>45	>25	Light Rail, BRT, Rapid Bus, Local Bus	10 mins or better
Urban Mixed-Use	30-45	15-25	BRT, Rapid Bus, Local Bus	10-15 minutes
Neighborhood & Surburban Mixed-Use	15-30	10-15	Local Bus	15-30 minutes
Mixed Neighborhoods	10-15	5-10	Local Bus, Micro-transit	30-60 minutes
Low Density	2-10	2-5	Micro-transit, Rideshare, Volunteer Driver Pgm	60 mins or less or On Demand
Rural	<2	<2	Rideshare, Volunteer Driver Pgm	On Demand

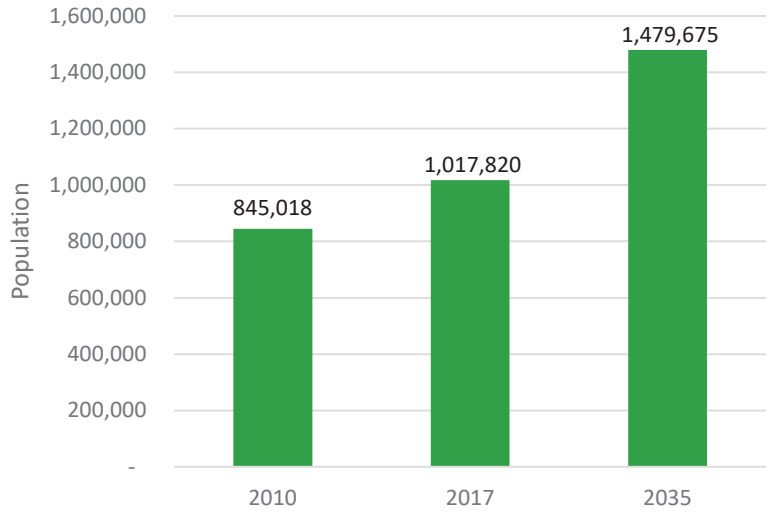
Source: Thresholds based on research by Nelson\Nygaard.

In these instances, Wake County and its partners can explore alternative types of transit, such as shared mobility solutions. Different levels of residential and employment density are supportive of different levels of transit. Most of the land area of Wake County is low density or rural (**Figure 17**).

Population Density

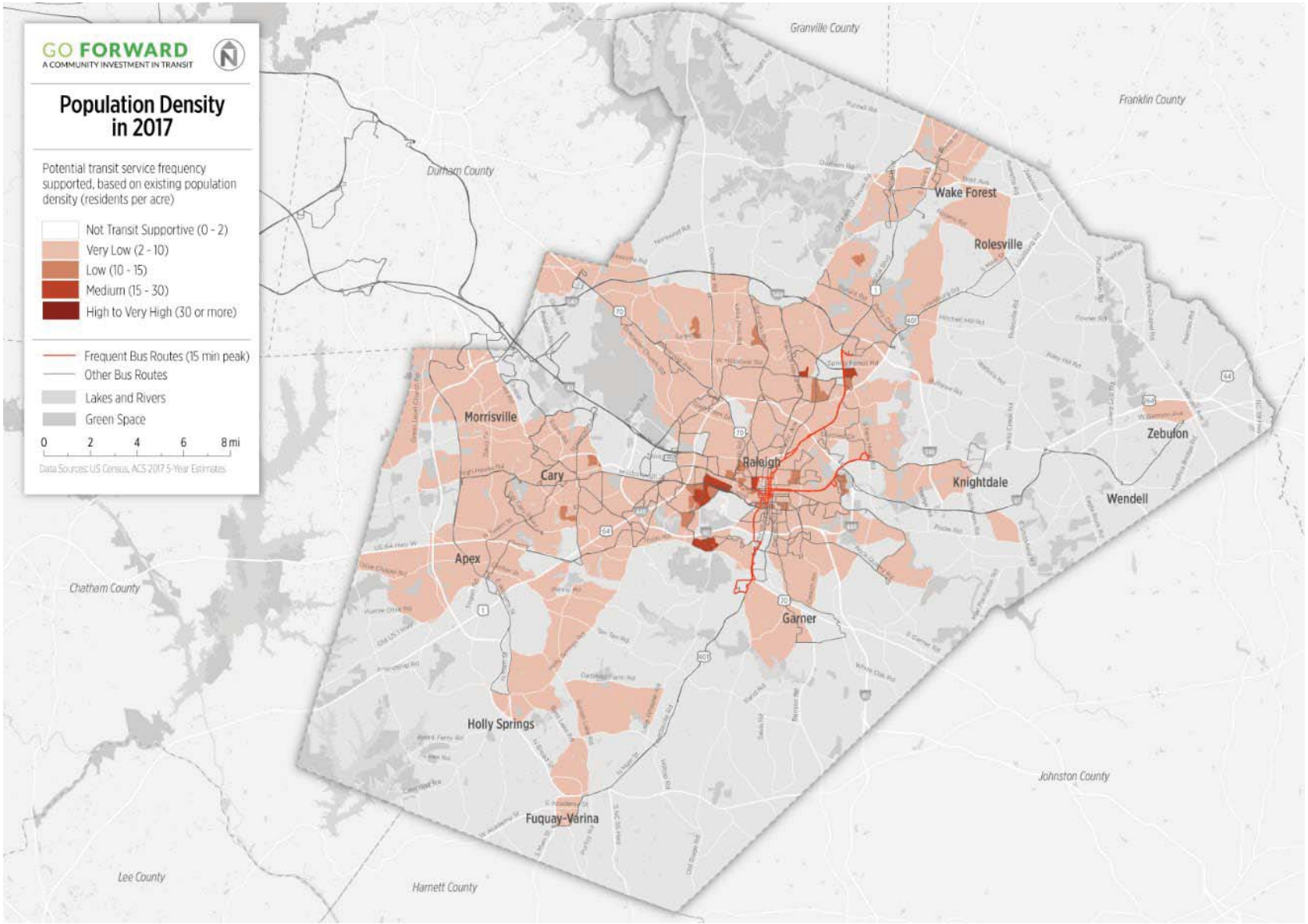
Wake County is rapidly growing, but most of the county still has very low population density, except for Downtown Raleigh, the western part of Raleigh near North Carolina State University, and parts of northeastern Raleigh. Between 2010 and 2017, the population of Wake County grew by 20.5% from 845,000 residents to 1,018,000 residents, and it is expected to grow by another 45% by 2035 (**Figure 18**). Much of this population growth was in the smaller, outer-area towns of Wake County, such as Apex, Morrisville, and Wake Forest (**Figure 19**).

Figure 18 Wake County Population in 2010, 2017, and 2035



Source: ACS 5-Year Estimates, CAMPO MTP

Figure 19 Wake County Population Density in 2017



Transit Propensity

In addition to population density, socioeconomic characteristics influence people's propensities toward using transit. Many population groups often have a higher propensity for transit than the overall population. This generally includes groups that are more disadvantaged in society, such as communities of color, foreign-born residents, low-income families, and people without access to personal vehicles.

When a significant number of people from these socioeconomic groups live in clustered areas, the underlying demand for transit in these areas may be higher than is captured by just looking at population density. Conversely, in areas where transit-supportive groups have lower representation, the transit demand may be lower than what is captured purely by population density.

Taking these factors into account, the project team calculated a measure called the **Transit Propensity Adjustment Factor**, which measures how many times more likely certain demographic groups or residents in an area are to use transit to get to work as compared to the general population. Findings are as follows:

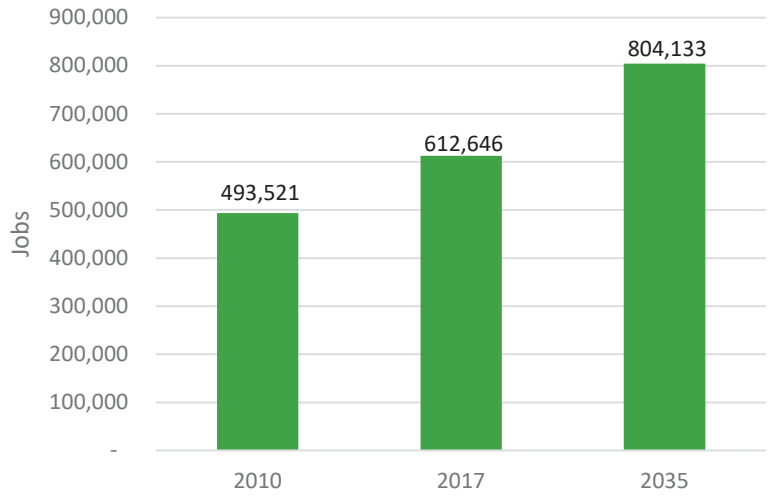
- **Race and Ethnicity:** Black residents of Wake County are 2.1 times more likely, and Asians and Latinos 1.4 times more likely, to use transit to get to work than the average resident, likely due to more limited resources for transportation and denser neighborhoods closer to the city center.
- **Foreign-Born Residents:** Residents born outside of the United States are 1.5 times more likely to use transit than the average resident in Wake County.
- **Poverty Level:** People who live below the poverty level are 4.2 times more likely to use transit to get to work in Wake County.
- **Car Availability:** Workers who live in households without a car are 15.8 times more likely than the average worker to use transit to get to work in Wake County.

Figure 21 shows the Transit Propensity Adjustment Factors applied to different areas of Wake County, based on their demographic makeup. Raleigh has the highest transit propensity, especially towards the south, northeast, and west towards Cary. The Highway 1 corridor to Wake Forest and the Highway 264 corridor to Zebulon also have high transit propensity factors. Other than town centers, most of the rest of Wake County has low transit propensity factors. These transit propensity factors can be applied to the prior population density map to get an adjusted population density that better fits transit demand.

Employment Density

The number of jobs in Wake County increased by 24% between 2010 and 2017, from 494,000 to 613,000 jobs (**Figure 20**). By 2035, it is expected to increase to 804,000 jobs in the county. Jobs are most highly concentrated in Raleigh and Cary, with notable levels of job density in Morrisville/RTP as well (**Figure 22**). Within Raleigh, jobs are concentrated along major corridors and the I-440 loop. Between 2010 and 2017, job density increased in Morrisville/RTP and northeastern Raleigh.

Figure 20 Wake County Jobs in 2010, 2017, and 2035



Source: ACS 5-Year Estimates, CAMPO MTP

Figure 21 Transit Propensity Adjustment Factor Map

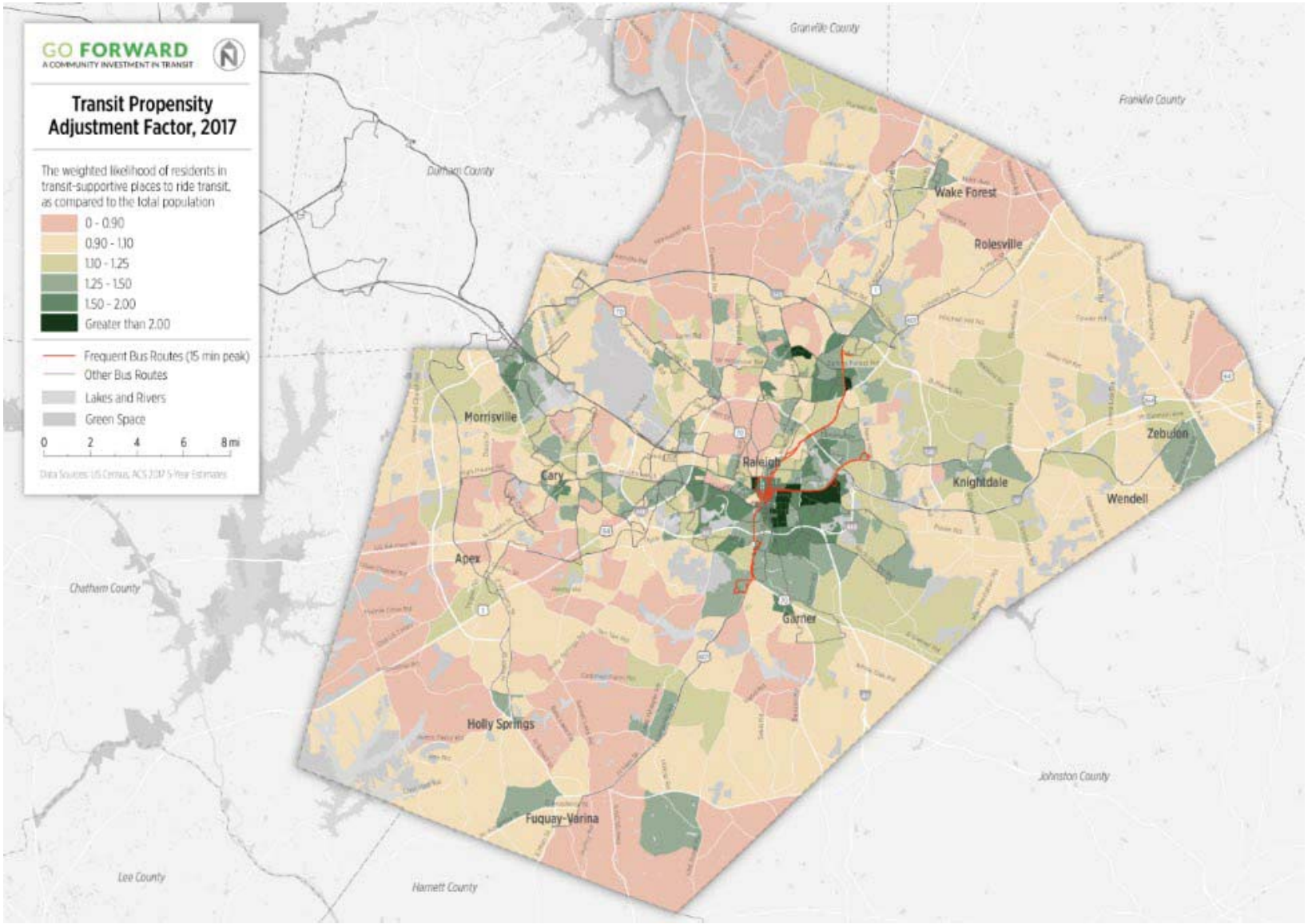
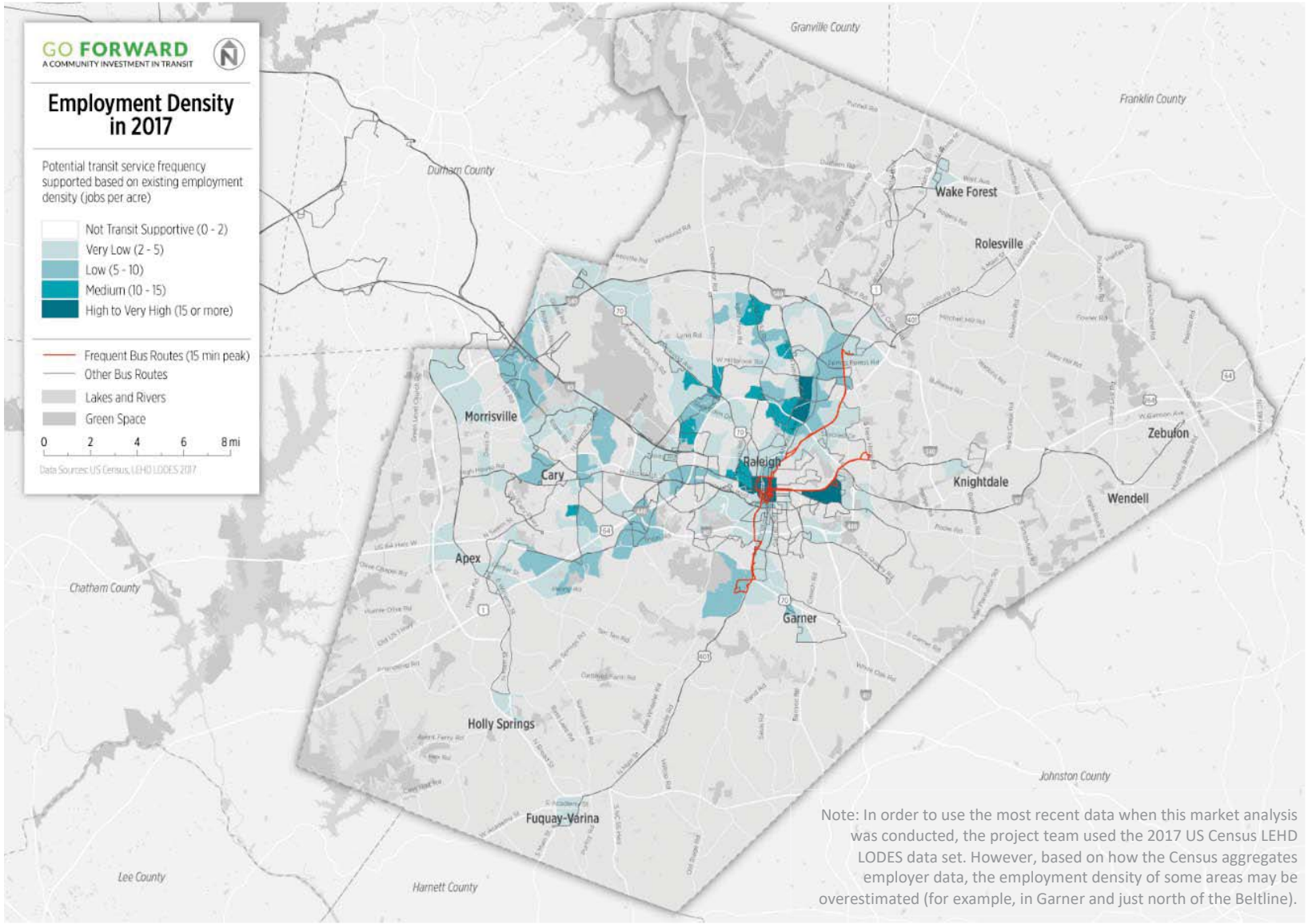


Figure 22 Employment Density in 2017



Though this analysis only considers the total number of jobs, it is important to note that some groups of workers, such as those with low wages and people of color, rely on transit to get to work more heavily than other groups. Additionally, the urban form of employment centers is important when considering the viability of transit. For example, transit can better serve a dense downtown with good walking conditions compared to a suburban office park without sidewalks.

Composite Density

Population density, socioeconomic characteristics, and employment density all play a role in the demand for public transit. The following map combines these factors into a **Composite Density**, showing the total transit demand in an area based on where people live and work. The composite density is equal to the population density, adjusted by the transit propensity adjustment factors, plus twice the employment density, which accounts for both the workers themselves and customers who visit the job sites.

The composite density map (**Figure 23**) shows some level of density in most of the incorporated cities and towns in Wake County. Density is most heavily concentrated in Raleigh, especially downtown, the southeastern region, the northeastern region, and west to Cary.

Looking Ahead to 2035

By 2035, Wake County's population is projected to nearly have doubled from 2010 and grown by another 462,000 people from 2017. This assumed growth is represented throughout the county, both in already dense areas and in areas currently without much transit demand. There is a projected increase in the rural and suburban population, especially in the southern half of the county: Holly Springs, Fuquay-Varina, Garner, Knightdale, and Wendell. Similar to the change in population, Wake County also expects a large increase in the number of jobs by 2035. Between 2010 and 2035, employment is projected to increase by over 63% to about 804,000 jobs.

Combining the adjusted population and employment densities in 2035 into a composite density shows a clear projected increase in transit demand in Wake County in the future, as seen in **Figure 24**. Though most of the county is projected to still have very low density, the more dense and urban areas show an increased need for transit.

Composite density is concentrated in the following areas:

- Downtown Raleigh and the area immediately surrounding downtown
- Northeastern Raleigh along Capital Boulevard
- Eastern Raleigh along New Bern Avenue
- Southern Raleigh along Wilmington Street
- Northern Raleigh along I-440 loop
- Between Raleigh and Cary along Western Boulevard
- Between Cary and Morrisville/RTP
- Parts of Apex, Garner, and far northwestern Raleigh around Brier Creek

Figure 23 Composite Density in 2017

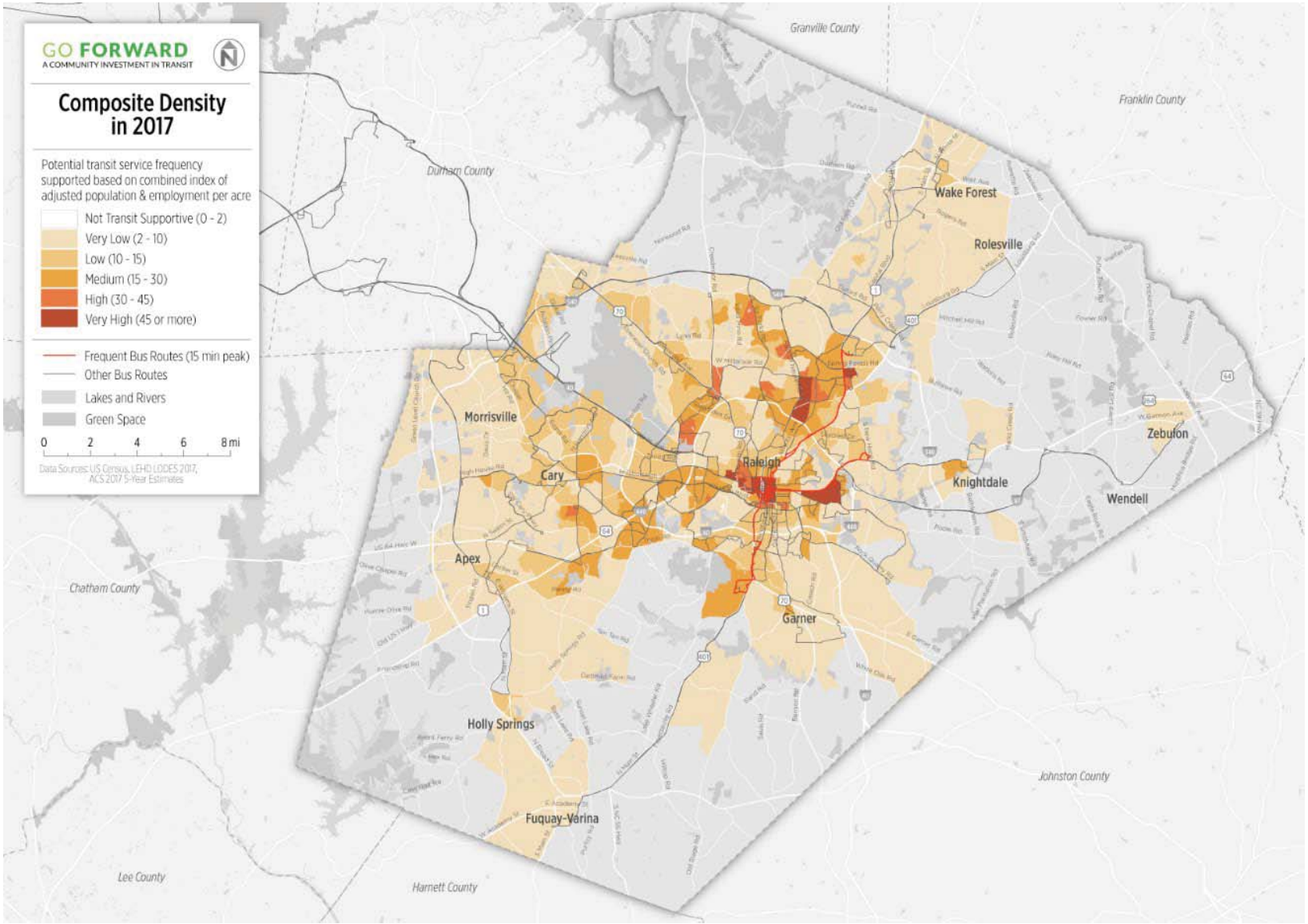
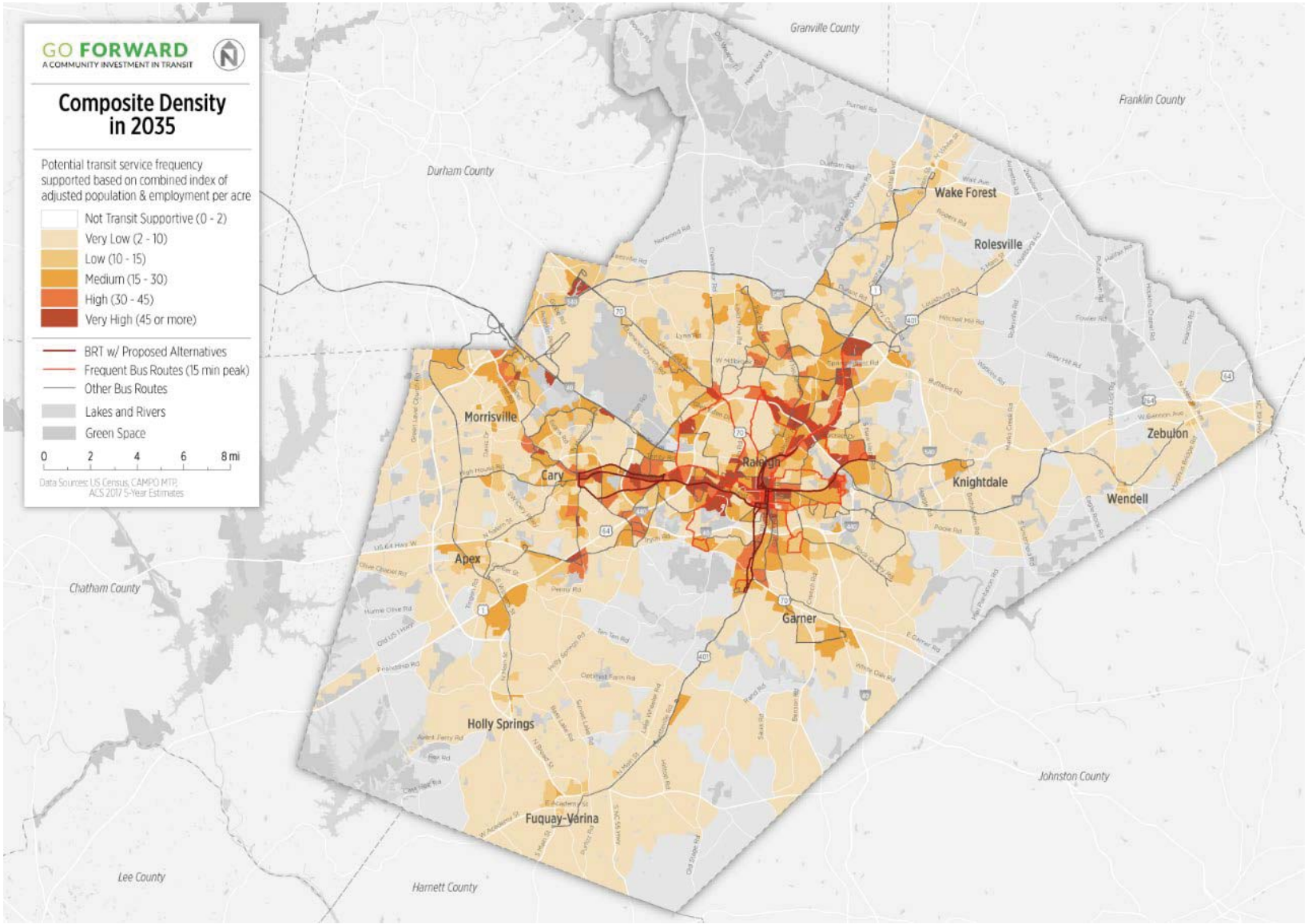


Figure 24 Composite Density in 2035



OTHER FACTORS AFFECTING TRANSIT DEMAND

Pedestrian Environment

The pedestrian environment is a major consideration for transit usage since most transit riders walk between their origin or destination and their bus stop. A safe, comfortable, walkable environment is more conducive to transit ridership. Additionally, buses run faster and more reliably when they can stop on a major street rather than weave in and out of parking lots, but for the former to be convenient for riders, the final destinations must be within a reasonable walking range and environment to the bus stop. Factors that affect walkability and transit ridership include, but are not limited to:

- Sidewalks, crosswalks, and lighting
- Proximity to diverse sets of housing, services, offices, and other employment sites
- Intersection density, or the number of intersections within an area
- Transit availability and parking prices

Downtown Raleigh, parts of northern Raleigh, and parts of Cary have the greatest intersection density and are currently relatively well served by transit services. Most other areas of the county have low intersection density, and thus have pedestrian environments that may be difficult to serve via transit without additional pedestrian infrastructure improvements.

Activity Centers

Some activity centers generate additional demand for transit that are not captured by the previous density analyses. Wake County's major activity centers and points of interest include, but are not limited to:

- Hospitals, such as WakeMed Cary and Duke Health Raleigh Hospitals
- Shopping centers, such as Crabtree Valley Mall and Triangle Town Center Mall
- Major employers and job centers, such as in Research Triangle Park

Colleges and universities are also major activity centers and are discussed in the following section. In general, these activity centers differ in terms of their environment and ability to be served by transit. For example, WakeMed Hospital in Raleigh and UNC Rex Hospital have relatively walkable urban fabrics and can be well served by fixed-route transit. In contrast, Research Triangle Park is more difficult to serve with fixed-route transit due to its office park nature and the requirement that 50% of each lot is preserved as woodlands.

Since many of these activity centers are in rural and suburban areas, otherwise without much transit demand, fixed-route buses may not be the best option. Demand response services or circulators are potential ways to serve these areas.

Colleges and Universities

Trips to education facilities are a major travel purpose in Wake County, second only to travel to jobs. Wake County has eight post-secondary institutions, including the Wake Technical Community College which has numerous campuses. Of the eight post-secondary institutions, North Carolina State University (NCSU) has the highest enrollment by far at 35,479 students. Most colleges and universities in Wake County are clustered close to downtown Raleigh, though there are also large Wake Tech campuses to the north and south. Every post-secondary institution is currently served in some capacity by fixed-route transit, except for the Wake Tech Western Wake Campus in southern Cary.

It is important to note that colleges and universities are also major employment centers. Compared to traditional employment trips, however, trips to schools are less likely to follow a conventional morning and afternoon peak schedule. There is likely a larger spread of times in which travel to education facilities occurs, due to varying class times and the academic calendar.

TRAVEL PATTERNS

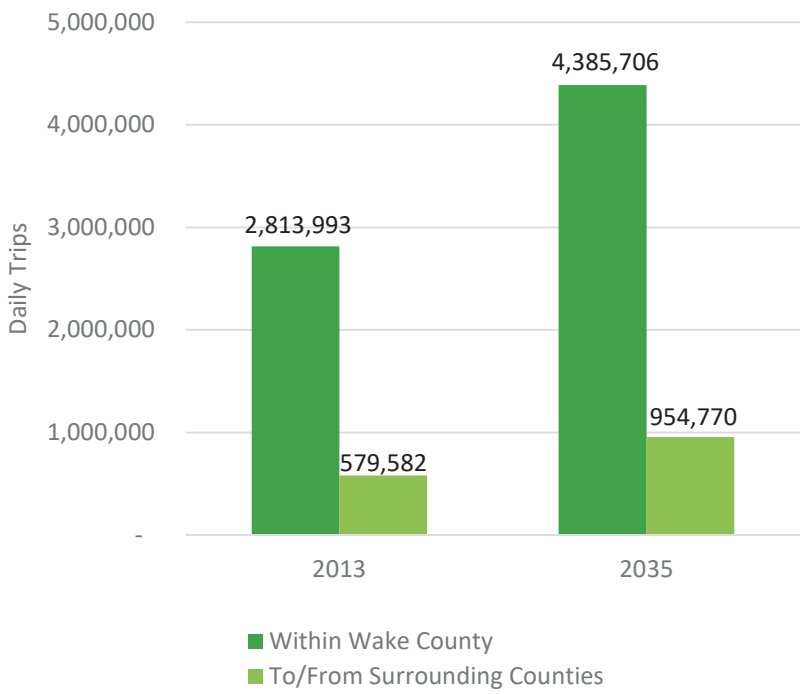
Travel flows show the places that people travel between, within, and outside of Wake County. The total number of daily trips for Wake County is projected to increase by 57% between 2013 and 2035 (**Figure 25**). For this analysis, the project team divided the county into travel zones based on existing towns, cities, and neighborhoods. **Figure 26** and **Figure 27** show the average daily trips made on all transportation modes within or between the zones, with 2013 as the base year. Visualizing these flows can provide an understanding of where travel markets exist for transit to potentially capture.

In 2013, Cary and the northwestern and northeastern parts of Raleigh exhibited the greatest number of intra-zone flows. Between zones, flows were strongest coming into and out of Cary and the northeastern part of Raleigh.

By 2035, there will be an all-around increase in intra-zone flows, especially in the western part of Raleigh (NC State), Downtown Raleigh, the eastern part of Raleigh, Garner, and Fuquay-Varina. Flows between zones also increase county-wide, especially in zones and towns in the southern half of the county. Though Raleigh has the greatest number of flows, the flows into and out of Cary are also very strong. Garner also emerges by 2035 as an area with a greater number of daily trips.

Additionally, between 2013 and 2035, flows between areas of Wake County and the surrounding counties will also increase, especially to Durham County, Harnett County, and Johnston County.

Figure 25 Wake County Daily Trips in 2013 and 2035



Source: CAMPO MTP

Figure 26 Intra-Zone Travel Flows in 2013

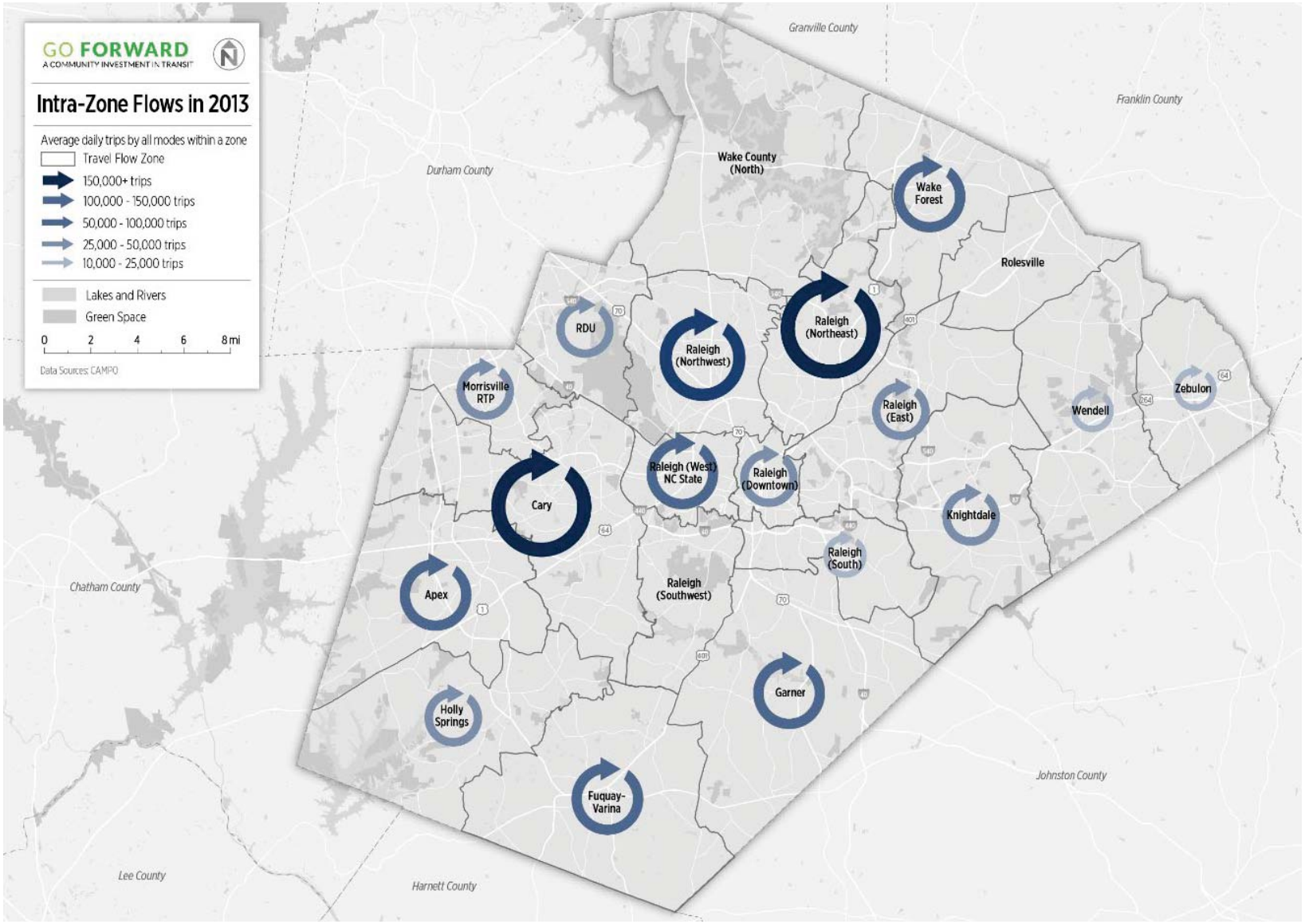
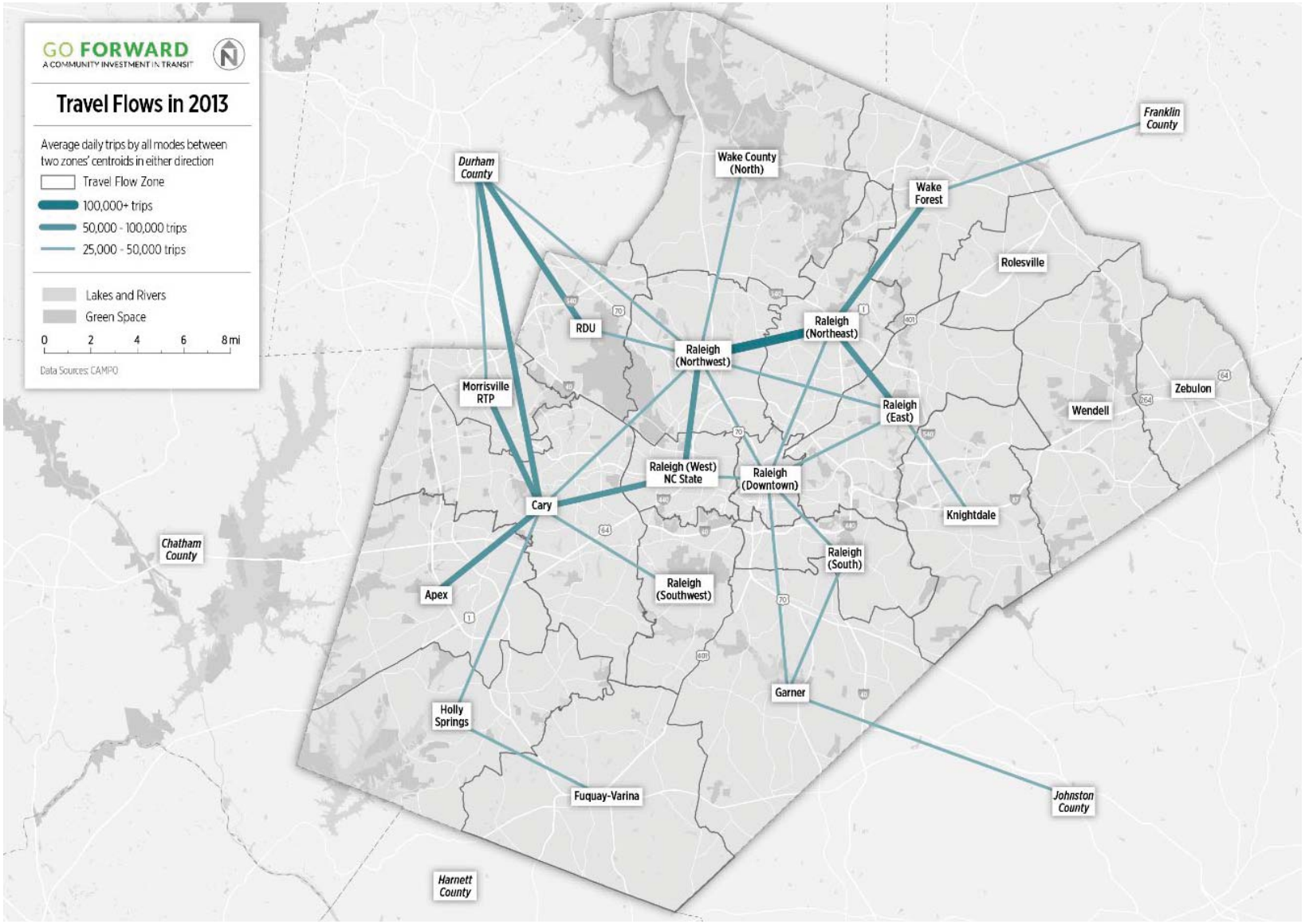


Figure 27 Inter-Zone Travel Flows in 2013



CONGESTION

Figure 28 and **Figure 29** compare the congestion in 2013 with predicted congestion in 2035. As expected with population and employment growth, congestion gets significantly worse. In 2013, most local roads were below capacity. Highways are mostly at capacity, except for parts of I-40, I-440, Highway 1, and Highway 401, which are above capacity. By 2035, most highways and major arterials are above capacity, and local roads are at a mix of at-capacity and below capacity.

These congestion maps highlight the importance of planning and policy that prioritizes reliable and frequent transit so that people have a high-quality option for transportation other than driving. On key corridors and highways with high congestion, there is a need for dedicated rights-of-way for transit so that buses can get to stops and stations in a timely manner. These maps also highlight the importance of linking transportation and land use decisions, since concentrating development in areas where people do not have to drive can greatly ease congestion.

TRANSIT RIDERSHIP

Public transit currently represents a small share of commuting travel in Wake County, so analyzing current ridership patterns can help determine improvements for transit in the future. On an average weekday in 2018, GoTriangle served about 7,000 trips, GoRaleigh served about 22,000 trips, and GoCary just under 1,000 trips. The highest ridership stops in Wake County are GoRaleigh Station, the Regional Transit Center (RTC), and NC State.

Figure 30 shows transit ridership by stop overlaid on the 2017 Composite Density layer (stops with fewer than 10 boardings per day are not shown). In general, transit ridership is highest in downtown Raleigh and along corridors with frequent bus routes. The stops with higher ridership generally match the places with relatively higher composite densities. Some notable areas with relatively higher composite density that do not have high ridership include:

- Cary outside of downtown Cary and Cary Towne Center
- Northwestern Raleigh from I-440 to Brier Creek

Ridership may be low in these areas as a result of many possible factors, including a lack of adequate pedestrian infrastructure, low frequency or limited hours provided for existing transit service, or lower than usual demand.

TRANSIT MARKET CONCLUSION

Continued implementation of the investments envisioned in the original Wake County Transit Plan and the limited new investment included with this transit plan update comport with many of the needs identified by this refreshed market outlook. However, market conditions and trends point to the need for additional investment beyond the 2030 horizon of this plan update. A more involved assessment of additional investments to fill these needs will be examined through subsequent updates to the transit plan. However, the 'Vision for the Future: 2030 and Beyond' section of Chapter 2 and Appendix G: Post-2030 Unconstrained High-Capacity Transit Corridors identify many candidate high-capacity transit investments that are geared toward addressing these needs based on current market projections.

Figure 28 Congestion 2013

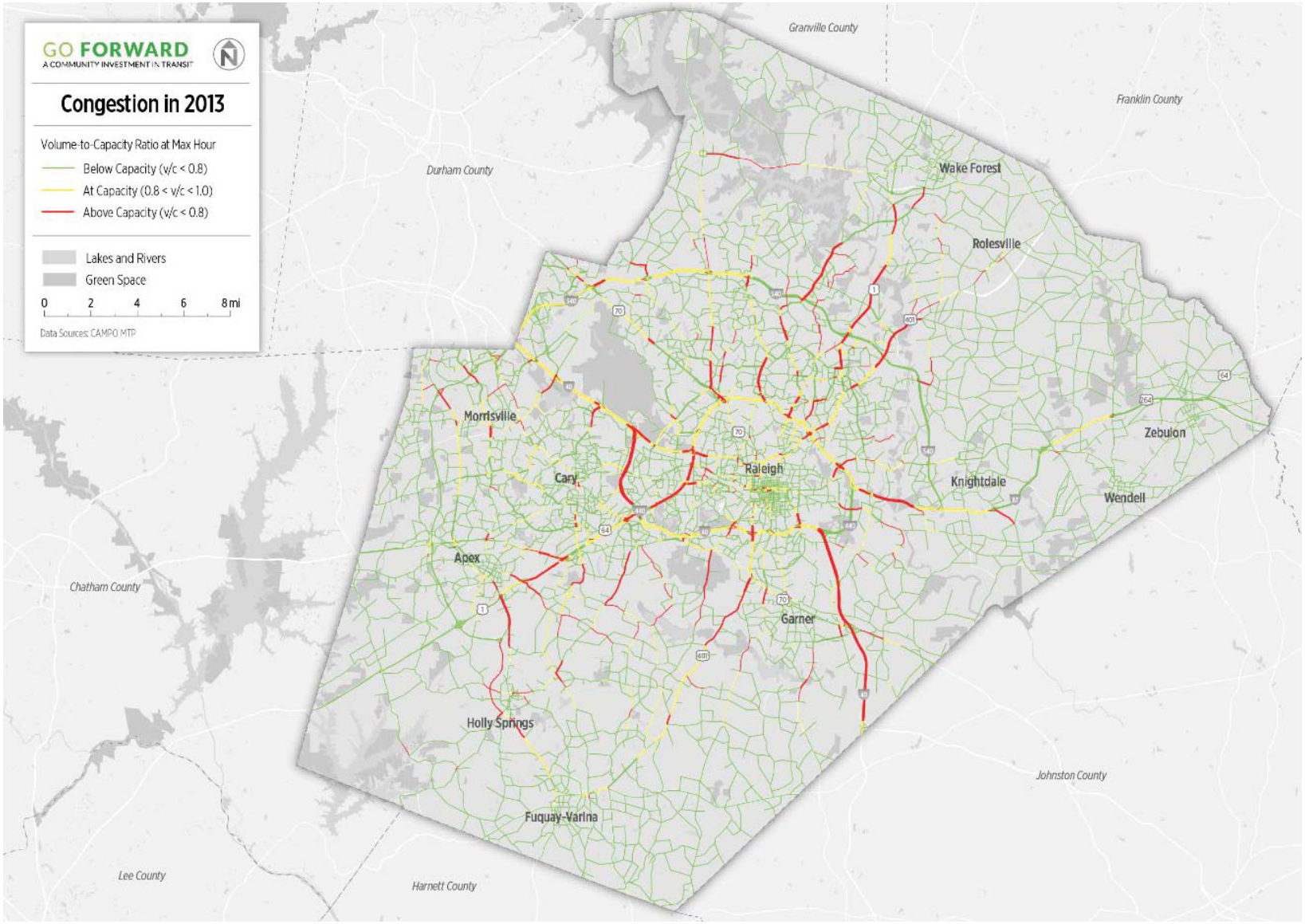


Figure 29 Congestion in 2035

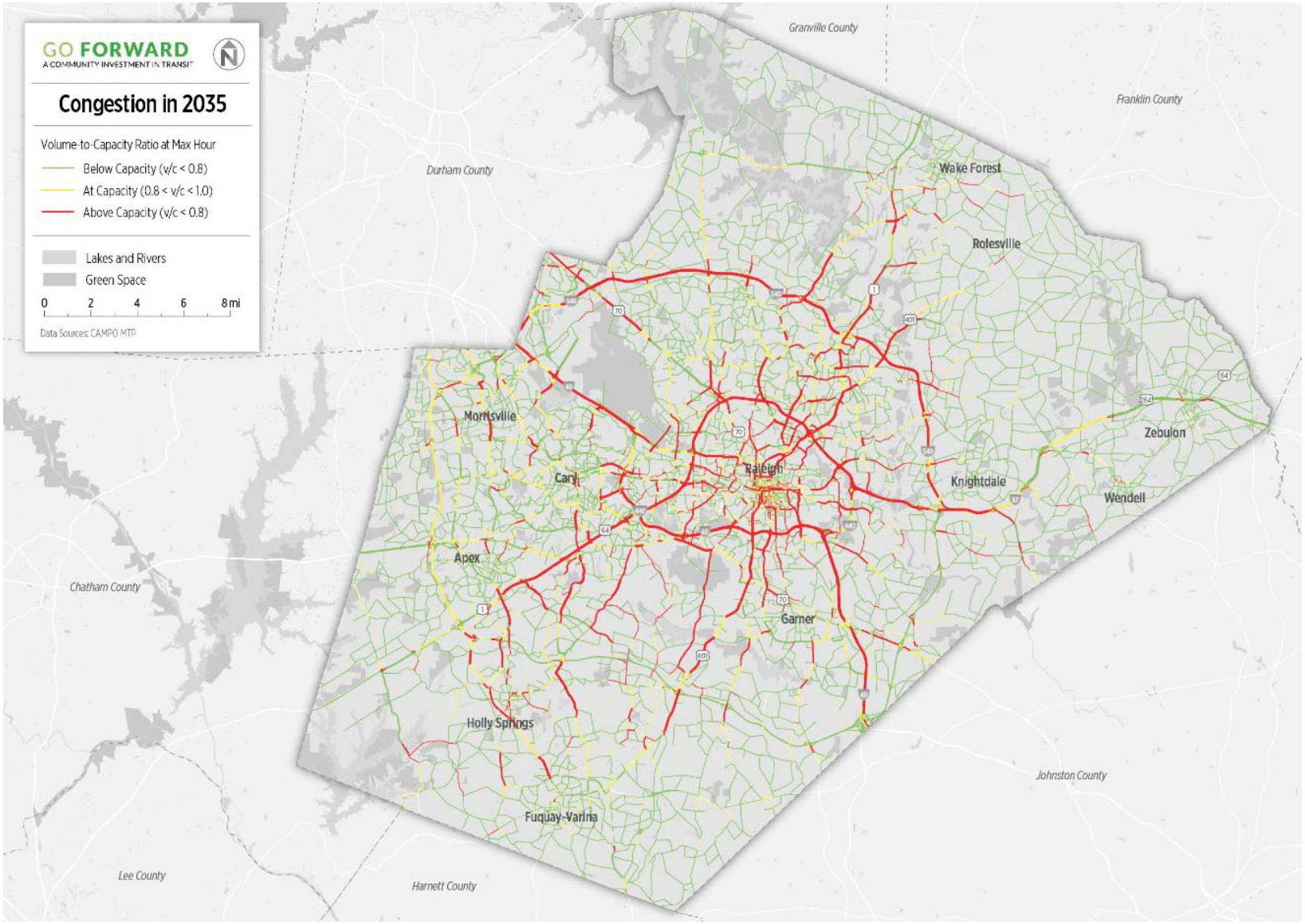
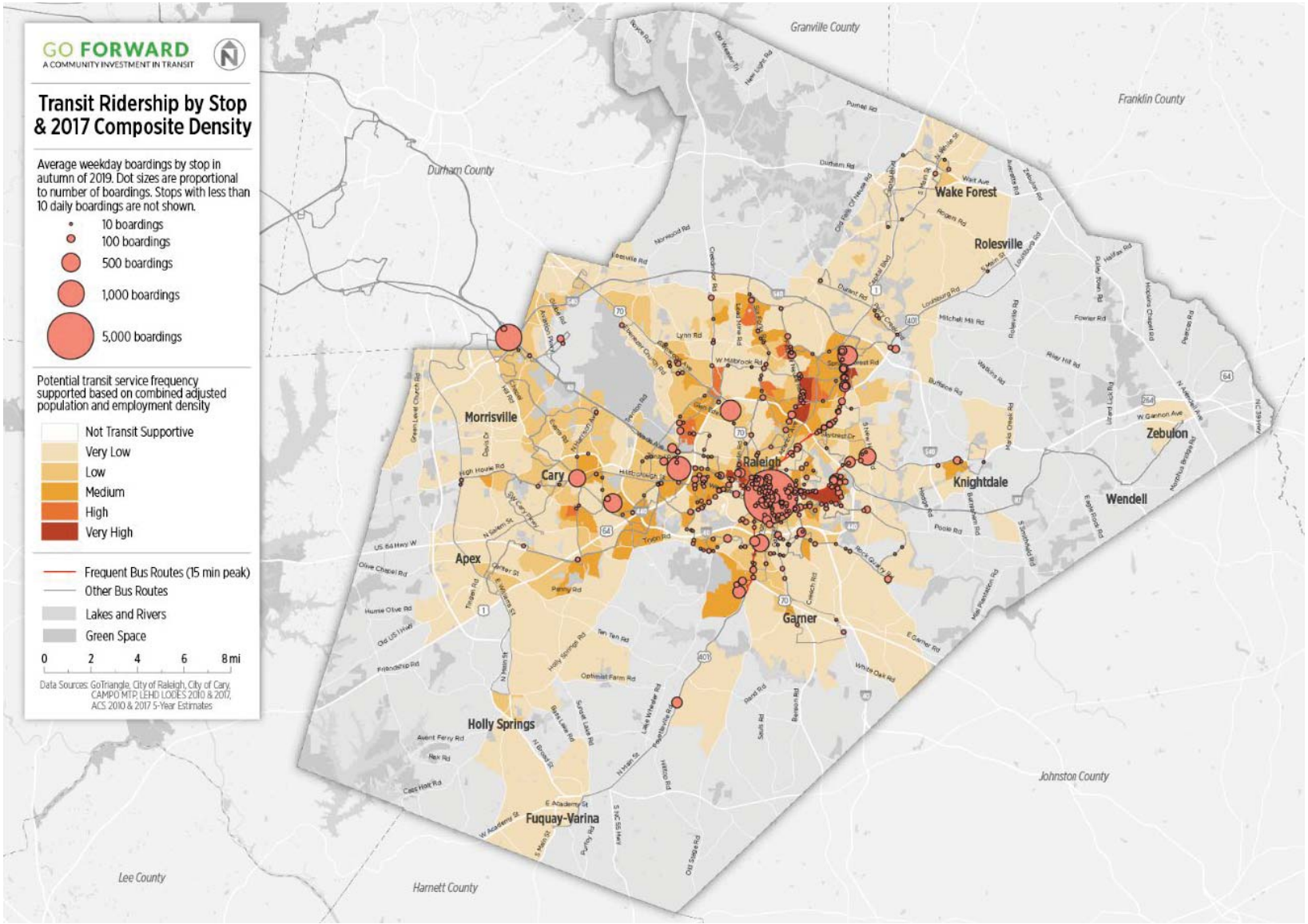


Figure 30 Transit Ridership by Stop and 2017 Composite Density



Chapter 4: Financial Plan

FINANCIAL PLAN DETAILS

The Wake County Transit Plan and this subsequent update are fiscally constrained and are contingent on a variety of financial assumptions coming to fruition. This update to the Wake County Transit Plan extends the original 2027 financial constraint through 2030. These assumptions evolve as better information becomes available for various investments, and projections are updated to reflect actual results. Many projects included in the original Wake County Transit Plan have undergone further feasibility study, and new cost and implementation timeline information has been used to modify and refine assumptions that were originally made for the plan adopted in 2016. As implementation progresses, projects included in the transit plan will continue to be studied, and new information will continue to influence their cost and timing. Additionally, overall inflation assumptions, availability of local sources of revenue and their growth assumptions, competition for federal funding for projects and successful access to capital markets, and regional partnerships will continue to influence the overall financial outlook of the transit plan. The following sections detail current assumptions and provide a comparison to assumptions made for the original Wake County Transit Plan.

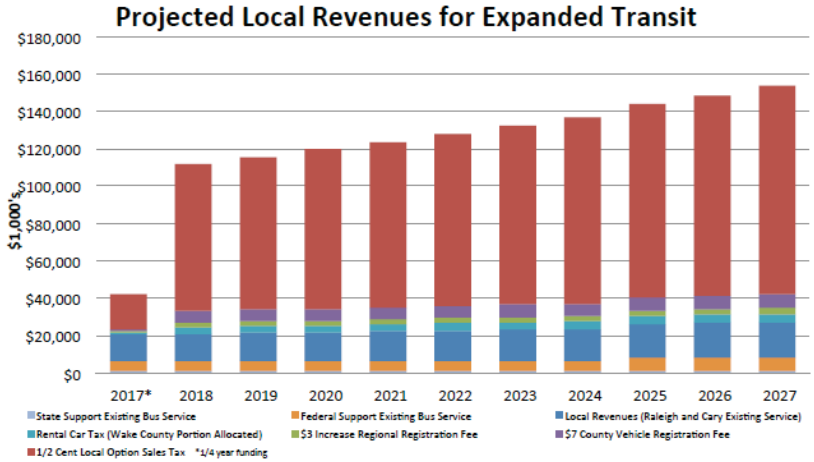
SOURCES OF REVENUE

Half-Cent Sales Tax for Transit (Article 43)

The largest recurring local revenue source supporting the Wake County Transit Plan is a half-cent local option sales tax, as authorized by NCGS Chapter 105 Article 43. This tax was approved by the voters of Wake County on the general election ballot in November of 2016. Collection of these revenues began in the spring of 2017.

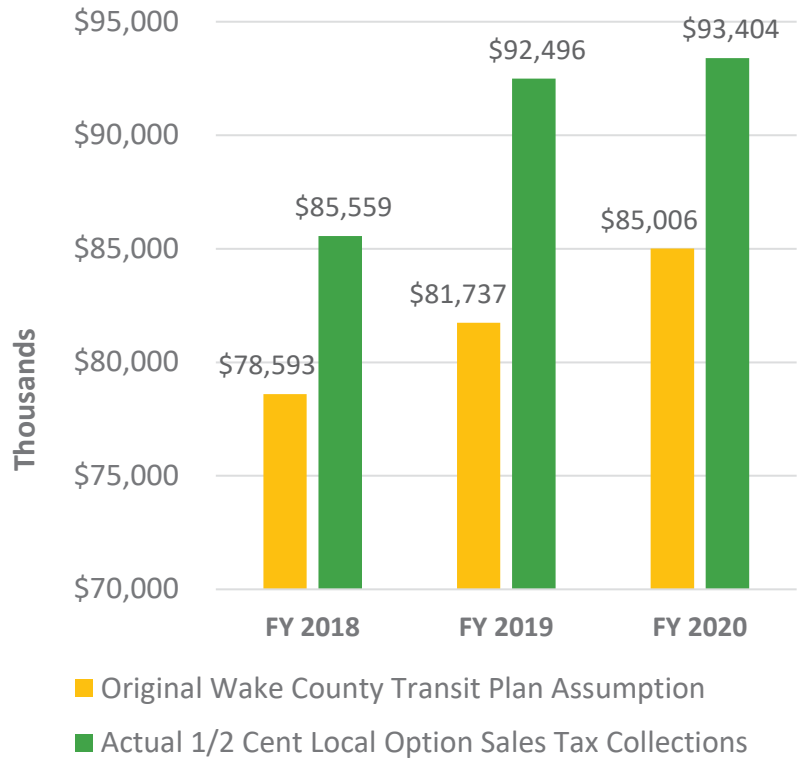
For the original Wake County Transit Plan that was adopted in 2016, sales tax collections were projected using actuals for Wake County's Article 39 local option sales tax gross revenues, with fiscal year 2015 serving as the base, less 10%, as Article 39 collections include food purchases, which are prohibited to be taxed as part of Article 43 (public transportation sales tax). Then, it was assumed that the local sales tax revenue would be half of that amount, as Article 39 is one (1) percent of applicable sales transactions and Article 43 is one-half (1/2) percent. Using the County's same assumption for sales tax growth that was used in the County's debt and capital financial model, this amount was grown annually by 4%. Accordingly, the alternatives included an assumption that the half-cent sales tax revenue available for new transit would be $78.5 million in FY 2018 and would grow by 4% annually thereafter. These original assumptions are depicted in **Figure 31**.

Figure 31 Projected Local Revenues for Expanded Transit for Original Wake County Transit Plan (2016)



As depicted in **Figure 32**, the original Wake County Transit Plan assumptions proved to be rather conservative in the first three (3) full fiscal years of sales tax collections. Collections exceeded original projections by approximately $3.9 million, $7.6 million, and $5.1 million in FYs 2018, 2019, and 2020, respectively. While actual sales tax collections initially exceeded original projections, and actual growth from FY 2018 to FY 2019 was slightly more than double (8.1%) the original year-over-year growth assumption of 4%, actual growth from FY 2019 to FY 2020 slowed to slightly less than 1%, likely as a result of the economic impacts of the Coronavirus Disease 2019 (COVID-19) pandemic during the latter half of FY 2020.

Figure 32 Comparison of Actual Sales Tax Collections to Original Transit Plan Assumptions

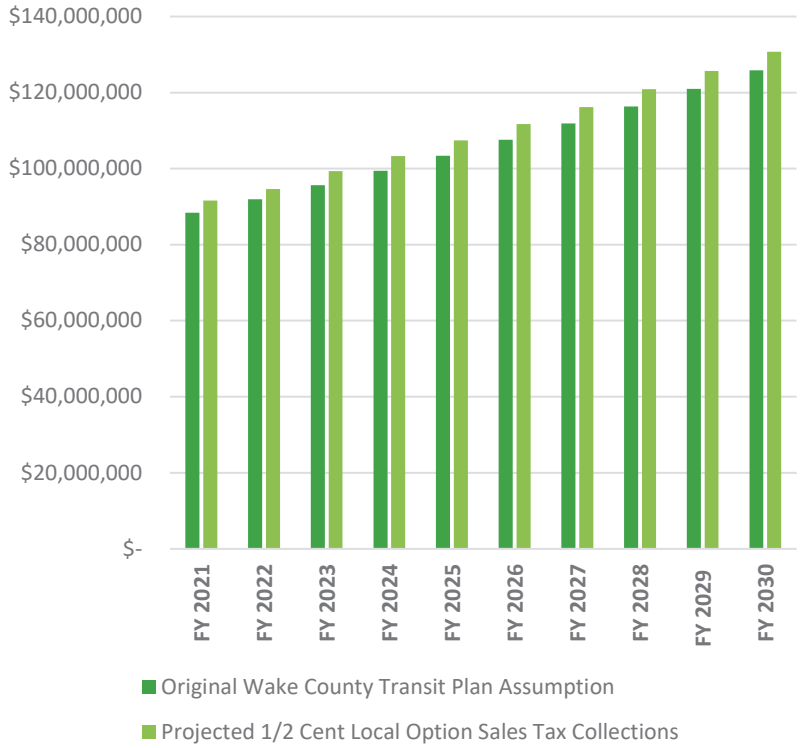


As explained in Chapter 1, the TPAC, in cooperation with CAMPO and GoTriangle, develops an annual Wake Transit Work Plan that includes periodic refinement of financial assumptions as a major component. Every year, assumptions for both anticipated revenues and expenses for various investments are reevaluated and adjusted based on progress to date and an examination of current and future market conditions. Because sales tax collections for FYs 2018 and 2019 were much higher than originally anticipated, and market conditions suggested a more optimistic than originally anticipated future outlook, sales tax collection assumptions were adjusted upward. Further, this assumed additional revenue was rebalanced with additional expenses or assumed increases in expenses for projects already included in the plan.

With social distancing and 'stay-at-home' measures to control the spread of COVID-19 imposed on residents statewide in March and April of 2020, economic activity in Wake County slowed immediately and in dramatic fashion. While it is known that sales tax collections to support transit investments decreased by a significant margin during the 4th quarter of FY 2020 (April-June), and collections have since experienced a substantial rebound, uncertainty surrounding downstream future-year impacts of the pandemic continues. Consequently, in the midst of the development of this plan update and shortly after the onset of the pandemic, Wake County Transit Plan implementation partners revisited what were previously assumed before the pandemic to be more optimistic conditions (based on actual collections and market conditions) compared to original transit plan assumptions.

Prior to the COVID-19 pandemic, projections that were adjusted for more optimistic conditions than the original transit plan assumed a total of $1,192,453,000 in sales tax collections from FY 2021 through FY 2030. With a re-evaluation of growth assumptions that tempered projections to account for revenue reductions as a result of the pandemic, new projections assumed a total of $1,101,442,705 in sales tax collections from FY 2021 through FY 2030. This is a $91 million, or 7.6%, reduction in assumed sales tax collections between the two scenarios. A more detailed summary of the assumptions used for sales tax collections for this Wake County Transit update and its comparison to pre-pandemic assumptions is included in **Appendix C: Recommended Financial Assumptions for Wake Transit Plan Update**.

Figure 33 Comparison of Transit Plan Update Sales Tax Projections to Original Transit Plan Assumptions



While adjustments to assumed expenditures had to be made to account for this reduction, the new assumption of sales tax revenue growth fell very closely in line with the collection assumptions made in the original transit plan through FY 2030 as depicted in **Figure 33**.

Other Local Revenue Sources

Increases to vehicle registration taxes also are included in the assumptions for local revenue sources. Prior to the adoption of the original Wake County Transit Plan, GoTriangle collected a tax of $5 per registration throughout Wake, Durham, and Orange Counties that is used to support transit activities in this three-county service area. This tax was increased by $3, for a total of $8 per registration. Further, a new $7 vehicle registration tax that did not exist prior to the adoption of the original Wake County Transit Plan was assessed by the Wake County Board of Commissioners, as authorized by NCGS 105-509. Together, the vehicle registration taxes were projected by the original Wake County Transit Plan to generate approximately $8.5 million a year in fiscal year 2018 and were projected to grow 2% a year thereafter. This resulted in an assumed $95.2 million of collections from 2018 through 2027.

Although not as elastic to impacts as sales tax, vehicle registration taxes were also affected by the economic impacts of the COVID-19 pandemic. Operating under more optimistic conditions (based on actual collections) prior to the pandemic, a total of $106.2 million in collections was assumed between FY 2021 and FY 2030. With a re-evaluation of growth assumptions that tempered projections to account for revenue reductions as a result of the pandemic, new projections assumed a total of $102.6 million in vehicle registration tax collections from FY 2021 through FY 2030. This is a $3.6 million, or 3.4%, reduction in assumed registration tax collections between the two scenarios.

A vehicle rental tax also is included as a revenue source in the transit plan. GoTriangle currently levies a 5% tax on vehicle rentals in Wake, Durham, and Orange Counties. GoTriangle's Board of Trustees has an existing policy that 50% of rental revenues are dedicated to expanding transit options in the region, while the other 50% is used by GoTriangle for operations and capital needs of the current system. To determine the amount allocated to each county, GoTriangle dedicates vehicle rental revenues based on percent of total population. GoTriangle's current allocation percentages are 68% for Wake County, 21.5% for Durham County, and 10.5% in Orange County. As such, the Wake County portion of all vehicle rental revenues is, compared to the total collected, 34%. The original transit plan included an assumption that rental car tax revenue available for new transit programs would be $3.6 million in FY 2018, which would grow by 2.5% annually. This resulted in an assumed $40.3 million of collections from 2018 through 2027.

Vehicle rental tax revenues have proven to be the most elastic to impacts associated with the COVID-19 pandemic. Operating under more optimistic

conditions (based on actual collections) prior to the pandemic, a total of $50.6 million in collections was assumed between FY 2021 and FY 2030. With a re-evaluation of growth assumptions that tempered projections to account for revenue reductions as a result of the pandemic, new projections assumed a total of $39.5 million in rental tax collections from FY 2021 through FY 2030. This is an $11.1 million, or 21.9%, reduction in assumed rental vehicle tax collections between the two scenarios.

A more detailed summary of the assumptions used for vehicle registration and rental tax collections for this Wake County Transit update and its comparison to pre-pandemic assumptions is included in **Appendix C: Recommended Financial Assumptions for Wake Transit Plan Update**.

The transit plan also includes local revenues from the City of Raleigh, Town of Cary, and GoTriangle for existing bus operations. Local bus operations that existed in their respective service areas prior to adoption of the original Wake County Transit Plan will continue, and bus operations in the transit plan were designed considering those existing resources. Accordingly, the transit plan assumed that the local contribution from each agency would equal approximately $15 million in 2018 and that this contribution would increase at 2.5% each year, the assumed rate of operating inflation.

Federal and State Contributions

The original Wake County Transit Plan and this plan update assume federal and/or state funding for many planned projects. Significant contributions from federal sources are assumed for the capital costs for both CRT and BRT. A total of 50% in federal share is assumed for CRT and three (3) of the four (4) original core BRT corridors. A total of 60% in federal share is assumed for one (1) of the four (4) original core BRT corridors. For the four (4) original core BRT corridors envisioned in the original Wake County Transit Plan, the projects are assumed to successfully compete through the FTA Capital Investment Grants Small Starts program such that an estimated total of approximately $244 million in federal funds will be secured. The capital cost of the two (2) BRT extensions to RTP and to Clayton are assumed to be covered 100% by approximately $115 million in state funding.

For commuter rail, it is assumed that, through a regional partnership by extending the line into neighboring counties, the project would successfully compete for 50% federal funding (estimated at $600 million, the Wake County share included in the Financial Plan). Approximately $27 million of federal funds to support bus infrastructure improvements is assumed in the plan.

Federal funds toward operating expenses also are assumed in the Wake County Transit Plan. These funds come from assumed growth in federal formula transit grants for expended bus service and the initiation of BRT services. This revenue is assumed to begin two (2) years after the implementation of applicable services based on the methodology used by the Federal Transit Administration (FTA) to calculate formula funding to be allocated.

State funds for operating expenses are primarily limited to a very small amount of support for bus, BRT, and commuter rail operations once those services are in place. To be fiscally conservative, the Wake County Transit Plan does not include state funds toward the capital costs for the original four (4) core BRT corridors or commuter rail. However, the County and its partners would work to achieve such funding for those projects or for certain components of those projects.

Farebox Revenue

Farebox revenue varies by type of service and by service provider. A farebox recovery ratio of 20% is assumed for BRT and CRT operations. Assumed farebox recovery for GoRaleigh, GoCary, and GoTriangle local and regional bus services begin at 0.7%, 2.0%, and 1.6% in FY 21, respectively, and ramp up to just under 14% by 2030 for all three. Farebox recovery for local services implemented via the Community Funding Area Program is assumed to be 0%.

Long-Term Bond Proceeds

Shown as revenues, with corresponding debt service expenses, certain capital projects are assumed to be debt funded. Commuter rail is assumed to be 35% debt funded, BRT is 25% debt funded, and bus infrastructure projects (e.g., transit centers, bus stop improvements, park-and-rides, etc.) are 10% debt

funded. A portion of future projects modeled after 2030 are also assumed to be funded with debt.

Debt will be structured in a manner consistent with the useful life of related projects, not to exceed a final maturity of 30 years. Principal amortization will be level debt service or faster, except for deferrals of principal in connection with construction period financing or short-term financing related to future receipt of federal and/or state funds. Debt for the commuter rail project is anticipated to include a final maturity of 30 years with a gradual interest rate increase to 5.25% in FY29. All other long-term debt includes a final maturity of 20 years with a gradual rate increase to 4.75%.

By using long-term debt, it is important that the model adhere to several key metrics, including adequate operating and capital fund balances to demonstrate sufficient liquidity to rating agencies and the capital markets. The Wake County Transit Plan was developed within the context of adhering to two key measures: 1) maintaining near-term capacity to service debt from recurring net revenues, and 2) gross debt service coverage. Given the transit plan's focus on capital and significantly increasing local bus service, a key measure for the transit plan is a projection of the ongoing ability to pay annual debt service given projected revenue, planned capital, and recurring operating expenses. The transit plan maintains net debt service coverage of revenues less operating expenses greater than 1.25 times annual debt service and maintains a gross debt service coverage of revenues more than three (3) times annual debt service expenses. Wake Transit Plan implementation financial policies, which includes these parameters, were adopted by the CAMPO Executive Board and GoTriangle Board of Trustees shortly after implementation of the original Wake County Transit Plan commenced. As plan implementation continues, these metrics and calculations may be revisited and updated.

PLANNED EXPENDITURES

Planned Expenditures and Inflation

To ensure fiscal constraint, the Wake County Transit Plan includes inflation estimates for project estimates and operating costs. For this update to the transit plan, project estimates for BRT, commuter rail, bus infrastructure, and buses were estimated in 2019 or 2020 dollars. Projects were then programmed according to planned project schedules, and then escalated to year of expenditure using an inflation factor of 4% per year. Local bus operating hours were calculated in 2020 dollars, and then escalated at 2.5% per year. Operating costs for commuter rail and BRT were estimated in 2019 dollars, and then inflated to the year the projects would begin, again using an

Figure 34 Capital Cost Summary and Comparison to Original Plan

Capital Investment Type	2016 Transit Plan Cost Assumption (in thousands)	Updated Transit Plan Cost Assumption (in thousands)
Commuter Rail	$886,500	$1,200,000
Bus Rapid Transit	$347,000	$511,020*
Vehicle Acquisition and Replacement	$114,700	$161,101
Bus Infrastructure	$208,400	$173,801
Other Capital Projects	$24,500	$16,803

Note: Expenses are expressed in year of expenditure dollars. Some of the increase in assumed expenditures is a result of inflation associated with spending occurring in later years than originally assumed.

*Assumed expenses for BRT extensions to RTP and Clayton, which were not included in the original transit plan, are included in this figure.

inflation factor of 2.5% per year. A full programming of all Wake County Transit Plan Update investments, including all operating and capital expenses, is provided as **Appendix E: FYs 2021-2030 Programming of Wake Transit Plan Update Investments**.

The original Wake County Transit Plan contemplated approximately $1.6 billion of capital projects by 2027. This update to the plan contemplates a total of approximately $2.1 billion of capital projects by 2030, with approximately $106.7 million of that having been allocated through FY 2020. A major component of the plan update process was a re-evaluation of the cost and schedule feasibility of major capital projects associated with the Wake County Transit Plan's five (5) major capital investments (Commuter Rail and four [4] BRT lines), particularly given that the corridors have had the benefit of undergoing further project-specific study since the adoption of the original Wake County Transit Plan. This reassessment revealed assumed increases in expenditure assumptions for both commuter rail and the full program of BRT corridors, mainly as a result of refined assumptions for the nature of the projects themselves. It also revealed that realistic implementation timelines for these projects may be longer than originally assumed when original assumptions were made without the benefit of further feasibility study. A full analysis for this assessment is included in **Appendix A: Major Capital Cost and Schedule Feasibility Memo**. A summary of all updated capital expenditures and their comparison to assumptions in the original Wake County Transit Plan is shown in **Figure 34**.

Commuter Rail Capital Expenditures

The Commuter Rail capital expenditures include an estimated Wake County share for a multi-county commuter rail investment. Within the 2030 horizon of this plan update, it is envisioned to operate eight (8) trips during the AM and PM peak periods, with two (2) mid-day and two (2) evening trains in each direction (8-2-8-2). Further study of the corridor since the adoption of the original transit plan has revealed that this service pattern is the minimum that is likely competitive for discretionary federal grant programs with ridership projections that compare favorably with nationwide peers. The final service hours and frequencies will be determined through further alternatives and feasibility study. To be conservative, included in the fiscal plan is an estimated 8-2-8-2 commuter rail service pattern, which would operate from West Durham to Garner within the existing Norfolk Southern Railroad corridor (owned by NCRR Company) by adding additional tracks and facilities. The project is contingent on funds from Durham County, other potential funding partners, and a federal funding award.

BRT Capital Expenditures

The BRT capital expenditures include the four (4) core BRT corridors envisioned in the original Wake County Transit Plan, as well as the BRT extensions to RTP and Clayton. These total approximately $511 million. Expenses programmed including planning and design, construction, and acquisition of vehicles for the corridors.

Other Capital Expenditures

Significant resources are allocated for capital infrastructure to support a rapidly growing local bus network. Expenses for bus infrastructure, which includes transfer stations, park-and-ride lots, bus stop improvements, bus maintenance facilities, sidewalk access and streetside facilities, and other improvements, are assumed to total $173.8 million through 2030. A total of $161.1 million is allocated toward the acquisition and replacement of buses. Further, approximately $16.8 million is allocated toward other capital, which includes funding for transit technology improvements and ongoing implementation planning for the full Wake Transit program.

Debt Service and Debt Service Reserve Fund

As debt is issued for capital projects, principal and interest will be paid on these projects. These dollars represent the corresponding debt service on commuter rail, BRT, and various bus infrastructure projects that are required during the first 20 years of the Wake County Transit Plan.

A Debt Service Reserve Fund ("DSRF") will be established for each debt issuance if the DSRF creates a lower cost of funds and does not exceed the

minimum amount permitted under federal tax law. The fund will incorporate amounts needed to ensure full and timely payments that coincide with the anticipated final maturity of the debt issued. This Wake County Transit Plan Update includes a reliance on debt-funded capital projects that include debt service costs exceeding the 10-year horizon covered in the plan.

Operating Fund Balance Allocation

To ensure adequate operating liquidity, the Wake County Transit Plan was developed with a target that the operating fund balance minimum would be equal to 25% of annual sales tax revenues. This update to the plan maintains that standard. The dollars allocated to this purpose are the minimum allocation necessary to meet this requirement.

Capital Fund Balance Allocation

To demonstrate credit strength to manage risk, the Wake County Transit Plan also was developed with a target of having a capital fund balance of 5% of capital projects cost. Through the process to update the plan, the capital fund balance or reserve rate was increased to 10% of the cost of those BRT projects assumed to be partially funded by federal sources. A 5% rate was maintained for all other capital projects. This put the total rate for the full outlay of expenditures at approximately 6.2%. This capital fund balance is over and above individual capital budgets, which may have their own project contingencies. Maintaining sufficient liquidity during construction activity is an important credit strength indication for rating agencies. The capital fund balance allocation is timed to when significant debt issuances would begin for capital projects funded in the Wake County Transit Plan.

Operating Expenses

There is a total of five (5) categories of operating expenses. The first is local/regional fixed-route bus service, which the original Wake County Transit Plan assumed to increase from $22 million in FY 2018 to $85 million by FY 2027 (both inclusive of pre-existing transit provider bus operations expenses). This update to the plan assumes total recurring expenses for local/regional fixed-route bus service in FY 2030 of $68.8 million.

Added to that is BRT service, with operations assumed to be initiated on various corridors beginning in FY 2024 and ramping up to service on all of the corridors by FY 2030. The total FY 2030 recurring expense for BRT operations is assumed to be approximately $19.2 million. Commuter rail is shown starting in 2029, with an FY 2030 annualized recurring cost of approximately $27.3 million. A total of approximately $6 million in recurring operating expenses is assumed for tax district and transit plan administration in FY 2030. These expenses support management and staffing for implementation of the plan. Further, a total of $14.2 million is assumed for other expenses associated with bus service, including maintenance of bus facilities, paratransit service, matching funds for the Community Funding Area Program, special fare programs, park-and-ride leases, etc. All operating expenses are grown at 2.5% to account for inflation. The supporting financial model for the plan assumes that by 2030, approximately $135 million of operations will be in place. A summary of 2030 operating costs and their comparison to assumptions in the original Wake County Transit Plan is shown in **Figure 35**.

Figure 35 Operating Expense Summary and Comparison to Original Plan

Operating Investment Type	Original Transit Plan FY 2030 Cost Assumption (in thousands)	Updated Transit Plan FY 2030 Cost Assumption (in thousands)
Local/Regional Bus Services	$91,859	$68,763
Bus Rapid Transit	$15,615	$19,173
Commuter Rail	$21,646	$27,291
Tax District and Transit Plan Administration	--	$5,985
Other Bus Operations/Maintenance	$10,123	$14,247

Appendices

A. **Major Capital Cost and Schedule Feasibility Memo**

B. **Transit Market Reassessment Report**

C. **Recommended Financial Assumptions for Wake Transit Plan Update**

D. **Project Prioritization/Reprogramming Guidance Memo**

E. **FYs 2021-2030 Programming of Wake Transit Plan Update Investments**

F. **Community Engagement Report**

G. **Post-2030 Unconstrained High-Capacity Transit Corridors**

Wake Transit Plan Update
Community Engagement Report

April 2021

Prepared By: GoTriangle

GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT

Index

Executive Summary

Every 5 years the Wake Transit Plan, which guides all investment through the Wake Transit Program for a 10-year period, is updated to ensure that the vision of public transportation in Wake County stays current and on track with community needs and future growth expectations. Public and Stakeholder input is a core component of the Update process.

The purpose of the public review period for the Wake Transit Plan Update is to share the draft "vision" for public transportation investment for the next 10-years and to show the community how the feedback received throughout the planning process has been incorporated. Comments and questions received during the review period will be considered and the draft updated as needed before the Plan Update is considered for adoption.

Community engagement in the spring of 2021 sought input on the draft 10-year Wake Transit Plan Update through 2030. Through a comprehensive approach including online and virtual engagement, as well as distribution of materials in paper form, Wake County community members received information about the opportunity to review the draft Wake Transit Plan Update and provide comments.

Public engagement conducted on behalf of, and in coordination with, Wake Transit Partners included meetings with community organizations and TPAC members, email campaigns to over 1,100 recipients, 25 Tweets, 7 Facebook posts, 12 geo-targeted social media campaigns and coverage in 3 local community news sources. In addition, over 800 flyers with information in English and Spanish were distributed.

A 40-day public comment period conducted from February 19, 2021 – March 31, 2021 garnered 65 comments online and via email, plus an additional 3 comments and a corresponding letter, at the CAMPO and GoTriangle Joint Public Hearing on March 17, 2021.

The Public Engagement & Communications Subcommittee endorsed the community engagement strategy, in accordance with the currently adopted Wake Transit Public Engagement Policy. The TPAC released the Draft Wake Transit Plan Update for the public review period, which began on February 19, 2021.

General Project Information	
Project	Wake Transit Plan Update
Event(s)	Wake Transit Plan Update Public Review & Comment Period and Public Hearing
Date(s)	Public Review & Comment Period • February 19, 2021 – March 31, 2021 (40 days) Public Hearing • March 17, 2021 (Joint GoTriangle & CAMPO)
Project Contact Information	
Lead Agency	GoTriangle
Contact Person	Liz Raskopf, Public Engagement Supervisor, eraskopf@gotriangle.org, (919)-939-0679
Engagement Strategy	
Goals	• Promote awareness of the Wake Transit Plan Update being released for public review. • Provide meaningful opportunity to provide input. • Educate the public on proposed service improvements and planned capital investments. • Engage the community in the decision-making process before adoption of the final Wake Transit Plan Update.
Target Audience	• The Wake County community, including individuals, organizations, businesses, interest groups, and other parties affected or interested in the Wake Transit decision-making process, including targeted outreach to traditionally underserved populations.
Staff and Resources	Liz Raskopf, GoTriangle, Public Engagement Supervisor Wendy Mallon, GoTriangle, Marketing Manager Burgetta Wheeler, GoTriangle, Communications Manager Sharon Chavis, GoTriangle, Wake Transit Program Coordinator Stephanie Plancich, CAMPO, TPAC Administrator

Implementation

Date	Engagement Activity
2/1-2/19	Pre-Engagement Emails: 25 Wake Community Organizations, 44 Wake County Minority Churches, Wake County municipal partners
2/11	Community Meeting: Wake Up Wake County
2/11	Community Meeting: NC Society for Hispanic Professionals
2/12	Community Meeting: Dorcas Ministries
2/15	Partner Meeting: Town of Wendell
2/16	Partner Meeting: Town of Apex
2/16	Partner Meeting: Town of Cary
2/19	Email Announcement #1: Wake County GoForward Subscribers
2/19	Email Announcement #1: Wake County Elected Officials
2/19	Email Announcement #1: Wake County Community Contacts
2/19	Email Announcement #1: Wake County Minority Churches

2/22	Facebook Post: Three opportunities to comment
2/19-3/31	@WakeTransit: Tweets rotate through engagement period specific to each plan
2/19-3/31	GoRaleigh: Weekly Newsletter
2/19-3/31	GoRaleigh: Weekly Social Media Posts
2/19-3/31	GoRaleigh: Commute Smart Monthly Newsletter
2/19-3/31	CAMPO: Social media posts
2/19-3/31	Town of Holly Springs: Social media posts
2/19-3/31	Town of Wendell: Monthly Newsletter
2/19-3/31	Town of Wendell: Weekly social media posts
2/19-3/31	Town of Zebulon: Social media posts
2/19-3/31	Town of Zebulon: Department webpage update
2/26	Geo-Targeting #1: Southeast Raleigh
2/26	Geo-Targeting #1: Capital Blvd
2/26	Geo-Targeting #1: Eastern Wake County
2/26	Geo-Targeting #1: Ages <18, 18-25, 65+
3/4	Geo-Targeting #1: Spanish Speakers
2/23	Community Meeting: Wake County Habitat For Humanity
2/24	Community Meeting: Wake Tech Community College
3/2	Facebook Post: Wake Transit 10 year plan focus
3/3	Hearing notice posted on CAMPO and GoTriangle websites, 1st social posts on hearing go out
3/8	Public Hearing Announcement E-mail: Wake County Elected Officials + Town Staff
3/8	Public Hearing Announcement E-mail: Spanish Media Contacts
3/8	Public Hearing Announcement E-mail: Wake County GoForward Subscribers
3/8- 3/26	Community engagement announcements: RALtoday, DRA, Raleigh Convergence
3/9	Facebook Post: Engagement policy focus
3/9	Focus Group: Wendell, 7-8 pm via Zoom
3/9-3/11	Geo-Targeting #2: Close gaps in participation (Women, Minorities, Ages 13-25, Income <$50k)
3/9-3/10	Geo-Targeting #2: Eastern Wake County
3/10	Community Meeting: North Carolina Society of Hispanic Professionals Youth Event
3/10	Geo-Targeting #2: Ages 65+

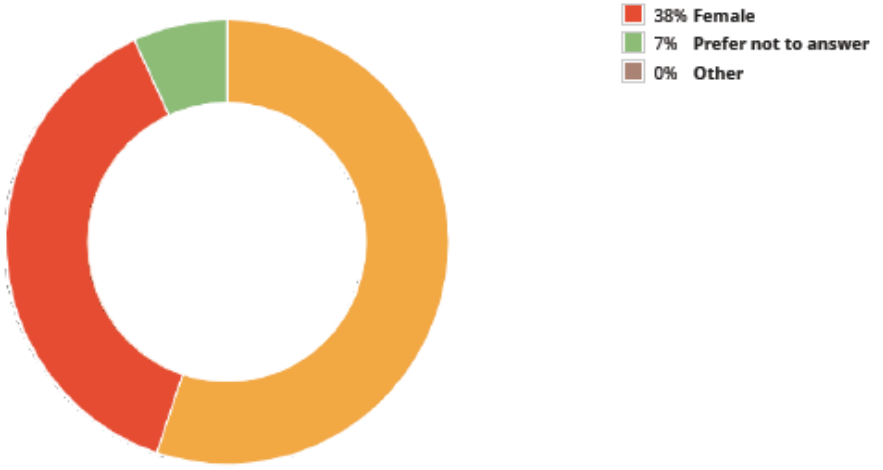
	3/10	Geo-Targeting #2: Spanish Speakers
	3/10	Public Hearing Announcement E-mail: Wake County Community Contacts and Minority Churches
	3/11	Geo-Targeting #2: Southeast Raleigh
	3/13	Facebook Post: Three opportunities to comment
	3/17	Public Hearing reminder social post
	3/17	CAMPO and GoTriangle Joint Public Hearing
	3/29	Facebook Post: Wake Transit Plan final days post
	4/1	Website Update: Wake Transit Plan Update comment period information removed from GoForward website; replaced with notice of upcoming Board meetings and when to come back to view final Plan.

Methods and Materials (English & Spanish)	The Public Engagement Team worked with community organizations and municipal partners to reach county residents through trusted sources in the community. This included participating in virtual meetings, sharing print materials for distribution, targeting underrepresented populations and engaging in community touchpoints that comply with public health guidelines during the COVID19 pandemic. Materials Included: 1. News release & tailored news item 2. Website update (goforwardnc.org/wakeinput) 3. Email campaign 4. Social media posts and graphics a. Facebook, Twitter 5. Comment box 6. Social media targeting 7. Public-facing PowerPoint presentation 8. One-page printable Flyer 9. Translated Materials
Web & Social Analytics	**Social Media** 20 Tweets re: comment period • 13,868 impressions • 233 engagements 5 Tweets re: public hearing • 7,947 impressions • 95 engagements 9 Facebook posts re: comment period • 3,838 reached • 42 engagements

	2 Facebook posts re: public hearing • 265 reached • 10 engagements **Geo-Targeting** • 12 campaigns • 20,746 impressions **Website** (GoForwardNC.org/wakeinput) • 1,498 unique views • 3:09 average time on page **Local newsletters** • Downtown Raleigh Alliance: 15,000 subscribers • RALtoday: 41,000 subscribers • Raleigh Convergence: 2,000 subscribers **Closing Gaps in Participation**: Following the first round of Facebook geotargeting campaigns to target hard-to-reach populations, the geotargets were refined to close gaps in participation in the following categories. • Non-white populations • Ages 13-25 + Incomes <$50k • Women • Spanish speakers

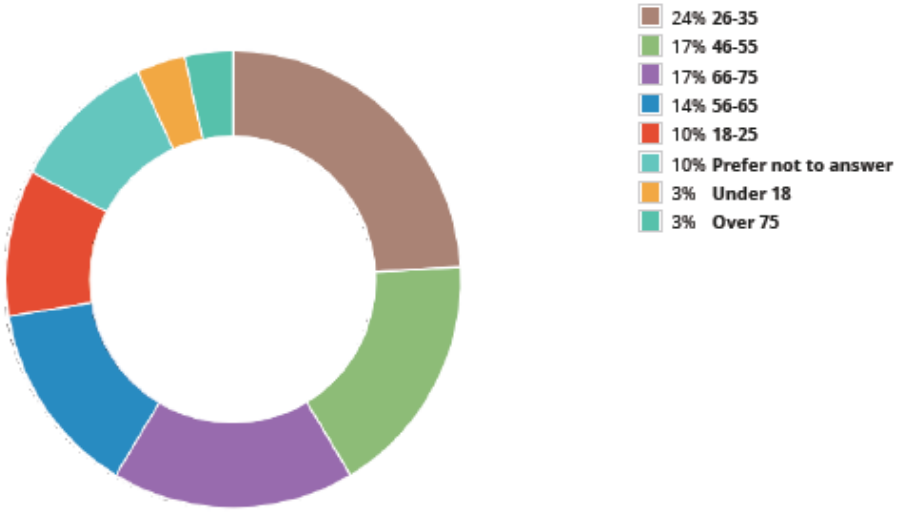
Participant Demographics

What is your gender?

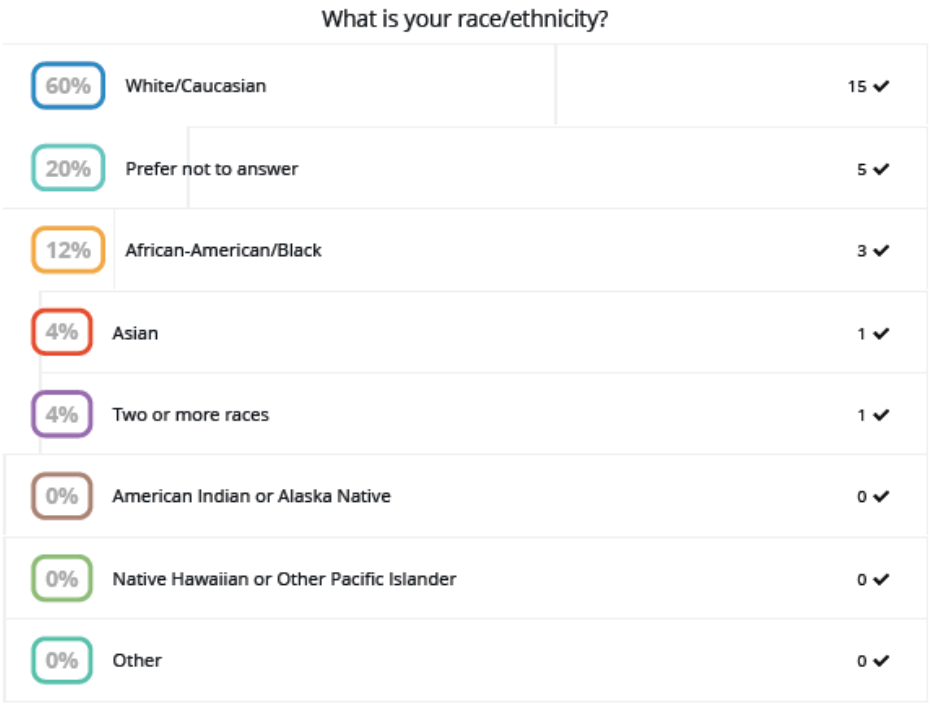


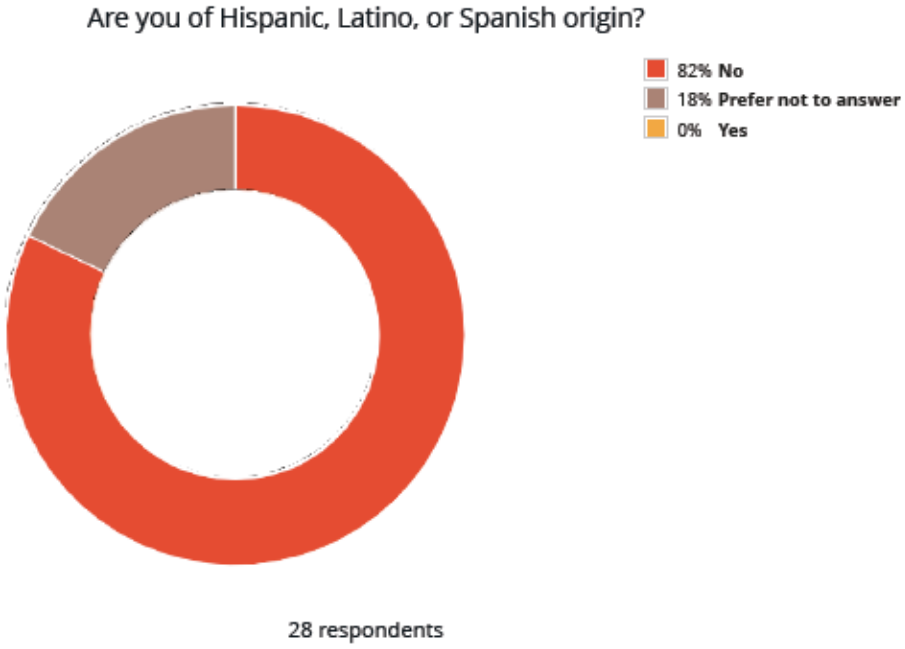
29 respondents

What is your age?

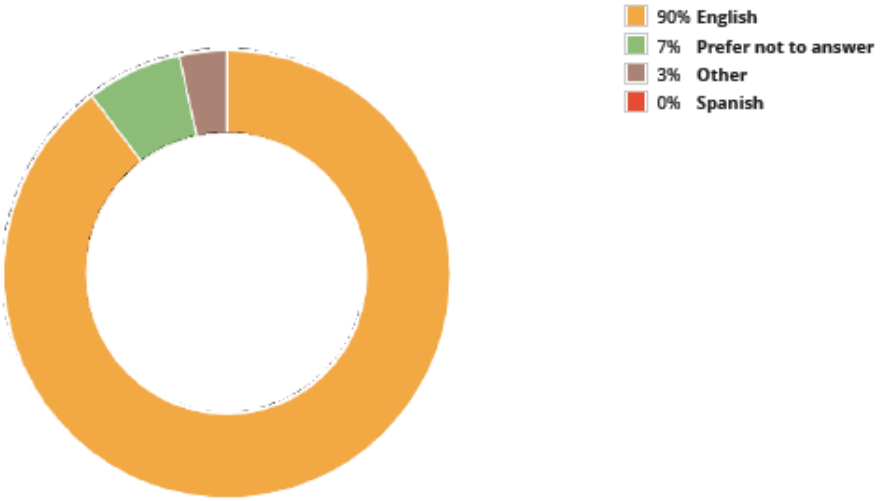


29 respondents


What is your race/ethnicity?
60% White/Caucasian 15
20% Prefer not to answer 5
12% African-American/Black 3
4% Asian 1
4% Two or more races 1
0% American Indian or Alaska Native 0
0% Native Hawaiian or Other Pacific Islander 0
0% Other 0
25 Respondents

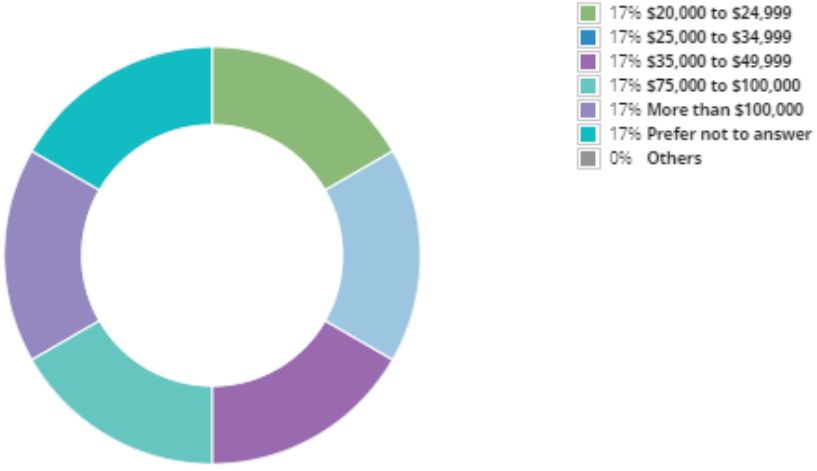

Are you of Hispanic, Latino, or Spanish origin?
82% No
18% Prefer not to answer
0% Yes
28 respondents

What language do you most often speak at home?



29 respondents

Which of the following groups does your total annual household income fall into?



6 respondents

Public Comments	**Online Comment Box & Email:** • 65 comments **Public Hearing:** • 3 comments + 1 letter (associated with comment 1. below)
CAMPO and GoTriangle Joint Public Hearing March 17, 2021	***Spoken comments during the joint public hearing on the Wake Transit Plan/Wake Transit Plan Update:*** **1. Joe Milazzo II:** "Thank you to CAMPO to GoTriangle to all the partners from Wake Transit, TPAC for working on this. RTA is also pleased to see the ongoing progression in the Wake Transit Plan. We thank you for the language about transit advantage in support of infrastructure in the plan. It's important to include not just "stop infrastructure," but what we will call "go infrastructure." We encourage you over time to identify some resources to support this over the next decade. We do want to applaud NC DOT for their work on freeway and street-based transit. The FAST vision is now posted on the NCDOT website under the public transportation division web page. I already mentioned zero fare transit during the public hearing. The same comments apply here over the longer horizon. We support the plan and we applaud you all for continuing to make transit in our future successful." **2. Daphanie Coleman** "I would appreciate it if, because with the way the new bus system is running, the bus stops are much further apart than in years past. And I would appreciate it if these stops are a little closer together because you almost have to walk four to five blocks between each bus stop. So is that something that you all would implement going forward to make the bus stops a little closer than where they are now like in years past?" ***Written comments (chat) during the joint public hearing on the Wake Transit Plan/Wake Transit Plan Update:*** **1. Daphanie Coleman:** from Daphanie Coleman to host (privately): 5:05 PM I speak for all the people of the poor black community that was not able to be on the call today. These meeting are not meant to be for the poor public groups or it would have been held in the evening. I find it ironic that now thoughts of FREE transit is thought of now since gentification had impacted the black community for the second time. That you all feel it's a good time to ride for free. But the black community has been subject to paying fare fees for more then 4 decades. I find it would be great if the Black people of the Raleigh Triangle area be reimbursed for all the money that they have spent in order to ride the bus in the past. Your plan should allocate funds to pay the black community for the fees that they have paid over time to make all this posible (in my opinion). **Participants:**

	Alarno Jones (call in) Alex Richard Angaza Laughinghouse Art Wright Ben Howell Bob Deaton Bob Smith Bonnie Parker Bret Martin Butch Lawter Charles Lattuca Chris Lukasina Corey Branch Daphanie Coleman Darius Sturdivant David Eatman David Keilson Dennis Jernigan Elisabeth Raskopf Emmily Tiampati Gaby Lawlor Grady Hint Gretchin Vetter Hank Graham Harold Weinbretcht Inez Nicholson Jacques Gilbert Jason Brown Jay Heikes Jennifer Robinson Jessica Day Jimmy Eaton Jimmy Gooch Joe Milazzo II John Burn John Hodges-Copple Joseph Geigle Juliet Andes Ken Marshburn Kenneth Withrow Lamar Jones (call-in) Larry Smith Lewis Weatherspoon Lisa Blackburn Liz Johnson Matt Mulhollem Melvin Mitchell (call-in)

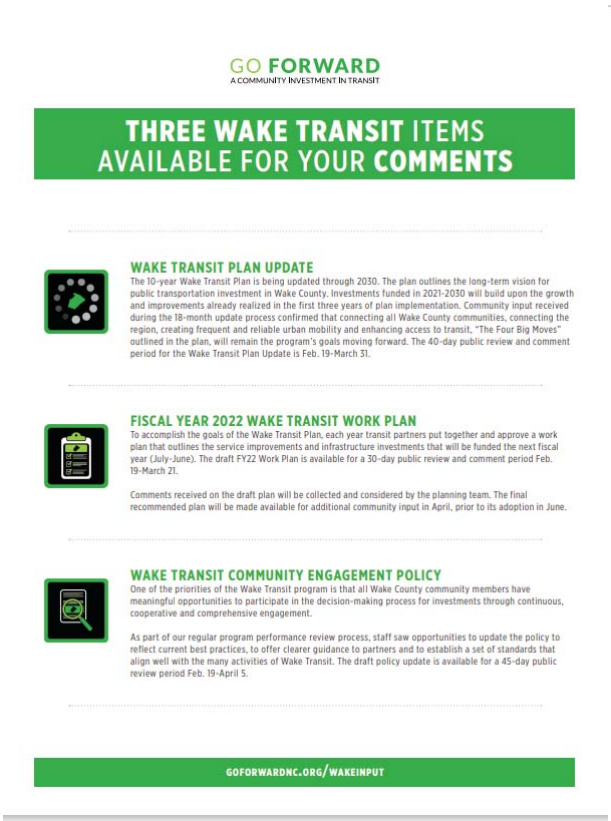
	Michael Frangos Michael Fox Michael Grannis Michael Moore Michael Parker Michelle Dawson Nina Nowell Odile Fredericks Paul Black Phil Geary Phil Weinberg Renee Price Richard Hancock Rodger Rochelle Ronnie Currin Russ May Sara Akimoto Scott Brame Shaun McGrath Shelby Powell Sig Hutchinson Stelfanie Williams Stephanie Plancich Steve Schewel T. J. Cawley Tim Gardiner Tracy Stephenson Valerie Jordan Virginia Gray Vivian Jones (call-in) Will Allen III

Appendix 1: Program Samples

The samples below include digital materials posted on social media and available on the website, and print materials distributed to community groups.

A. Samples of social media posts and graphics, posted in Spanish and English:

B. Flyer that contained information on the Wake Transit Plan Update and Combined Engagement effort, available in English and Spanish



GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT

THREE WAKE TRANSIT ITEMS AVAILABLE FOR YOUR COMMENTS

WAKE TRANSIT PLAN UPDATE
The 10-year Wake Transit Plan is being updated through 2030. The plan outlines the long-term vision for public transportation investment in Wake County. Investments funded in 2021-2030 will build upon the growth and improvements already realized in the first three years of plan implementation. Community input received during the 18-month update process confirmed that connecting all Wake County communities, connecting the region, creating frequent and reliable urban mobility and enhancing access to transit, "The Four Big Moves" outlined in the plan, will remain the program's goals moving forward. The 40-day public review and comment period for the Wake Transit Plan Update is Feb. 19-March 31.

FISCAL YEAR 2022 WAKE TRANSIT WORK PLAN
To accomplish the goals of the Wake Transit Plan, each year transit partners put together and approve a work plan that outlines the service improvements and infrastructure investments that will be funded the next fiscal year (July-June). The draft FY22 Work Plan is available for a 30-day public review and comment period Feb. 19-March 21.

Comments received on the draft plan will be collected and considered by the planning team. The final recommended plan will be made available for additional community input in April, prior to its adoption in June.

WAKE TRANSIT COMMUNITY ENGAGEMENT POLICY
One of the priorities of the Wake Transit program is that all Wake County community members have meaningful opportunities to participate in the decision-making process for investments through continuous, cooperative and comprehensive engagement.

As part of our regular program performance review process, staff saw opportunities to update the policy to reflect current best practices, to offer clearer guidance to partners and to establish a set of standards that align well with the many activities of Wake Transit. The draft policy update is available for a 45-day public review period Feb. 19-April 5.

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GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT

TRES ÁREAS SOBRE EL SERVICIO DE TRANSPORTE PÚBLICO DE WAKE QUE YA ESTÁN A DISPOSICIÓN PARA QUE BRINDE SU OPINIÓN

ACTUALIZACIÓN DEL PLAN DE TRANSPORTE PÚBLICO DE WAKE
El Plan de transporte público de Wake se actualizará hasta el año 2030. Este plan describe la visión a largo plazo en relación con la inversión en servicios de transporte público en el condado de Wake. Las inversiones que se financiarán entre el 2021 y el 2030 se basarán en el crecimiento y las mejoras ya realizadas en los primeros tres años de implementación del plan. Los comentarios que realizó la comunidad y que se recibieron durante el proceso de actualización de 18 meses confirmaron que las áreas que se mencionan a continuación siguen siendo los objetivos de este plan: conectar todas las comunidades del condado de Wake, conectar la región, crear un servicio de transporte urbano frecuente y confiable y mejorar el acceso al transporte público, "Los cuatro objetivos más importantes". El período de 40 días para que el público revise y brinde su opinión sobre la Actualización del plan de tránsito de Wake es del 19 de febrero al 31 de marzo.

PLAN DE TRABAJO DE TRANSPORTE PÚBLICO PARA EL AÑO FISCAL 2022
Para lograr las metas del Plan de transporte público de Wake, cada año los socios que brindan servicios de transporte público elaboran y aprueban un plan de trabajo que describe las mejoras al servicio y las inversiones en infraestructura que se financiarán durante el próximo año fiscal (julio-junio). El borrador del Plan de trabajo para el año fiscal 2022 se encuentra a disposición durante 30 días (del 19 de febrero al 21 de marzo) a fin de que el público lo revise y brinde su opinión.

El equipo de planificación recopilará y tendrá en cuenta todos los comentarios sobre el borrador que se reciban. El plan final que se recomiende estará a disposición de la comunidad para hacer comentarios adicionales durante el mes de abril, antes de que se apruebe en el mes de junio.

POLÍTICA DE PARTICIPACIÓN COMUNITARIA DEL TRANSPORTE PÚBLICO DE WAKE
Una de las prioridades del programa de transporte público de Wake es que todos los miembros de la comunidad del condado de Wake tengan más oportunidades para participar en el proceso de toma de decisiones sobre las inversiones a través de una participación continua, cooperativa e integral.

Como parte de nuestro proceso regular de revisión de la eficacia del programa, el personal vio oportunidades para actualizar la política de participación comunitaria a fin de tener en cuenta las mejores prácticas actuales, ofreceries a los socios que brindan servicios de transporte publico una orientacion mas ciara y establecer un conjunto de estándares que se adecúen a las diferentes actividades del servicio de transporte público de Wake. El borrador de la actualización de dicha política estará a disposición durante un período de revisión pública que durará 45 días, del 19 de febrero al 5 de abril.

GOFORWARDNC.ORG/WAKEINPUT

C. Email campaign sent to over 1,100 contacts including individuals, community groups, elected officials and municipal staff.
   a. Combined Engagement Campaign
   b. Public Hearing Campaign

Appendix 2: Public Comments

Comment	Source	Upvotes ("Likes" by other commenters)
There should be one goal: building a multimodal community, centered on human-scale infrastructure, by ending car-centricity. This means stop spending so much money on parking, parking decks, highways, lane-widening, etc., and starting to build an interconnected public transit (bus, train, rail, bike/ped) city. This means taking away lanes and parking from cars in order to make space for people. This means stop building parking decks and repurposing parking for people, buses, bikes, etc. While the plan is a good start, it is far, far too small-minded and too slow. This means increasing buses, rapid transit, and train service to a much higher rate (10 min or less per bus), more reliable (ensuring buses, trains, and bikes have right-of-way, priority, and dedicated lanes), and the immediate end of worshiping cars. Given the impending climate crisis, amongst so much much, building for cars has to end now. Building a robust, extensive, interconnected transportation network must be designed to promote equity, health, diversity, and a sense of belonging to everyone.	Online Survey	21
I support Zero-fare. Eliminates reliance on cars and creates an amazing source of equity in our community.	Online Survey	13
We need a functioning system that is reliable and accessible to ALL. Start with zero-fare transit. It's long overdue.	Online Survey	11
Zero fare transit! If we want to help our homeless and poor access the jobs and trainings they need to get on their feet, eliminating the cost of public transportation is crucial. Let's tax those that can afford more instead of forcing those that have the least to spend what little earnings they may have.	Online Survey	9
As a member of the Wake County community, I ask that the board set aside $1million dollars to continue the current zero fare service after the pandemic, starting with a pilot 'zero fare weekends for everyone program. This program would strengthen support for enhanced transit across our community, while enhancing access for communities who simultaneously have the least access to public transportation and the most need for it.	Online Survey	6
As a member of the Wake County community, I ask that the board set aside $1million dollars to continue the current zero fare service after the pandemic, starting with a pilot	Online Survey	6

‘zero fare weekends for everyone program.' This program would strengthen support for enhanced transit across our community, while enhancing access for communities who simultaneously have the least access to public transportation and the most need for it. Creating a more equitable and accessible transit system has been established as a key priority for Wake County. We ask that you demonstrate that principle and make this first step towards accessible, free public transportation.		
7.1: FY 2022 Draft Wake Transit Work Plan and Associated Concerns Continue the current zero fare service after the pandemic, starting with a pilot ‘zero fare weekends for everyone program.' This would create a more equitable transit system and be a great first step towards accessible, free public transportation for everyone.	Online Survey	6
Please continue the zero-fare program! I grew up in Chapel Hill where the bus system has remained free on all days across all bus lines, and this system has made Chapel HIll a better place. Having a transit system I can use across Wake County will keep me in touch with my friends and allow me to visit our cities more often.	Online Survey	4
Please set aside money (>$1 million) to continue zero fare programs or at least test them on weekends. It's imperative to have good transportation in this area so please make it accessible to all who need it. People already don't have affordable housing options here so help ease their burden by at least not making them pay to use public transit anymore. Making Wake County a more equitable place should be a top priority.	Online Survey	4
Work towards eliminating the region-wide dependence on the car as their primary source of transportation. Please add rail (not just for commuter and commuter hours, but as a way to connect individuals to sociocultural events, churches, friends/family, and other activities. Additionally, expand express bus service so that it runs outside of 9-5 business hours. Many individuals who rely on public transportation do not work standard 9-5 hours, so trying to make transit work for them is very frustrating. I would love to see rail connect Raleigh, Durham, and Chapel Hill. This region has so much potential to be an economic powerhouse and public transportation should be in the forefront.	Online Survey	3
It seems all the new service or expanded service is in areas that have money, Garner, Knightdale, Wendell and Zebulon need more service.	Online Survey	3

I support a zero-fare system that would strengthen support for enhanced transit across our community, while enhancing access for communities who simultaneously have the least access to public transportation and the most need for it.	Online Survey	2
Please make all transport fare free for residents!	Online Survey	1
Free transit is a necessity	Online Survey	1
Please start working on a functional interconnected public transit. We have nothing in place here to relieve our dependence on cars.	Online Survey	1
Mass transit, lite rail, walkability. don't just add more roads	Online Survey	1
I support zero fare, it will greatly increase the mobility of our community which will help us all.	Online Survey	1
Connecting all of the major Triangle Universities, and therefore their communities, is an excellent idea. Light rail is necessary for RTP to keep pace as a growing area for people to live and work. Zero-fare transit would certainly help those families and individuals who depend on public transportation to improve their lives.	Online Survey	1
I would like the Wendell rout to operate on Wendell Pky way we need a bus that comes this way instead of 10 minutes away, there are a lot of people that live here and they are building more houses everyday	Online Survey	1
We need to be able to have reliable services in the city we live in and to the surrounding cities. This is not either or . The lack of Strategic plans when you push people further out because they can't afford $500.0000 house/townhome or $3000 rent still stuns me. Really where do think they will go? How are the elderly and sick you push out of your way going to get to the doctor? The retired we get pushed out into to the county or in a friend from the university who was renting a small older home left stranded when the heirs sold and with no place to go.	Online Survey	1
Elements of this plan will improve service in many areas (both connectivity and frequency) that I believe ridership will increase. I see service not adequately addressed: Your own “likely riders” analysis shows SE Raleigh as highly likely but with very few job centers yet there is NO service improvement planned. S. New Hope Rd service between Rock Quarry Rd and North to the East Raleigh Enhanced Transit Stop (BRT service) should be added to your plans.	Online Survey	1
Enhanced Customer Experience: Very important to consider improving bus stop facilities and access (sidewalks, lighting, curb cuts, etc. What above COVID impact to transportation and transit plans in 2020, and if that might	Online Survey	1

affect projections that seem based on 2017/2018 data? Intrazone traffic flows in 2013 may not be as relevant today, and especially concerned about 8 year old data being extrapolated to 2035.		
I'm a little concerned about the additional BRT extensions, specifically the ones planned in the same corridor as the commuter rail. If both get implemented, unless there is something I'm not seeing, the bus rapid transit extensions would be redundant. If the corridors follow a more southerly route (ala Raleigh-Cary BRT), then the plan as is should be fine. The commuter rail extensions to Clayton/Selma and Hillsborough are ideal and I'd suggest the north/south line be extended south to Sanford.	Online Survey	0
Please continue the Zero-fare program. It makes transportation more accessible, keeps folks connected, and is a good look for our environment	Online Survey	0
With the quickly growing population, it is essential that we develop our transit system. That requires more ridership to make it more accessible to all. The more easily workers can commute, the less traffic which encourages more business into the area. The tax base from business and homes pays for the expense of quality transportation.	Online Survey	0
As a member of the Wake County community, I ask that the board set aside $1million dollars to continue the current zero fare service after the pandemic, starting with a pilot 'zero fare weekends for everyone program.' This program would strengthen support for enhanced transit across our community, while enhancing access for communities who simultaneously have the least access to public transportation and the most need for it. Creating a more equitable and accessible transit system has been established as a key priority for Wake County. We ask that you demonstrate that principle and make this first step towards accessible, free public transportation"	Online Survey	0
Your transit plans for Wake County are a crime for people with special needs!! In order to get to a job -- if you can't drive -- you have GoRaleigh vans -- which take HOURS to ride -- and are not solely for individuals with special needs!!! To use the taxi service -- you must live in a specific area in Raleigh proper!! YOU LEFT THESE PEOPLE OUT!!	Online Survey	0
Based on what you documented on pages 40 and 41, why is it that there is no plans to expand GoCary 5 to the Western Campus of Wake Tech Community College?	Online Survey	0
I dont like the idea of public transport since it is rarely used. Everyone living here travels using their cars. Not many people have the time that the public transportation needs to	Online Survey	0

get to a destination. My hope is to try to find better avenues to spend money rather than on public transport. I dont see the benefit		
Please do this!	Online Survey	0
The rail system needs to be established and expanded quickly to be sustainable and effective. The congestion on the roads is only going to get worse with increases in population. On a smaller scale, more sidewalks should be built. If the city were more pedestrian and public transport friendly, the influx of people would be less of an issue and help businesses in the area. I for one would be happy if I could sell my car and rely on a public rail to get to where I need to go.	Online Survey	0
The amount of population growth in Wake County necessitates increasing public transit any way possible. The idea of commuter rail was obviously downgraded from the light rail discussion due to cost, which is understandable. In my opinion, every municipality needs to be in the plan to be connected to this (commuter rail). In the meantime having BRT to all municipalities is important. I drive because the bus routes don't go where I need them to in order to perform my job. If they went were I needed them to, I'd be happy to ride the bus or future commuter rail to reduce road congestion.	Online Survey	0
Hyperloop tech is being tested and they're looking for the right place to try it out. Where better than the triangle? We're just the right amount of distance and space to make this happen and we're not really suitable for underground. Wouldn't it be great, instead of being 20min from everywhere, we were 2?	Online Survey	0
The problem with rail is the high cost of the right of way and the huge possibility that by the time it is built, jobs and populations shifts will mean it is in the wrong place. Buses can change routes much easier.	Online Survey	0
Basic mobility options for people should be available based on equity and inclusion. These should include health and human services, senior programs, et al, but should also provide for general public use for non-agency trips, embracing social determinants of health. All services should be viewed as one system, not disparate pieces and the State should understand that growing suburban areas outside designated transit agencies are not served with equity. In order for programs like microtransit to succeed, the State should lobby the FTA to develop a new funding source that recognizes the benefit in community based services and first/last mile connections outside the constructs that exist in the current FTA program. Partnering more with health and housing entities should be rewarded and required.	Online Survey	0

Although the area is changing to increased density dwellings, North Hills, Glenwood South, Downtown, I don't believe it has the base population to support light rail service. While I support assuring the right of ways are not loss I do not support the development of the system. I believe the pandemic has modified the model to where more people will be working from home instead of travelling to offices.	Online Survey	0
I use the bus system for school. I support anything that make's it easyer for me to get to school	Online Survey	0
There should be one goal: building a multimodal community, centered on human-scale infrastructure and increased equity, by ending car-centricity now. Please stop wasting so much money on parking, parking decks, highways, lane-widening, etc., and start building a tightly interconnected public transit (bus, train, rail, bike/ped) community. Please remove car lanes and parking in order to make space for people. Please stop building parking decks and instead repurpose parking for people, buses, bikes, parks, etc. While the plan is okay for a beginning, it is far, far too small-minded and too slow. To become a viable community, we need dependable buses, rapid transit, and train service to a much higher rate (10 min or less per bus), more reliable (ensuring buses, trains, and bikes have right-of-way, priority, and dedicated lanes). We must end the immediate end of the addiction to cars. Given the impending climate conerns, amongst so much much, building for people and community must begin 30 years ago. Building a robust, extensive, interconnected transportation network must be designed to promote equity, health, diversity, and a sense of belonging to everyone. Please, end the adoration of cars!	Online Survey	0
The commuter rail should be highest priority, and will significantly enhance adoption of public transport in our county. This should be sped up, with completion before 2025 if possible.	Online Survey	0
I live between 2 bus service lines that do not connect and I am not within walking distance to catch either line. If these two bus lines would connect with a bus going up Brier Creek Parkway from the Brier Creek Commons to RTC Regional Transit Centers, then me and my community would have public transit access throughout Raleigh, Cary, Durham, and Chapel Hill. Please connect the Raleigh bus route 70x with the RTC Transit Center and make some stops in between going up Brier Creek Parkway/Globe Road.	Online Survey	0
As a part of Wake County's maturer population, the transportation has a lot of empty holes for us! Transportation is lacking in moving about the city. For those of us without a car, we are locked into a limited area of travel, or we are forced to go as far as we can	Online Survey	0

by bus, and then walk. Sometimes these "walks" can be anywhere from ten minutes to an hour. If I am individual with mobility or physical issues, this is a crime! It also limits where we can live. There are routes where we have no where to sit, or get out of the elements due to no bus shelters. Some routes run every hour, which for a maturer person, or someone with mobility or physical limitations can be painful and exhausting. Wake's TRACS System is flimsily at best. One may be able to get to their destination, and find they aren't able to get back home using this service. It is not always reliable! There is also a limited amount of reserved seating for "seniors" using this system. Maybe if the bus system were a more viable method of transportation, there wouldn't be the large need for cars to get around Raleigh, or to the outlaying areas of the city. It's time for those responsible for setting up and making these changes really happen, act on our suggestions. I don't feel that a light rail system is a priority at this time, as the system hasn't been set up to meet the needs of all Wake County residents. Once that's done, then by all means let's circle back to the light rail plans.		
Please delete any plans for fixed rail from the plan. Buses. Are flexible and much less expensive.	Online Survey	0
Light rail is essential and long overdue.	Online Survey	0
No rail. We will vote it down every time. Like we've done for a decade.	Online Survey	0
I may not be seeing it, but where is the transit support for the people who commute from Fuquay and Angier up through Holly Springs to the Research Triangle? With all the development down here, don't we need to plan for Park and Ride lots along the 55 bypass onto 540?	Online Survey	0
This is some what discussed in the region specific plan but I would love to see integration and use of the rail from Wendell area into Raleigh. Also, maybe some plans for more public transport to sporting events. For example, I would love to be able to ride the train into Durham and know I could take a bus to a Bulls game etc.	Online Survey	0
1. It is rather insulting to Johnston County that you've miss-labelled the county on the first map. It is also worrying that the connectivity to Clayton is planned for 2028, when Johnston County is the fastest growing county in NC right NOW and the morning radio traffic reports consistently show the worst slowdowns are traffic from Johnston County & into RTP. The plan addresses RTP needs soon and Johnston as a "maybe" later. 2. These plans are still following a radial system from downtown Raleigh for bus service. Not everyone has time to go downtown and transfer back out to get to an outlying	Online Survey	0

location. Personal experience with this is - I personally travel from Northeast Raleigh (close to Knightdale) to Wake Forest 6 days a week. Driving takes a half hour, taking the bus would take almost 3 hours by the time I rode downtown and transferred back out. How many people are in this situation? Has there been work done to see cross community commutes? 3. Why are we not considering a subway system as part of the solution? Raleigh/wake county has as many residents or more than cities that do have subway transit & as density increases, this option will only become more expensive. If it is considered NOW, building codes/standards can be put into place that will allow subway to be a little less expensive. At the rate the area is growing, it will eventually make sense. 4. The BRT corridors seem to make sense for the travel patterns, but why such a long timeframe for implementation? 5. I do like the youth pass free pass (my kids have used this to go to school) and am glad to see it for seniors, as well. It should also be available for the permanently disabled, too.		
Hello, I'm living on North of Falls of Neuse Rd. Please Please put adding Metro (Wake Forest, Raleigh) to your agenda soon. Thank You. Regards, Habi Ghorbani	Email	0
Having a more accessible public transport system means more people can visit different areas of the city that could lead to more support in our local businesses. It's a no brainer!	Online Survey	0
Free transportation should be everywhere.	Online Survey	0
Re: agenda item 7.1: "FY 2022 Draft Wake Transit Work Plan and Associated Concerns.": As a member of the Wake County community, I ask that the board set aside $1million dollars to continue the current zero fare service after the pandemic, starting with a pilot 'zero fare weekends for everyone program.'	Online Survey	0

This program would strengthen support for enhanced transit across our community, while enhancing access for communities who simultaneously have the least access to public transportation and the most need for it. Creating a more equitable and accessible transit system has been established as a key priority for Wake County. We ask that you demonstrate that principle and make this first step towards accessible, free public transportation”		
agenda item 7.1: “FY 2022 Draft Wake Transit Work Plan and Associated Concerns.” As a citizen and taxpayer in Wake County, I'm writing to urge the Board to set aside $1million dollars to continue the current zero fare service after the pandemic, starting with a pilot ‘zero fare weekends for everyone program.' This program would get more people riding, and therefore strengthen support for enhanced transit in Wake County, while enhancing access for low wage essential workers, who have the least access to public transportation and the most need for it. Creating a more equitable and accessible transit system is a high priority for Wake County. I ask that you demonstrate that principle and make this first step towards accessible, free public transportation.	Online Survey	0
I appreciate your outreach and planning process. For the proposed new bus service, I really like enhancing two routes: "GoRaleigh Route 6" and "Route 70X". Also, I like expanding establishing more park-and-ride areas. Finally, please keep up your good work on BRT.	Online Survey	0
Every bus I have ever seen near me is completely empty. It is hard to get behind any transportation plan when I see this. Not sure what else to say.	Online Survey	0
EGGZACKLY my friend, and I have advised them of this same thing. Increasing public transportation when current levels are low is jus absurd.	Online Survey	0
I always rode Route 305 from Apex to my job at the NC State Legislature in Raleigh. Even when we lived in Cary during the 80s and early 90s, I could ride the bus to work. Now that I am retired, I would love to be able to ride this route with hourly service during off-hours. and if weekend and late evening service were available, we could attend concerts, etc. without the hassle of driving in the dark. We would definitely go to Raleigh more often if this service was available. Any idea when this will happen?	Online Survey	0

Would love to see more updates/transparency about the progress on commuter rail since it seems to the general public that the opening date is always shifting back with no movement unlike BRT (especially after the Durham-Chapel Hill light rail failure). Surprised there is no recommendation to extend the northern bus rapid transit line up Capital Boulevard further since that is one of the top 2 or 3 routes on the GoRaleigh system (as opposed to extending BRT out to Clayton) Approve of the addition of extra routes to the frequent transit network. Would love it if North Raleigh got some extra love too (such as frequent service for the Falls of Neuse #2 route)	Online Survey	0
The first 3 bullet points in the FOREWARD section are wrong. Therefore the next 56 pages (lol) are based on the incorrect information. There is less transportation needs going forward due to covid making employers realize their employees can work from home. The WCPSS has announced a REDUCTION is student population. We need to simply repair roads in bad shape, lose the big busses for smaller ones. I find it comical really to see so many big busses driving around with no one on them. I would think you would consider expndign if all these busses were full are close to capcity. Theye are not, and thats your first sign growing public transportation is not needed.	Online Survey	0
Right now I wouldn't use public transportation even if I needed to just because of incompatible relationship between itself and the political whims of its leadership especially in the area of masking. Right now I haven't driven in years because of the DMV's HIPAA violation requirements involving providing medical information in order to be able to drive in North Carolina so I have to rely on others to get me from point a to point b, but since I primarily rely on family for transportation but if they should pass then I would be able to get nowhere because once you cross 540 on Six Forks heading north there are no city services including public transportation. Going farther out on some level would be a plus in the future but since I don't use apps I have no access to transportation such as uber and such so access help would be nice. I turn 60 in 2029 but may need transportation access availability before then.	Online Survey	0
I'm curious as to what the "new 23" route is. The current 23L needs longer running hours. I get off work at 5:30PM. If I'm lucky to catch the 5:45PM departure from GoRaleigh to Crabtree, then I still wouldn't arrive in time for the 23L departure from	Online Survey	0

Crabtree at 6:00PM. We either need longer 23L running times or a safe way to cross Glenwood/Lead Mine Rd as a pedestrian.		
We need to look into the future rather than be caught short later. Check out Texas and their electric grid issue lately.	Online Survey	0
Bus service should be just for the poorest communities. Light rail is a waste of money. Giving service to area's like Wendell Pkwy is just ridiculous Katie, there are area's with much lower average income that could use it.	Online Survey	0
I like the ideas of the transit plan but I feel Wake County and Raleigh need to move faster. Many people move here every day and there are currently no alternatives, other than bus, to car travel. I feel that the roads could be overwhelmed as soon as the pandemic is over. Is there any way to add rail capacity, light rail, and dedicated bus in a sooner fashion to match our city's growth? The city already has great access to railways that could be used immediately. In addition, it seems that much of the plan revolves around giving suburban areas (Garner, Wake Forest, etc.) better access to transit, but I wonder if people in those areas will take advantage of transit? They did the same thing in Atlanta and the reality was that everyone in the city wanted to take transit, but did not have options, whereas suburban folks had transit options but would always choose their cars.	Online Survey	0
There needs to be better connection to the outer suburbs. The southern BRT corridor needs to go to Fuquay Varina. The town has several higher density developments under construction/in planning. You could use that corridor to connect Raleigh to Wake Tech in Garner and Fuquay. You claim low ridership interest in Fuquay, but what choices do we have?? One outdated bus that is only designed to transport commuters! But, what is the benefit? The travel time is just as long as by car. Also, why would you have the FRX bus go along the same route as the proposed BRT? That's nonsensical! Extend the BRT and incorporate that from the beginning. We are wayyy behind other cities and are starting to become non-competetive (why did Amazon pick NY over us??)! Also, why doesn't every road have a sidewalk yet? Inexcusable! Me and my family will leave Wake County in 5 years if I see one more highway expansion project without a simultaneous transit/pedestrian project being started. Become competitive or we will go somepkace that is. Btw, Mecklemburg County is smaller (in population) than Wake, and they have LRT!! You don't even have that planned!	Online Survey	0

Please refrain from classifying an expense as an investment.	Online Survey	0
Thank you to CAMPO to GoTriangle to all the partners from Wake Transit, TPAC for working on this. RTA is also pleased to see the ongoing progression in the Wake Transit Plan. We thank you for the language about transit advantage in support of infrastructure in the plan. It's important to include not just "stop infrastructure," but what we will call "go infrastructure." We encourage you over time to identify some resources to support this over the next decade. We do want to applaud NC DOT for their work on freeway and street-based transit. The FAST vision is now posted on the NCDOT website under the public transportation division web page. I already mentioned zero fare transit during the public hearing. The same comments apply here over the longer horizon. We support the plan and we applaud you all for continuing to make transit in our future successful.	Public Hearing - spoken comment	
I would appreciate it if, because with the way the new bus system is running, the bus stops are much further apart than in years past. And I would appreciate it if these stops are a little closer together because you almost have to walk four to five blocks between each bus stop. So is that something that you all would implement going forward to make the bus stops a little closer than where they are now like in years past?	Public Hearing - spoken comment	
from Daphanie Coleman to host (privately): 5:05 PM I speak for all the people of the poor black community that was not able to be on the call today. These meeting are not meant to be for the poor public groups or it would have been held in the evening. I find it ironic that now thoughts of FREE transit is thought of now since gentification had impacted the black community for the second time. That you all feel it's a good time to ride for free. But the black community has been subject to paying fare fees for more then 4 decades. I find it would be great if the Black people of the Raleigh Triangle area be reimbursed for all the money that they have spent in order to ride the bus in the past. Your plan should allocate funds to pay the black community for the fees that they have paid over time to make all this posible (in my opinion).	Public hearing - written chat comment	

RTA REGIONAL BUSINESS LEADERSHIP

The voice of the regional business community on transportation | letsgetmoving.org

March 18, 2021

Bret Martin
Wake Transit Program Manager
Capital Area Metropolitan Planning Organization

Dear Mr. Martin,

Thank you for the opportunity to comment on the Wake Transit work plan!

The Regional Transportation Alliance, the voice of the regional business community on transportation in the Research Triangle region of North Carolina, is a strong advocate for enhanced multimodal mobility and the rapid, effective implementation of the Wake County Transit Plan.

We are requesting that the FY 2022 annual Wake Transit work program include a specific budgetary allocation of funds to support or backstop a potential "zero fare weekends" transit initiative.

Wake County has established a "Prosperity for All" framework, including leadership goals for health and economic mobility – and our innovative region has embraced equity as essential for our future.

We support a "zero fare weekends for everyone" pilot, which would reduce barriers to using *and considering* transit, while providing solidarity to and enhancing access for vulnerable communities.

Our neighbors in Chapel Hill have been zero fare for everyone, every day, for nearly two decades, and they, like others across the nation, have experienced ridership increases of 20-30%.

Our understanding is that weekends represent only around 20% of total weekly fare revenue, such that a year-long "zero fare weekends" pilot for both GoRaleigh and GoCary would require less than $1 million in hold harmless allocations.

While we support the launch of a zero fare weekends pilot, our request is simply that the work plan set aside a budgetary funding allocation to support a possible pilot later this year or in early 2022.

Thank you for considering this request, and for helping our region become a national leader in innovative approaches to advancing equity and economic mobility in our community.

Sincerely,

Joe Milazzo II, PE
Executive Director, Regional Transportation Alliance

cc Stephanie Plancich, Wake Transit TPAC Administrator, Capital Area MPO

800 South Salisbury St. Raleigh, NC 27601 | 919.664.7062

Wake County Transit Plan Update

Schedule and Cost Feasibility of Major Capital Projects

February 7, 2020 – FINAL

Wake Transit Plan

GO FORWARD

A COMMUNITY INVESTMENT IN TRANSIT

Table of Contents

IMPORTANT NOTE*

Appendix A is intended to document an essential step taken early in the process to update the Wake County Transit Plan that was used to inform later plan update development steps. The cost and schedule feasibility information for major capital projects represented in Appendix A was prepared during the fall and winter of 2019/2020 and reflects a snapshot at that time of the projects' assumed characteristics, implementation timelines, and corresponding costs. Subsequent to the fall and winter of 2019/2020, feasibility study for these major capital projects continued, and further changes to these details were made based on new information. The most updated assumptions (and those carried forward as the official assumptions supporting the Wake County Transit Plan Update) for project characteristics, implementation timelines, and correpsonding costs are reflected in the main Wake County Transit Plan Update document and in Appendices C and E.

1 Overview

INTRODUCTION

The Wake Transit Vision Plan Update intends to: 1) reevaluate expenditure and schedule assumptions for major capital projects assumed in the originally adopted Wake Transit Plan and determine the financial impact of these underlying assumptions; and 2) build on these findings to determine remaining financial capacity and expand the Wake Transit Plan implementation horizon from 2027 to 2030. This technical memo, the first in a series, is focused on updating the schedule and cost feasibility assumptions of the Wake Transit Plan's major capital projects.

The Wake Transit Plan included five major capital investments: development of a commuter rail line and four bus rapid transit (BRT) corridors. Combined, the five projects account for over 75% of the capital investments in the Wake Transit Plan. As of December 2019, each project is within a different stage of the project development phase.

The project team, including Capital Area Metropolitan Planning Organization (CAMPO), the Wake Transit Plan Update Core Technical Team (CTT), and the consultant team, collaborated to compare planned capital projects against updated implementation timeline and cost assumptions. The process was developed using three main steps:

1. Review original and updated cost and timeline estimates for commuter rail and BRT projects.
2. Inventory project development teams' updated cost and implementation timeline estimates for individual projects.
3. Survey similar projects implemented in the United States to understand implementation experience, especially with regard to cost estimation and implementation timeframe.

KEY FINDINGS

The adopted Wake County Transit Plan acknowledged in its Plan Implementation and Finance section that the first few years of implementation will involve further study and significant design for projects that require significant investment to balance the careful use of taxpayer dollars with thoughtful investment in transit. The Plan acknowledged that the costs of and timing for those projects will evolve as further study and design reveals new information.

Assumed cost and schedule estimates for the Wake Transit Plan's major capital projects – one commuter rail line and four BRT corridors – have changed as project planning has advanced. Based on the results of further study for commuter rail and the BRT corridors through a Wake Transit Fixed Guideway Corridors Major Investment Study (MIS), alternatives analysis for commuter rail, and preliminary design for the New Bern Avenue BRT corridor, the Wake Transit Plan major capital projects are assumed to exceed both originally estimated costs and implementation timeframes based on a variety of factors. These factors include the impact of inflation from elongating implementation timeframes and higher construction costs associated with more aggressive assumptions for infrastructure improvements (e.g. percentage of BRT corridor alignments with dedicated runningway). These factors will continue to be tweaked as project planning and design continues, which may result in increases or decreases to updated assumptions. Additionally, further consideration should be given to lessons from peer reviews suggesting that costs and schedules can be vulnerable to the federal project development process and the duration and financial resources required from project sponsors to complete projects.

Figure 1 Change in Estimated Spending for Major Capital Projects

$,000's	Baseline: FY20 Work Plan	Updated Assumptions: Lower Bound	Updated Assumptions: Upper Bound	Estimated Change in Spending
Total	**$1,231,644**	**$1,390,094**	**$1,791,966**	**+ $158,450 to 560,322**
FY18	$0	$0	$0	$0
FY19	$6,952	$8,572	$8,572	+$1,620
FY20	$63,724	$27,000	$27,000	-$36,724
FY21	$178,668	$108,360	$108,360	-$70,308
FY22	$299,223	$75,943	$137,128	-$223,280 to -$162,095
FY23	$279,965	$131,071	$169,171	-$148,894 to -$110,794
FY24	$172,952	$218,900	$287,219	+$45,949 to +$114,267
FY25	$173,653	$265,259	$334,456	+$91,606 to +$160,802
FY26	$56,507	$262,659	$338,830	+$206,152 to +$282,323
FY27	$0	$180,288	$235,115	+$180,288 to +$235,115
FY28	$0	$89,572	$116,811	+$89,572 to +$116,811
FY29	$0	$22,471	$29,304	+$22,471 to +$29,304

Note: in year-of-expenditure dollars

The overall combined spending curve for the Wake Transit Plan major capital investments has shifted by two to three years, with the bulk of the spending in FY23 to FY27 rather than in FY21 to FY25 as originally assumed (see Figure 1 and Figure 2). Total costs for both commuter rail and the four (4) BRT corridors combined are now assumed to be about $158.45 to $560.32 million greater than planned in the adopted FY20 Wake Transit Work Plan, depending on which alignments are chosen for the BRT corridors and where the commuter rail project lands within the assumed updated cost range. This updated estimate represents a 13% to 45% increase in cost compared to original estimates, and this change takes into account both of the following:

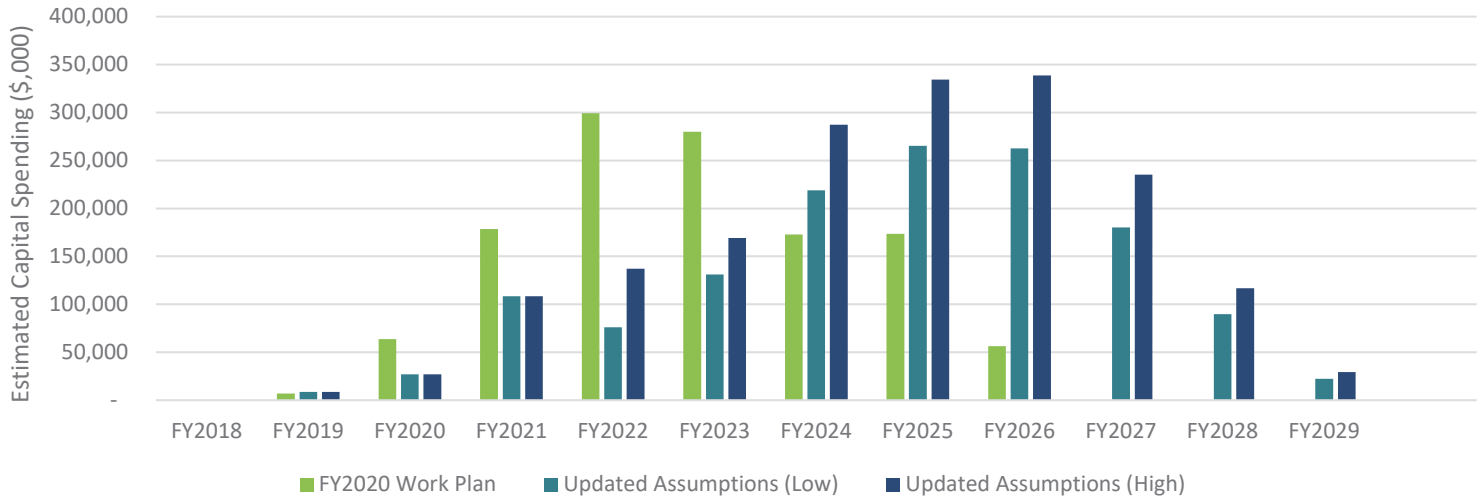
- Refinement in the scope and scale of projects, such as infrastructure requirements for commuter rail and dedicated lanes for BRT, have increased assumed project cost estimates by 5% to 35%.
- Since project timelines have been extended by two to three years, with a majority of spending in the latter half of the cost curve, inflation associated with construction costs have increased assumed cost estimates by 8% to 10%.

Due to these shifts in the schedule, the Wake Transit Plan partners will likely spend less than planned in FY19 to FY23 and more than planned in FY24 to FY29. The first project currently planned to start service is the New Bern BRT in 2023, and assumptions regarding the schedule for initiating commuter rail service have been adjusted by two years from FY27 to FY29.

Through conversations with the project planning teams at GoTriangle and the City of Raleigh and a review of peer projects around the country, the Vision Plan Update team has identified the following factors that may further impact the cost and schedule assumptions beyond the updated estimates yielded from this task:

- While there is always risk associated with construction projects, the peer review findings suggest most projects that assume federal financial participation run into problems by underestimating the time and financial costs associated with moving a project through the federal process.
- The FTA Small Starts and New Starts processes are complicated. A common pitfall identified by the peers is that, during early stages of project development, agencies tend to underestimate the cost and time required to plan and design projects, which can cause FTA grant award and construction start dates to occur much later than originally envisioned. The rigor associated with the FTA project development process should not be underestimated.
- Part of the complication with the project development and design process is that the amount of coordination required, which in this case will be with local partners such as the Transit Planning Advisory Committee (TPAC), local governments, North Carolina Department of Transportation (NCDOT), and North Carolina Railroad (NCRR), is also frequently underestimated. Staffing resources at partner agencies do not always adjust because of new local projects.
- Project sponsors and funders expect that cost and schedule assumptions will be updated and refined as projects proceed through project development and final design. For example, as the Southern, Western, and Northern BRT corridor alignments are determined and they proceed through project development and final design, assumed costs may increase or decrease and schedules may change as more characteristics of and conditions surrounding the projects become known.

Figure 2 Comparison of FY20 Work Plan Vs. Updated Assumptions for Total Major Capital Project Expenditures



Note: in year-of-expenditure dollars

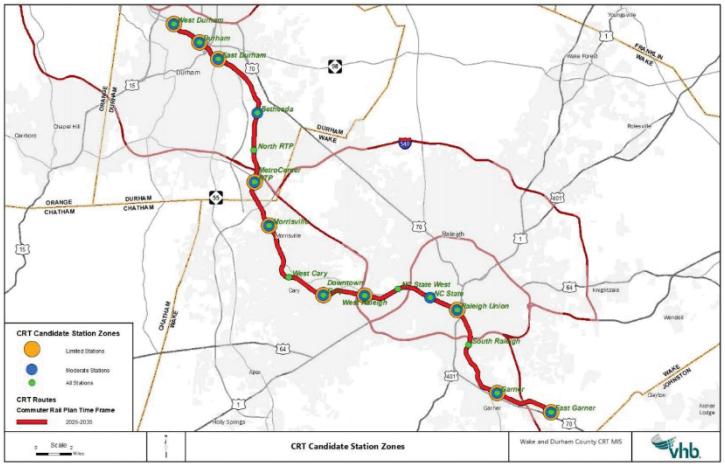
2 Commuter Rail

PROJECT DESCRIPTION

One of the signature projects in the Wake Transit Plan is commuter rail, which was originally planned to connect West Durham in Durham County with Garner in Wake County, traveling via downtown Raleigh, N.C. State University, Cary, Morrisville, and the Research Triangle Park. Commuter rail was designed to be a joint Durham County and Wake County effort, with operations on a 37-mile stretch of existing rail corridor owned by the North Carolina Railroad Company and shared with Amtrak and NCDOT Carolinian/Piedmont trains and freight lines.

Under the Wake Transit Plan, commuter rail services will provide up to eight trips in each direction during peak hours and one or two trips each way during midday and evening hours, recognizing that the rail line will continue to operate as a shared resource balanced against the needs of commuters and other travelers.

Figure 3 MIS Potential CRT Candidate Station Zones



Source: MIS

In terms of capital investments, the commuter rail project assumes rail track improvements, development of 14 stations (up to 20 stations total along potential extensions, see Figure 3), plus vehicles. GoTriangle is the primary agency responsible for the development and implementation of the commuter rail project.

ESTIMATED SCHEDULE AND COST

In 2016, the Wake Transit Plan estimated the cost of the Wake County portion of the commuter rail project at $887.8 million. The original cost estimates included the following assumptions:

- A cost-sharing formula where Wake County would be responsible for two-thirds of the total cost, and Durham County would be responsible for the remaining one-third.
- Half (50%) of the estimated expenses would be covered by Federal Transit Administration (FTA) grants.

The Wake Transit Plan originally assumed work on commuter rail would begin in FY18 and will be ongoing until FY26, with the service opening in 2027 (see Figure 4). The original cost and spending curves assumed most spending would occur between FY22 and FY25 to move the project into final design and then construction (track updates, station development, and vehicle purchases).

To account for delays in implementation planning, Wake Transit Plan partners updated schedule assumptions from the original Wake County Transit Plan as part of the FY 2020 Wake Transit Work Plan. This process primarily held the assigned financial resources constant and reassigned them to the remaining Wake Transit Plan timeframe, so all funding would be used by 2027. Updated assumptions did not change the overall project cost or

delay the project opening year (see Figure 5). As compared with the original Wake County Transit Plan estimate, the forecasts updated for the FY20 Wake Transit Work Plan show a later start year and associated spending occurring in the FY21 and FY26 timeframe.

UPDATED PROJECT ASSUMPTIONS

As discussed, development of the commuter rail project has been slower than originally assumed due to the need for an extended planning and feasibility study phase. Updated assumptions for the commuter rail project cost and schedule have been impacted by a variety of factors, including greater clarity on infrastructure improvements necessary to support reliability expectations for planned service, identification of details that will require negotiations with the railroad owner and freight operators, requirements for carefully coordinating and negotiating involvement of funding partners and stakeholders along the corridor, challenges associated with sensitive high-risk environments along the corridor, and accounting for other rail projects, encroachments, and operating pressures. Project delays also are reflective of the dissolution of Durham County's planned light rail project and the associated political impacts. Consequently, as of November 2019, Wake Transit's commuter rail project remains in the early stages of development and pre-project development planning. Commuter rail is being managed by GoTriangle, with technical support provided by a consultant team. The team has recently released new cost estimates, including updated assumptions about the project delivery schedule, shown in Figure 6.

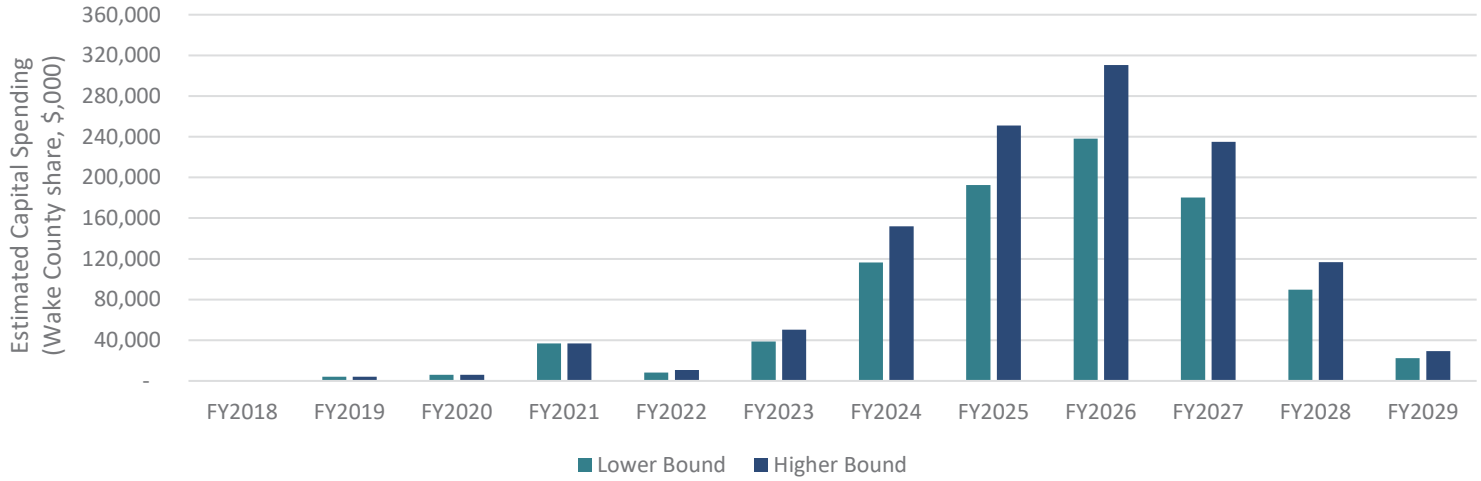
Figure 4 Original Wake Transit Plan Assumed Commuter Rail Expenditures by Year (2016 estimates)

Source: Wake Transit Plan, 2016; in year-of-expenditure dollars

Figure 5 FY20 Work Plan Assumed Commuter Rail Expenditures by Year

Source: FY20 Work Plan; in year-of-expenditure dollars

Figure 6 Winter 2019/2020 Assumptions for Commuter Rail Development (Planned Expenditures by Year)



Source: GoTriangle Staff; in year-of-expenditure dollars

The updated assumed cost curve shifts the commuter rail opening year to 2029, instead of the 2027 opening estimated in the Wake Transit Plan and FY20 Work Plan. The majority of project development, as well as some right-of-way acquisitions, is assumed to happen between FY21 and FY23. The construction and bulk of spending is scheduled for FY24 to FY28. The total cost, partially as a result of inflationary influences from shifting the schedule, has also increased from prior estimates: the Wake share is now represented as range between $933.33 million and $1,202.88 million in year-of-expenditure dollars, since decisions have not been finalized regarding specific infrastructure requirements, level of service, and other factors. A handful of factors could change the updated assumptions for commuter rail spending:

- **Railroad coordination.** The current spending timeline assumes timely engagement with the operating railroads in the corridor beginning in 2020 and continuing throughout project development, design, construction, and start-up. Delay in initiating formal engagement or delay in progressing with network modeling and subsequent activities would result in further changes to the project timeline.
- **Change in partner participation.** The commuter rail project assumes participation from two major partners, Wake and Durham Counties. As of December 2019, the commitment levels of the individual partners are in negotiation, especially with regards to the pace of moving forward to project development, design and construction. Durham County is currently in the process of reweighing investment priorities through a wholesale update of its transit plan. There is also potential that the entire commuter rail project does not go forward, or for other partners to join the agreement.
- **Requirements or decisions to include additional contingency beyond what is currently assumed.** The current cost estimate and schedule are planning-level estimates, which include reasonable contingencies based on what is known about the project at this time and assumptions about unknown items based on industry experience with similar projects. As the project is further defined , the FTA may require and/or the project team may recommend modifying the budget and/or schedule to carry a higher level of contingency . While this could be mitigated by controlling the scope of the project, this could ultimately increase the total budget and further modify the project timeline. FTA has changed how it assesses the risk of a project, including requiring agencies to demonstrate they are prepared to face risks that may disrupt cost and schedule. Agencies must also show that they have the project management expertise to back their implementation timelines.

PEER REVIEW

Since 2000, there have been a handful of commuter rail projects in the United States that developed from planning to operations. As part of updating the schedule and cost feasibility of the Wake Transit Plan major capital projects, the project team considered the experience of peer systems. This peer review was designed to identify unanticipated tracks and pitfalls encountered by the peers that may hold lessons for Wake Transit Plan major capital project implementation.

Two peers were selected for consideration. These peers were selected first by considering commuter rail systems evaluated as part of the MIS project (see Appendix A) and then looking at other commuter rail projects completed in the last five years. Other factors considered when identifying peers included projects with track sharing, comparable service miles, and project timing. With this perspective in mind, the project team recommends **SunRail (Orlando, FL)** and the **Hartford Line (CT & MA)** as peer projects:

- The **SunRail Commuter Rail** connecting downtown Orlando, Florida with Kissimmee and Poinciana Industrial Park opened in 2014 after many years of planning. At 32 miles, it is roughly the same length as the West Durham-Garner extents of the planned Wake Transit Commuter Rail Project. The service was also proposed on an active rail corridor, owned and operated by CSXT and with service shared by Amtrak. SunRail was also a peer in the MIS effort.
- The **Hartford Line** connecting New Haven, CT; Hartford, CT; and Springfield, MA opened in 2018. While a significantly longer project than the proposed Wake Transit commuter rail Project, like the Wake project, this project focused on updating a portion of an existing rail network. A notable difference between Hartford and the Wake Transit Commuter Rail is that, in Connecticut, track was owned by Amtrak rather than a private railroad, although the rail corridor is shared with freight service. Further, the project was sufficiently complicated and involved collaboration with numerous stakeholders to consider it a relevant peer.

Detailed summaries of these two projects' development, cost, and schedules can be found in Appendix A. The following key findings and lessons learned may be useful for GoTriangle as the commuter rail project enters development:

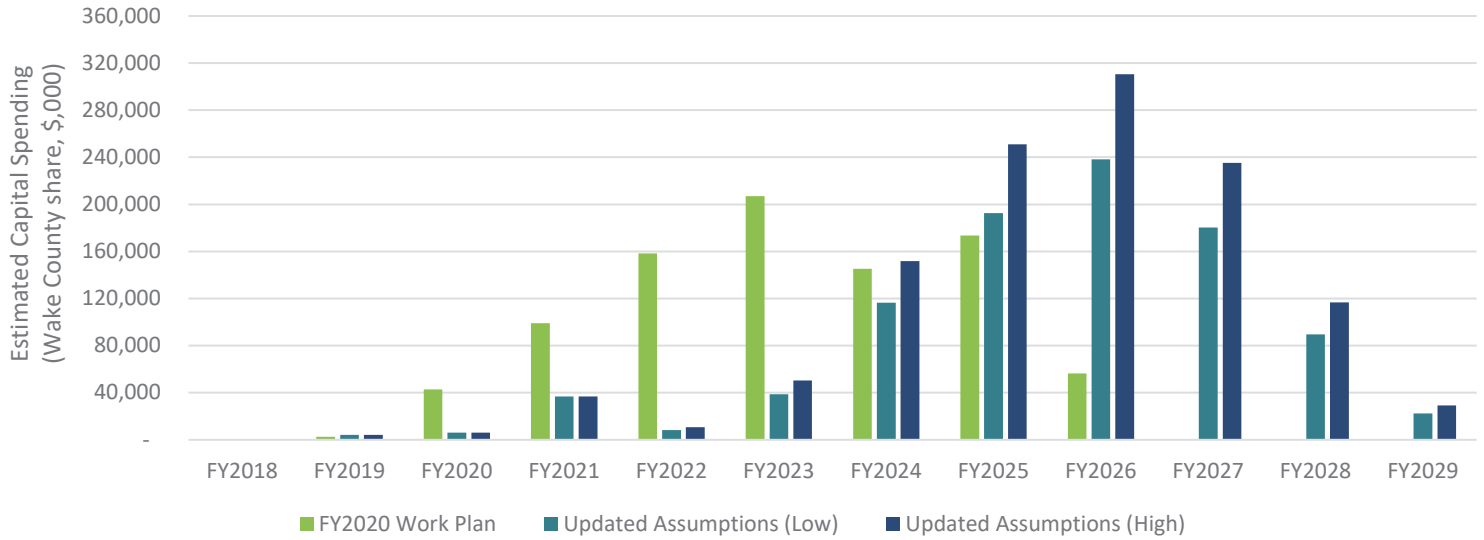
- Having state government in support of commuter rail can help move projects along more quickly; likewise without state support, projects can stall. The Hartford Line had three consecutive governors in full support of rail, and they helped advocate for the project at all levels of government. In Florida, the SunRail project stalled for about three years due to roadblocks from the Florida Legislature and/or Governor.

Figure 7 Change in Estimated Spending from Baseline to Updated Assumptions for Commuter Rail (in $,000s)

	FY20 Baseline Assumptions (FY20 Work Plan)	Updated Assumptions: Lower Bound	Updated Assumptions: Higher Bound	Estimated Change in Spending
Total	**$885,275**	**$933,344**	**$1,202,881**	**+$48,059 to +$317,606**
FY19	$2,636	$4,256	$4,256	+$1,620
FY20	$42,724	$6,000	$6,000	-$36,724
FY21	$99,033	$36,724	$36,724	-$62,309
FY22	$158,438	$8,303	$10,828	-$150,125 to -$147,610
FY23	$207,075	$38,728	$50,506	-$168,347 to -$156,569
FY24	$145,209	$116,457	$151,833	-$28,782 to +$6,624
FY25	$173,653	$192,450	$250,975	+$18,796 to +$77,322
FY26	$56,507	$238,116	$310,529	+$181,609 to +$254,022
FY27	0	$180,288	$235,115	+$180,288 to +$235,115
FY28	0	$89,572	$116,811	+$89,572 to +$116,811
FY29	0	$22,471	$29,204	+$22,471 to +$29,304

Source: FY20 Work Plan, GoTriangle Staff; in year-of-expenditure dollars

Figure 8 Comparison of FY20 Work Plan and Updated Assumptions for Commuter Rail Expenditures



Source: FY20 Work Plan, GoTriangle Staff; in year-of-expenditure dollars

- Working with Amtrak can be difficult to navigate and negotiate but can lead to mutually beneficial partnerships. Florida DOT had a contract with Amtrak to maintain SunRail vehicles at Amtrak facilities, which reduced project schedule risk. In Connecticut, Amtrak operates about half the trains on the Hartford Line, and there is full fare integration between the two entities.
- Project timelines for commuter rail tend to be much longer than expected. From the first alternatives analysis to the opening date, SunRail took 12 years to be fully realized. For the Hartford Line, it was 15 years between the start of the Implementation Plan for Commuter Rail and the opening date. Such long timelines lead to changes in costs as well, due to inflation and changes in the economy over time.

SUMMARY FINDINGS

The most up-to-date Wake-Durham commuter rail estimates from the GoTriangle project team represent an assumed shift in both schedule and cost when compared to the FY20 Work Plan baseline. Figure 7 shows the difference in the assumed amount of spending for each fiscal year until opening, and Figure 8 compares the cost over time for the two estimates. The changes in assumed spending include the following:

- Assumed cost curves will shift spending by roughly two years, delaying the opening year for the commuter rail project to 2029. Investment in commuter rail at a rate of $100 million per year or more is assumed occur between FY24 and FY27. This reflects the two-year delay from the prior planned years of heavy investment (FY22 to FY25).

- The assumed total cost for Wake Transit for the project will increase by $48.06 to $317.61 million, or 5% to 36%, in year-of-expenditure dollars. Wake Transit will spend less than planned in FY20 to FY23, but dramatically more than planned in FY24 to FY29.
- This 5% to 36% increase in estimated costs is impacted by both a refinement in project characteristics demanding certain infrastructure requirements, resulting in a -4% to 24% change in cost, and inflationary influences from the shift in timeline, resulting in a 9% to 12% increase in year-of-expenditure costs. Even though the costs attributed to assumed infrastructure requirements for the lower bound updated assumptions are slightly lower than the baseline, inflation due to increased spending on a later project timeline means that the total year-of-expenditure cost range is higher than the baseline FY20 Work Plan estimates.

3 Bus Rapid Transit

PROJECT DESCRIPTION

The Wake Transit Plan includes approximately 20 miles of bus rapid transit (BRT) service, split into four general corridors that all begin/end in downtown Raleigh. The four corridors are designed to create a high capacity transit network along an east-west and north-south spine (see Figure 9). These services are the core service of the Wake Transit Plan's frequent transit network. Service is designed to operate every 10-20 minutes, depending on time of day, from 4AM to midnight.

While there is a clear plan for BRT project development, as blueprinted by the Wake Transit Fixed Guideway Corridors Major Investment Study (MIS), several elements such as final corridor alignments and BRT technology investments have yet to be determined. However, in every case, BRT is assumed to operate on dedicated lanes for a minimum of 50 percent of each corridor. Other investments include transit signal priority (TSP) at every signalized intersection, specialized vehicles, and enhanced stations with BRT branding. The City of Raleigh was designated as the project sponsor for the development and implementation of all four corridors in the BRT network.

Wake BRT: New Bern Avenue

The Wake BRT: New Bern Avenue projects is furthest along in its development process. From downtown Raleigh, the BRT will travel east on New Bern Avenue (and west on Edenton Street), then continue on New Bern Avenue past the Wake Medical Campus. Figure 10 shows the corridor and proposed stations. Based on stakeholder and community input and ridership projections, the project team extended the New Bern Avenue BRT beyond its original scope east from the Wake Medical Campus to New Hope Road. While the project partners agreed to extend BRT service, the extension will operate in mixed traffic rather than in dedicated lanes.

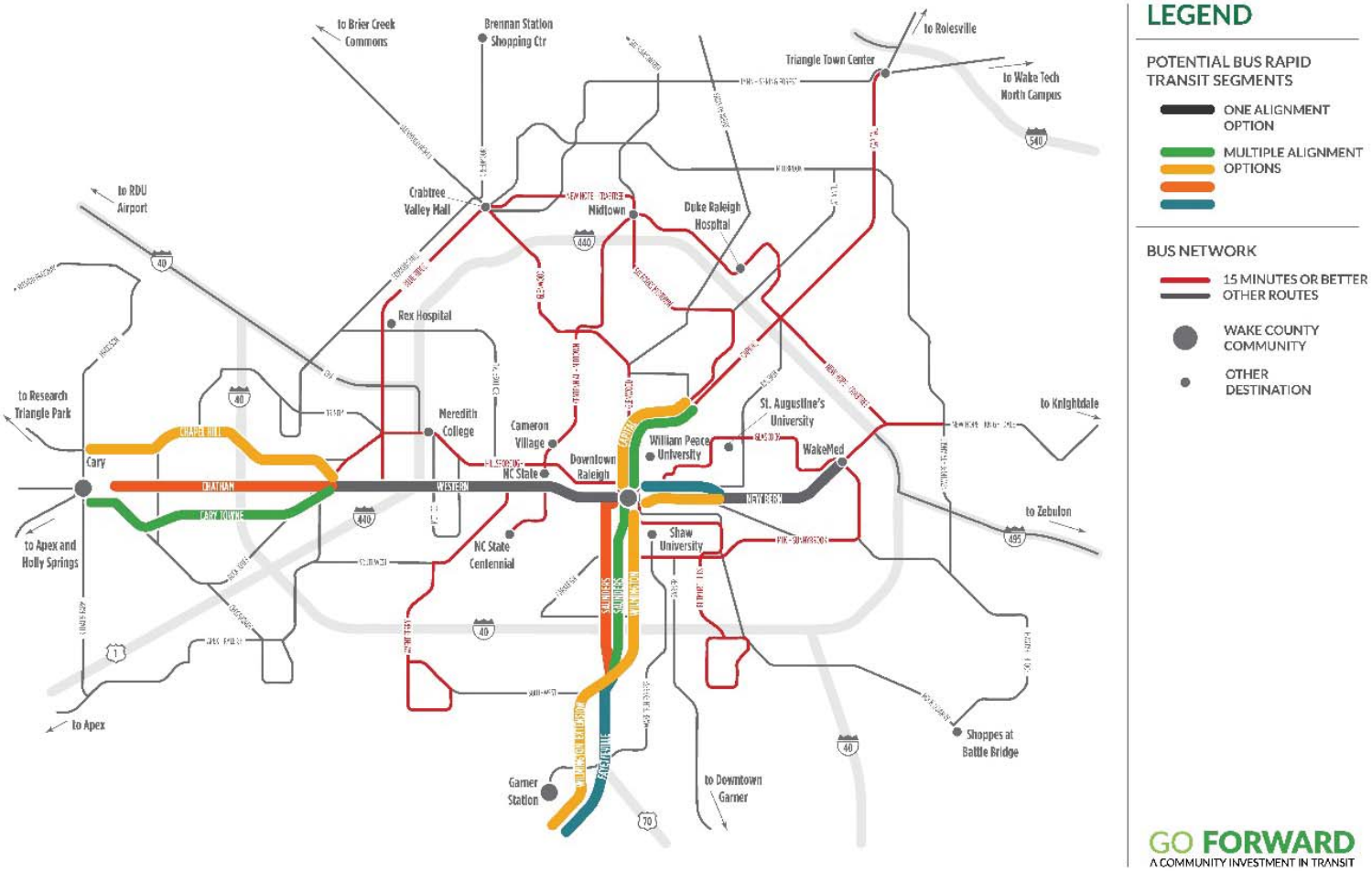
Wake BRT: Southern Corridor

The Wake BRT: Southern Corridor extends south of downtown Raleigh from South Street to Purser Drive. There are three options for the northern part of this corridor: South Street and S. Saunders Street (2.4 miles), McDowell Street and S. Saunders Street (2.4 miles), or Wilmington Street (2.4 miles). For the southern part of this corridor, there are two options: on a new roadway extension of Wilmington Street (1.8 miles), or Fayetteville Road (1.7 miles). Once the Locally Preferred Alternative is identified, the Southern Corridor will enter into the federal Small Starts Project Development phase in Spring 2020.

Wake BRT: Western Corridor

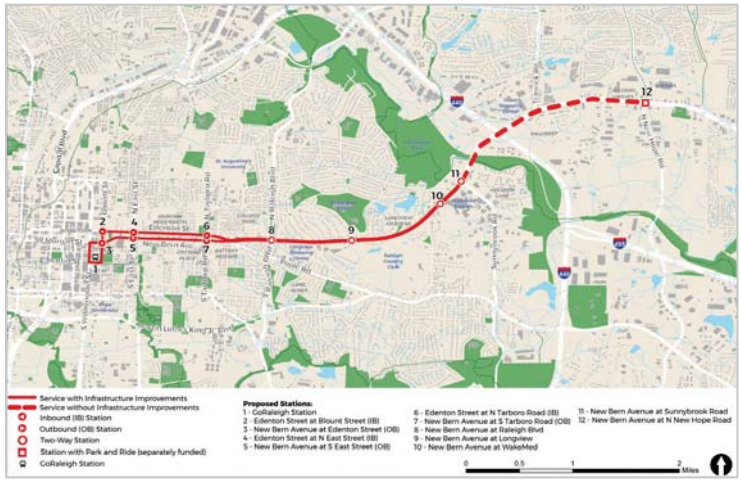
The Wake BRT: Western Corridor is the longest proposed corridor, extending west of downtown Raleigh to downtown Cary. The eastern segment of this route will operate on Western Boulevard between Wilmington Street and Hillsborough Street for 4.8 miles. There are three options for the western segment: Chapel Hill Road (4.1 miles), Chatham Street (3.1 miles), or Cary Towne Boulevard and Walnut Street (3.9 miles), all terminating in downtown Cary.

Figure 9 Raleigh 2027 Bus Network with BRT Alignments



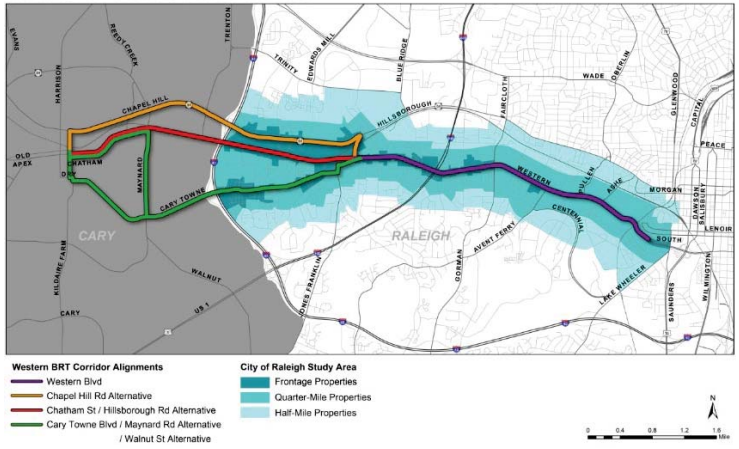
Source: Wake Transit Plan

Figure 10 New Bern Corridor BRT



Source: City of Raleigh

Figure 11 Western Corridor BRT Options



Source: City of Raleigh

The City of Raleigh is leading a Wake BRT: Western Boulevard Corridor Study to identify the preferred Western Corridor alignment. This study and input from the Cary Multimodal Transit Facility Feasibility Study suggest a potential new alignment through Cary (see Figure 11 for all four corridor alternatives). Once the Locally Preferred Alternative is identified through the Western Boulevard Corridor Study, the Western Corridor will enter into the project development phase in Spring 2020.

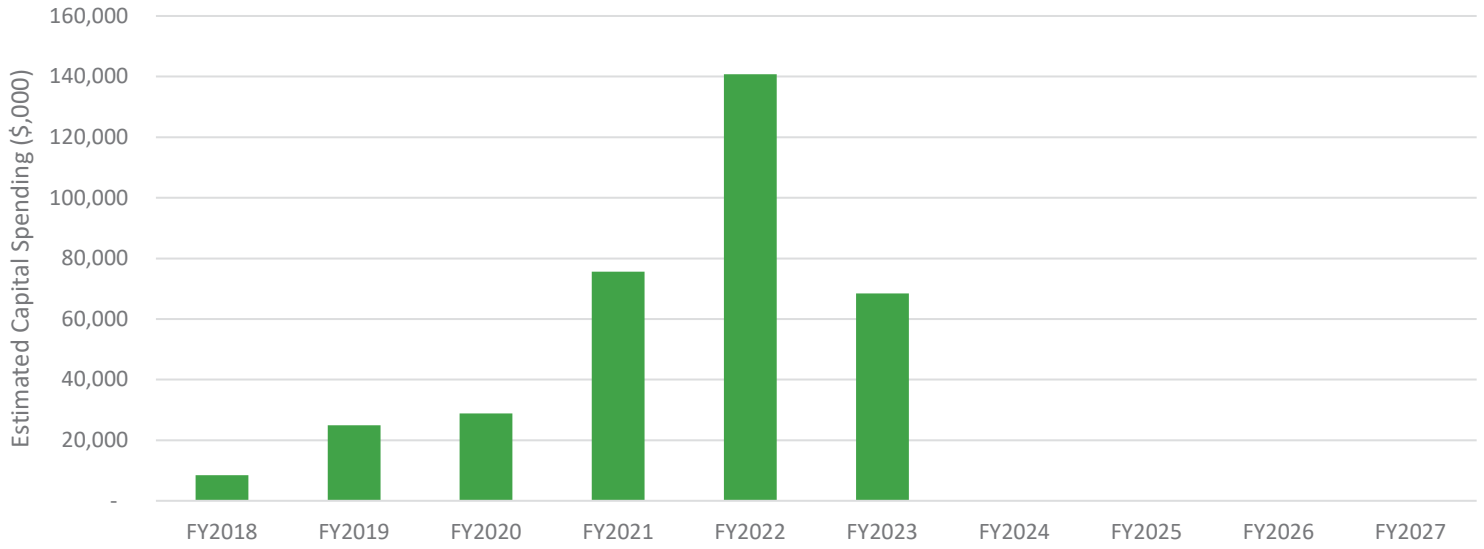
Wake BRT: Northern Corridor

The Wake BRT: Northern Corridor extends north from downtown Raleigh to a future transit center at Crabtree Boulevard. There are two potential configurations for this service: West Street and Capital Boulevard or remaining on Capital Boulevard for the entire alignment. Current plans suggest the Capital Corridor will enter project development last in 2021.

ESTIMATED SCHEDULE AND COST

The original Wake Transit Plan estimated the cost of the four BRT corridors at $347 million total in year of expenditure dollars for capital expenses (see Figure 12) and acknowledged that further implementation planning would occur to refine project characteristics, including cost and schedule feasibility. This estimated cost was based on an assumption that dedicated runningway would be constructed along a minimum of 50 percent of the corridors. The financial model for the Plan also assumed all four corridors would be implemented in parallel, such that the four projects would move into project development in 2018 with operations starting in 2024. Capital costs would be shared equally between the FTA and Wake Transit funds, or roughly $174 million paid for by Wake Transit funds.

Figure 12 Original Wake Transit Plan Assumed BRT Expenditures by Year



Source: Wake Transit Plan; in year-of-expenditure dollars

Since the original Wake Transit Plan, cost and schedule assumptions for the BRT corridors have been developed and updated several times between 2016 and 2019. The first adjustment was developed as part of the MIS conducted in 2018, which included more detailed corridor feasibility planning work and estimated the cost by corridor. With the exception of downtown Raleigh, the planning-level BRT costs generated by the MIS were based on an assumption that 100 percent of the BRT corridor alignments would involve construction of dedicated runningways that are separate from general-purpose lanes. The original Wake Transit Plan assumed that 50 percent of the corridors would involve construction of separate dedicated runningway. The MIS created a low and high estimate for each corridor, depending on route alignments, and estimated BRT development costs at between $375 million and $484 million in 2018 dollars (see Figure 13). The Southern Corridor has the greatest range in cost between its alternatives, due to the infrastructure investments required for one of the corridor alignment alternatives.

The MIS also broke down the cost of each corridor into the ten FTA Standard Cost Categories (five construction categories, plus right-of-way, vehicles, professional services, unallocated contingency, and finance charges), but did not break down the cost by estimated year of expenditure, since a schedule for each corridor was not developed. Since the MIS estimates are in 2018 dollars, the totals for each alternative are not directly comparable to total costs estimated in the Wake Transit Plan and annual work plans, which are in year-of-expenditure dollars with inflation

considered. In general, however, MIS estimates represent a higher cost and level of investment for the four BRT corridors than in the Wake Transit Plan, primarily due to the greater amount of dedicated runningway assumed.

The FY20 Annual Work Plan, largely based off of the original Wake Transit Plan, was developed at the same time as the MIS, so findings from the MIS were not incorporated into this work plan. For the FY20 Work Plan, shown in Figure 14 and Figure 15, the City of Raleigh included separate, more detailed project development and construction cost estimates for the New Bern Corridor. For the remaining three corridors, the Wake Transit partners estimated the combined cost curve based only upon pre-project development planning to date. The total estimated cost remained the same as the original Wake Transit Plan estimates, as did the opening year for all the lines (by 2024).

Figure 13 MIS BRT Estimated Cost (in thousands)

Corridor	Least Costly Alternative	Most Costly Alternative
Wake BRT: New Bern Avenue	$64,861	$64,861
Wake BRT: Southern Corridor	$84,092	$158,891
Wake BRT: Western Corridor	$148,217	$167,585
Wake BRT: Northern Corridor	$78,390	$92,968
Total	**$375,661**	**$484,306**

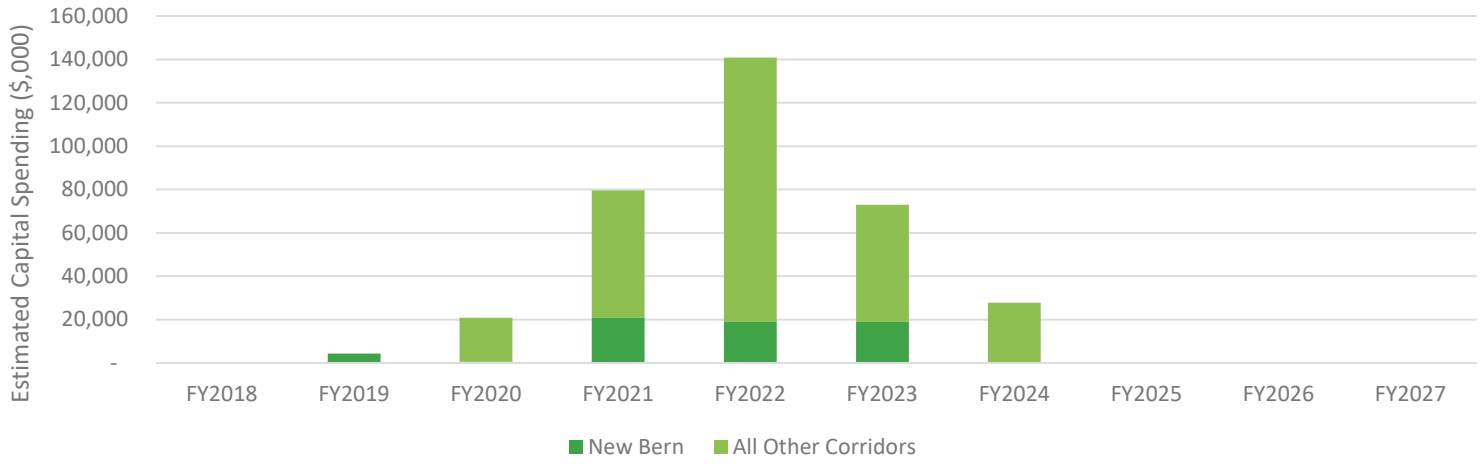
Source: MIS; in 2018 dollars. Note: New alternative for Western Corridor on Maynard Road was not included in MIS.

Figure 14 FY20 Work Plan Assumed BRT Expenditures by Phase and Year

Corridor/ Phase	FY19	FY20	FY21	FY22	FY23	FY24	Total
New Bern Corridor							***$63,848***
Project Development & Final Design	$4,316	$631	$1,000				*$5,947*
Right-of-Way			$1,000				*$1,000*
Construction			$18,967	$18,967	$18,967		*$56,901*
All Other Corridors							***$282,421***
Project Development & Final Design		$20,369 *Southern: $6,540* *Western: $8,290* *Northern: $5,540*	$3,000				*$23,269*
Right-of-Way & Construction			$55,668	$121,818	$53,923	$27,743	*$259,152*
Total BRT Cost	**$4,316**	**$21,000**	**$79,635**	**$140,785**	**$72,890**	**$27,743**	***$346,269***

Source: FY20 Work Plan; in year-of-expenditure dollars

Figure 15 FY20 Work Plan Assumed BRT Expenditures by Year



Source: FY20 Work Plan; in year-of-expenditure dollars

UPDATED PROJECT ASSUMPTIONS

In mid-2019, the City of Raleigh submitted an FTA Small Starts Grant application for the New Bern Corridor with costs estimated at $71.5 million in year of expenditure dollars. FTA Small Starts is a competitive grant program, with grant awards being subject to scoring and funding availability. The application assumes the total of City of Raleigh and Wake Transit revenues would be matched equally by the FTA. The City of Raleigh's most recent estimate is substantially similar to the $64 million estimated in the MIS, which is in 2018 dollars. Wake Transit partners are currently in the process of developing the FY21 Work Plan, and the City of Raleigh submitted the estimates shown in Figure 16 as the draft updated cost estimates for the corridor.

Though project construction is planned to go through 2023, the City of Raleigh is requesting all of the funds in FY21. This request reflects the City of Raleigh's need to demonstrate to the FTA that the local match is available and to potentially enter into a single-year FTA grant agreement. Further, by securing local and federal funds in FY21, the City of Raleigh will have more flexibility to purchase right-of-way and enter different phases of construction without having to wait to finalize funding.

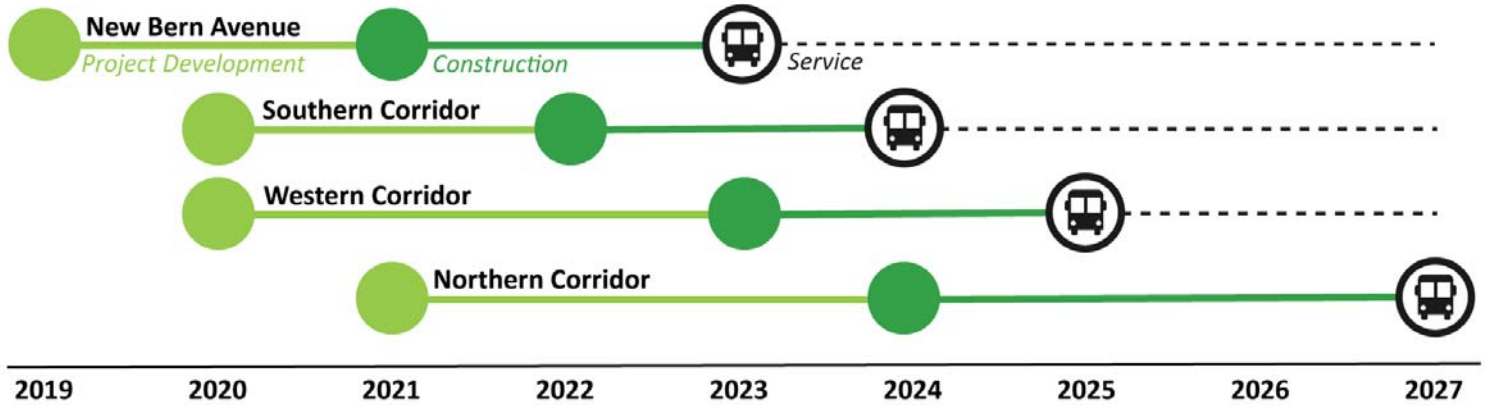
In the time since the MIS and FY20 Work Plan were published, the City of Raleigh refined the BRT implementation schedule (see Figure 17). As discussed, the New Bern corridor is well into the project development phase with construction planned for 2021 to 2023. The Southern and Western Corridors are entering project development concurrently, with construction planned for 2022 to 2023 and 2023 to 2024, respectively. The Northern Corridor is planned to enter project development in 2021 and will be the last to open for service in 2027.

Figure 16 Draft New Bern Costs for FY21 Work Plan

Category	Funding Source	FY19	FY20	FY21	*Total*
Project Development & Final Design	Wake Transit Tax	$4,316	$631	$1,953	*$6,900*
Right-of-Way	Wake Transit Tax			$44	*$44*
Construction	Wake Transit Tax			$19,204	*$19,204*
	Federal			$35,655	*$35,655*
	Raleigh			$3,261	*$3,261*
Equipment (Vehicles)	Wake Transit Tax			$4,024	*$4,024*
Unallocated Contingency	Wake Transit Tax			$2,995	*$2,995*
Total		**$4,316**	**$631**	**$67,136**	***$72,083***

Source: City of Raleigh; in year-of-expenditure dollars

Figure 17 BRT Implementation Schedule (as of 2019)



Source: City of Raleigh; subject to change as each project enters into Project Development

Figure 18 Approximate Expenditure Schedule by FTA Standard Cost Category

FTA Standard Cost Category	Project Development			Construction		
	Year 1	Year 2	Year 3	Year 3/4	Year 4/5	Year 5/6
10 Guideway & Track Elements				33%	33%	33%
20 Stations, Stops, Terminals, Intermodal				33%	33%	33%
30 Support Facilities				33%	33%	33%
40 Sitework & Special Conditions				33%	33%	33%
50 Systems				33%	33%	33%
60 ROW, Land, Existing Improvements				100%		
70 Vehicles					100%	
80 Professional Services	As estimated in FY20 and FY21 Work Plans, and remaining amount divided evenly over remaining years of Project Development.					
90 Unallocated Contingency	Divided evenly among all years after FY 21					

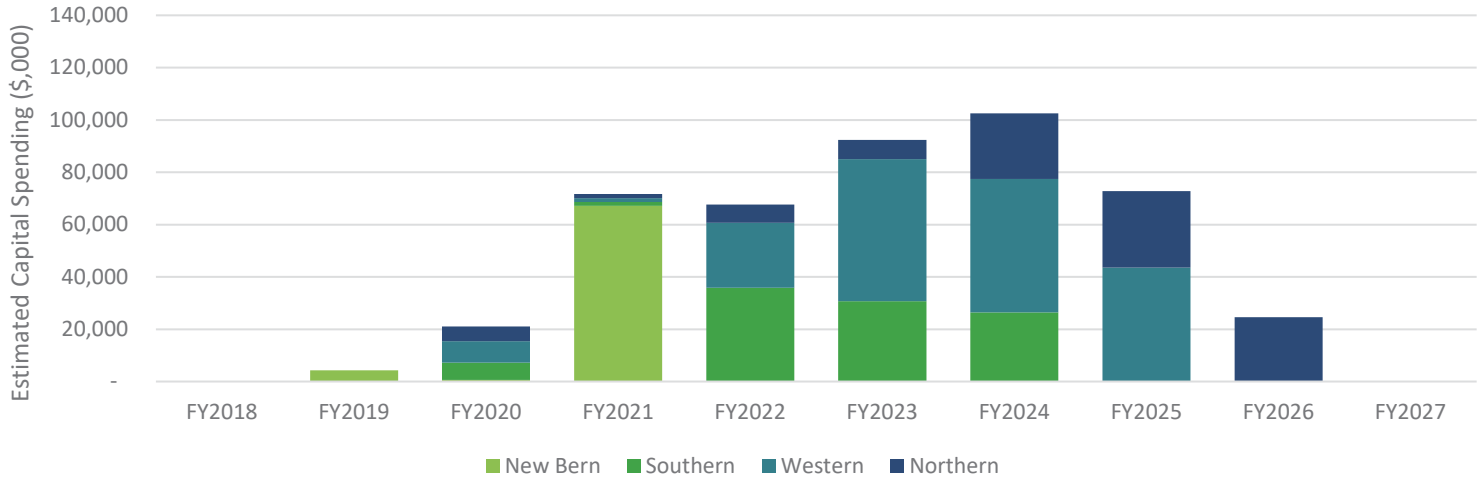
The City of Raleigh has not developed a more detailed implementation schedule beyond what is shown in Figure 17. As part of assessing cost and schedule feasibility, the Vision Plan Update team estimated costs by year for each corridor. For New Bern, the cost by year is represented in the draft FY21 Work Plan (Figure 16). For the other three corridors, the project team used the MIS estimates by FTA Standard Cost Category to allocate the portion of the project budget spent by year by category (see Figure 18 for the approximate rough schedules). Our baseline analysis reflects an assumption that project development and construction each require 2.5 to 3 years for each corridor. It's important to note that the Professional Services category is largely tied to Project Development, for which more exact estimates have already been made for FY20 in the FY20 Work Plan (Figure 14) and for FY21 in the draft FY21 Work Plan (which allocates $1.5 million to each of the three corridors in FY21).

The Vision Plan Update team used the estimates by Standard Cost Category from the MIS for the Southern, Western, and Northern corridors and combined these with the rough schedule in Figure 18 to estimate cost curves for BRT capital development, inflated to year-of-expenditure dollars. Since the alignments have not been chosen for these corridors yet, the cost estimates vary. The low-end cost assumptions are shown in Figure **19** and the high-end assumptions in Figure 20. In both cases, the BRT network will complete construction in the same timeframe.

Based on this analysis, the cost to develop the BRT network is estimated between $454.76 and $589.09 million in year-of-

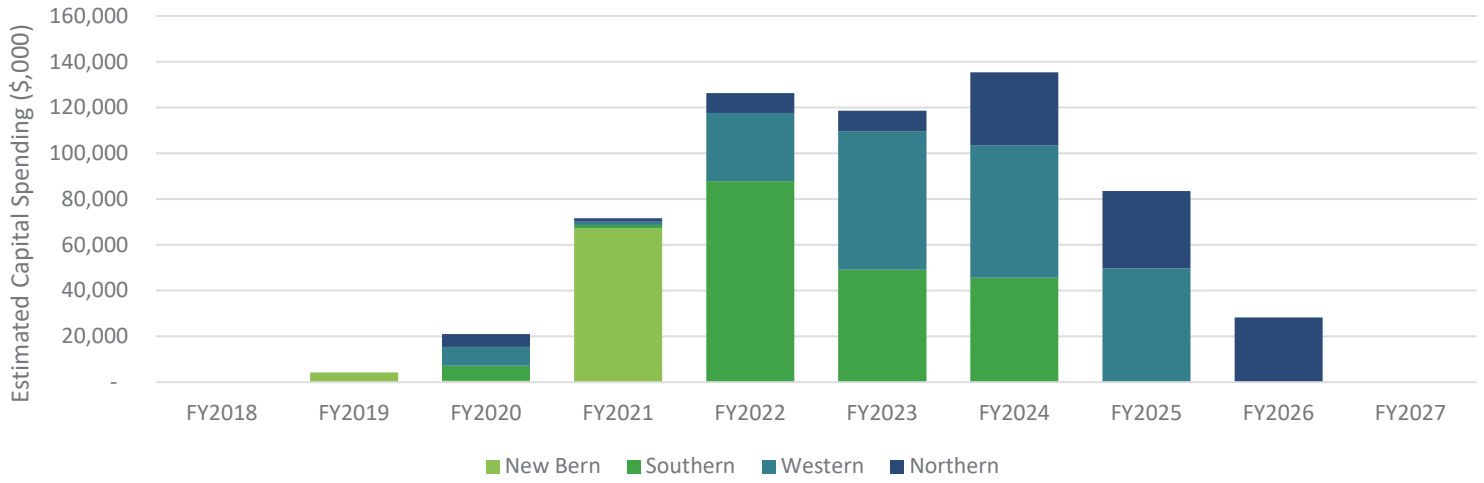
expenditure dollars. A handful of factors could change the updated assumptions for BRT spending:

Figure 19 **Fall 2019 Assumptions for BRT Development (Lower Bound Planned Expenditures by Year)**



Source: City of Raleigh, MIS, Nelson\Nygaard Estimates; in year-of-expenditure dollars

Figure 20 Fall 2019 Assumptions for BRT Development (Upper Bound Planned Expenditures by Year)



Source: City of Raleigh, MIS, Nelson\Nygaard Estimates; in year-of-expenditure dollars

- **The alignments of the Southern, Western, and Northern Corridors have not been chosen.** The scale of construction needed for the chosen alternatives may extend or shorten the construction timelines and increase or decrease total project costs.
- **Changes in construction cost may occur.** These costs vary with the economy, and prices increase during economic upturns and decrease during downturns.

FTA project development processes and definitions are in flux. As with the commuter rail project, the City of Raleigh and its partners will have to show that they can manage greater cost and schedule risk than required by BRT projects.

PEER REVIEW

The project team surveyed BRT projects implemented in similarly sized and positioned communities in the United States to understand their experiences, focusing on planned schedule and cost estimates. We considered the peer systems evaluated as part of the MIS and other projects with similar characteristics nationally (Appendix B). Some of the key factors for consideration when identifying peer BRT projects were the use of dedicated lanes, a relatively recent opening year, and route length. The Wake County BRT service consists of four corridors planned concurrently and crosses jurisdictional boundaries, which are also factors considered.

Based on this scan, the project team recommended using IndyGo Red Line (Indianapolis, IN), Swift BRT (Snohomish County, WA), and ART (Albuquerque, NM) as comparable projects.

- The **IndyGo Red Line** opened in August of 2019 as the first BRT line in Indianapolis's planned network. IndyGo also has two additional planned lines (Blue and Purple). Like Wake Transit's BRT, the Red Line operates in mostly dedicated lanes.
- **Swift BRT** is operated by Community Transit in Snohomish County, WA, and connects major population and employment centers north of Seattle. The first line opened in 2009, the second in 2019, and the third is planned to open in 2024. Swift mostly operates in side-running business-and-transit lanes.
- The **ART** is a BRT project in Albuquerque, NM that started operating in 2017. Though there is only one line, the capital cost per mile and level of infrastructure investment is similar to that of Wake Transit BRT. The opening of ART has been delayed due to numerous issues, so lessons learned from this project can help Wake County adjust its planning based on schedule and cost changes.

Detailed summaries of these three projects' development, cost, and schedules can be found in Appendix B. The following key findings and lessons learned may be useful for the City of Raleigh as the BRT projects enter development:

- Constructing stations with level boarding is more complicated than most agencies expect. Staff from both IndyGo and Community Transit emphasized that concrete pads are crucial for durable level boarding but adds more time and complexity to construction.
- IndyGo and Community Transit staff also suggested splitting construction bids into different packages to make the project easier to manage and to guarantee the best expertise at the lowest cost for each component of the project.
- As ABQ Ride learned from its two-year delay in implementing ART, electric buses require time and extensive testing, and orders should not be rushed.
- The FTA is an essential partner to most infrastructure investment projects. However, the duration of the project may mean that the federal process could change. For example, for some peers, a change in the required contingency created funding challenges.

SUMMARY FINDINGS

The updated BRT cost curves represent a shift in schedule and cost when compared to the FY20 Work Plan baseline. Figure 21 shows change in the dollar value that the Wake Transit Plan may need to spend in each fiscal year through 2027. Figure 22 compares the cost over time between the FY20 Work Plan estimates, the current lower bound estimates, and the current upper bound estimates. The changes in spending and schedule include the following:

- Project development and construction are now staggered for the four corridors, with New Bern as the first to start service in 2023 and the Northern Corridor as the last to start in 2027.
- Significant spending on the BRT project development and construction is expected between FY21 and FY25. The FY20 Work Plan assumed heavy spending would occur between FY21 and FY23.
- Our analysis suggests the cost to build four BRT lines will be $110.39 million to $242.72 million, or 32% to 70%, more than estimated in the FY20 Work Plan. The Wake Transit Plan should expect to spend more than planned in the FY20 Work Plan in FY23 to FY26.

- The 32% to 70% increase in cost estimates is due to both changes to the project scope, resulting in 27% to 63% increase in costs, and inflation from a longer construction timeline, resulting in 5% to 7% increase in costs. The changes to the project scope are primarily for the level of infrastructure investment for these BRT corridors. For example, the MIS planned for a significantly larger amount of dedicated runningway than the baseline Wake Transit Plan, and the project team used the MIS, extrapolated to year-of-expenditure dollars, to update cost assumptions for the Southern, Northern, and Western Corridors.

These current assumptions may be vulnerable to the following changes, beyond the expected cost increase:

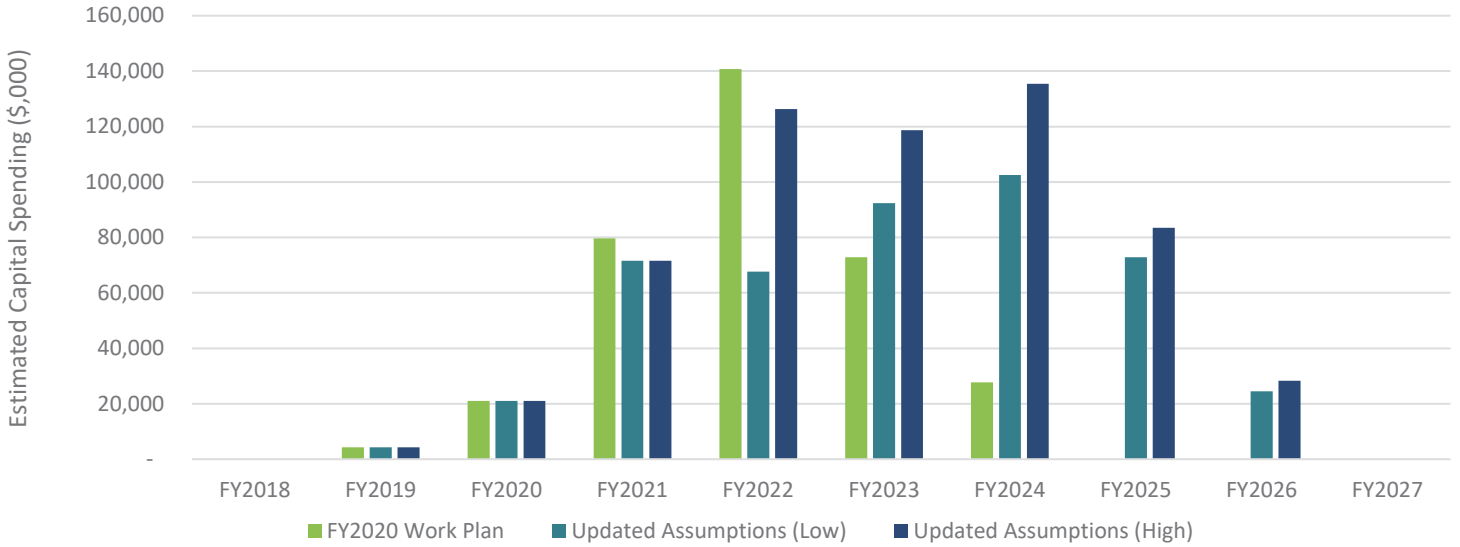
- A common mistake identified by the peers is that agencies tend to be optimistic about project development, especially project costs but also schedules. The experience of the peers suggest that resources are consumed quickly and the rigor of the FTA project development process should not be underestimated.
- The Wake Transit Plan BRT projects are sized under the FTA's Small Starts project. While less complicated than New Starts projects, they still require extensive collaboration with local, regional and federal partners and should not be underestimated.
- The FTA is wary of risk in project plans, especially funding risks. Such risks increase when implementing a portfolio of projects as is outlined by the Wake Transit Plan's BRT network. One of the strengths of the Wake Transit Plan is access to a dedicated funding stream.
- Once alignments of the Southern, Western, and Northern Corridors are chosen, cost and schedule will need to be further refined to the scale of construction needed for each project.
- Bids from construction firms may come in more or less than expected, and construction of stations may take more money and time than expected.

Figure 21 Change in Estimated Spending from Baseline to Updated Assumptions for BRT

$,000's	Baseline: FY20 Work Plan	Updated Assumptions: Lower Bound	Updated Assumptions: Upper Bound	Estimated Change in Spending
Total	**$346,369**	**$456,760**	**$584,926**	**+$110,392 to +$242,717**
FY19	$4,316	$4,316	$4,316	$0
FY20	$21,000	$21,000	$21,000	$0
FY21	$79,635	$71,636	$71,636	-$7,999
FY22	$140,785	$67,640	$126,300	-$73,145 to -$14,485
FY23	$72,890	$92,343	$118,665	+$19,453 to +$45,775
FY24	$27,743	$102,474	$135,386	+$74,731 to +$107,643
FY25	0	$72,809	$83,481	+$72,809 to +$83,481
FY26	0	$24,543	$28,301	+$24,543 to +$28,301

Source: FY20 Work Plan, City of Raleigh, MIS, Nelson\Nygaard Estimates; in year-of-expenditure dollars

Figure 22 Comparison of FY20 Work Plan and Current Assumptions for BRT Expenditures



Source: FY20 Work Plan, City of Raleigh, MIS, Nelson\Nygaard Estimates; in year-of-expenditure dollars

Appendix A: Peer Commuter Rail Projects

TABLE OF POTENTIAL COMMUTER RAIL PEER PROJECTS

Service	Operation Year	Capital Cost/Mile (millions)	Annual Operating Cost (millions)	Track Length (miles)	Track Sharing	Number of Stations
Wake Transit (Raleigh, NC)	2029	$48.8 (YOE $'s)	$21.1 (2029 $'s)	37	Freight, Amtrak	14
Peers Used in MIS						
A-Train (Denton, TX)	2011	$14.6	$12.8	21	Freight	5
MetroRail (Austin, TX)	2010	$5.5	$23.1	32	Freight	9
SunRail (Orlando FL)	2014	$12.6	$31.2	32	Freight, Amtrak	12
Music City Star (Nashville, TN)	2006	$1.8	$5.2	33	Freight	6
Tri-Rail (Miami, FL)	1989	$18	$90	71	Freight, Amtrak	18
VRE (Washington, DC)	1992	Unk	$69.9	35/54	Freight, Amtrak	10/13
TRE (Dallas, TX)	1996	$10.6	$28	36	Freight	10
Northstar (Minneapolis, MN)	2009	$10.3	$16.7	40	Freight	7
COASTER (San Diego, CA)	1995	Unk	$16.7	41	Freight, Amtrak	8
Front Runner (Salt Lake City, UT)	2008	$18.3	$45.2	89	Partly, Freight	16
A-Line (Denver, CO)	2016	$55.4	$46.7	23	No	8
Other Potential Peers						
Hartford Line (CT & MA)	2018	Unk	Unk	62	Amtrak	9

SUNRAIL (FL)

Overview

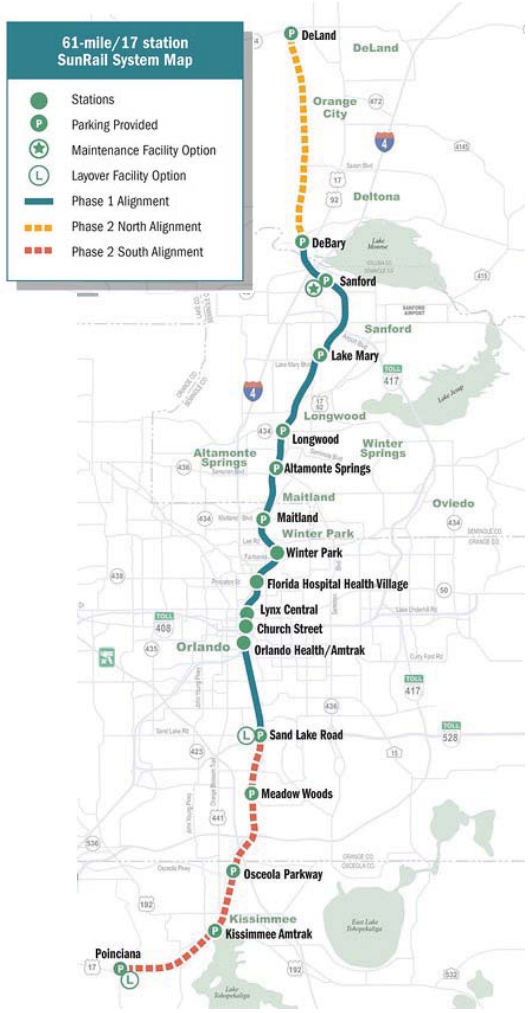
SunRail is a commuter rail line in the Orlando, Florida, area serving the 2.7 million residents of Orange, Osceola, Seminole, and Volusia Counties (Figure 23). Phase 1 of SunRail opened in 2014 on tracks owned by the Florida Department of Transportation (DOT) and shared with freight and Amtrak. Florida DOT operates the line, which now includes Phase I and Phase II South. Operations are expected to transition to the Central Florida Commuter Rail Commission in 2021 through an interlocal agreement already in place. For the development and construction of the project, the capital funding breakdown was 50% from FTA New Starts, 25% from state funds, and 25% split among the four counties and the City of Orlando.

For Phase I, trains ran on weekdays between 12 stations, with 18 daily round trips. The capital cost of the project was approximately $12.6 million per mile, or $403 million total, and operating costs were $31.2 million in FY16. In July of 2018, the southern part of Phase 2 opened, adding 17.2 miles and 4 stations to the route. The service level increased to 20 roundtrips each weekday, and operating costs were $38.2 million in FY19.

Schedule

FDOT experienced major delays during project development, as shown in Figure 24. The agency conducted an alternatives analysis (AA) and settled on a locally preferred alternative (LPA) in 2002 to 2004. In 2007, the LPA entered the New Starts Preliminary Engineering (PE) phase, with an anticipated opening year of 2010. Once the project entered Final Design (FD), the anticipated opening year was pushed back to 2011.

Figure 23 SunRail Phase I Map



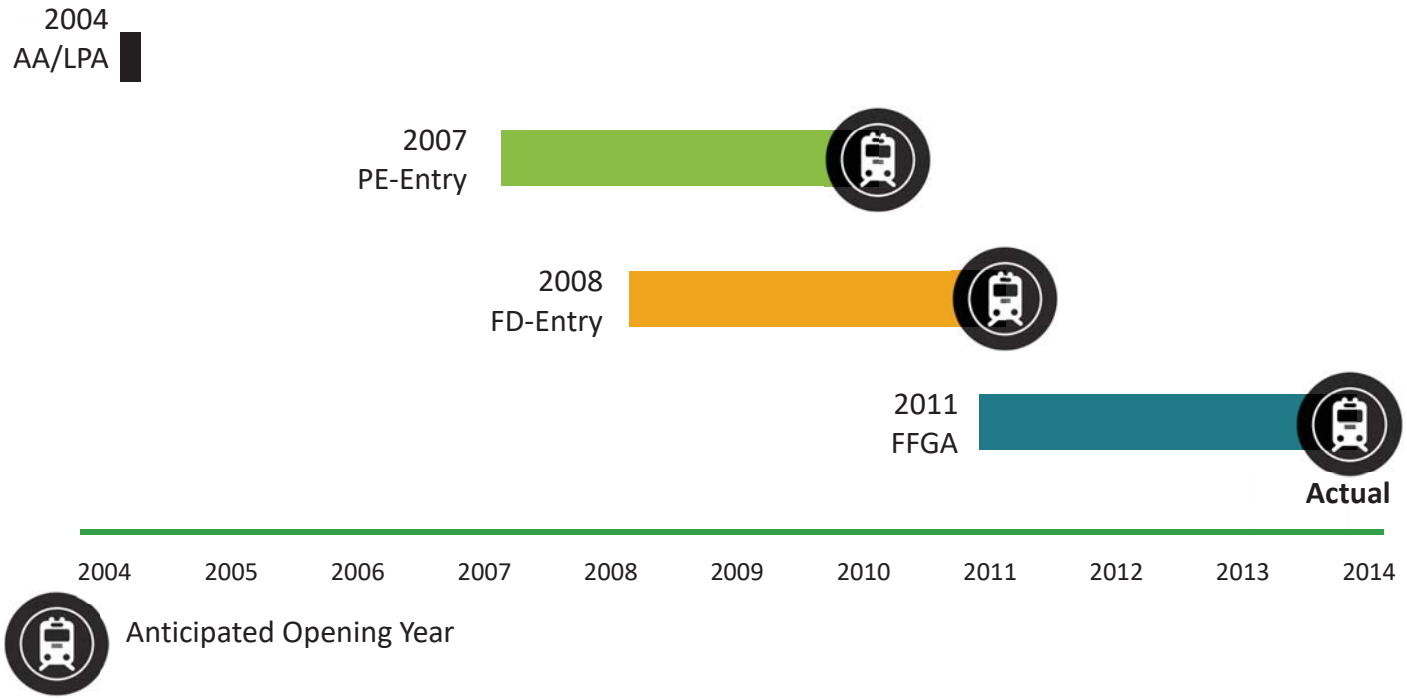
Source: SunRail

However, FDOT only received the Full Funding Grant Agreement (FFGA) in 2011, which shifted the actual opening date to May 2014. Many of these delays were due to legislative and political issues. In 2008, the Florida Legislature delayed the project due to liability and indemnification issues with the right-of-way, and in 2009, they initially voted against an insurance proposal brought forward by FDOT before eventually supporting it later that year. In 2011, the governor froze all construction contracts, delaying the progress of construction.

Costs

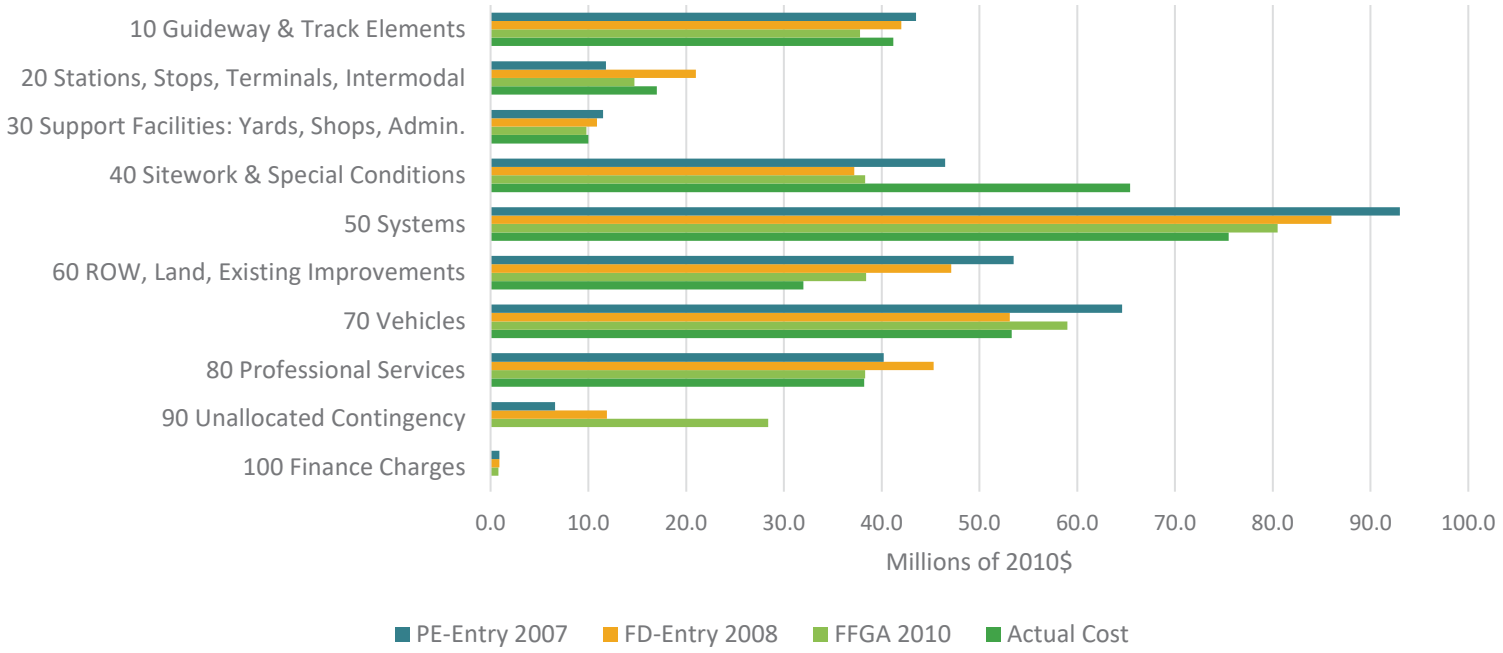
The estimated costs throughout the project remained relatively consistent, and the actual cost was on budget. However, estimates of individual cost categories differed throughout the process, as shown in Figure 25. FDOT underestimated sitework construction costs, as estimates were produced during the recession, but ultimately made the purchases during economic recovery, when costs were higher. Systems construction and vehicles were generally overestimated.

Figure 24 SunRail Phase I Schedule Changes



Source: SunRail Phase I Before & After Study

Figure 25 SunRail Estimated vs Actual Costs by Standard Cost Category and Phase



Source: SunRail Phase I Before & After Study

Lessons Learned

The SunRail project team shared several lessons they learned that may be useful as GoTriangle develops the Wake-Durham commuter rail:

- Early transit-oriented development (TOD) planning helps with local buy-in and seeding development.
- Visiting peers or inviting them to present for lessons learned workshops can help identify challenges in the process.
- SunRail's cost risk was reduced by having more than 75% of the FFGA known or committed through contracts and advanced design for remaining bid items prior to the FFGA application.
- SunRail's schedule risk was reduced through ownership of the corridor, a contract with Amtrak to maintain vehicles at the Amtrak facility near the SunRail facility, the inclusion of a new dispatch center, and the adoption of CSXT construction standards rather than creating new ones for FDOT.

HARTFORD LINE (CT & MA)

Overview

The Hartford Line is a regional rail service operating between New Haven, CT and Springfield, MA via Hartford, CT. Service commenced on the entire 63-mile corridor in June 2018, serving the 1.9 million residents of central Connecticut and southwest Massachusetts. For the development and construction of the project, the capital funding breakdown was about 17% Federal Railroad Administration (FRA) High Speed Intercity Passenger Rail (HSIPR) Program funds (as part of the American Recovery and Reinvestment Act) and 83% state funds.

Currently, there are nine stations along the line, and four infill stations are in development. On weekdays, 18 round trips operate between New Haven and Hartford. Of these 18 round trips, 12 also operate between Hartford and Springfield. On weekend days, 14 roundtrips operate between New Haven and Hartford, with 11 also operating to Springfield. Service is provided by a mix of Amtrak and CT*rail* trains operated by a single service provider (a joint venture of TransitAmerica Services and Alternate Concepts). On weekdays, eight of the 18 round trips are operated on Amtrak trains. On weekend days, six of the 14 round trips are operated on Amtrak trains.

The Hartford Line advertises a “one ticket, any train” policy for its customers, meaning any ticket may be used on any train between Springfield, MA and New Haven, CT, including intermediate stations. Amtrak tickets are accepted on CT*rail* Hartford Line trains, and CT*rail* Hartford Line tickets are accepted on Amtrak trains. Passengers must buy a separate ticket for connecting service bus, Metro North, Amtrak, and Shore Line East service in New Haven.

Figure 26 Hartford Line Map

Source: Connecticut Business and Industry Association

The original 63-mile rail corridor between New Haven and Springfield had previously been served only by six daily Amtrak round trips, but the majority of the corridor (about 39 miles) was single tracked. The majority of funding allocated to Hartford Line construction has been dedicated to double tracking and/or relaying track along the corridor. Combined, these projects (the last phases of which remain ongoing), are expected to cost $1,202 million (2018 USD), making for an average cost of $17 million/mile.

Once the portion of the corridor between Hartford and Springfield is double-tracked, Hartford Line administrators envision 25 round trips per weekday, resulting in 30-minute frequencies during peak travel times.

Schedule

The Connecticut Department of Transportation (CTDOT) experienced some delays during project development; however, these were largely the result of a new funding source—the Federal HSIPR Program—becoming available in 2008. In 2003, Connecticut initiated an Implementation Plan for Commuter Rail service in Connecticut, which was published in June 2005, and an Environmental Impact Analysis (EIA) of this new commuter rail service was initiated in 2008. Before this study was completed, however, President Obama and Congress created the HSIPR Program to support new intercity and high-speed passenger rail service. For the first time since Amtrak was created, the Federal government made funding available to support new intercity and high-speed rail investments.

The creation of this new funding source resulted in the FRA requiring the Hartford Line project to essentially restart from scratch. Connecticut, its partner states (Massachusetts and Vermont), and Amtrak presented a new plan for a mix of intercity and regional trains along the corridor to the FRA in 2009. FRA and FTA supported the new plan, and the Hartford Line ended up receiving about $190 million from the HSIPR Program. Since the conclusion of the HSIPR Program, the Hartford Line has received about $14 million from the FTA for station renovations and a Rail Alternatives Analysis.

Once the development plan for the corridor was re-created to leverage HSIPR funding, CTDOT estimated that the line would begin operation in mid-2017. The actual opening date for the line was June 2018. This one-year delay was the result of more difficult than expected construction conditions in the railroad right-of-way: During the 1980s, Amtrak had stopped maintaining one track along much of the corridor in order to save money on maintenance costs, and as a result, some right-of-way required extra work during Phases 1 and 2 in order to be double tracked.

Costs

The first phase of Hartford Line construction was over-budget, but later phases of the project were on budget. Phase 1's capital costs were estimated by the FTA to be $6 million/track mile, but the eventual cost of double tracking the Meriden-Newington corridor was about $14 million/track mile. This large difference in cost was largely the result of the Amtrak union's mandated large crew size, which inflated costs. Later phases of the project took into account the higher costs associated with building on an Amtrak corridor, resulting in all subsequent phases remaining on-budget. The costs and sources of each phase of the Hartford Line project are presented below in Figure 27.

.

Figure 27 Hartford Line Funding Components

Funding Component	Location	Cost	Federal Share	State Share
Phase I	Meriden-Newington	$147.7 million	$40.0 million	$107.7 million
Phase 2 Implementing Grant	New Haven-Hartford	$352.5 million	$120.9 million	$231.6 million
Phase 3A	Windsor	$122.9 million	$30.0 million	$92.9 million
State Street Station	New Haven	$18.8 million	$10.0 million	$8.8 million
Hartford Rail Alternatives Analysis	Hartford	$4.9 million	$3.9 million	$1.0 million
Meriden TOD & Other Costs	Various	$61.3 million	n/a	$61.3 million
Phase 3B Design	Windsor – Springfield	$27.5 million	n/a	$27.5 million
Phase 3B Construction	Windsor – Springfield	$186.6 million	n/a	$186.6 million (not funded)
Phase 4 Design	(N. Haven, W. Hartford, Windsor, Windsor Locks, Enfield)	$33.5 million	n/a	$33.5 million
Phase 4 Construction	(N. Haven, W. Hartford, Windsor, Windsor Locks, Enfield)	$246.0 million	n/a	$246.0 million (not funded)

Source: Connecticut Department of Transportation

Lessons Learned

The Hartford Line project team shared several lessons they learned that may be useful as GoTriangle develops the Wake-Durham commuter rail line:

- Today, the right-of-way where Wake-Durham commuter rail service is planned is served by several daily Amtrak services (Palmetto, Silver Star, Silver Meteor, Piedmont, and Carolinian). This presents the opportunity for the region to partner with Amtrak to provide commuter service between Durham and Raleigh in much the same way as CTDOT does on the Hartford Line. The project team cautioned that long-distance Amtrak trains are often very off-schedule due to delays caused by freight train interference, so this arrangement has resulted in some service reliability problems.
- Prior to the Hartford Line, Amtrak was "adamantly" unwilling to share intercity train travel operations with an additional service provider. The Hartford Line shows that interagency cooperation can successfully bring about a shared operating agreement with Amtrak.
- The Hartford Line project team emphasized the benefits of having a vocal supporter in the form of the state's Governor. The project's lifetime has spanned three different governors from both the Republican and Democratic parties. All three governors supported the project and made it a priority to pass bond measures in order to realize the project's construction.
- The Hartford Line saved capital costs and were able to keep extra delays at bay by entering into a train leasing agreement with the MBTA. The majority of service along the line is operated by leased MBTA commuter rail trains; the rest of the service is provided by Amtrak trains.

Appendix B: Peer BRT Projects

TABLE OF POTENTIAL BRT PEER PROJECTS

Service	Operation Year	Capital Cost/ Mile (millions)	Annual Operating Cost (millions)	Length (miles)	Bus Lane?	# of Lines (+ Planned)	Cross City Lines?
Wake Transit (Raleigh, NC)	2023-27	$23-29 (YOE $'s)	$14 (2024 $'s)	~20	Mostly	4	Yes
Peers Used in MIS							
HealthLine (Cleveland, OH)	2008	$28.1	$8.2	7.1	Yes	1	No
Orange Line (Los Angeles, CA)	2005	$26.9	Unk	18	Yes	1	No
EmX (Eugene, OR)	2007-17	$7.1	Unk	28	Mostly	2	Yes
Swift Green (Snohomish, WA)	2009-24	$6.0	$6.2	12.5	Some	2 (+1)	Yes
ART (Albuquerque, NM)	2017-19	$15.2	$6.2	14	Yes	1	No
Other Potential Peers							
Red Line (Indianapolis, IN)	2019-23	$7	$8	13.5	Mostly	1 (+2)	No
GRTC Pulse (Richmond, VA)	2018	$8.5	Unk	7.6	Some	1	No
sbX (San Bernardino, CA)	2014	$12.2	Unk	15.7	Some	1 (+9)	Yes
UVX (Central Utah)	2018	$14.5	Unk	11	Mostly	2 (+2)	Yes

INDYGO RED LINE (INDIANAPOLIS, IN)

Overview

Opened in 2019, the Red Line is Indianapolis's first BRT project. IndyGo operates the service on a 13.5-mile corridor with 28 stations, serving 60,000 people and 136,000 jobs. The bus runs on dedicated lanes for most of the route, and about a third of stations are on the side of the street and two-thirds are in the center of the street. The Red Line is the first of three corridors planned for Indianapolis; the Purple Line will open in 2022 and the Blue Line in 2024.

The total capital cost for the red line was $96.3 million, or $7 million per mile, funded 80% from an FTA Small Starts Grant and 20% from local revenues. The annual operating cost is predicted to be $7 or 8 million. The service currently runs every 10 minutes all day on weekdays and every 15 minutes all day on weekends. The average weekday boarding in September 2019 was 7,700 riders per day.

Schedule

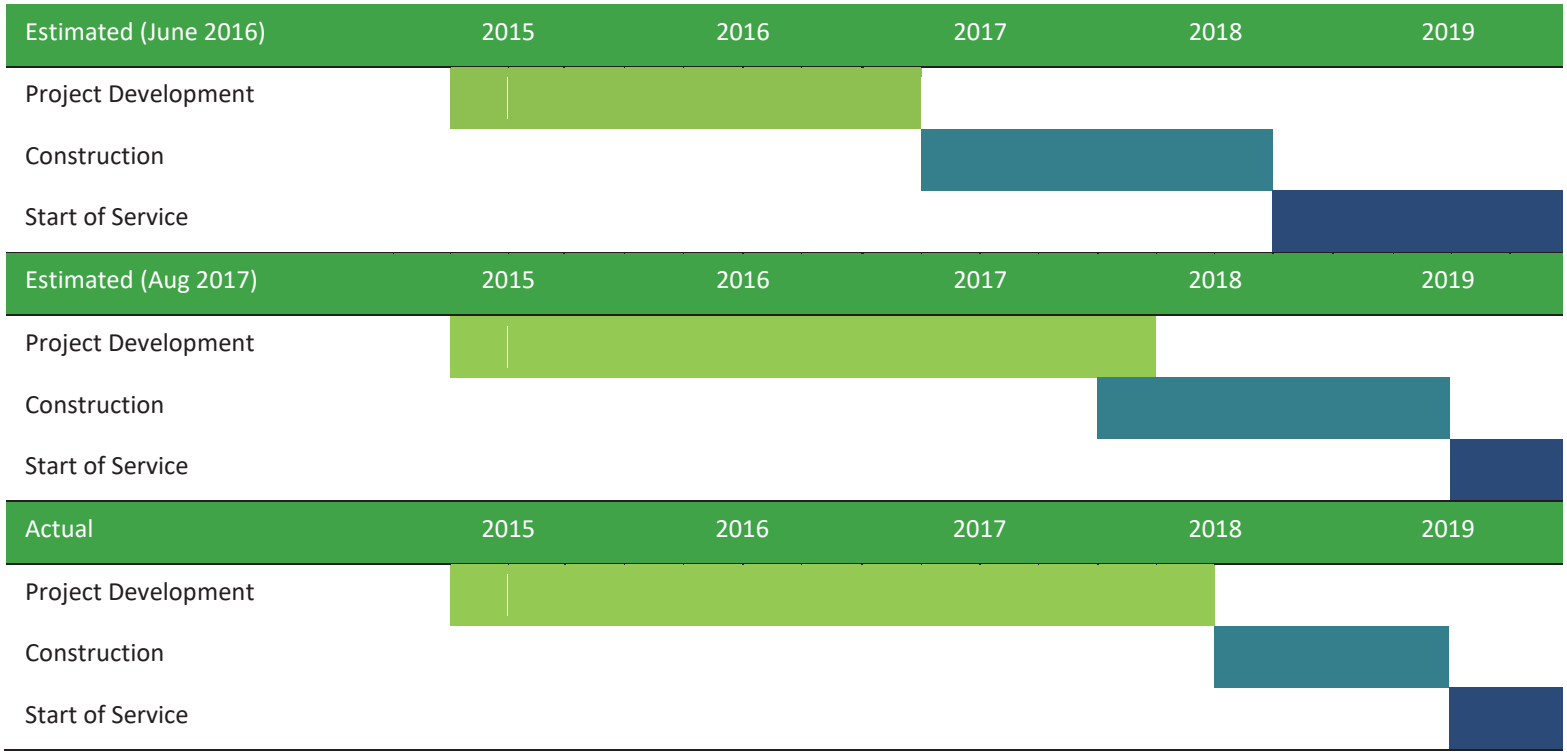
The development and construction of the Red Line took 4.5 years, which is about three quarters of a year later than initially estimated. After decades of trying to build light rail in Indianapolis, the City shifted its focus to BRT in the early 2010's. Project development for the Red Line started in 2015, with an opening date in Autumn of 2018. By August 2017, the opening date was pushed back to mid-2019, which was in line with the actual opening date in September of 2019. Figure 29 shows the schedule at different points of the project.

Delays were largely due to local and federal politics. In 2017, the project stalled for six months since the City did not want to proceed further with the project until receiving funding recommendations from the FTA. Once the bids were selected, IndyGo experienced a four-month delay in receiving the grant due to the change in the federal administration. Construction time, on the other hand, was shortened to prevent the open date from further delays. Construction bids came in lower than expected, so IndyGo was able to spend their extra and contingency funds on overtime labor to speed up construction.

Figure 28 IndyGo BRT Map

Source: IndyStar

Figure 29 IndyGo Red Line Schedule Changes



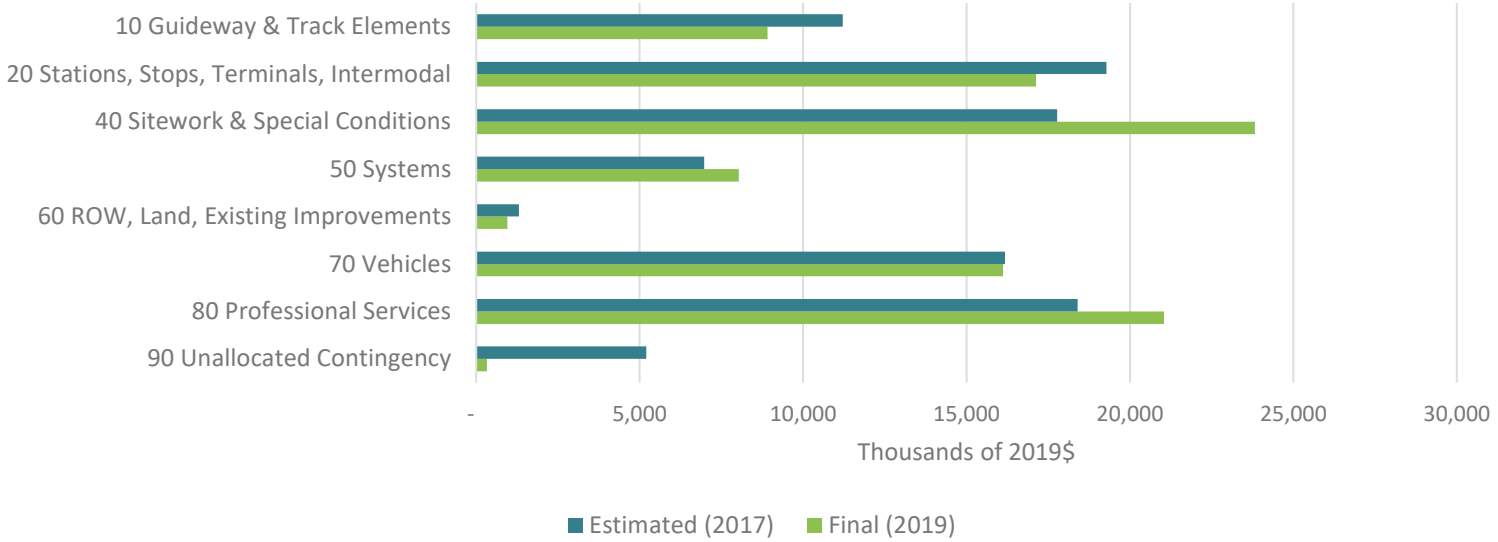
Source: IndyGo Staff

Costs

IndyGo maintained a budget of $96.3 million while building the Red Line and finished on budget. As shown in Figure 30, guideways and stations were less costly than estimated, while more of the budget was spent on sitework and professional services than expected. All the unallocated contingency was spent as well. A significant portion of the savings in construction and the unallocated contingency was used on overtime labor to speed up construction, which mostly went into the labor-intensive sitework.

In talks with the FTA, the agency wanted IndyGo to increase its initial 12-15% contingency to 15-30% (depending on phase). Since IndyGo wanted to stick to the budget, it instead reduced the project scope by making some low priority components, such as snow melt coils in the station platforms, into bid alternatives rather than mandatory. Since IndyGo ended up not using the entire contingency budget, most of these low priority components were added back into the scope.

Figure 30 IndyGo Red Line Estimated vs Actual Costs by Standard Cost Category



Source: IndyGo Staff

Lessons Learned

The Red Line project team shared the following lessons learned from their BRT development process:

- Agencies should always plan for more time, especially with FTA funding and local politics.
- Splitting contractors into two contract packages can lead to better expertise and potentially lower costs. One engineering firm can rarely do both roadwork and station-work at a better quality and price than two separate firms.
- While planning for multiple BRT routes, gaining FTA trust will make the project go smoother. The FTA wants to see multiple agency staff dedicated to the project, not just consultants.
- Level boarding requires tight tolerances, and the same contractor should first build the stations, then install bus pads on the road.
- Center stations are better than side stations, since building one two-sided station is cheaper than building two stations. They are also a more efficient use of space and better received by the public.

SWIFT BRT (SNOHOMISH COUNTY, WA)

Overview

Swift is a BRT network in Snohomish County, WA, just north of Seattle. Community Transit opened the Swift Blue Line in 2009, and the Green Line recently opened in early 2019. Swift buses run every 10 minutes during most of the day on weekdays, and every 15-20 minutes early morning and late nights, as well as weekends. A third line, the Orange Line, is in its project development phase and is set to open in 2024.

The Blue Line corridor is 16.7 miles and 17 stations, and the service currently has 6,000 daily weekday boardings. This route was entirely locally funded, at $34 million total, or $2 million per mile in 2009 dollars. The bus runs on existing Business Access and Transit (BAT) lanes, so Community Transit did not have to put funds into building new lanes. Operating costs for the Blue Line are about $8 million per year.

The Swift Green Line is Community Transit's first FTA Small Starts project, so it serves as a peer to Wake County's BRT corridors. The corridor is 12.5 miles of queue jump and general traffic lanes, and there are 18 stations. Capital costs were $73 million total, or $5.8 million per mile, 65% of which was paid for by the FTA, 17.5% paid for locally, and 17.5% through a state matching fund. The Green Line currently has an average of 2,100 weekday boardings, and the number is growing. Operating costs are estimated to be about $7 million per year.

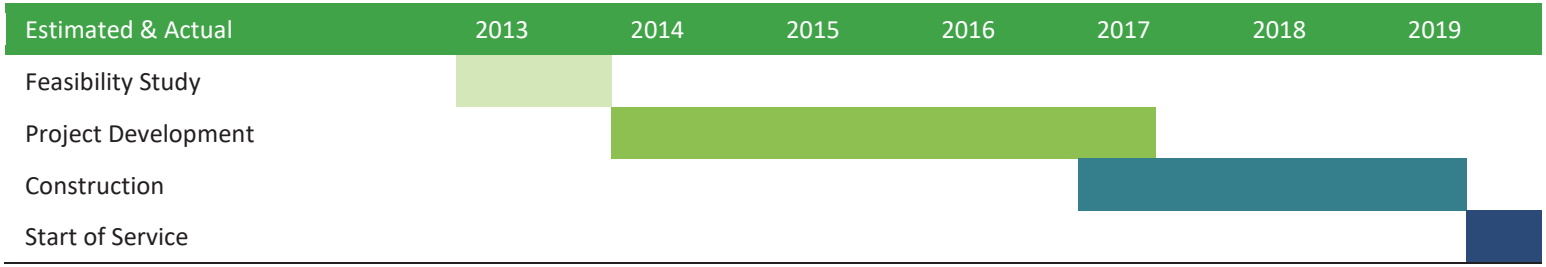
Schedule

The Swift Green Line project mostly kept to Community Transit's estimated schedule (Figure 32), but the project required much effort to stay on schedule.

Figure 31 Swift BRT Map

Source: Community Transit

Figure 32 Swift Green Line Schedule



Source: Community Transit Staff

Community Transit submitted the FTA Small Starts Grant application mid-2014 and was approved at the end of the same year. However, once the Small Starts Grant was appropriated in Congress, they heard that grant execution would be delayed due to the change in federal administration. Community Transit applied for a Letter of No Prejudice from the FTA, which confirms the grant but does not guarantee the grant is coming, and then brought the letter to their Board to get permission to proceed without the federal funding available yet. As delays persisted, they applied for a second letter, which allowed them to continue until April 2018, when FTA finally gave them the funds.

Costs

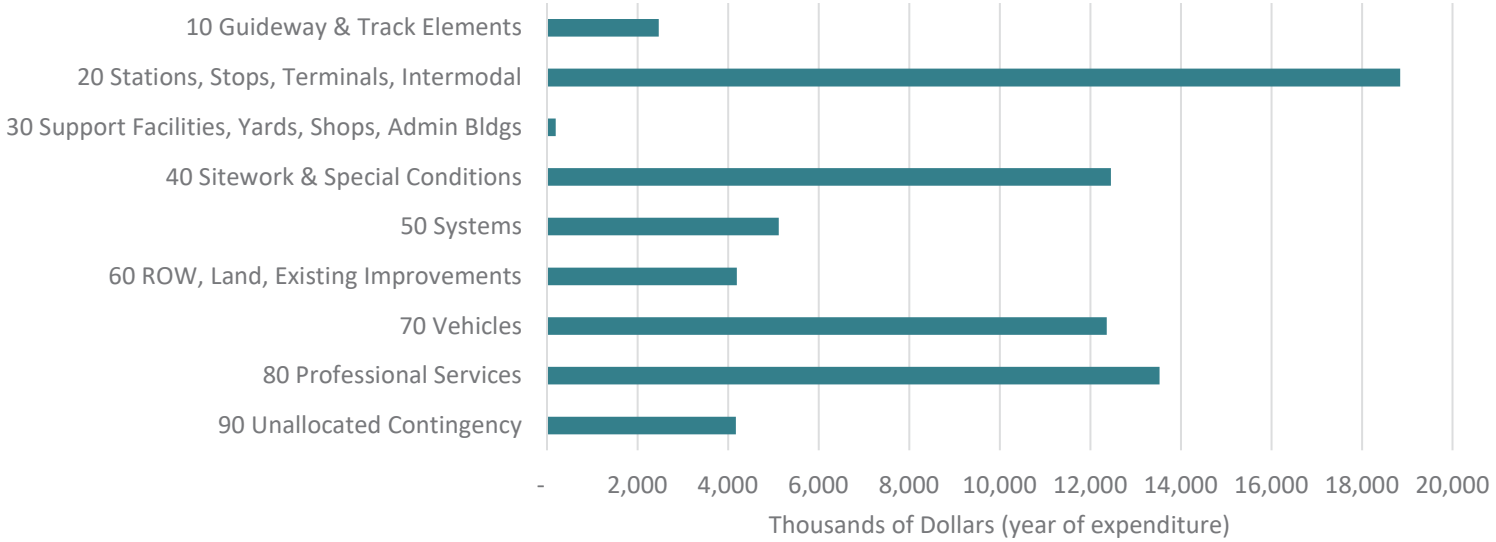
In addition to sticking to the schedule, Swift Green Line also stayed within budget. Community Transit predicts that the project ended up $2 million under budget, but they are in the process of closing out the project, so exact final cost is still to be determined. Figure 33 shows the expenditures by Standard Cost Category estimated during project development. Based on conversations with agency staff, construction generally went over budget, especially stations and the new transit center, while vehicles were under budget. The agency used most of the unallocated contingency to combat construction costs.

Lessons Learned

Community Transit staff provided the following lessons learned from their experience with the Swift BRT system:

- The FTA planning process is rigorous and subject to change, including during project development. Agencies should add time in their schedule if using FTA funds.
- The FTA is now more likely to approve a Small Starts Grant with a 50/50 split, rather than 65/35, so Community Transit is only requesting 50% for the Orange Line.
- Concrete pads are crucial for stations for durable level boarding but adds time and complexity.
- Construction will generally go over budget, so agencies should follow FTA's request to increase the contingency.
- Splitting the construction bids into different packages may make the project easier to manage.

Figure 33 Swift Green Line Estimated Cost by Standard Cost Category



Source: Community Transit Staff

ART (ALBUQUERQUE, NM)

Overview

The Albuquerque Rapid Transit (ART) is a Gold-Standard BRT service in Albuquerque, NM, operated by ABQ Ride, the city's transit department. The service operates along the center of an 8.5 mile corridor, and continues with lower-frequency service along two legs, one 5.4 miles (Green Line) and the other 3.7 miles (Red Line), as shown in Figure 34. The main trunk has 19 center stations with level-boarding and off-board fare payment. Buses run every 7 to 10 minutes on weekdays from 5:30AM to 10PM (with Fridays to 11PM), every 10 minutes on Saturdays from 5:45AM to 11PM, and every 15 minutes on Sundays from 6:15AM to 7PM. The station catchment population for ART contains 74,024 residents and 81,157 jobs.

The service began partial operation in November 2017 and full operation in November of 2019, delayed due to vehicle issues. The capital cost for the project was $133.67 million total, or about $15.2 million per mile. 55% of the funding was from an FTA Small Starts Grant, 25% was from other federal grants, and 20$ was funded locally. Operating costs are estimated to be about $6.2 million annually.

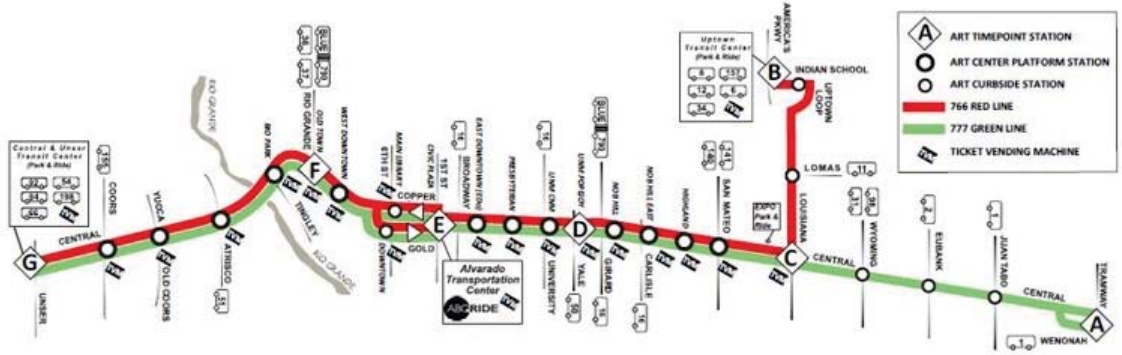
Schedule

Project development and construction of the ART corridor and stations were mostly on schedule, but the service experienced major delays in its official opening date due to issues with the battery electric buses ABQ Ride was planning to use. Figure 35 shows the changes to the schedule at different points in the project.

In 2015, ABQ Ride expected to start service in mid-to-late 2017. After designs and scopes were refined and an all-electric vehicle fleet was selected for the project, the timeline shifted by a few months for an expected opening in late 2017. However, near the end of 2017, the city began experiencing issues with the battery electric buses and their manufacturer. Only 15 out of 20 buses ordered had been delivered. The buses experienced mechanical malfunctions during test runs, such as bolts flying off doors and air conditioning outages. The batteries also did not charge as expected, and buses could only go 177 miles before recharging, rather than the expected 275 miles.

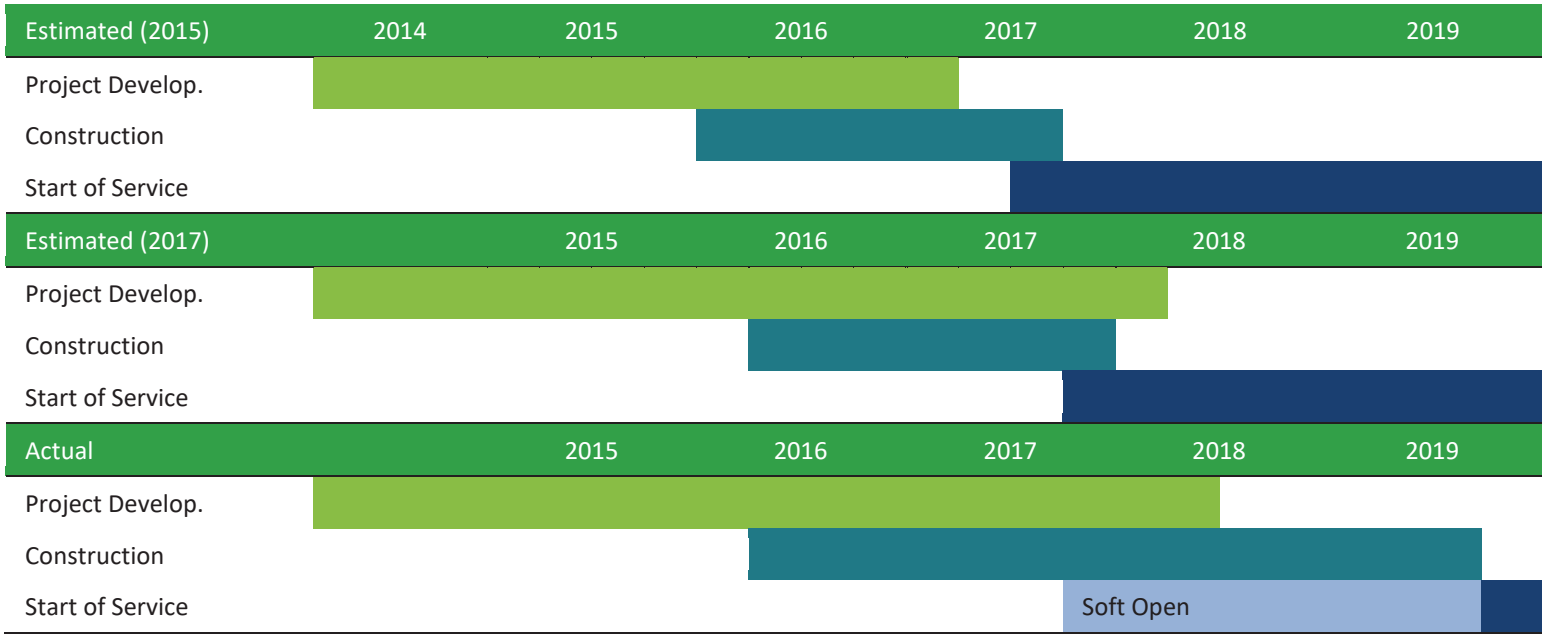
The service still had a soft opening at the end of 2017 since construction on the stations and dedicated bus lanes had finished and the mayor was at the end of his term. For the next two years, local buses ran along the corridor. The city sued the battery electric bus manufacturer and ordered new diesel buses instead. Those buses were delivered 18 months later, and ART finally opened for service at the end of 2019.

Figure 34 ART Map



Source: ABQ Ride

Figure 35 ART Schedule Changes



Source: FTA Albuquerque Rapid Transit Project Profile, ABQ Ride

Costs

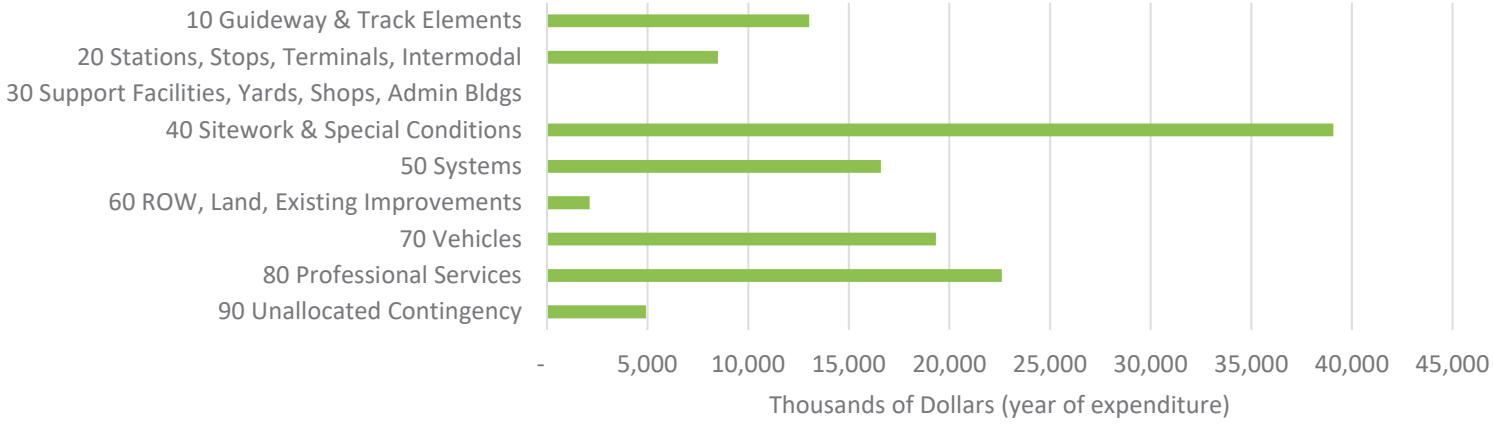
Costs increased slightly through the planning process of ART. When ABQ Ride submitted their FTA Small Starts Grant proposal in 2015, they estimated the total cost to be $126.16 million, shown by Standard Cost Category in Figure 36. By the next year's FTA Small Starts evaluation, costs had risen to $133.67 after finalizing the design and selecting to use an all-electric vehicle fleet. The Small Starts funding request also increased slightly, as did the size of the FTA grant. ABQ Ride maintained this budget to the end of the project.

Lessons Learned

The development process of ART provides the following lessons learned for the City of Raleigh and Wake Transit:

- The timeline was rushed so that the project could open by the end of 2017, which was the end of the mayor's term. This led to unintended consequences that could have been avoided with a longer process and timeline:
    - The entire corridor was constructed all at once, rather than in phases, which was economically disruptive to the city's central corridor.
    - More public outreach would have been helpful, especially since many businesses were impacted or were perceived to have been impacted by the construction.
- Battery electric buses are complicated to implement.
- If possible, use physical separation between the bus lane and car lanes. When full BRT service started, there were many cars in the bus lane, as well as car/bus crashes, especially while turning at intersections.

Figure 36 ART Estimated Cost by Standard Cost Category



Source: ART Standard Cost Category Workbook (2015)

Wake County Transit Plan Update

Market Analysis

March 12, 2020

Wake Transit Plan

GO FORWARD

A COMMUNITY INVESTMENT IN TRANSIT

Table of Contents

Introduction

Overview

WAKE TRANSIT PLAN VISION UPDATE

In 2016, the Wake Transit Plan was released, calling for improvements to bus service and facilities and the development of one commuter rail and four bus rapid transit corridors. Voters approved a transit-dedicated half-cent sales tax investment, and the Plan is currently in its implementation stage.

Three years later, the project team—including the Capital Area Metropolitan Planning Organization (CAMPO), the Wake Transit Plan Core Technical Team (CTT), and the consultant team—are collaborating to update the Plan. One of the major components of the Wake Transit Plan Vision Update calls for an update to the assessment of the transit market.

REASSESSING THE TRANSIT MARKET

The project team has been tasked with analyzing Wake County's demand for transit services through developing a detailed market analysis. The original Wake Transit Plan used data from 2010 to 2013, while this updated market analysis uses the most up-to-date data available (from 2017 for most cases, and 2013 otherwise), applying a methodology focused on assessing the change in demand from the past to the present and into the future. This document provides the approach, analysis, and findings of the market analysis, which will then be used to evaluate the appropriateness of planned services and identify new and emerging opportunities for transit investment.

FACTORS RELATED TO TRANSIT DEMAND

Underlying transit demand is strongly related to six factors:

1. **Population and population density** – Transit relies on having more people in closer proximity to service, so higher population density makes it more feasible to provide higher levels of service.
2. **Socioeconomic Characteristics** – Different people have different likelihoods to use public transit, often related to socioeconomic characteristics. For example, lower-income households are more likely to use transit than higher-income ones.
3. **Employment and Employment Density** – Travelling to and from work often accounts for the most frequent type of transit trip, so location and density of jobs is a strong indicator of transit demand. Trips to schools, especially to colleges and universities which are also major employers, is the second most common type of transit usage.
4. **Development Patterns** – There is a strong correlation between development patterns and transit ridership. In areas with denser development and a good pedestrian environment, transit can become a convenient and attractive option.
5. **Major Activity Centers** – Larger employers, colleges, tourism destinations, and town centers can attract large volumes of people and generate many transit trips.
6. **Travel Flows** – Travel flows provide information on where people originate and end their trips, which shows which locations and corridors have the highest travel demand. Inter-county travel flows are also important to assess regional transit priorities.

Analyzing How Wake County Travels

EXISTING TRANSIT USE IN WAKE COUNTY

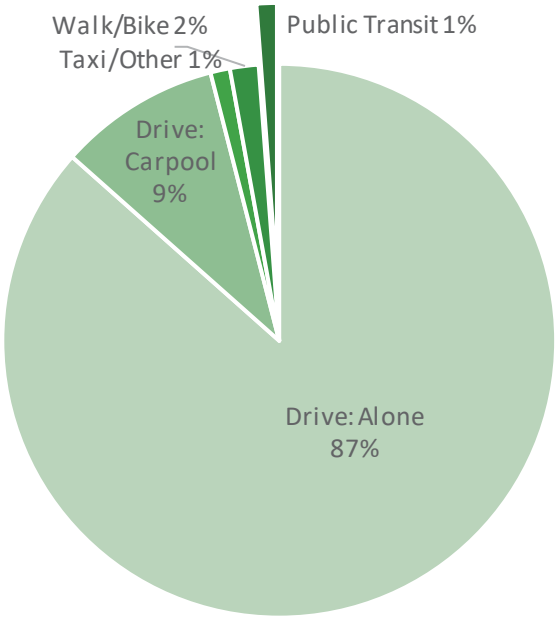
Like in most of the country, the primary way people travel in Wake County is alone in a private vehicle. Overall, 87% of Wake County residents drive alone to work, 9% carpool, 2% walk or bike, and only 1% take transit. Though much of the county is rural or suburban, transit can be an attractive and reliable option in denser areas or between dense areas. This market analysis focuses on understanding where there is demand for public transit, so that improvements can be made in a way that will encourage more people to use transit services.

APPROACH

In order to understand the demand and need for public transportation services in Wake County, the project team analyzed the following factors over the listed years:

- Population density in 2010, 2017, and 2035
- Population density adjusted by socioeconomic characteristics in 2010, 2017, and 2035
- Employment density in 2010, 2017, and 2035
- Composite density (combined population and employment) in 2010, 2017, and 2035
- Intersection density in 2010
- Major activity centers and education facilities
- Local travel patterns in 2013 and 2035
- Congestion in 2013 and 2035
- Ridership by stop in 2019

Wake County Means of Transportation to Work



Source: ACS 2017 5-Year Estimates

KEY DATA SOURCES

Data used for this market analysis was primarily sourced from:

- US Census: American Community Survey (ACS)
- US Census: Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES)
- CAMPO Metropolitan Transportation Plan (MTP)
- Wake County Open Data
- GoTriangle, City of Raleigh, and Town of Cary

Key Findings

LOCAL TRANSIT DEMAND

The analysis of underlying local transit demand based on population density, socioeconomic characteristics, and employment density shows that:

- Population and employment have increased significantly between 2010 and 2017 and will continue to increase past 2035. Population density is increasing throughout the county, in rural, suburban, and urban areas. Employment density is increasing primarily along urban corridors and existing employment centers.
- The socioeconomic characteristics of people who use transit to get to work are greatly different from the countywide demographics. People who take transit are much more likely to not own a car, live below the poverty line, be a person of color, and be born outside of the country than the average resident.
- The combined impact of changes in population density, employment density, and socioeconomic characteristics suggests that transit demand is the strongest and growing in:
    - Downtown Raleigh and the areas immediately surrounding downtown
    - Along major corridors to the northeast, east, and south of Raleigh
    - Along the northern half of the I-440 loop and in Brier Creek
    - West from Raleigh to Cary and Apex
    - Between Cary and Morrisville/Research Triangle Park
- The transit demand shown by the composite density generally lines up with the planned Wake Transit Plan 2027 Transit Network.

OTHER FACTORS AFFECTING TRANSIT DEMAND

In addition to population and employment density, factors that affect transit demand include pedestrian environment and activity centers. Based on an analysis of intersection density, downtown Raleigh, northern Raleigh, and parts of Cary have environments better suited to walking, and thus transit, than other parts of the county. Post-secondary education facilities are also an important consideration for transit demand, since prior surveys have revealed that educational travel is the second most common type of transit trip.

TRAVEL PATTERNS

The analysis of travel flows between, within, and outside of zones in Wake County show that:

- Travel flows are currently the strongest within and between Cary and the northeastern and northwestern parts of Raleigh.
- The total number of daily trips within Wake County and between Wake County and surrounding counties will increase by 57% between 2013 and 2035. By 2035, the number of travel flows will increase county-wide, concentrated in Raleigh, Cary, and Garner.
- Congestion will also increase greatly between 2013 and 2035, especially along highways and major arterial corridors.
- The increase in both travel flows and congestion signals a need for transit priority strategies. Improving transit through increasing frequency and dedicating rights-of-way along roads and highways to buses means that there can be a reliable and high-quality alternative to driving.

Lastly, an analysis of existing transit ridership by stop shows that current transit usage largely matches areas with higher population and employment density, though parts of Cary and northwestern Raleigh can be served with better transit.

Underlying Local Transit Demand 2010 & 2017

Transit Demand

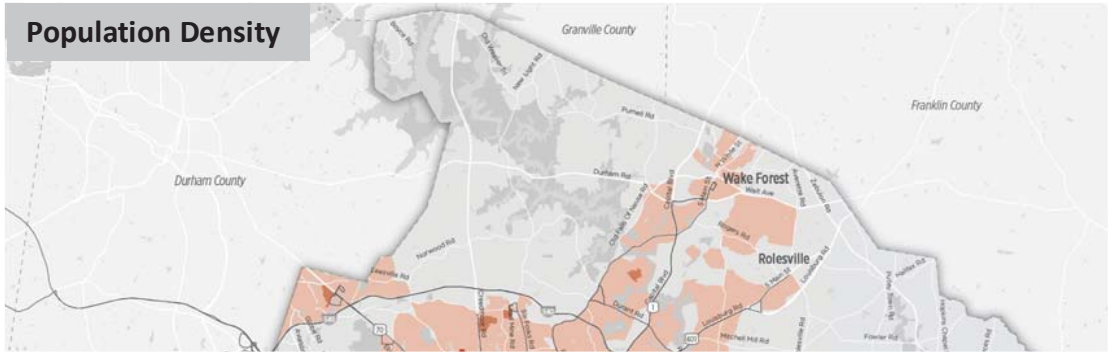
Population and employment density are the most important factors that determine the underlying demand for transit, due to the following reasons:

1. Transit is generally accessible to those who live and/or work within one-quarter mile of a bus stop or one-half mile of a bus rapid transit or rail stop, so the travel market is directly related to the density of the area.
2. In order to serve the greatest number of people, transit service levels must be matched with demand. Providing frequent service in the areas with highest demand can get more people to their destinations faster and more reliably.
3. To attract travelers who often drive, transit must be able to get most people to the places with the highest demand in a cost and time competitive manner.

Additionally, the street environment affects people's access to transit. Transit services are most effective when paired with sufficient and well-lit sidewalks and crosswalks that allow people to safely reach bus stops. Even in the places with the highest density, people may not use transit services if stops are not in a walkable environment.

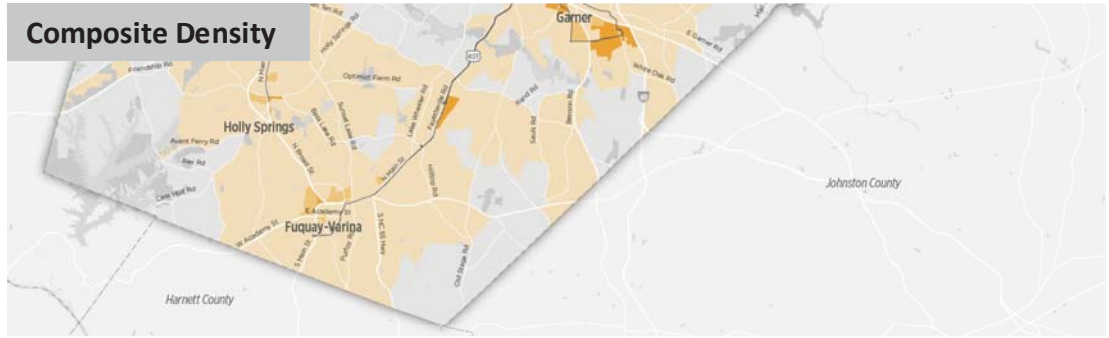
Lastly, it is important to recognize that areas without some level of population and employment density may not provide an environment where fixed-route transit can generate enough ridership to succeed. In these instances, Wake County and its partners can explore alternative types of transit, such as shared mobility solutions.

Population Density



Employment Density

Composite Density



Transit-Supportive Land Use and Density

Different levels of residential and employment density are supportive of different levels of transit. Most of the land area of Wake County is low density or rural.

LAND USE			TRANSIT	
Land Use Type	Residents per Acre	Jobs per Acre	Appropriate Types of Transit	Frequency of Service
Downtowns & High Density Corridors	>45	>25	Light Rail, BRT, Rapid Bus, Local Bus	10 mins or better
Urban Mixed-Use	30-45	15-25	BRT, Rapid Bus, Local Bus	10-15 minutes
Neighborhood & Surburban Mixed-Use	15-30	10-15	Local Bus	15-30 minutes
Mixed Neighborhoods	10-15	5-10	Local Bus, Micro-transit	30-60 minutes
Low Density	2-10	2-5	Micro-transit, Rideshare, Volunteer Driver Pgm	60 mins or less or On Demand
Rural	<2	<2	Rideshare, Volunteer Driver Pgm	On Demand

Source: Thresholds based on research by Nelson\Nygaard.

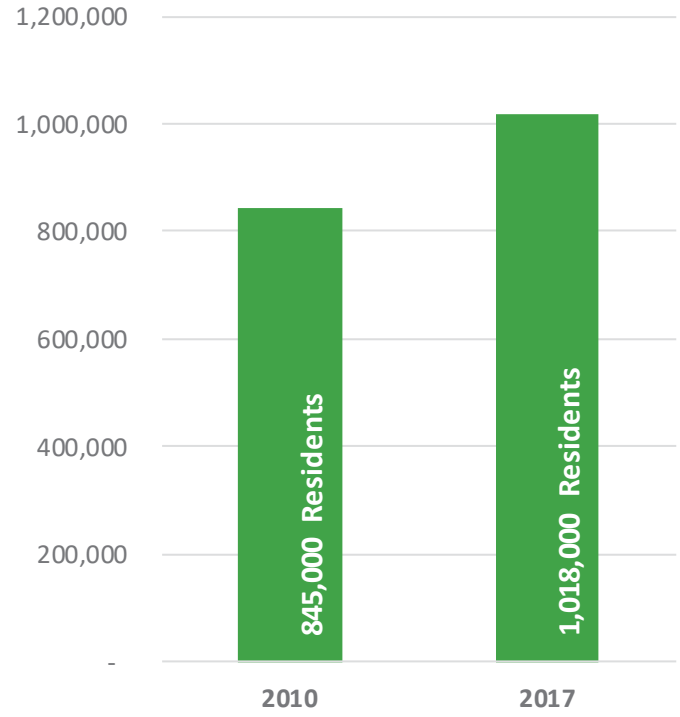
Population Density

Population density is an important indicator for transit demand, since effective transit systems require people living and working within walking distance to stops and stations. Additionally, denser areas tend to be more walkable and less automobile-oriented, with limited access to parking and less reason to own a private automobile.

The following maps show the population density of different areas of Wake County in 2010 and 2017. Most of the county has very low population density, except for Downtown Raleigh, the western part of Raleigh near North Carolina State University, and parts of northeastern Raleigh.

Between 2010 and 2017, the population of Wake County grew by 20.5% from 845,000 residents to 1,018,000 residents. Much of this population growth was in the smaller, outer-area towns of Wake County, such as Apex, Morrisville, and Wake Forest.

Wake County Population in 2010 and 2017



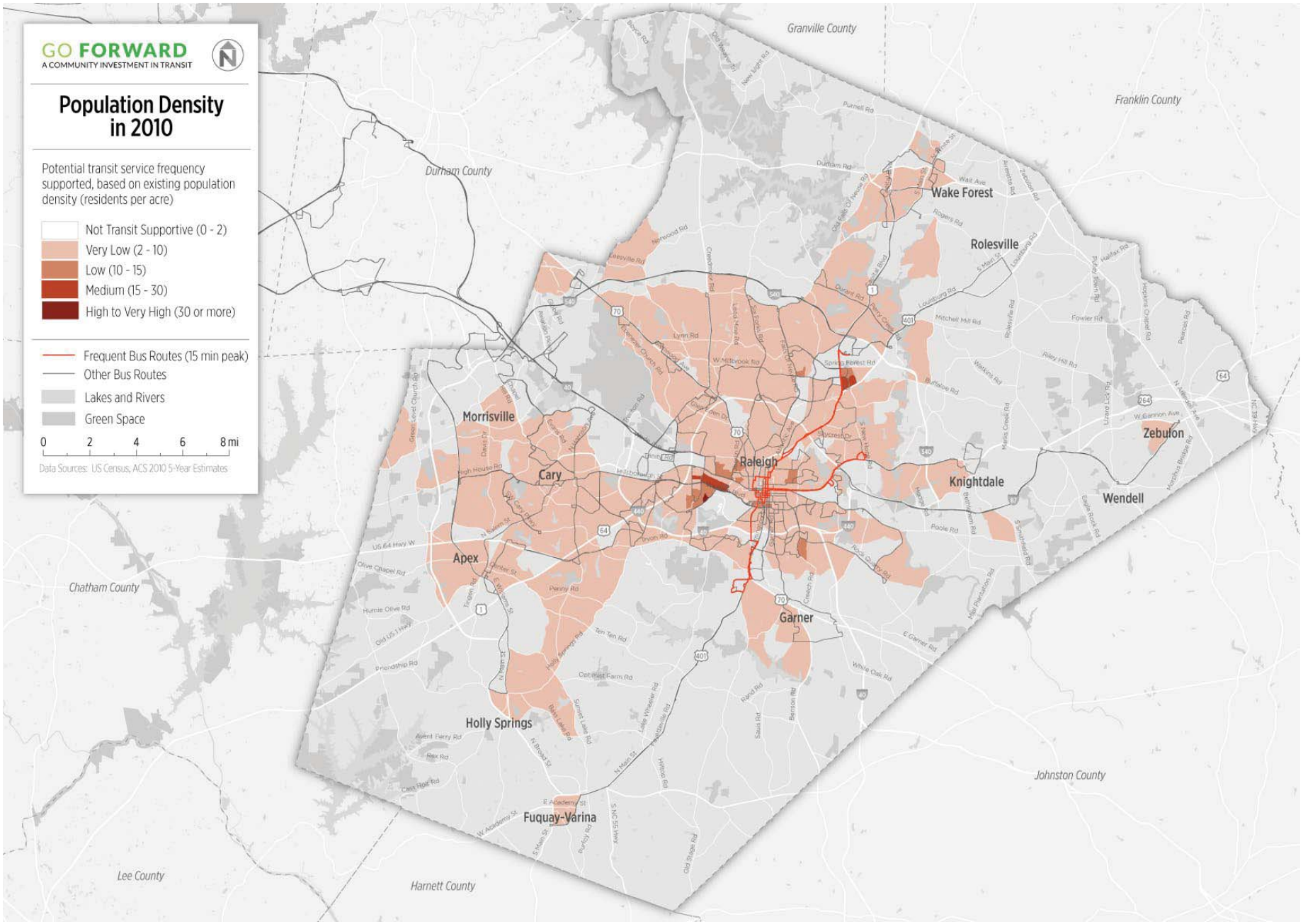
Source: ACS 5-Year Estimates

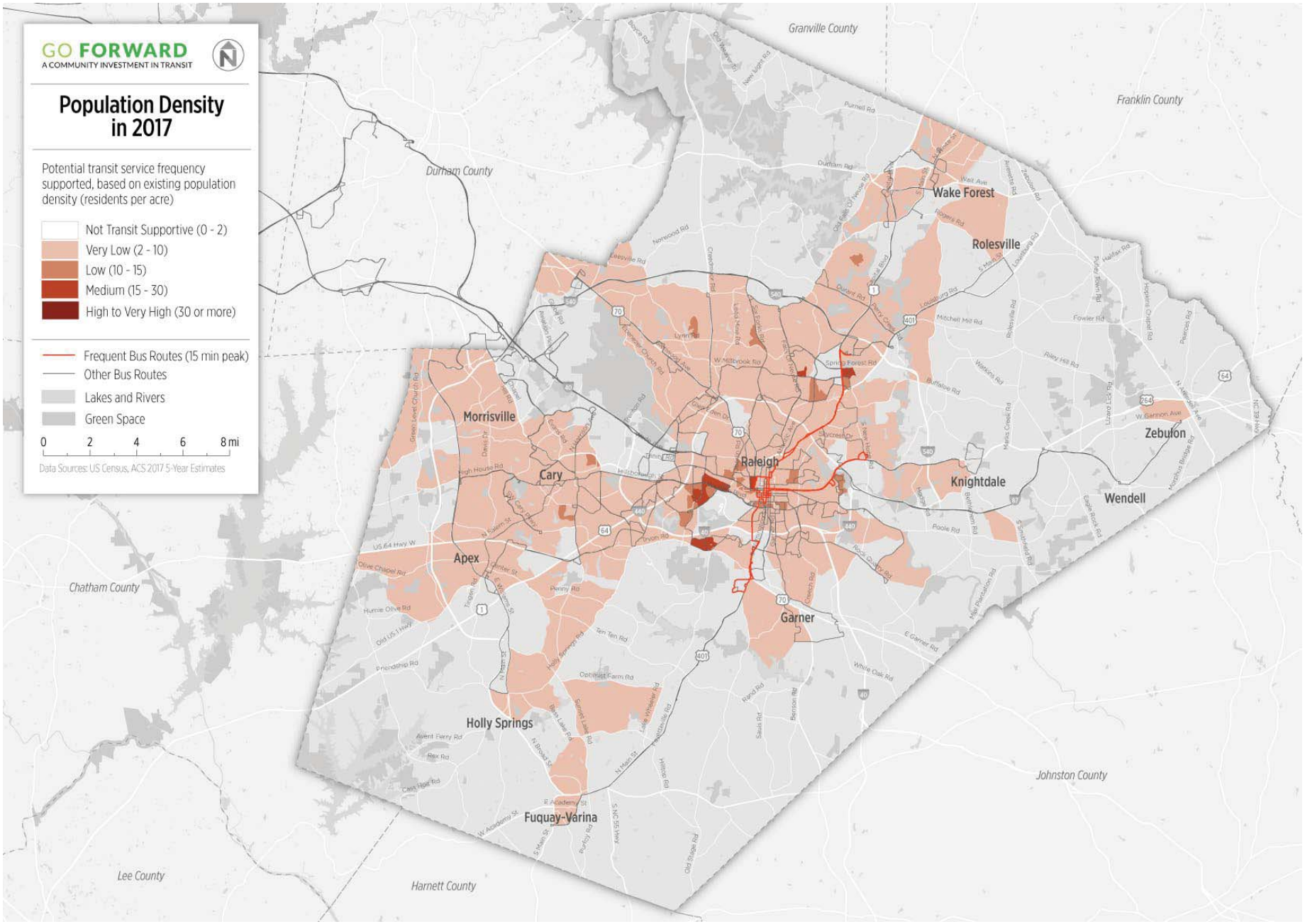
MAPPING POPULATION DENSITY

The following maps show population density in Wake County based on the following symbology:

High to Very High Density	More than 30 people per acre
Medium Density	15 to 30 people per acre
Low Density	10 to 15 people per acre
Very Low Density	2 to 10 people per acre
Not Transit Supportive	Less than 2 people per acre

Underlying Local Transit Demand: 2010 & 2017




GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Population Density in 2017
Potential transit service frequency supported, based on existing population density (residents per acre)
Not Transit Supportive (0 - 2)
Very Low (2 - 10)
Low (10 - 15)
Medium (15 - 30)
High to Very High (30 or more)
Frequent Bus Routes (15 min peak)
Other Bus Routes
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: US Census, ACS 2017 5-Year Estimates
Granville County
Franklin County
Durham County
Wake Forest
Rolesville
Zebulon
Knightdale
Wendell
Raleigh
Cary
Morrisville
Apex
Garner
Holly Springs
Fuquay-Varina
Chatham County
Johnston County
Lee County
Harnett County

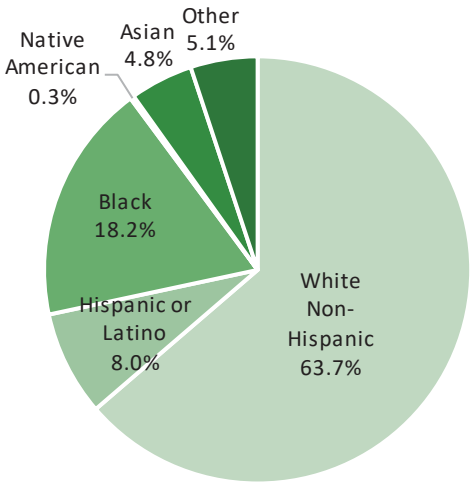
Demographics-Based Transit Propensity

In addition to population density, socioeconomic characteristics influence people's propensities toward using transit. Many population groups often have a higher propensity for transit than the overall population, generally groups that are more disadvantaged in society.

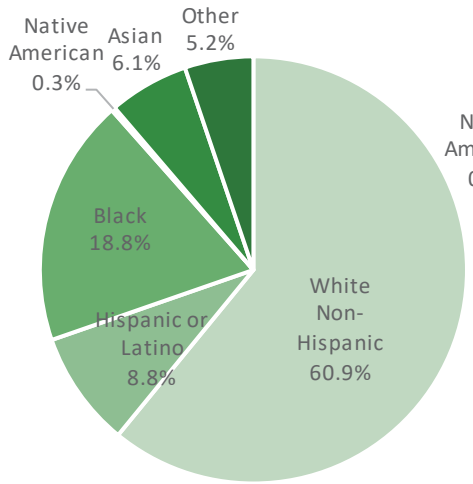
RACE AND ETHNICITY

Black residents of Wake County are 2.1 times more likely, and Asians and Latinos 1.4 times more likely, to use transit to get to work than the average resident, likely due to more limited resources for transportation and denser neighborhoods closer to the city center.

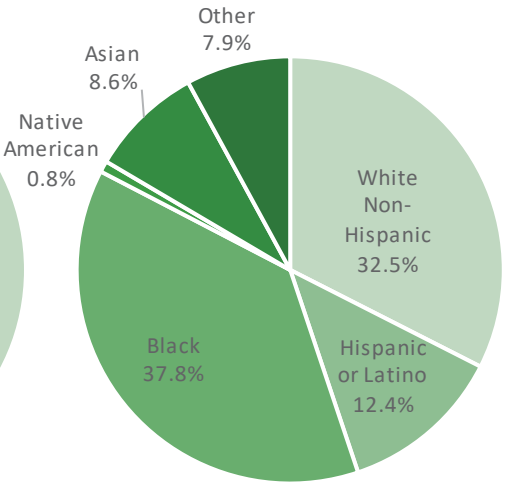
All Commuters (2010)



All Commuters (2017)



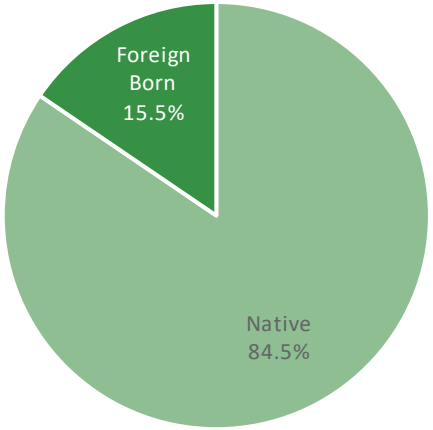
Commuters Who Use Transit (2017)



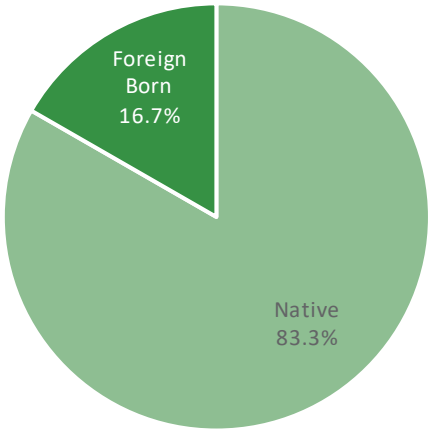
FOREIGN-BORN

Residents born outside of the United States are 1.5 times more likely to use transit than the average resident in Wake County.

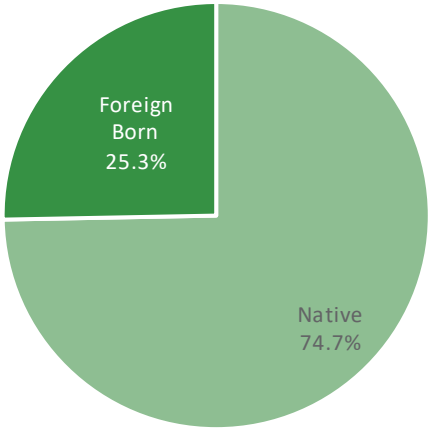
All Commuters (2010)



All Commuters (2017)



Commuters Who Use Transit (2017)



Source: ACS 5-Year Estimates

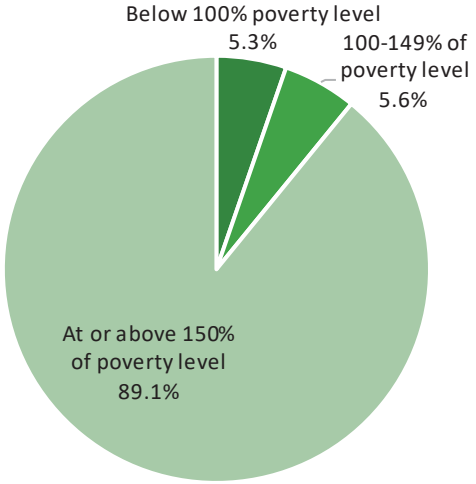
Demographics-Based Transit Propensity

POVERTY LEVEL

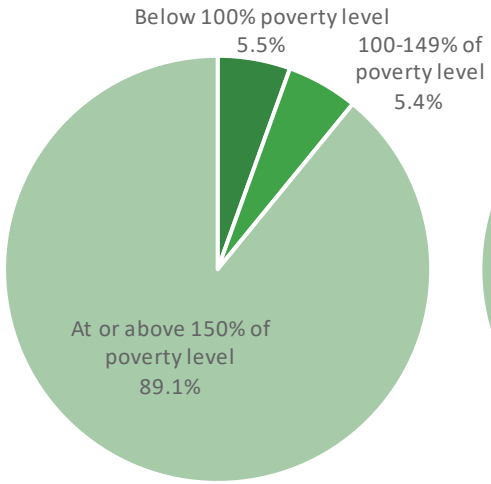
An individual's poverty level* also impacts their transit propensity. People who live below the poverty level are 4.2 times more likely to use transit to get to work in Wake County.

*Federal poverty levels scale to the number of people in a family. In 2017, the poverty level was $16,250 for a family of two and $24,600 for a family of four.

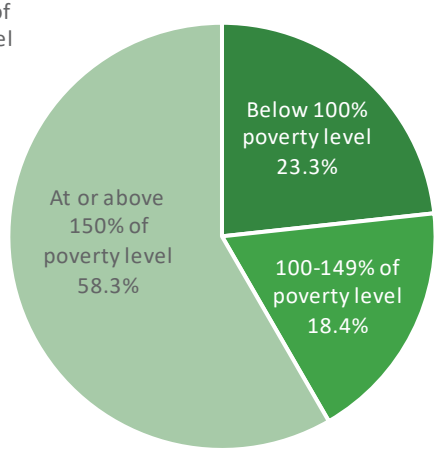
All Commuters (2010)



All Commuters (2017)



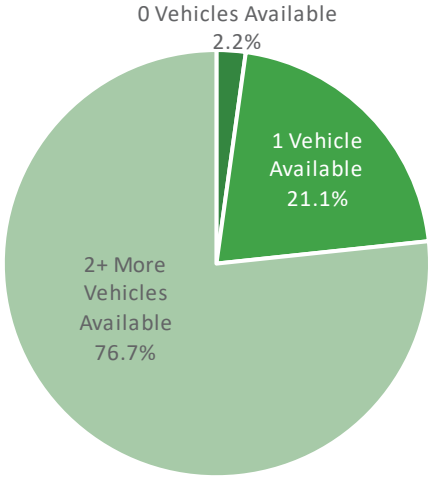
Commuters Who Use Transit (2017)



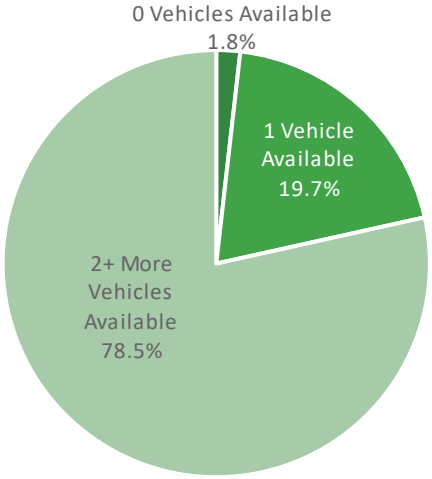
CAR AVAILABILITY

Workers who live in households without a car are 15.8 times more likely than the average worker to use transit to get to work in Wake County.

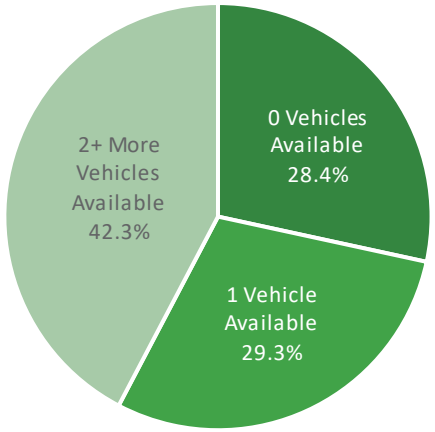
All Commuters (2010)



All Commuters (2017)



Commuters Who Use Transit (2017)



Source: ACS 5-Year Estimates

Transit Propensity Adjustment Factor

When a significant number of people from the demographic groups described earlier live in clustered areas, the underlying demand for transit in these areas may be higher than is captured by just looking at population density. Conversely, in areas where transit-supportive groups have lower representation, the transit demand may be lower than what is captured purely by population density.

Taking these factors into account, the project team calculated a measure called the **Transit Propensity Adjustment Factor**, which measures the relative demand for transit in different areas of the region based on demographic characteristics*. The table to the right shows the relative transit propensity among different groups. A factor greater than 1 means that the group is *x* times more likely to use transit than the average population, with *x* signifying the value of the factor.

The following maps show the transit propensity adjustment factor for each area of Wake County in 2010 and 2017. In 2010, Raleigh has the highest transit propensity, especially towards the south, northeast, and west towards Cary. The Highway 1 corridor to Wake Forest and the Highway 264 corridor to Zebulon also have high transit propensity factors. Other than town centers, most of the rest of Wake County has low transit propensity factors.

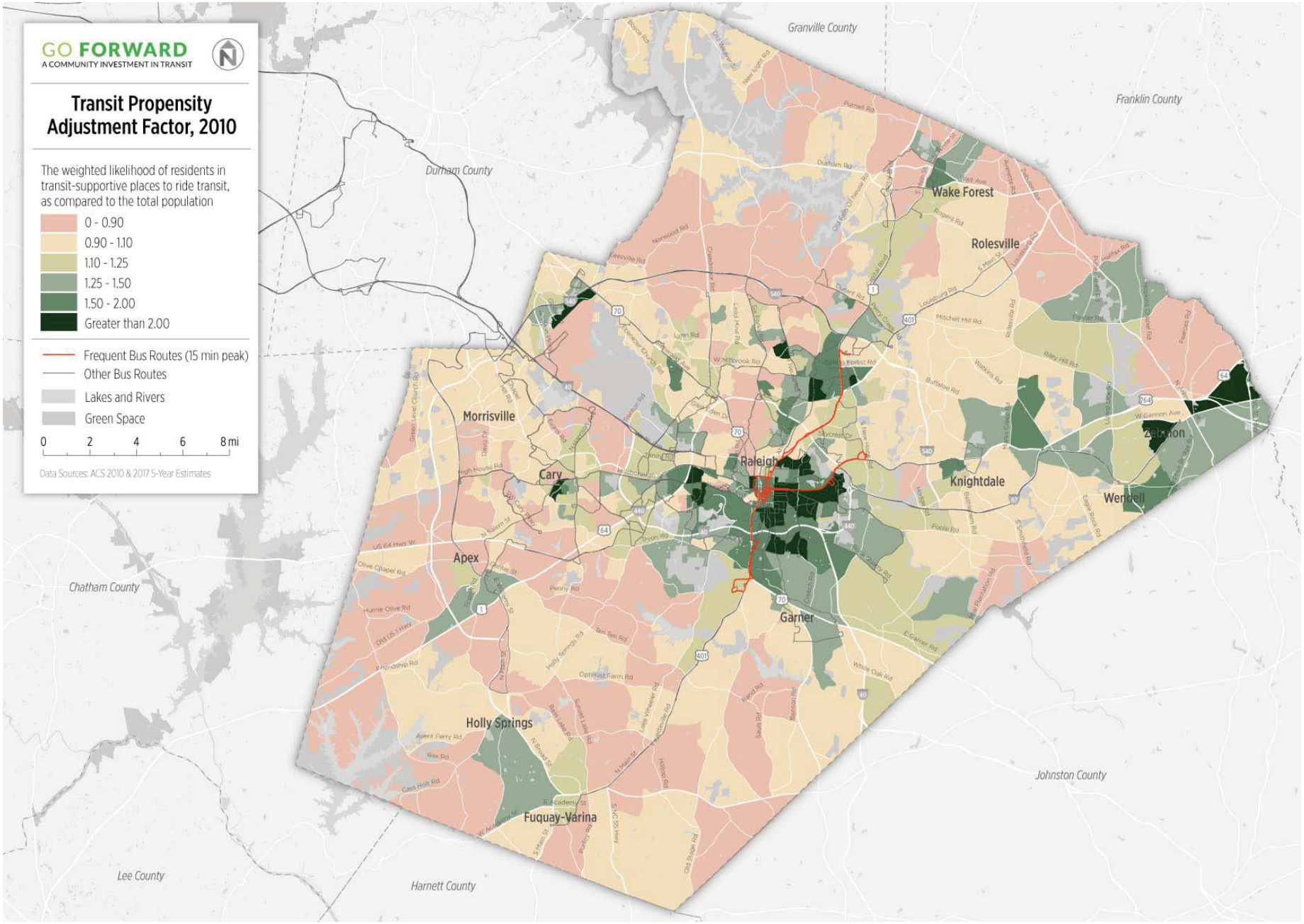
These trends hold true in 2017 as well, though distinctions are more muted. Areas that increased in transit propensity factor include Morrisville/Research Triangle Park (RTP) and Knightdale.

*The Transit Propensity Adjustment Factor is calculated by finding the ratio between the transit modeshare of the demographic group and the transit modeshare of the general population. For example, the Transit Propensity Adjustment Factor for foreign-born residents is found by dividing the % of foreign-born residents who commute to work via transit by the % of all residents who commute to work via transit.

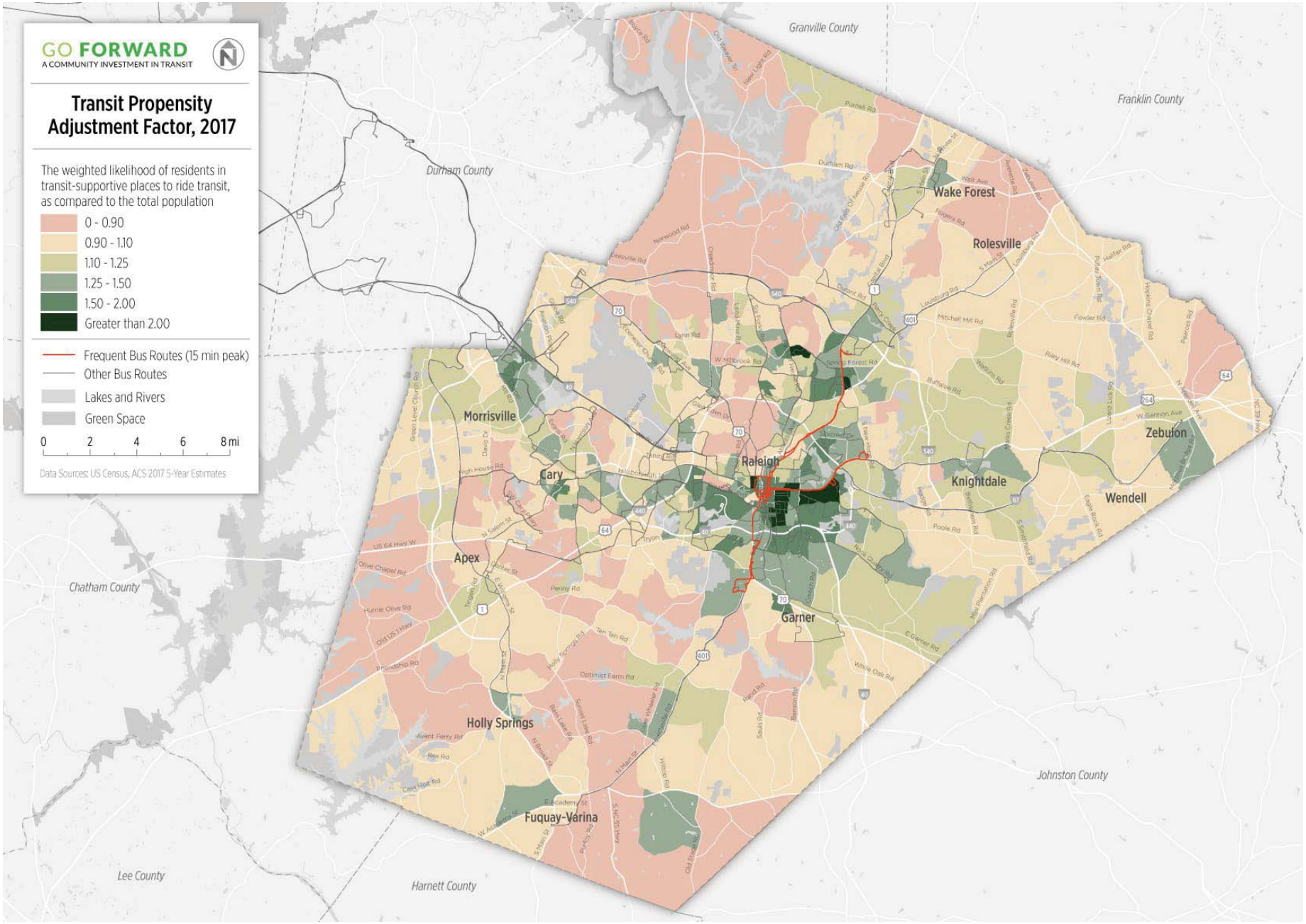
Wake County Transit Propensity Adjustment Factor

Demographic Group	Transit Propensity*
Race/Ethnicity	
White, non-Hispanic	0.5
Hispanic or Latino	1.4
Black	2.1
Native American	3.0
Asian	1.4
Other	1.6
Native/Foreign Born	
Native-Born	0.9
Foreign-Born	1.5
Poverty Level	
< 100% Poverty Line	4.2
100-149% Poverty Line	3.4
> 150% Poverty Line	0.7
Vehicle Availability	
No Vehicles	15.8
1 Vehicle	3.4
2 or More Vehicles	0.7

Source: ACS 2017 5-Year Estimates


GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Transit Propensity Adjustment Factor, 2010
The weighted likelihood of residents in transit-supportive places to ride transit, as compared to the total population
0 - 0.90
0.90 - 1.10
1.10 - 1.25
1.25 - 1.50
1.50 - 2.00
Greater than 2.00
Frequent Bus Routes (15 min peak)
Other Bus Routes
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: ACS 2010 & 2017 5-Year Estimates
Granville County
Franklin County
Durham County
Wake Forest
Rolesville
Morrisville
Raleigh
Cary
Knightdale
Wendell
Zebulon
Apex
Garner
Holly Springs
Fuquay-Varina
Chatham County
Johnston County
Lee County
Harnett County

Underlying Local Transit Demand: 2010 & 2017



Adjusted Population Density

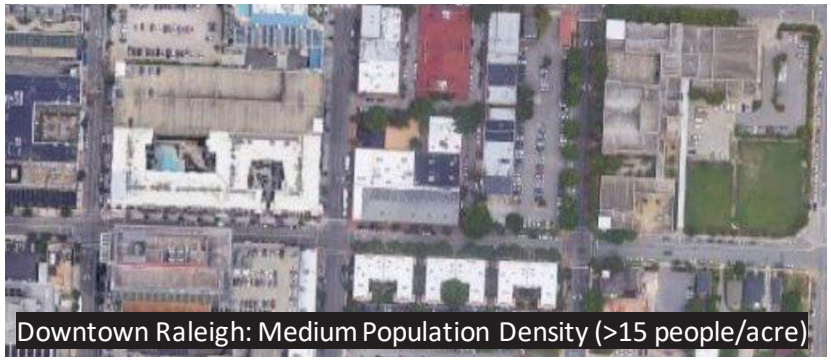
Using the transit propensity adjustment factors discussed earlier, the following maps show the population density in 2010 and 2017 adjusted by socioeconomic characteristics. Adjusting the population density towards groups that generally use and need to use transit often intensifies transit demand in urban areas and diminishes demand in rural areas.

In 2010, the adjusted population density is the greatest in the City of Raleigh, especially in the south and parts of northeastern Raleigh. Cary, and parts of Morrisville, Apex, Holly Springs, Fuquay-Varina, Garner, Knightdale, Zebulon, and Wake Forest also have some level of adjusted population density.

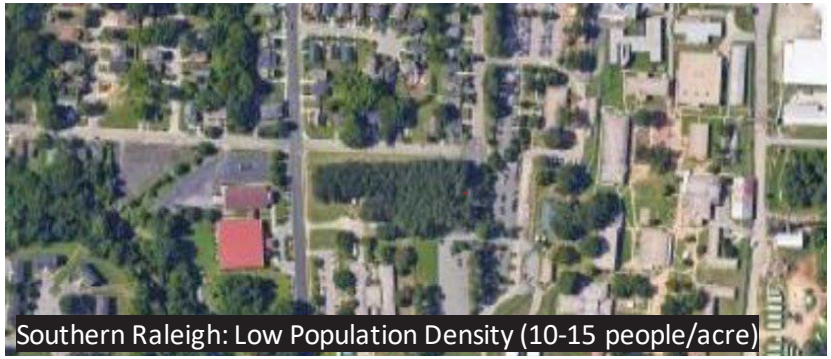
The 2017 adjusted population density map looks similar to 2010, though the outer edges of the above cities and towns gain population. Morrisville and RTP, in particular, gain a sizeable amount of population density near the Wake-Durham border. Southern Raleigh, compared to the rest of the county, remains relatively dense, though its density is still low in absolute terms since Wake County is mostly rural and suburban.

The aerial photos to the right provide examples of different levels of density. In 2017, based solely on the adjusted population density, about half of the land area of the county does not have a high enough density to be transit supportive (less than 2 people per acre). The other half mostly ranges from “Very Low” to “Medium” levels of population density.

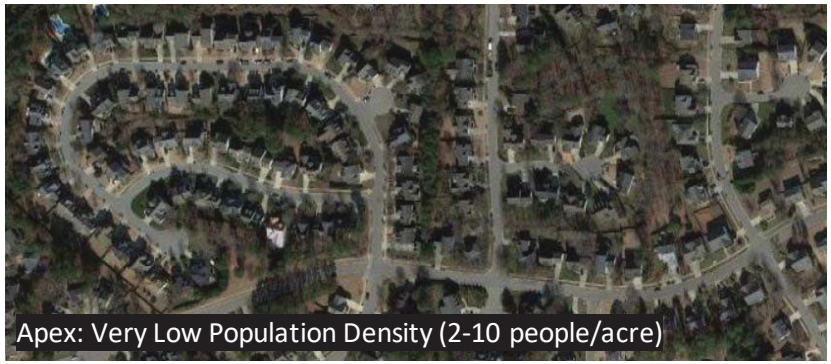
Visualizing Population Density



Downtown Raleigh: Medium Population Density (>15 people/acre)

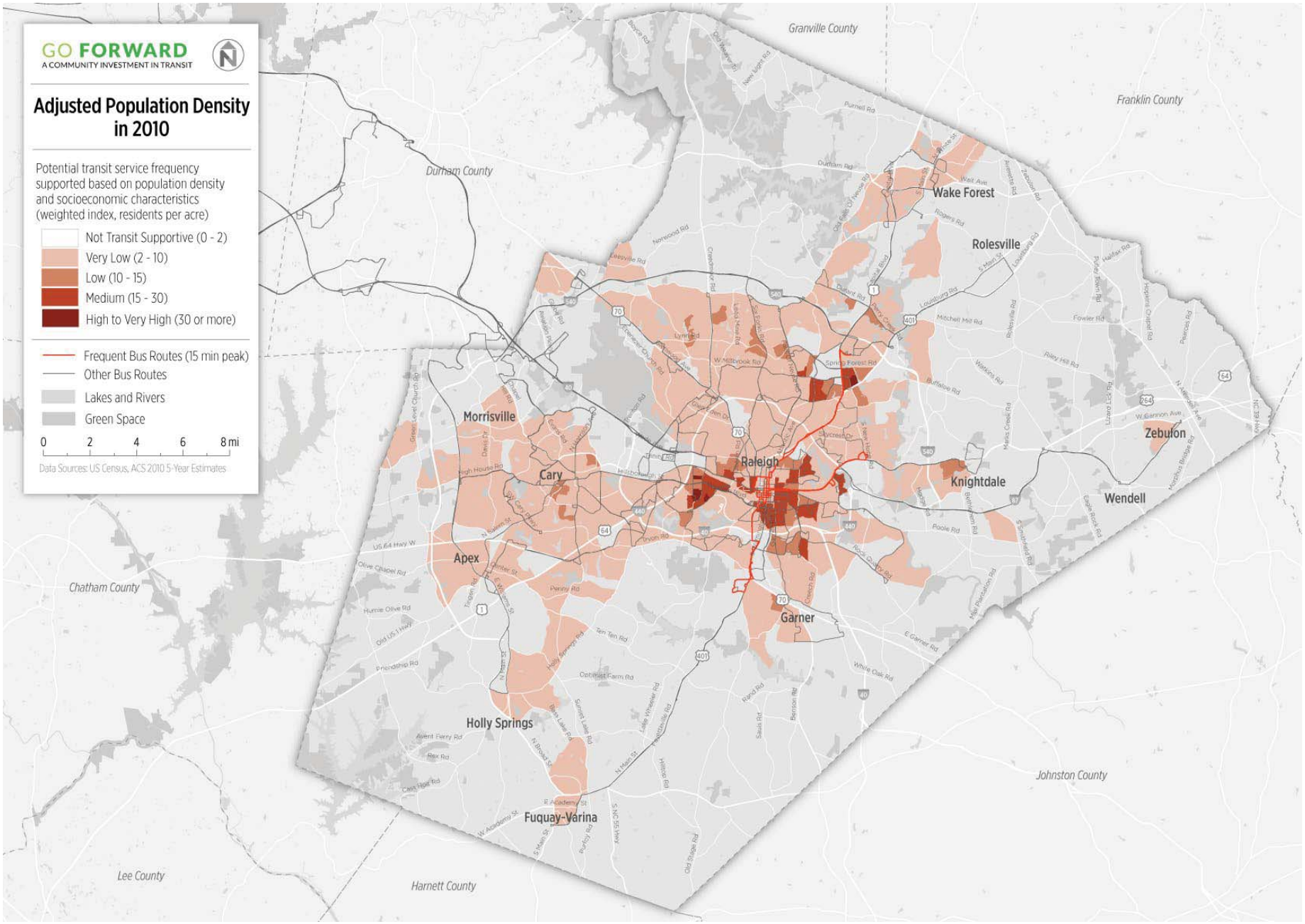


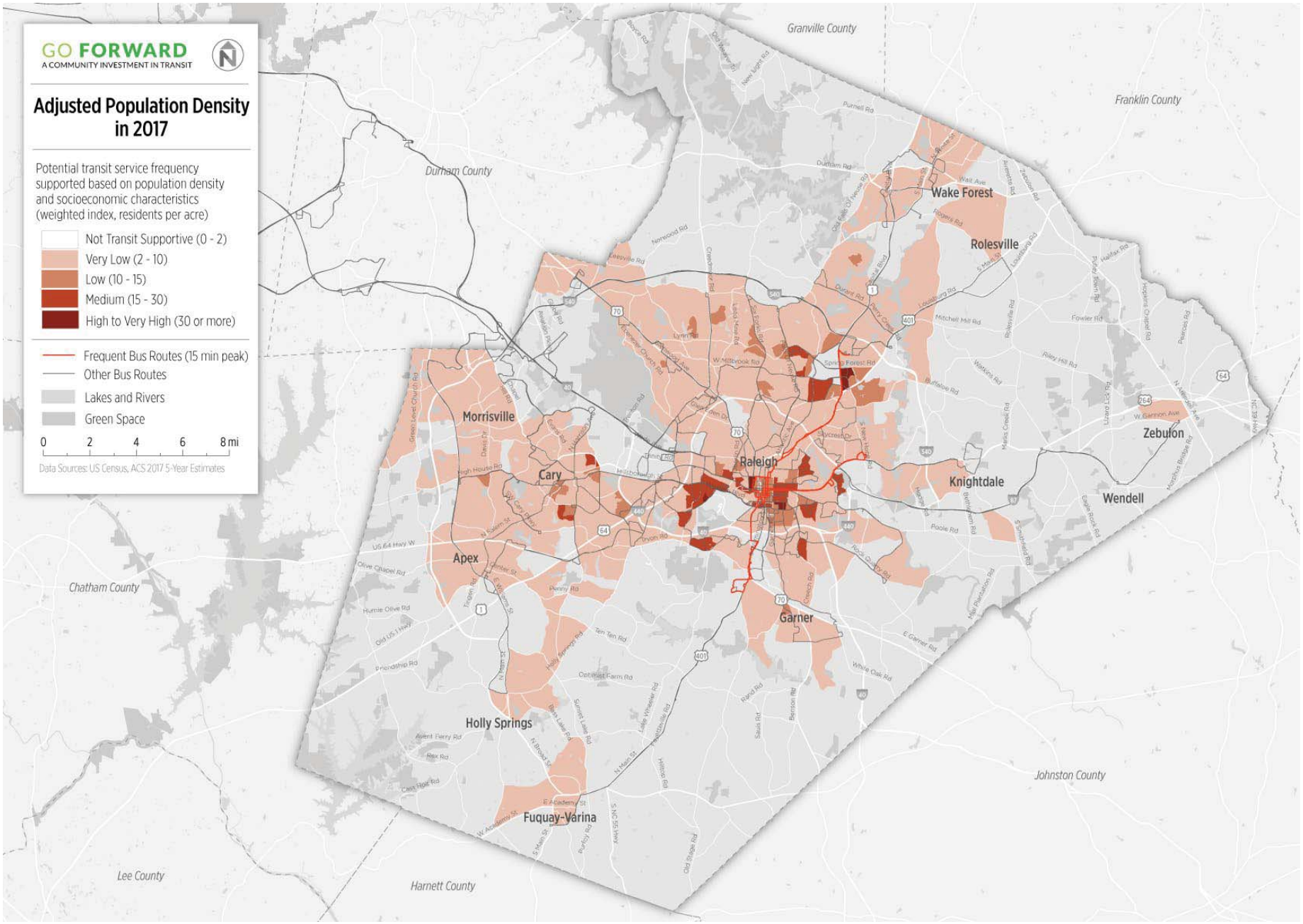
Southern Raleigh: Low Population Density (10-15 people/acre)



Apex: Very Low Population Density (2-10 people/acre)

Underlying Local Transit Demand: 2010 & 2017




GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Adjusted Population Density in 2017
Potential transit service frequency supported based on population density and socioeconomic characteristics (weighted index, residents per acre)
Not Transit Supportive (0 - 2)
Very Low (2 - 10)
Low (10 - 15)
Medium (15 - 30)
High to Very High (30 or more)
Frequent Bus Routes (15 min peak)
Other Bus Routes
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: US Census, ACS 2017 5-Year Estimates
Granville County
Franklin County
Durham County
Wake Forest
Rolesville
Zebulon
Knightdale
Wendell
Raleigh
Morrisville
Cary
Apex
Garner
Holly Springs
Fuquay-Varina
Chatham County
Johnston County
Lee County
Harnett County

Employment Density

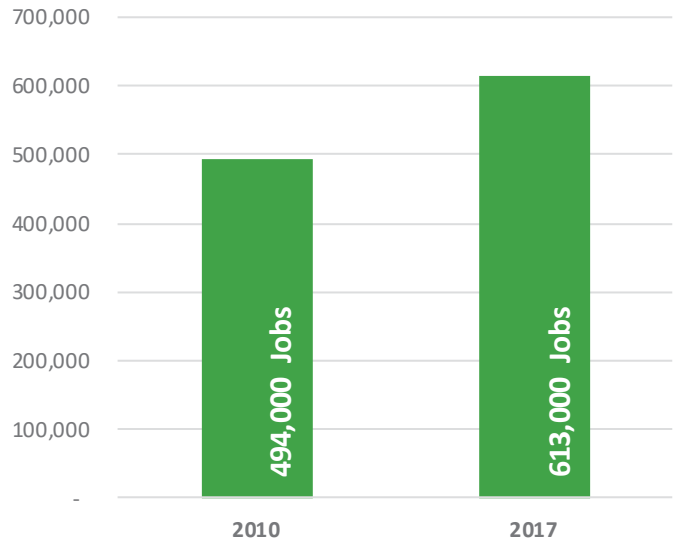
Employment density provides a strong indication of transit demand derived from people travelling to and from jobs, as well as to the services that these jobs provide. For example, restaurant and hospital employees may take transit to and from work, and customers and patients may also use the same transit.

The number of jobs in Wake County increased by 24% between 2010 and 2017, from 494,000 to 613,000 jobs. As shown in the following maps, jobs in 2010 were concentrated in Raleigh and Cary, with some level of job density in Morrisville/RTP as well.

This pattern also holds true in 2017, with an increase in the number of jobs all around. Morrisville/RTP and northeastern Raleigh in particular have increased job density. Within Raleigh, jobs are concentrated along major corridors and the I-440 loop.

Though this analysis only considers the total number of jobs, it is important to note that some groups of workers, such as those with low wages and people of color, rely on transit to get to work more heavily than other groups. Additionally, workers may be travelling from outside of Wake County to access jobs within the county. Lastly, the urban form of employment centers is important when considering the viability of transit. For example, transit can better serve a dense downtown with good walking conditions compared to a suburban office park without sidewalks.

Wake County Jobs in 2010 and 2017

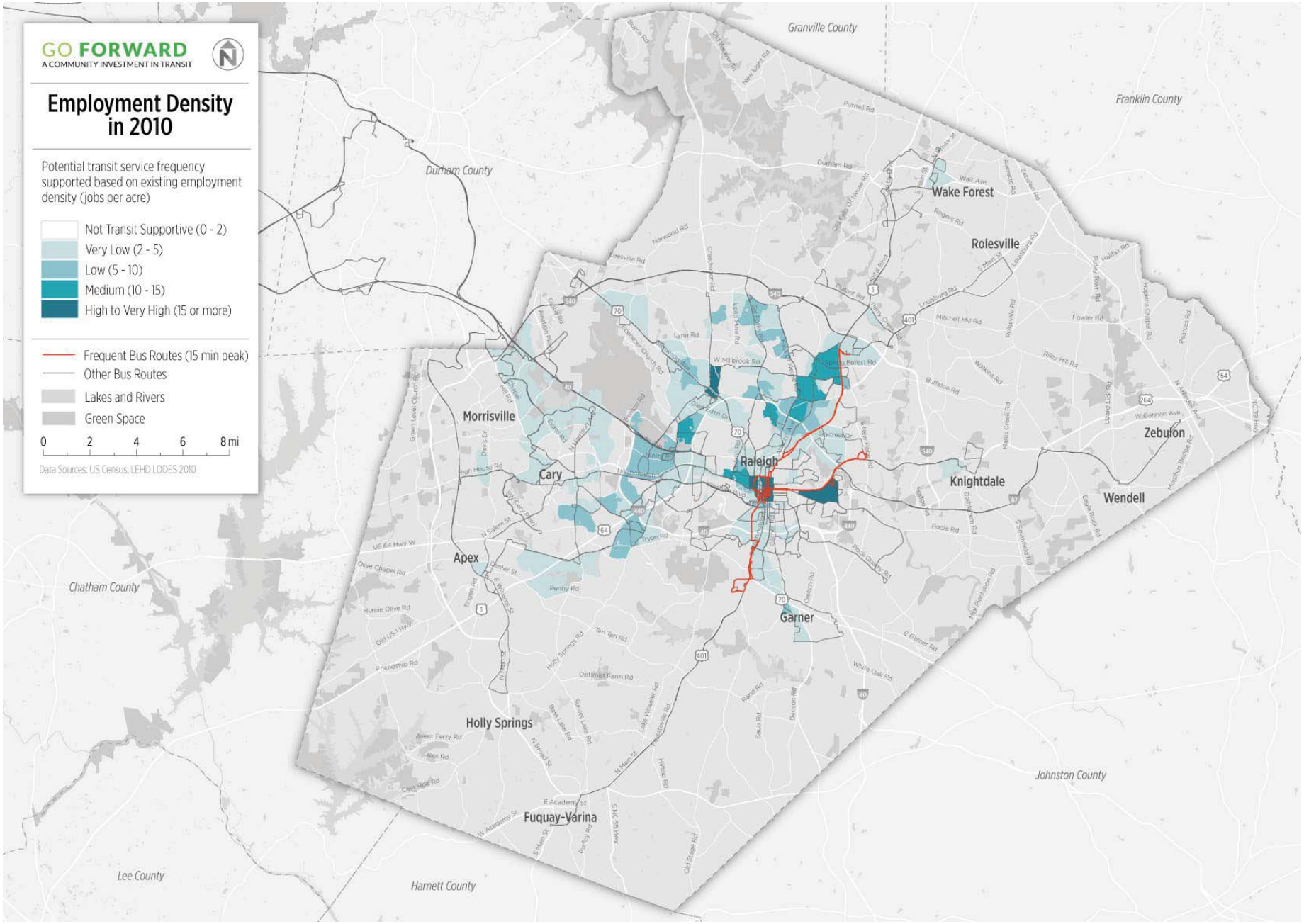


Source: ACS 5-Year Estimates

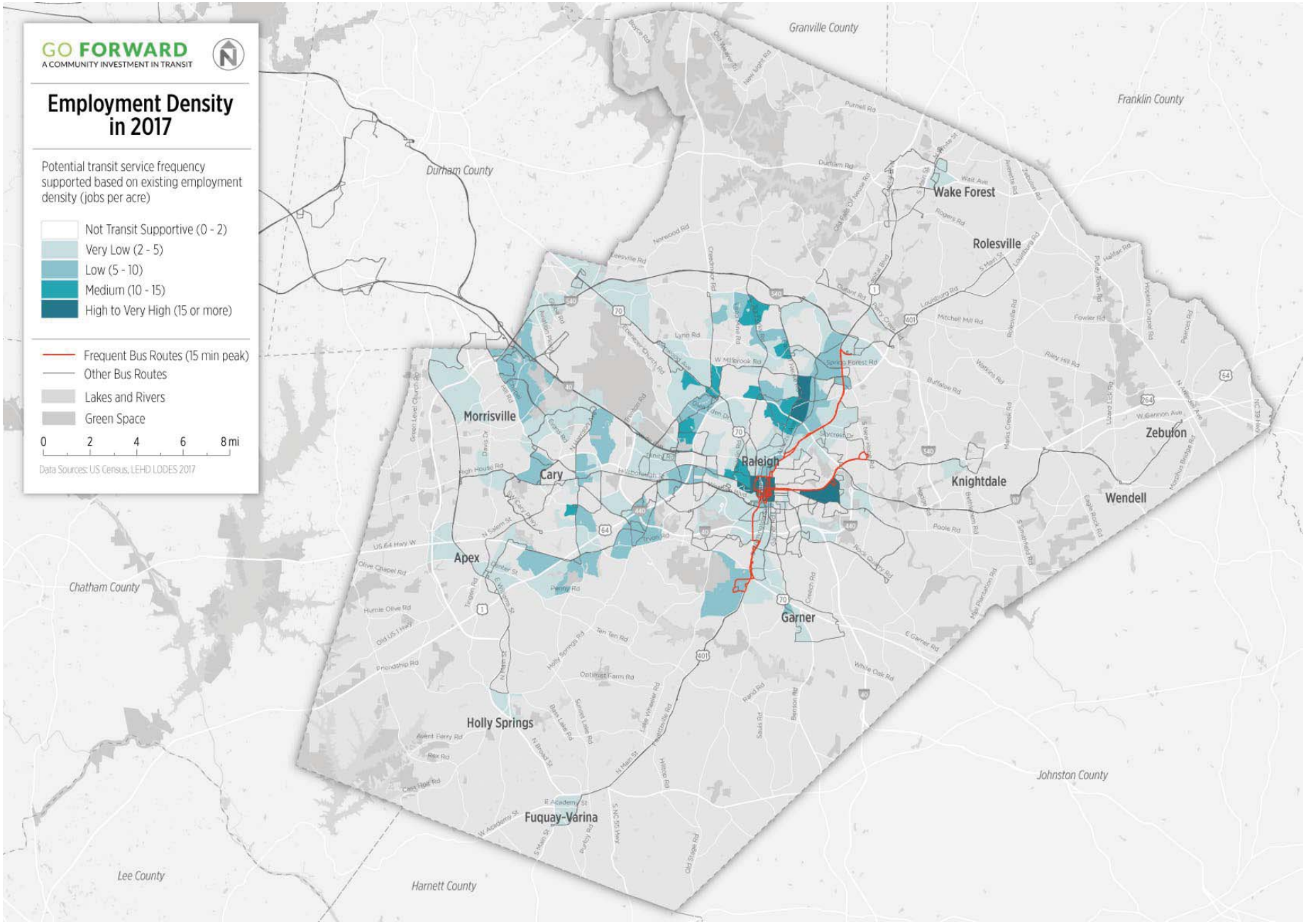
MAPPING EMPLOYMENT DENSITY

The following maps show employment density in Wake County based on the following symbology:

High to Very High Density	More than 15 jobs per acre
Medium Density	10 to 15 jobs per acre
Low Density	5 to 10 jobs per acre
Very Low Density	2 to 5 jobs per acre
Not Transit Supportive	Less than 2 jobs per acre


GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Employment Density in 2010
Potential transit service frequency supported based on existing employment density (jobs per acre)
Not Transit Supportive (0 - 2)
Very Low (2 - 5)
Low (5 - 10)
Medium (10 - 15)
High to Very High (15 or more)
Frequent Bus Routes (15 min peak)
Other Bus Routes
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: US Census, LEHD LODES 2010
Granville County
Franklin County
Durham County
Wake Forest
Rolesville
Morrisville
Cary
Raleigh
Zebulon
Knightdale
Wendell
Apex
Garner
Chatham County
Holly Springs
Fuquay-Varina
Johnston County
Lee County
Harnett County

Underlying Local Transit Demand: 2010 & 2017



Composite Density

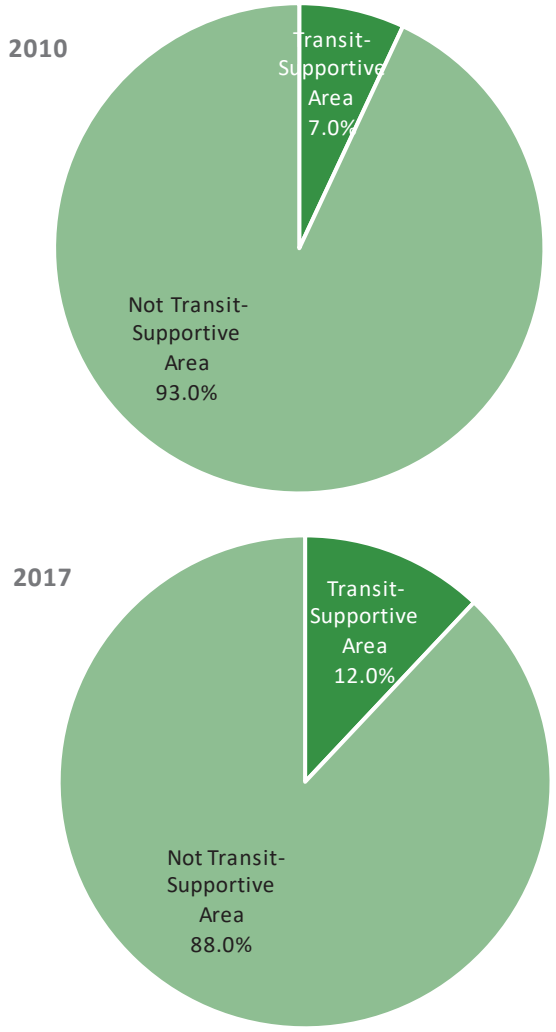
Population density, socioeconomic characteristics, and employment density all play a role in the demand for public transit. The following maps combine these factors into a **Composite Density**, which shows the total transit demand in an area based on where people live and work. The composite density is equal to the adjusted population density plus twice the employment density, which takes into account both the workers themselves and customers who visit the job sites.

The 2010 composite density map shows some level of density in most of the incorporated cities and towns in Wake County. Density is concentrated in Raleigh, especially Downtown, the southeastern region, the northeastern region, and west to Cary.

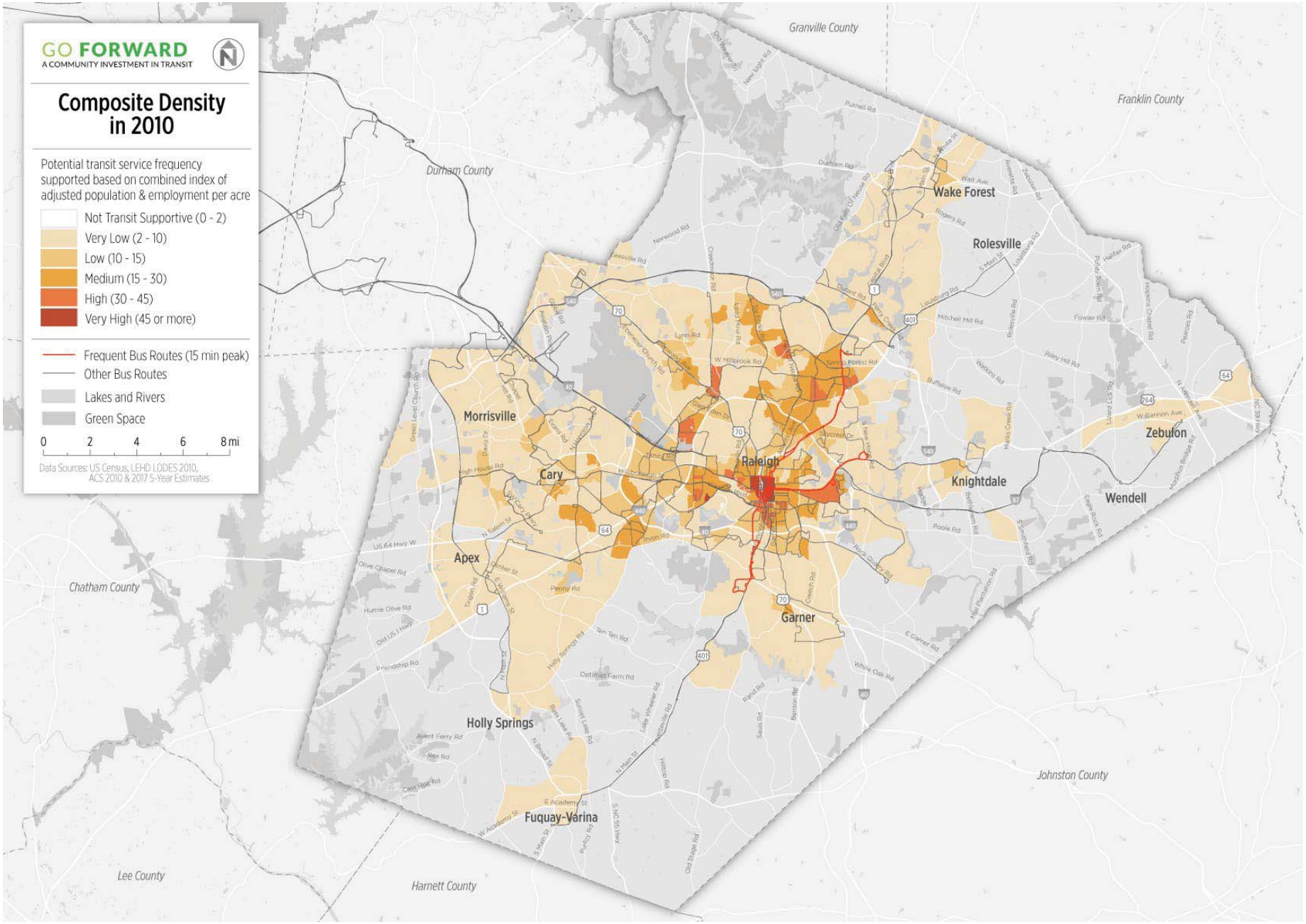
The 2017 map shows an increase in composite density all around, with the suburban and rural areas gaining some level of density, and parts of Raleigh reaching "Very High" density. The density is concentrated among major corridors in Raleigh and Cary.

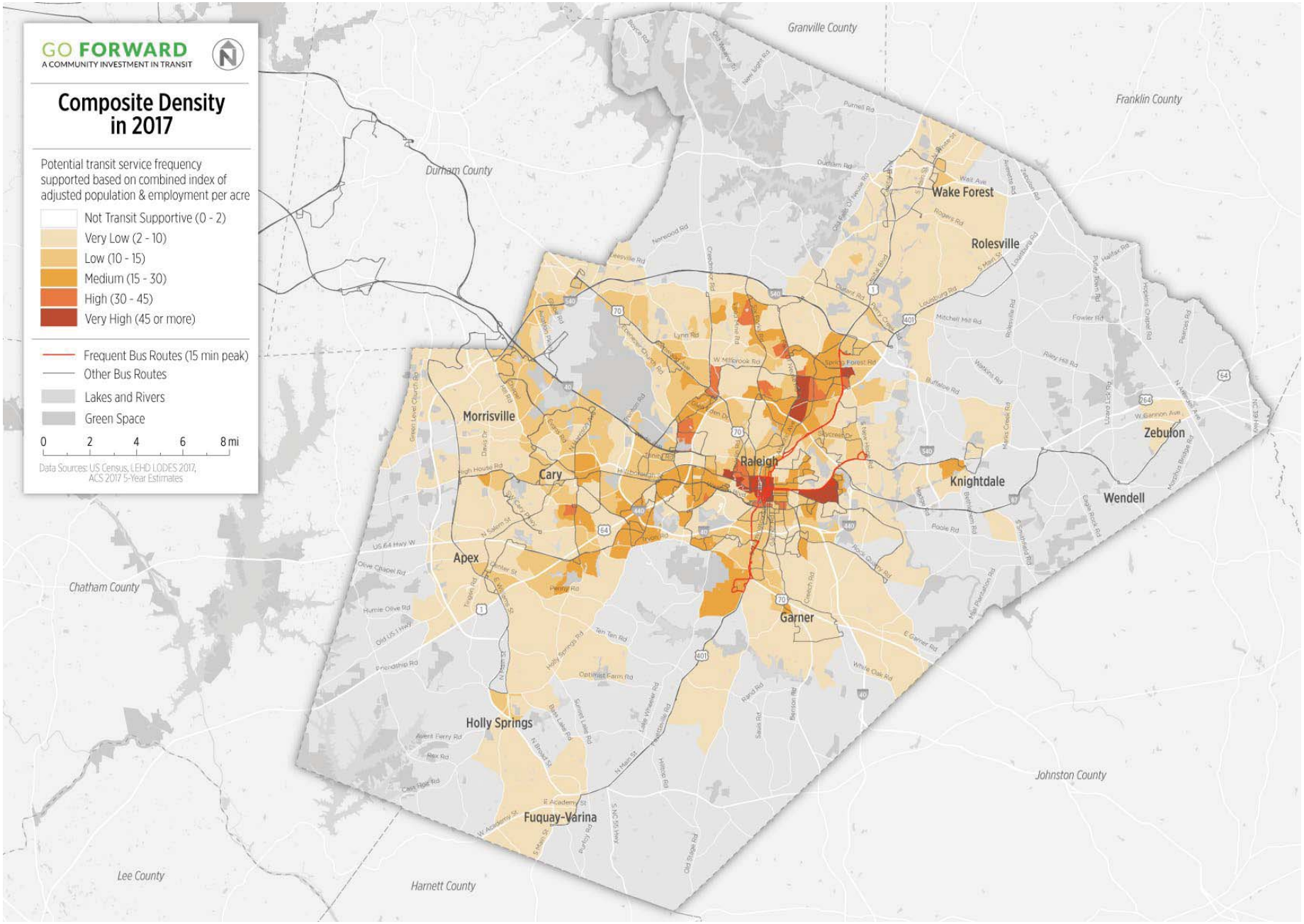
Between 2010 and 2017, there was an increase in the land area of Wake County supportive of fixed-route transit, from 7% to 12%. Fixed-route transit works best in areas with more than ten residents per acre and/or five jobs per acre, shown in the maps as having "Low" density or higher.

Proportion of county acreage supportive of fixed-route transit



Underlying Local Transit Demand: 2010 & 2017




GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Composite Density in 2017
Potential transit service frequency supported based on combined index of adjusted population & employment per acre
Not Transit Supportive (0 - 2)
Very Low (2 - 10)
Low (10 - 15)
Medium (15 - 30)
High (30 - 45)
Very High (45 or more)
Frequent Bus Routes (15 min peak)
Other Bus Routes
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: US Census, LEHD LODES 2017, ACS 2017 5-Year Estimates
Granville County
Franklin County
Durham County
Wake Forest
Rolesville
Morrisville
Raleigh
Cary
Knightdale
Zebulon
Wendell
Apex
Garner
Holly Springs
Fuquay-Varina
Chatham County
Johnston County
Lee County
Harnett County

Looking Forward to 2035

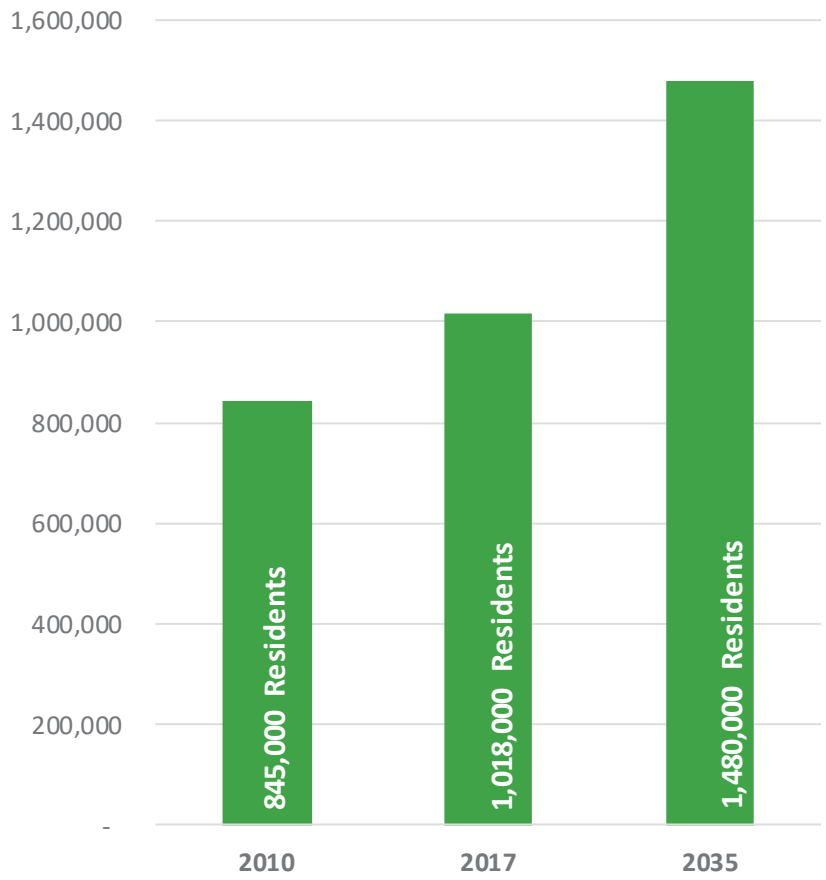
Population Density in 2035

Since most transit investments are for the long term, it is important to understand future development patterns and changes in population so that agencies can adequately plan for the future. By 2035, Wake County's population will nearly have doubled from 2010 and grown by another 462,000 people from 2017.

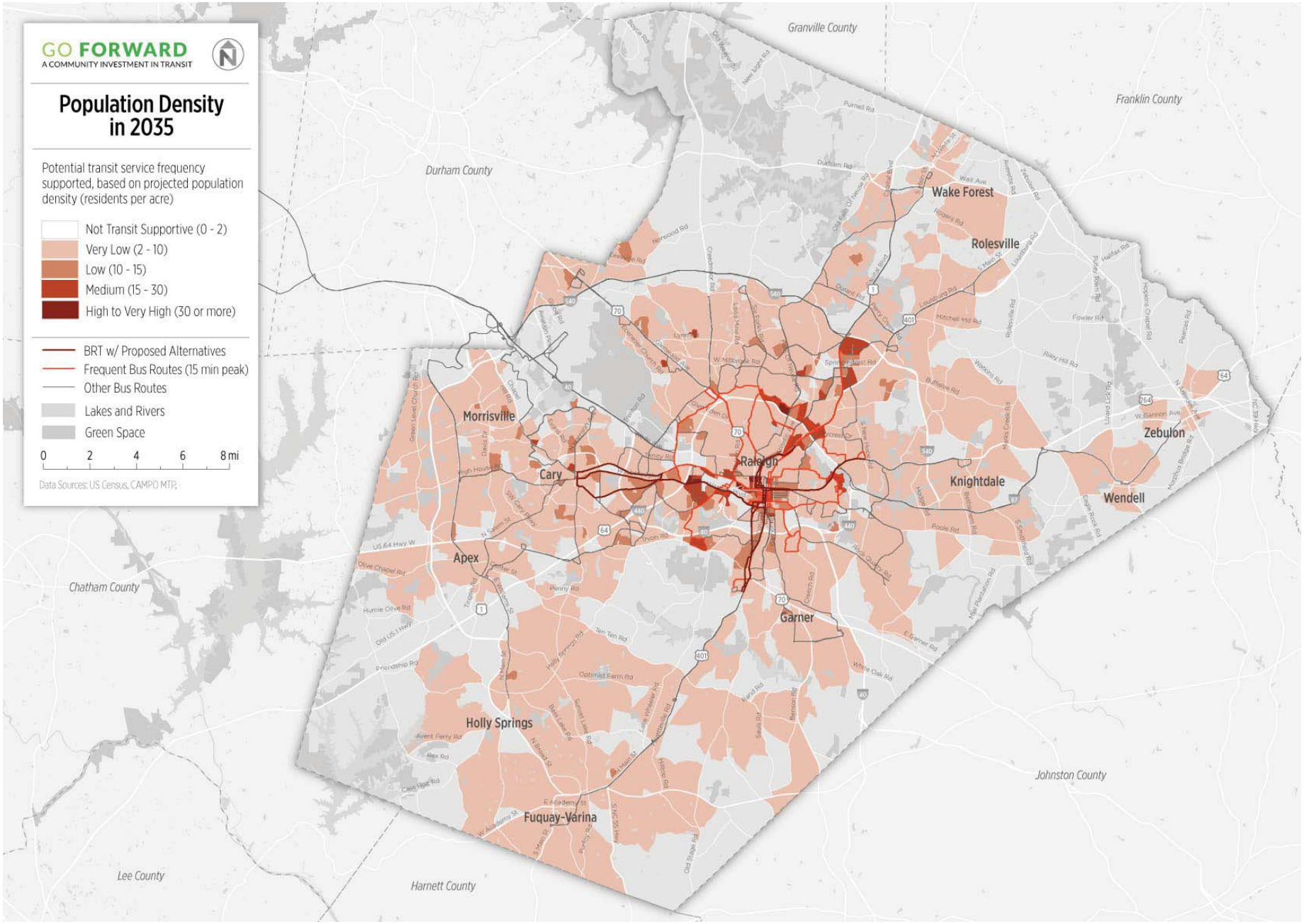
As shown in the following map, this population growth is represented throughout the county, both in areas already dense and in areas currently without much transit demand. There is an increase in the rural and suburban population, especially in the southern half of the county: in Holly Springs, Fuquay-Varina, Garner, Knightdale, and Wendell. Even with the increase in population however, most of the transit-supportive areas of Wake County with "Low" population density, which is the minimum density needed to support hourly fixed-route service, or higher are still along major corridors in Raleigh and parts of Cary.

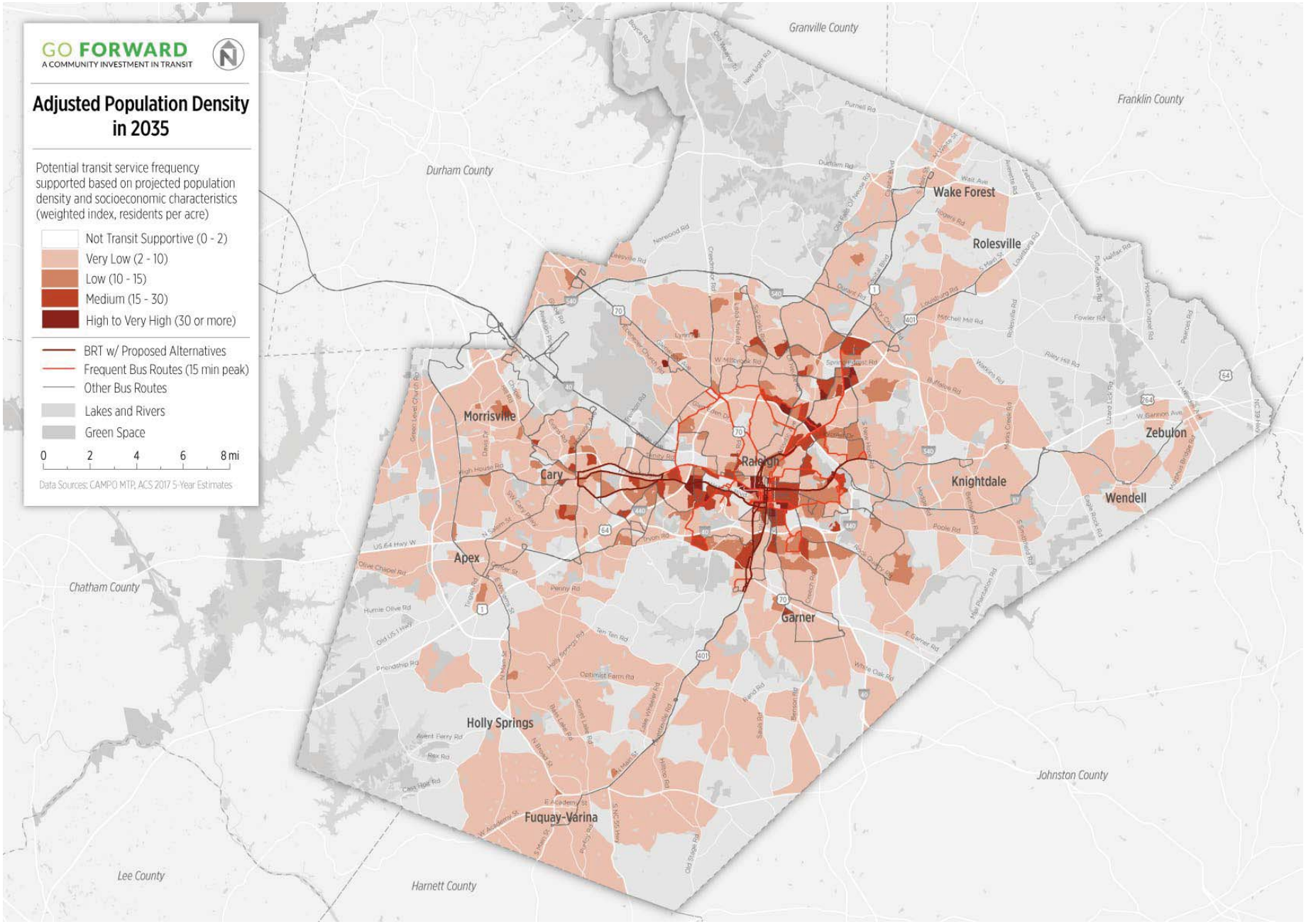
The project team also applied the transit propensity adjustment factors to the 2035 population density, shown in the map following the next. Again, adjusted population density is concentrated in Raleigh, but with a strong emphasis along the southern part of the city, as well as into the northeast and west into Cary.

Wake County Population in 2010, 2017, and 2035



Source: ACS 5-Year Estimates, CAMPO MTP


GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Population Density in 2035
Potential transit service frequency supported, based on projected population density (residents per acre)
Not Transit Supportive (0 - 2)
Very Low (2 - 10)
Low (10 - 15)
Medium (15 - 30)
High to Very High (30 or more)
BRT w/ Proposed Alternatives
Frequent Bus Routes (15 min peak)
Other Bus Routes
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: US Census, CAMPO MTP,
Granville County
Franklin County
Durham County
Wake Forest
Rolesville
Zebulon
Knightdale
Wendell
Morrisville
Cary
Raleigh
Apex
Garner
Holly Springs
Fuquay-Varina
Chatham County
Johnston County
Lee County
Harnett County


GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Adjusted Population Density in 2035
Potential transit service frequency supported based on projected population density and socioeconomic characteristics (weighted index, residents per acre)
Not Transit Supportive (0 - 2)
Very Low (2 - 10)
Low (10 - 15)
Medium (15 - 30)
High to Very High (30 or more)
BRT w/ Proposed Alternatives
Frequent Bus Routes (15 min peak)
Other Bus Routes
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: CAMPO MTP, ACS 2017 5-Year Estimates
Granville County
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Zebulon
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Wendell
Raleigh
Cary
Morrisville
Apex
Garner
Holly Springs
Fuquay-Varina
Chatham County
Johnston County
Lee County
Harnett County

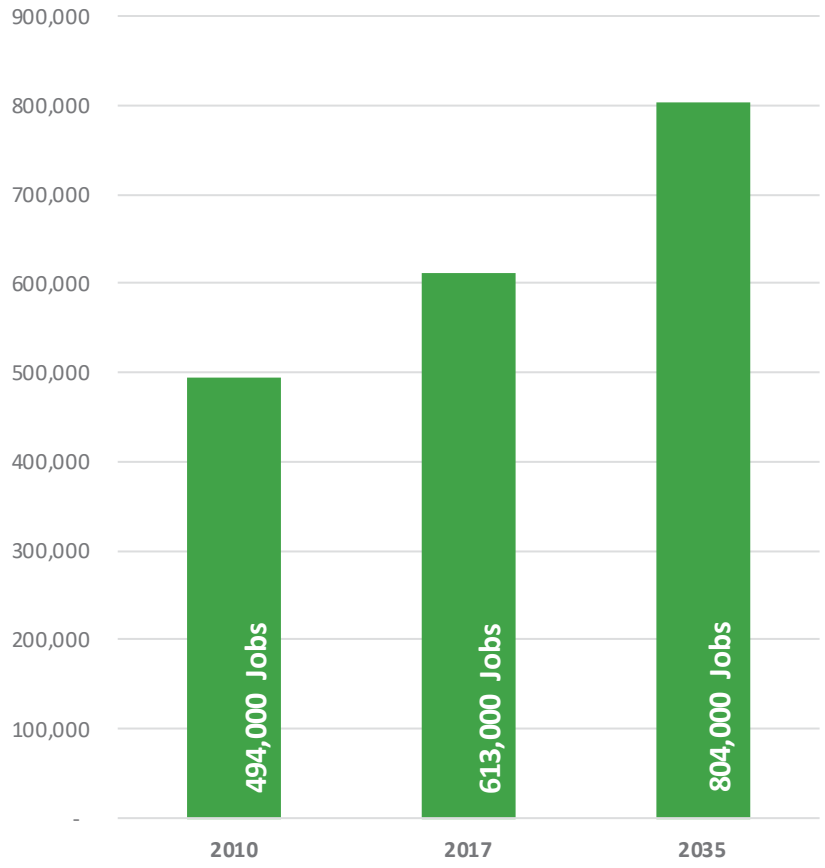
Employment Density in 2035

Similar to the change in population, Wake County also has a large increase in the number of jobs by 2035. Between 2010 and 2035, employment will increase by over 63% to about 804,000 jobs.

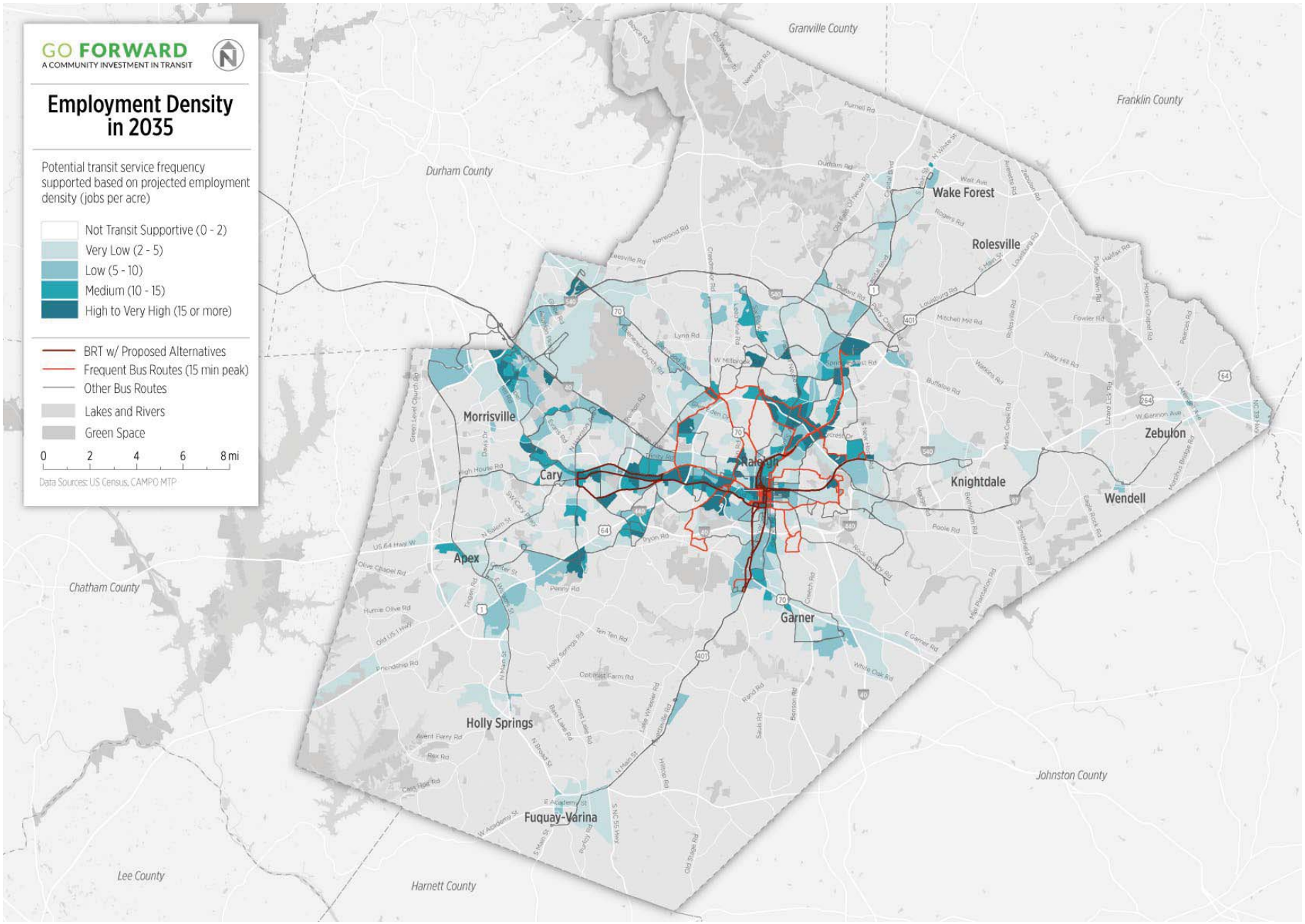
As shown in the following map, the increase in employment density has mostly been in areas that already had some level of density in 2017. Employment density is concentrated in the following areas, though the built form and development patterns, and thus their ability to be served well by transit, differ among the areas:

- From Downtown Raleigh to the northwest, east, and south along major corridors
- From Raleigh west to Cary
- Along the northern half of the I-440 loop
- In the Research Triangle Park area
- Between Cary and Morrisville
- Between Raleigh, Cary, and Apex

Wake County Population in 2010, 2017, and 2035



Source: LEHD LODES, CAMPO MTP


GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Employment Density in 2035
Potential transit service frequency supported based on projected employment density (jobs per acre)
Not Transit Supportive (0 - 2)
Very Low (2 - 5)
Low (5 - 10)
Medium (10 - 15)
High to Very High (15 or more)
BRT w/ Proposed Alternatives
Frequent Bus Routes (15 min peak)
Other Bus Routes
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: US Census, CAMPO MTP
Granville County
Franklin County
Durham County
Wake Forest
Rolesville
Zebulon
Knightdale
Wendell
Morrisville
Cary
Raleigh
Apex
Garner
Holly Springs
Fuquay-Varina
Chatham County
Johnston County
Lee County
Harnett County

Composite Density in 2035

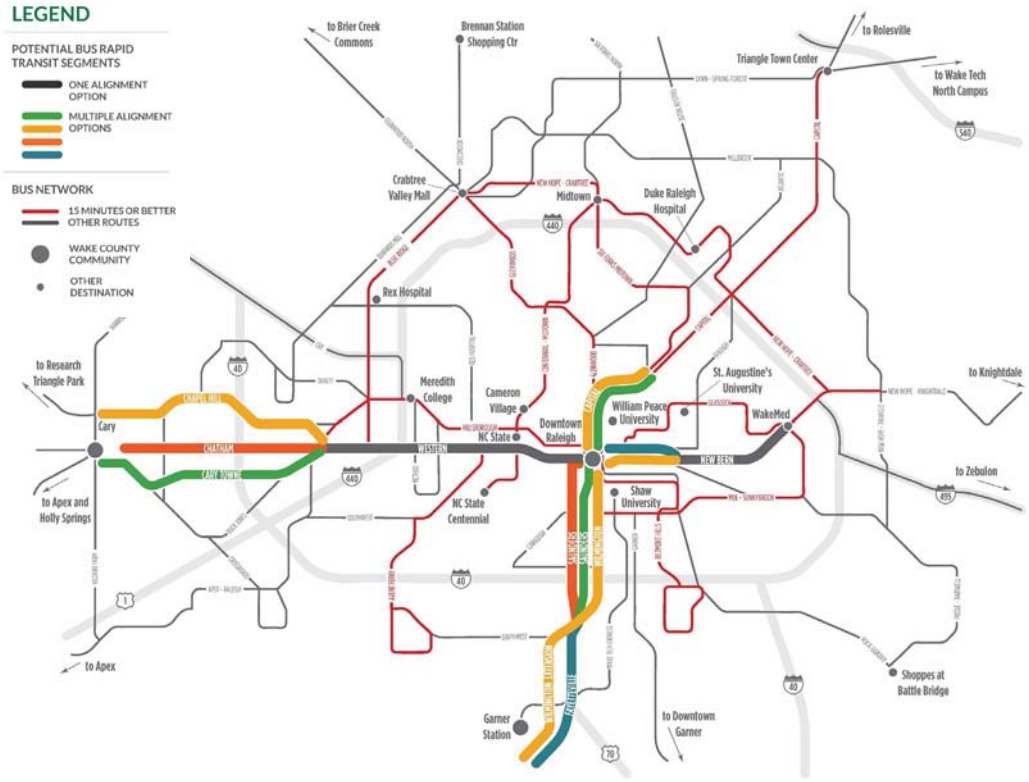
Combining the adjusted population and employment densities in 2035 into a composite density shows the clear increase in transit demand in Wake County in the future, as seen in the following map. Though most of the county will still have very low density, the more dense and urban areas show an increased need for transit.

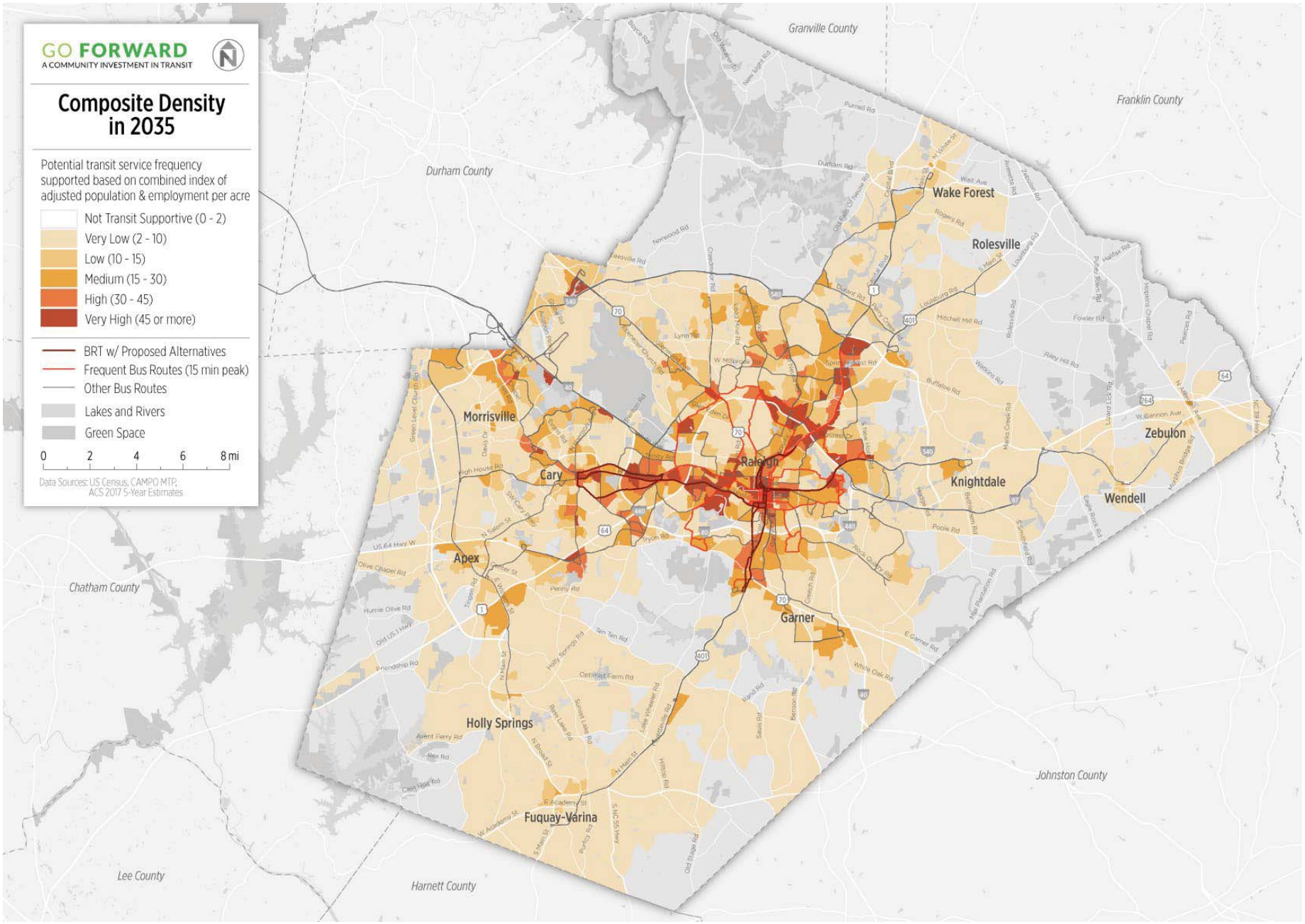
Composite density is concentrated in the following areas:

- Downtown Raleigh and the area immediately surrounding downtown
- Northeastern Raleigh along Capital Boulevard
- Eastern Raleigh along New Bern Avenue
- Southern Raleigh along Wilmington Street
- Northern Raleigh along I-440 loop
- Between Raleigh and Cary along Western Boulevard
- Between Cary and Morrisville/RTP
- Parts of Apex, Garner, and far northern Raleigh around Brier Creek

Agencies in Wake County are in the process of implementing the Wake Transit Plan, with the planned 2027 transit network shown in the figure on the right and overlaid on the following map. The composite density matches well with the planned transit network, with BRT and frequent routes in the highest density corridors, though frequencies can be improved in the outer areas.

2027 Planned Transit Network




GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Composite Density in 2035
Potential transit service frequency supported based on combined index of adjusted population & employment per acre
Not Transit Supportive (0 - 2)
Very Low (2 - 10)
Low (10 - 15)
Medium (15 - 30)
High (30 - 45)
Very High (45 or more)
BRT w/ Proposed Alternatives
Frequent Bus Routes (15 min peak)
Other Bus Routes
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: US Census, CAMPO MTP, ACS 2017 5-Year Estimates
Granville County
Franklin County
Durham County
Wake Forest
Rolesville
Morrisville
Cary
Raleigh
Knightdale
Zebulon
Wendell
Apex
Garner
Holly Springs
Fuquay-Varina
Chatham County
Johnston County
Lee County
Harnett County

Other Factors Affecting Transit Demand

Pedestrian Environment

The pedestrian environment is a major consideration for transit usage since most transit riders walk between their origin or destination and their bus stop. A safe, comfortable, walkable environment is more conducive to transit ridership. Additionally, buses run faster and more reliably when it can stop on a major street rather than weave in and out of parking lots, but for the former to be convenient for riders, the final destinations must be within close walking distance to the bus stop. Factors that affect walkability and transit ridership include, but are not limited to:

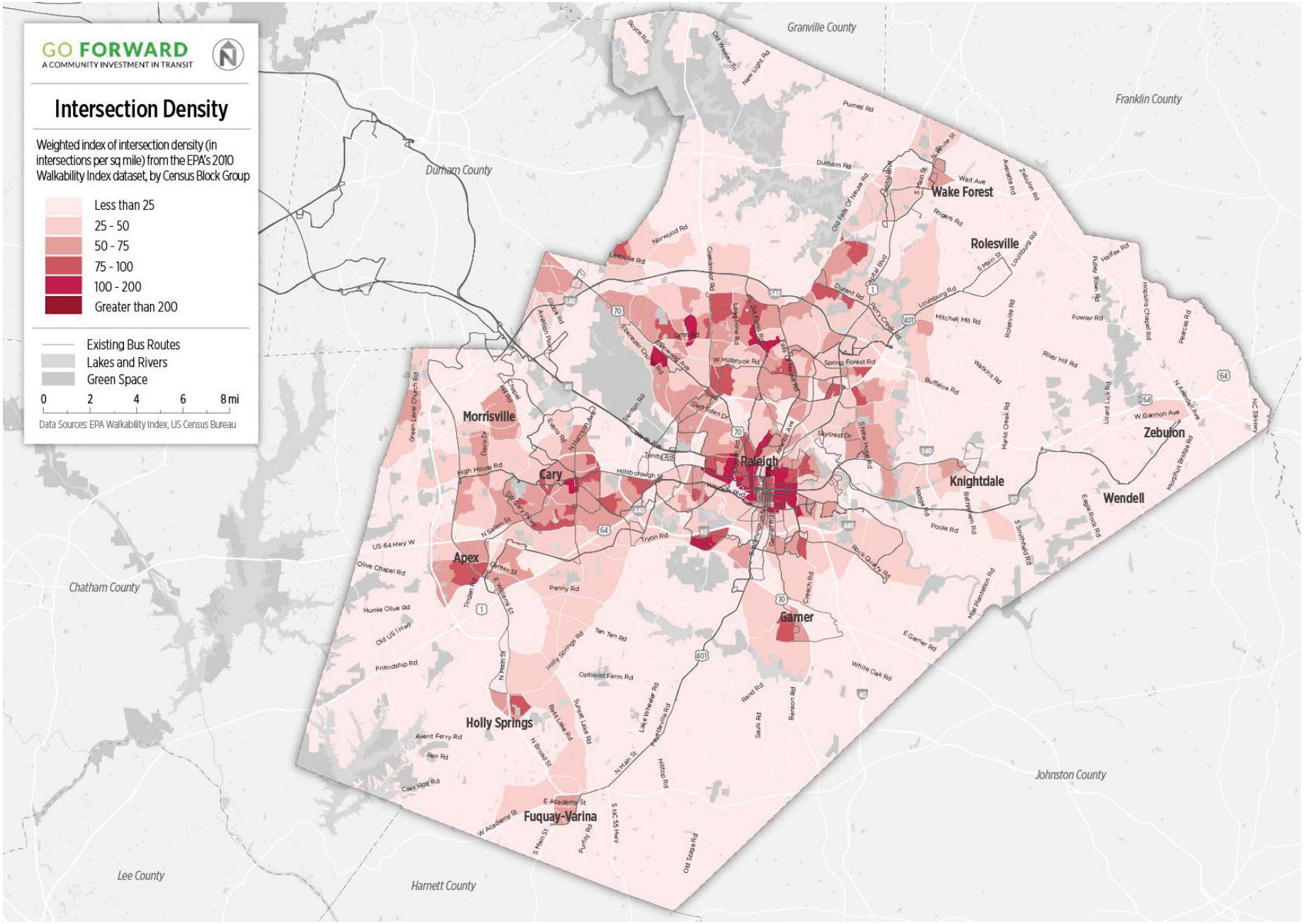
- Sidewalks, crosswalks, and lighting
- Proximity to diverse sets of housing, services, offices, and other employment sites
- Intersection density, or the number of intersections within a defined area
- Transit availability and parking prices

Due to the countywide scope of this study, the project team used intersection density as a proxy for walkability, since higher intersection density is correlated with more walk trips. The following map shows a relative index of intersection density from the EPA's 2010 Walkability Index dataset. Downtown Raleigh, parts of northern Raleigh, and parts of Cary have the highest intersection density and are currently relatively well served by transit services. Most other areas of the county have low intersection density, and thus have pedestrian environments that may be difficult to serve via transit.

Pedestrian Environment in Downtown Raleigh (top) versus Knightsdale (Bottom)

Source: Google Maps Street View

Other Factors Affecting Transit Demand



Activity Centers

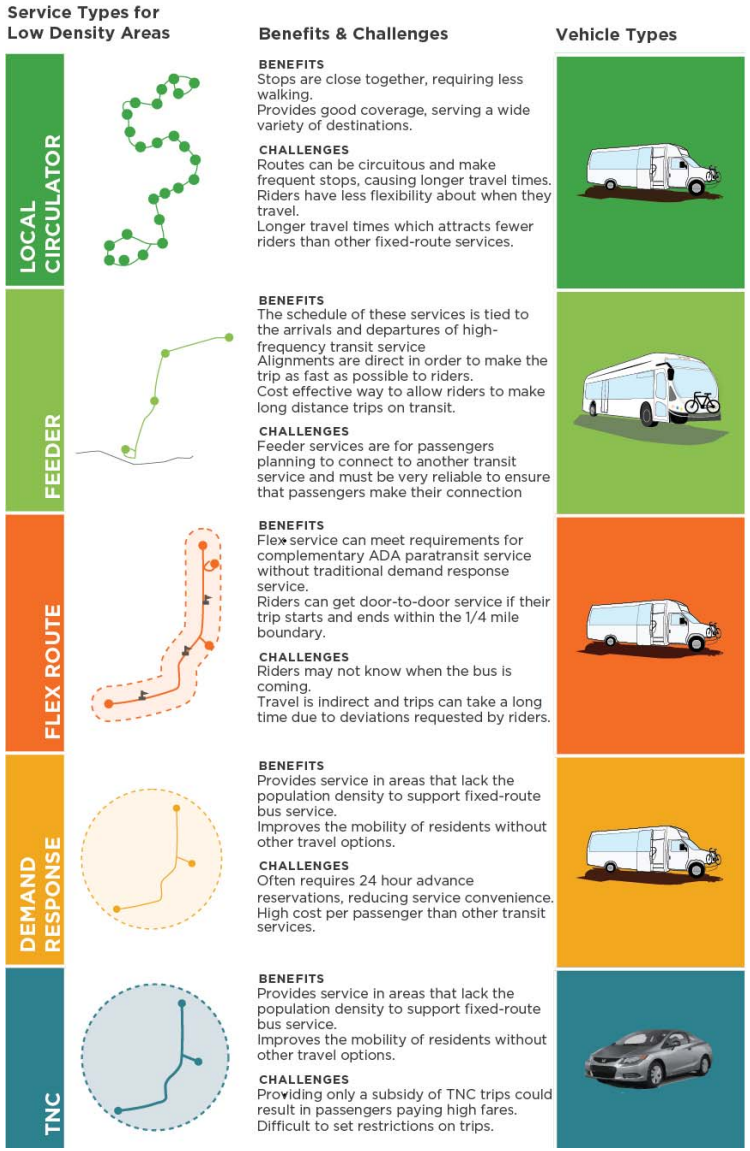
Some activity centers generate additional demand for transit that are not captured by the previous density analyses. As shown in the following map, Wake County's major activity centers and points of interest include:

- **Hospitals**, such as WakeMed Cary Hospital and Duke Health Raleigh Hospital
- **Shopping centers**, such as Crabtree Valley Mall and Triangle Town Center Mall
- **Major employers and job centers**, such as in Research Triangle Park

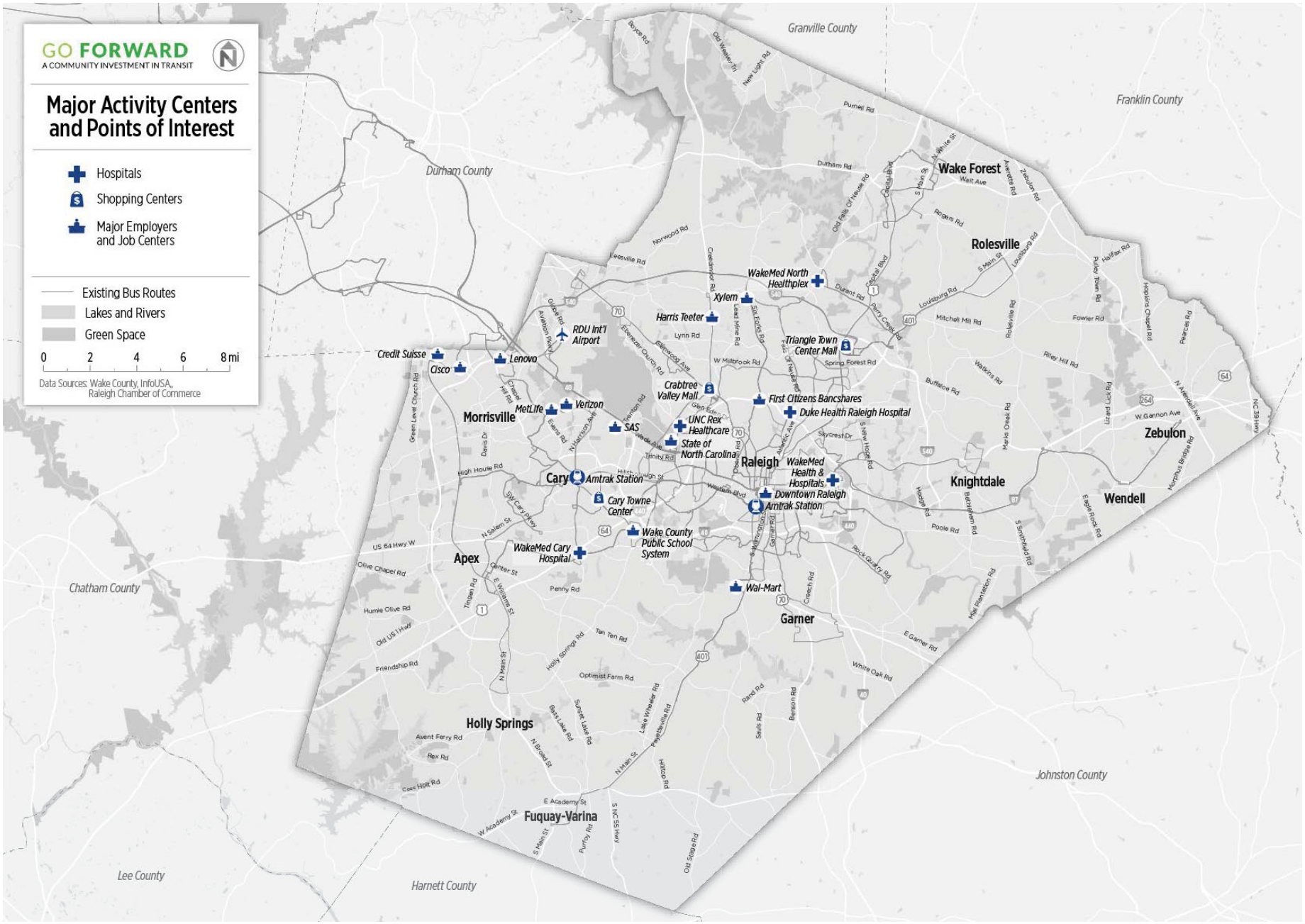
Colleges and universities are also major activity centers and are discussed in the following section. In general, these activity centers differ in terms of their environment and ability to be served by transit. For example, WakeMed Hospital in Raleigh and UNC Rex Hospital have relatively walkable urban fabrics and can be well served by fixed-route transit. In contrast, Research Triangle Park is more difficult to serve with fixed-route traffic, due to its office park nature and the requirement that 50% of each lot is preserved as woodlands.

Since many of these activity centers are in rural and suburban areas, otherwise without much transit demand, fixed-route buses may not be the best option. The figure to the right shows other service types that may better fit low-density areas, such as demand-response services and circulators.

Potential Transit Service Types for Low Density Areas



Other Factors Affecting Transit Demand



Colleges and Universities

Trips to education facilities are a major travel purpose in Wake County, second only to travel to jobs. Wake County has eight post-secondary institutions, including the Wake Technical Community College which has numerous campuses. The table to the right shows the student enrollment (both undergraduate and graduate, when applicable) of each campus, and the map on the next page shows their location in relation to their student population.

North Carolina State University (NCSU) has the greatest population by far at 35,479 students. Most colleges and universities in Wake County are clustered close to downtown Raleigh, though there are also large Wake Tech campuses to the north and south. Every post-secondary institution is currently served in some capacity by fixed-route transit, except for Wake Tech Western Wake Campus in southern Cary.

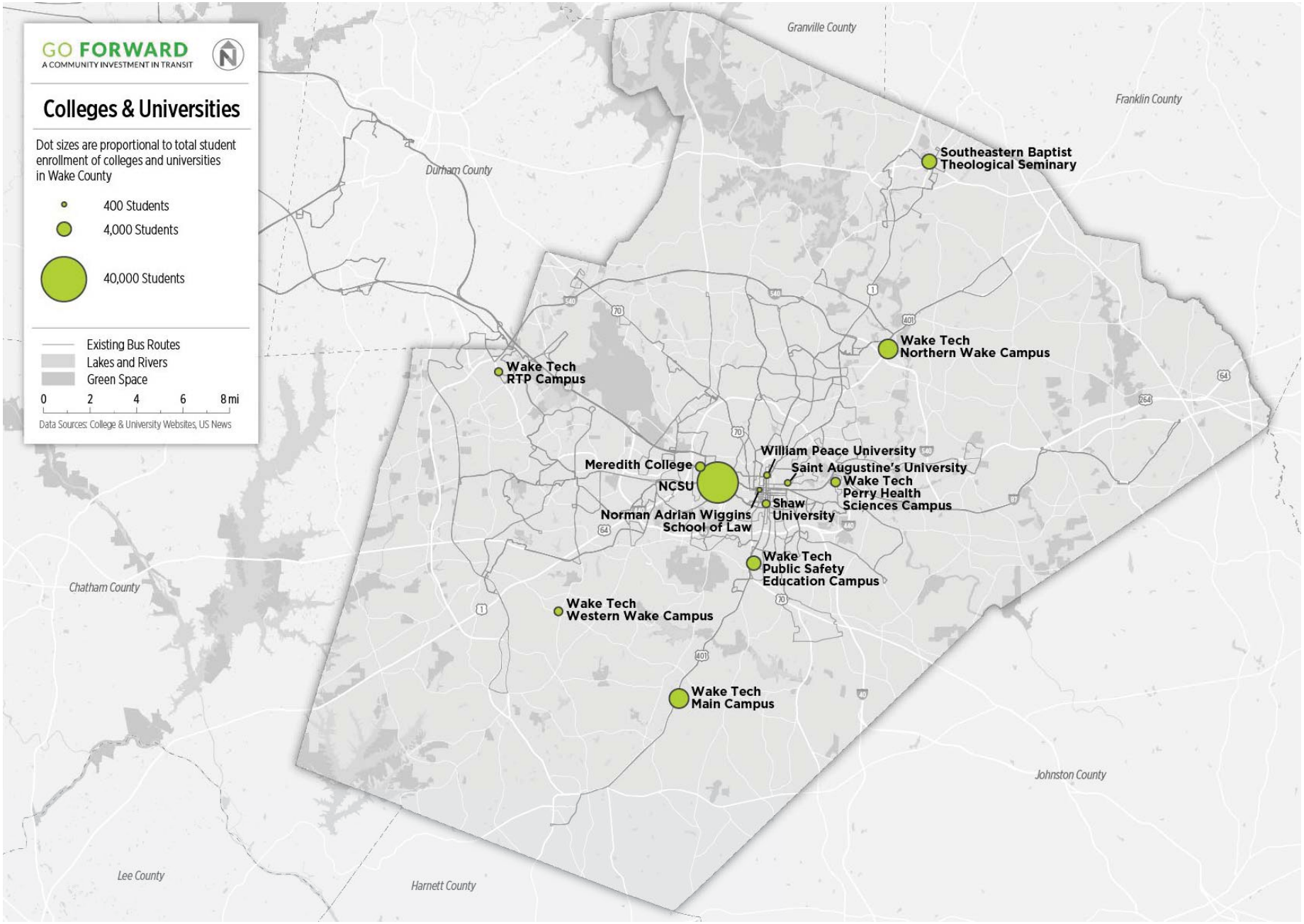
It is important to note that colleges and universities also serve as major employment centers. Compared to traditional employment trips, however, trips to schools are less likely to follow a conventional morning and afternoon peak schedule. There is likely a larger spread of times in which travel to education facilities occurs, due to varying class times and the academic calendar.

Wake County Colleges and Universities

College or University	Student Enrollment
North Carolina State University	35,479
Southeastern Baptist Theological Seminary	4,700
Meredith College	1,905
Shaw University	1,411
Saint Augustine's University	767
William Peace University	910
Norman Adrian Wiggins School of Law (Campbell University)	426
Wake Technical Community College	
Southern Wake Campus (Main)	*8,344*
Northern Wake Campus	*8,272*
Perry Health Sciences Campus	*1,767*
Public Safety Education Campus	*4,045*
Western Wake Campus	*1,693*
RTP Campus	*1,441*

Source: College and University websites, US News

Other Factors Affecting Transit Demand



Travel Patterns

Travel Flows

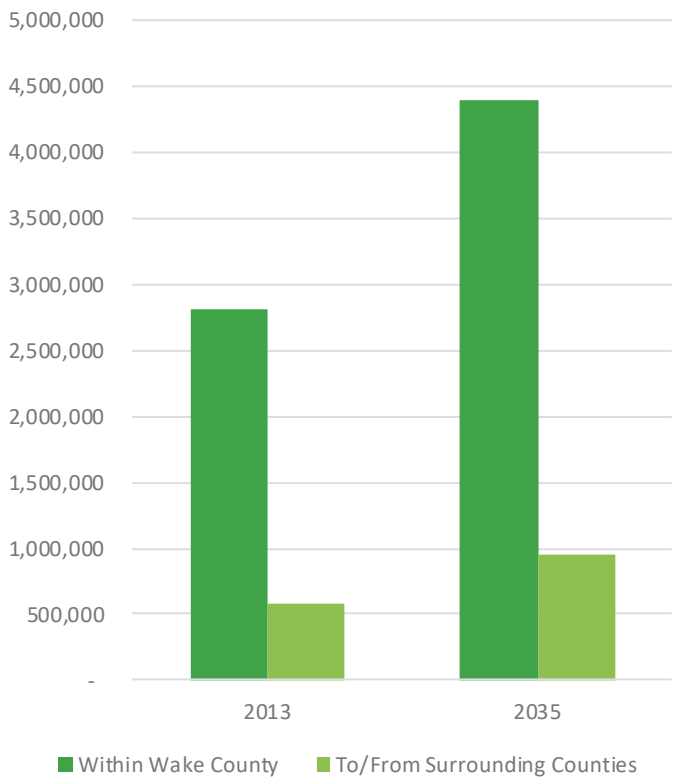
Travel flows show the places that people travel between, within, and outside Wake County. For this analysis, the project team divided the county into travel zones based on existing towns, cities, and neighborhoods. The following four maps show the average daily trips made on all transportation modes within or between the zones, with 2013 as the base year and 2035 as the future year. Visualizing these flows can provide an understanding of where travel markets exist for transit to potentially capture.

The total number of daily trips for Wake County will increase by 57% between 2013 and 2035. Trips within the county will increase by 56% and trips to/from surrounding counties will increase by 65%. In 2013, Cary and the northwestern and northeastern parts of Raleigh exhibit the greatest number of intra-zone flows. Between zones, flows are the strongest coming into and out of Cary and the northeastern part of Raleigh.

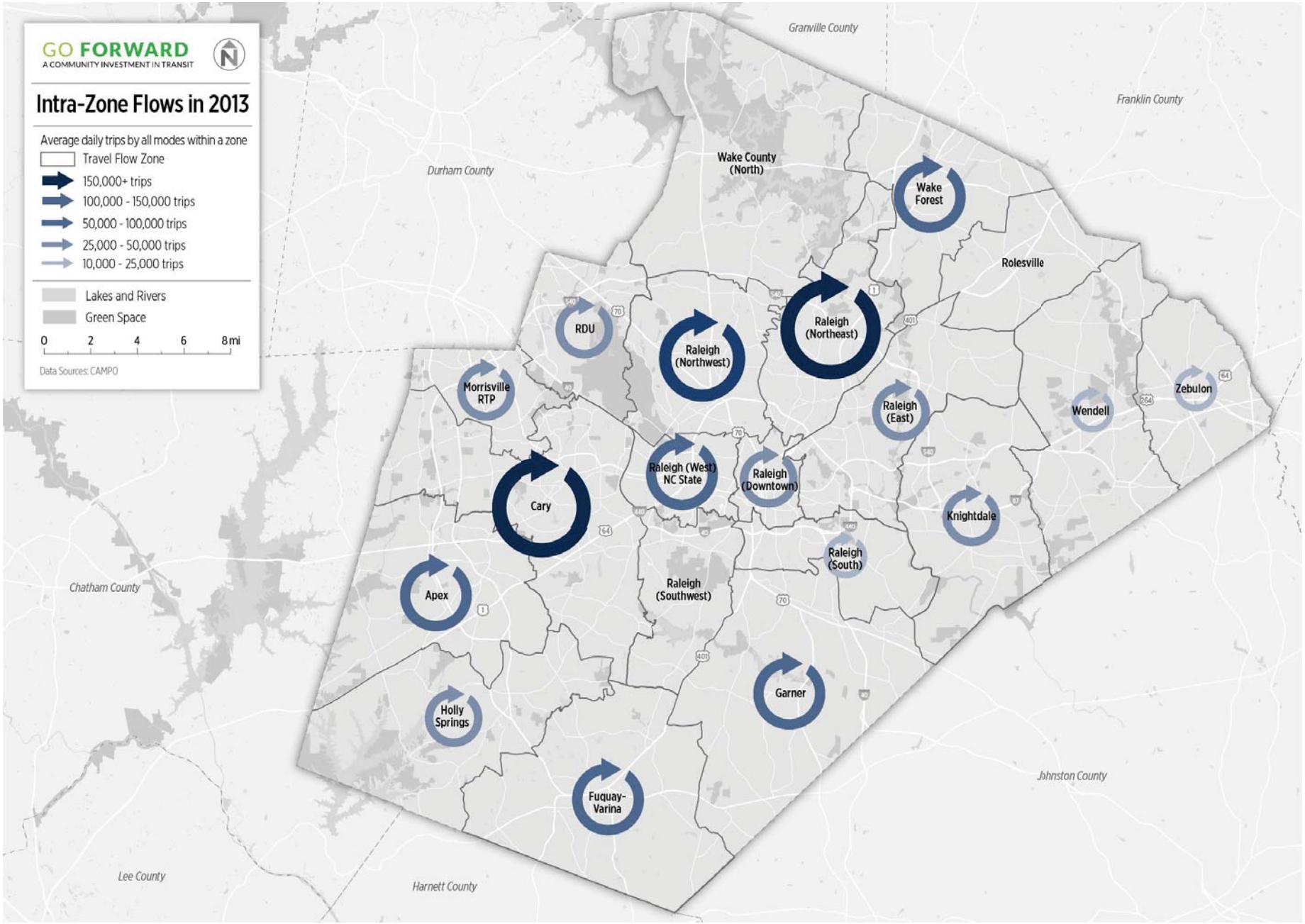
In 2035, there will be an all-around increase in intra-zone flows, especially in the western part of Raleigh (NC State), Downtown Raleigh, the eastern part of Raleigh, Garner, and Fuquay-Varina. Flows between zones also increase county-wide, with an emphasis on the zones and towns in the southern half of the county. Though Raleigh has the greatest number of flows, the flows into and out of Cary are also very strong. Garner also emerges in 2035 as an area with a greater number of daily trips.

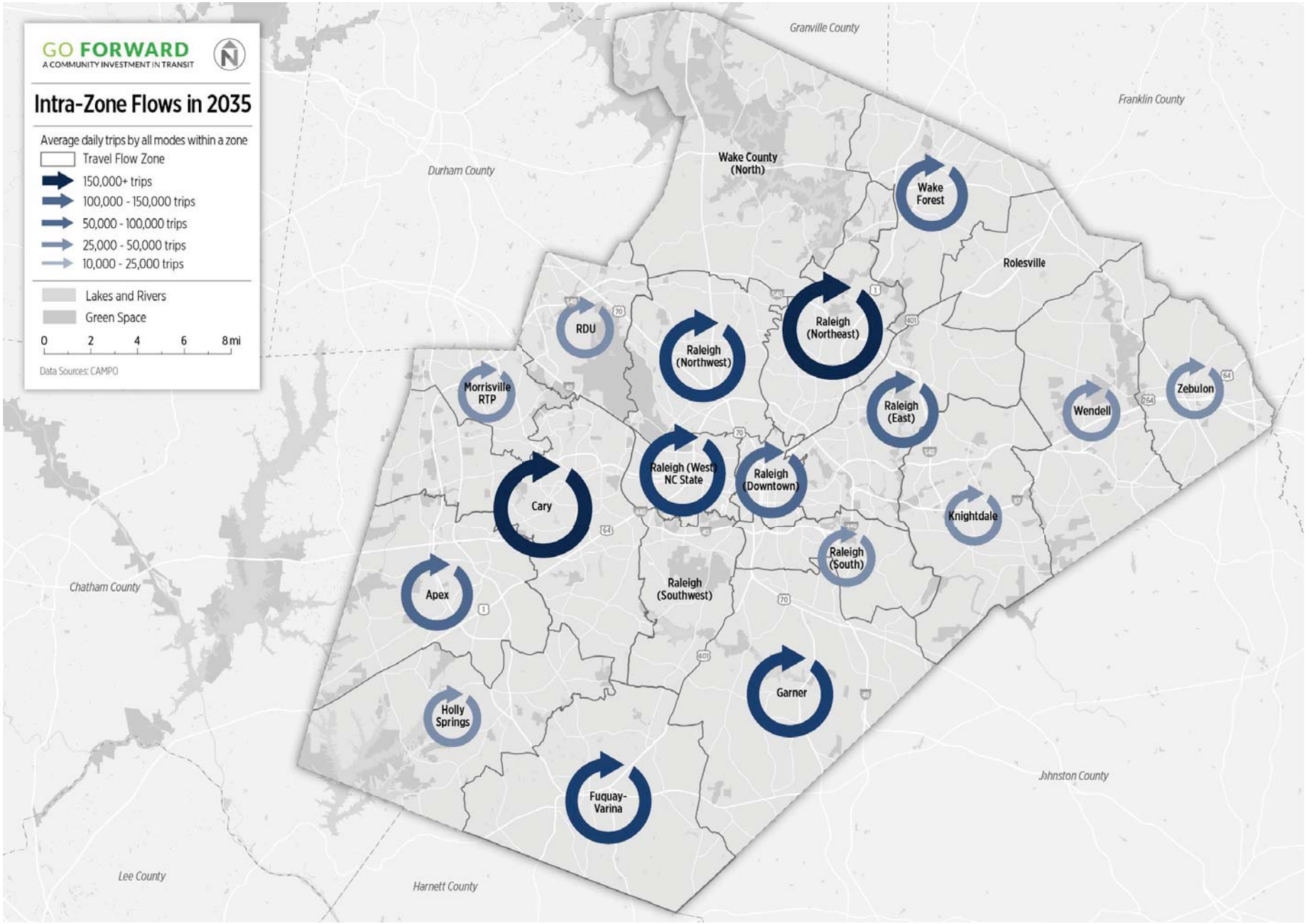
Additionally, between 2013 and 2035, flows between areas of Wake County and the surrounding counties will also increase, especially to Durham County, Harnett County, and Johnston County.

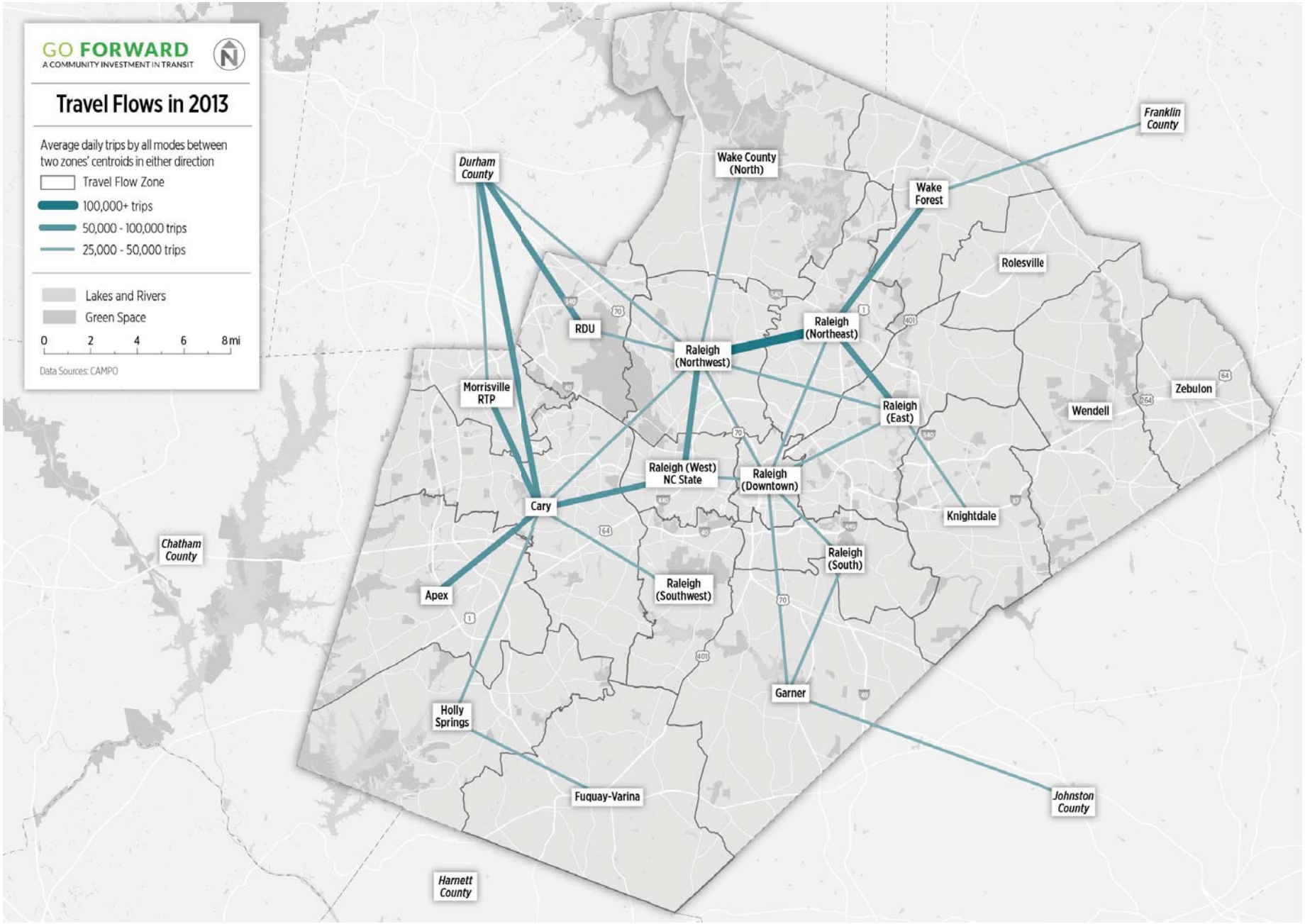
Wake County Daily Trips in 2013 and 2035

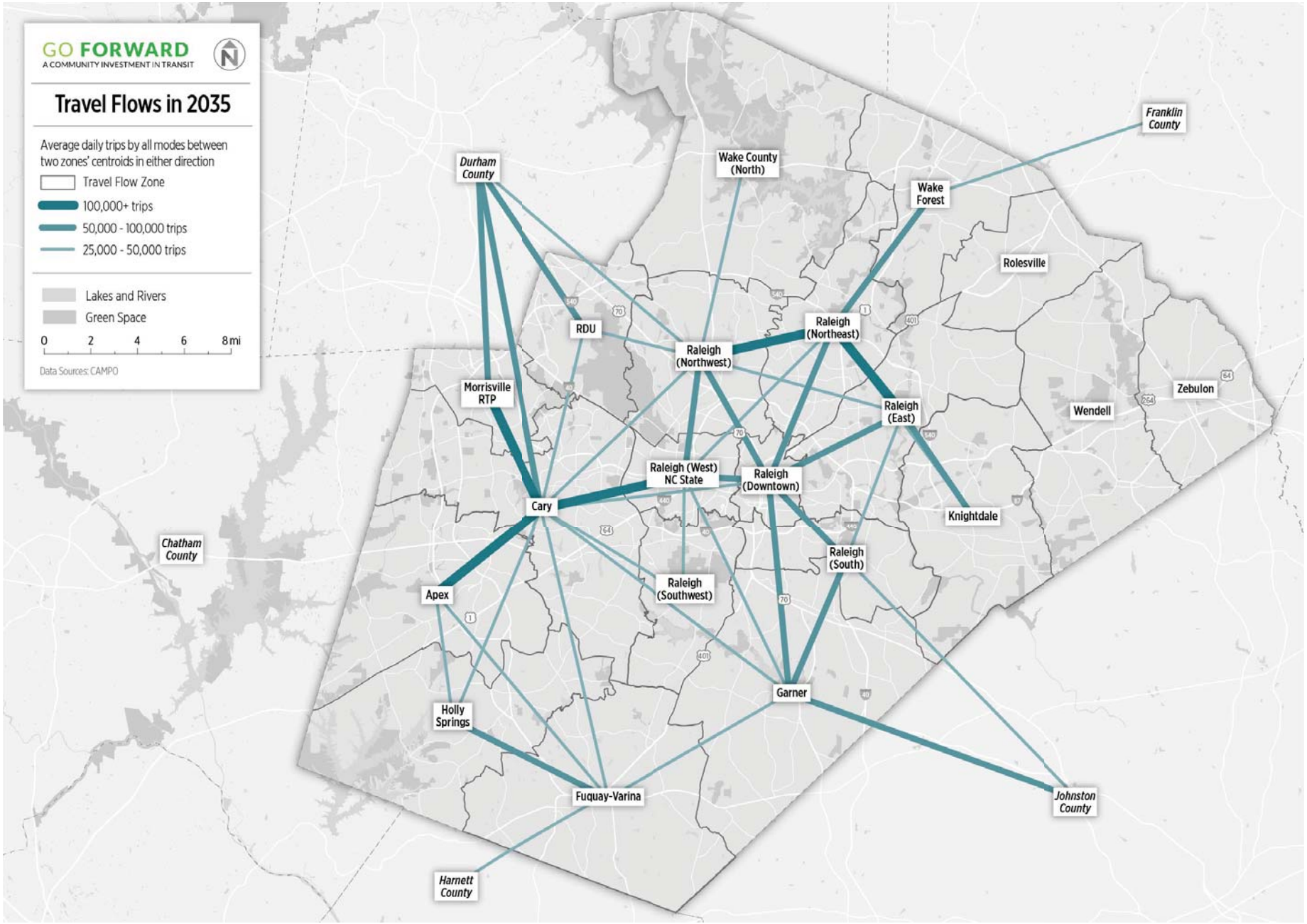


Source: CAMPO MTP


GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Intra-Zone Flows in 2013
Average daily trips by all modes within a zone
Travel Flow Zone
150,000+ trips
100,000 - 150,000 trips
50,000 - 100,000 trips
25,000 - 50,000 trips
10,000 - 25,000 trips
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: CAMPO
Granville County
Franklin County
Durham County
Wake County (North)
Wake Forest
Rolesville
RDU
Raleigh (Northwest)
Raleigh (Northeast)
Morrisville RTP
Raleigh (East)
Wendell
Zebulon
Raleigh (West) NC State
Raleigh (Downtown)
Cary
Knightdale
Raleigh (South)
Chatham County
Apex
Raleigh (Southwest)
Garner
Holly Springs
Johnston County
Fuquay-Varina
Lee County
Harnett County


GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Intra-Zone Flows in 2035
Average daily trips by all modes within a zone
Travel Flow Zone
150,000+ trips
100,000 - 150,000 trips
50,000 - 100,000 trips
25,000 - 50,000 trips
10,000 - 25,000 trips
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: CAMPO
Granville County
Franklin County
Durham County
Wake County (North)
Wake Forest
Rolesville
RDU
Raleigh (Northwest)
Raleigh (Northeast)
Morrisville RTP
Raleigh (East)
Wendell
Zebulon
Raleigh (West) NC State
Raleigh (Downtown)
Cary
Knightdale
Raleigh (South)
Chatham County
Apex
Raleigh (Southwest)
Garner
Holly Springs
Johnston County
Fuquay-Varina
Lee County
Harnett County


GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Travel Flows in 2013
Average daily trips by all modes between two zones' centroids in either direction
Travel Flow Zone
100,000+ trips
50,000 - 100,000 trips
25,000 - 50,000 trips
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: CAMPO
Durham County
Wake County (North)
Franklin County
Wake Forest
Rolesville
RDU
Raleigh (Northeast)
Raleigh (Northwest)
Morrisville
RTP
Zebulon
Wendell
Raleigh (East)
Raleigh (West) NC State
Raleigh (Downtown)
Cary
Knightdale
Chatham County
Raleigh (South)
Apex
Raleigh (Southwest)
Garner
Holly Springs
Fuquay-Varina
Johnston County
Harnett County


GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Travel Flows in 2035
Average daily trips by all modes between two zones' centroids in either direction
Travel Flow Zone
100,000+ trips
50,000 - 100,000 trips
25,000 - 50,000 trips
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: CAMPO
Durham County
Wake County (North)
Franklin County
Wake Forest
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Raleigh (Northwest)
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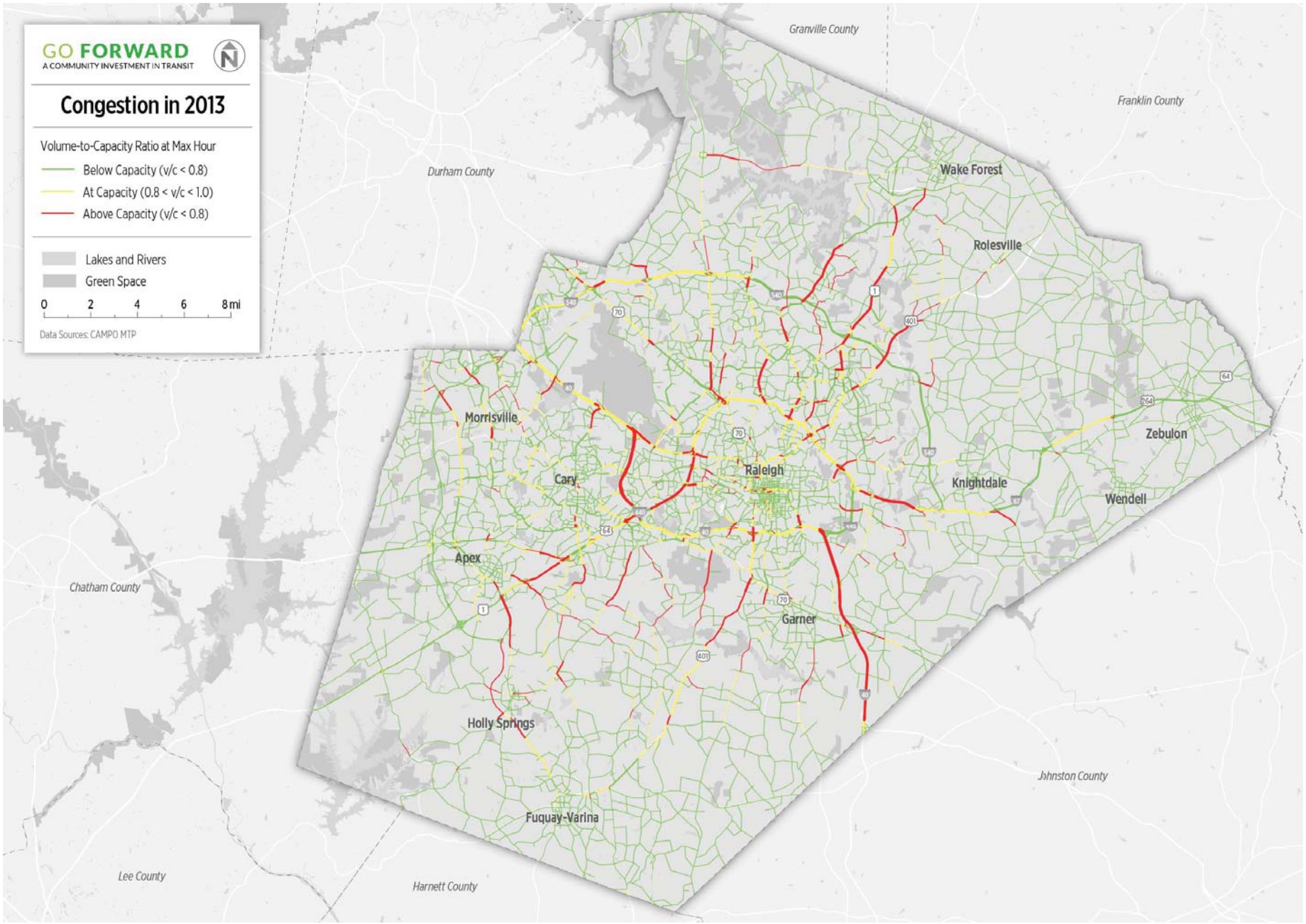
Morrisville
RTP
Raleigh (East)
Zebulon
Wendell
Raleigh (West)
NC State
Raleigh (Downtown)
Cary
Knightdale
Chatham County
Raleigh (South)
Apex
Raleigh (Southwest)
Garner
Holly Springs
Fuquay-Varina
Johnston County
Harnett County

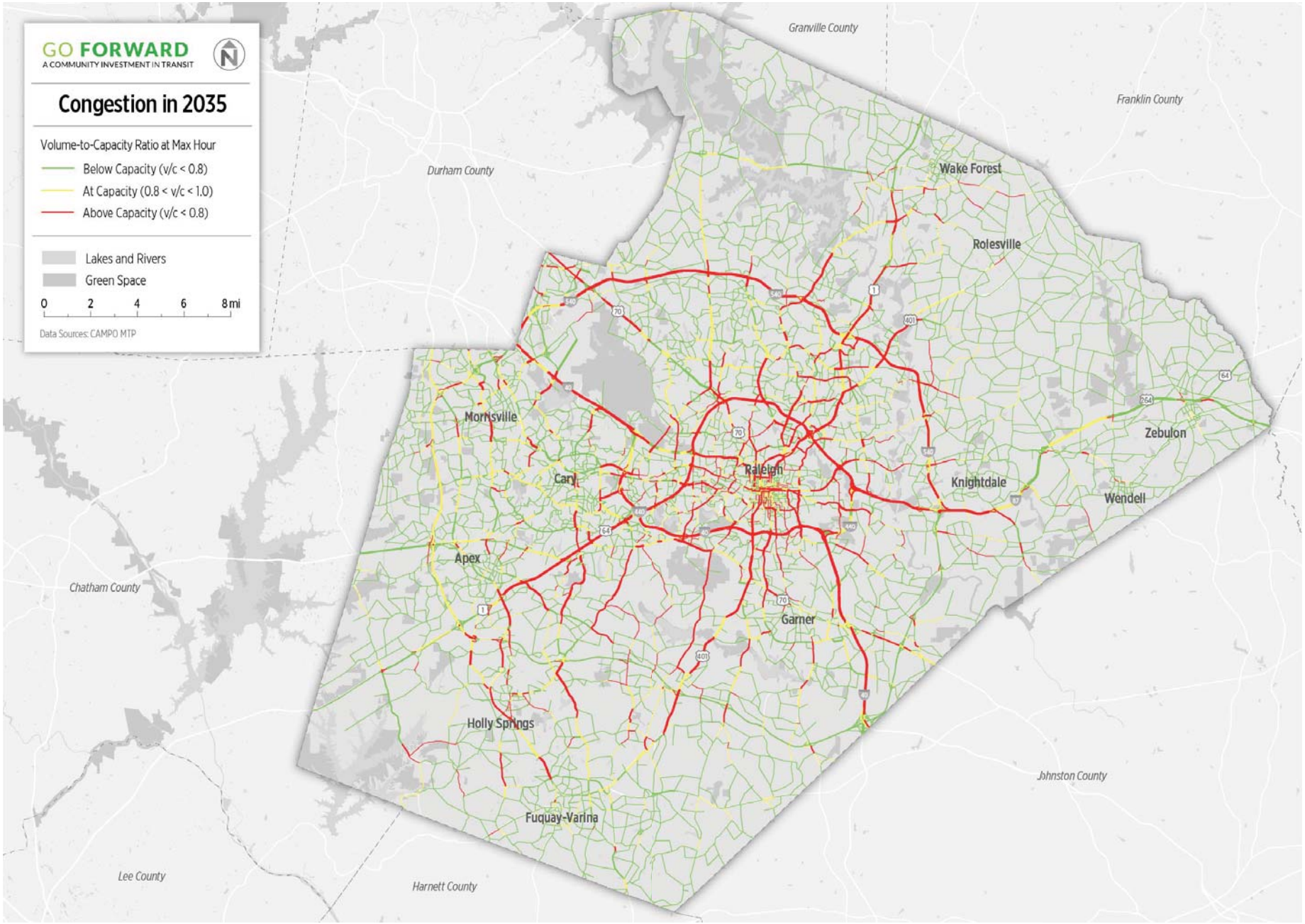
Congestion

Congestion levels impact transit systems generally through three ways: 1) heavy traffic can discourage people from driving and therefore take transit, 2) buses can get stuck in traffic more intensely than cars due to pulling into and out of stops and stations, and 3) unpredictability in travel times due to congestion makes transit unreliable and unable to follow defined timetables. Overall, heavy congestion often leads to frustration for both transit users and car users, as well as missed appointments and job opportunities and increased air and noise pollution.

The following two maps compare the congestion in 2013 with predicted congestion in 2035. As expected with population and employment growth, congestion gets significantly worse. In 2013, most local roads are below capacity. Highways are mostly at capacity, except for parts of I-40, I-440, Highway 1, and Highway 401, which are above capacity. By 2035, most highways and major arterials are above capacity. Local roads are at a mix of at capacity and below capacity.

These congestion maps highlight the importance of planning and policy that prioritizes reliable and frequent transit so that people have a high-quality option for transportation other than driving. On key corridors and highways with high congestion, there is a need for dedicated rights-of-way for transit so that buses can get to stops and stations in a timely manner. These maps also highlight the importance of linking transportation and land use decisions, since concentrating development in areas where people do not have to drive can greatly ease congestion.


GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Congestion in 2013
Volume-to-Capacity Ratio at Max Hour
Below Capacity (v/c < 0.8)
At Capacity (0.8 < v/c < 1.0)
Above Capacity (v/c < 0.8)
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: CAMPO MTP
Granville County
Franklin County
Durham County
Wake Forest
Rolesville
Zebulon
Knightdale
Wendell
Morrisville
Cary
Raleigh
Apex
Garner
Holly Springs
Fuquay-Varina
Chatham County
Johnston County
Lee County
Harnett County


GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Congestion in 2035
Volume-to-Capacity Ratio at Max Hour
Below Capacity (v/c < 0.8)
At Capacity (0.8 < v/c < 1.0)
Above Capacity (v/c < 0.8)
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: CAMPO MTP
Granville County
Franklin County
Durham County
Wake Forest
Rolesville
Morrisville
Cary
Raleigh
Knightdale
Zebulon
Wendell
Apex
Chatham County
Garner
Holly Springs
Fuquay-Varina
Johnston County
Lee County
Harnett County

Transit Ridership

Public transit currently represents a small modeshare of commuting travel in Wake County, so analyzing current ridership patterns can help determine improvements for transit in the future. On an average weekday in 2018, GoTriangle served about 7,000 trips, GoRaleigh served about 22,000 trips, and GoCary just under 1,000 trips. The table to the right shows the highest ridership stops for each transit agency measured by average weekday boardings, and GoRaleigh Station, the Regional Transit Center (RTC), and Durham Station are the most utilized stations.

The following map shows transit ridership by stop overlaid on the 2017 Composite Density layer (stops with less than 10 boardings per day are not shown). In general, transit ridership is highest in downtown Raleigh and along corridors with frequent bus routes. The stops with higher ridership generally match the places with relatively higher composite densities. The areas with relatively higher composite density that do not have high ridership include:

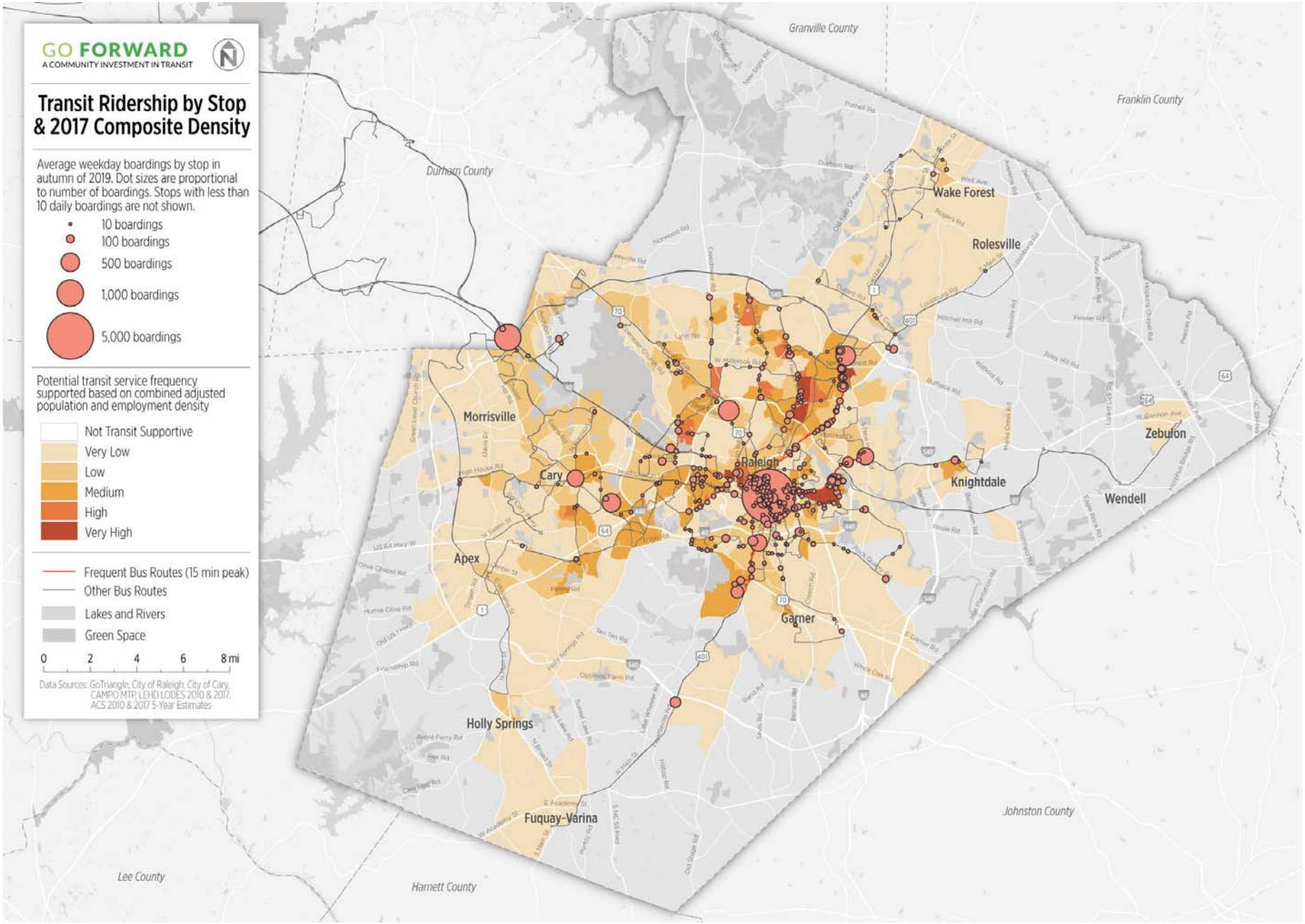
- Cary outside of downtown Cary and Cary Towne Center
- Northwestern Raleigh from I-440 to Brier Creek

Improving service to these areas and countywide can make transit a more reliable mode for residents of Wake County.

Highest Ridership Stop by Transit Agency

Stop Location	Avg. Weekday Boarding
GoTriangle	
Regional Transit Center (RTC)	990
Durham Station	820
GoRaleigh Station	649
GoRaleigh	
GoRaleigh Station	5,862
Crabtree Valley Mall	646
Cary Towne Center	500
GoCary	
Cary Train Station	201
Cary Towne Center Mall at Sears	54
Crescent Commons at Walmart	28

Source: GoTriangle, City of Raleigh, Town of Cary APC data for Autumn 2019


GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Transit Ridership by Stop & 2017 Composite Density
Average weekday boardings by stop in autumn of 2019. Dot sizes are proportional to number of boardings. Stops with less than 10 daily boardings are not shown.
10 boardings
100 boardings
500 boardings
1,000 boardings
5,000 boardings
Potential transit service frequency supported based on combined adjusted population and employment density
Not Transit Supportive
Very Low
Low
Medium
High
Very High
Frequent Bus Routes (15 min peak)
Other Bus Routes
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: GoTriangle, City of Raleigh, City of Cary, CAMPO MTP, LEHD LODES 2010 & 2017, ACS 2010 & 2017 5-Year Estimates
Granville County
Franklin County
Durham County
Wake Forest
Rolesville
Morrisville
Raleigh
Cary
Knightdale
Zebulon
Wendell
Apex
Garner
Holly Springs
Fuquay-Varina
Johnston County
Lee County
Harnett County

APPENDIX C

Recommended Financial Assumptions for Wake Transit Plan Update

Throughout the June-October 2020 timeframe, CAMPO and its Wake County Transit Plan implementation partners reassessed a number of financial assumptions for the delivery of the Wake County Transit Plan through the 2030 horizon year. This was in response to adverse economic impacts to revenue collections that were realized after the onset of the COVID-19 pandemic, as well as the uncertainty associated with the pandemic's future impacts. Preceding the onset of the pandemic, revenue collections for FYs 2018 and 2019 were much higher than originally anticipated, and market conditions suggested a more optimistic than originally anticipated future outlook. Consequently, Wake County Transit Plan implementation partners adjusted revenue assumptions for future years upward from what was assumed in the original Wake County Transit Plan and balanced those revenues with additional expenses or assumed increases in expenses for projects already included in the plan.

The reassessment completed in conjunction with the Wake County Transit Plan Update revisited and adjusted specific assumptions for revenue growth and for major capital project expenditures through the evaluation of five (5) scenarios ranging from very conservative to liberal/optimistic. These scenarios represented a range of potential outcomes within which the future financial reality for delivery of the Wake County Transit Plan is most likely to fall based on knowns and educated projections for unknowns. The following summary documents the final financial assumptions selected from the five (5) scenarios by the Wake County Transit Plan implementation partners to carry forward as the assumptions that will be used to support the Wake County Transit Plan Update. A summary table representing the five (5) scenarios evaluated is also included as **Exhibit 1** to this appendix.

REVENUE ASSUMPTIONS

Following are the final recommended Wake Transit revenue assumptions for fiscal year (FY) 2021 for all of the assumed local revenue sources. These assumptions are expressed in terms of a percentage (%) growth or decline rate from actual FY 2020 collections for each corresponding revenue source for each respective month.

FY 2021 Local Revenue Assumptions - % Change from FY 2020

<table>
<tr><th>Month</th><th>Sales Tax</th><th>Vehicle Registration Tax</th><th>Vehicle Rental Tax</th><th>Month</th></tr>
<tr><td>July</td><td rowspan="4">-6.5%</td><td rowspan="2">Actual</td><td rowspan="2">Actual</td><td>July</td></tr>
<tr><td>August</td><td>August</td></tr>
<tr><td>September</td><td rowspan="5">2.0%</td><td>-35.0%</td><td>September</td></tr>
<tr><td>October</td><td rowspan="2">-15.0%</td><td>October</td></tr>
<tr><td>November</td><td rowspan="3">-5.0%</td><td>November</td></tr>
<tr><td>December</td><td rowspan="2">-10.0%</td><td>December</td></tr>
<tr><td>January</td><td>January</td></tr>
<tr><td>February</td><td>-5.0%</td><td>February</td></tr>
<tr><td>March</td><td rowspan="4">5.7%</td><td rowspan="4">7.0%</td><td rowspan="4">Previous
8-Month Average</td><td>March</td></tr>
<tr><td>April</td><td>April</td></tr>
<tr><td>May</td><td>May</td></tr>
<tr><td>June</td><td>June</td></tr>
</table>

APPENDIX C

Recommended Financial Assumptions for Wake Transit Plan Update

Following are the projected collection amounts for each local revenue source for each respective month using the assumptions provided above:

FY 2021 Assumed Revenue Collections

Month	Sales Tax	$7 Vehicle Registration Tax	$3 Vehicle Registration Tax	Vehicle Rental Tax
July	$6,916,168	$657,867	$281,814	$221,742
August	$7,205,712	$608,678	$260,787	$259,128
September	$7,692,878	$489,733	$209,815	$284,267
October	$8,069,355	$579,233	$248,151	$290,685
November	$7,947,755	$505,641	$216,642	$372,722
December	$8,748,790	$534,529	$229,041	$302,818
January	$6,548,932	$585,666	$250,880	$325,295
February	$6,487,524	$511,452	$219,087	$273,670
March	$8,097,317	$540,224	$231,457	$291,291
April	$6,668,962	$450,179	$192,821	$291,291
May	$7,813,630	$505,942	$216,758	$291,291
June	$9,426,284	$590,624	$253,044	$291,291
TOTAL	**$91,623,306**	**$6,559,766**	**$2,810,298**	**$3,495,490**
TOTAL (All Revenue Sources)	**$104,488,870**			

Following are the recommended Wake Transit revenue assumptions for fiscal year (FY) 2022 for all of the local revenue sources. These assumptions are expressed in terms of a percentage (%) growth or decline rate from FY 2021-assumed collections for each corresponding revenue source for each respective month.

FY 2022 Local Revenue Assumptions - % Change from FY 2021

Month	Sales Tax	Vehicle Registration Tax	Vehicle Rental Tax	Month
July	3.0%	2.0%	2.5%	July
August				August
September				September
October				October
November				November
December				December
January	3.5%			January
February				February
March				March
April				April
May				May
June				June

APPENDIX C

Recommended Financial Assumptions for Wake Transit Plan Update

Following are the projected collection amounts for each local revenue source for each respective month using the assumptions provided above:

FY 2022 Assumed Revenue Collections

Month	Sales Tax	$7 Vehicle Registration Tax	$3 Vehicle Registration Tax	Vehicle Rental Tax
July	$7,123,653	$671,024	$287,450	$227,286
August	$7,421,884	$620,852	$266,003	$265,606
September	$7,923,664	$499,527	$214,011	$291,373
October	$8,311,435	$590,817	$253,114	$297,952
November	$8,186,187	$515,753	$220,975	$382,040
December	$9,011,254	$545,220	$233,622	$310,388
January	$6,778,145	$597,379	$255,898	$333,427
February	$6,714,588	$521,682	$223,469	$280,512
March	$8,380,723	$551,028	$236,086	$298,573
April	$6,902,375	$459,183	$196,678	$298,573
May	$8,087,107	$516,061	$221,094	$298,573
June	$9,756,204	$602,436	$258,105	$298,573
TOTAL	**$94,597,218**	**$6,690,962**	**$2,866,504**	**$3,582,878**
TOTAL (All Revenue Sources)	**$107,737,562**			

Following are the recommended assumptions for each local revenue source for FYs 2023-2030. The assumptions are expressed in terms of a percentage (%) growth rate from assumed collections for the prior FY.

FYs 2023-2030 Revenue Growth Assumptions

FY	Sales Tax Assumption	Vehicle Registration Tax Assumption	Vehicle Rental Tax
2023	5%	2%	2.5%
2024	4%		
2025			
2026			
2027			
2028			
2029			
2030			

APPENDIX C

Recommended Financial Assumptions for Wake Transit Plan Update

Following are the projected local revenue collection amounts for FYs 2021-2030 using the assumptions provided above:

FYs 2021-2030 Projected Collections

FY	Sales Tax	$7 Vehicle Registration Tax	$3 Vehicle Registration Tax	Vehicle Rental Tax
2021	$91,623,306	$6,559,766	$2,810,298	$3,495,490
2022	$94,597,218	$6,690,962	$2,866,504	$3,582,878
2023	$99,327,079	$6,824,781	$2,923,834	$3,672,450
2024	$103,300,162	$6,961,277	$2,982,311	$3,764,261
2025	$107,432,169	$7,100,502	$3,041,957	$3,858,367
2026	$111,729,455	$7,242,512	$3,102,796	$3,954,827
2027	$116,198,634	$7,387,362	$3,164,852	$4,053,697
2028	$120,846,579	$7,535,110	$3,228,149	$4,155,040
2029	$125,680,442	$7,685,812	$3,292,712	$4,258,916
2030	$130,707,660	$7,839,528	$3,358,566	$4,365,389
TOTAL	**$1,101,442,705**	**$71,827,611**	**$30,771,979**	**$39,519,656**
TOTAL (All Revenue Sources)	**$1,243,561,951**			

A comparison of these new local revenue projections generated in October of 2020 to projections produced in early 2020 as part of the Draft FY 2021 Wake Transit Work Plan, before the onset of the COVID-19 pandemic, is provided below:

Comparison of Early 2021 Projections Vs. October (2021) Projections

Projection	Sales Tax	$7 Vehicle Registration Tax	$3 Vehicle Registration Tax	Vehicle Rental Tax
Early 2021	$1,192,453,000	$74,360,000	$31,854,000	$50,602,000
October 2021	$1,101,442,705	$71,827,611	$30,771,979	$39,519,656
Variance	**-$91,010,295**	**-$2,532,389**	**-$1,082,021**	**-$11,082,344**
% Change	**-7.6%**	**-3.4%**	**-3.4%**	**-21.9%**
TOTAL VARIANCE	**-$105,707,049**			
TOTAL % CHANGE	**-7.8%**			

APPENDIX C

Recommended Financial Assumptions for Wake Transit Plan Update

EXPENDITURE ASSUMPTIONS

Following are final recommendations for expenditure assumptions for the Wake Transit-funded major capital/high-capacity projects to be implemented through FY 2030.

Major Capital Project Expenditure Assumptions

Expenditure Component	Recommendation
Bus Rapid Transit (BRT) Total Cost Assumption	Assume updated costs and schedules from most recent feasibility findings for most reasonably implementable BRT alternatives with 70% dedicated runningway (western, southern, northern)
Commuter Rail (CRT) Total Cost Assumption	Upper limit of cost range (i.e., $1.8 billion) assuming 2/3 Wake share (i.e., $1.2 billion)
Capital Reserve Requirements	Set reserve requirement for BRT to 10%, keep reserve requirement for all other capital projects at 5%
Federal Participation in BRT and CRT	50% federal participation for CRT; 50% federal participation for southern and northern BRT corridors and 60% for western BRT corridor
State Revenue for BRT	Assume State Revenue for BRT (i.e., $115 million through 2031)

EXHIBIT 1

Wake Transit Financial Scenarios Through FY 2030

Financial Component			Scenario 1: Very Conservative		Scenario 2: Conservative		Scenario 3: Moderate-Low		Scenario 4: Moderate-High		Scenario 5: Optimistic
BRT and CRT			Assume updated costs and schedules for most expensive BRT alternatives and upper limit of CRT cost curve		Assume updated costs and schedules for most reasonably implementable BRT alternatives (100% runningway) and midpoint of CRT cost range		Assume updated costs and schedules for most reasonably implementable BRT alternatives with 70% dedicated runningway (western, southern, northern) and midpoint of CRT cost range		Assume costs and schedules for most reasonably implementable BRT alternatives with 70% dedicated runningway and midpoint of CRT cost range		Assume costs and schedules for most reasonably implementable BRT alternatives with 50% dedicated runningway and midpoint of CRT cost range
Reserve Requirements			Set reserve requirement for BRT and CRT to 10%, keep reserve requirement for other capital projects at 5%		Set reserve requirement for BRT and CRT to 10%, keep reserve requirement for other capital projects at 5%		Set reserve requirement for BRT and CRT to 10%, keep reserve requirement for other capital projects at 5%		Keep reserve requirements as they were		Keep reserve requirements as they were
Federal Participation in CRT/BRT			Set CRT to 45% federal participation; retain 50% for all BRT corridors		Keep CRT and BRT federal participation assumption at 50% for each		Keep 50% federal participation for CRT and 50% for eastern, northern, and southern BRT corridors but change to 60% for western BRT corridor		Keep 50% federal participation for CRT and 50% for eastern and northern BRT corridors but change to 60% for western and southern BRT corridors		Keep 50% federal participation for CRT and 50% for eastern BRT corridor, but change to 60% for southern BRT corridor and 70% for western BRT corridor
State Revenue for BRT			No State revenue for BRT		Assume State revenue for Morrisville-Clayton BRT but delay by 2 years		Assume State revenue for Morrisville-Clayton BRT on current STIP schedule		Assume State revenue for Morrisville-Clayton BRT on current STIP schedule		Assume State revenue for Morrisville-Clayton BRT on current STIP schedule
Updated Sales Tax Growth			FY 21: -7.3% from FY 20 FY 22: 2.5% from FY 21 FY 23: 2.75% from FY 22 FYs 24-30: 3% per year		FY 21: -7.3% from FY 20 FY 22: 2.5% from FY 21 FY 23: 2.75% from FY 22 FYs 24-30: 3% per year		FY 21: -7.5% from FY 20 (but higher FY 20 base) FY 22: 3% from FY 21 FYs 23-25: 3.5% per year FYs 26-30: 4% per year		FY 21: -5% from FY 20 FY 22: 3.5% from FY 21 FYs 23-30: 4% per year		FY 21: 0% from FY 20 FYs 22-24: 4% per year FY 25: 4.3% per year FYs 26-28: 4.5% per year FYs 29-30: 5% per year
Reduction in Tax Collections Compared to Draft FY 21 Work Plan (FYs 21-30)			-$280M		-$277M		-$236M		-$192M		-$101M
Output	**Operating**		Cut $32.5M of recurring expenses starting in FY 22		Cut $21.5M of recurring expenses starting in FY 22		Cut $15.3M of recurring expenses starting in FY 22		Cut $12.6M of recurring expenses starting in FY 22		+$1.7M of recurring expenses starting in FY 28
	AND		AND		AND		AND		AND		AND
	Capital	**FYs 21-27***	Cut $226M		Cut $226M		Cut $221M		Cut $221M		+$88M
		FYs 21-30**	Cut $157M	Postpone $69M until FY 28	Cut $93M	Postpone $133M until FY 28	Cut $38M	Postpone $183M until FY 28	Cut $58M	Postpone $163M until FY 28	

*FYs 21-27: What happens when we keep all originally assumed expenses in their respective originally programmed years.

**FYs 21-30: What happens when we use three additional years to rebalance what was previously already programmed.

Note: This table does not include adjustments made to the assumptions for collections of vehicle rental and vehicle registration taxes. Assumptions for collections of those revenue sources have also been modified for each scenario, with the results for each reflected in the output for each scenario.

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SUMMARY OF FINANCIAL CONDITIONS

In February of 2020, five (5) financial scenarios ranging from those using very conservative assumptions to those using optimistic assumptions were developed to help Wake Transit partners understand Wake Transit's financial capabilities through 2030. These scenarios delineated a cone of uncertainty, similar to those developed for hurricane forecasting, that represented a range of future financial outcomes within which Wake Transit's future financial capabilities are most likely to fall. At that time, forecast results indicated there was a good chance there would be capacity for new investment in the three (3) years being added to the Wake County Transit Plan's horizon beyond what the 2016 Wake County Transit Plan originally committed.

Accounting for the economic impact of the COVID-19 pandemic and changes in cost and schedule assumptions for planned major capital projects, revenue assumptions for the five (5) scenarios were revisited in May/June of 2020. A comparison of these financial scenarios to those generated in February revealed an anticipated reduction of between $107 million and $248 million in sales tax collections through 2030. Since June of 2020, actual sales tax collections data for March through June were obtained and revealed that collections did indeed fall during that time, but they did not fall as severely as most of the scenarios originally projected. While revenue assumptions and other inputs to the financial scenarios will continue to be revisited and updated to account for this, current indications still suggest that there will likely be a need to use revenue collections for the three (3) years being added to the Wake County Transit Plan horizon to reschedule Wake County Transit Plan implementation elements through 2030. Current indications also suggest that investments previously scheduled for delivery through 2027 will need to be cut or deferred beyond the 2030 horizon even after accounting for these three (3) additional years of revenue collections.

PUBLIC/STAKEHOLDER ENGAGEMENT ON PRIORITIES

Through the months of August and September, the Capital Area Metropolitan Planning Organization (CAMPO) and its Wake Transit Plan implementation partners solicited input from the public and targeted stakeholders on investment priorities. The input was provided through a public survey and live interactive polling of stakeholders that was designed to receive responses to various investment tradeoffs that have competing objectives and that tie to the objectives of the implementation elements previously scheduled for delivery through 2027. The results of this input were used to inform the direction of the prioritization guidance outlined in this document.

PRIORITIZATION BACKGROUND AND APPROACH

Prioritization of Wake County Transit Plan implementation elements through the new planning horizon of 2030 is the first step of a wholesale project rescheduling/reprogramming process. All projects and implementation elements previously programmed under the Wake County Transit Plan through 2027 have been studied, planned, vetted, and considered as worthy projects within the applicable financial constraint. Prioritization does not determine whether projects are important or worthy. It is ultimately an evaluation of the relative importance of implementation elements that is informed by past and recent public and stakeholder input, input from project sponsors, and adopted program-level prioritization policies and guidance.

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The overall lens through which to view prioritization in the context of preparing for reprogramming is to consider it an exercise in allocating or 'carving out' financial capacity for implementation elements in a certain logical order within a set financial constraint. Higher priority implementation elements are assigned available financial resources within the financial constraint first, and lower priority elements are assigned available financial resources last. There is no explicit temporal element to this ordering, as project scheduling falls to the next step of programming. Other considerations that prioritization does not address and does not mean to address at this stage in the process are project readiness, past performance of related or similar projects, or synchronization of interrelated projects. These are programming considerations.

DRAFT PRIORITIZATION OF WAKE TRANSIT IMPLEMENTATION ELEMENTS

Following is an outline representing a draft logical ordering of prioritized implementation elements. Financial capacity within the 2030 financial constraint will be reserved in the following order:

TIER 1: **Continued Funding for Community Funding Area Program as Currently Programmed and Funding Programmed for Rural Elderly/Disabled and General Public Demand-Response Trips (GoWake Access Allocations)**

The results of the Wake Transit priorities public and stakeholder outreach revealed that there is still a notable desire to support expanding services that provide greater geographic access to transit throughout the county, particularly among low-income, non-white, non-transit user, and suburban/rural survey respondents. Both the Community Funding Area Program and the expansion of GoWake Access demand-response trips throughout the less densely populated areas of the county would directly support this emphasis on coverage services and do not collectively require a large amount of financial resources within the 2030 financial constraint, particularly since Community Funding Area-eligible municipalities contribute a minimum of 50 percent of the funding for applicable services. Although the targeted stakeholders that participated in recent engagement disproportionately represented interests with more of a coverage and geographic access focus, of modal priorities represented in the Wake County Transit Plan, coverage bus services ranked on par with or ever so slightly higher than high-frequency bus services.

Further, unlike Wake County's fixed-route service providers, Community Funding Area-eligible municipalities have not received funding for these coverage-oriented services in the first three (3) years of Wake Transit Plan implementation and have only recently been able to take advantage of Wake Transit funds to develop and implement services.

TIER 2: **Capital Projects with Design or Land Acquisition Phases Already Initiated, for Which Later Phases Should Be Funded to Keep Their Momentum**

A number of Wake Transit-funded capital projects have been allocated funding for early phases of development in FYs 2018-2020, such as for design and land acquisition for the development of facilities that support existing and future transit services. It is important that we allow projects that have received funding for these phases of work to proceed to later

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phases, such as construction, to keep their momentum for ultimately being delivered and to avoid unnecessary stoppages in work that could jeopardize their progress.

Projects that fall into this tier include:

Town of Cary:

1) Cary Bus Operations and Maintenance Facility Construction
2) Downtown Cary Multimodal Transit Facility Construction

City of Raleigh:

1) East Raleigh Transit Center Construction
2) GoRaleigh/GoWake Access Paratransit Operations & Maintenance Facility Design and Construction
3) Transfer Point Construction:
    a. Cross Link/Rock Quarry
    b. Hillsborough/Gorman
    c. Hillsborough/State Fairgrounds
    d. Hillsborough/Jones Franklin

TIER 3: Facilities/Infrastructure/Resources Needed to Support Future Expansion or General State of Good Repair and Operations

The adopted Wake Bus Plan Project Prioritization Policy places an emphasis on prioritizing critical systemwide investments to support existing and expansion services within the plan's financial constraint. Certain investments are necessary to simply maintain system operations in a state of good repair and order, irrespective of future service expansion, and work to ensure the entire system rests on a solid foundation to support future growth.

Projects that fall into this tier include:

Town of Cary:

1) Requested Staff Resources

City of Raleigh:

1) Fixed Route Replacement Vehicles
2) Paratransit Replacement Vehicles
3) Expansion of Compressed Natural Gas Fueling Station
4) Support Vehicles

GoTriangle:

1) New Regional Transit Center Facility Design, Land Acquisition, and Construction
2) Paratransit Replacement Vehicles
3) Purchase/Repower Vehicles (those for replacements only)

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4) Bus Operations and Maintenance Facility (Wake Share)
5) Wake Bus Plan Update
6) Requested Staff Resources

CAMPO:

1) Major Investment Study/Alternatives Analysis for BRT Extensions to RTP and Clayton

TIER 4: **Projects That Involve Time-Sensitive External Grant Sources as Part of Their Overall Funding Mechanism** (i.e., CAMPO Locally Administered Project Program [LAPP] or other federal sources)

Over the past four (4) years, project sponsors have worked to expand the overall funding footprint of the Wake Transit program by using Wake Transit funding to leverage external grant sources. In these cases, commitments were made in external grant funding applications that Wake Transit funding would be used as the necessary matching funds. To honor this expansion of the Wake Transit program's overall funding footprint, projects for which Wake Transit funding was committed as a necessary match should be given a high level of priority for reserving financial capacity within the 2030 financial constraint.

GoRaleigh:

1) Bus Service Transfer Point Design/Construction:
    a. Capital/Millbrook
    b. WakeMed North
    c. Pleasant Valley Shopping Center

GoTriangle:

1) FY 21 Unbudgeted Reserve Bus Stop Improvements (At least $64,800 to match LAPP grant)

TIER 5: **Wake Bus Rapid Transit (BRT) Program of Projects:**

Right-of-Way Acquisition, Construction, Vehicle Procurement, and Operations in the following order for:

- Western Corridor (includes extension to Morrisville/Research Triangle Park [RTP]; extension would likely use Route 310 resources for future implementation element);
- Southern Corridor (includes extension to Clayton); and
- Northern Corridor

The full program of BRT corridors was a signature component of the frequent and reliable urban mobility 'big move' in the 2016 Wake County Transit Plan. The adopted Wake Bus

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Plan Project Prioritization Policy places an emphasis on ensuring that projects "promised" in the Wake County Transit Plan can be delivered by ensuring appropriate financial capacity is available to these projects and that other bus operating and capital investments are geared toward maximizing and optimizing the effectiveness of larger capital and service investments as much as possible. Further, public and stakeholder priorities as revealed through recent engagement suggests that the Wake BRT corridors, combined with other bus service augmentations and expansion in the Wake County Transit Plan, most prominently advance the more desired objectives while also providing some balance with competing objectives that are still deemed important.

The Wake BRT corridors place more emphasis on ridership, productivity, speed, reliability, and directness of travel than on coverage or geographic access. However, when compared to other high-capacity or fixed-guideway investments, BRT service generally provides more balance between these objectives by being more accessible as a result of higher stop/station densities. Public and stakeholder priorities together reveal that there is a need for balance between local travel needs (within cities and towns) and regional travel needs (between cities and towns). The Wake BRT corridors collectively provide this balance when compared to other high-capacity modes by providing a market for serving a multitude of trip purposes, including employment and education commuting and general-purpose personal trips, within both a local setting and among cities, towns, and communities.

Public and stakeholder priorities together also reveal that there is a need for balance between investment in service versus investment in infrastructure. The Wake BRT corridors collectively provide this balance by incorporating an abundance of speed-enhancing and customer convenience-supportive infrastructure while also making use of that infrastructure to provide an abundance of high-frequency, all-day service for multiple markets and trip purposes. The market that commuter rail generally serves tends to be more targeted toward daily employment or education commuters and can be more efficient at serving a higher volume of those commuters than BRT. However, commuter rail also tends to involve a much greater investment in infrastructure. Of all modal priorities represented in the Wake County Transit Plan, BRT is the highest ranked priority among the targeted stakeholder participants recently engaged.

TIER 6: Commuter Rail Project Design, Right-of-Way/Land Acquisition, Construction, Vehicle Procurement, and Operations

The commuter rail corridor was a signature component of the connecting regionally 'big move' in the 2016 Wake County Transit Plan. The adopted Wake Transit Bus Plan Project Prioritization Policy places an emphasis on ensuring that projects "promised" in the Wake County Transit Plan can be delivered by ensuring appropriate financial capacity is available to these projects and that supporting bus operating and capital investments are geared toward maximizing and optimizing the effectiveness of larger capital and service investments as much as possible. Further, public and stakeholder priorities as revealed through recent engagement suggests that a commuter rail project, combined with other bus service augmentations and expansion in the Wake County Transit Plan, remains an investment priority.

A commuter rail project puts a significant amount of emphasis on ridership, productivity, speed, reliability, and directness of travel rather than on coverage or geographic access.

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When compared to the BRT mode, commuter rail provides considerably less balance between these objectives with lower station/stop densities resulting in fewer opportunities for access. However, commuter rail must be designed this way to maximize its speed, reliability, directness of travel, and productivity benefits. Public and stakeholder priorities together reveal that there is a need for balance between local travel needs (within cities and towns) and regional travel needs (between cities and towns). However, public survey results alone suggest a slightly stronger preference for regional needs over local needs overall. A commuter rail projects puts a significant amount of emphasis on regional travel needs rather than on local travel needs.

In sum, commuter rail is an investment that exhibits an 'all-in' approach to providing most of what public survey respondents generally favored overall, with much less balance between those objectives and competing objectives that are still deemed important. An exception to this is the public's overall preference toward service over infrastructure. Nonetheless, much of that balance can still be provided with other modes identified for investment in the Wake County Transit Plan in conjunction with a commuter rail project.

Of all modal priorities represented in the Wake County Transit Plan, commuter rail was the second highest ranked priority among the targeted stakeholder participants recently engaged.

TIER 7: Systemwide Bus Stop Improvements for Already Served Corridors/Stop Locations

Public and stakeholder input received through recent priorities outreach strongly suggests that infrastructure connecting to transit is a high priority throughout Wake County, particularly among low-income populations. Input received over the past four (4) years in response to annual Wake Transit Work Plans also supports this investment priority. While there is a recognition that infrastructure connecting to transit, such as pedestrian facilities and bikeways, is not fully the responsibility of Wake Transit tax revenues to support, there is clearly a preference for as much emphasis as possible to be placed on this investment focus within the current means of the Wake Transit program.

TIER 8: Fixed-Route Bus Service Improvements and Corresponding Infrastructure That Ties to Bus Service Improvements/Expansion

While fixed-route bus services have the ability to advance many of the priorities suggested by the results of recent public and stakeholder input, depending on their design, Wake Transit-funded bus service implementation was accelerated ahead of its original outlay in the 2016 Wake County Transit Plan. A number of bus service improvements that strike a balance between those that are ridership- and productivity-oriented and those that are coverage- and geographic access-oriented were advanced beginning in FY 2018 and added in every subsequent year to date. Following is a graphic showing bus service spending for the first three (3) full fiscal years of plan implementation compared to what was originally assumed in the 2016 Wake County Transit Plan:

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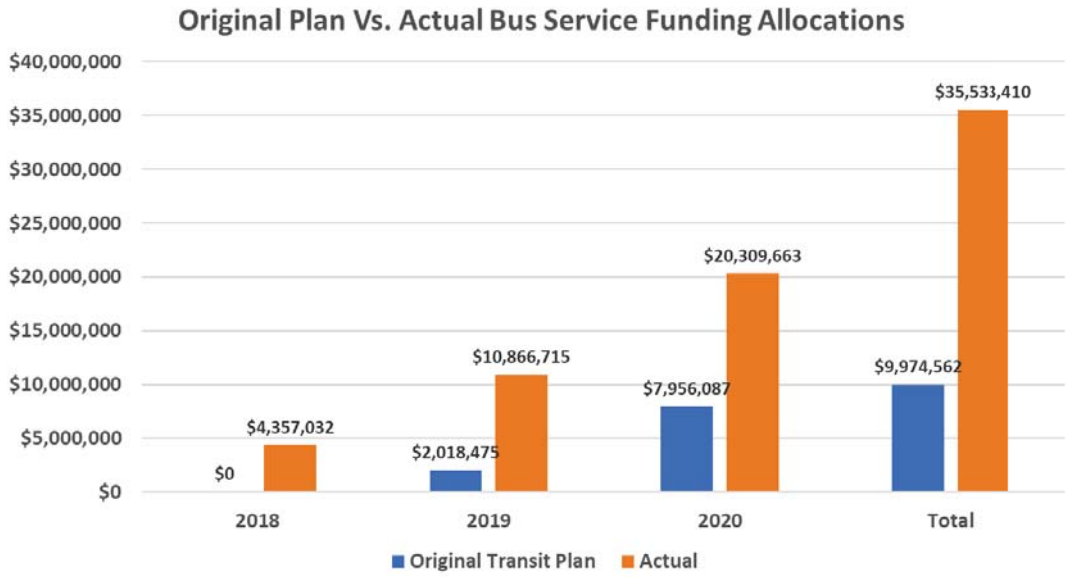

The total difference in spending between actual investment and original assumptions through the first three (3) years of plan implementation was $25,558,848. Carried out over the 10-year financial constraint between FY 21 and FY 30, this earlier-than-scheduled investment in bus services is even more impactful than what can be exhibited in the first three (3) years because these services are assumed to be an ongoing recurring cost through the 10-year horizon and, as a result, the long-term impact balloons over time. The most important takeaway from this point is that the bus service implementation component of the Wake County Transit Plan is already well ahead of schedule, and earlier-than-scheduled implementation has created an even stronger need to preserve financial capacity for other components of the original plan, including for BRT, commuter rail, and other essential capital investments.

Further, the adopted Wake Transit Bus Plan Project Prioritization Policy places an emphasis on ensuring that projects "promised" in the Wake County Transit Plan can be delivered by ensuring appropriate financial capacity is available to these projects and that supporting bus operating and capital investments are geared toward maximizing and optimizing the effectiveness of larger capital and service investments as much as possible. This supports the approach of reserving financial capacity for fixed-route bus services and capital investments tied to those services after first reserving capacity for the BRT and commuter rail corridors. It also supports an approach of building a bus network that augments the performance of those larger and more impactful investments.

For this category of investments, two different methods were proposed as options to lay out a ranking of bus service improvements and expansion implementation elements.

Method 1:

The first method consisted of scoring and ranking routes using the adopted Wake Bus Plan Project Prioritization Policy and then adjusting those rankings based on internal

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prioritization provided by project sponsors. All scored routes were assigned to three different tiers of priority based on their raw scores: high scoring priorities (> 40), medium scoring priorities (34-40), and low scoring priorities (< 34). Then the rankings of implementation elements within those tiers were reordered to match the internal prioritization of implementation elements provided by project sponsors. Only routes within each tier, as opposed to routes between tiers, were reordered. This was done to maintain the overall integrity of the adopted project prioritization policy.

Scoring for both Methods 1 and 2 was applied to individual routes rather than to route packages that are currently portrayed in the FY 21 Wake Transit Work Plan multi-year operating program. Both Methods 1 and 2 also scored applicable routes as if the entire route buildout was being scored rather than a smaller implementation element that advances a piece of full route buildout. Following are the raw scores and associated rankings of individual implementation elements generated by the methodology outlined in the adopted Wake Bus Project Prioritization Policy:

Method 1 Scores and Rankings

High Priority	Medium Priority	Low Priority
Route 20: Garner (54)	Route 31: Southwest (40)	Route 33: New Hope-Knightdale (32)
Route 310: RTC-Cary (53)	Route 8L: Six Forks North (40)	Route 16: Centennial-Midtown (32)
Route 3: Glascock (51)	Route 32: Lynn Spring Forest (39)	Route 24: New Hope-Crabtree (32)
Route 5: Biltmore Hills (49)	Route 9B: Buck Jones (38)	Route 27: Blue Ridge (32)
Route 11: Avent Ferry Improvements (48)	Route 28: New Hope-Triangle (37)	Route 6L: Glenwood North (31)
Route 9: Hillsborough Street (48)	Route 2: Falls of Neuse (37)	Route 100: Raleigh-RDU-RTC (30)
Route 8: Six Forks Midtown (46)	Route 34: Wake Tech North (36)	Route 23: Millbrook (29)
Route 305: Apex-Raleigh (45)	Route 9A: Hillsborough-Trinity (36)	Route 25: Durant (29)
Route 6: Glenwood (43)	Route 2L: Falls of Neuse North (35)	Route 6La: Glenwood-Pleasant Valley (27)
Route 10: Raleigh Blvd (41)	Route 14: Atlantic (34)	Route 29: Garner-Wake Tech (26)
Route 20L: Garner South (41)	Route 12: Method (34)	NRX: North-Raleigh Express (22)

Following are the rankings of individual implementation elements with the rankings adjusted using internal prioritization of applicable routes by project sponsors:

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High Priority	Medium Priority	Low Priority
Route 21: Caraleigh Improvements	Route 28: New Hope-Triangle	Route 6L: Glenwood North
Route 3: Glascock		
Route 9: Hillsborough Street	Route 14: Atlantic	Route 100: Raleigh-RDU-RTC
Route 305: Apex-Raleigh	Route 12: Method	Route 6La: Glenwood-Pleasant Valley
Route 20: Garner	Route 9B: Buck Jones	Route 16: Centennial-Midtown
Route 5: Biltmore Hills	Route 8L: Six Forks North	Route 24: New Hope-Crabtree
Route 20L: Garner South	Route 32: Lynn-Spring Forest	Route 25: Durant
Route 10: Raleigh Blvd	Route 2: Falls of Neuse	Route 23: Millbrook
Route 310: RTC-Cary	Route 2L: Falls of Neuse North	Route 29: Garner-Wake Tech
Route 6: Glenwood	Route 9A: Hillsborough-Trinity	Route 27: Blue Ridge
Route 11: Avent Ferry	Route 31: Southwest	Route 33: New Hope-Knightdale
Route 8: Six Forks Midtown	Route 34: Wake Tech North	NRX: North Raleigh Express

Method 2:

Method 2 consisted of first ranking routes, or packages of routes as portrayed in the FY 21 Wake Transit Work Plan multi-year operating program, using each project sponsor's internal prioritization. Then the routes' raw scores from the project prioritization policy were used to determine how to rank order routes or route packages among the three (3) different project sponsors. This method used the scoring of individual routes to determine the rank order of implementation elements. However, the method combined individual routes into the route packages within which they fit as portrayed in the FY 21 Wake Transit Work Plan multi-year operating program and used the highest scoring route of the package to control where it ultimately landed within the rank ordering.

Because GoRaleigh is represented as the project sponsor for over ¾ of the routes or route packages, the general approach taken for Method 2 was it first ranked all of GoRaleigh's routes or route packages in the order GoRaleigh prioritized them. In many cases throughout GoRaleigh's prioritized list of routes, GoRaleigh ranked routes or route packages that received lower raw scores from the project prioritization policy methodology higher than other GoRaleigh routes or route packages that received higher raw scores, which Method 2 honors. Then the routes from GoCary and GoTriangle were added to the list in a rank position based on those routes' raw scores relative to GoRaleigh's routes' raw scores in a manner in which, in no case, a GoRaleigh route or route package with a lower raw score ranked ahead of a GoCary or GoTriangle route with a higher raw score.

Following are the rankings of the individual bus service implementation elements using Method 2:

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Rank	Route/Implementation Element	Project Sponsor
1	Route 21: Caraleigh Improvements	GoRaleigh
2	Route 310: RTC-Cary Improvements	GoTriangle/TBD (Future BRT)
3	Route 3: Glascock Improvements	GoRaleigh
4	Route 9: Hillsborough (possible need to program with GoCary Route 9A)	GoRaleigh
5	Route 305: Holly Springs/Apex/Raleigh Improvements	GoTriangle
6	Route 5: Biltmore Hills/Route 20: Garner Improvements	GoRaleigh
7	Route 10: Raleigh Blvd	GoRaleigh
8	Route 9B: Buck Jones Improvements	GoCary
9	Route 28: New Hope-Triangle	GoRaleigh
10	Route 14: Atlantic	GoRaleigh
11	Route 12: Method Improvements	GoRaleigh
12	Route 9A: Hillsborough-Trinity (if not programmed with GoRaleigh Route 9)	GoCary
13	Routes 6/6L: Glenwood/Glenwood North	GoRaleigh
14	Route 11: Avent Ferry Improvements	GoRaleigh
15	Routes 8/8L/16: Oberlin/Six Forks Route Package	GoRaleigh
16	Route 24: New Hope-Crabtree	GoRaleigh
17	Routes 2/2L/25/32: Falls of Neuse Route Package	GoRaleigh
18	Route 31: Southwest	GoRaleigh
19	Route 27: Blue Ridge Frequency Improvements	GoRaleigh
20	Route 33: Knightdale Weekend Service	GoRaleigh
21	Route 34: Wake Tech North	GoRaleigh
22	Route 100 Improvements	GoTriangle
23	Route 29: Garner-Wake Tech	GoRaleigh
24	Route 23: Millbrook	GoRaleigh
25	Route NRX Improvements	GoTriangle

Method 2 was selected by GoCary, GoRaleigh, and GoTriangle as the preferred method for prioritizing bus services and corresponding capital investments.

Through the project verification and internal prioritization process, CAMPO and the Town of Cary have determined that the following routes can be eliminated from the 2030 financial constraint:

1) New Morrisville-Cary Route – **GoCary**
2) New Cary-Airport Route – **GoCary**

Following are the types of projects or implementation elements to be coordinated with bus service expansion in accordance with project sponsors' internal prioritization:

1) Maintenance of Bus Stops and Park and Ride Facilities
2) Fixed Route Expansion Vehicles
3) Paratransit Expansion Vehicles
4) Bus Stop Improvements for New Stop Locations or Routes Serving New Locations
5) New Transit Centers

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6) Transit Center Updates
7) New Park and Ride Facilities
8) Transfer Point Improvements
9) Existing Park and Ride Lot Improvements
10) ADA Operations

IMPLEMENTATION ELEMENT REPROGRAMMING GUIDANCE

As previously mentioned in the prioritization guidance, within the final selected financial constraint set for the Wake Transit Plan Update through FY 2030, financial capacity was reserved for Wake Transit implementation elements listed in the prioritized order presented above. However, other considerations have driven the scheduling or assignment of implementation elements and associated phases to specific years within the financial constraint. These include:

1) Scheduling and Phasing of Projects/Implementation Elements as Determined by the Adopted Wake Bus Plan

   The Wake Bus Plan provided a detailed strategic blueprint for the phasing of bus service expansion implementation elements and supporting capital investments through the FY 2027 horizon associated with the 2016 Wake County Transit Plan. While these projects and implementation elements needed to be rescheduled over the new 10-year plan horizon through FY 2030, the strategic phasing of the investments blueprinted in the Wake Bus Plan still apply to the logical phasing of investments throughout the new financial constraint.

2) Scheduling and Phasing of Projects/Implementation Elements Based on Input on Project Programming Provided by Project Sponsors

   Throughout the plan update process, each Wake Transit project sponsor provided input on prioritization of their projects and implementation elements, as well as on the interrelatedness of their projects to others and preferences for their phasing. To the extent possible, this input was used to logically reschedule projects and implementation elements, or phases thereof.

3) Wake Bus Plan Project Prioritization Policy Governance Framework

   The governance framework associated with the adopted Wake Bus Plan Project Prioritization Policy was developed to ensure the bus service implementation elements prioritized and ranked through the evaluation framework component of the prioritization policy are ultimately phased throughout the plan horizon to achieve program-level goals set by the original 2016 Wake County Transit Plan. These goals include:

   - Milestones for transitioning from investment in 70% coverage services/30% ridership services to 70% ridership services/30% coverage services;
   - Balancing investments equally in transit services and infrastructure;
   - Ensuring that all-day transit service is within three-quarters of a mile (roughly walking distance) from 54% of all Wake County residents and 80% of jobs in Wake County;

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- Connecting all Wake County communities and ultimately ensure they are connected with the greatest span of service as identified in the Wake County Transit Plan; and
- Allocating certain amounts of total investment to customer service- and user experience-focused improvements.

The governance framework additionally provided that necessary financial capacity be reserved for critical systemwide investments, as well as the major high-capacity capital projects envisioned in the 2016 Wake County Transit Plan. These components of the governance framework were meant to ensure too much investment in bus service expansion and supporting capital infrastructure does not conflict with the ability for signature components of the 2016 Wake County Transit Plan to be delivered.

4) Project Readiness

Project readiness is the reasonableness of certain projects or project phases to be initiated or funded at certain times based on the performance of preceding project studies or phases upon which later phases are predicated. It also involves appropriately timing project funding allocations based on the timing of separate interrelated projects that set a foundation for the subject project. For example, if it is apparent that extensive additional study is needed for a major capital project before it can transition to a design or land acquisition stage in its development, funding for those design and land acquisition phases would be scheduled at a time based on when the project's progress reasonably foretells it will be ready to enter those phases.

5) Project Cost Curves and Reasonableness of Timing for Phases of Project Life Cycle

Many larger capital projects involve multiple phases in which later phases build upon earlier phases. These phases may include feasibility planning, preliminary design, environmental review, land acquisition, final design, construction, system integration, and initiating operations. In many cases and for many potential reasons, not all phases can reasonably be completed in a single year and need to be spread out over two or more years so that funding allocations to each respective phase are appropriately timed to fit a project's life cycle schedule. Examples of what contributes to the duration of project life cycle elements include, but are not limited to: staffing constraints, external oversight and regulatory processes, adequate check-ins with the public and involved stakeholders, etc.

Cost curves that take into account these considerations have been developed for many of the larger capital projects in the Wake Transit implementation program. These cost curves will be reevaluated for their reasonableness and adjusted, if necessary.

6) Synchronization of Interrelated Projects/Implementation Elements

A number of Wake Transit projects and implementation elements are interrelated such that their timing must be well-coordinated for them to succeed. An example of this would be bus service improvements to be implemented by a project sponsor that require the implementation of other service improvements or supporting capital improvements, either by the same project sponsor or another project sponsor, in advance of or at the same time as those improvements to make their implementation successful.

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7) Past Performance on Related or Similar Projects

The Wake Transit implementation program places a high level of emphasis on project monitoring and accountability. Project performance is regularly evaluated. If progress made on delivering projects to which funding allocations have previously been provided is much slower or faster than originally planned, that information can be used to inform the reasonableness of the speed of performance for the same type of project to which future funding allocations will be made. Further, per the adopted Wake Bus Service Guidelines and Performance Measures, if bus service performance for a particular route that has already been funded has been consistently underperforming, it is worth reconsidering funding allocations for implementation elements that build upon those underperforming services. If bus service performance has been consistently overperforming, it is also worth reconsidering funding allocations for implementation elements that build upon those services.

PROJECT REPROGRAMMING EXAMPLE

To provide an example of how projects and implementation elements were reprogrammed, for simplicity, let's first assume that the total financial constraint through FY 2030 is $100 million that is projected to be collected and made available in $10 million increments over the 10 years to be covered by the new plan horizon (FYs 2021-2030). Our list of ranked priorities tells us we first need to program funding for the Community Funding Area Program in accordance with the most recently approved program funding amounts. Let's assume approved program funding allocates $1 million per year from FY 2021 through FY 2030. In this case, we would reserve $1 million per year over the next 10 years for the Community Funding Area Program in accordance with the following graph:

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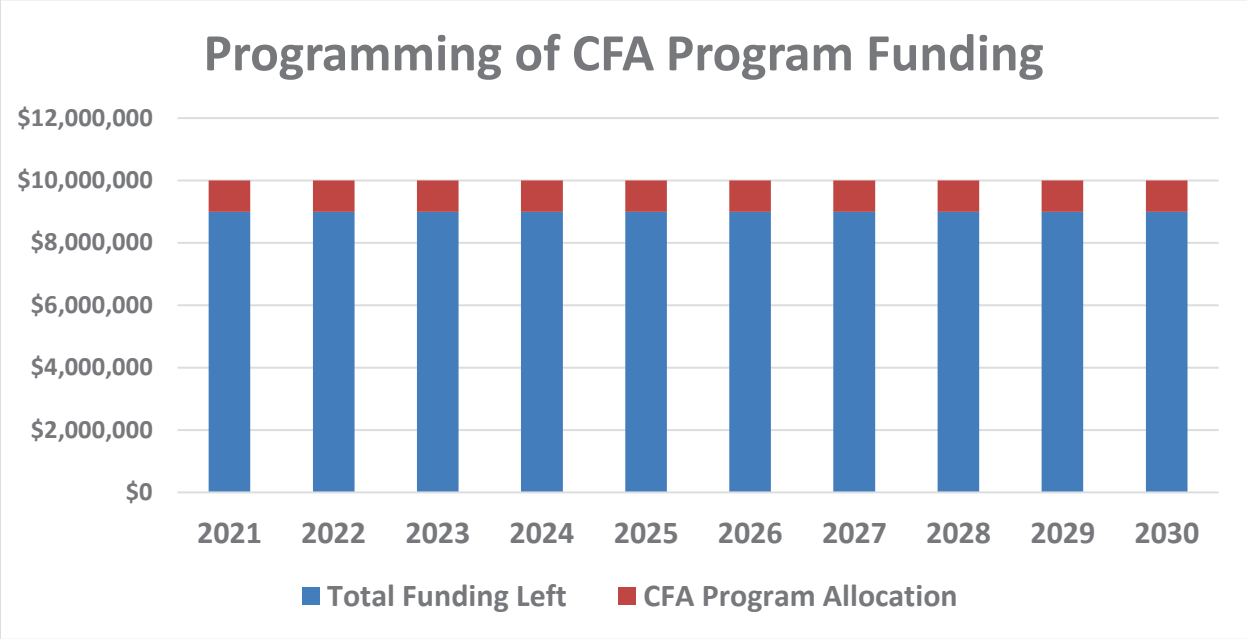

If the next highest ranked implementation element on our list is BRT Project X, we would then reserve financial capacity for that project within the financial constraint in the years that correspond to the project's reasonable cost curve. While it is the case with many large capital projects that funding has been reserved in prior fiscal years to support those investments, for simplicity, this example only shows how much would hypothetically be needed from the financial constraint for each respective year. We would also need to program funding for its operations when it is assumed by that cost curve to be complete in accordance with the following graph:

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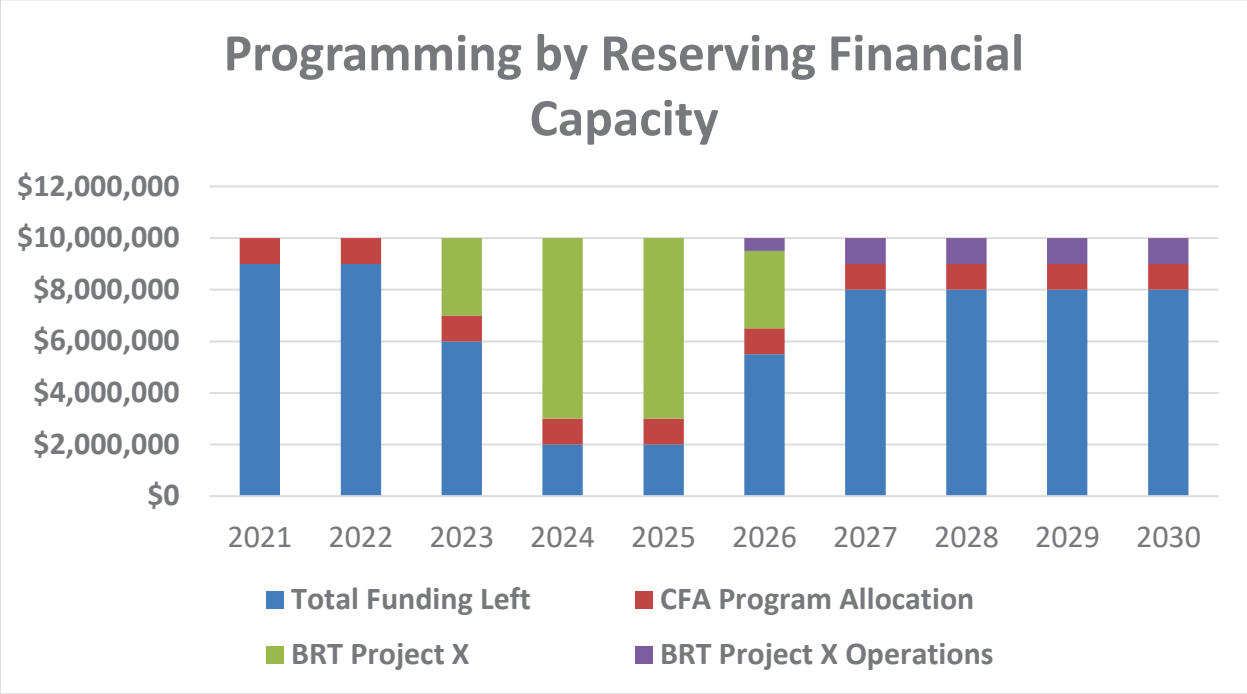


APPENDIX E: FYs 2021-2030 Programming of Wake Transit Plan Update Investments

Final Multi-Year Operating Investment Alternative

TO001 – Tax District Administration													
Staffing and Administrative Costs													
Project Sponsor	**Project ID**	**Project**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**FY 2030**
GoTriangle	TO001-A	1.0 FTE: Financial Oversight of Tax District/Senior Financial Analyst	$ 138,600	$ 142,065	$ 145,617	$ 149,257	$ 152,988	$ 156,813	$ 160,734	$ 164,752	$ 168,871	$ 173,092	$ 177,420
	TO001-B	Overhead Administrative Costs – Tax Districts Audits	$ 16,000	$ 16,400	$ 16,810	$ 17,230	$ 17,661	$ 18,103	$ 18,555	$ 19,019	$ 19,494	$ 19,982	$ 20,481
	TO001-D	1.0 FTE: Budget and Financial Management	$ 149,800	$ 153,545	$ 157,384	$ 161,318	$ 165,351	$ 169,485	$ 173,722	$ 178,065	$ 182,517	$ 187,080	$ 191,757
	TO001-E	0.5 FTE: Tax District Administrative Assistant	$ 44,700	$ 39,600	$ 40,590	$ 41,605	$ 42,645	$ 43,711	$ 44,804	$ 45,924	$ 47,072	$ 48,249	$ 49,455
Staffing and Administrative Costs Subtotal			**$ 349,100**	**$ 351,610**	**$ 360,400**	**$ 369,410**	**$ 378,646**	**$ 388,112**	**$ 397,814**	**$ 407,760**	**$ 417,954**	**$ 428,403**	**$ 439,113**
Contracted Services													
GoTriangle	TO001-C	Financial Consulting	$ 100,000	$ 137,500	$ 140,938	$ 144,461	$ 148,072	$ 151,774	$ 155,569	$ 159,458	$ 163,444	$ 167,530	$ 171,719
Contracted Services Subtotal			**$ 100,000**	**$ 137,500**	**$ 140,938**	**$ 144,461**	**$ 148,072**	**$ 151,774**	**$ 155,569**	**$ 159,458**	**$ 163,444**	**$ 167,530**	**$ 171,719**
TAX DISTRICT ADMINISTRATION TOTAL			**$ 449,100**	**$ 489,110**	**$ 501,338**	**$ 513,871**	**$ 526,718**	**$ 539,886**	**$ 553,383**	**$ 567,218**	**$ 581,398**	**$ 595,933**	**$ 610,831**

TO002 – Transit Plan Administration/Implementation													
Staffing													
Project Sponsor	**Project ID**	**Project**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**FY 2030**
GoTriangle	TO002-A	3.5 FTEs: Transit/Transportation Planning Services and Public Outreach and Communications	$ 399,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TO002-A2	1.0 FTE: Transit Service Planner	$ -	$ 126,588	$ 129,753	$ 132,997	$ 136,321	$ 139,729	$ 143,223	$ 146,803	$ 150,473	$ 154,235	$ 158,091
	TO002-R	1.0 FTE: Paralegal	$ 107,000	$ 109,675	$ 112,417	$ 115,227	$ 118,108	$ 121,061	$ 124,087	$ 127,189	$ 130,369	$ 133,628	$ 136,969
	TO002-S	0.6 FTE: Project Implementation Director	$ 214,500	$ 135,000	$ 138,375	$ 141,834	$ 145,380	$ 149,015	$ 152,740	$ 156,559	$ 160,473	$ 164,484	$ 168,597
	TO002-T	0.5 FTE: Wake Transit Program Coordinator	$ 138,600	$ 67,500	$ 69,188	$ 70,917	$ 72,690	$ 74,507	$ 76,370	$ 78,279	$ 80,236	$ 82,242	$ 84,298
	TO002-U	0.4 FTE: Performance Data Analyst	$ 28,150	$ 28,854	$ 29,575	$ 30,314	$ 31,072	$ 31,849	$ 32,645	$ 33,462	$ 34,298	$ 35,155	$ 36,034
	TO002-X	1.0 FTE: Public Engagement Specialist	$ 71,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TO002-AM	1.0 FTE: Commuter Rail Environmental Planner	$ 97,067	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TO002-AN	1.0 FTE: Commuter Rail Manager of Design	$ 136,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TO002-AQ	Project Implementation Staff: 4.5 FTEs	$ -	$ 525,013	$ 538,138	$ 551,592	$ 565,382	$ 579,516	$ 594,004	$ 608,854	$ 624,075	$ 639,677	$ 655,669
	TO002-AT	Public Engagement Team: 2.5 FTEs	$ -	$ 213,303	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TO002-AT	Public Engagement Team: 3.5 FTEs	$ -	$ 55,320	$ 332,042	$ 340,343	$ 348,852	$ 357,573	$ 366,512	$ 375,675	$ 385,067	$ 394,694	$ 404,561
	TO002-AU	1.0 FTE: Communications Coordinator	$ -	$ 54,000	$ 144,000	$ 147,600	$ 151,290	$ 155,072	$ 158,949	$ 162,923	$ 166,996	$ 171,171	$ 175,450
	TO002-Y	0.6 FTE: Project Manager for Regional Technology Integration	$ 85,700	$ 87,843	$ 90,039	$ 92,290	$ 94,597	$ 96,962	$ 99,386	$ 101,870	$ 104,417	$ 107,028	$ 109,703
		GoTriangle Subtotal	**$ 1,277,717**	**$ 1,403,095**	**$ 1,583,526**	**$ 1,623,114**	**$ 1,663,692**	**$ 1,705,284**	**$ 1,747,916**	**$ 1,791,614**	**$ 1,836,405**	**$ 1,882,315**	**$ 1,929,373**
Capital Area MPO	TO002-L	1.0 FTE: TPAC Administration	$ 133,333	$ 136,666	$ 140,083	$ 143,585	$ 147,175	$ 150,854	$ 154,625	$ 158,491	$ 162,453	$ 166,515	$ 170,677
	TO002-V	1.0 FTE: Wake Transit Program Manager	$ 133,333	$ 136,666	$ 140,083	$ 143,585	$ 147,175	$ 150,854	$ 154,625	$ 158,491	$ 162,453	$ 166,515	$ 170,677
	TO002-W	1.0 FTE: Transit Planner	$ 133,333	$ 136,666	$ 140,083	$ 143,585	$ 147,175	$ 150,854	$ 154,625	$ 158,491	$ 162,453	$ 166,515	$ 170,677
		Capital Area MPO Subtotal	**$ 399,999**	**$ 409,998**	**$ 420,249**	**$ 430,755**	**$ 441,525**	**$ 452,562**	**$ 463,875**	**$ 475,473**	**$ 487,360**	**$ 499,544**	**$ 512,032**
Town of Cary	TO002-N	1.0 FTE: Coordination/Management of Capital Projects	$ 138,375	$ 141,834	$ 145,380	$ 149,015	$ 152,740	$ 156,559	$ 160,473	$ 164,484	$ 168,596	$ 172,811	$ 177,131
	TO002-AC	1.0 FTE: Transportation Analyst	$ 128,105	$ 131,308	$ 134,590	$ 137,955	$ 141,404	$ 144,939	$ 148,563	$ 152,277	$ 156,084	$ 159,986	$ 163,985
	TO002-AD	1.0 FTE: Transportation Program Coordinator	$ 135,000	$ 138,375	$ 141,834	$ 145,380	$ 149,015	$ 152,740	$ 156,559	$ 160,473	$ 164,485	$ 168,597	$ 172,812
	TO002-AE	0.5 FTE: Position Upgrade & Reorganization – Deputy Transit Administrator	$ 79,259	$ 81,240	$ 83,271	$ 85,353	$ 87,487	$ 89,674	$ 91,916	$ 94,214	$ 96,569	$ 98,984	$ 101,458
	TO002-AR	1.0 FTE: Transportation Outreach and Communications Coordinator	$ -	$ 67,500	$ 138,375	$ 141,834	$ 145,380	$ 149,015	$ 152,740	$ 156,559	$ 160,473	$ 164,484	$ 168,597
		Town of Cary Subtotal	**$ 480,739**	**$ 560,257**	**$ 643,451**	**$ 659,538**	**$ 676,026**	**$ 692,927**	**$ 710,251**	**$ 728,006**	**$ 746,206**	**$ 764,862**	**$ 783,983**
City of Raleigh	TO002-P	1.0 FTE: Service Planning	$ 130,000	$ 133,250	$ 136,581	$ 139,996	$ 143,496	$ 147,083	$ 150,760	$ 154,529	$ 158,392	$ 162,352	$ 166,411
	TO002-AG	1.0 FTE: Transportation Analyst	$ 130,000	$ 133,250	$ 136,581	$ 139,996	$ 143,496	$ 147,083	$ 150,760	$ 154,529	$ 158,392	$ 162,352	$ 166,411
	TO002-AH	1.0 FTE: Transit Planner	$ 141,000	$ 144,525	$ 148,138	$ 151,842	$ 155,638	$ 159,529	$ 163,517	$ 167,605	$ 171,795	$ 176,090	$ 180,492
	TO002-AI	1.0 FTE: Traffic Signal Timing Specialist	$ 130,000	$ 133,250	$ 136,581	$ 139,996	$ 143,496	$ 147,083	$ 150,760	$ 154,529	$ 158,392	$ 162,352	$ 166,411
	TO002-AJ	1.0 FTE: Senior Engineer	$ 144,000	$ 147,600	$ 151,290	$ 155,072	$ 158,949	$ 162,923	$ 166,996	$ 171,171	$ 175,450	$ 179,836	$ 184,332
	TO002-AO	1.0 FTE: Procurement Analyst	$ 55,000	$ 112,750	$ 115,569	$ 118,458	$ 121,419	$ 124,455	$ 127,566	$ 130,755	$ 134,024	$ 137,375	$ 140,809
	TO002-AP	1.0 FTE: Transportation Planning Analyst	$ 69,000	$ 141,450	$ 144,986	$ 148,611	$ 152,326	$ 156,134	$ 160,038	$ 164,039	$ 168,140	$ 172,343	$ 176,652
		City of Raleigh Subtotal	**$ 799,000**	**$ 946,075**	**$ 969,727**	**$ 993,970**	**$ 1,018,819**	**$ 1,044,290**	**$ 1,070,397**	**$ 1,097,157**	**$ 1,124,586**	**$ 1,152,701**	**$ 1,181,518**
		Staffing Subtotal	**$ 2,957,455**	**$ 3,319,425**	**$ 3,616,953**	**$ 3,707,377**	**$ 3,800,063**	**$ 3,895,063**	**$ 3,992,439**	**$ 4,092,251**	**$ 4,194,557**	**$ 4,299,421**	**$ 4,406,906**
Administrative Expenses													
GoTriangle	TO002-B	Travel and Training	$ 10,988	$ 11,263	$ 11,544	$ 11,833	$ 12,129	$ 12,432	$ 12,743	$ 13,061	$ 13,388	$ 13,722	$ 14,065
	TO002-D	Outreach/Marketing/Communications for Transit Plan Implementation	$ 99,425	$ 165,520	$ 169,658	$ 173,899	$ 178,247	$ 182,703	$ 187,271	$ 191,952	$ 196,751	$ 201,670	$ 206,712
	TO002-H	Utilities for Wake County Satellite Office	$ 25,625	$ 26,266	$ 26,922	$ 27,595	$ 28,285	$ 28,992	$ 29,717	$ 30,460	$ 31,222	$ 32,002	$ 32,802
	TO002-I	Property Maintenance, Repairs and Appraisals	$ 51,308	$ 52,591	$ 53,905	$ 55,253	$ 56,634	$ 58,050	$ 59,502	$ 60,989	$ 62,514	$ 64,077	$ 65,678
	TO002-J	Customer Feedback Management System	$ 35,875	$ 36,772	$ 37,691	$ 38,633	$ 39,599	$ 40,589	$ 41,604	$ 42,644	$ 43,710	$ 44,803	$ 45,923
	TO002-AA	Paratransit Office Space Lease	$ 95,000	$ 95,000	$ 97,375	$ 99,809	$ 102,305	$ 104,862	$ 107,484	$ 110,171	$ 112,925	$ 115,748	$ 118,642

	TO002-AL	Operations & Maintenance of New Facility for Passenger Amenity Storage and Fabrication	$ 10,000	$ 10,000	$ 10,250	$ 10,506	$ 10,769	$ 11,038	$ 11,314	$ 11,597	$ 11,887	$ 12,184	$ 12,489
		GoTriangle Subtotal	**$ 328,221**	**$ 397,412**	**$ 407,345**	**$ 417,529**	**$ 427,967**	**$ 438,666**	**$ 449,635**	**$ 460,874**	**$ 472,396**	**$ 484,206**	**$ 496,311**
Town of Cary	TO002-M	Marketing of New Bus Services	$ 62,397	$ 63,957	$ 65,556	$ 67,195	$ 68,874	$ 70,596	$ 72,361	$ 74,170	$ 76,024	$ 77,925	$ 79,873
City of Raleigh	TO002-AS	Transit Office Space Lease for Transit Staff	$ -	$ 156,550	$ 160,464	$ 164,475	$ 168,587	$ 172,802	$ 177,122	$ 181,550	$ 186,089	$ 190,741	$ 195,509
		Administrative Expenses Subtotal	**$ 390,618**	**$ 617,919**	**$ 633,365**	**$ 649,199**	**$ 665,429**	**$ 682,064**	**$ 699,118**	**$ 716,594**	**$ 734,509**	**$ 752,872**	**$ 771,694**
		Contracted Services											
GoTriangle	TO002-C	Outside Legal Counsel	$ 25,000	$ 25,625	$ 26,266	$ 26,922	$ 27,595	$ 28,285	$ 28,992	$ 29,717	$ 30,460	$ 31,221	$ 32,002
	TO002-F	Transit Customer Surveys	$ 128,125	$ 131,328	$ 134,611	$ 137,977	$ 141,426	$ 144,962	$ 148,586	$ 152,300	$ 156,108	$ 160,010	$ 164,010
	TO002-Z	Creative Design Contractor	$ 80,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Contracted Services Subtotal	**$ 233,125**	**$ 156,953**	**$ 160,877**	**$ 164,899**	**$ 169,021**	**$ 173,247**	**$ 177,578**	**$ 182,017**	**$ 186,567**	**$ 191,232**	**$ 196,012**
		TRANSIT PLAN ADMINISTRATION/IMPLEMENTATION TOTAL	**$ 3,581,198**	**$ 4,094,297**	**$ 4,411,194**	**$ 4,521,475**	**$ 4,634,512**	**$ 4,750,375**	**$ 4,869,135**	**$ 4,990,862**	**$ 5,115,633**	**$ 5,243,524**	**$ 5,374,612**

TO003, TO004, TO005 - BUS OPERATIONS*															
Fixed Route Bus Service															
Project Sponsor	**Project ID**	**Project**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**FY 2030**
GoTriangle	TO005-A	Route 100 Frequency and Sunday Span Improvements	$ 510,512	$ 541,893	$ 555,440	$ 569,326	$ 583,559	$ 598,148	$ 613,102	$ 628,430	$ 644,140	$ 660,244	$ 676,750
	TO005-B	Route 300 Improvements	$ 1,012,837	$ 648,753	$ 664,972	$ 681,596	$ 698,636	$ 716,102	$ 734,004	$ 376,177	$ -	$ -	$ -
	TO003-A	Fuquay-Varina Express Route	$ 278,996	$ 285,971	$ 293,120	$ 300,448	$ 307,959	$ 315,658	$ 323,550	$ 331,639	$ 339,930	$ 348,428	$ 357,139
	TO005-C	Additional Trips for Durham-Raleigh Express	$ 239,078	$ 245,055	$ 251,181	$ 257,461	$ 263,897	$ 270,495	$ 277,257	$ 284,189	$ 291,294	$ 149,288	$ -
	TO005-D	Reliability Improvements for Chapel Hill-Raleigh Express	$ 59,926	$ 61,424	$ 62,960	$ 64,534	$ 66,147	$ 67,801	$ 69,496	$ 71,233	$ 73,014	$ 37,420	$ -
	TO005-X	Improvements to Route 310	$ 464,284	$ 1,147,001	$ 1,367,643	$ 1,401,834	$ 1,436,880	$ -	$ -	$ -	$ -	$ -	$ -
	TO005-AC	Improvements to Route 305 – Apex-Raleigh (all day and weekend service) with peak period extension to Holly Springs	$ -	$ 681,593	$ 1,501,452	$ 1,538,988	$ 1,577,463	$ 1,616,900	$ 1,657,322	$ 1,698,755	$ 1,741,224	$ 1,784,755	$ 1,829,373
	TO005-AF	Route 100 Improvements (full route buildout with extended service hours)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 862,000	$ 1,300,000
	TO005-AQ	Route 310 Improvements (all day and weekend service)	$ -	$ -	$ -	$ -	$ -	$ 2,899,367	$ 2,971,851	$ 1,523,074	$ -	$ -	$ -
	TO005-AS	Route NRX Improvements (replacement of Route 201, added trips, full buildout)	$ -	$ 313,200	$ 321,030	$ 329,056	$ 337,282	$ 345,714	$ 354,357	$ 363,216	$ 372,296	$ 381,604	$ 391,144
	TO005-BH	GoTriangle Complementary ADA Services	$ -	$ 187,285	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Western BRT Replacement of Route 300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (442,019)	$ (884,038)	$ (884,038)	$ (884,038)
		Savings from Replacement of Existing GoTriangle Service	**$ -**	**$ (615,104)**	**$ (615,104)**	**$ (615,104)**	**$ (615,104)**	**$ (615,104)**	**$ (615,104)**	**$ (615,104)**	**$ (615,104)**	**$ (615,104)**	**$ (615,104)**
		GoTriangle Subtotal	**$ 2,565,633**	**$ 3,497,071**	**$ 4,402,694**	**$ 4,528,140**	**$ 4,656,720**	**$ 6,215,081**	**$ 6,385,836**	**$ 4,219,590**	**$ 1,962,756**	**$ 2,724,597**	**$ 3,055,264**
Town of Cary	TO004-A	Sunday and Holiday Service on All Routes (with expanded paratransit hours)	$ 598,676	$ 528,177	$ 580,995	$ 595,520	$ 610,408	$ 625,668	$ 641,309	$ 657,342	$ 673,776	$ 690,620	$ 707,886
	TO004-B	Increase Midday Frequencies on Existing Routes	$ 455,471	$ 438,962	$ 482,858	$ 494,930	$ 507,303	$ 519,985	$ 532,985	$ 546,310	$ 559,967	$ 573,967	$ 588,316
	TO005-H	New Route – Weston Parkway	$ 824,919	$ 758,874	$ 930,096	$ 953,349	$ 977,182	$ 1,001,612	$ 1,026,652	$ 1,052,318	$ 1,078,626	$ 1,105,592	$ 1,133,232
	TO005-BE	Apex-Cary Express	$ -	$ 129,114	$ 142,025	$ 145,576	$ 149,215	$ 152,946	$ 156,769	$ 160,689	$ 164,706	$ 168,824	$ 173,044
	TO005-AG	Route 9B - Buck Jones Span Improvements	$ -	$ -	$ -	$ 443,590	$ 454,680	$ 466,047	$ 477,698	$ 489,640	$ 501,881	$ 514,428	$ 527,289
	TO005-AK	New Route: 9A Hillsborough-Trinity	$ -	$ -	$ -	$ 1,226,063	$ 1,256,715	$ 1,288,133	$ 1,320,336	$ 1,353,345	$ 1,387,178	$ 1,421,858	$ 1,457,404
	TO005-BI	GoCary Complementary ADA Services	$ -	$ 86,668	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Town of Cary Subtotal	**$ 1,879,066**	**$ 1,941,795**	**$ 2,135,974**	**$ 3,859,027**	**$ 3,955,503**	**$ 4,054,391**	**$ 4,155,750**	**$ 4,259,644**	**$ 4,366,135**	**$ 4,475,289**	**$ 4,587,171**
City of Raleigh	TO004-D	Increase Frequency on Route 7 (South Saunders)	$ 254,164	$ 260,518	$ 267,031	$ 273,707	$ 280,549	$ 287,563	$ 294,752	$ 302,121	$ 154,837	$ -	$ -
	TO004-E	Increase Sunday Service Span	$ 1,817,018	$ 1,531,436	$ 1,828,868	$ 1,874,590	$ 1,708,648	$ 1,751,364	$ 1,402,256	$ 1,323,841	$ 1,254,311	$ 1,068,274	$ 697,242
	TO005-I	Southeast Raleigh Route Package (4 Routes)	$ 5,656,452	$ 2,735,060	$ 3,075,000	$ 3,151,875	$ 3,230,672	$ 3,311,439	$ 3,394,225	$ 3,479,080	$ 3,566,057	$ 3,655,209	$ 3,746,589
	TO005-J	Northwest Raleigh Route Package (4 Routes)	$ 4,742,163	$ 3,190,903	$ 3,587,500	$ 3,677,188	$ 3,769,117	$ 3,863,345	$ 3,959,929	$ 4,058,927	$ 4,160,400	$ 4,264,410	$ 4,371,020
	TO005-Q	New Route 401 – Rolesville Express	$ 208,165	$ 119,000	$ 121,975	$ 125,024	$ 128,150	$ 131,354	$ 134,638	$ 138,004	$ 141,454	$ 144,990	$ 148,615
	TO005-P	New Route 33 – New Hope-Knightdale	$ 520,414	$ 460,000	$ 546,760	$ 560,429	$ 574,440	$ 588,801	$ 603,521	$ 618,609	$ 634,074	$ 649,926	$ 666,174
	TO005-R	New Route/Route Realignment - 20/20L Garner	$ 1,977,573	$ 1,679,300	$ 2,077,687	$ 2,129,629	$ 2,182,870	$ 2,237,442	$ 2,293,378	$ 2,350,712	$ 2,409,480	$ 2,469,717	$ 2,531,460
	TO005-AL	Improvements to Route 21 – Caraleigh	$ -	$ 396,631	$ 493,826	$ 512,141	$ 530,913	$ 550,155	$ 569,878	$ 584,125	$ 598,728	$ 613,697	$ 629,039
	TO005-AM	Glenwood Route Package	$ -	$ 471,164	$ 993,427	$ 1,018,263	$ 1,043,719	$ 1,069,812	$ 1,096,558	$ 1,123,971	$ 1,152,071	$ 1,180,873	$ 1,210,394
	TO005-AD	New Route 9 – Hillsborough Street	$ -	$ -	$ -	$ 1,828,790	$ 1,874,510	$ 1,921,372	$ 1,969,407	$ 2,018,642	$ 2,069,108	$ 2,120,836	$ 2,173,857
	TO005-AI	Falls of Neuse Route Package	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,961,329
	TO005-AN	Oberlin/Six Forks Route Package	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,667,713	$ 3,254,075	$ 3,335,426	$ 3,418,812	$ 3,504,282
	TO005-AO	Add Weekend Service to Route 33 – New Hope-Knightdale	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 173,764	$ 178,108	$ 182,561
	TO005-AP	Biltmore Hills/Garner Route Package	$ -	$ -	$ -	$ -	$ 839,530	$ 860,518	$ 882,031	$ 904,082	$ 926,684	$ 949,851	$ 973,597
	TO005-AR	Route 27 – Blue Ridge (Frequency Improvements)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,359,162	$ 1,393,141	$ 1,427,970	$ 1,463,669
	TO005-AT	Improvements to Route 11: Avent Ferry	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,248,368	$ 1,279,578	$ 1,311,567
	TO005-AU	New Route 31 - Southwest**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TO005-AV	Improvements to Route 12: Method	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,937	$ 7,110	$ 7,288	$ 7,470	$ 7,657
	TO005-AW	Improvements to Route 3: Glascock	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,434,779	$ 1,470,648	$ 1,507,415	$ 1,545,100	$ 1,583,728
	TO005-AX	New Route 10: Raleigh Boulevard	$ -	$ -	$ -	$ -	$ -	$ -	$ 495,889	$ 508,286	$ 520,993	$ 534,018	$ 547,368
	TO005-BB	New Route 24: New Hope-Crabtree	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,011,395	$ 3,086,680
	TO005-BC	New Route 14 - Atlantic	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,584,863	$ 1,624,485	$ 1,665,097
	TO005-BD	New Route 28 – New Hope-Triangle	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,213,032	$ 1,243,358	$ 1,274,442	$ 1,306,303
		Northern BRT Replacement of Route 1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (1,291,597)	$ (2,583,194)
		New Bern BRT - Route 15 Service Reductions	$ -	$ -	$ -	$ -	$ (520,832)	$ (1,041,663)	$ (1,041,663)	$ (1,041,663)	$ (1,041,663)	$ (1,041,663)	$ (1,041,663)
		Southern BRT - Route 7 Service Reductions	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (365,284)	$ (730,568)	$ (730,568)
	TO005-BJ	GoRaleigh Complementary ADA Services	$ -	$ 1,247,999	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		City of Raleigh Subtotal	**$ 15,175,949**	**$ 12,092,011**	**$ 12,992,074**	**$ 15,151,635**	**$ 15,642,287**	**$ 15,531,503**	**$ 19,164,227**	**$ 23,672,764**	**$ 26,674,874**	**$ 28,355,331**	**$ 29,412,803**
Town of Apex	TO005-BF	GoApex Route 1 Fixed-Route Circulator	$ -	$ 115,000	$ 379,770	$ 389,264	$ 398,996	$ 408,971	$ 419,195	$ 429,675	$ 440,417	$ 451,427	$ 462,713
Town of Morrisville	TO005-BG	Operation of Node-Based Smart Shuttle	$ -	$ 33,000	$ 338,800	$ 347,270	$ 355,952	$ 364,851	$ 373,972	$ 383,321	$ 392,904	$ 402,727	$ 412,795
Town of Wake Forest	TO005-AA	Wake Forest Loop: Reverse Circulator	$ 214,057	$ 337,888	$ 346,335	$ 354,994	$ 363,868	$ 372,965	$ 382,289	$ 391,846	$ 401,642	$ 411,683	$ 421,975

Project Sponsor	Project ID	Project	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
		Fixed Route Bus Service Subtotal	**$ 19,834,705**	**$ 18,016,766**	**$ 20,595,648**	**$ 24,630,330**	**$ 25,373,325**	**$ 26,947,760**	**$ 30,881,269**	**$ 33,356,840**	**$ 34,238,729**	**$ 36,821,053**	**$ 38,352,721**
		Other Bus Service											
GoTriangle	TO005-L1	Youth GoPass Program	$ 48,835	$ 50,056	$ 51,307	$ 52,590	$ 53,905	$ 55,252	$ 56,634	$ 58,049	$ 59,501	$ 60,988	$ 62,513
	TO005-E	Extension of Regional Information Center Operating Hours	$ 25,000	$ 25,625	$ 26,266	$ 26,922	$ 27,595	$ 28,285	$ 28,992	$ 29,717	$ 30,460	$ 31,221	$ 32,002
		GoTriangle Subtotal	**$ 73,835**	**$ 75,681**	**$ 77,573**	**$ 79,512**	**$ 81,500**	**$ 83,537**	**$ 85,626**	**$ 87,766**	**$ 89,961**	**$ 92,210**	**$ 94,515**
Town of Cary	TO005-L2	Youth GoPass Program	$ 30,533	$ 31,296	$ 32,079	$ 32,881	$ 33,703	$ 34,545	$ 35,409	$ 36,294	$ 37,201	$ 38,132	$ 39,085
City of Raleigh	TO005-L3	Youth GoPass Program	$ 201,443	$ 206,479	$ 211,641	$ 216,932	$ 222,355	$ 227,914	$ 233,612	$ 239,452	$ 245,439	$ 251,575	$ 257,864
Wake County	TO005-G1	Rural General Public and Elderly and Disabled Demand Response Service Expansion	$ 330,609	$ 437,000	$ 523,000	$ 607,000	$ 687,000	$ 761,000	$ 828,000	$ 888,000	$ 910,200	$ 932,955	$ 956,279
	TO005-G2	Wake County Transportation Call Center	$ 34,753	$ 35,621	$ 36,512	$ 37,425	$ 38,361	$ 39,320	$ 40,303	$ 41,310	$ 42,343	$ 43,401	$ 44,486
		Wake County Subtotal	**$ 365,362**	**$ 472,621**	**$ 559,512**	**$ 644,425**	**$ 725,361**	**$ 800,320**	**$ 868,303**	**$ 929,310**	**$ 952,543**	**$ 976,356**	**$ 1,000,765**
Capital Area MPO	TO005-Z	Community Funding Area Program Reserve	$ -	$ 249,626	$ 436,155	$ 221,264	$ 401,668	$ 497,289	$ 510,121	$ 523,449	$ 536,535	$ 549,949	$ 563,697
Reserve	TO005-W	Hold Harmless Subsidy for Implementation of Countywide Fare Strategy	$ 58,500	$ 117,000	$ 119,925	$ 122,923	$ 125,996	$ 129,146	$ 132,375	$ 135,684	$ 139,076	$ 142,553	$ 146,117
	TO005-AE	ADA/Paratransit Operations Expansion (Not yet allocated to transit providers)	$ -	$ -	$ 710,403	$ 1,612,522	$ 1,906,484	$ 2,241,250	$ 3,380,667	$ 4,292,494	$ 5,301,905	$ 6,337,871	$ 7,084,716
		Reserve Subtotal	**$ 58,500**	**$ 117,000**	**$ 830,328**	**$ 1,735,445**	**$ 2,032,480**	**$ 2,370,396**	**$ 3,513,042**	**$ 4,428,178**	**$ 5,440,981**	**$ 6,480,424**	**$ 7,230,833**
		Other Bus Service Subtotal	**$ 729,673**	**$ 1,152,703**	**$ 2,147,288**	**$ 2,930,458**	**$ 3,497,067**	**$ 4,014,001**	**$ 5,246,113**	**$ 6,244,450**	**$ 7,302,660**	**$ 8,388,645**	**$ 9,186,759**
		Technology											
Town of Cary	TO005-O	Annual Maintenance of Fare Collection Technology	$ 10,000	$ 10,250	$ 10,506	$ 10,769	$ 11,038	$ 11,314	$ 11,597	$ 11,887	$ 12,184	$ 12,489	$ 12,801
City of Raleigh	TO005-U	Web Hosting and Maintenance of Fare Collection Technology	$ 90,000	$ 93,600	$ 97,344	$ 101,238	$ 105,287	$ 109,499	$ 113,879	$ 118,434	$ 121,395	$ 124,430	$ 127,540
GoTriangle	TO005-Y	Maintenance of Mobile Ticketing Software	$ 200,000	$ 50,000	$ 51,250	$ 52,531	$ 53,845	$ 55,191	$ 56,570	$ 57,985	$ 59,434	$ 60,920	$ 62,443
		Technology Subtotal	**$ 300,000**	**$ 153,850**	**$ 159,100**	**$ 164,538**	**$ 170,170**	**$ 176,004**	**$ 182,046**	**$ 188,306**	**$ 193,013**	**$ 197,839**	**$ 202,785**
		Bus Infrastructure Maintenance											
City of Raleigh	TO005-V	Maintenance of Bus Stops and Park-and-Ride Facilities	$ 80,312	$ 164,640	$ 168,756	$ 172,975	$ 177,299	$ 181,732	$ 186,275	$ 190,932	$ 195,705	$ 200,598	$ 205,613
TBD	TO005-AB	Unallocated Bus Infrastructure Maintenance	$ -	$ -	$ 904,901	$ 1,287,270	$ 1,723,135	$ 1,771,142	$ 2,445,764	$ 2,608,840	$ 2,800,411	$ 3,055,052	$ 3,185,957
		Bus Infrastructure Maintenance Subtotal	**$ 80,312**	**$ 164,640**	**$ 1,073,657**	**$ 1,460,245**	**$ 1,900,434**	**$ 1,952,874**	**$ 2,632,039**	**$ 2,799,772**	**$ 2,996,116**	**$ 3,255,650**	**$ 3,391,570**
		Vehicle/Site Leasing											
Town of Wendell	TO003-G	Contribution toward Zebulon-Wendell Express Park-and-Ride	$ 4,305	$ 4,413	$ 4,523	$ 4,636	$ 4,752	$ 4,871	$ 4,992	$ 5,117	$ 5,245	$ 5,376	$ 5,511
Town of Zebulon	TO003-H	Contribution toward Zebulon-Wendell Express Park-and-Ride	$ 5,795	$ 5,940	$ 6,088	$ 6,241	$ 6,397	$ 6,557	$ 6,720	$ 6,888	$ 7,060	$ 7,237	$ 7,418
GoTriangle	TO005-F	Short -Term Park-and-Ride Leases	$ 90,000	$ 92,250	$ 94,556	$ 96,920	$ 99,343	$ 101,827	$ 104,372	$ 106,982	$ 109,657	$ 112,398	$ 115,208
	TO005-N	Holly Springs Park-and-Ride Lease	$ 7,880	$ 16,153	$ 16,558	$ 16,972	$ 17,396	$ 17,831	$ 18,277	$ 18,734	$ 19,202	$ 19,682	$ 20,174
		GoTriangle Subtotal	**$ 97,880**	**$ 108,403**	**$ 111,114**	**$ 113,892**	**$ 116,739**	**$ 119,658**	**$ 122,649**	**$ 125,716**	**$ 128,859**	**$ 132,080**	**$ 135,382**
City of Raleigh	TO005-S	Rolesville Park-and-Ride Lease	$ 15,579	$ 15,968	$ 16,368	$ 16,777	$ 17,196	$ 17,626	$ 18,067	$ 18,519	$ 18,982	$ 19,457	$ 19,943
		Vehicle/Site Leasing Subtotal	**$ 123,559**	**$ 134,724**	**$ 138,093**	**$ 141,546**	**$ 145,084**	**$ 148,712**	**$ 152,428**	**$ 156,240**	**$ 160,146**	**$ 164,150**	**$ 168,254**
		BUS OPERATIONS TOTAL	**$ 21,068,249**	**$ 19,622,682**	**$ 24,113,786**	**$ 29,327,118**	**$ 31,086,080**	**$ 33,239,351**	**$ 39,093,896**	**$ 42,745,608**	**$ 44,890,665**	**$ 48,827,336**	**$ 51,302,088**

*The services reflected in the above table will be supported by a combination of Wake Transit revenues; other local, state, and federal funds; and farebox revenues.

**GoRaleigh Route 31: Southwest is currently proposed to be implemented without the assistance of Wake Transit revenues. However, it is included in the multi-year operating program to provide the full picture of route improvements and adjustments that will be made for the bus service expansion tier of the Wake Transit investment portfolio.

Notes: New GoRaleigh Routes 23 (Millbrook), 29 (Garner-Wake Tech), and 34 (Wake Tech North) and additional trips on GoTriangle's NRX route were originally included for investment in the FYs 2018-2027 Wake Bus Plan and Multi-Year Operating Program. Due to funding limitations identified through the Wake Transit Plan Update and the FY 21 Wake Transit Work Plan reassessment process in which projects were reprioritized and reprogrammed to rebalance expenditures with reduced revenue assumptions, financial capacity for these investments has not been identified within the 2030 Wake County Transit Plan horizon. As plan implementation continues and revenue and expenditure assumptions are refined for the full Wake Transit program, investment in these services will continue to be considered for potential funding. While Routes 29 and 34 could not be included, the Wake Tech North campus is currently served and will continue to be served by GoRaleigh Route 25L: Triangle Town Link. The Wake Tech South campus is currently served and will continue to be served by GoRaleigh Route 40X: Wake Tech Express. The new Route 29: Garner-Wake Tech would only operate when Route 40X is not otherwise operating due to campus closures for breaks, holidays, weather events, etc.

TO006 – BRT Operations*											
Project Sponsor	**Project ID**	**Project**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**FY 2030**
GoRaleigh	N/A	New Bern Corridor	$ -	$ -	$ 1,387,443	$ 2,844,258	$ 2,915,364	$ 2,988,249	$ 3,062,955	$ 3,139,529	$ 3,218,017
	N/A	Western Corridor	$ -	$ -	$ -	$ -	$ -	$ 2,113,662	$ 4,333,007	$ 4,441,332	$ 4,552,365
	N/A	Southern Corridor	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,317,039	$ 2,699,931	$ 2,767,429
	N/A	Northern Corridor	$ -	$ -	$ -	$ -		$ -	$ -	$ 2,612,103	$ 5,354,811
TBD	N/A	Cary - RTP	$ -	$ -	$ -	$ -	$ -	$ 1,523,074	$ 3,122,301	$ 3,200,359	$ 3,280,367
	N/A	Garner - Clayton	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BRT OPERATIONS TOTAL			**$ -**	**$ -**	**$ 1,387,443**	**$ 2,844,258**	**$ 2,915,364**	**$ 6,624,985**	**$ 11,835,302**	**$ 16,093,253**	**$ 19,172,990**

*The services reflected in the above table will be supported by a combination of Wake Transit revenues; other local, state, and federal funds; and farebox revenues.

TO007 – CRT Operations*											
Project Sponsor	**Project ID**	**Project**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**FY 2030**
GoTriangle	N/A	Commuter Rail Operations & Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 13,312,880	$ 27,291,403
		CRT OPERATIONS TOTAL	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 13,312,880**	**$ 27,291,403**
*The service reflected in the above table will be supported by a combination of Wake Transit revenues; other local, state, and federal funds; and farebox revenues.											

Final Multi-Year Capital Investment Alternative

TC001 – VEHICLE ACQUISITION*													
Fixed Route Expansion Vehicles													
Project Sponsor	**Project ID**	**Project/Phase**	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**FY 2030**
GoTriangle	TC001-C	Purchase 40-Foot Diesel, CNG, or Electric Buses	$ 2,500,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
City of Raleigh	TC001-E	Purchase 40-Foot Diesel, CNG, or Electric Buses	$ 7,764,325	$ -	$ 3,304,219	$ 687,277	$ 714,769	$ 6,690,234	$ 4,638,563	$ 2,412,052	$ 9,197,960	$ 2,608,876	$ -
		Fixed Route Expansion Vehicles Subtotal	**$ 10,264,325**	**$ -**	**$ 3,304,219**	**$ 687,277**	**$ 714,769**	**$ 6,690,234**	**$ 4,638,563**	**$ 2,412,052**	**$ 9,197,960**	**$ 2,608,876**	**$ -**
Fixed Route Replacement Vehicles													
GoTriangle	TC001-D	Purchase/Repower 40-Foot Diesel, CNG, or Electric Vehicles	$ 2,500,000	$ 1,906,280	$ 1,321,687	$ 1,700,000	$ 2,450,000	$ 2,700,000	$ 2,820,000	$ 2,600,000	$ 2,700,000	$ 2,825,000	$ 2,950,000
City of Raleigh	TC001-F	Purchase 40-Foot Diesel, CNG or Electric Buses	$ 14,242,618	$ 5,083,413	$ 9,073,893	$ 1,374,555	$ -	$ 8,920,312	$ 6,957,843	$ -	$ 7,150,000	$ 2,700,000	$ 11,475,000
Reserve	TC001-G	Local Match for Vehicle Grants	$ 1,200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Fixed Route Replacements Vehicles Subtotal	**$ 17,942,618**	**$ 6,989,693**	**$ 10,395,580**	**$ 3,074,555**	**$ 2,450,000**	**$ 11,620,312**	**$ 9,777,843**	**$ 2,600,000**	**$ 9,850,000**	**$ 5,525,000**	**$ 14,425,000**
Paratransit Expansion Vehicles													
City of Raleigh	TC001-K	Pararansit Expansion Vehicles	$ 380,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
TBD	TC001-H	Countywide Paratransit Expansion Vehicles	$ -	$ -	$ 105,287	$ 109,499	$ 113,879	$ 118,434	$ 123,171	$ 128,098	$ 133,222	$ 138,551	$ 144,093
		Paratransit Expansion Vehicles Subtotal	**$ 380,000**	**$ -**	**$ 105,287**	**$ 109,499**	**$ 113,879**	**$ 118,434**	**$ 123,171**	**$ 128,098**	**$ 133,222**	**$ 138,551**	**$ 144,093**
Paratransit Replacement Vehicles													
City of Raleigh	TC001-J	Paratransit Replacement Vehicles	$ -	$ 380,000	$ 395,200	$ 411,008	$ 427,448	$ 444,546	$ 462,328	$ 480,821	$ 500,054	$ 520,056	$ 540,858
TBD	TC001-I	Countywide Paratransit Replacement Vehicles	$ -	$ -	$ 1,006,356	$ 1,089,001	$ 1,169,877	$ 1,490,706	$ 1,474,148	$ 1,575,415	$ 1,638,432	$ 1,703,969	$ 1,772,128
		Paratransit Replacement Vehicles Subtotal	**$ -**	**$ 380,000**	**$ 1,401,556**	**$ 1,500,009**	**$ 1,597,325**	**$ 1,935,252**	**$ 1,936,476**	**$ 2,056,236**	**$ 2,138,485**	**$ 2,224,025**	**$ 2,312,986**
Supervisor/Support Vehicles													
City of Raleigh	TC001-L	Support Vehicles	$ -	$ 156,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Support Vehicles Subtotal	**$ -**	**$ 156,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		VEHICLE ACQUISITION TOTAL	**$ 28,586,943**	**$ 7,525,693**	**$ 15,206,642**	**$ 5,371,340**	**$ 4,875,972**	**$ 20,364,232**	**$ 16,476,054**	**$ 7,196,386**	**$ 21,319,667**	**$ 10,496,452**	**$ 16,882,079**

*The expenses reflected in the above table will be supported by a combination of Wake Transit revenues; other local, state, and federal funds; and additional federal and state discretionary grants.

TC002 – BUS INFRASTRUCTURE*														
Bus Stop Improvements														
Project Sponsor	**Project ID**	**Project**	**Phase**	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**FY 2030**
Town of Cary	TC002-C	Systemwide Bus Stop Improvements/ADA Enhancements	Design/Construction	$ 894,110	$ -	$ 846,753	$ 448,945	$ 466,903	$ 485,579	$ 505,002	$ 525,202	$ 546,210	$ 568,059	$ 590,781
	TC002-R	Bus Stop Improvements for New Stop Locations/Expansion Service	Design/Construction	$ 1,016,000	$ -	$ 776,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Town of Apex	TC002-BE	Bus Stop Improvements for GoApex Route 1	Design/Construction	$ -	$ 207,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Town of Morrisville	TC002-BF	Bus Stop/Node Improvements for Smart Shuttle	Design/Construction	$ -	$ 248,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
City of Raleigh	TC002-I	Systemwide Bus Stop Improvements	Design/Construction	$ 750,000	$ -	$ 1,761,600	$ 1,124,864	$ 1,169,859	$ 1,216,653	$ 1,265,319	$ 1,315,932	$ 1,368,569	$ 1,423,312	$ 1,480,245
	TC002-S	Bus Stop Improvements for New Stop Locations/Expansion Service	Design/Construction	$ 1,455,000	$ -	$ 237,952	$ 148,482	$ -	$ 1,953,945	$ 1,336,177	$ 521,109	$ 1,776,403	$ 3,068,660	$ -
GoTriangle	TC002-Y	Systemwide Bus Stop Improvements	Design/Construction	$ 250,000	$ 64,800	$ 270,400	$ 281,216	$ 292,465	$ 304,163	$ 316,330	$ 328,983	$ 342,142	$ 355,828	$ 370,061
	TC002-M	Bus Stop Improvements for New Stop Locations/Expansion Service	Design/Construction	$ 919,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-BC	I-540 Bus on Shoulder Improvements	Design/Construction	$ 31,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-BD	Improvements to Airport Bus Stop	Design/Construction	$ -	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Bus Stop Improvements Subtotal		**$ 5,315,310**	**$ 569,800**	**$ 3,892,705**	**$ 2,003,507**	**$ 1,929,226**	**$ 3,960,340**	**$ 3,422,828**	**$ 2,691,226**	**$ 4,033,324**	**$ 5,415,859**	**$ 2,441,087**
Park-and-Ride Improvements														
Town of Holly Springs	TC002-W	New Holly Springs Park-and-Ride Improvements	Construction/Install Amenities	$ 55,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
GoTriangle	TC002-K	Existing Park-and-Ride Lot Improvements	Construction/Install Amenities	$ 408,000	$ -	$ 692,000	$ 355,000	$ 57,000	$ -	$ 57,000	$ -	$ -	$ -	$ -
	TC002-AI	New Hillsborough/I-440 Park-and-Ride	Design/Land Acquisition	$ -	$ -	$ 1,248,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction	$ -	$ -	$ -	$ 1,352,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-AJ	New Park-and-Ride at Creedmoor/I-540 or Falls of Neuse/I-540	Design/Land Acquisition	$ -	$ -	$ 1,248,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction	$ -	$ -	$ -	$ -	$ 1,406,080	$ -	$ -	$ -	$ -	$ -	$ -
		GoTriangle Subtotal		**$ 408,000**	**$ -**	**$ 3,188,000**	**$ 1,707,000**	**$ 1,463,080**	**$ -**	**$ 57,000**	**$ -**	**$ -**	**$ -**	**$ -**
City of Raleigh	TC002-X	Rolesville Park-and-Ride Improvements	Construction/Install Amenities	$ 55,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-BA	New Gorman/I-40 Park-and-Ride	Design/Land Acquisition	$ -	$ -	$ -	$ -	$ -	$ 1,432,481	$ -	$ -	$ -	$ -	$ -
			Construction	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,613,927	$ -	$ -	$ -
		Park-and-Ride Improvements Subtotal		**$ 518,000**	**$ -**	**$ 3,188,000**	**$ 1,707,000**	**$ 1,463,080**	**$ 1,432,481**	**$ 57,000**	**$ 1,613,927**	**$ -**	**$ -**	**$ -**
Transit Center/Transfer Point Improvements														
GoTriangle	TC002-A	New Raleigh Union Station Bus Facility	Design	$ 7,030,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction	$ 3,630,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-N	New Regional Transit Facility (Wake County Share)	Planning/Feasibility	$ 312,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Design	$ -	$ -	$ 1,250,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction	$ -	$ -	$ 3,750,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-AK	Downtown Apex Transfer Point Improvements	Design	$ -	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction	$ -	$ -	$ 216,320	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		GoTriangle Subtotal		**$ 10,972,500**	**$ -**	**$ 5,316,320**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Town of Cary	TC002-F	New Downtown Cary Multimodal Transit Facility	Feasibility/Planning	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Design and Land Acquisition	$ 2,000,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction	$ -	$ -	$ 7,349,184	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-AV	Crossroads Plaza Transfer Point Improvements	Design/ Land Acquisition/Construction	$ -	$ -	$ -	$ 346,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-AW	Park West Village Transfer Point Improvements	Design/ Land Acquisition/Construction	$ -	$ -	$ -	$ 346,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-BB	Cary Towne Center Transfer Point Improvements	Design/ Land Acquisition/Construction	$ -	$ -	$ -	$ -	$ 360,000	$ -	$ -	$ -	$ -	$ -	$ -
		Town of Cary Subtotal		**$ 2,500,000**	**$ -**	**$ 7,349,184**	**$ 692,000**	**$ 360,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

Project Sponsor	Project ID	Project	Phase	Prior Years	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
City of Raleigh	TC002-T	New East Raleigh Community Transit Center	Planning/Design	$ 850,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Land Acquisition	$ 1,500,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction	$ -	$ -	$ 3,157,530	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-AC	New Midtown Transit Center	Planning//Design	$ 364,000	$ -	$ -	$ -	$ 546,684	$ -	$ -	$ -	$ -	$ -	$ -
			Land Acquisition	$ -	$ -	$ -	$ -	$ 2,249,728	$ -	$ -	$ -	$ -	$ -	$ -
			Final Design and Construction	$ -	$ -	$ -	$ -	$ -	$ 2,989,360	$ -	$ -	$ -	$ -	$ -
	TC002-AL	Crabtree Valley Mall Transit Center Updates	Design/Construction/Install Amenities	$ -	$ -	$ 323,904	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-AM	Triangle Town Center Transit Center Updates	Design/Construction/Install Amenities	$ -	$ -	$ 323,904	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-AX	Relocation of Triangle Town Center Transit Center	Feasibility/Design	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 442,862	$ -
			Construction	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,428,617
	TC002-AD	Cross Link/Rock Quarry Transfer Point Improvements	Design/Land Acquisition	$ 62,623	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction	$ -	$ 246,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-AE	Hillsborough/Gorman Transfer Point Improvements	Design/Land Acquisition	$ 62,624	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction	$ -	$ 246,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-AF	Hillsborough/State Fairgrounds Transfer Point Improvements	Design/Land Acquisition	$ 62,624	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction	$ -	$ 246,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-AG	MLK/Rock Quarry Transfer Point Improvements	Design/ Land Acquisition/Construction	$ 308,624	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-AH	Hillsborough/Jones Franklin Transfer Point Improvements	Design/ Land Acquisition	$ 62,624	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction	$ -	$ 246,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-AN	Capital/Millbrook Transfer Point Improvements	Design/Land Acquisition	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction	$ -	$ 152,421	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-AO	WakeMed North Transfer Point Improvements	Design/Land Acquisition	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction	$ -	$ 152,421	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-AQ	Pleasant Valley Shopping Center Transfer Point Improvements	Design/Land Acquisition/Construction	$ -	$ 152,421	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-BG	GoRaleigh Systemwide Transfer Point Improvements	Design/Land Acquisition	$ -	$ -	$ 133,200	$ -	$ 216,104	$ -	$ -	$ -	$ 80,980	$ 87,560	$ -
			Construction	$ -	$ -	$ -	$ 532,800	$ -	$ 864,414	$ -	$ -	$ -	$ 336,879	$ 350,240
		Identified GoRaleigh Systemwide Transfer Point Improvement Locations Include: Falls of Neuse/Spring Forest, Hillsborough/Oberlin, Clark/Oberlin, Brier Creek Commons, Avent Ferry/Gorman, Wilmington/Pecan, and Village District (Formerly Cameron Village)												
			City of Raleigh Subtotal	**$ 3,273,119**	**$ 1,441,263**	**$ 3,938,538**	**$ 532,800**	**$ 3,012,516**	**$ 3,853,774**	**$ -**	**$ -**	**$ 80,980**	**$ 867,301**	**$ 4,778,857**
			Transit Center/Transfer Point Improvements Subtotal	**$ 16,745,619**	**$ 1,441,263**	**$ 16,604,042**	**$ 1,224,800**	**$ 3,372,516**	**$ 3,853,774**	**$ -**	**$ -**	**$ 80,980**	**$ 867,301**	**$ 4,778,857**
			Technology											
Town of Cary	TC002-Z	Fare Collection Technology Upgrade	N/A	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
City of Raleigh	TC002-AA	Fare Collection Technology Upgrade	N/A	$ 1,600,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
GoTriangle	TC002-AB	Farebox Upgrades and Mobile Ticketing Technology (Wake County Share)	N/A	$ 1,400,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Technology Subtotal	**$ 3,500,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
			Maintenance Facility Improvements											
City of Raleigh	TC002-V	New GoRaleigh/GoWake Access Paratransit Maintenance and Operations Facility	Planning/Feasibility	$ 350,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Land Acquisition	$ 2,750,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Design	$ -	$ -	$ 4,000,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction	$ -	$ -	$ 13,800,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC002-H	Expansion of Compressed Natural Gas Fueling Station at Poole Road Operations Facility	Design and Construction	$ 1,500,000	$ -	$ -	$ 5,800,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			City of Raleigh Subtotal	**$ 4,600,000**	**$ -**	**$ 17,800,000**	**$ 5,800,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Town of Cary	TC002-E	New Bus Operations and Maintenance Facility	Design/PreConstruction	$ 2,500,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction		$ -	$ 17,600,000						$ -	$ -	$ -

Project Sponsor	Project ID	Project	Phase	Prior Years	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
GoTriangle	TC002-B	Expansion of Bus Operations and Maintenance Facility (Wake County share)	Planning and Design	$ 200,000	$ -	$ 400,000	$ 2,280,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Construction	$ -	$ -	$ -	$ -	$ 13,077,696	$ 8,718,464	$ -	$ -	$ -	$ -	$ -
Maintenance Facility Improvements Subtotal				**$ 2,700,000**	**$ -**	**$ 35,800,000**	**$ 8,080,000**	**$ 13,077,696**	**$ 8,718,464**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
BUS INFRASTRUCTURE TOTAL				**$ 28,778,929**	**$ 2,011,063**	**$ 59,484,747**	**$ 13,015,307**	**$ 19,842,518**	**$ 17,965,058**	**$ 3,479,828**	**$ 4,305,152**	**$ 4,114,304**	**$ 6,283,160**	**$ 7,219,944**

*The expenses reflected in the above table will be supported by a combination of Wake Transit revenues; other local, state, and federal funds; and additional federal and state discretionary grants.

TC003 – OTHER CAPITAL													
Capital Planning													
Project Sponsor	**Project ID**	**Project/Phase**	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**FY 2030**
GoTriangle	TC003-A	Fixed Guideway Transit Corridors Major Investment Study	$ 2,000,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC003-C	Bus and Rail Station Land Use & Affordable Housing Planning	$ 181,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC003-K	Wake Bus Plan Update	$ -	$ 100,000	$ 550,000	$ -	$ -	$ -	$ 731,580	$ -	$ -	$ -	$ 823,400
City of Raleigh	TC003-E	Western Boulevard Corridor Study	$ 350,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC003-O	Transit Origin-Destination Survey	$ -	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Area MPO	TC003-N	Major Investment Study/Alternatives Analysis for BRT Extensions to RTP and Clayton	$ -	$ 400,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Area MPO	TC003-F	Extension of Planning Horizon for Wake Transit Vision Plan	$ 250,000	$ -	$ -	$ -	$ 281,377	$ -	$ -	$ -	$ 316,692	$ -	$ -
Wake County	TC003-L	Northeastern Microtransit Planning Study	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Capital Planning Subtotal	**$ 2,781,000**	**$ 605,000**	**$ 550,000**	**$ -**	**$ 281,377**	**$ -**	**$ 731,580**	**$ -**	**$ 316,692**	**$ -**	**$ 823,400**
Community Funding Area Planning													
Town of Fuquay-Varina	TC003-H	Microtransit Feasibility Study	$ 13,750	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Town of Garner	TC003-I	Transit Planning Study	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Town of Rolesville	TC003-J	Comprehensive Community Transportation Study	$ 16,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Community Funding Areas Subtotal	**$ 80,250**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Technology													
GoTriangle	TC003-D	Enterprise Resource Planning (ERP) System (Wake County Share)	$ 916,666	$ 458,333	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Area MPO	TC003-G	Public-Facing Online Map for Wake Transit Projects	$ 90,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
TBD	TC003-M	Unallocated Technology Reserve	$ -	$ -	$ 4,080,000	$ 2,163,200	$ 2,249,728	$ 675,717	$ -	$ -	$ -	$ -	$ -
		Technology Subtotal	**$ 1,006,666**	**$ 458,333**	**$ 4,080,000**	**$ 2,163,200**	**$ 2,249,728**	**$ 675,717**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		OTHER CAPITAL TOTAL	**$ 3,867,916**	**$ 1,063,333**	**$ 4,630,000**	**$ 2,163,200**	**$ 2,531,105**	**$ 675,717**	**$ 731,580**	**$ -**	**$ 316,692**	**$ -**	**$ 823,400**

*The expenses reflected in the above table will be supported by a combination of Wake Transit revenues; other local, state, and federal funds; and additional federal and state discretionary grants.

TC004 – COMMUTER RAIL TRANSIT*														
Project Sponsor	**Project ID**	**Project**	**Phase**	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**FY 2030**
GoTriangle	TC004-A1	Commuter Rail from Garner to Western Durham (Wake County Share)**	Early Project Development	$ 6,000,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Reserve	TC004-A	Commuter Rail from Garner to Western Durham (Wake County Share)**	Project Development	$ 38,260,371	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Commuter Rail from Garner to Western Durham (Wake County Share)**	Final Design, Construction, Land Acquisition, Vehicles, Facilities	$ -	$ -	$ -	$ 61,334,000	$ 151,833,000	$ 250,975,000	$ 310,529,000	$ 235,115,000	$ 116,811,000	$ 29,304,000	$ -
GoTriangle	TBD	Reimburse FTA Share for 5 Parcels	Purchase	$ -	$ 1,100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		COMMUTER RAIL TRANSIT TOTAL		**$ 44,260,371**	**$ 1,100,000**	**$ -**	**$ 61,334,000**	**$ 151,833,000**	**$ 250,975,000**	**$ 310,529,000**	**$ 235,115,000**	**$ 116,811,000**	**$ 29,304,000**	**$ -**

*The expenses reflected in the above table will be supported by a combination of Wake Transit revenues and federal discretionary grants.

Note: The adopted 2016 Wake County Transit Plan anticipated that costs and timing for major capital project implementation would be adjusted based on the best information available that may be refined as projects undergo further study. Assumed cost information for major capital projects included in Annual Wake Transit Work Plans is continually updated through each Work Plan development cycle to reflect findings from further project-level study, including alternatives analysis and preliminary engineering associated with the project development process. It is anticipated that costs and schedules for major capital projects will continue to be refined as better project-level information becomes available.

TC005 – BUS RAPID TRANSIT*															
Project Sponsor	**Project ID**	**Project**	**Funding Source**	**Phase**	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**FY 2030**
City of Raleigh	TC005-A1	New Bern Corridor Bus Rapid Transit Facility**	Wake Transit Tax Proceeds	Project Development and Final Design	$ 4,947,000	$ 1,953,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
				Right-of-Way	$ -	$ 44,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
				Construction	$ -	$ 22,199,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
				Vehicles	$ -	$ 4,024,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Federal	All Phases	$ -	$ 35,655,100	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			City of Raleigh	All Phases	$ -	$ 3,261,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC005-A2	Southern Corridor Bus Rapid Transit Facility**	Wake Transit Tax Proceeds, Federal	Project Development and Final Design	$ 6,539,515	$ -	$ -	$ 7,600,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
				Right-of-Way, Construction, Vehicles			$ -	$ -	$ 108,900,000	$ -	$ -	$ -	$ -	$ -	$ -
	TC005-A3	Western Corridor Bus Rapid Transit Facility**	Wake Transit Tax Proceeds, Federal	Project Development and Final Design	$ 8,289,515	$ -	$ 12,000,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
				Right-of-Way, Construction, Vehicles			$ -	$ 162,000,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	TC005-A4	Northern Corridor Bus Rapid Transit Facility**	Wake Transit Tax Proceeds, Federal	Project Development and Final Design	$ 5,539,515	$ -	$ -	$ -	$ 6,544,720	$ -	$ -	$ -	$ -	$ -	$ -
				Right-of-Way, Construction, Vehicles	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,805,760	$ 20,075,120	$ 24,603,280	$ 19,438,640	$ -
TBD	TBD	Cary - RTP Bus Rapid Transit Facility	State	All Phases	$ -	$ -	$ -	$ -	$ -	$ 1,916,750	$ 1,916,750	$ 1,916,750	$ 4,025,000	$ 4,025,000	$ 11,500,000
TBD	TBD	Garner - Clayton Bus Rapid Transit Facility	State	All Phases	$ -	$ -	$ -	$ -	$ -	$ 1,916,750	$ 1,916,750	$ 1,916,750	$ 4,025,000	$ 4,025,000	$ 11,500,000
				BUS RAPID TRANSIT TOTAL	**$ 25,315,545**	**$ 67,136,100**	**$ 12,000,000**	**$ 169,600,000**	**$ 115,444,720**	**$ 3,833,500**	**$ 10,639,260**	**$ 23,908,620**	**$ 32,653,280**	**$ 27,488,640**	**$ 23,000,000**

*The expenses reflected in the above table will be supported by a combination of Wake Transit revenues, other local and state funds, and federal discretionary grants.

Note: The adopted 2016 Wake County Transit Plan anticipated that costs and timing for major capital project implementation would be adjusted based on the best information available that may be refined as projects undergo further study. Assumed cost information for major capital projects included in Annual Wake Transit Work Plans is continually updated through each Work Plan development cycle to reflect findings from further project-level study, including alternatives analysis and preliminary engineering associated with the project development process. It is anticipated that costs and schedules for major capital projects will continue to be refined as better project-level information becomes available.

Project Sponsor	Project Category	Project ID	Project
City of Raleigh	Bus Operations	TO005-AH	New Route 34: Wake Tech North*
		TO005-AJ	New Route 29: Garner-Wake Tech*
		TO005-AY	New Route 23: Millbrook*
GoTriangle	Bus Operations	TO005-AS	Route NRX Improvements* (Added trips, full buildout)
Town of Cary	Bus Operations	TO005-AZ	New Morrisville-Cary Route**
		TO005-BA	New Cary-Airport Route**

Note: Deferral of these services also entails deferral of corresponding capital needs, including expansion vehicles and bus stop improvements.

*New GoRaleigh Routes 23 (Millbrook), 29 (Garner-Wake Tech), and 34 (Wake Tech North) and additional trips on GoTriangle's NRX route were originally included for investment in the FYs 2018-2027 Wake Bus Plan and Multi-Year Operating Program. Due to funding limitations identified through the Wake Transit Plan Update and the FY 21 Wake Transit Work Plan reassessment process, in which projects were reprioritized and reprogrammed to rebalance expenditures with reduced revenue assumptions, financial capacity for these investments has not been identified within the 2030 Wake County Transit Plan horizon. As plan implementation continues and revenue and expenditure assumptions are refined for the full Wake Transit program, investment in these services will continue to be considered for potential funding. While Routes 29 and 34 could not be included, the Wake Tech North campus is currently served and will continue to be served by GoRaleigh Route 25L: Triangle Town Link. The Wake Tech South campus is currently served and will continue to be served by GoRaleigh Route 40X: Wake Tech Express. The new Route 29: Garner-Wake Tech would only operate when Route 40X is not otherwise operating due to campus closures for breaks, holidays, weather events, etc.

**Projects completely eliminated from further consideration

Appendix F:

Wake County Transit Plan

(FY2021-2030) Update

Community Engagement Report

GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT

Table of Contents

1 Executive Summary

The Wake County Transit Plan Update process started in the fall of 2019 (also referred to as the "Vision Plan Update"). CAMPO, transit agencies, and members of the Wake County Transit Planning Advisory Committee (TPAC) continue to prioritize and weigh the benefits of transit investments recommended in the 2016 Wake County Transit Plan. This engagement effort served as a community check-in to confirm Wake County's transit investment priorities for the next 10 years (through FY2030). COVID-19 and associated impacts to sales tax revenue were not anticipated. Projections reveal that a decrease in this revenue is likely to reduce funding available for projects for several years into the future compared to more optimistic conditions shortly before the onset of the pandemic. Therefore, gathering community feedback on transit investment priorities is important to inform the rescheduling of Wake County Transit Plan investments through 2030 to rebalance their ability to be implemented with updated revenue assumptions.

Members of the public and stakeholders from Wake County communities were engaged through a survey and virtual meetings to gain feedback on investment priorities and additional comments regarding the Wake County Transit Plan update. The survey was available through a public engagement period during the summer of 2020 (August 3, 2020 – August 31, 2020), and 1,704 survey responses were received, with over 2,500 views to the Wake Transit Priorities Survey Site. Of the survey respondents, 48% and 39% identified themselves as a transit user (have used transit within the previous year) or underserved, respectively.

Based on the survey responses received from the public:

- Service improvements related to coverage were rated the highest, and those associated with span of service rated the lowest;
- Infrastructure improvements related to speed and reliability were rated the highest, and those associated with vehicle upgrades rated the lowest; and
- Respondents preferred ridership over coverage, speed over access, regional over local service, and service investment over infrastructure investment.

The stakeholder meetings held in September and November of 2020 included representation from Wake County municipal elected officials, higher education institutions, the business community, citizens, non-profit organizations, and community advocacy groups. Based on polling results, the targeted stakeholders prioritized ridership and coverage similarly, with a focus on speed (making routes faster) over greater access and infrastructure investment over service investment. Frequency, coverage, and span were identified as important service investments with speed and reliability prioritized highest for infrastructure investments. Bus rapid transit (BRT) and commuter rail continue to be identified as major modal priorities among the engaged stakeholders.

The transit investment input from the public, stakeholders, and Wake Transit project sponsors was used to develop a methodology to prioritize and reprogram Wake Transit Investments from FY2021 through FY2030.

2 Summary of Summer/Fall Engagement

ENGAGEMENT APPROACH

The engagement effort was a collaborative effort led by CAMPO, with support from GoTriangle, members of the Wake Transit Planning Advisory Committee (TPAC), and the consultant team. The engagement effort focused on reaching out to the overall Wake County community and specific stakeholders.

Purpose of Engagement

The Wake County Transit Plan makes a commitment to check in with the community as projects are implemented. This engagement effort served as a community check-in to confirm Wake County's transit investment priorities for the next 10 years (through FY2030). COVID-19 and associated impacts to sales tax revenue were not anticipated. Projections reveal that a decrease in this revenue is likely to reduce funding available for projects for several years into the future compared to more optimistic conditions shortly before the onset of the pandemic. Therefore, gathering community feedback on transit investment priorities is important to inform the rescheduling of planned investments through FY2030.

Advertisement / Announcements

CAMPO, GoTriangle, GoRaleigh, GoCary, and TPAC partners worked together to advertise the opportunity for public engagement using the "GoForward" branding. There was local news coverage, links provided on numerous websites, fliers and posters (printed and available for posting to online platforms), and many Facebook posts and tweets linking to the survey.

Engagement Materials

Materials for the Summer/Fall 2020 public engagement effort consisted primarily of materials that could be easily shared and accessed through online platforms. These engagement materials were made available for print to TPAC members and transit agencies.

- Survey – both in hard-copy and online through MetroQuest.
- A series of "boards" that summarized key aspects of the Wake Transit Plan update including boards showing public engagement activities and outcomes, updated schedules and financial information, and the overall Wake County Transit Plan implementation timeline.
- PowerPoint presentation presented to stakeholders highlighting updates and requesting feedback on priorities for implementation of the Wake County Transit Plan.

ENGAGEMENT EVENTS AND ACTIVITIES

This round of outreach was more targeted than previous rounds, as the focus was to confirm transit investment priorities and focus on a three-year period (through FY2030) of potential additional investment being added to the Wake County Transit Plan. The engagement primarily included the survey, which was made available to the entire community, and targeted stakeholder events. CAMPO hosted a partner workshop prior to the engagement period to inform partners of planned outreach, available advertising materials, and resources to promote engagement. Overall, the Wake County community seems excited about the future of transit in Wake County and want to see improvements as soon as possible.

Stakeholder Events

Stakeholders were formally introduced to the Wake County Transit Plan update in November of 2019. The Summer/Fall 2020 engagement included two rounds of stakeholder input sessions. The first round of input sessions took place September 14, 15, and 17, and gauged stakeholder investment priorities. The second round of stakeholder input sessions was held November 19 and 20 to confirm reprioritization and reprogramming of the Wake County Transit Plan multi-year investment strategy. Both rounds of stakeholder input sessions included a presentation, polling questions, and an opportunity for discussion. Additionally, a virtual "Welcome Room" was made available where stakeholders could review updated materials before and after the sessions.

Stakeholder Letters

The Regional Transportation Alliance and WakeUp Wake County, in collaboration with Habitat for Humanity of Wake County, submitted formal letters to CAMPO during the community engagement process. These letters offered support for continued implementation of the Wake County Transit Plan and requested additional components to meet community needs. Stakeholder letters are attached in **Exhibit A**.

MetroQuest Survey

A survey was created through MetroQuest where community members could provide feedback on investment priorities and additional comments regarding the Wake County Transit Plan update. Hard copies of the survey were also available, and those received were incorporated into the MetroQuest results.

3 Survey Results

SUMMARY

The survey was available through a public engagement period during the summer of 2020 (August 3, 2020 – August 31, 2020). There were 1,704 survey responses and over 2,500 views to the Wake Transit Priorities Survey Site. Of the 1,704 survey responses received for the Wake Transit Priorities Survey, 117 of those were received via paper surveys, while the others were received online via MetroQuest.com. A snapshot and analysis of survey responses and major themes conveyed through comments are shown below. **Exhibit B** includes survey choices detailed by demographic cohorts.

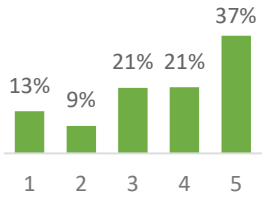
PROJECT PRIORITIES – SERVICE

Rating

Transit service improvements are an important part of the Wake County Transit Plan, and responses to this question are used to confirm the community's transit service investment priorities and to reprioritize planned transit service investments planned through FY2030. Transit service improvements were ranked by importance to the respondent. Improvements that mattered most were ranked with five (5) stars, while improvements that mattered the least were ranked with one (1) star. A summary of service improvement choices, average ratings, and rating distributions are shown below. The average ratings illustrate the average priority rating given to each service topic area, while the rating distribution shows the percentage of respondents that rated each service improvement. For example, 37% of the respondents rated Frequency as a five (5) (their most important improvement). Overall, service improvements related to coverage were rated the highest, and those associated with span of service rated the lowest.

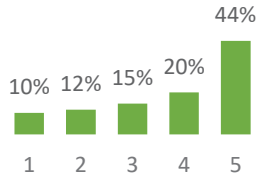
Frequency
Transit comes to stops and stations more often

Average Rating = 3.60



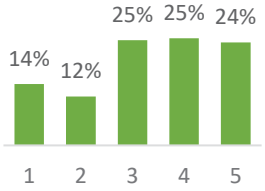
Coverage
More communities and neighborhoods get some transit service

Average Rating = 3.76



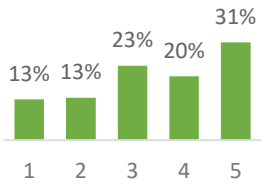
Span
Transit runs on more days of the week and/or for more hours each day

Average Rating = 3.33



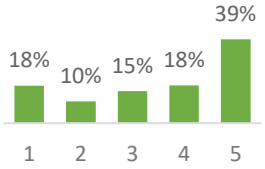
Local Service
Expand/enhance transit services operating within a city or a town

Average Rating = 3.43



Regional Service
Expand/enhance transit that connects cities and towns to each other

Average Rating = 3.51



Comments

The table below summarizes the number of comments received from respondents related to each topic area for service priorities. Below the table is a summary of the comments relating to each topic. A spreadsheet of all comments received can be found in **Exhibit C**.

Service Comments – Primary Focus	# of Comments
Suggested Additional Service Topic	36
Frequency	43
Coverage	42
Span	28
Local Service	26
Regional Service	47

Suggested Additional Service Topic

Respondents were allowed to recommend their own service topic if the provided categories did not fit their priorities. Bus rapid transit (BRT) was cited 22 times by commenters as a suggested service topic. Other comments highlighted recommended route enhancements, Transportation Network Company (TNC) partnerships, and rail.

Frequency

Forty-two (42) comments were received regarding Frequency. The bus coming more often helps to achieve the Wake Transit big move of providing frequent, reliable urban mobility. Ten (10) comments focused on what frequent service meant to them. Some highlighted the need for better than 60-minute service when connecting with jobs, while others noted that 30-minute service is not sufficient and a true frequent network needs to contain 10-, 15-, or 20-minute headway routes. Five (5) comments offered suggestions for how to prioritize frequent service, such as focusing on routes with the highest ridership and focusing investment on those corridors.

Coverage

Expanding bus service to provide coverage will help to achieve the Wake Transit big move of connecting all Wake County communities. Eight (8) comments focused on the need to prioritize coverage-oriented service based on criteria such as land use, projected ridership, and environmental justice areas. Three commenters noted a preference to invest in sidewalks, bike paths, and park-and-rides as a way to effectively extend the coverage of existing transit service. Additionally, commenters recommended certain communities for additional service.

Span

Increasing the span of operation for bus service can make more transit trips possible. Four (4) commenters noted how the typical workday is changing in that more and more people are working night shifts and flexible hours that are outside of the conventional commuting hours. Others recognized the need for span of routes to be customized to the destinations and employment centers they serve. Additionally, two (2) commenters asked for a mid-day run of express regional bus services.

Local Service

Four (4) commenters noted that the key to local service is access (i.e., feeling safe on the first and last mile to the transit stop is critical). Other commenters gave specific recommendations for increased service along routes and within municipalities.

Regional Service

Investing in regional service aids in accomplishing the Wake Transit big moves of connecting Wake County communities and the Triangle region. Three (3) commenters mentioned the need for regional service to serve special events like sporting events and concerts. Others noted opportunities for growth in regional service to destinations other than Downtown Raleigh. Additionally, commenters recommended service to specific municipalities and the airport.

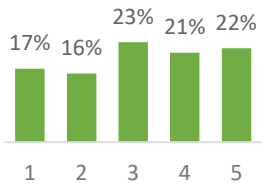
PROJECT PRIORITIES – INFRASTRUCTURE

Rating

Transit infrastructure improvements are a key component of the Wake County Transit Plan, and responses to this question are used to confirm the community's transit infrastructure investment priorities and to reprioritize planned transit infrastructure projects through FY2030. Transit infrastructure improvements were ranked by importance to the respondent. Improvements that mattered most were ranked with five (5) stars, while improvements that mattered the least were ranked with one (1) star. A summary of infrastructure improvement choices, average ratings, and rating distributions are shown below. The average ratings illustrate the average priority rating given to each infrastructure topic area, while the rating distribution shows the percentage of respondents that rated each infrastructure improvement. For example, 22% of the respondents rated Facilities as a five (5) (their most important improvement). Overall, infrastructure improvements related to speed and reliability were rated the highest, and those associated with vehicle upgrades rated the lowest.

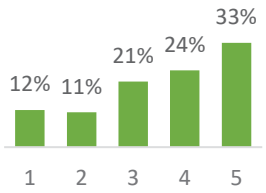
Facilities
Facility improvements (new/upgraded bus stops, stations, or park & rides)

Average Rating = 3.14



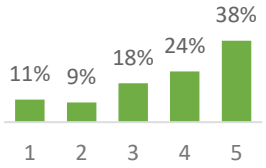
Technology
Real-time travel information, ticketing, passenger communications systems, Wi-Fi access

Average Rating = 3.55



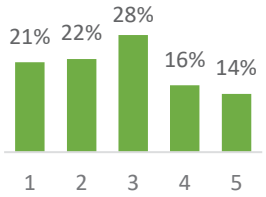
Connecting Infrastructure
Connections to transit through new/improved sidewalks, crosswalks, bike paths

Average Rating = 3.70



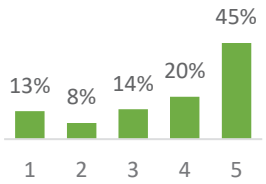
Vehicles
New buses, bus upgrades, and improvements to bus comfort

Average Rating = 2.79



Speed & Reliability
Dedicated bus lanes, rail transit, traffic signals that allow bus priority at intersections, faster ticketing

Average Rating = 3.77



Comments

The table below summarizes the number of comments received related to each topic area for infrastructure priorities. A spreadsheet of all comments received can be found in **Exhibit C**.

Infrastructure Comments – Primary Focus	# of Comments
Suggested Additional Infrastructure Topic	29
Facilities	42
Technology	37
Connecting Infrastructure	35
Vehicle	42
Speed & Reliability	39

Suggested Additional Infrastructure Topic

Respondents were allowed to recommend their own infrastructure topic if the provided categories did not fit their priorities. Twenty-three (23) of the comments focused on the need for BRT to be prioritized. Additional comments included recommending reloadable fare card infrastructure and the need for a clean bus fleet.

Facilities

One aspect of the Wake County Transit Plan is improving bus stops and shelters. There were 18 comments regarding transit shelters. Commenters emphasized the importance of having a shelter at stops. Additionally, commenters noted that shelters may not be as important on frequent routes where wait times are not as long, as well as the need for stops to be ADA accessible. The importance of park-and-rides were commented on four (4) times, while branding and appearance of stops was commented on three (3) times.

Technology

Investing in technology can help improve the customer experience by making transit easier to use. The most common theme in comments regarding technology, mentioned 14 times, was real-time information. Some commenters did not know that it is currently possible to track buses via smart phone apps, while others knew about the current capabilities but emphasized the need for more accurate information when it comes to bus arrivals. Additionally, seven (7) comments were received related to fare payment and specifically the need for easier payment methods such as off-board fare payment, e-ticketing, and monthly passes.

Connecting Infrastructure

Connecting infrastructure such as bike facilities, sidewalks, and crosswalks make it easier and safer for transit users to begin and end their trip. Commenters voiced the overall need for safe bike and pedestrian infrastructure connecting to transit. Comments noted the shared benefits with the broader community from improved sidewalks and bike infrastructure, as well as improvements to accessibility. Others noted the need for investment in connecting infrastructure to be a partnership with local government. There were also multiple spot pedestrian infrastructure recommendations such as crosswalks at specific intersections, transit centers, and park-and-rides.

Vehicle

Nine (9) commenters agreed that the current vehicle fleet is in a good state and not in need of major investment. While GoRaleigh is transitioning to a compressed natural gas fleet, eight (8) comments focused on the desire to shift the fleet towards electric power. Others (five [5] comments) indicated the need to right-size vehicles and use smaller transit vehicles on routes with lower ridership.

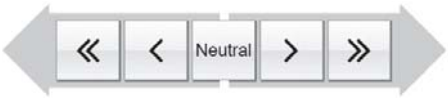
Speed & Reliability

Creating frequent, reliable urban mobility and investing in projects that improve speed and reliability is key to implementing the Wake County Transit Plan. Four (4) commenters noted the importance of investing in speed and reliability improvements such that transit becomes competitive with car travel times. Other commenters debated the efficacy of BRT and rail as a mode for the region with no clear consensus.

PROJECT TRADEOFFS – SERVICE QUALITIES

Core to the Wake County Transit Plan is improving transit. However, planners need to know which projects to prioritize given constrained funding. Responses to the tradeoffs question are used to confirm the community's transit tradeoff preferences and to reprioritize planned transit service improvements through FY2030. A summary of the tradeoff preferences from the public is shown below. Each button shows the number of times selected and percent of total responses selected for each level of preference. For example, 366 respondents or 26% of all respondents preferred to have all the investment go towards ridership-oriented investments over coverage-oriented investments. Overall, respondents preferred ridership over coverage, speed over access, regional over local service, and service investment over infrastructure investment.

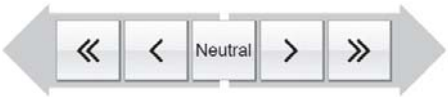
Ridership
Increase service hours and days where more people are (serves more people in busier areas)



382 406 262 279 187
25% 27% 17% 18% 12%

Coverage
Provide some service to more places (serves more communities but fewer people)

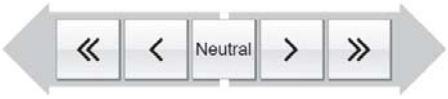
Speed
Faster Routes (More direct route, Fewer stops, Shorter trip from A to B)



382 341 264 313 210
25% 23% 17% 21% 14%

Access
More Stops & Stations (Shorter walk to a stop, Longer trip from A to B)

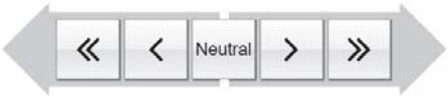
Regional
Transit services that connect cities and towns to each other



352 341 275 254 271
24% 23% 18% 17% 18%

Local
Add/increase transit services that run inside your town/city limits

Service
Adding new services and routes and buses come more often



348 356 257 257 260
24% 24% 17% 17% 18%

Infrastructure
Bus shelters, sidewalks, bus lanes and other projects that make transit faster and easier to use

Comments

The table below summarizes the number of comments related to each project trade-off topic area.. A spreadsheet of all comments received can be found in Exhibit C.

Tradeoff Comments – Primary Focus	# of Comments
Service vs Infrastructure	46
Ridership vs Coverage	36
Speed vs Access	43
Regional vs Local	27

Service vs Infrastructure

Wake County Transit Plan investments support projects improving transit service, such as adding new routes and increasing service on existing routes, as well as projects that make using transit a better experience, from bus shelters to bus lanes and more. Of the comments, the desire for BRT was noted in 15 comments and bus lanes two (2) times. Additionally, seven (7) commenters highlighted the need for shelters at stops. Others noted the service vs infrastructure tradeoff should be decided on a local or route level.

Ridership vs Coverage

The Wake County Transit Plan set the goal of shifting from a coverage-based transit system where all people get a little bit of service to more of a ridership-based transit system providing more frequent service on high demand corridors. Those who commented highlight BRT 13 times, while three (3) commenters noted the need for improvements to be prioritized by those that serve environmental justice populations.

Speed vs Access

Route design can influence the speed to which transit can operate between destinations, as well as the access that the service can provide to communities. BRT was mentioned 15 times as important, while four (4) commenters noted the need for any type of speed-oriented project to be accompanied by sidewalk improvements to enhance pedestrian access. Others (six [6] commenters) said that speed vs access route design decisions should be made on a route level considering population served, distance of service, and alternative service along a corridor.

Regional vs Local

The Wake County Transit Plan aims to both connect the region and create a frequent, reliable urban mobility network. Three (3) commenters noted rail as a preferred mode for regional transportation. Others noted the need for mobility hubs to leverage regional and local investments to make both more effective.

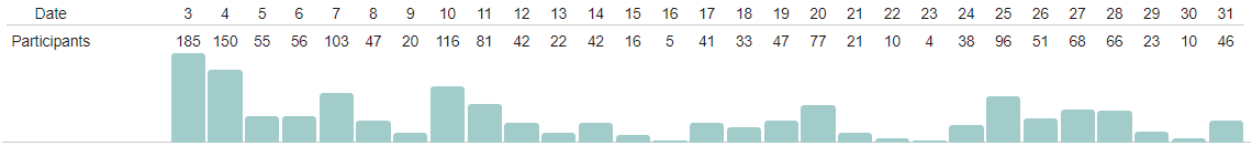
EFFECTIVE OUTREACH

The study team's goal was to ensure that the diverse communities in Wake County are represented in the survey responses collected during the outreach effort. The table below details participation goals and representation for the survey responses.

Participation Categories	Goal	Actual
Total Surveys Collected	450+	1,704
Transit User (Have Used Transit Within the Previous Year)	50%	48%
Underserved Participants (Those Who Identify as One or More of the Following Underserved Populations)*	50%	39%
Minority	40%	32%
Low Income/ Poverty (Less than $30,000)	8%	17%
Disability	14%	13%
Younger Than 18	24%	0.4%
65 and Older	12%	19%

*not all survey respondents completed demographic information

There was a total of 1,704 survey responses. The graph below shows the responses to the online survey by date.



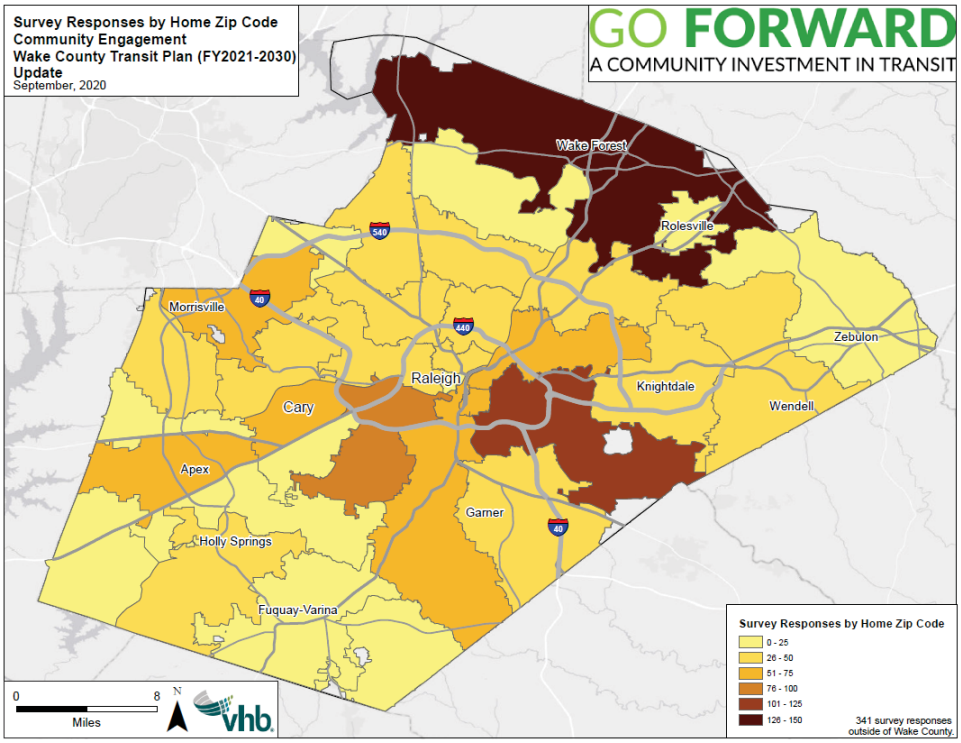
It is important to understand which methods of outreach are the most effective at encouraging and directing residents to take the survey. When asked how they heard about this survey, the following outreach channels were cited:

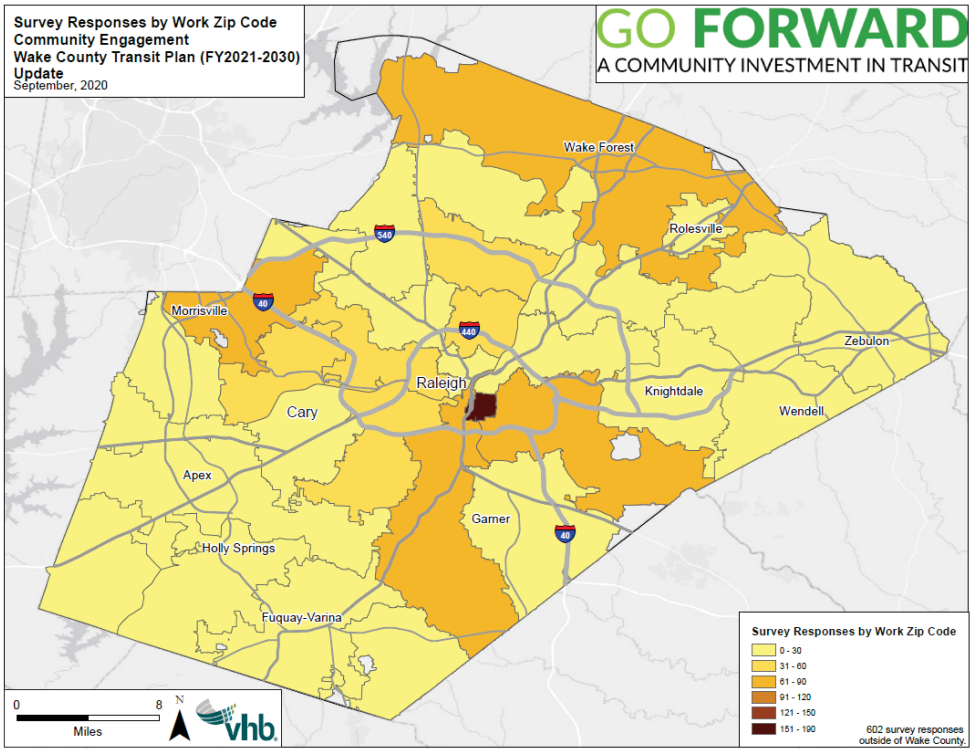
- Facebook - 375
- Twitter – 171
- Email – 540
- Newsletter – 78
- Meeting – 67
- Website – 112
- Poster/Flier - 77

Agencies and organizations helped make outreach more effective by reaching their stakeholders. Some of the agencies and organizations that were cited included:

- GoRaleigh, GoCary, GoTriangle and GoForward
- Habitat for Humanity
- Meals on Wheels
- North Carolina Society of Hispanic Professionals
- Municipality email blasts and newsletters
- DT Raleigh Community Forum

Survey responses were received throughout Wake County. The figures below demonstrate responses received by both home and work zip codes.

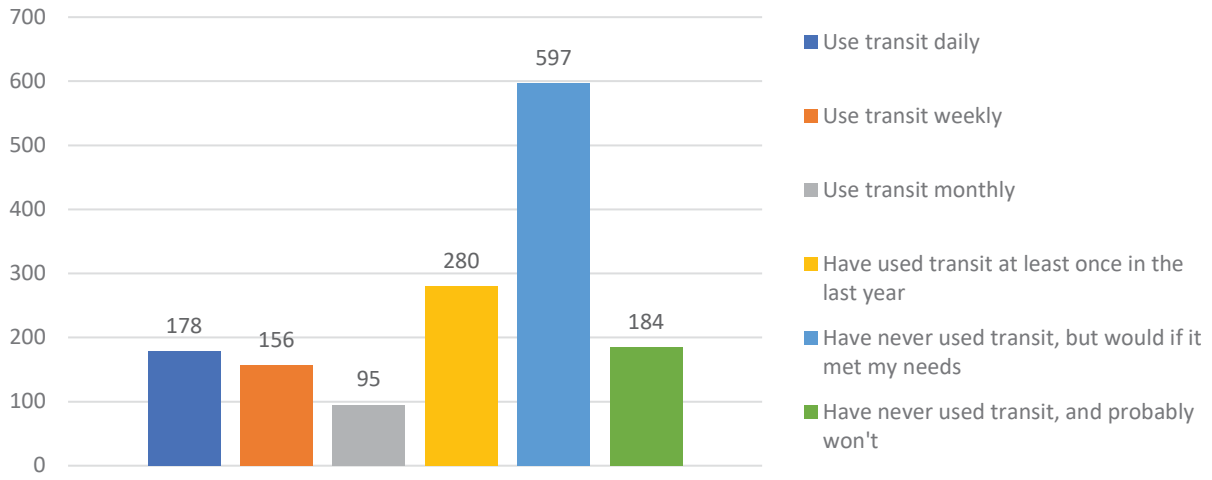




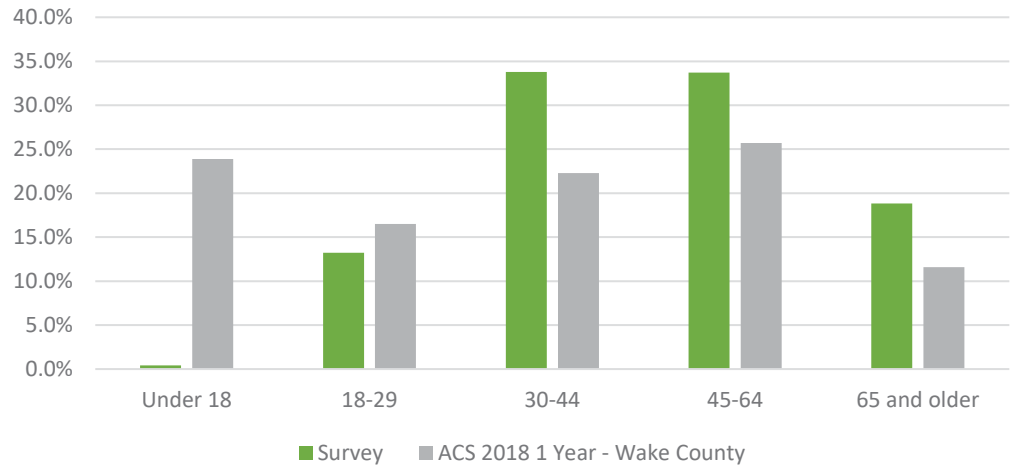
Respondents were asked to identify their connection with Wake County. Overwhelmingly, respondents identified themselves as a community member (see breakdown below).

- Community Member – 1,126
- Business Owner/Employer - 50
- Non-profit Organization - 35
- Faith-based Organization - 10
- Human Service Agency - 8
- K-12 Educator/Student - 32
- College/University Educator/Student - 65
- Local Government Staff - 73
- State/Federal Government Staff - 40
- Elected Official - 21

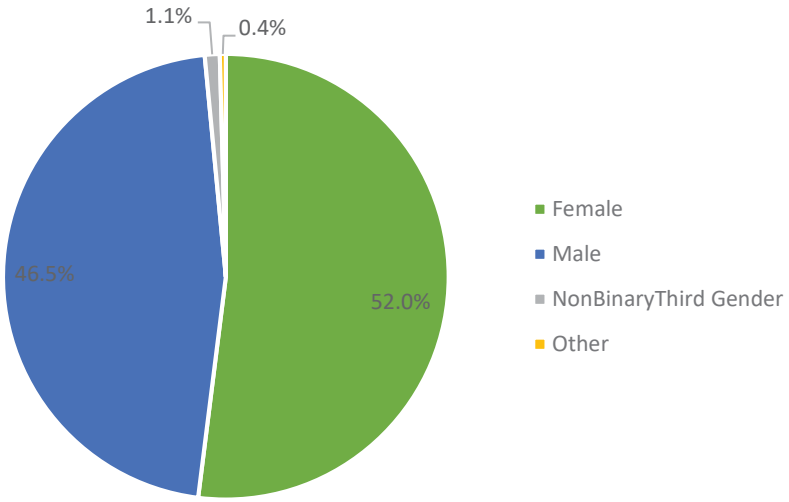
Respondents were also asked about their transit use. Approximately 52% of the respondents indicated that they have never used transit, but would, and 29% of the respondents use transit at least once a month.



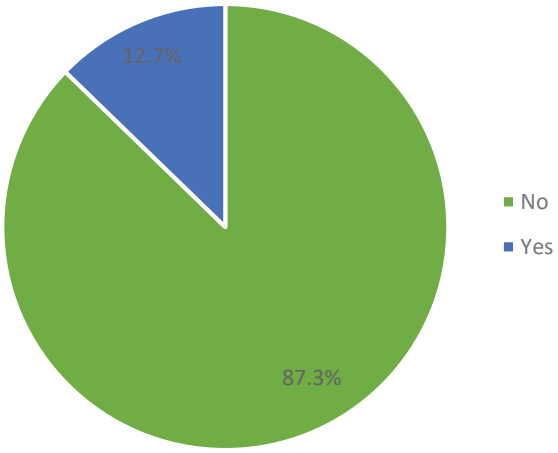
The majority of the survey respondents were between the ages of 30-64 years old. Youth (under 18) was the age least represented in the survey (see figure below).



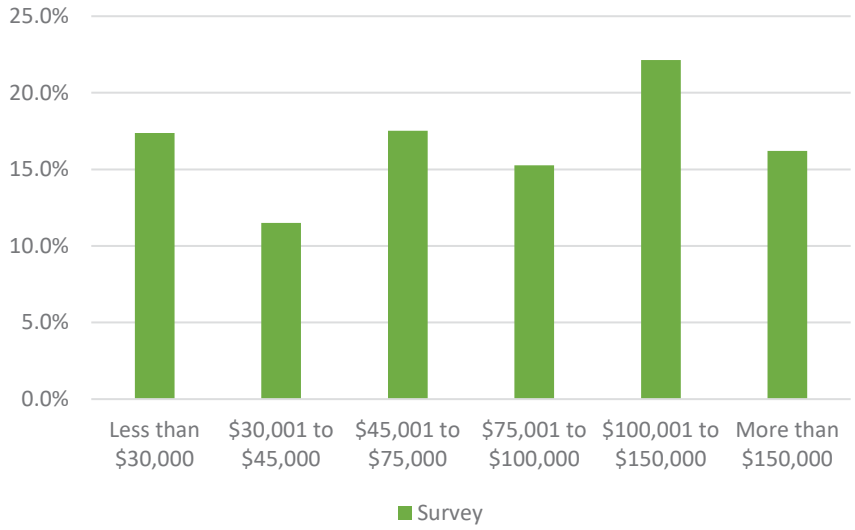
The gender representation of the survey respondents was split close to half between male and female (see figure below).

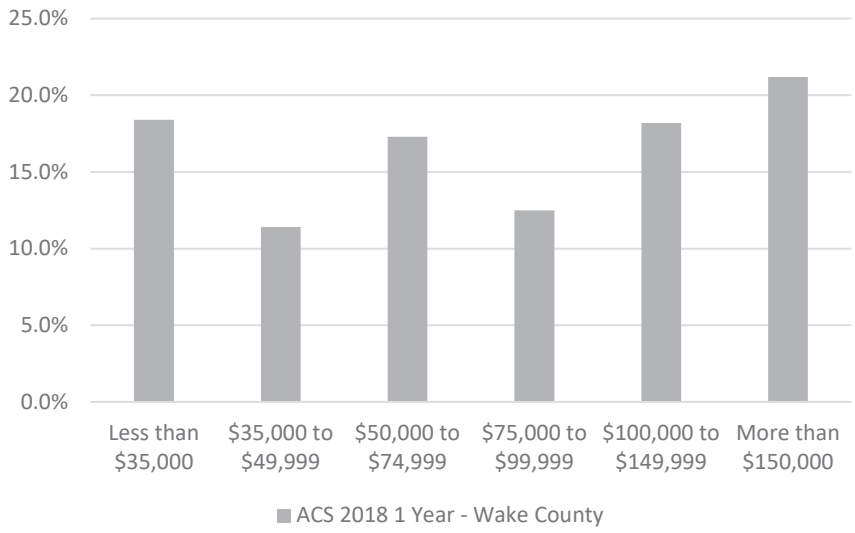


Approximately 11.8% of the survey respondents indicated having a disability (see figure below).

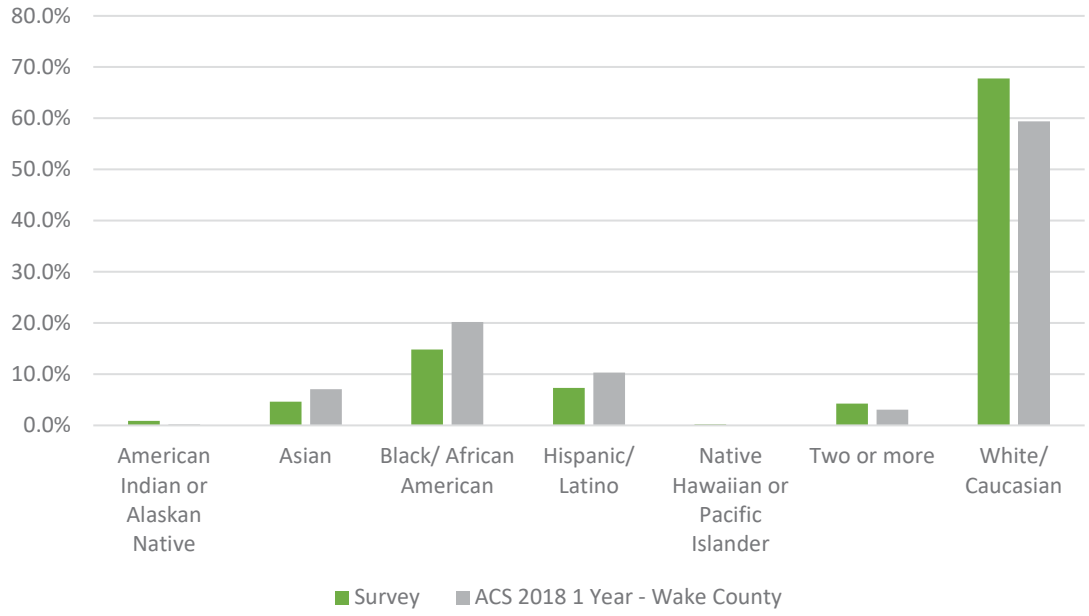


The distribution of annual household income among the survey respondents was representative of Wake County.

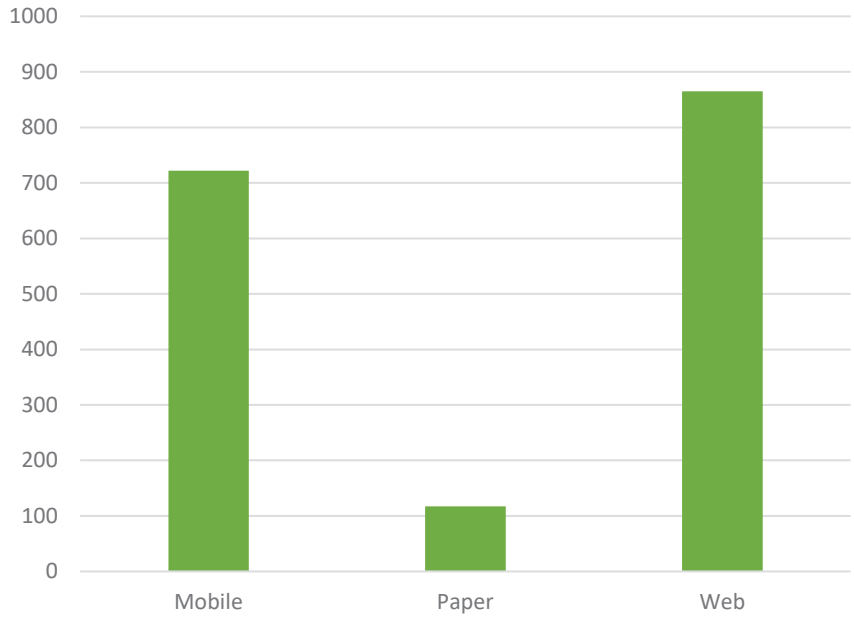




The distribution of the race of respondents was slightly over-representative of White/ Caucasian and under-representative of minorities compared to the Wake County demographic profile.



A majority of survey responses occurred virtually via MetroQuest.com. Of the surveys completed online, approximately 45% were completed using a smartphone.



4 Stakeholder Meeting Results

SEPTEMBER STAKEHOLDER MEETINGS

The stakeholder meetings held in September of 2020 (three total) included representatives with a variety of interests from throughout Wake County. These stakeholders were invited to share their input on transit investment priorities with the Wake County Transit Plan development team. These events were highly interactive and built upon the results collected through the community survey conducted in August of 2020. Representatives from the following communities participated in the meetings:

- Apex, Town of – Council Member
- Business Community
- Garner, Town of – Citizen
- GoTriangle/CAMPO Board
- Morrisville, Town of – Mayor, Mayor Pro Tem
- Regional Transportation Alliance
- Shaw University – Administration
- Wake County – Office of Social and Economic Vitality
- Wake Forest, Town of – Mayor
- Wake Technical Community College
- WakeUp Wake County

Below is the event summary and the cumulative polling results from the three (3) events held in September 2020. It is important to note that poll responses directly reflect the knowledge, experience and location-specific representation interests of those in attendance. With a higher proportion of attendees located outside of the urban core, we had a great opportunity to discuss and gather more information on coverage-oriented priorities at these events.

The transit investment input from the public, stakeholders, and Wake Transit project sponsors was used to develop a methodology to prioritize and reprogram Wake Transit Investments from FY2021 through FY2030.

SEPTEMBER POLL RESULTS

Ridership vs Coverage

If you have $100 to spend over the next 10 years and could spend it on investments that:

A) Increase service hours and times of service where more people are located/concentrated, OR

B) Provide some service to more places

Answer	Number of voters	Percentage of voters
A $100, B $0	1	8%
A $75, B $25	**6**	**46%**
A $50, B $50	1	8%
A $25, B $75	**5**	**38%**
A $0, B $100	0	0%

Speed vs Access

If you have $100 to spend over the next 10 years and you could spend that money on services or investments that either:

A) Make routes faster (more direct routes and/or fewer stops), OR

B) Provide better access to routes with more stops/stations resulting in shorter trips to stops but longer transit trips

Answer	Number of voters	Percentage of voters
A $100, B $0	0	0%
A $75, B $25	**7**	**54%**
A $50, B $50	2	15%
A $25, B $75	3	23%
A $0, B $100	1	8%

Local vs Regional

If you have $100 to spend over the next 10 years and you could spend that money on investments that either:

A) Add or increase transit services within cities/towns/communities, OR

B) Add or increase transit services that connect cities/towns/communities to each other

Answer	Number of voters	Percentage of voters
A $100, B $0	0	0%
A $75, B $25	**4**	**31%**
A $50, B $50	**4**	**31%**
A $25, B $75	**4**	**31%**
A $0, B $100	1	8%

Infrastructure vs Service

If you have $100 to spend over the next 10 years and you could spend that money on either:

A) Bus shelters, sidewalks, bus lanes and other infrastructure that make transit faster and easier to use, OR

B) Adding new services and routes and having buses/services coming more often

Answer	Number of voters	Percentage of voters
A $100, B $0	0	0%
A $75, B $25	**6**	**46%**
A $50, B $50	2	15%
A $25, B $75	3	23%
A $0, B $100	2	15%

Service Investments

Of the following service improvement or investment categories, which three (3) are the most important:

Answer	Number of voters	Percentage of voters
A) Frequency: Transit comes to stops and stations more often	**10**	**77%**
B) Coverage: More communities and neighborhoods get some transit service	**9**	**69%**
C) Span: Transit runs on more days of the week and/or for more hours each day	**9**	**69%**
D) Regional Service: Expand/enhance transit that connects cities and towns to each other	8	62%
E) Local Service: Expand/enhance transit services operating within a city or a town	3	23%

Infrastructure Investments

Of the following infrastructure improvement or investment categories, which three (3) are the most important:

Answer	Number of voters	Percentage of voters
A) Facilities: Facility improvements (new/upgraded bus stops, stations, transit centers, or park & rides)	**9**	**75%**
B) Technology: Real-time travel information, ticketing, passenger communications systems, Wi-Fi access	**7**	**58%**
C) Speed and Reliability: Dedicated bus lanes, rail transit, traffic signals that allow bus priority at intersections, faster ticketing/off-board fare payment	**11**	**92%**
D) Connecting Infrastructure: Connections to transit through new/improved sidewalks, crosswalks, bike paths	**7**	**58%**
E) Vehicles: New buses, bus upgrades, and improvements to bus comfort	2	17%

Modal Priorities

Of the following categories of investment, which two (2) are the most important:

Answer	Number of voters	Percentage of voters
A) BRT: Implementing and expanding a Bus Rapid Transit (BRT) system in areas with highest ridership potential and denser areas of population and employment (Frequency, Span, Speed and Reliability, Ridership, Heavy Infrastructure)	**9**	**69%**
B) High-Frequency Bus: Expanding high-frequency local bus services in the urban core of the county where more people and jobs are concentrated (Frequency, Span, Speed, Ridership, Local Service, Service Heavy)	4	31%
C) Coverage Bus Services: Expanding conventional regional and local bus service to cover more areas throughout the county (Coverage, Regional Service, Local Service, Access, Service Heavy)	5	38%
D) Commuter Rail: Implementing an inter-county Commuter Rail corridor/system that connects major population and employment centers throughout the region	**7**	**54%**

Communication Methods

Let us know how you prefer that we circle back with you in November.

Answer	Number of voters	Percentage of voters
A) Schedule a virtual meeting like this one to review and discuss reprogramming recommendations	**9**	**75%**
B) Email a copy of the print version of the proposed reprogramming alternatives to review with a set deadline to submit any questions or comments you may have.	3	25%
C) Email a link to a recorded presentation of the proposed reprogramming alternatives that you can watch with a set deadline to submit any questions or comments you may have.	0	0%

NOVEMBER STAKEHOLDER MEETINGS

The stakeholder meetings held in November of 2020 (two total) included representatives with a variety of interests from throughout Wake County. These stakeholders were invited to share their input on transit investment priorities and programming with the Wake County Transit Plan development team. These events were interactive and focused on four (4) core components: financial forecast, role of stakeholders, investment prioritization methodology, and draft investment strategy through 2030. Representatives from the following communities participated in the meetings:

- Business Community
- Raleigh, City of – Citizen
- GoTriangle/CAMPO Board
- Knightdale, Town of – Council Member
- North Carolina Department of Transportation – Board Member and Staff
- Morrisville, Town of – Mayor
- Triangle J Council of Governments
- Wake County – Commissioners (two)
- Wake Forest, Town of – Mayor
- WakeUp Wake County
- Regional Transportation Alliance

Below is the event summary and the cumulative polling results from stakeholders at the two (2) events in November of 2020. It is important to note that poll responses directly reflect the knowledge, experience, and location-specific representation interests of those in attendance.

The transit investment input from the stakeholders was used to confirm investment programming of Wake Transit investments from FY2021 through FY2030.

NOVEMBER POLL RESULTS

Frequent, Reliable Urban Mobility

What is your overall level of satisfaction with the investment strategy for the Frequent and Reliable Urban Mobility Big Move?

Answer	Number of voters	Percentage of voters
Very Satisfied	5	36%
Satisfied	5	36%
Neutral	4	29%
Unsatisfied	0	0%

Connect the Region

What is your overall level of satisfaction with the investment strategy for the Connect the Region Big Move?

Answer	Number of voters	Percentage of voters
Very Satisfied	3	21%
Satisfied	8	57%
Neutral	3	21%
Unsatisfied	0	0%

Connect All Communities

What is Your Overall Level of Satisfaction with the Investment Strategy for the Connect All Communities Big Move?

Answer	Number of voters	Percentage of voters
Very Satisfied	5	33%
Satisfied	6	40%
Neutral	4	27%
Unsatisfied	0	0%

Enhance Access to Transit

What is Your Overall Level of Satisfaction with the Investment Strategy for the Enhance Access to Transit Big Move?

Answer	Number of voters	Percentage of voters
Very Satisfied	1	8%
Satisfied	4	33%
Neutral	6	50%
Unsatisfied	1	8%

Priority Framework

What is Your Overall Level of Satisfaction with the Priority Framework?

Answer	Number of voters	Percentage of voters
Very Satisfied	2	12%
Satisfied	11	69%
Neutral	3	19%
Unsatisfied	0	0%

Exhibit A

Stakeholder Letters

August 31, 2020

To: **Chris Lukasina**, Executive Director, Capital Area Metropolitan Planning Organization
Charles Lattuca, President and CEO, GoTriangle
Chris Dillon, Assistant Wake County Manager – Transit, Wake County Government

Dear Mr. Lukasina, Mr. Lattuca, and Mr. Dillon,

We appreciate the opportunity to offer comments on potential reprioritization of Wake Transit projects due to current and anticipated lower transit revenues.

The Regional Transportation Alliance business coalition continues to support the 10-year Wake Transit plan – including proposed investments in regional commuter rail, four bus rapid transit lines, and enhanced bus service overall – as well as the ongoing implementation of electric and compressed natural gas technologies for transit buses.

RTA understands that local transit revenues have not fallen in a vacuum**.** Circumstances include an extended pandemic, an economic downturn and the impact on families, uncertainty about funding and usage, and a renewed focus on equity in our region and nation.

While we recognize that reduced funding is a real challenge, we believe that the present situation calls for a willingness to take calculated risks and provide new opportunities that can accelerate recovery as the Wake Transit partners consider reprioritization.

In addition to continued movement on the approved plan, the RTA encourages an increased focus on flexibility, equity, and relief amidst uncertainty.

We have three requests to consider:

1. Formalize equity as a metric of success
2. Incorporate "FAST" framework principles for BRT corridors and possible extensions
3. Consider allocating funding for a possible zero fare weekends pilot in 2021

The following page provides some additional details.

Thank you for considering these suggestions, and for your leadership to provide an enhanced transit system for our community. Please let me know if you have questions.

Sincerely,

Joe Milazzo II, PE
Executive Director, Regional Transportation Alliance

Cc Jay Irby, RTA transit chair
John McGeary, RTA funding chair
Maeve Gardner, RTA chair

1. Formalize equity as a metric of success
As we noted in our FY 2019 letter, we encourage the core metric of building a more equitable community and increasing ridership to maximize community-wide benefits.

This equity lens should apply to the entire plan, including the creation of new bus rapid transit, the initiation of commuter rail, and the expansion of bus service overall, as well as possible complementary efforts such as the activation of a FAST network and/or a zero fare pilot.

2. Incorporate "FAST" framework principles for BRT corridors and possible extensions
As noted above, RTA supports the scalable completion of all four approved regional bus rapid transit (BRT) routes in Wake Co., along with the study to initiate regional commuter rail.

The ongoing Freeway And Street-based Transit ("FAST") study funded by RTA, GoTriangle, and NCDOT is examining ways to extend and connect the BRT corridors and complement future commuter rail by creating transit advantages along our roadway system.

In this time of limited funding and project delays, we encourage the inclusion of low-cost FAST principles and projects in the Wake Transit plan to accelerate an interconnected network of high-quality, regional transit that will accelerate and complement BRT and commuter rail.

The advancement of an expanded, higher-frequency, interconnected regional transit network will strengthen equity for the plan and for Wake County citizens, and can build on prior work including CAMPO's recent RED transit lanes study.

3. Consider allocating funding for a possible zero fare weekends pilot in 2021
We have previously lauded the implementation of zero fare for youth using sales tax revenue, and we support the upcoming initiation of mobile ticketing with a fare capping policy.

We encourage Wake Transit to consider other ways to enhance equity and provide relief in this challenging and uncertain economic time, even under a reduced funding environment.

One option is to continue our region's zero fare journey, by reserving funding to help defray the cost of a possible "zero fare weekends" pilot for at least one agency sometime in 2021.

From an ongoing study commissioned by RTA, we understand that yearly weekend fare revenue typically represents around 2% of total annual operational funding for area transit partners, so a focus on zero fare weekends would minimize financial risk to agencies.

Note: RTA recognizes that agencies have a number of legitimate concerns about launching a zero fare pilot at the present time, including lower and uncertain funding, higher costs, and issues concerning crowding. To that point, we understand that the ending of fare suspensions and a degree of normalization of service would precede the initiation of a pilot, and that it may or may not be possible for one or more agencies to launch an effective pilot in 2021.

###

December 8, 2020

To: Bret Martin, AICP, Wake Transit program manager

Dear Bret,

The Regional Transportation Alliance business coalition appreciates the opportunity to offer comments on potential reprioritization of Wake Transit projects in light of new revenue projections.

While we recognize that funding realities continue to present a challenge, we believe that the present situation calls for a willingness to take calculated risks and effective steps that can accelerate recovery and the realization of community goals, particularly around equity.

Given the regional business community's ongoing encouragement of an investment framework centered on flexibility, equity, and relief amidst uncertainty, we have three requests to consider:

1. Formalize equity as a metric of success for Wake Transit capital and operational improvements
2. Develop a funding pool to advance quick, low-cost "transit advantage" investments that incrementally develop an enhanced regional transit network while accelerating benefits now
3. Prepare a contingent support fund for a possible zero fare weekends pilot in 2021

The following page provides some additional details.

Thank you for considering these suggestions, and for your leadership to provide an enhanced transit system for our community. Please let me know if you have questions.

Sincerely,

Joe Milazzo II, PE
Executive Director, Regional Transportation Alliance

1. Formalize equity as a metric of success for Wake Transit capital and operational improvements

As we noted in our August 2020 letter, we encourage the institutionalization of building a more equitable community as a core metric of success for Wake Transit investments.

An equity lens should apply to the entire plan, including the launch of new bus rapid transit, the initiation of commuter rail, and the enhancement of bus service overall, as well as possible complementary efforts such as the incremental development of a regional Freeway And Street-based transit ("FAST") network via quick, low cost improvements, and/or a zero fare weekends pilot.

Maximizing overall transit ridership from the package of investments may serve as a reasonable proxy while additional equity measures are developed that speak to tradeoffs of time-to-implement, cost effectiveness, overall value of community benefits, and so on.

2. Develop a funding pool to advance quick, low-cost "transit advantage" investments that incrementally develop an enhanced regional transit network while accelerating benefits now

We encourage the creation of a funding pool to accelerate low-cost "transit advantage" investments. Doing so will advance quick wins that improve transit operations – lowering costs for operators while making transit more attractive for current and new customers.

We believe that transit advantage investments are consistent with, and should be considered part of, priority category 3: critical infrastructure needed to support existing and future service.

While it is useful to develop improved transit "stop" infrastructure like shelters for waiting customers, it is just as important to develop transit "go" infrastructure that keeps transit customers moving faster and more reliably to their destinations via queue jumps, RED transit lanes, and so on.

The improved funding situation affords the opportunity to create a "transit advantages" funding pool that can help the community incrementally and steadily realize an enhanced regional Freeway And Street-based Transit ("FAST") network, complement and leverage the success of our upcoming BRT corridors and future commuter rail, while quickly delivering benefits for transit riders now to enhance equity.

3. Prepare a contingent support fund for a possible zero fare weekends pilot in 2021

We believe that the improved funding situation – and current economic circumstances – create the opportunity to develop a contingent funding pool to help defray the costs and reduce the revenue risk of a potential zero fare weekends pilot for one or more transit agencies in 2021.

We understand that current economic, pandemic, ridership, and revenue conditions give agencies significant, reasonable pause about the prospect of launching any zero fare pilot in the near future.

Nonetheless, we believe that current conditions call for accelerated measures to support residents, and there is a substantial upside opportunity from both an equity and recovery standpoint – as well as a ridership and support for transit perspective – of pursuing a zero fare weekends pilot in 2021.

In addition, we understand that yearly weekend fare revenue typically represents around 2% of total annual operational funding for area transit partners, so a focus on zero fare weekends would minimize financial risk to agencies.

We have previously lauded the implementation of zero fare for youth, funded using sales tax revenue, and believe that a contingent support fund for a possible zero fare weekends pilot in 2021 would complement the upcoming initiation of mobile ticketing and associated fare capping policy, and further highlight this region's commitment to equity, recovery, and maximizing community investments in transit.

Cc Jay Irby, RTA transit chair
Pete Marino, RTA freeways chair
Adrianne Elder, RTA streets chair
Dave Byerley, RTA commuter rail chair
Brittany Chmielewski, RTA active transportation chair
John McGeary, RTA funding chair
Julia Wright, RTA policy chair
Scott Ralls, RTA workforce and equity chair
Maeve Gardner, RTA chair
Mike Schoenfeld, RTA chair-elect

Chris Lukasina, Executive Director, Capital Area Metropolitan Planning Organization
Chris Dillon, Assistant Wake County Manager – Transit, Wake County Government
Charles Lattuca, President and CEO, GoTriangle

VIA email: comments@campo-nc.us

September 1, 2020

Capital Area Metropolitan Planning Organization (CAMPO)
P.O. Box 590
Raleigh, NC 27601

Re: Wake Transit Plan Re-Prioritization Comments

Capital Area MPO Executive Board,

We believe that public transit, housing affordability, and land use are fundamentally tied together. Transportation costs can serve as a significant barrier to households struggling with housing affordability, as housing and transportation account for the largest percentage of the average household's budget. Access to reliable public transit boosts job opportunities and reduces costs, helping to enable economic mobility for families and residents across the county.

Four years ago, Wake County voters passed the Wake Transit Plan (WTP) with the intent that a portion of sales tax revenue would be used to create a state-of-the-art transit network connecting our communities with jobs and commercial centers. This would increase the opportunities for all residents and reduce car use in a growing region. Four years later, due to a virus created downturn, sales tax revenues are projected to fall, and you have asked the public for help reprioritizing plans over the next ten years. We are asking for the adoption of certain standards that we feel would fulfill the intent that voters approved, further improve housing affordability for many residents, and assist with the adoption of future capital projects.

While the *Wake Transit Service Guidelines and Performance Measures* drafted by Nelson\Nygaard Consulting Associates, Inc. sets standards for bus facilities, we believe more can and should be done to create a safe and reliable transit network. As transit routes are expanded and frequency increased throughout the county, stop standards will ensure residents can safely access bus stops and feel confident utilizing improved services. This will especially benefit underserved neighborhoods where the current lack of sidewalks and lighting make accessing transit stops unsafe. Standards within the built environment around bus stops could create safer settings for families and individuals to use reliable services with the knowledge that measures such as speed reductions, lighting, and sidewalks will reduce the likelihood of accidents and pedestrian fatalities.

We are asking that the following items be included as standards for all WTP funded projects.

Amenities suggested within ¼ mile radius of bus stops:

- Continuous and connected Sidewalks
- 0.4 to 1.2 foot-candles Lighting
- Canopy to shelter from rain and/or for shade
- Reasonable Speed limit reduction
- Concrete crosswalks at a minimum, HAWK signal technology suggested
- Protected bike lanes & access to a bike share where possible
- ADA accessibility including ramps, audio signals, etc.
- New multifamily and large commercial space development should include, at a minimum, these amenities, if not the stop itself

These standards are largely inclusive of what NCDOT already envisions as complete integrated streets. It is important that a process is created across transit agencies, NCDOT, and municipalities to ensure these standards are seamlessly implemented amidst differing jurisdictions.

We are suggesting these new standards because we know that housing and transit are linked, and that housing affordability is more than just the value of the home. We also believe that the increased walkability of neighborhoods around transit will have health and financial impacts that will lead to a better personal and county-wide economy.

We also believe that developers building around transit can share the cost and having a standard will make it easier to ensure properties fit the communities served by transit.

We approach this request with the knowledge that the reprioritization of the WTP is due to reduced revenues and that municipalities are experiencing their own financial stresses. However, we feel that a transit plan that does not facilitate safe usage by those who are most dependent on it runs counter to our community's goals for racial and economic equity, which voters support.

We look forward to more discussion regarding our comments and thank you for the opportunity to add them.

Sincerely,

Heather Vail Keefer
Executive Director
WakeUP Wake County

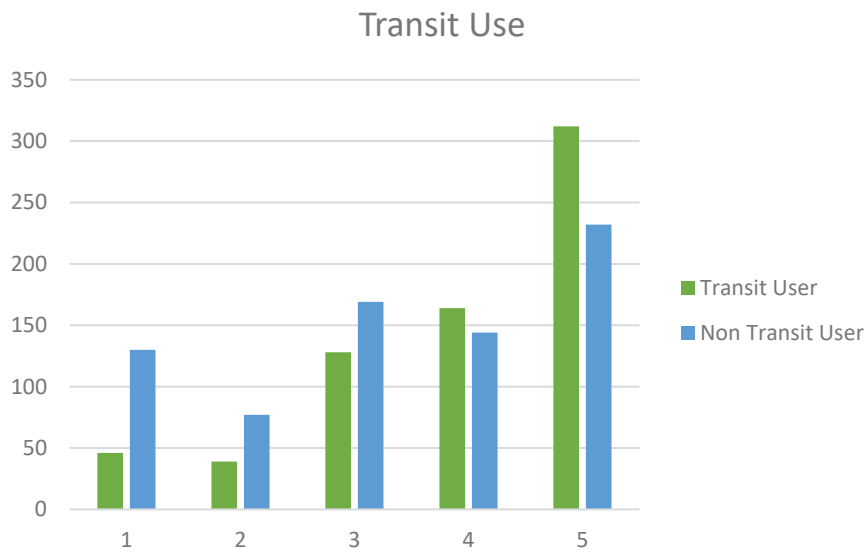
Bill Ahern
President/CEO
Habitat for Humanity of Wake County

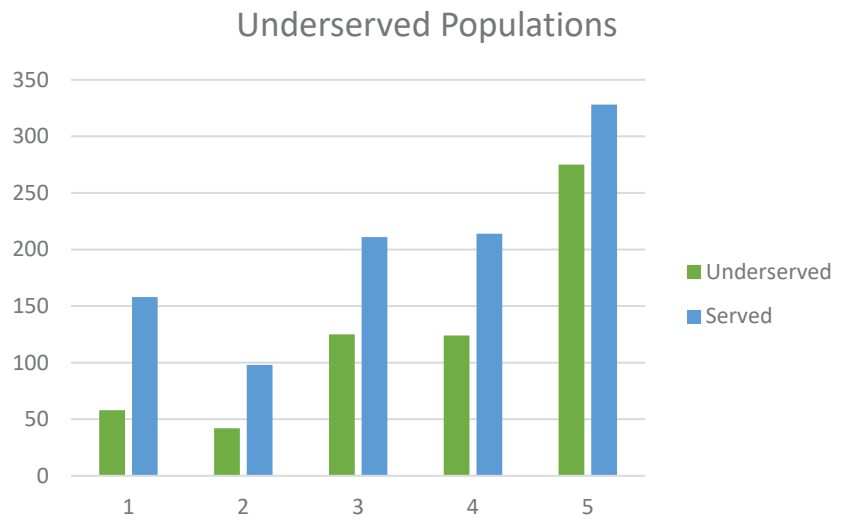
cc: Chris Lukasina, Executive Director
Sig Hutchinson, Executive Board Chair

Exhibit B

Survey Choices by Detailed Demographic Cohorts

Frequency (1 = Least Important, 5 = Most Important)

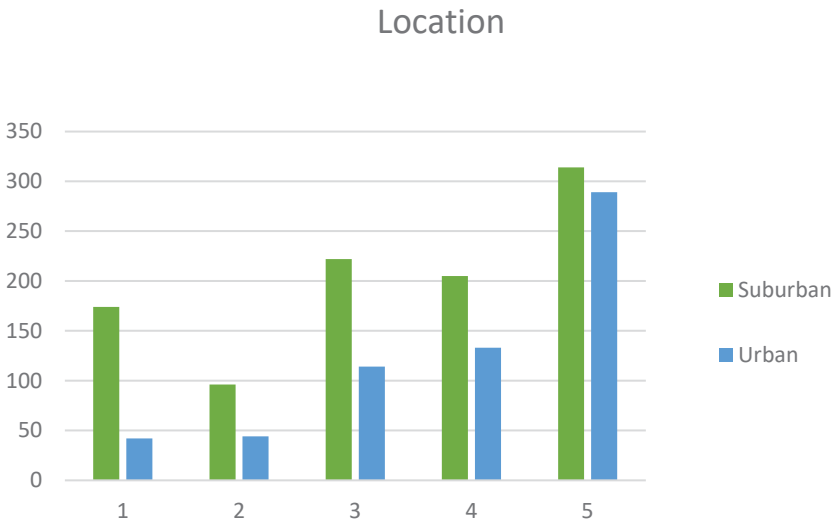


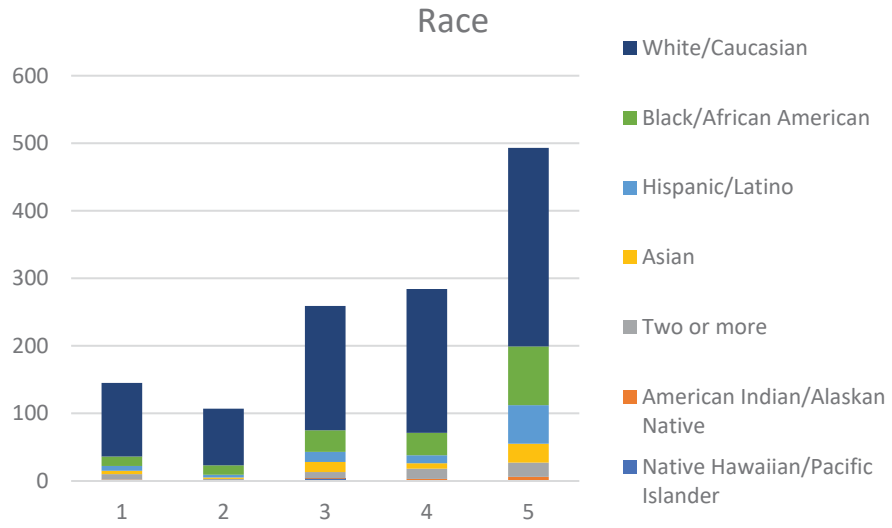


Frequency Rating	Transit User	Non-Transit User
1	46	130
2	39	77
3	128	169
4	164	144
5	312	232
Grand Total	**689**	**752**

Frequency Rating	Underserved	Served
1	58	158
2	42	98
3	125	211
4	124	214
5	275	328
Grand Total	**624**	**1009**

Frequency (1 = Least Important, 5 = Most Important)

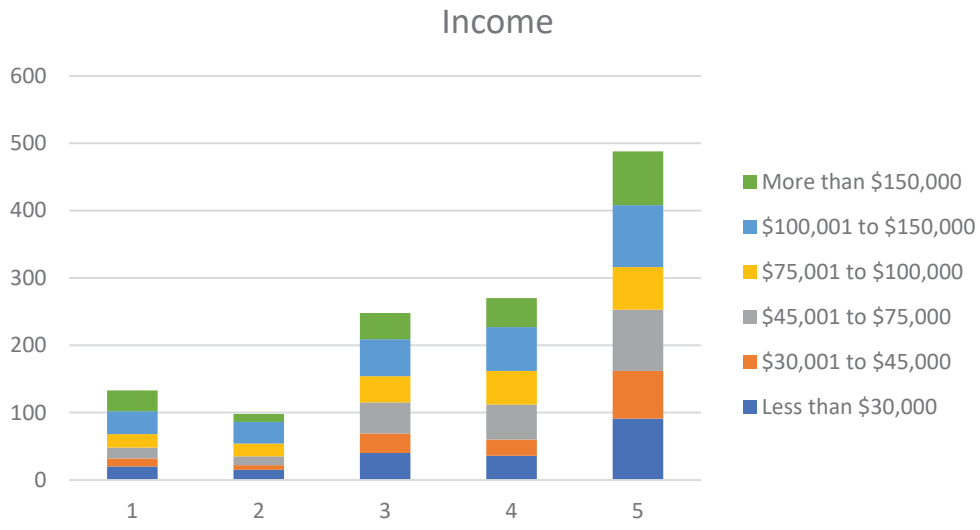


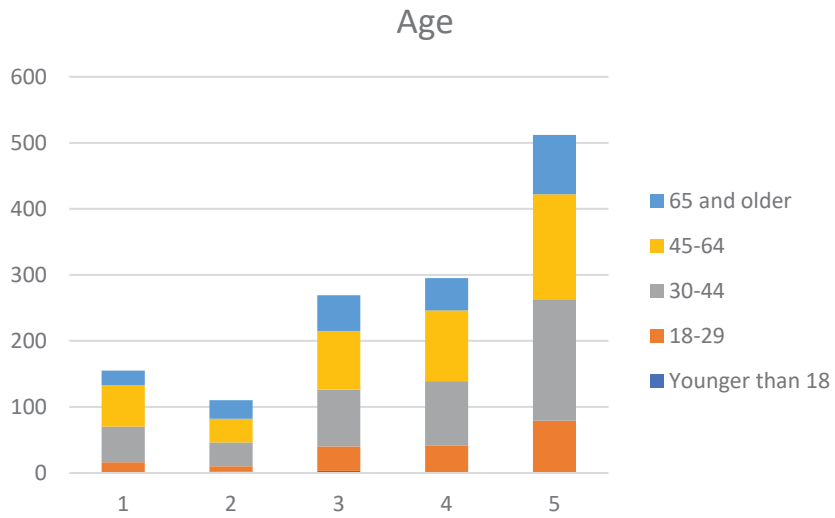


Frequency Rating	Suburban	Urban
1	174	42
2	96	44
3	222	114
4	205	133
5	314	289
Grand Total	**1011**	**622**

Frequency Rating	Native Hawaiian/Pacific Islander	American Indian /Alaska Native	Two or more	Asian	Hispanic/Latino	Black/ African American	White/ Caucasian
1		2	8	5	7	14	109
2			3	2	4	14	84
3	3	1	9	15	15	32	184
4		3	15	8	12	33	213
5		6	21	28	57	87	294
Grand Total	**3**	**12**	**56**	**58**	**95**	**180**	**884**

Frequency (1 = Least Important, 5 = Most Important)

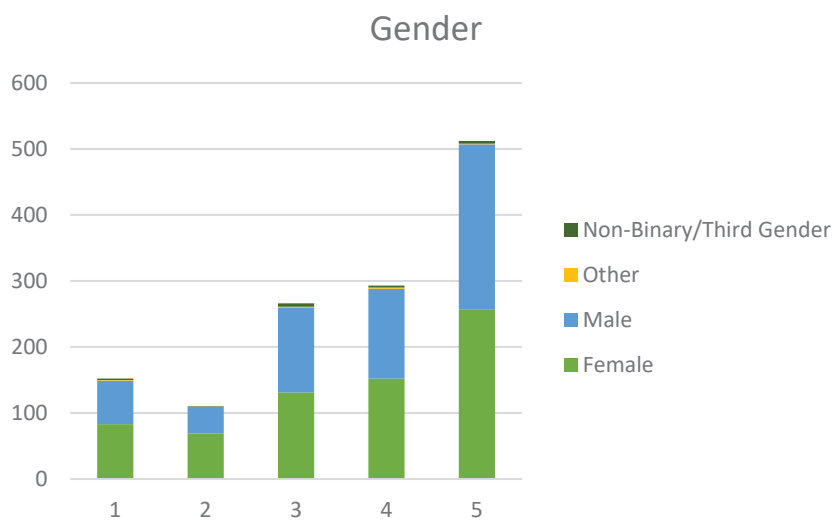


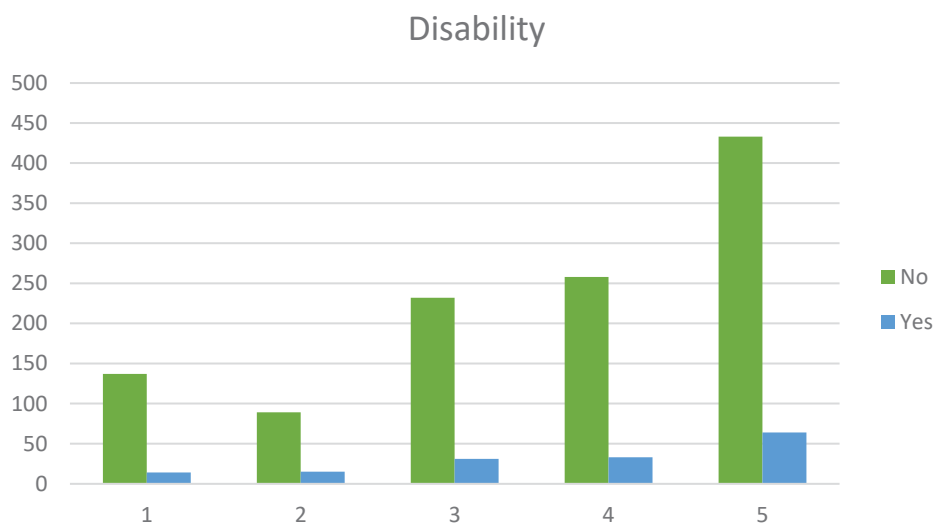


Frequency Rating	Less than $30,000	$30,001 to $45,000	$45,001 to $75,000	$75,001 to $100,000	$100,001 to $150,000	More than $150,000
1	20	12	16	20	34	31
2	15	7	13	19	32	12
3	40	29	46	39	55	39
4	36	24	52	50	65	43
5	91	71	91	63	92	80
Grand Total	**202**	**143**	**218**	**191**	**278**	**205**

Frequency Rating	Younger than 18	18-29	30-44	45-64	65 and older
1		16	54	63	22
2	2	8	36	36	28
3	3	37	86	89	54
4	1	40	98	107	49
5		79	184	159	90
Grand Total	**6**	**180**	**458**	**454**	**243**

Frequency (1 = Least Important, 5 = Most Important)

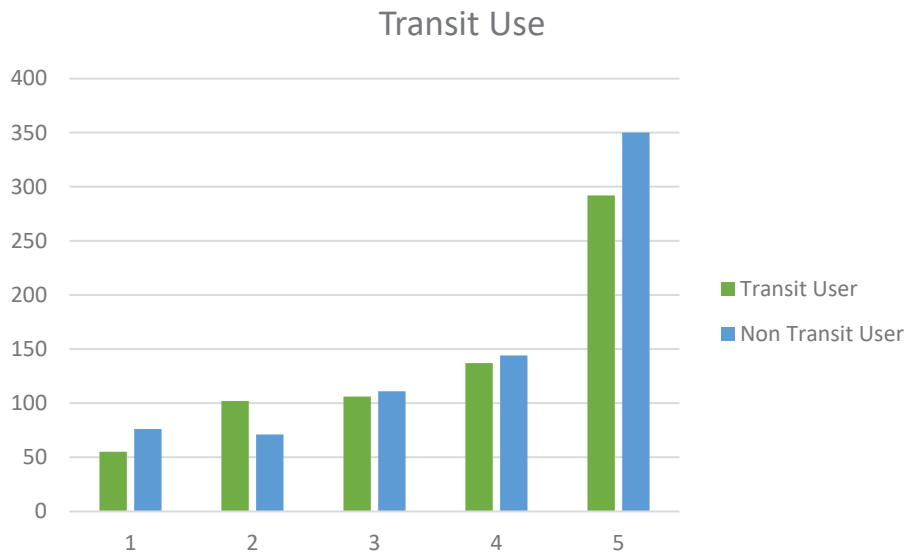


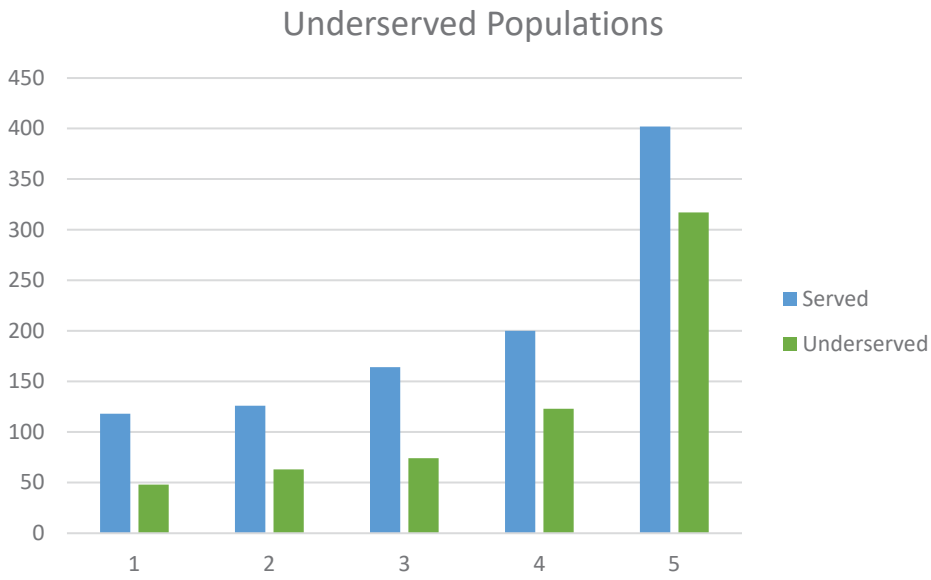


Frequency Rating	Female	Male	Other	Non-Binary/Third Gender
1	83	66	1	2
2	69	40		1
3	131	128	2	5
4	152	136	2	3
5	257	250	1	4
Grand Total	**692**	**620**	**6**	**15**

Frequency Rating	No	Yes
1	137	14
2	89	15
3	232	31
4	258	33
5	433	64
Grand Total	**1149**	**157**

Coverage (1 = Least Important, 5 = Most Important)

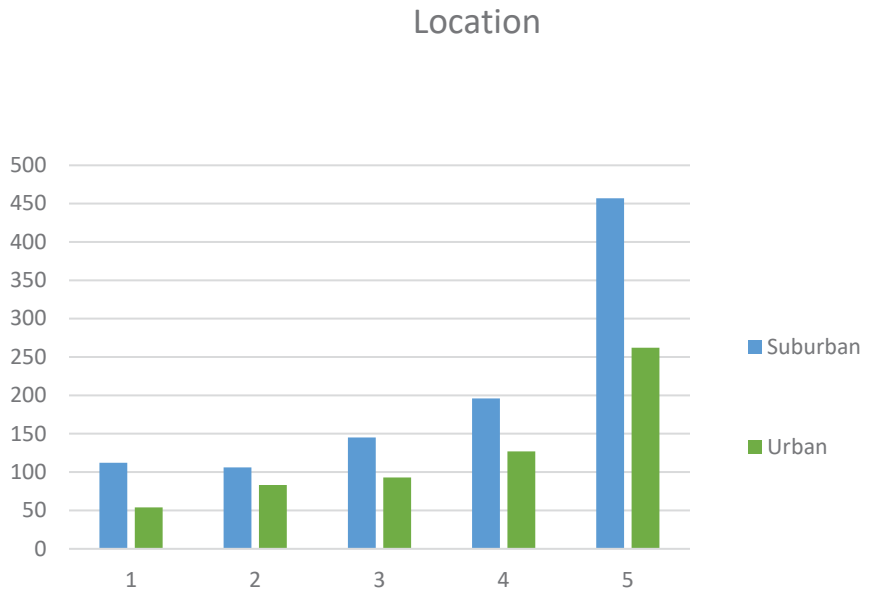


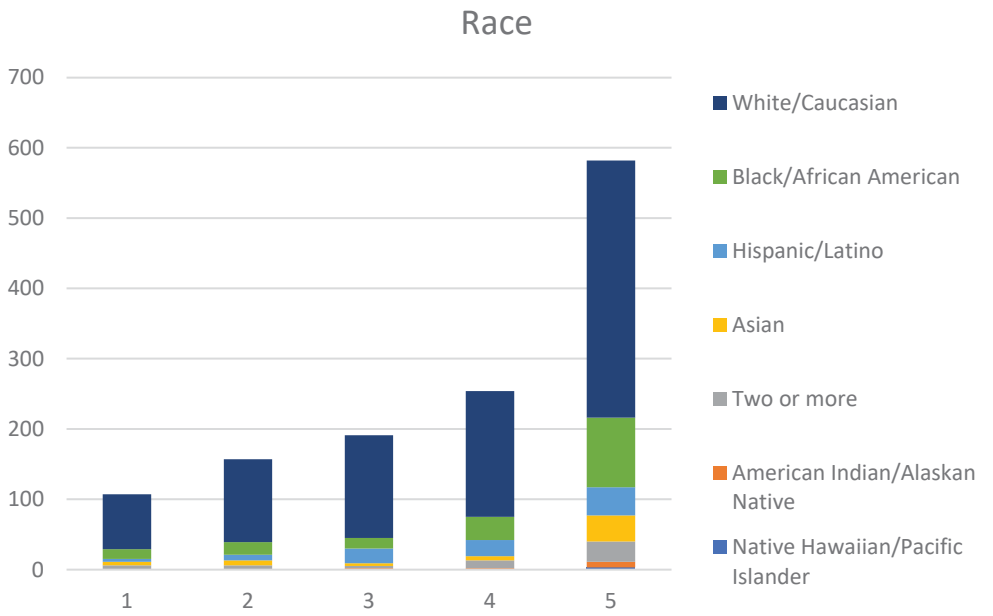


Coverage Rating	Transit User	Non-Transit User
1	55	76
2	102	71
3	106	111
4	137	144
5	292	350
Grand Total	**692**	**752**

Coverage Rating	Served	Underserved
1	118	48
2	126	63
3	164	74
4	200	123
5	402	317
Grand Total	**1010**	**625**

Coverage (1 = Least Important, 5 = Most Important)

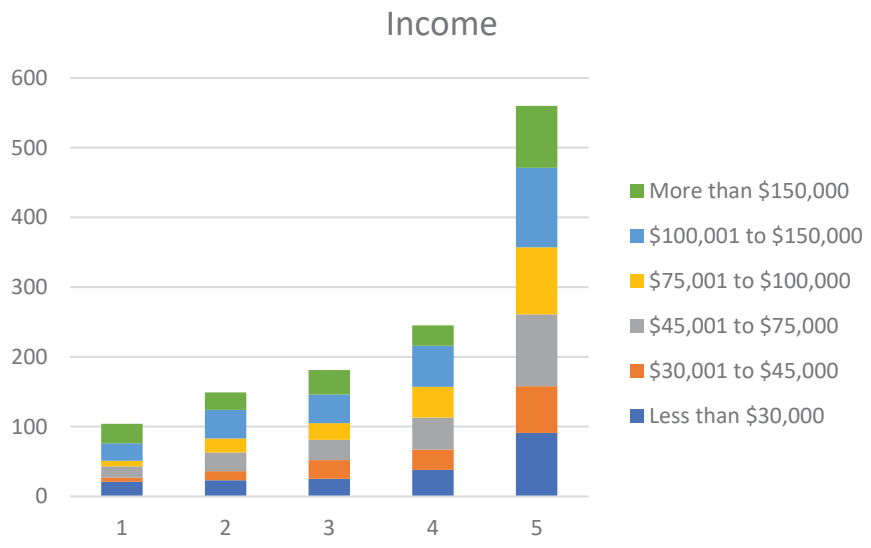


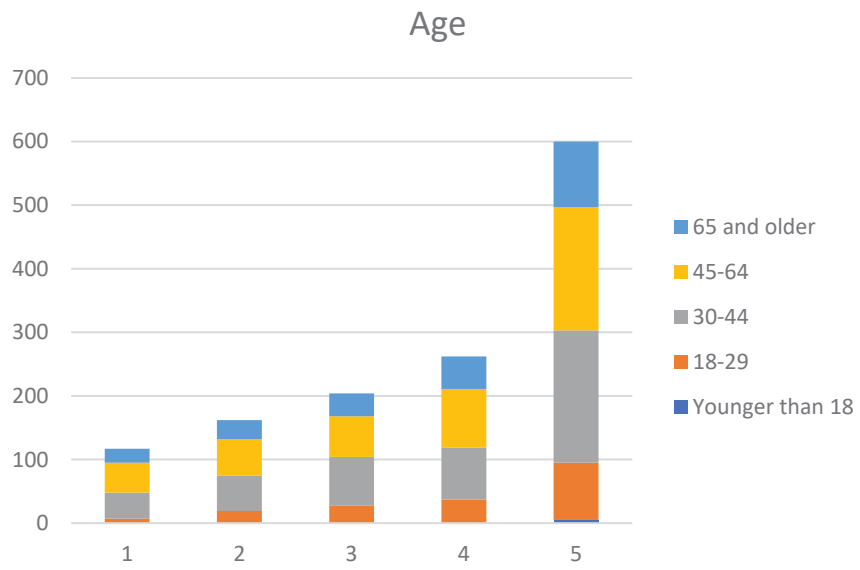


Coverage Rating	Suburban	Urban
1	112	54
2	106	83
3	145	93
4	196	127
5	457	262
Grand Total	**1016**	**619**

Coverage Rating	Native Hawaiian/ Pacific Islander	American Indian/ Alaskan Native	Two or more	Asian	Hispanic/ Latino	Black/ African American	White/ Caucasian
1			6	5	4	14	78
2			6	7	8	18	118
3		2	3	4	21	15	146
4		2	11	6	23	33	179
5	3	8	29	37	40	99	366
Grand Total	**3**	**12**	**55**	**59**	**96**	**179**	**887**

Coverage (1 = Least Important, 5 = Most Important)

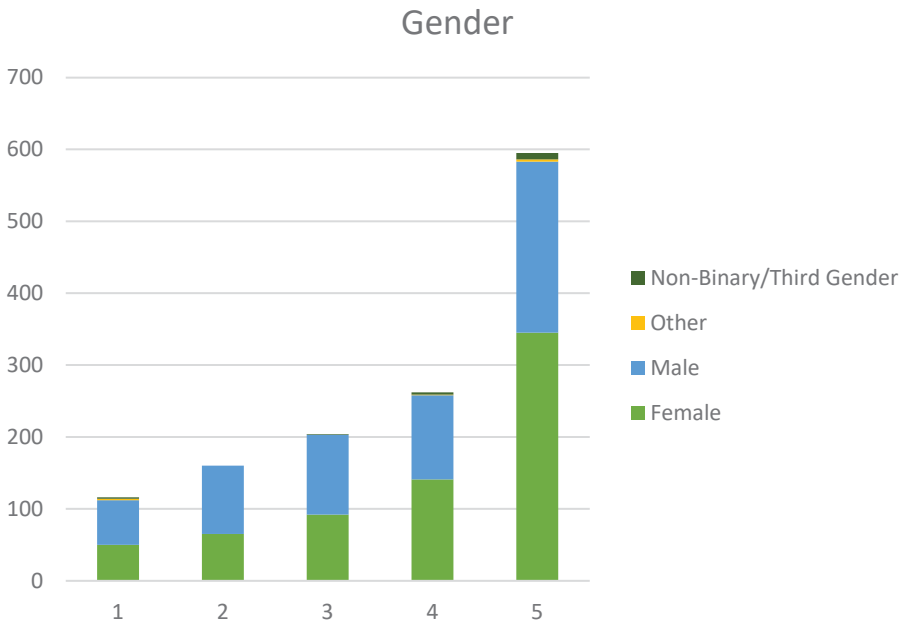


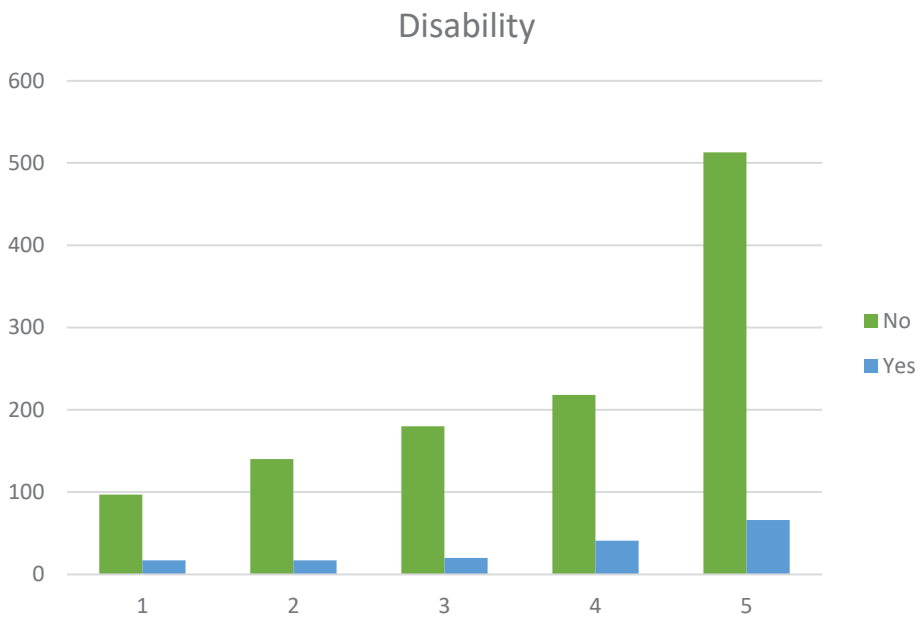


Coverage Rating	Less than $30,000	$30,001 to $45,000	$45,001 to $75,000	$75,001 to $100,000	$100,001 to $150,000	More than $150,000
1	21	6	16	8	25	28
2	23	13	27	20	41	25
3	25	27	29	24	41	35
4	38	29	46	44	59	29
5	91	67	103	96	114	89
Grand Total	**198**	**142**	**221**	**192**	**280**	**206**

Coverage Rating	Younger than 18	18-29	30-44	45-64	65 and older
1		7	41	47	22
2		19	56	57	30
3		28	76	64	36
4		37	82	92	51
5	5	90	208	194	103
Grand Total	**5**	**181**	**463**	**454**	**242**

Coverage (1 = Least Important, 5 = Most Important)

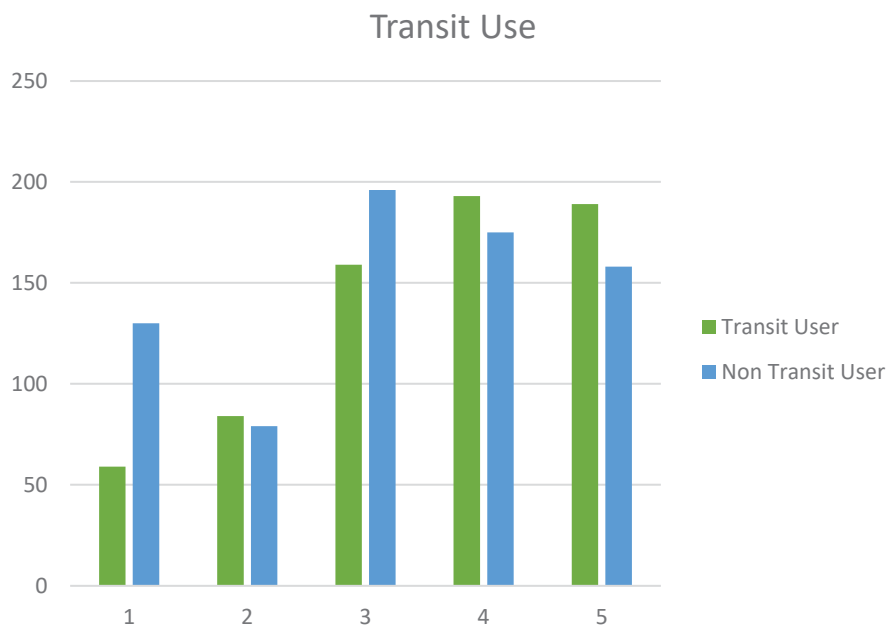


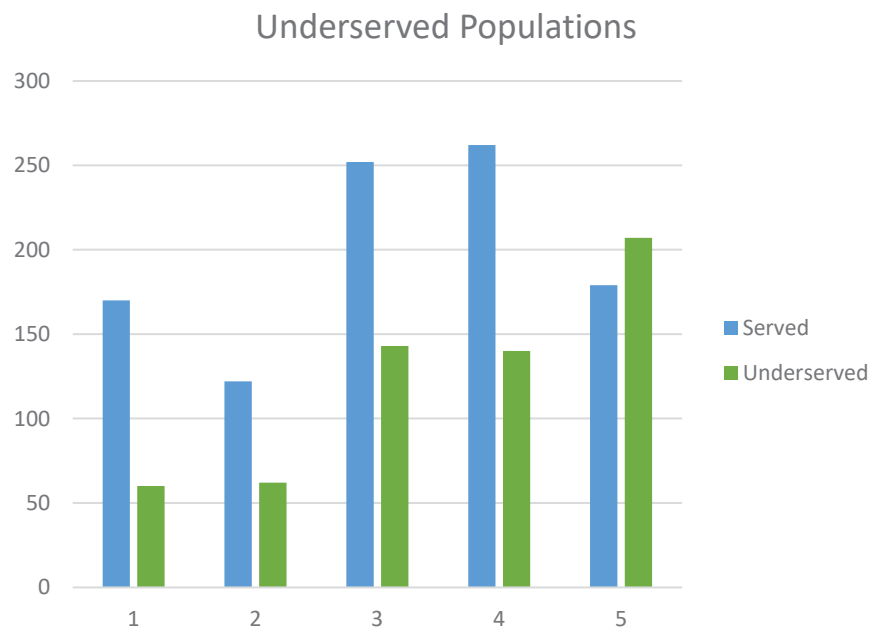


Coverage Rating	Female	Male	Other	Non-Binary/Third Gender
1	50	62	2	2
2	65	95		
3	92	111		1
4	141	117	1	3
5	345	238	3	9
Grand Total	**693**	**623**	**6**	**15**

Coverage Rating	No	Yes
1	97	17
2	140	17
3	180	20
4	218	41
5	513	66
Grand Total	**1148**	**161**

Span (1 = Least Important, 5 = Most Important)

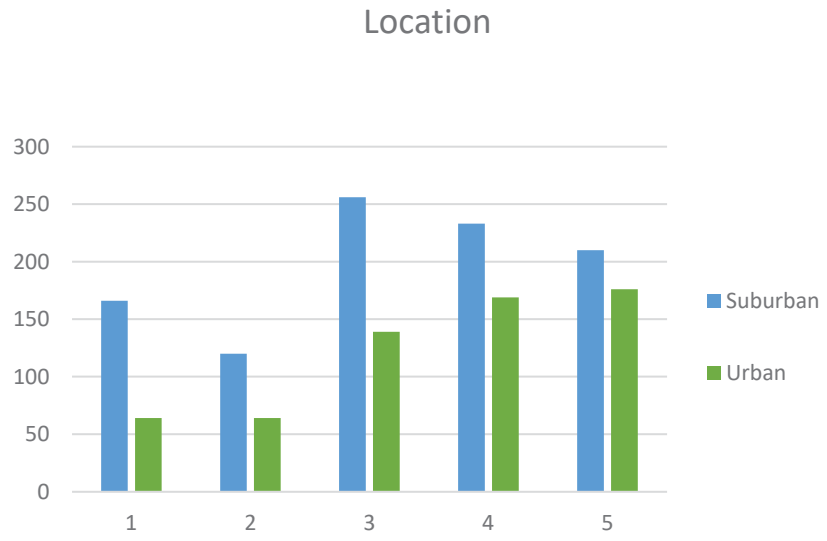


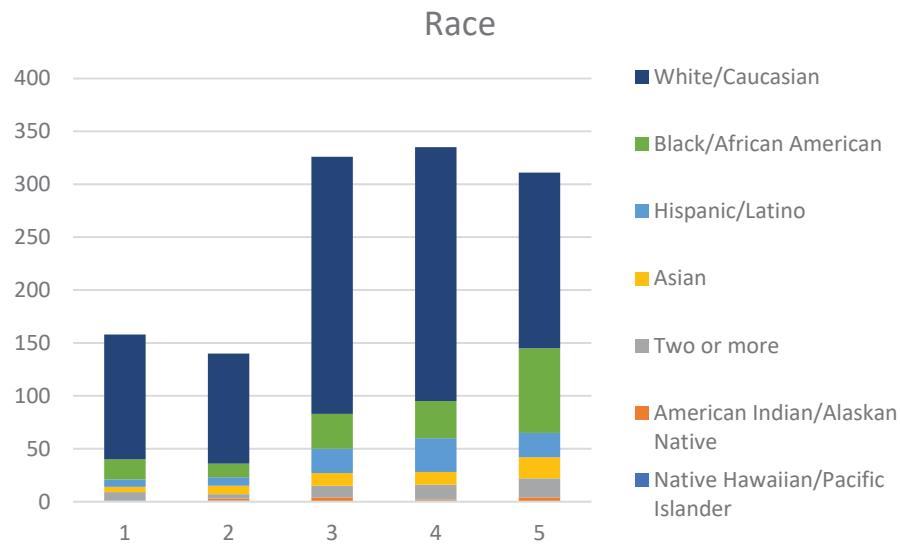


Span Rating	Transit User	Non-Transit User
1	59	130
2	84	79
3	159	196
4	193	175
5	189	158
Grand Total	**684**	**738**

Span Rating	Served	Underserved
1	170	60
2	122	62
3	252	143
4	262	140
5	179	207
Grand Total	**985**	**612**

Span (1 = Least Important, 5 = Most Important)

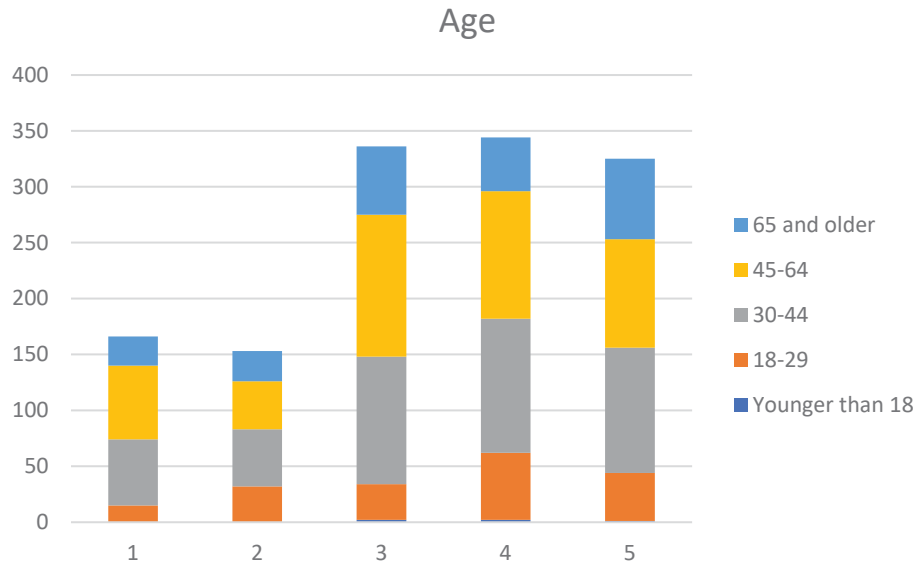




Span Rating	Suburban	Urban
1	166	64
2	120	64
3	256	139
4	233	169
5	210	176
Grand Total	**985**	**612**

Span Rating	Native Hawaiian/ Pacific Islander	American Indian/ Alaskan Native	Two or more	Asian	Hispanic/ Latino	Black/ African American	White/ Caucasian
1	1		8	5	7	19	118
2	1	2	4	8	8	13	104
3		4	11	12	23	33	243
4	1	1	14	12	32	35	240
5		4	18	20	23	80	166
Grand Total	**3**	**11**	**55**	**57**	**93**	**180**	**871**

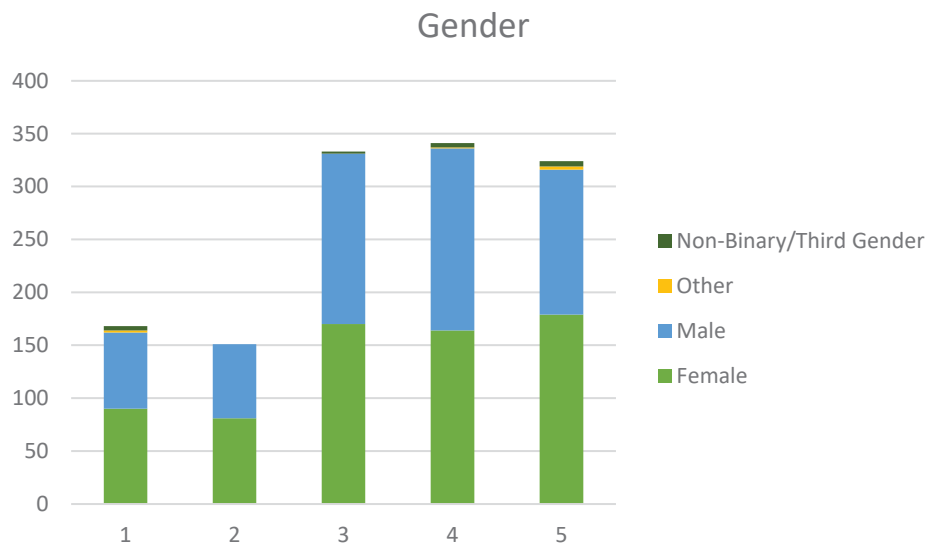
Span (1 = Least Important, 5 = Most Important)

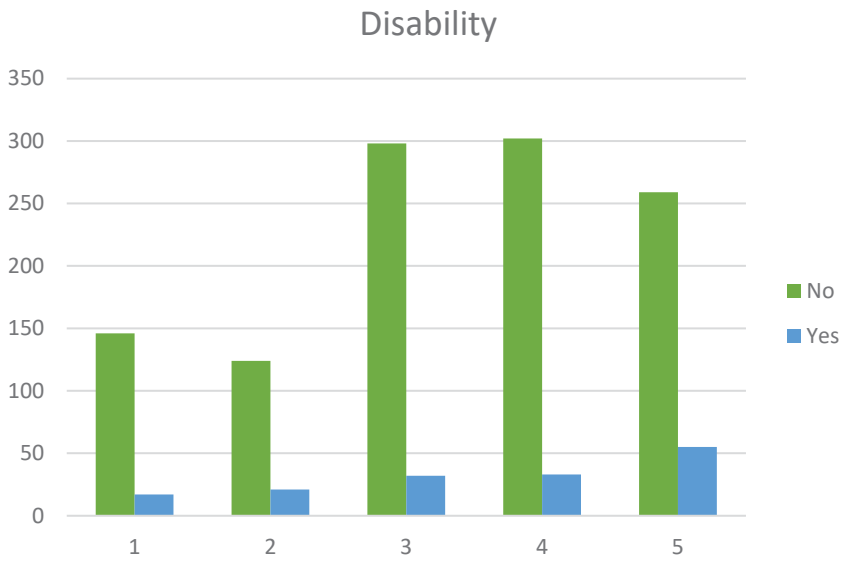


Span Rating	Less than $30,000	$30,001 to $45,000	$45,001 to $75,000	$75,001 to $100,000	$100,001 to $150,000	More than $150,000
1	23	14	21	15	43	33
2	21	15	22	18	35	23
3	33	30	54	57	81	56
4	48	31	69	54	70	54
5	74	45	53	47	45	39
Grand Total	**199**	**135**	**219**	**191**	**274**	**205**

Span Rating	Younger than 18	18-29	30-44	45-64	65 and older
1		15	59	66	26
2		32	51	43	27
3	2	32	114	127	61
4	2	60	120	114	48
5	1	43	112	97	72
Grand Total	**5**	**182**	**456**	**447**	**234**

Span (1 = Least Important, 5 = Most Important)

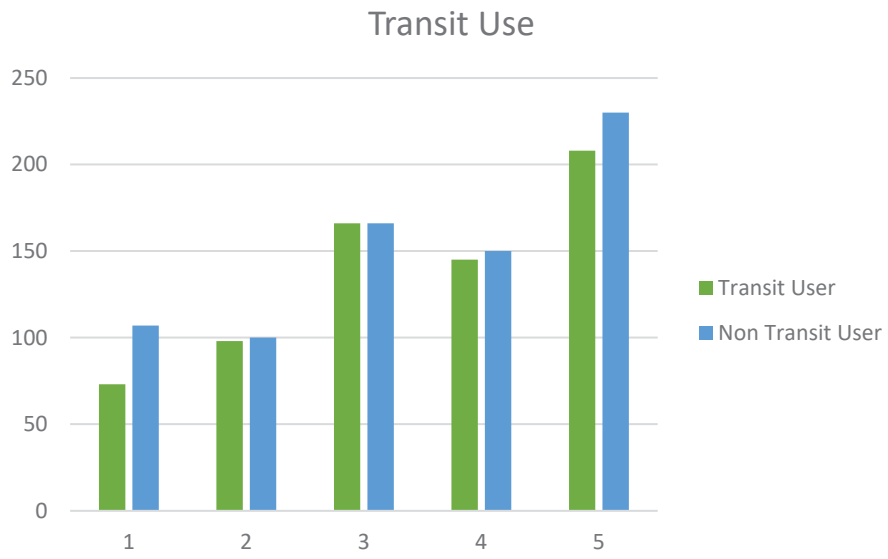




Span Rating	Female	Male	Other	Non-Binary/Third Gender
1	90	72	2	4
2	81	70		
3	170	161		2
4	164	172	1	4
5	179	137	3	5
Grand Total	**684**	**612**	**6**	**15**

Span Rating	No	Yes
1	146	17
2	124	21
3	298	32
4	302	33
5	259	55
Grand Total	**1129**	**158**

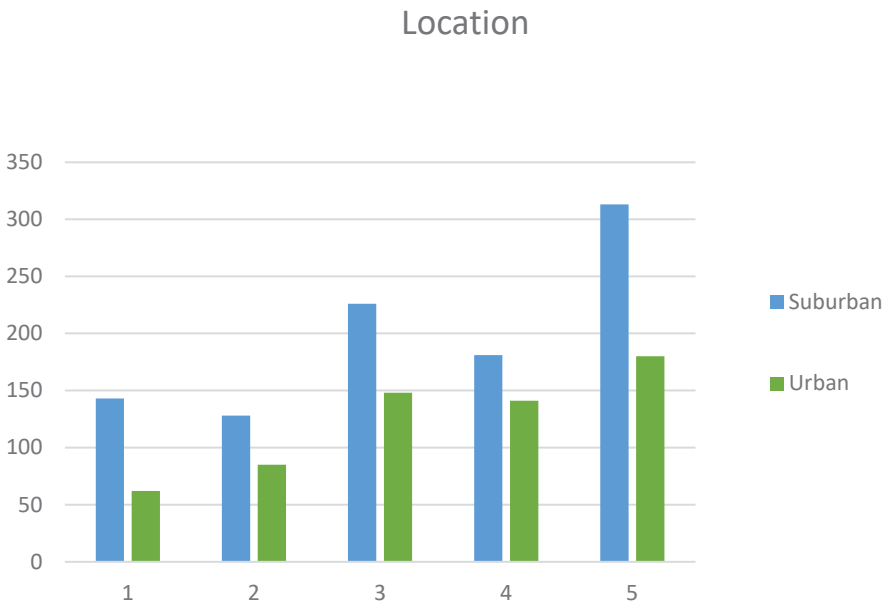
Local Service (1 = Least Important, 5 = Most Important)

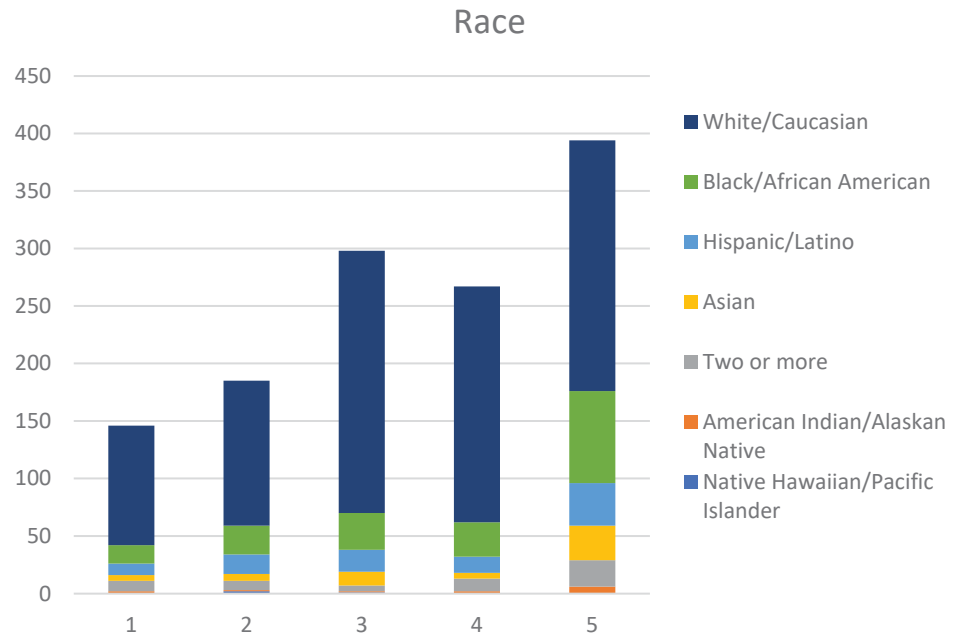


Local Service Rating	Transit User	Non-Transit User
1	73	107
2	98	100
3	166	166
4	145	150
5	208	230
Grand Total	**690**	**753**

Local Service Rating	Served	Underserved
1	136	69
2	120	93
3	262	112
4	208	114
5	254	239
Grand Total	**980**	**627**

Local Service (1 = Least Important, 5 = Most Important)

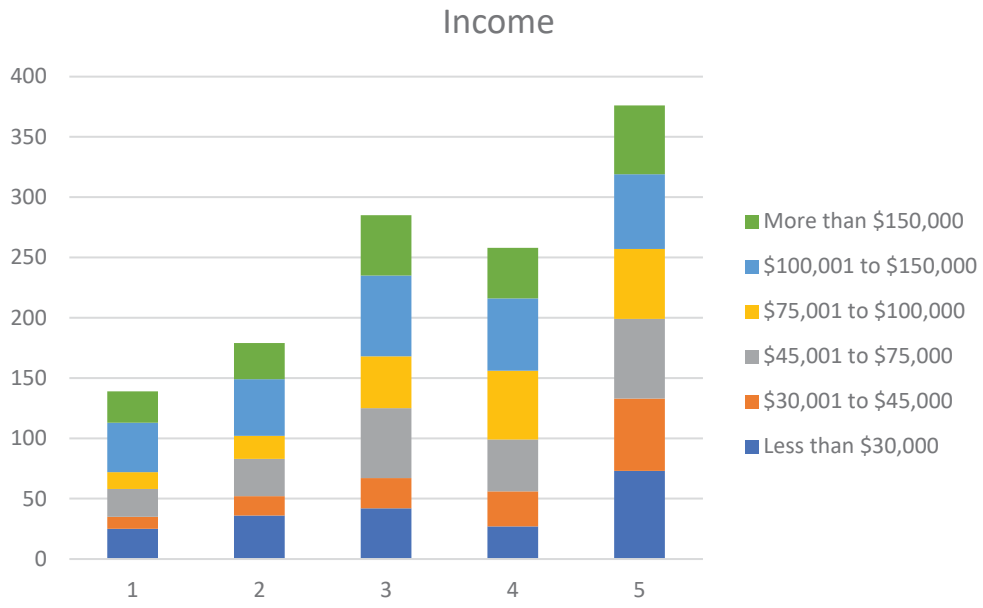


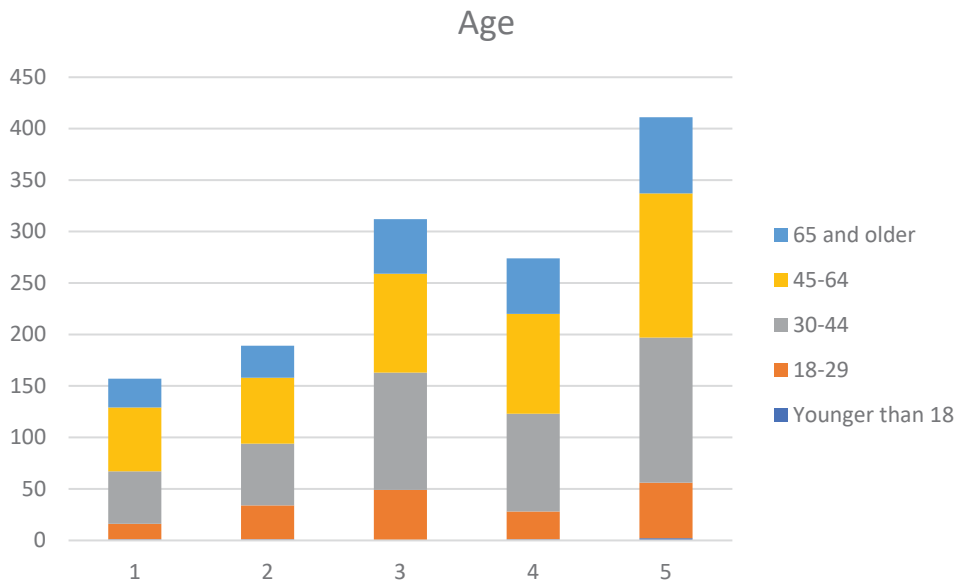


Local Service Rating	Suburban	Urban
1	143	62
2	128	85
3	226	148
4	181	141
5	313	180
Grand Total	**991**	**616**

Local Service Rating	Native Hawaiian/ Pacific Islander	American Indian/ Alaskan Native	Two or more	Asian	Hispanic/ Latino	Black/ African American	White/ Caucasian
1		2	9	5	10	16	104
2	2	1	8	6	17	25	126
3	1	1	5	12	19	32	228
4		2	11	5	14	30	205
5		6	23	30	37	80	218
Grand Total	**3**	**12**	**56**	**58**	**97**	**183**	**881**

Local Service (1 = Least Important, 5 = Most Important)

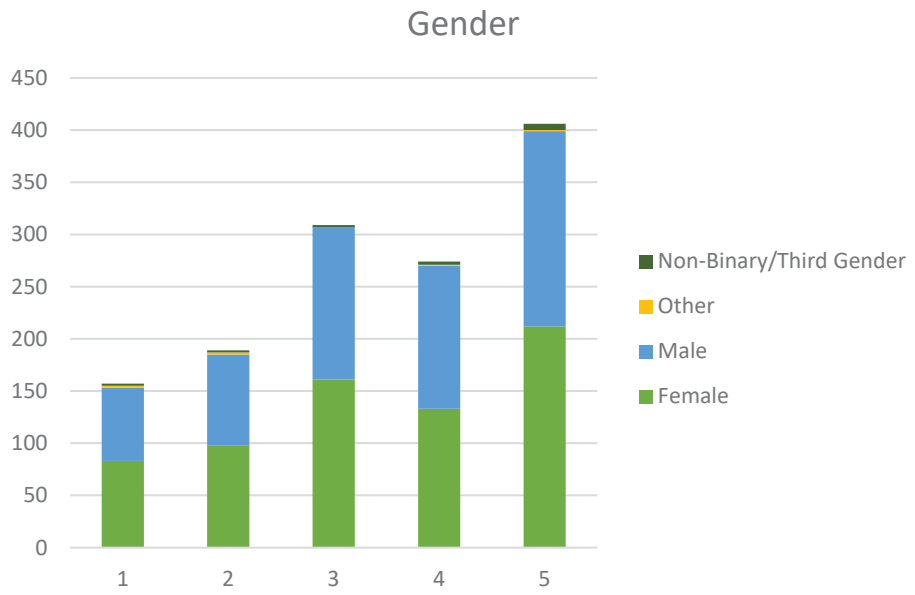


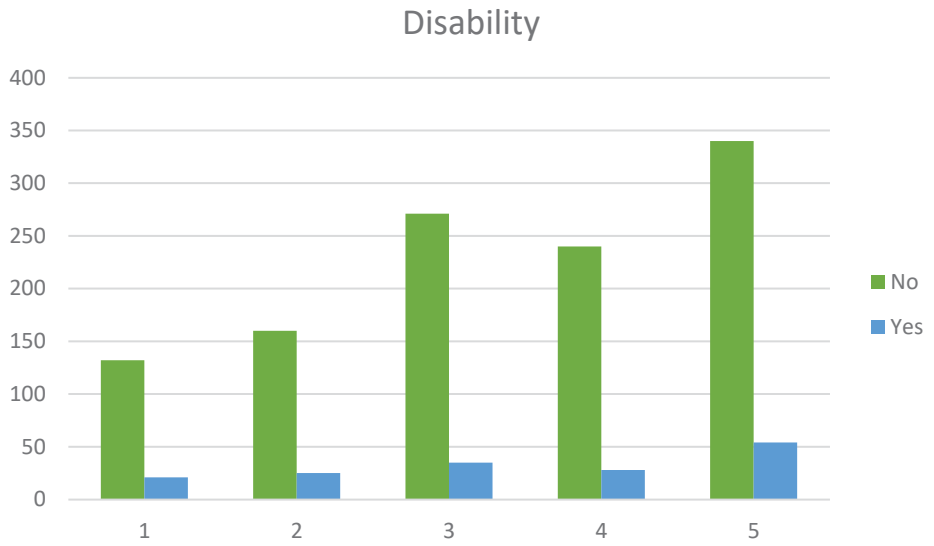


Local Service Rating	Less than $30,000	$30,001 to $45,000	$45,001 to $75,000	$75,001 to $100,000	$100,001 to $150,000	More than $150,000
1	25	10	23	14	41	26
2	36	16	31	19	47	30
3	42	25	58	43	67	50
4	27	29	43	57	60	42
5	73	60	66	58	62	57
Grand Total	**203**	**140**	**221**	**191**	**277**	**205**

Local Service Rating	Younger than 18	18-29	30-44	45-64	65 and older
1	1	15	51	62	28
2	1	33	60	64	31
3		49	114	96	53
4	1	27	95	97	54
5	2	54	141	140	74
Grand Total	**5**	**178**	**461**	**459**	**240**

Local Service (1 = Least Important, 5 = Most Important)

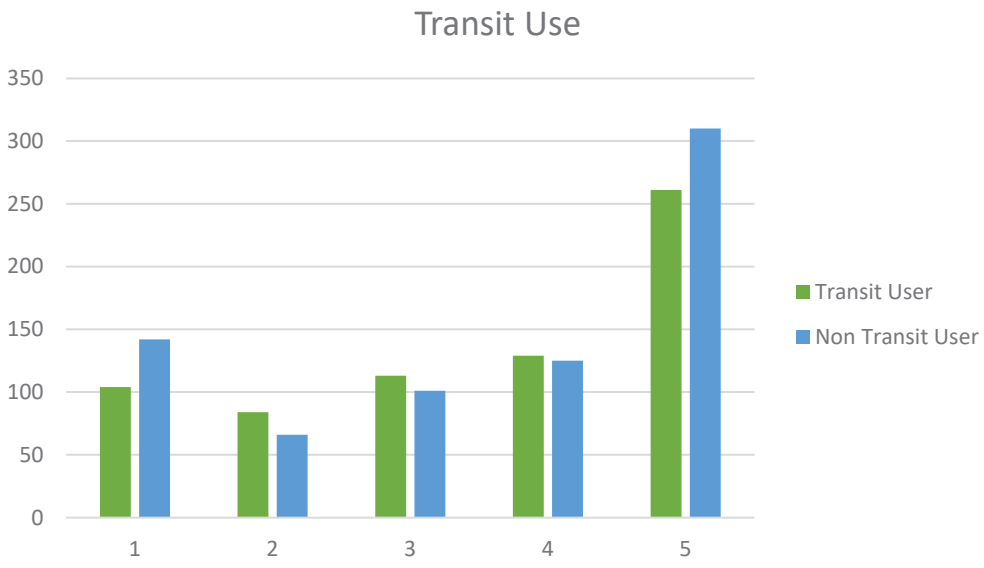


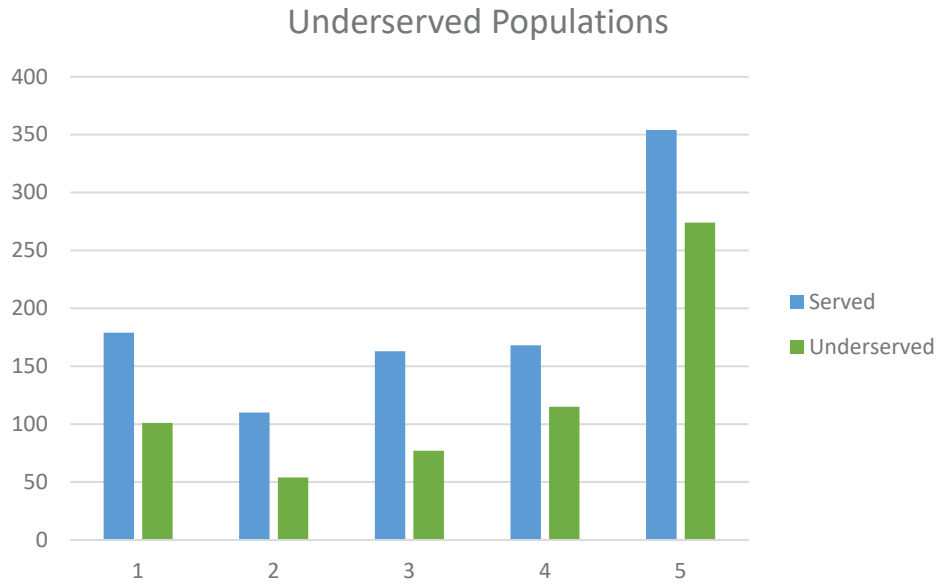


Local Service Rating	Female	Male	Other	Non-Binary/Third Gender
1	83	70	2	2
2	98	87	2	2
3	161	146		2
4	133	137	1	3
5	212	187	1	6
Grand Total	**687**	**627**	**6**	**15**

Local Service Rating	No	Yes
1	132	21
2	160	25
3	271	35
4	240	28
5	340	54
Grand Total	**1143**	**163**

Regional Service (1 = Least Important, 5 = Most Important)

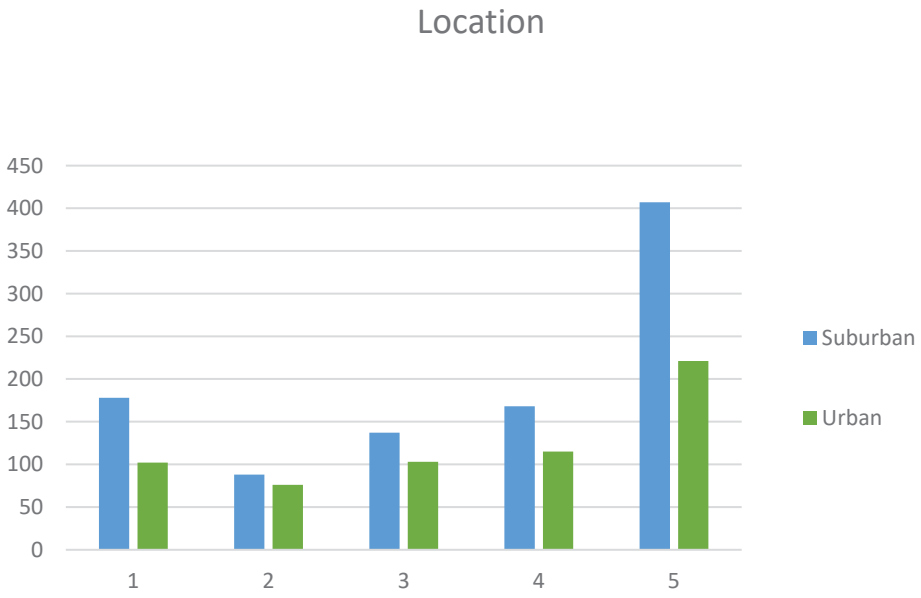


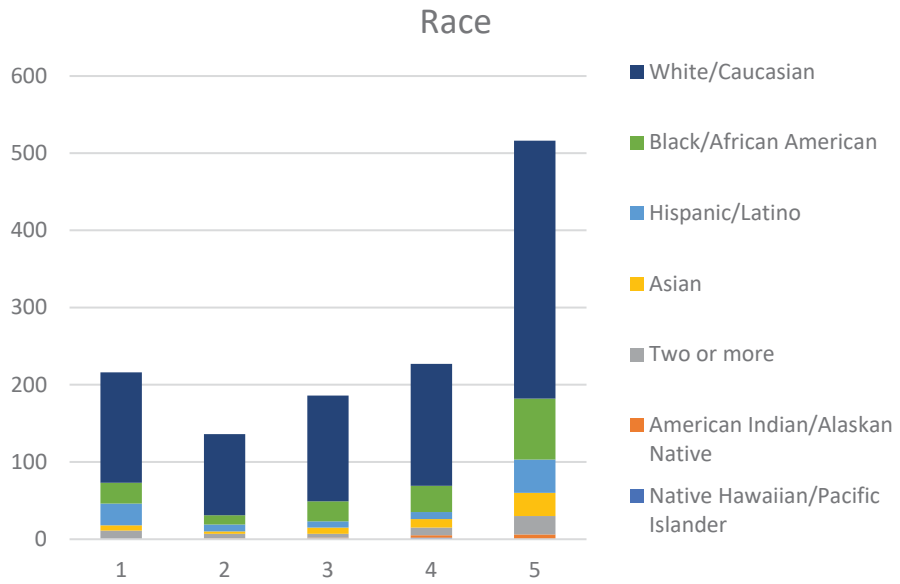


Regional Service Rating	Transit User	Non-Transit User
1	104	142
2	84	66
3	113	101
4	129	125
5	261	310
Grand Total	**691**	**744**

Regional Service Rating	Served	Underserved
1	179	101
2	110	54
3	163	77
4	168	115
5	354	274
Grand Total	**974**	**621**

Regional Service (1 = Least Important, 5 = Most Important)

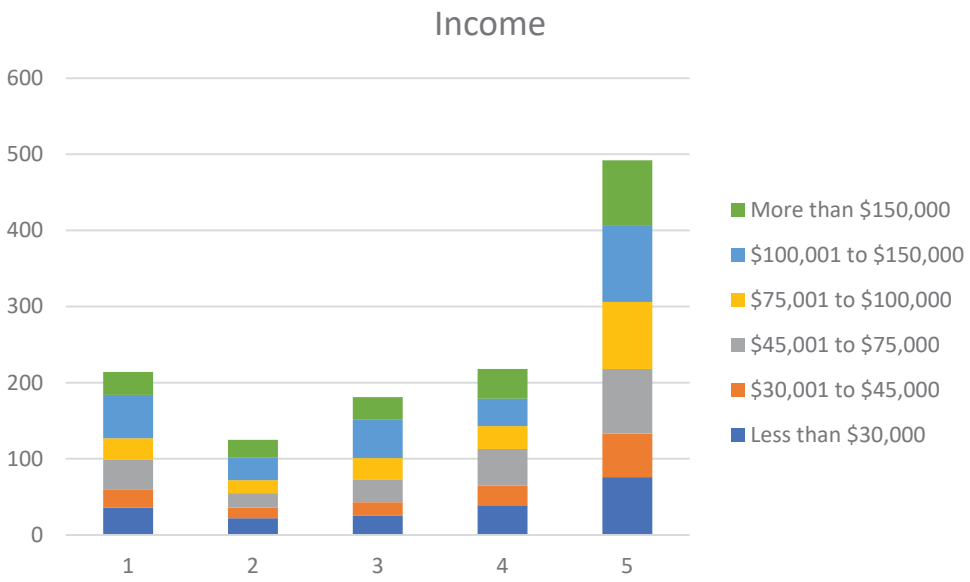


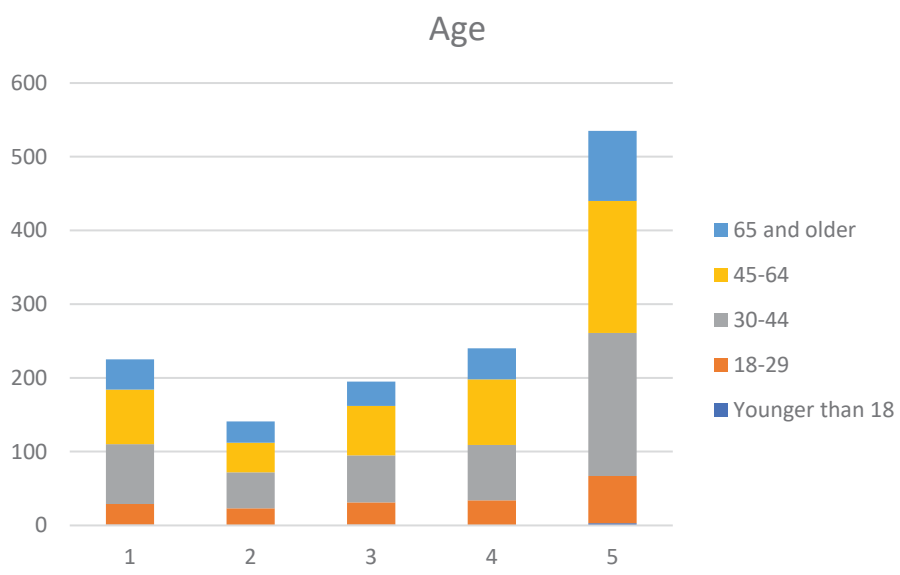


Regional Service Rating	Suburban	Urban
1	178	102
2	88	76
3	137	103
4	168	115
5	407	221
Grand Total	**978**	**617**

Regional Service Rating	Native Hawaiian/ Pacific Islander	American Indian/ Alaskan Native	Two or more	Asian	Hispanic/ Latino	Black/ African American	White/ Caucasian
1			11	7	28	27	143
2		1	6	3	9	12	105
3	1	1	5	8	8	26	137
4	2	3	10	11	9	34	158
5		6	24	30	43	79	334
Grand Total	**3**	**11**	**56**	**59**	**97**	**178**	**877**

Regional Service (1 = Least Important, 5 = Most Important)

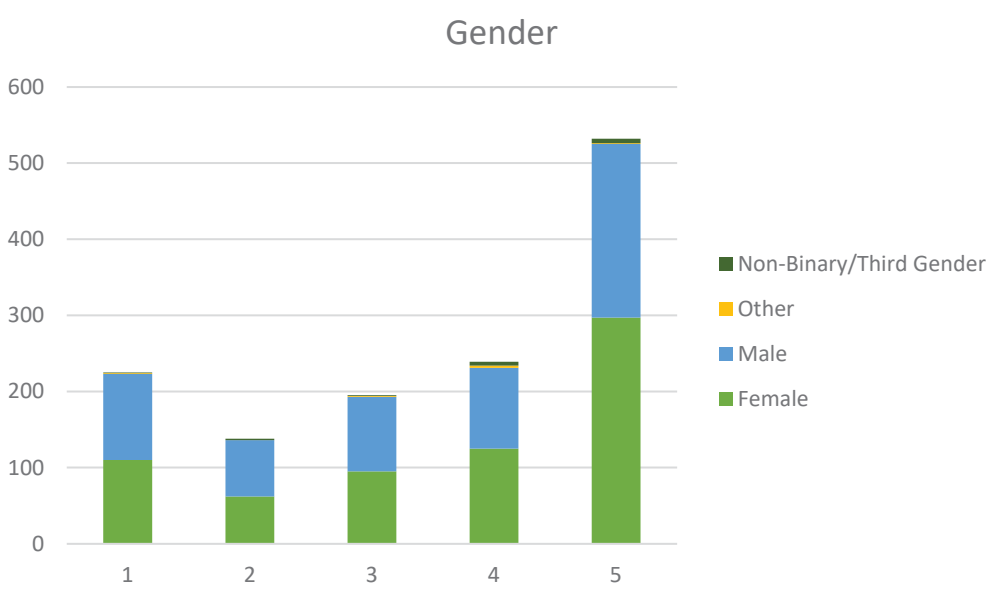


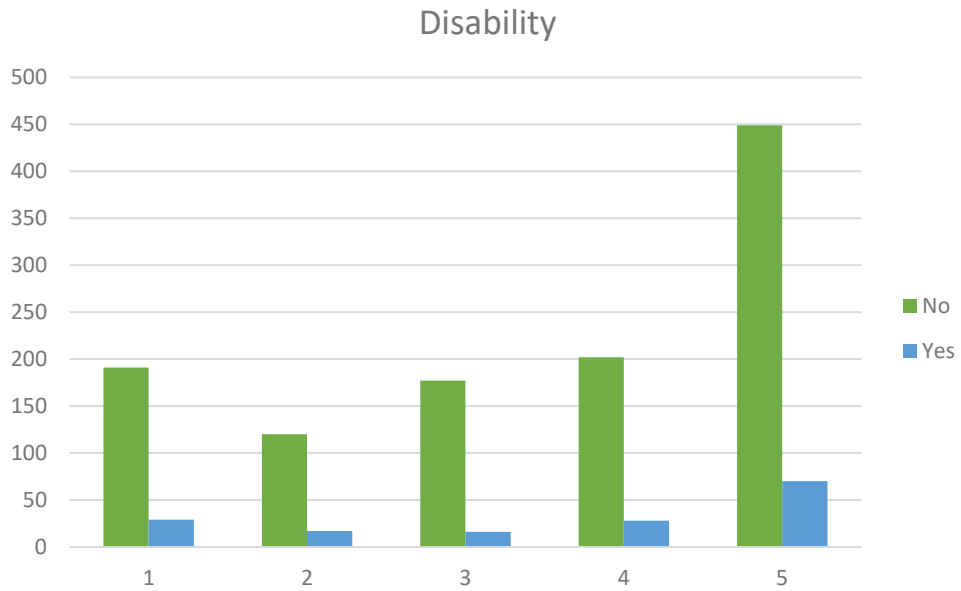


Regional Service Rating	Less than $30,000	$30,001 to $45,000	$45,001 to $75,000	$75,001 to $100,000	$100,001 to $150,000	More than $150,000
1	36	24	39	28	57	30
2	22	14	19	17	30	23
3	25	18	30	28	51	29
4	39	26	48	30	36	39
5	76	57	85	88	101	85
Grand Total	**198**	**139**	**221**	**191**	**275**	**206**

Regional Service Rating	Younger than 18	18-29	30-44	45-64	65 and older
1	1	28	81	74	41
2		23	49	40	29
3	1	30	64	67	33
4		34	75	89	42
5	3	64	194	179	95
Grand Total	**5**	**179**	**463**	**449**	**240**

Regional Service (1 = Least Important, 5 = Most Important)

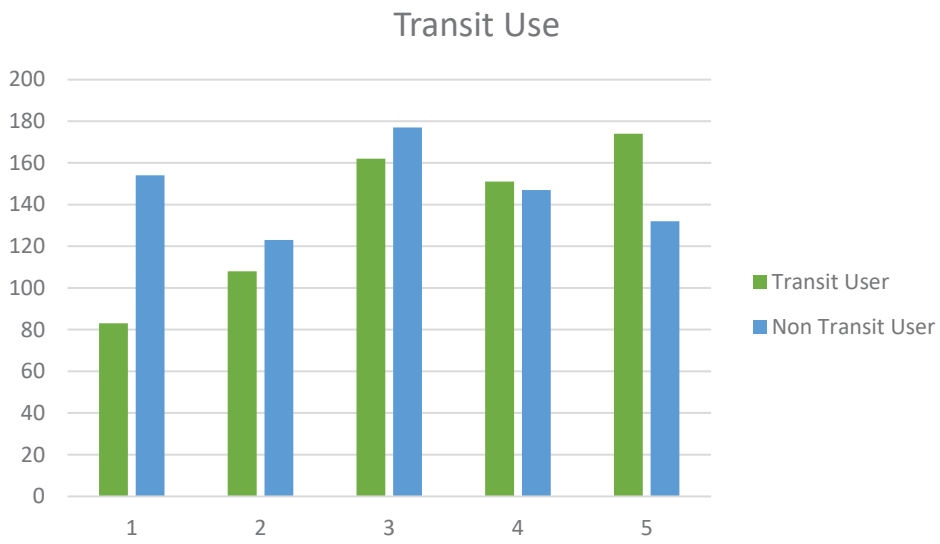




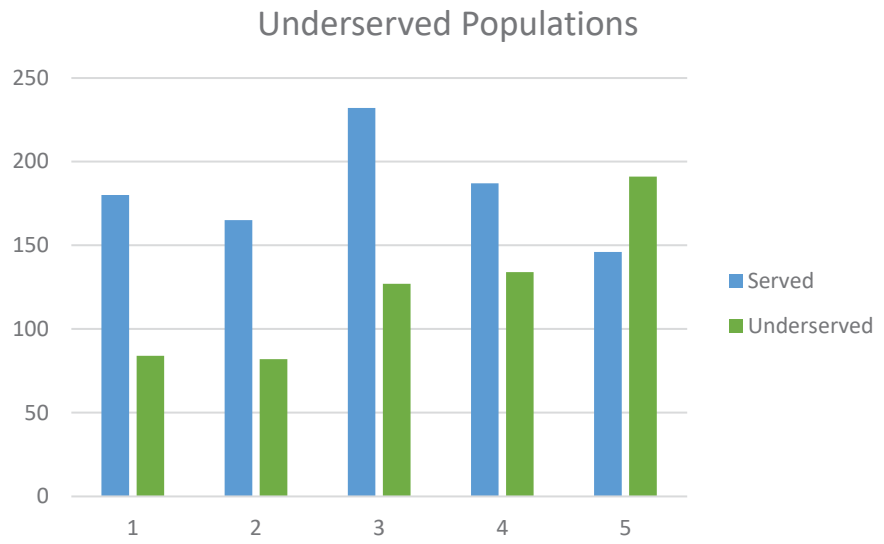
Regional Service Rating	Female	Male	Other	Non-Binary/Third Gender
1	110	113	1	1
2	62	74		2
3	95	98	1	1
4	125	106	3	5
5	297	228	1	6
Grand Total	**689**	**619**	**6**	**15**

Regional Service Rating	No	Yes
1	191	29
2	120	17
3	177	16
4	202	28
5	449	70
Grand Total	**1139**	**160**

Facilities (1 = Least Important, 5 = Most Important)

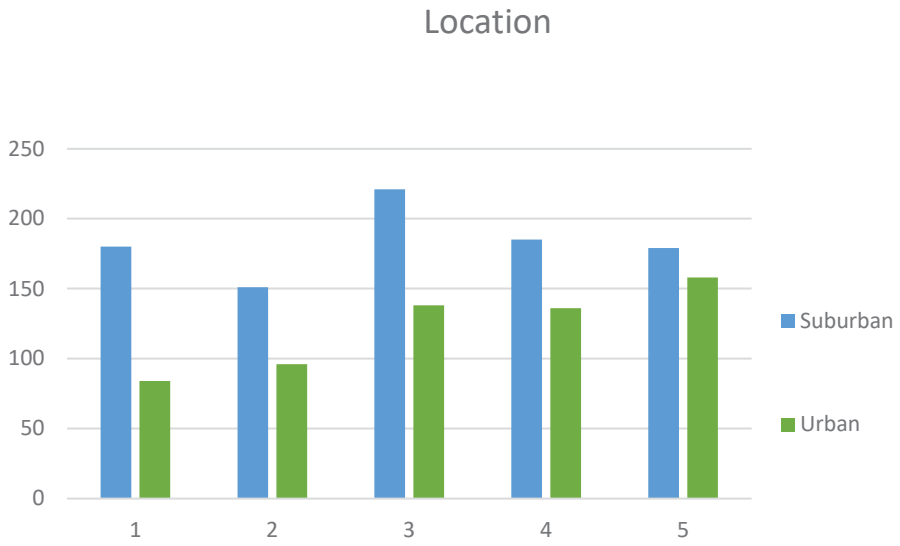


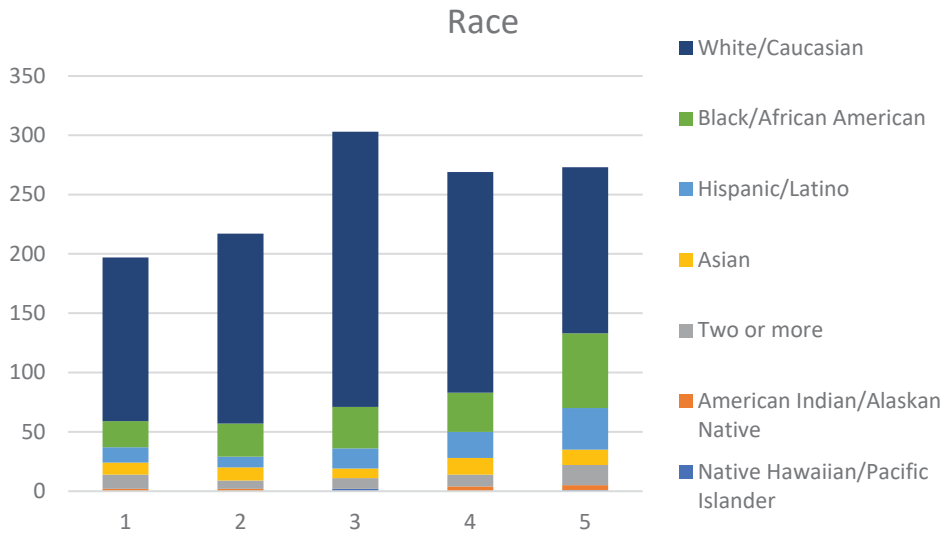
Facilities Rating	Transit User	Non-Transit User
1	83	154
2	108	123
3	162	177
4	151	147
5	174	132
Grand Total	**678**	**733**



Facilities Rating	Underserved	Served
1	84	180
2	82	165
3	127	232
4	134	187
5	191	146
Grand Total	**618**	**910**

Facilities (1 = Least Important, 5 = Most Important)

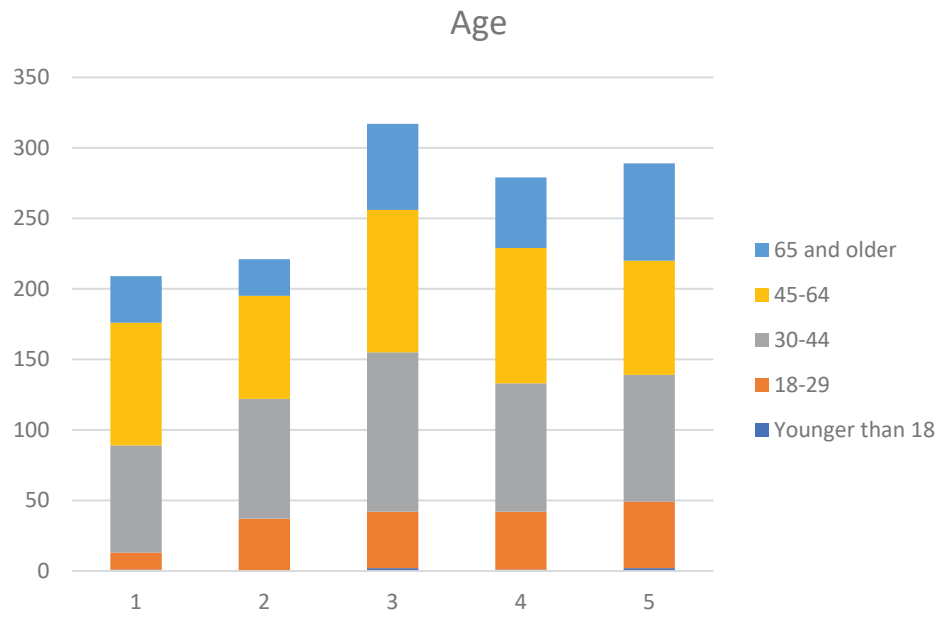




Facilities Rating	Suburban	Urban
1	180	84
2	151	96
3	221	138
4	185	136
5	179	158
Grand Total	**916**	**612**

Facilities Rating	Native Hawaiian/Pacific Islander	American Indian /Alaska Native	Two or more	Asian	Hispanic/Latino	Black/ African American	White/ Caucasian
1		2	12	10	13	22	138
2		2	7	11	9	28	160
3	2		9	8	17	35	232
4		4	10	14	22	33	186
5	1	4	17	13	35	63	140
Grand Total	**3**	**12**	**55**	**56**	**96**	**181**	**856**

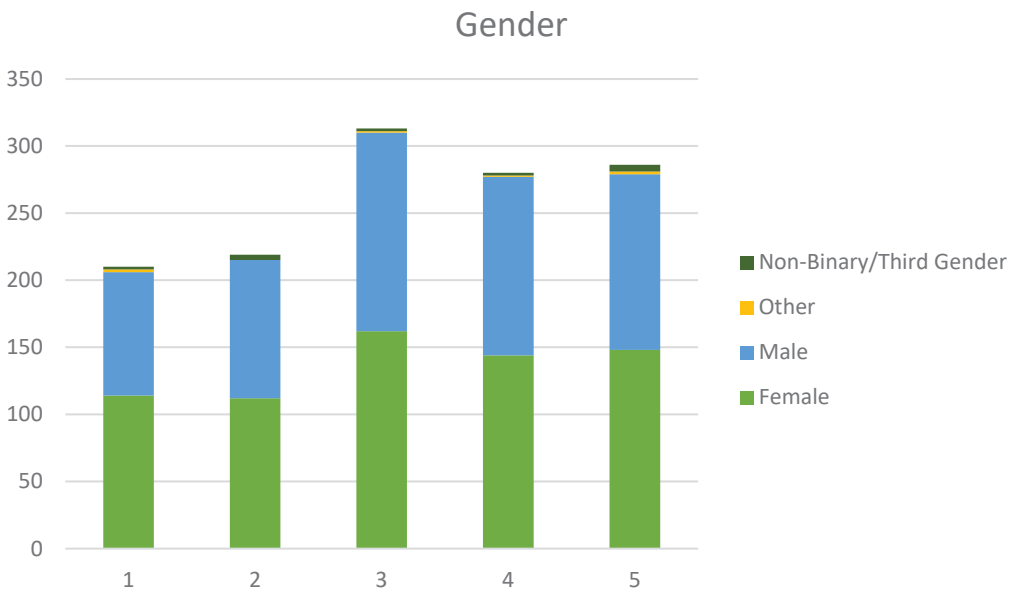
Facilities (1 = Least Important, 5 = Most Important)

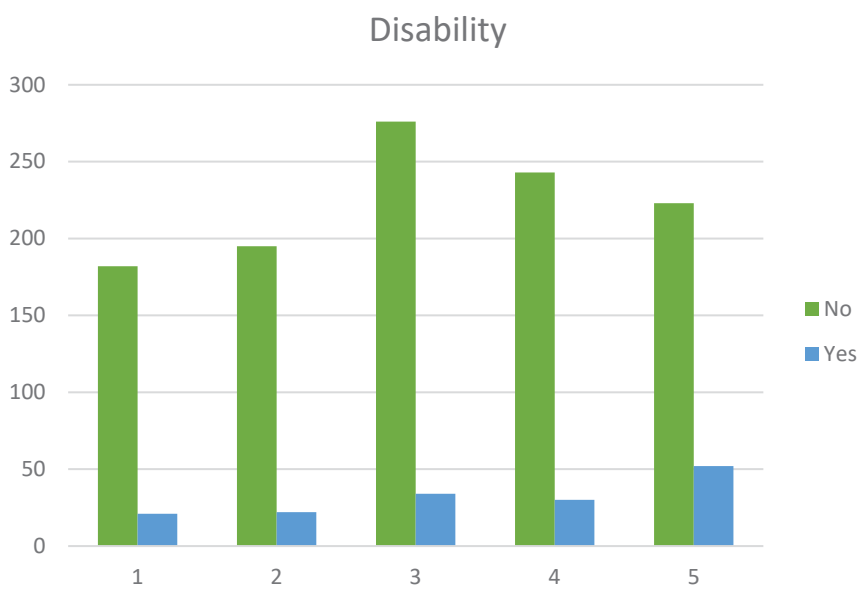


Facilities Rating	Less than $30,000	$30,001 to $45,000	$45,001 to $75,000	$75,001 to $100,000	$100,001 to $150,000	More than $150,000
1	27	9	27	30	53	42
2	30	14	33	28	70	30
3	36	29	64	46	65	49
4	36	30	45	46	54	48
5	71	56	46	38	28	29
Grand Total	**200**	**138**	**215**	**188**	**270**	**198**

Facilities Rating	Younger than 18	18-29	30-44	45-64	65 and older
1	1	12	76	87	33
2		37	85	73	26
3	2	40	113	101	61
4	1	41	91	96	50
5	2	47	90	81	69
Grand Total	**6**	**177**	**455**	**438**	**239**

Facilities (1 = Least Important, 5 = Most Important)

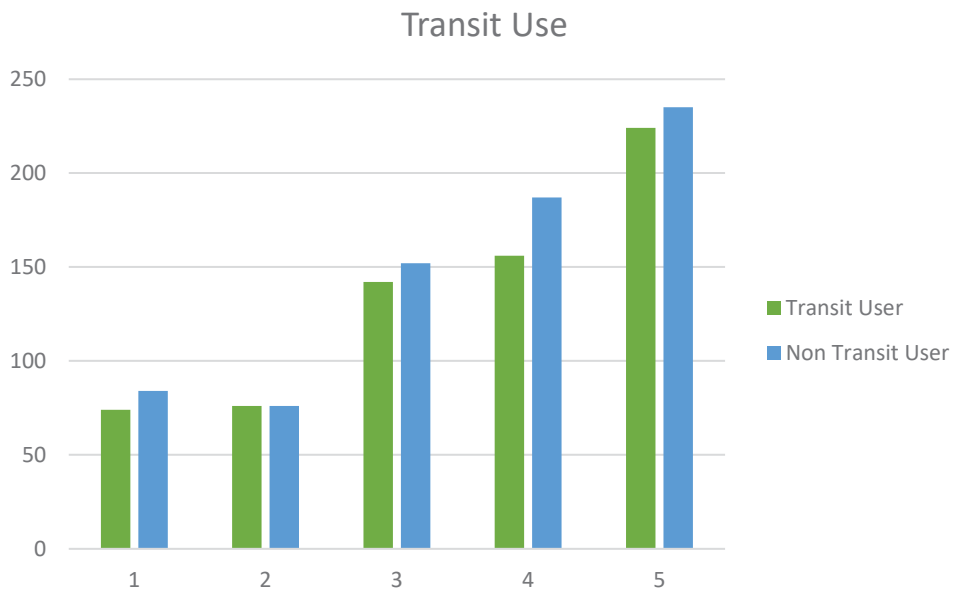


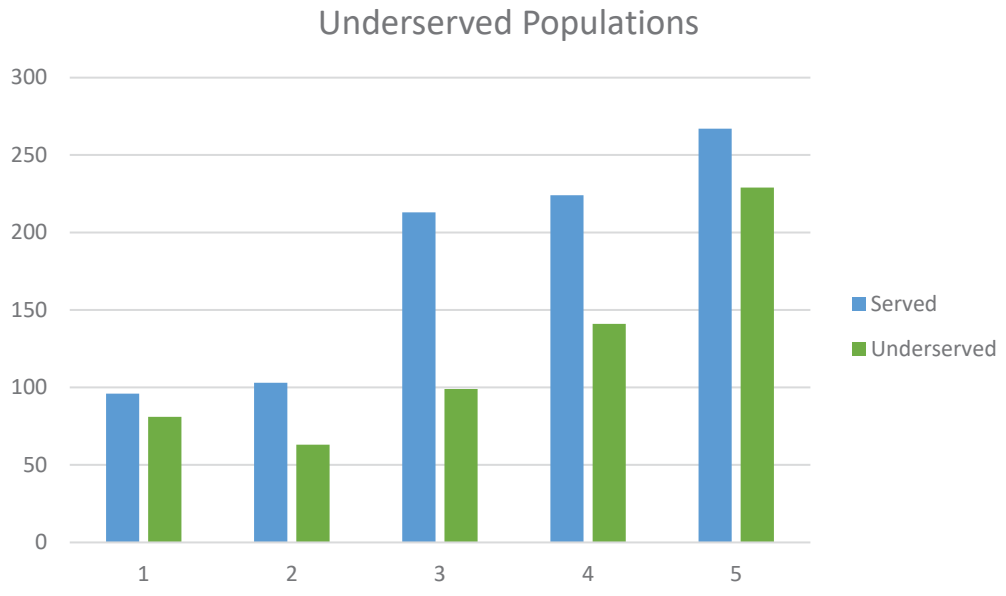


Facilities Rating	Female	Male	Other	Non-Binary/Third Gender
1	114	92	2	2
2	112	103		4
3	162	148	1	2
4	144	133	1	2
5	148	131	2	5
Grand Total	**680**	**607**	**6**	**15**

Facilities Rating	No	Yes
1	182	21
2	195	22
3	276	34
4	243	30
5	223	52
Grand Total	**1119**	**159**

Technology (1 = Least Important, 5 = Most Important)

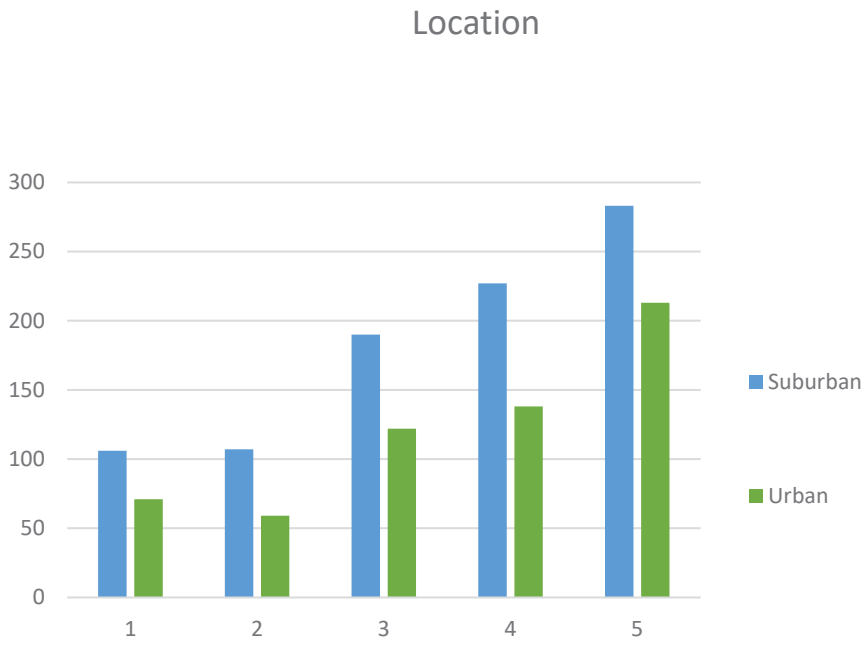


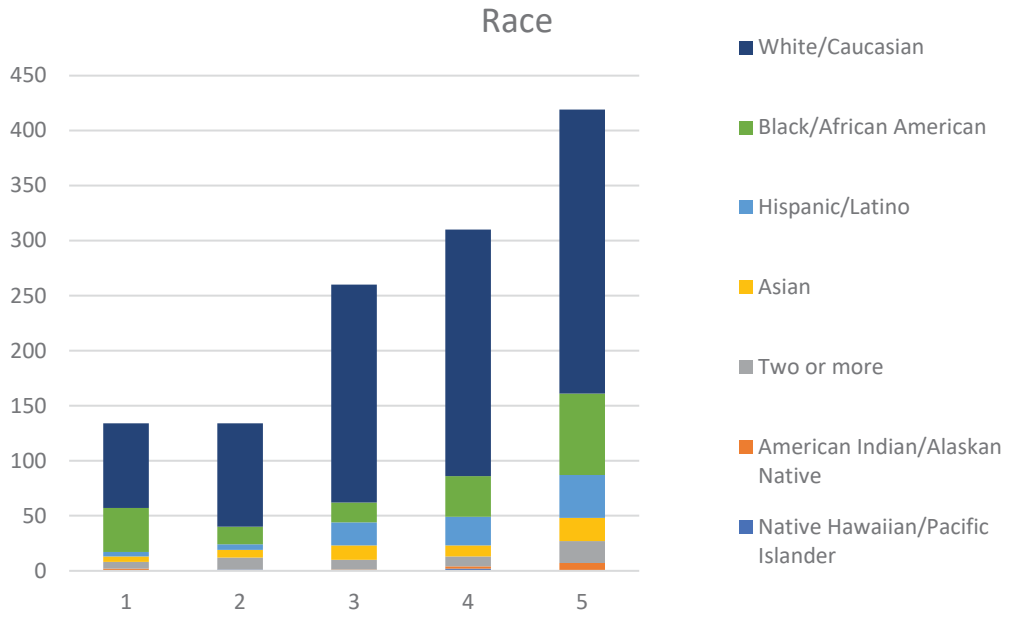


Technology Rating	Transit User	Non-Transit User
1	74	84
2	76	76
3	142	152
4	156	187
5	224	235
Grand Total	**672**	**734**

Technology Rating	Served	Underserved
1	96	81
2	103	63
3	213	99
4	224	141
5	267	229
Grand Total	**903**	**613**

Technology (1 = Least Important, 5 = Most Important)

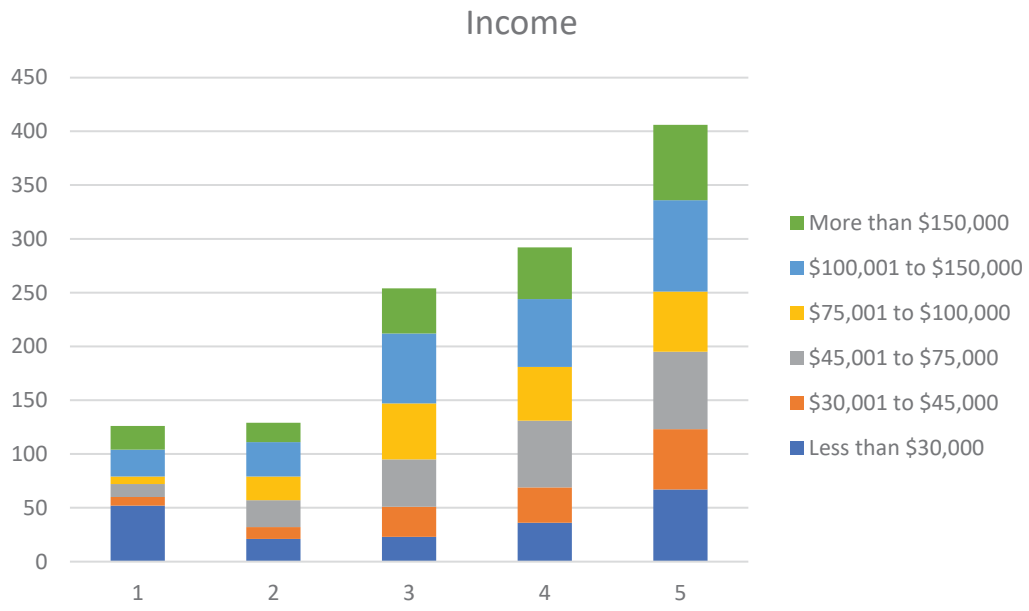


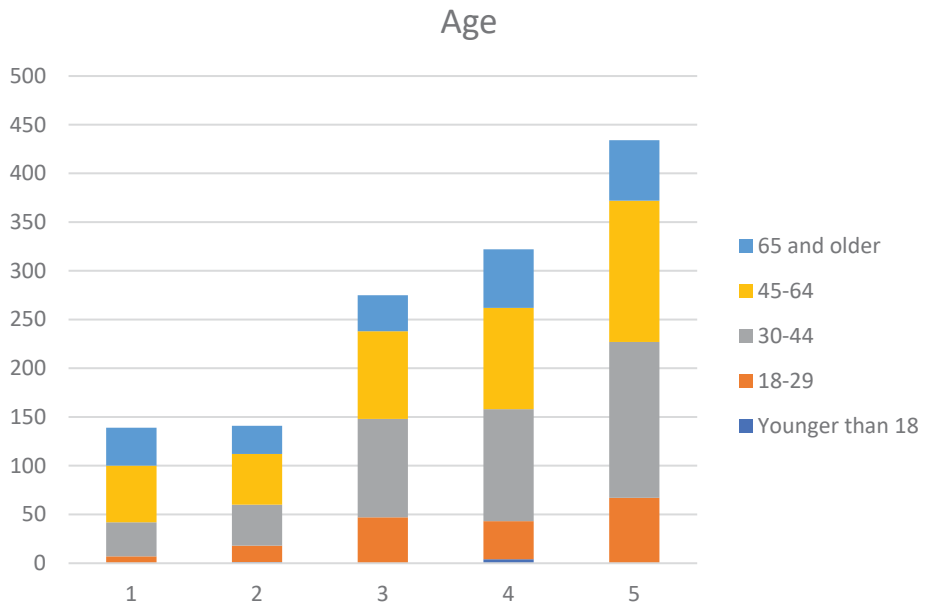


Technology Rating	Suburban	Urban
1	106	71
2	107	59
3	190	122
4	227	138
5	283	213
Grand Total	**913**	**603**

Technology Rating	Native Hawaiian/ Pacific Islander	American Indian/ Alaskan Native	Two or more	Asian	Hispanic/ Latino	Black/ African American	White/ Caucasian
1		2	6	5	4	40	77
2	1		11	7	5	16	94
3		1	9	13	21	18	198
4	2	2	9	10	26	37	224
5		7	20	21	39	74	258
Grand Total	**3**	**12**	**55**	**56**	**95**	**185**	**851**

Technology (1 = Least Important, 5 = Most Important)

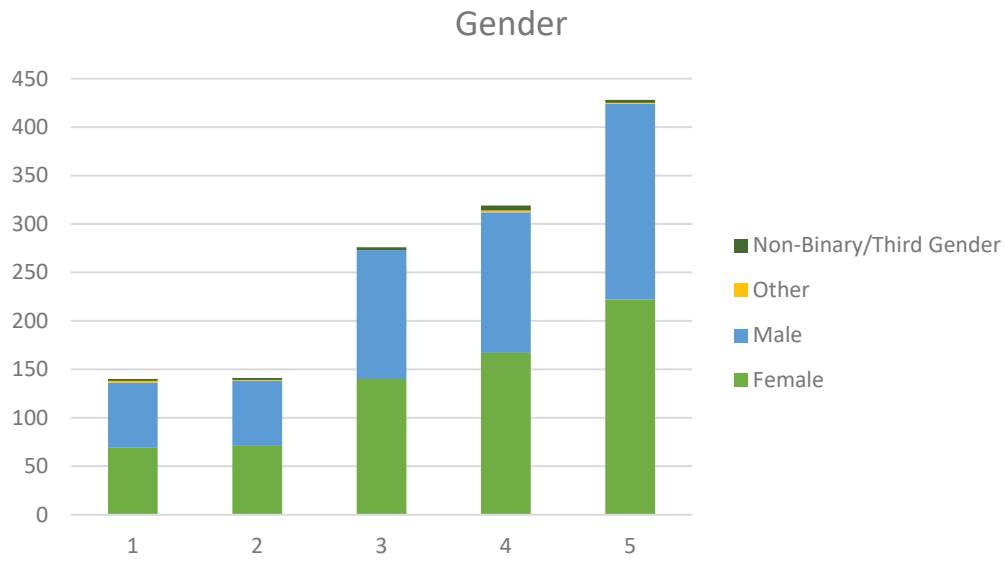


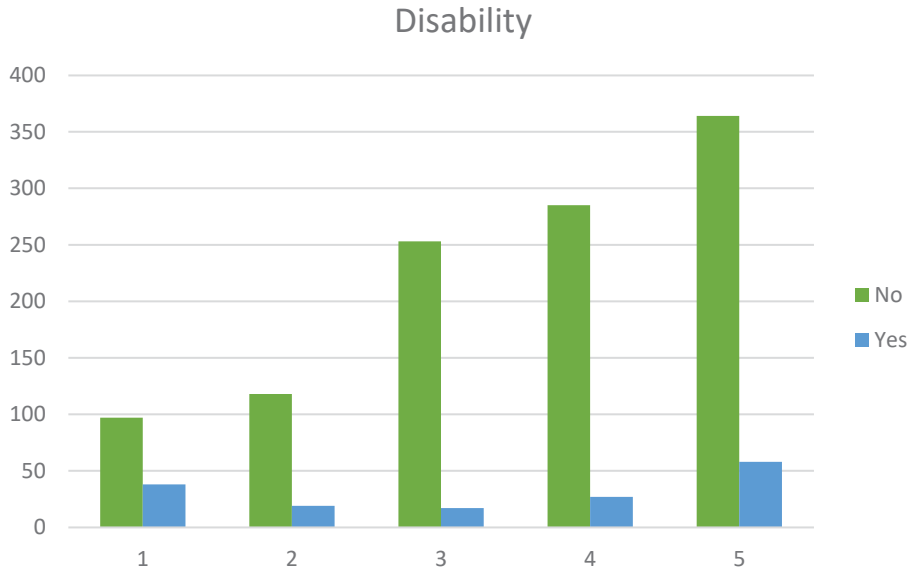


Technology Rating	Less than $30,000	$30,001 to $45,000	$45,001 to $75,000	$75,001 to $100,000	$100,001 to $150,000	More than $150,000
1	52	8	12	7	25	22
2	21	11	25	22	32	18
3	23	28	44	52	65	42
4	36	33	62	50	63	48
5	67	56	72	56	85	70
Grand Total	**199**	**136**	**215**	**187**	**270**	**200**

Technology Rating	Younger than 18	18-29	30-44	45-64	65 and older
1		7	35	58	39
2	1	17	42	52	29
3		47	101	90	37
4	4	39	115	104	60
5		67	160	145	62
Grand Total	**5**	**177**	**453**	**449**	**227**

Technology (1 = Least Important, 5 = Most Important)

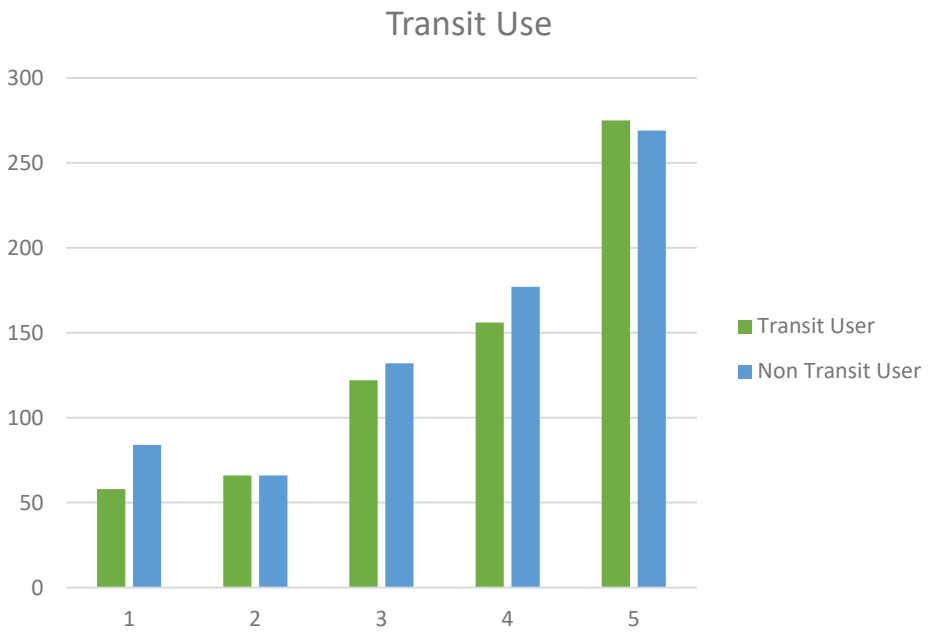


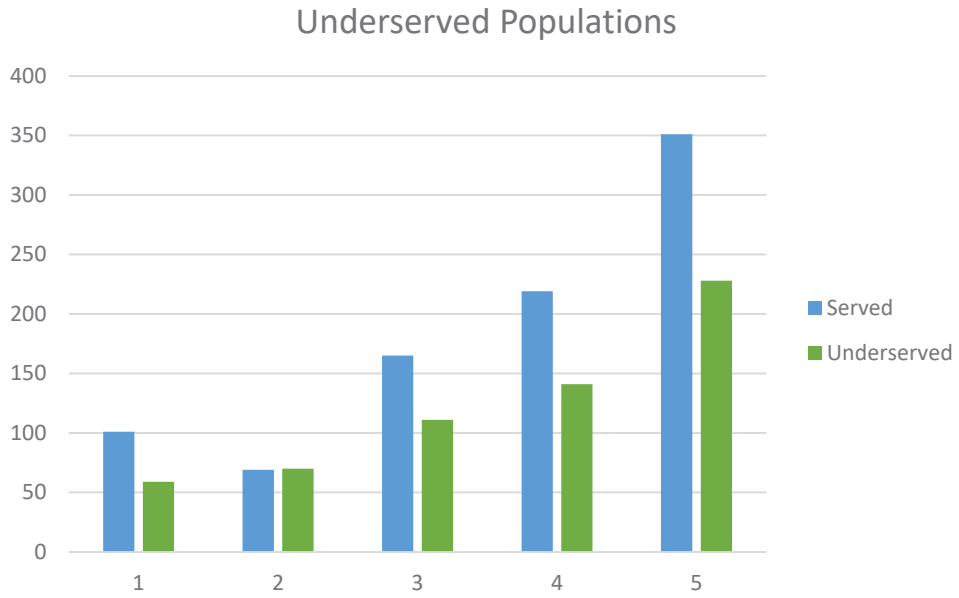


Technology Rating	Female	Male	Other	Non-Binary/Third Gender
1	69	67	2	2
2	71	67	1	2
3	140	133		3
4	167	145	2	5
5	222	202	1	3
Grand Total	**669**	**614**	**6**	**15**

Technology Rating	No	Yes
1	97	38
2	118	19
3	253	17
4	285	27
5	364	58
Grand Total	**1117**	**159**

Connecting Infrastructure (1 = Least Important, 5 = Most Important)

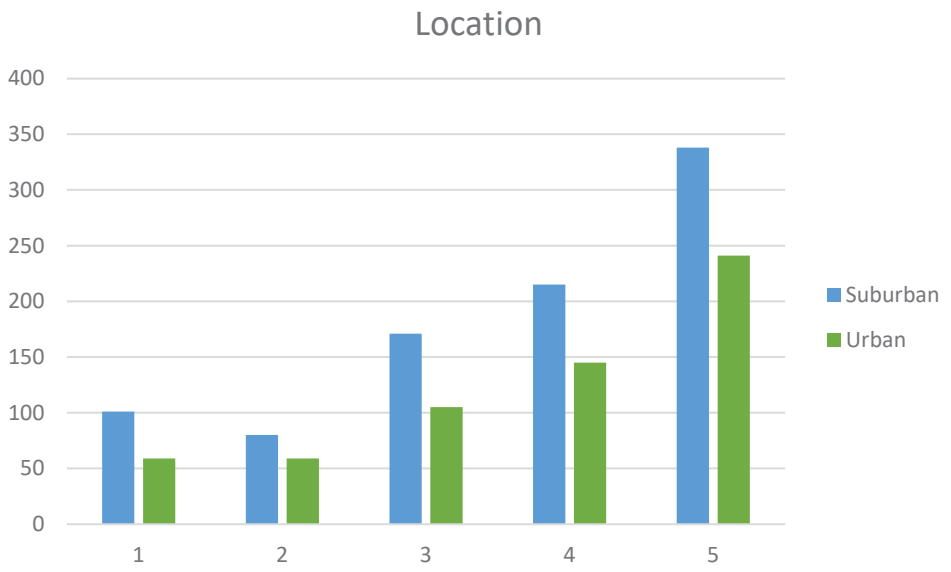


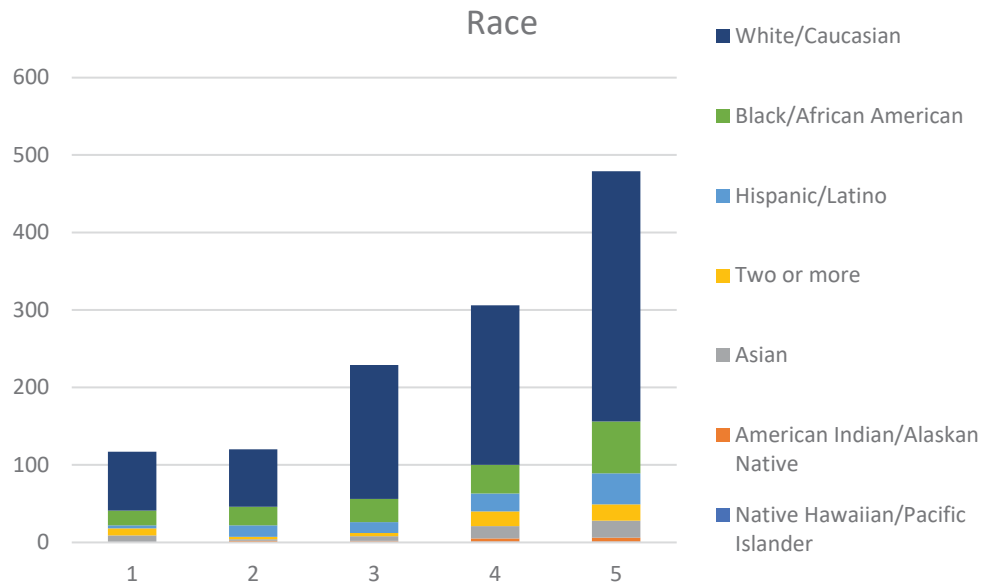


Connecting Infrastructure Rating	Transit User	Non-Transit User
1	58	84
2	66	66
3	122	132
4	156	177
5	275	269
Grand Total	**677**	**728**

Connecting Infrastructure Rating	Served	Underserved
1	101	59
2	69	70
3	165	111
4	219	141
5	351	228
Grand Total	**905**	**609**

Connecting Infrastructure (1 = Least Important, 5 = Most Important)

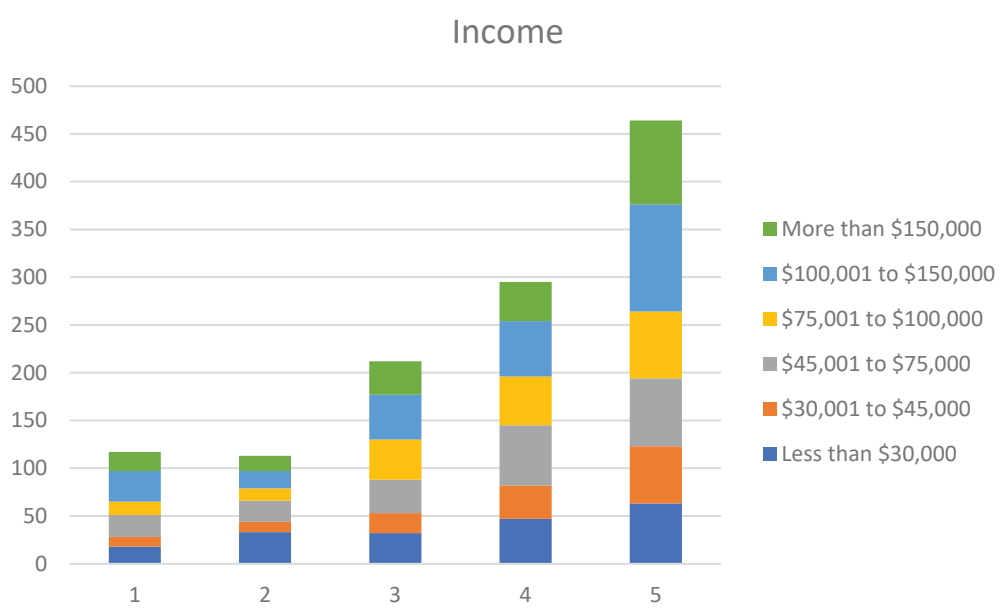


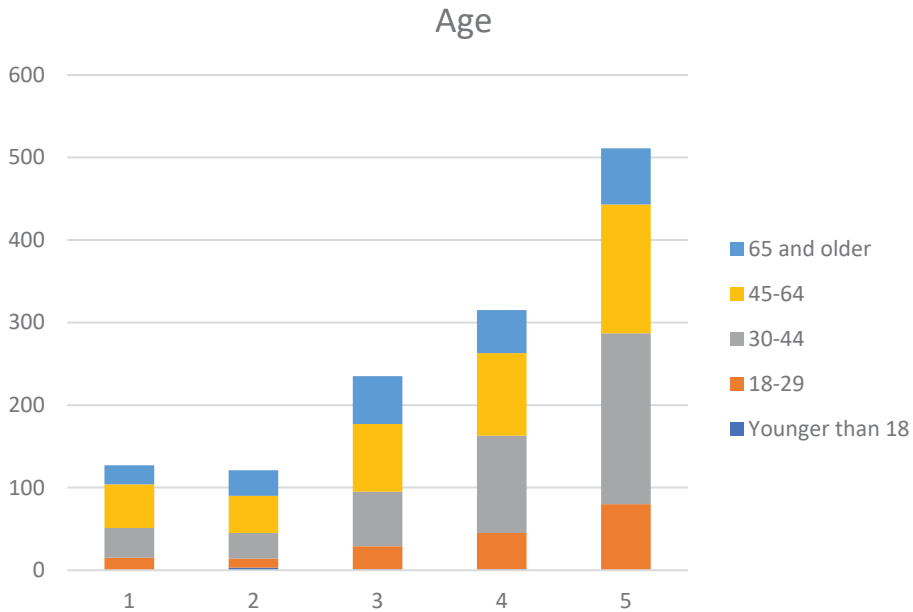


Connecting Infrastructure Rating	Suburban	Urban
1	101	59
2	80	59
3	171	105
4	215	145
5	338	241
Grand Total	**905**	**609**

Connecting Infrastructure Rating	Native Hawaiian/ Pacific Islander	American Indian/ Alaskan Native	Two or more	Asian	Hispanic / Latino	Black/ African American	White/ Caucasian
1			9	9	4	19	76
2		2	2	3	15	24	74
3	1	1	6	4	14	30	173
4	1	4	16	19	23	37	206
5	1	5	22	21	40	67	323
Grand Total	**3**	**12**	**55**	**56**	**96**	**177**	**852**

Connecting Infrastructure (1 = Least Important, 5 = Most Important)

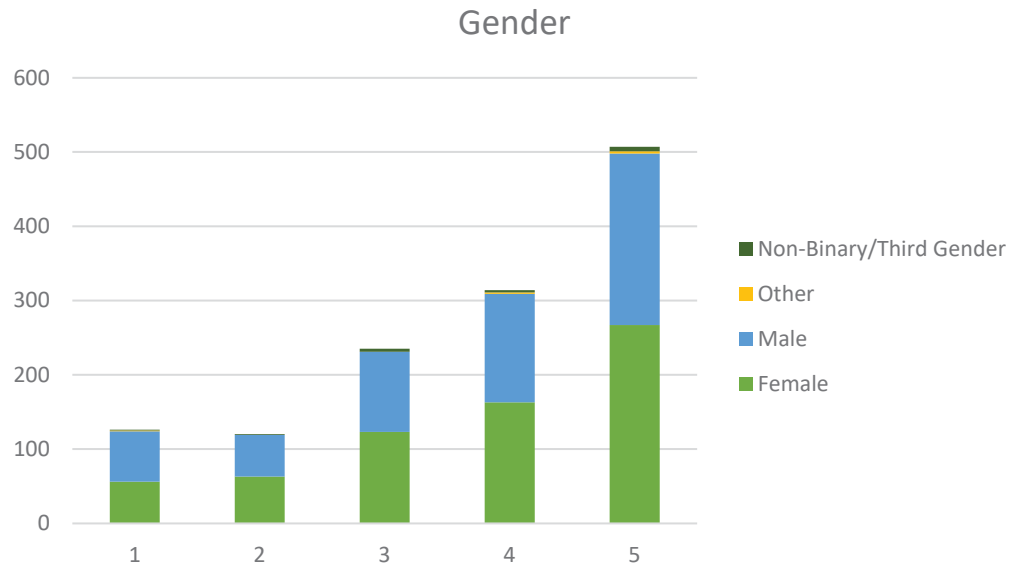


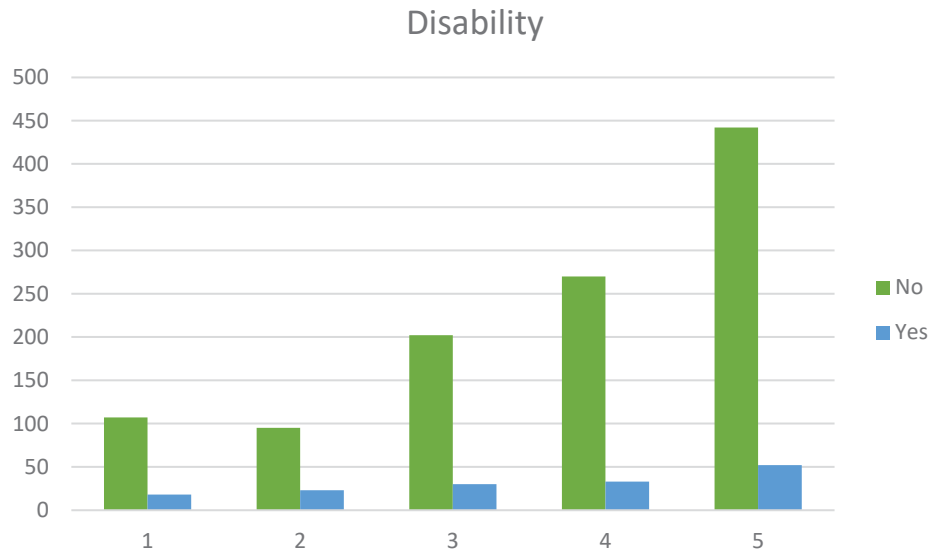


Connecting Infrastructure Rating	Less than $30,000	$30,001 to $45,000	$45,001 to $75,000	$75,001 to $100,000	$100,001 to $150,000	More than $150,000
1	18	10	23	14	32	20
2	33	11	22	13	18	16
3	32	21	35	42	47	35
4	47	35	63	51	58	41
5	63	60	71	70	112	88
Grand Total	**193**	**137**	**214**	**190**	**267**	**200**

Connecting Infrastructure Rating	Younger than 18	18-29	30-44	45-64	65 and older
1		15	36	53	23
2	3	11	31	45	31
3	1	28	66	82	58
4	1	44	118	100	52
5		80	207	156	68
Grand Total	**5**	**178**	**458**	**436**	**232**

Connecting Infrastructure (1 = Least Important, 5 = Most Important)

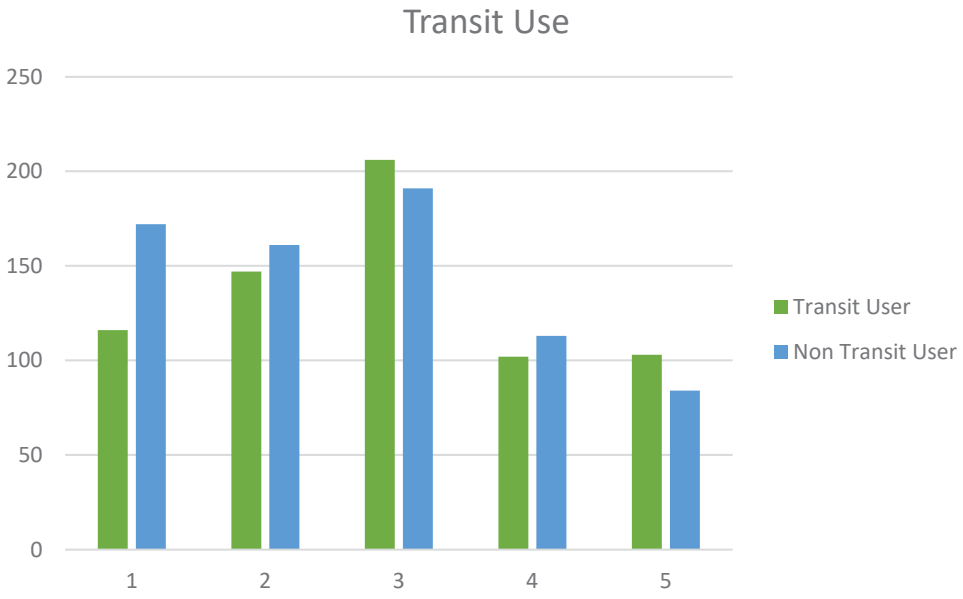


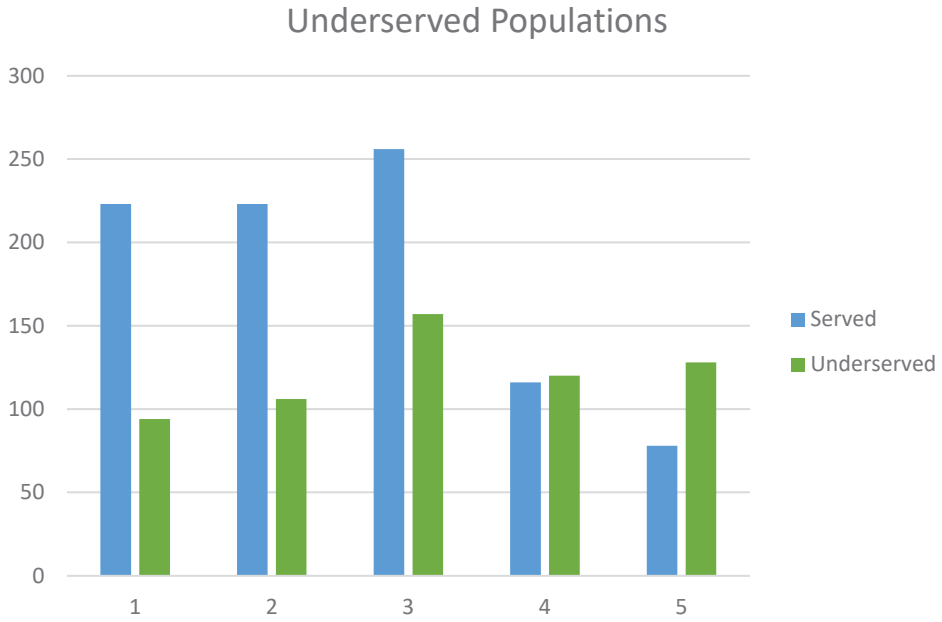


Connecting Infrastructure Rating	Female	Male	Other	Non-Binary/Third Gender
1	56	68	1	1
2	63	56		1
3	123	108		4
4	163	146	2	3
5	267	231	3	6
Grand Total	**672**	**609**	**6**	**15**

Connecting Infrastructure Rating	No	Yes
1	107	18
2	95	23
3	202	30
4	270	33
5	442	52
Grand Total	**1116**	**156**

Vehicle (1 = Least Important, 5 = Most Important)

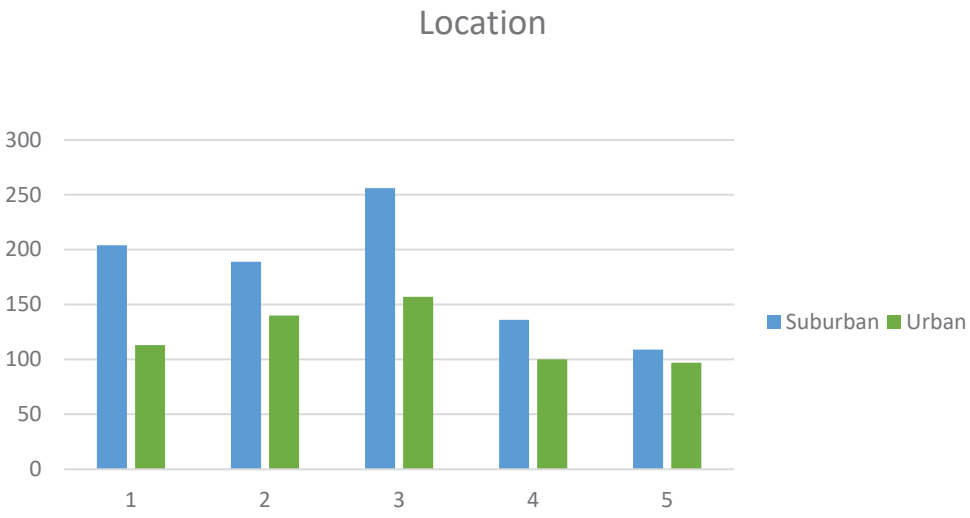


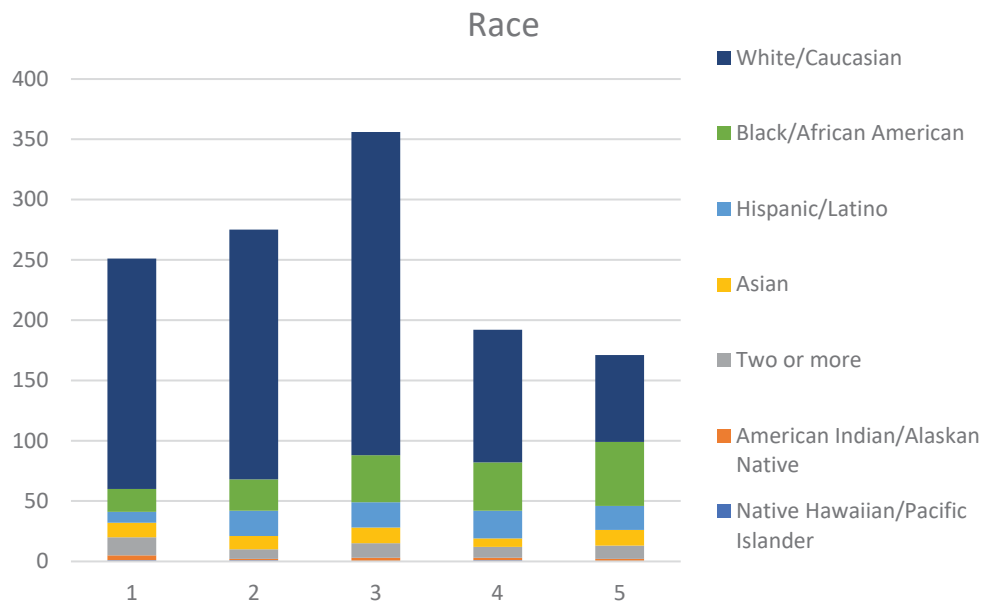


Vehicle Rating	Transit User	Non-Transit User
1	116	172
2	147	161
3	206	191
4	102	113
5	103	84
Grand Total	**674**	**721**

Vehicle Rating	Served	Underserved
1	223	94
2	223	106
3	256	157
4	116	120
5	78	128
Grand Total	**896**	**605**

Vehicle (1 = Least Important, 5 = Most Important)

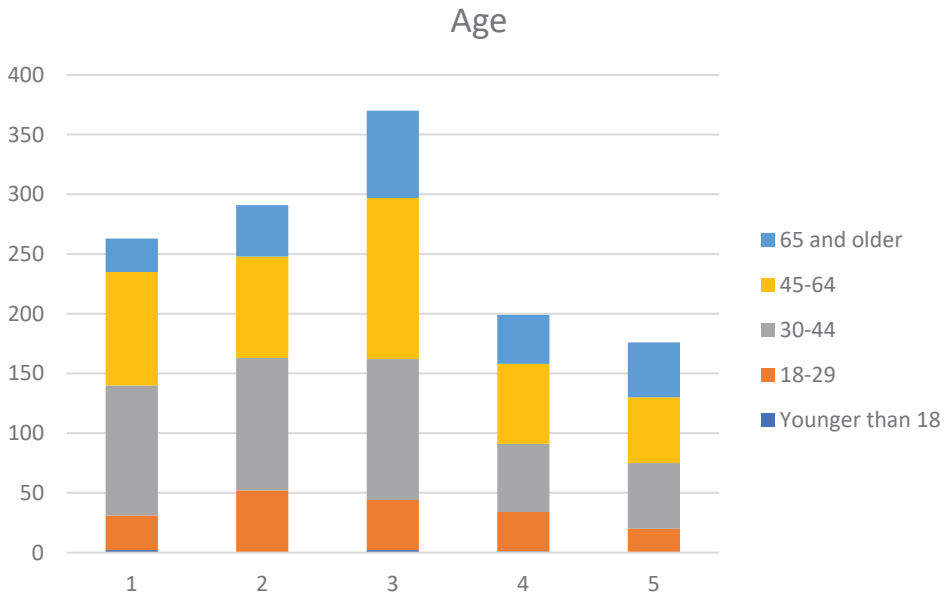




Vehicle Rating	Suburban	Urban
1	204	113
2	189	140
3	256	157
4	136	100
5	109	97
Grand Total	**894**	**607**

Vehicle Rating	Native Hawaiian/ Pacific Islander	American Indian/ Alaskan Native	Two or more	Asian	Hispanic / Latino	Black/ African American	White/ Caucasian
1	1	4	15	12	9	19	191
2	1	1	8	11	21	26	207
3		3	12	13	21	39	268
4	1	2	9	7	23	40	110
5		2	11	13	20	53	72
Grand Total	**3**	**12**	**55**	**56**	**94**	**177**	**848**

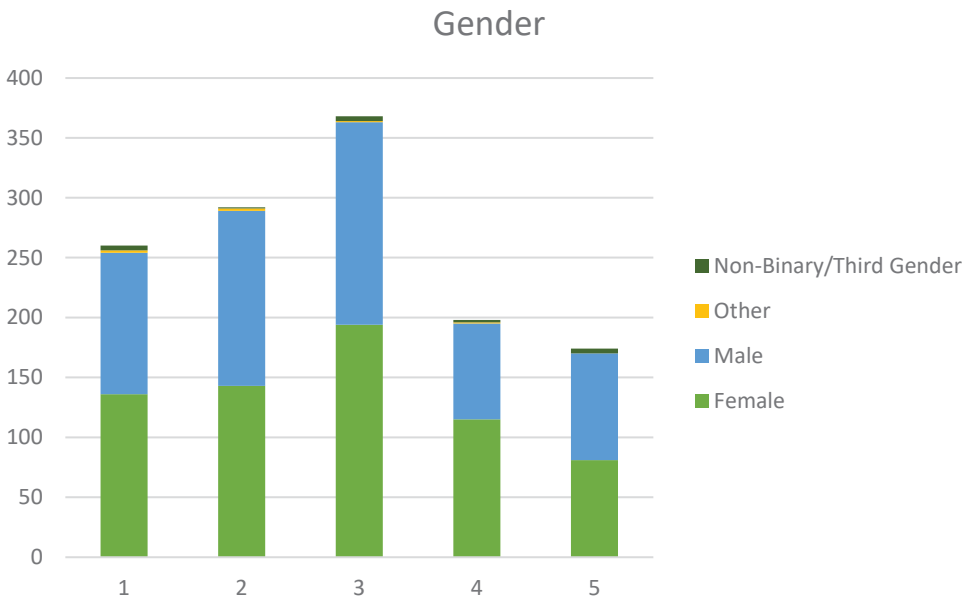
Vehicle (1 = Least Important, 5 = Most Important)

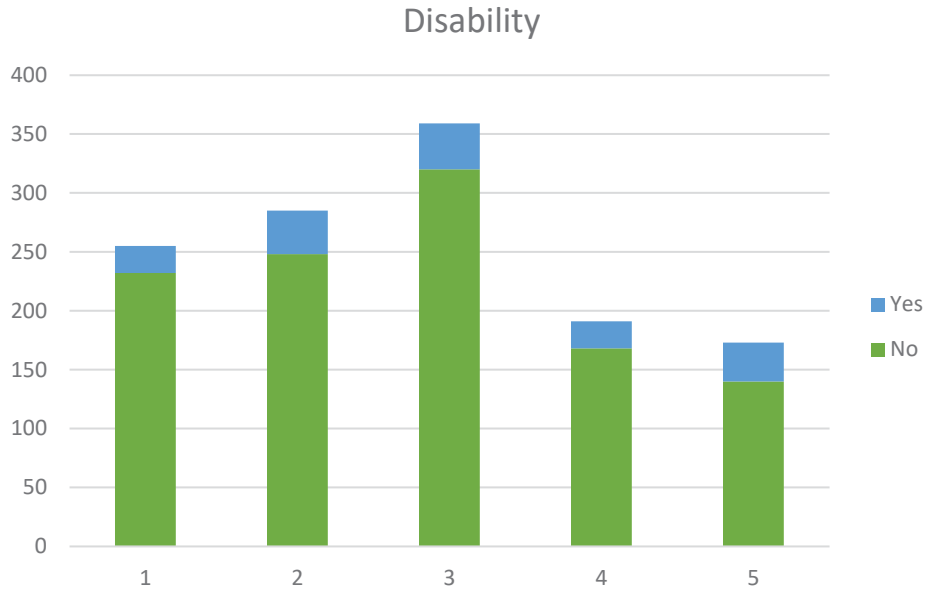


Vehicle Rating	Less than $30,000	$30,001 to $45,000	$45,001 to $75,000	$75,001 to $100,000	$100,001 to $150,000	More than $150,000
1	27	17	39	41	72	44
2	44	28	35	34	65	61
3	40	36	77	52	78	51
4	30	25	40	41	28	23
5	55	28	23	19	24	19
Grand Total	**196**	**134**	**214**	**187**	**267**	**198**

Vehicle Rating	Younger than 18	18-29	30-44	45-64	65 and older
1	2	29	109	95	28
2		52	111	85	43
3	2	42	118	135	73
4	1	33	57	67	41
5		20	55	55	46
Grand Total	**5**	**176**	**450**	**437**	**231**

Vehicle (1 = Least Important, 5 = Most Important)

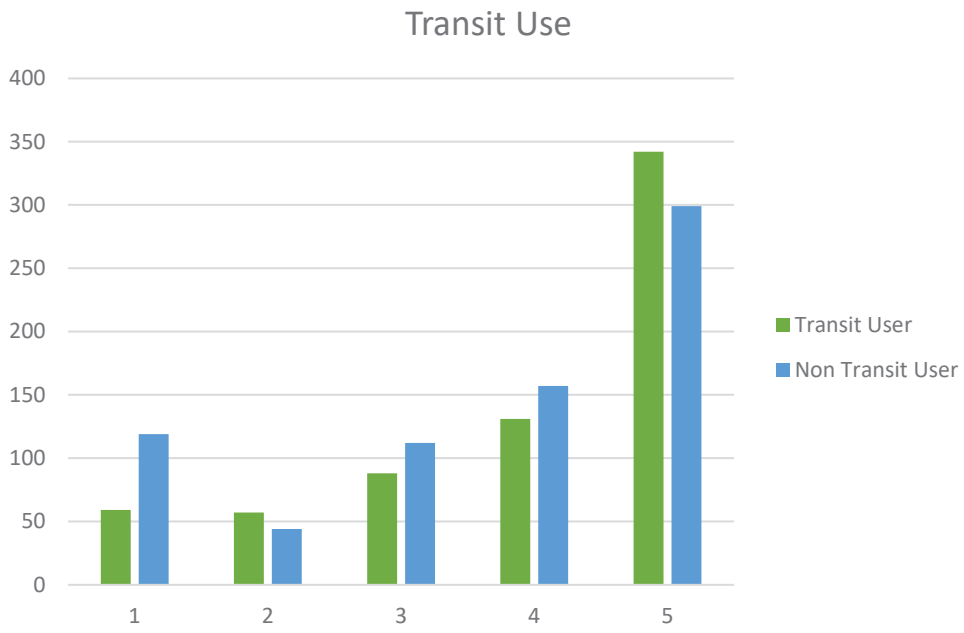


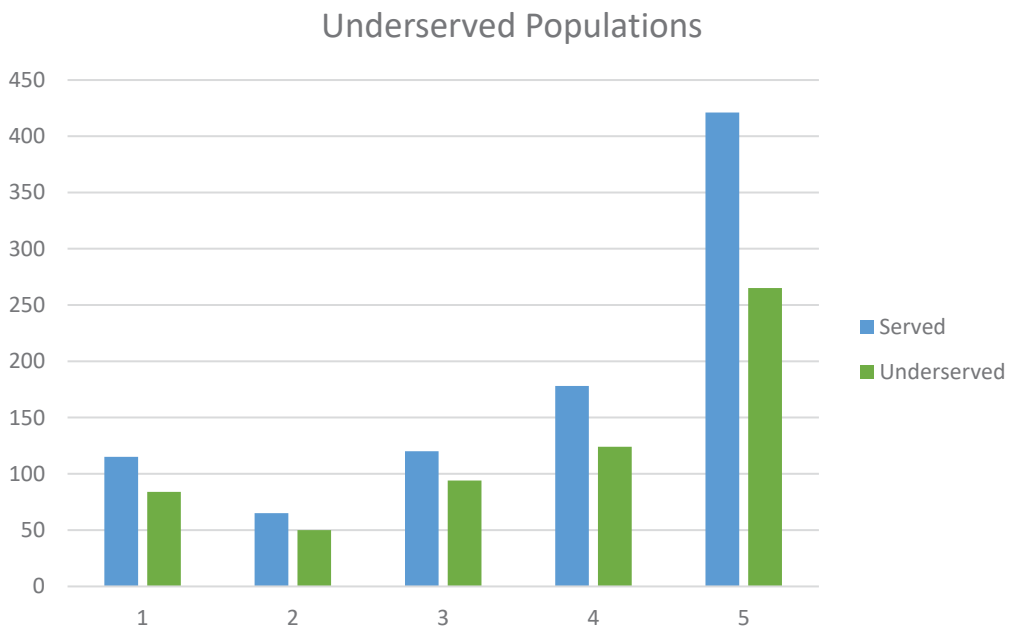


Vehicle Rating	Female	Male	Other	Non-Binary/Third Gender
1	136	118	2	4
2	143	146	2	1
3	194	169	1	4
4	115	80	1	2
5	81	89		4
Grand Total	**669**	**602**	**6**	**15**

Vehicle Rating	No	Yes
1	232	23
2	248	37
3	320	39
4	168	23
5	140	33
Grand Total	**1108**	**155**

Speed and Reliability (1 = Least Important, 5 = Most Important)

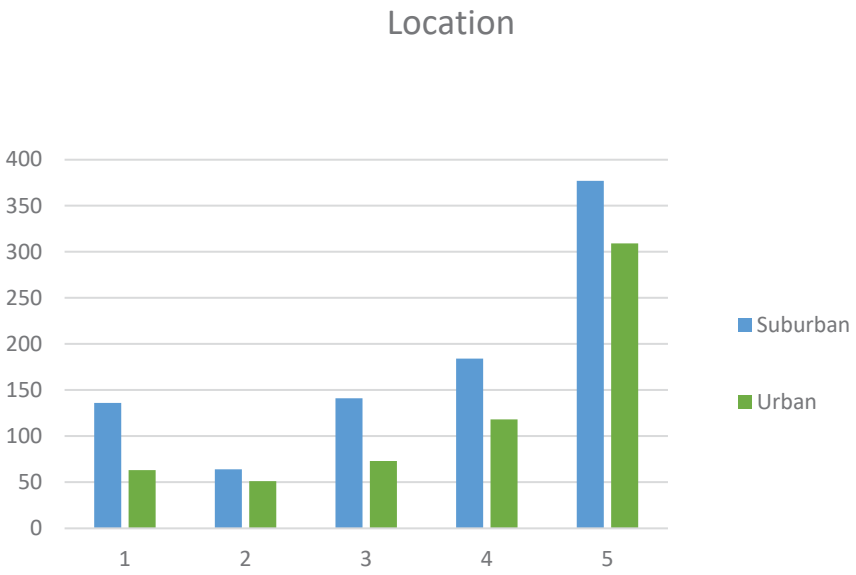


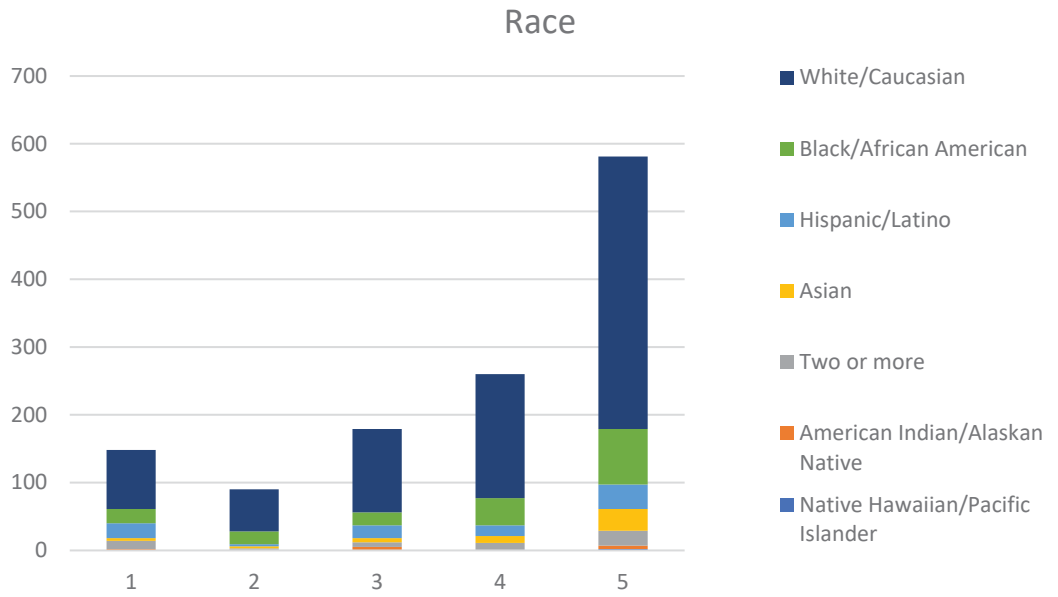


Speed and Reliability Rating	Transit User	Non-Transit User
1	59	119
2	57	44
3	88	112
4	131	157
5	342	299
Grand Total	**677**	**731**

Speed and Reliability Rating	Served	Underserved
1	115	84
2	65	50
3	120	94
4	178	124
5	421	265
Grand Total	**899**	**617**

Speed and Reliability (1 = Least Important, 5 = Most Important)

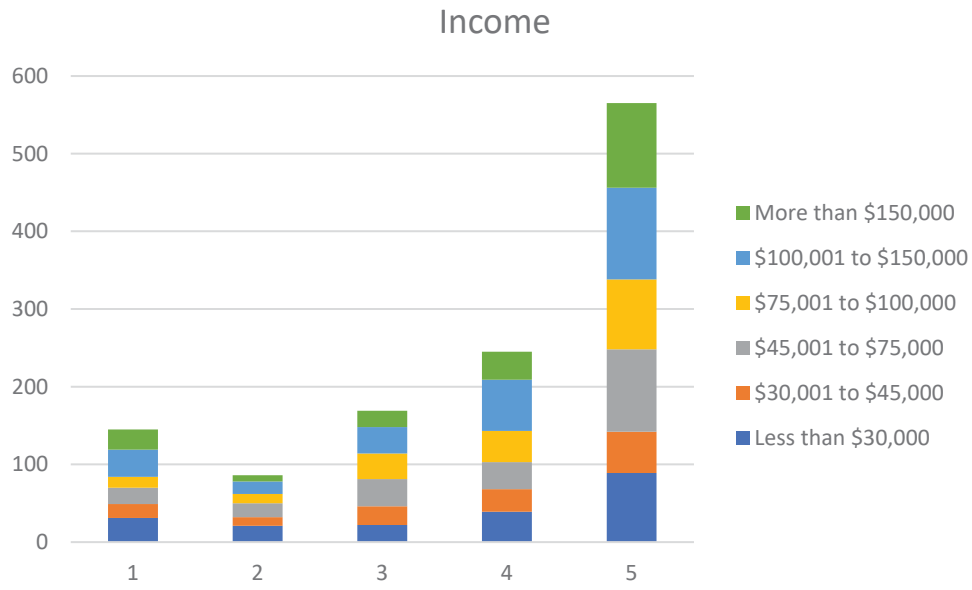


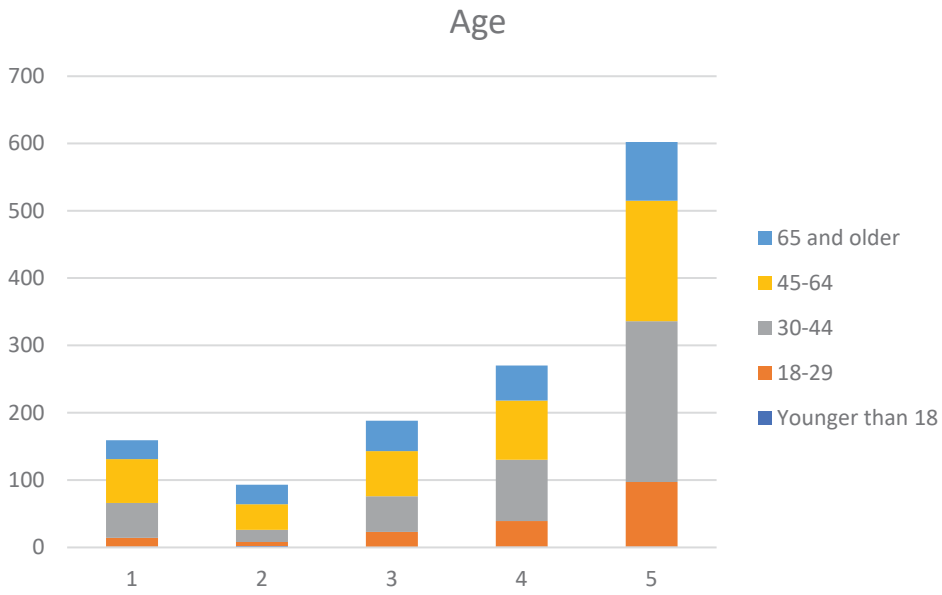


Speed and Reliability Rating	Suburban	Urban
1	136	63
2	64	51
3	141	73
4	184	118
5	377	309
Grand Total	**902**	**614**

Speed and Reliability Rating	Native Hawaiian/ Pacific Islander	American Indian/ Alaskan Native	Two or more	Asian	Hispanic/ Latino	Black/ African American	White/ Caucasian
1		2	12	4	22	21	87
2	1		2	3	3	19	62
3		5	7	6	19	19	123
4			11	10	16	40	183
5	2	5	22	32	36	82	402
Grand Total	**3**	**12**	**54**	**55**	**96**	**181**	**857**

Speed and Reliability (1 = Least Important, 5 = Most Important)

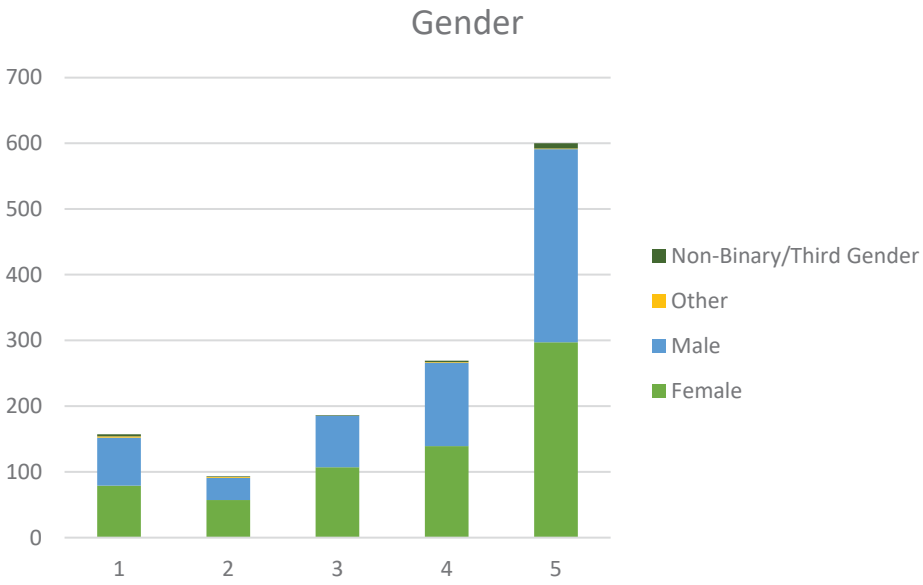


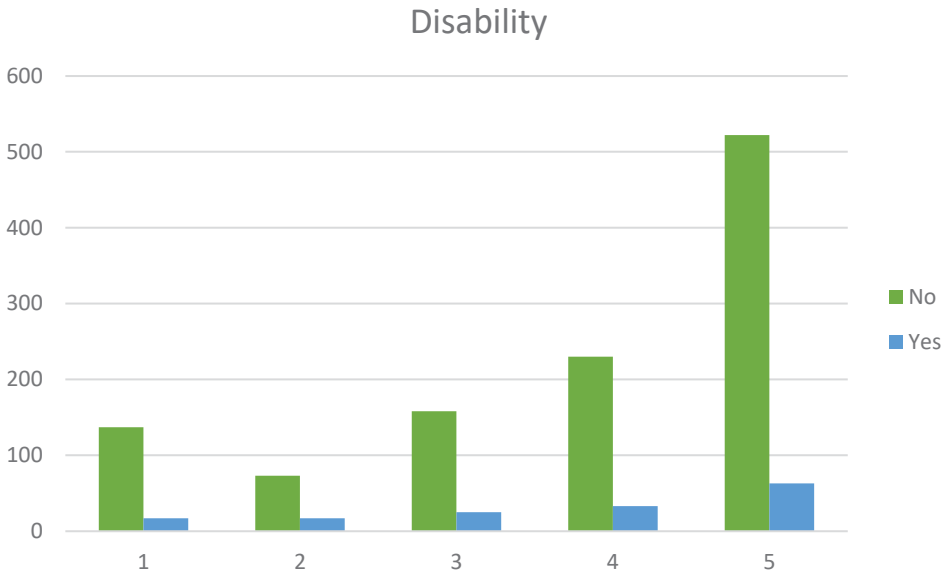


Speed and Reliability Rating	Less than $30,000	$30,001 to $45,000	$45,001 to $75,000	$75,001 to $100,000	$100,001 to $150,000	More than $150,000
1	31	18	21	14	35	26
2	21	11	18	12	16	8
3	22	24	35	33	34	21
4	39	29	35	40	66	36
5	89	53	106	90	118	109
Grand Total	**202**	**135**	**215**	**189**	**269**	**200**

Speed and Reliability Rating	Younger than 18	18-29	30-44	45-64	65 and older
1	1	13	52	65	28
2	2	6	18	38	29
3		23	53	67	45
4	1	38	91	88	52
5	1	96	239	179	87
Grand Total	**5**	**176**	**453**	**437**	**241**

Speed and Reliability (1 = Least Important, 5 = Most Important)

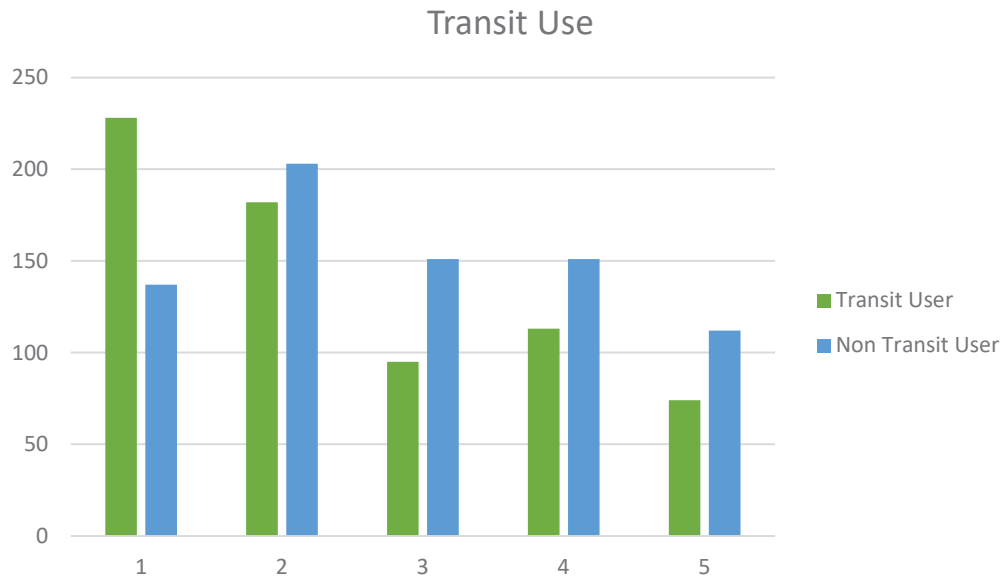


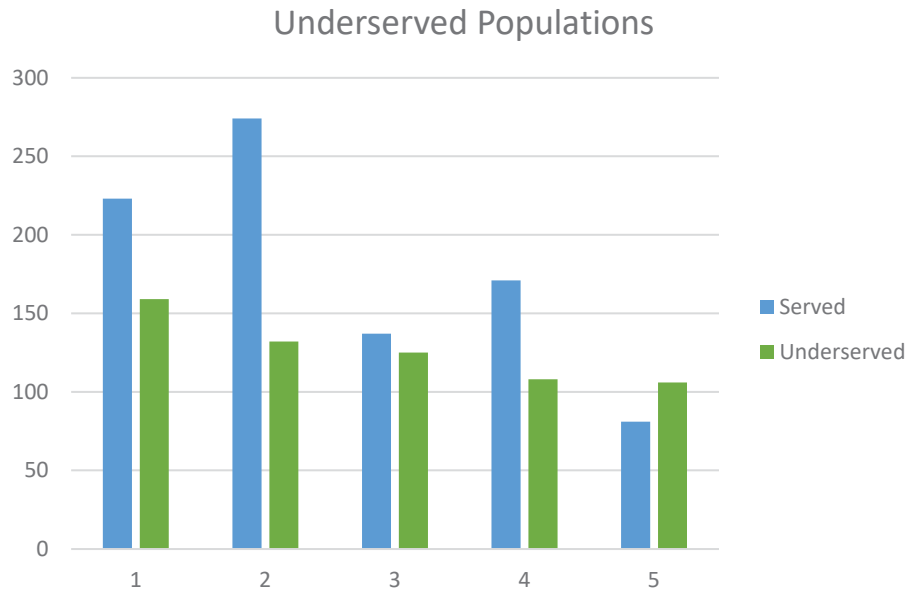


Speed and Reliability Rating	Female	Male	Other	Non-Binary/Third Gender
1	79	73	2	3
2	57	34	1	1
3	107	78		1
4	139	127	1	2
5	297	294	1	8
Grand Total	**679**	**606**	**5**	**15**

Speed and Reliability Rating	No	Yes
1	137	17
2	73	17
3	158	25
4	230	33
5	522	63
Grand Total	**1120**	**155**

System Design (1 = Ridership, 5 = Coverage)

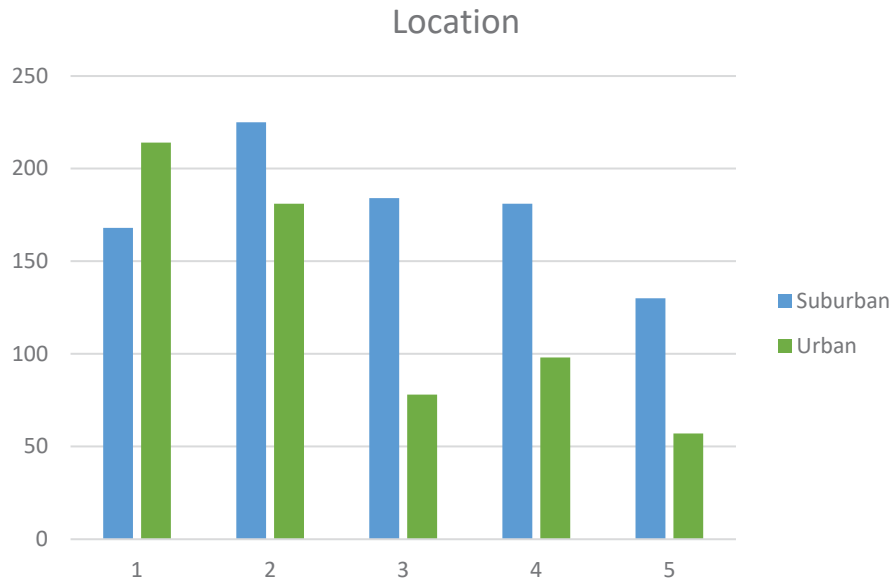


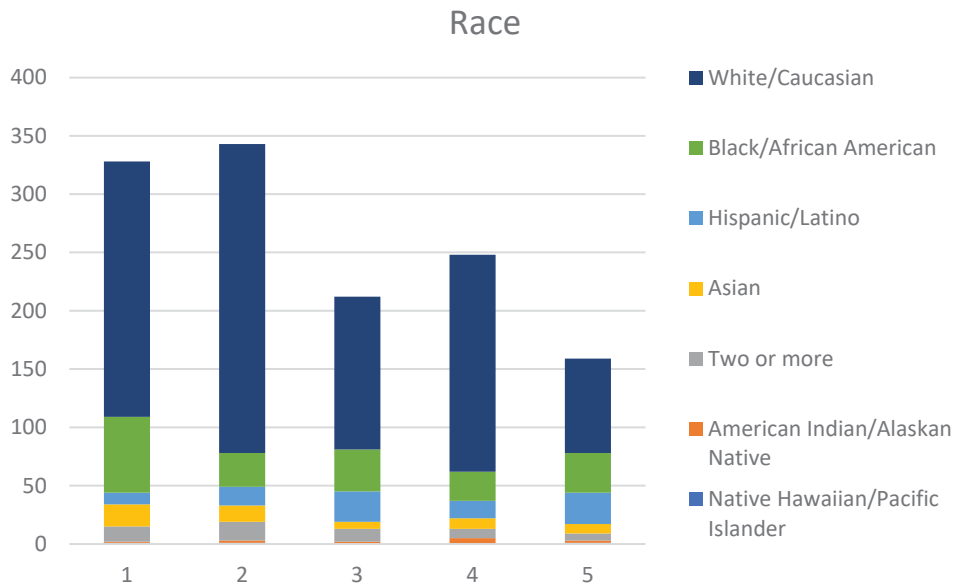


System Design Rating	Transit User	Non-Transit User
1	228	137
2	182	203
3	95	151
4	113	151
5	74	112
Grand Total	**692**	**754**

System Design Rating	Underserved	Served
1	159	223
2	132	274
3	125	137
4	108	171
5	106	81
Grand Total	**630**	**886**

System Design (1 = Ridership, 5 = Coverage)

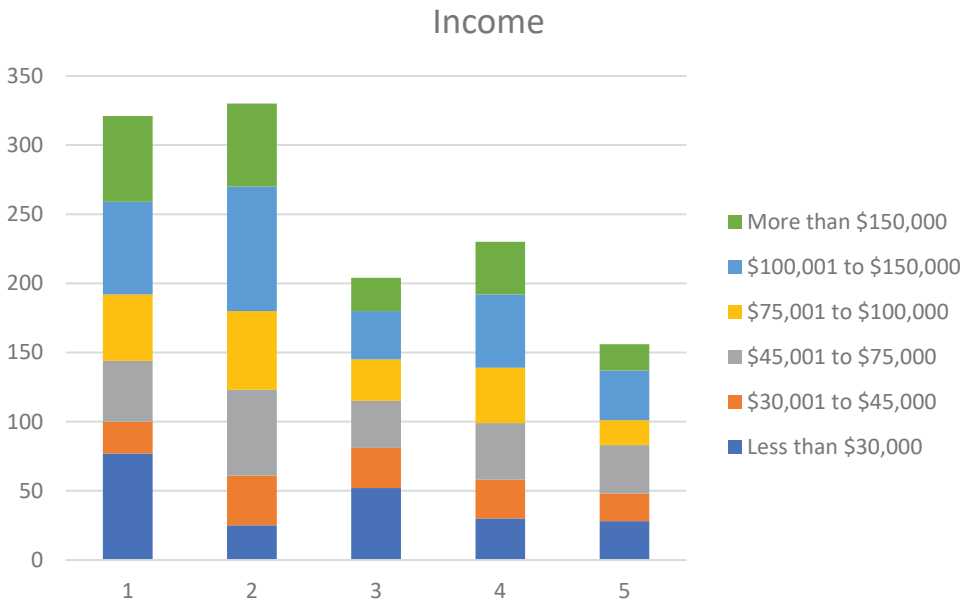


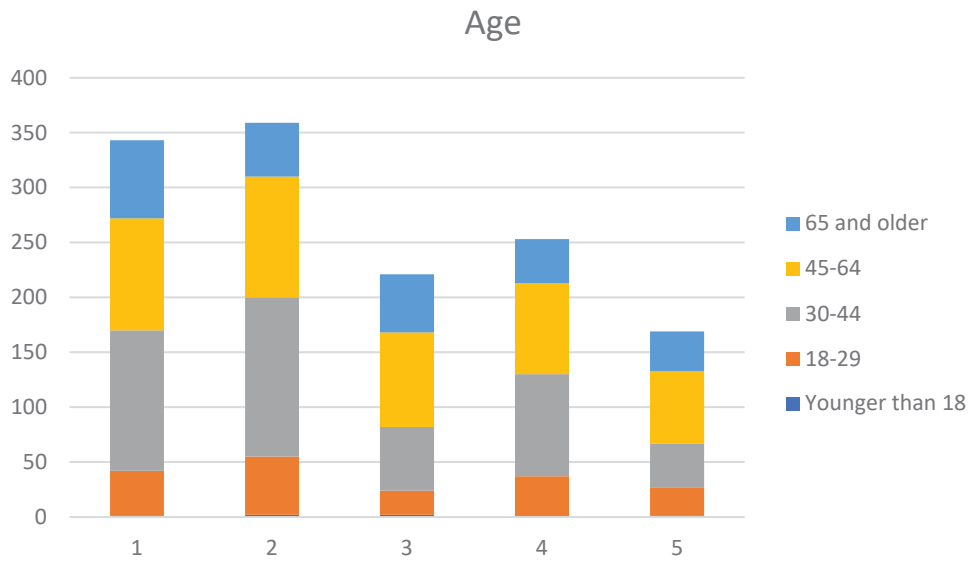


System Design Rating	Suburban	Urban
1	168	214
2	225	181
3	184	78
4	181	98
5	130	57
Grand Total	**888**	**628**

System Design Rating	Native Hawaiian/Pacific Islander	American Indian /Alaska Native	Two or more	Asian	Hispanic/Latino	Black/ African American	White/ Caucasian
1	1	1	13	19	10	65	219
2	1	2	16	14	16	29	265
3		2	11	6	26	36	131
4		5	8	9	15	25	186
5	1	2	6	8	27	34	81
Grand Total	**3**	**12**	**54**	**56**	**94**	**189**	**882**

System Design (1 = Ridership, 5 = Coverage)

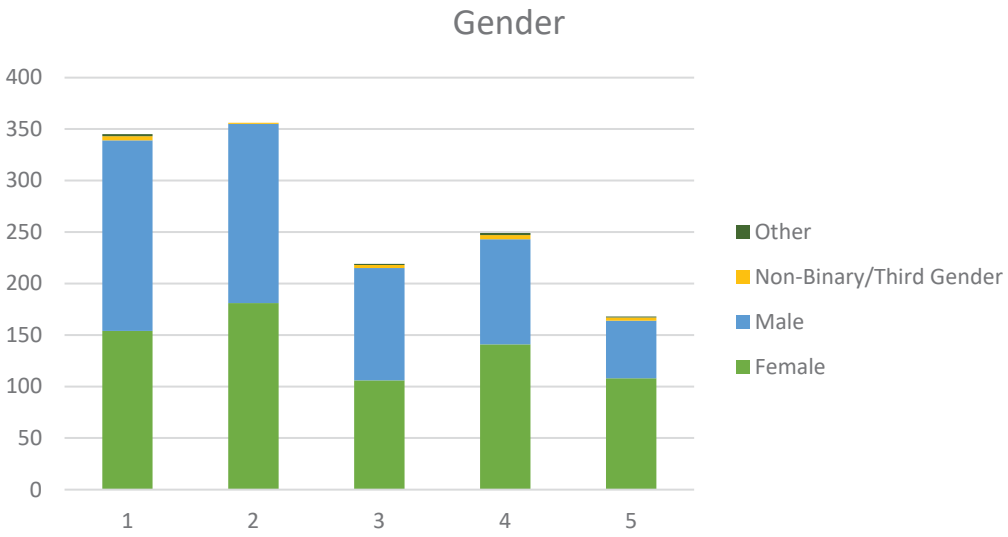


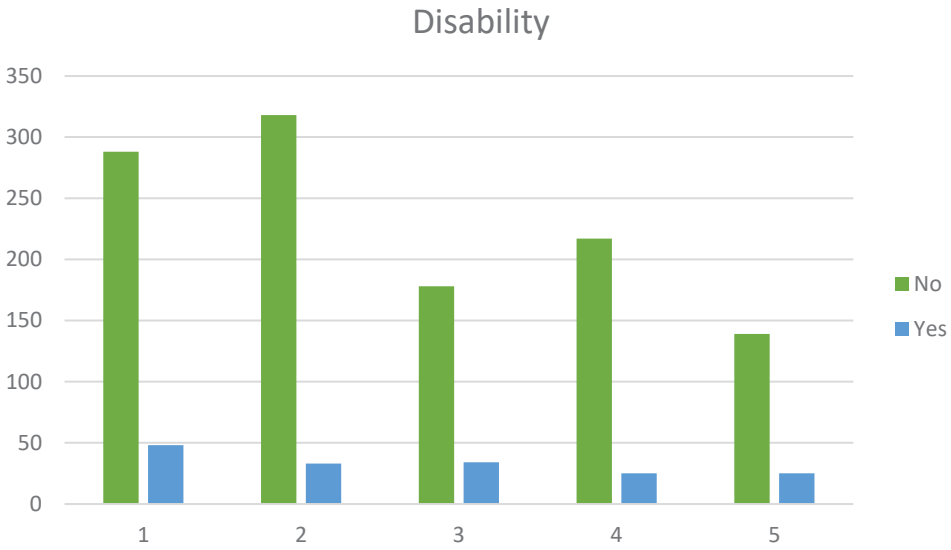


System Design Rating	Less than $30,000	$30,001 to $45,000	$45,001 to $75,000	$75,001 to $100,000	$100,001 to $150,000	More than $150,000
1	77	23	44	48	67	62
2	25	36	62	57	90	60
3	52	29	34	30	35	24
4	30	28	41	40	53	38
5	28	20	35	18	36	19
Grand Total	**212**	**136**	**216**	**193**	**281**	**203**

System Design Rating	Younger than 18	18-29	30-44	45-64	65 and older
1	1	41	128	102	71
2	2	53	145	110	49
3	2	22	58	86	53
4		37	93	83	40
5	1	26	40	66	36
Grand Total	**6**	**179**	**464**	**447**	**249**

System Design (1 = Ridership, 5 = Coverage)

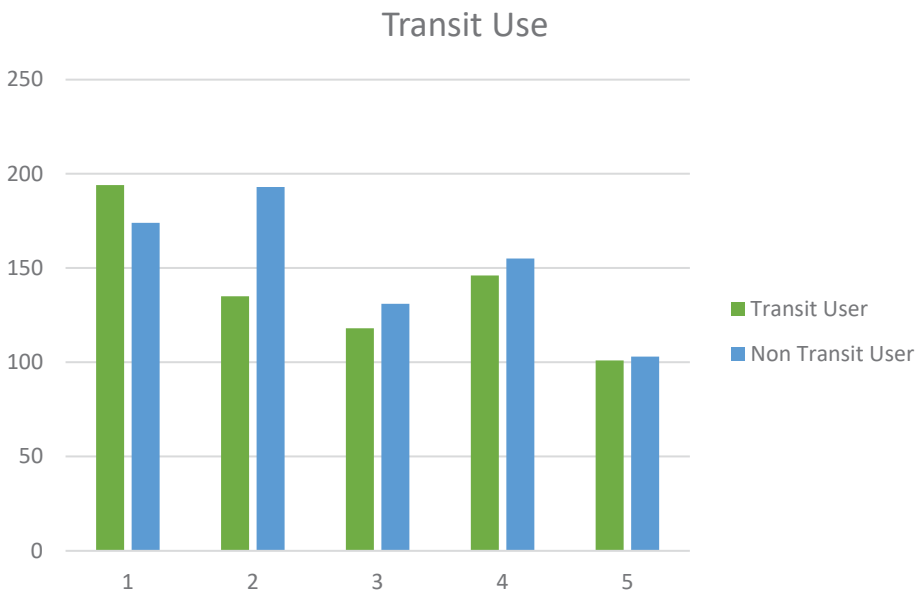


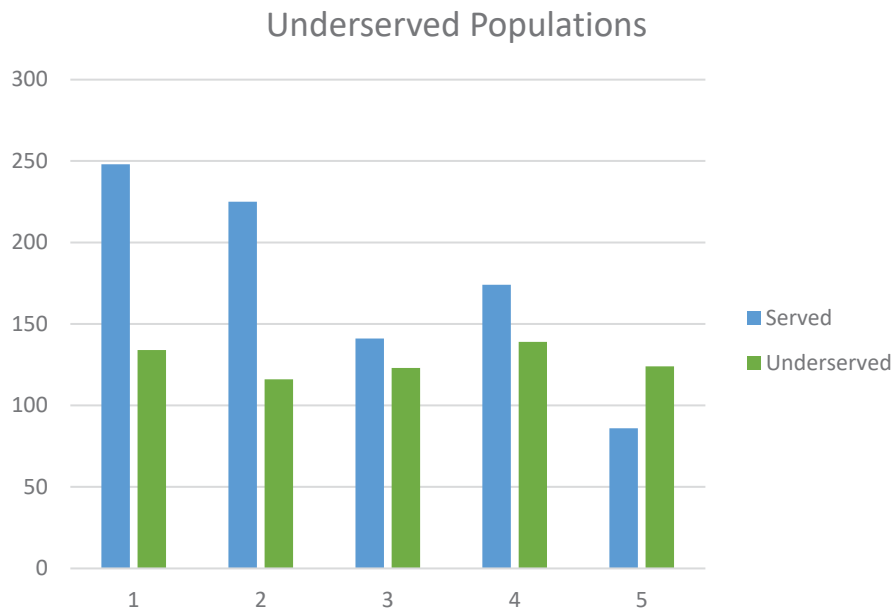


System Design Rating	Female	Male	Other	Non-Binary/Third Gender
1	154	185	2	4
2	181	174		1
3	106	109	1	3
4	141	102	2	4
5	108	56	1	3
Grand Total	**690**	**626**	**6**	**15**

System Design Rating	No	Yes
1	288	48
2	318	33
3	178	34
4	217	25
5	139	25
Grand Total	**1140**	**165**

Route Design (1 = Speed, 5 = Access)

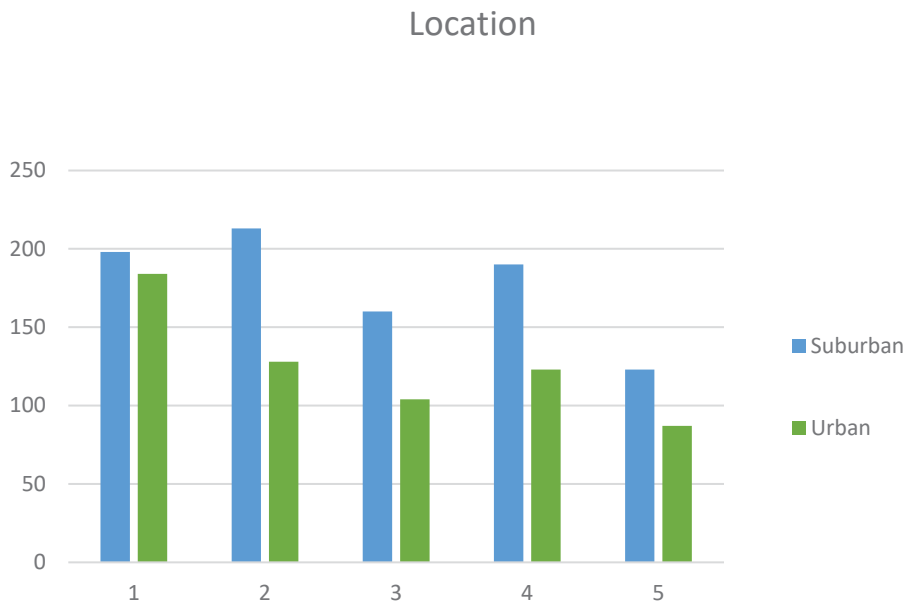


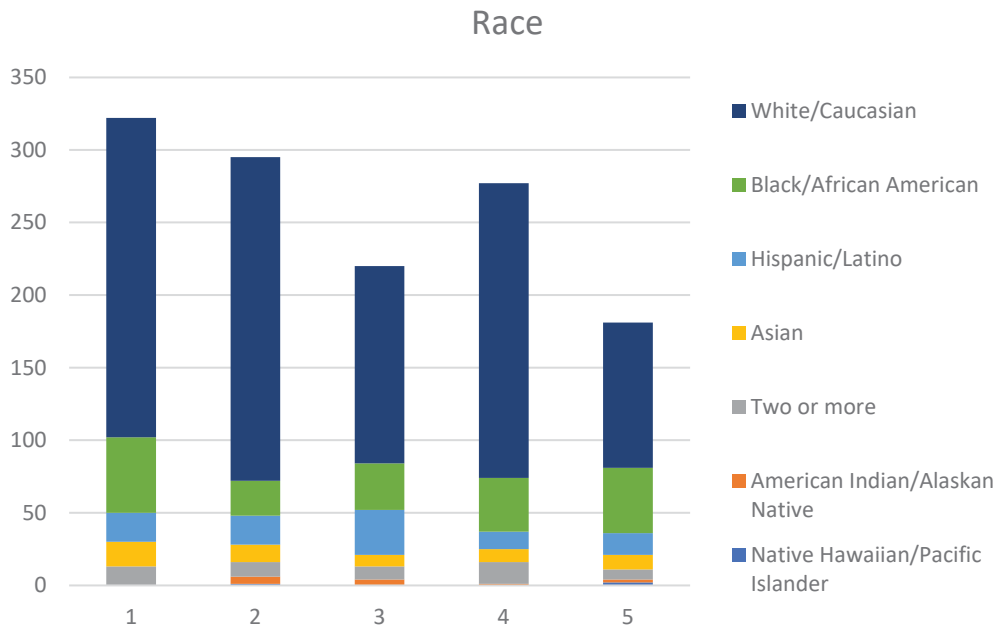


Route Design Rating	Transit User	Non-Transit User
1	194	174
2	135	193
3	118	131
4	146	155
5	101	103
Grand Total	**672**	**734**

Route Design Rating	Served	Underserved
1	248	134
2	225	116
3	141	123
4	174	139
5	86	124
Grand Total	**874**	**636**

Route Design (1 = Speed, 5 = Access)

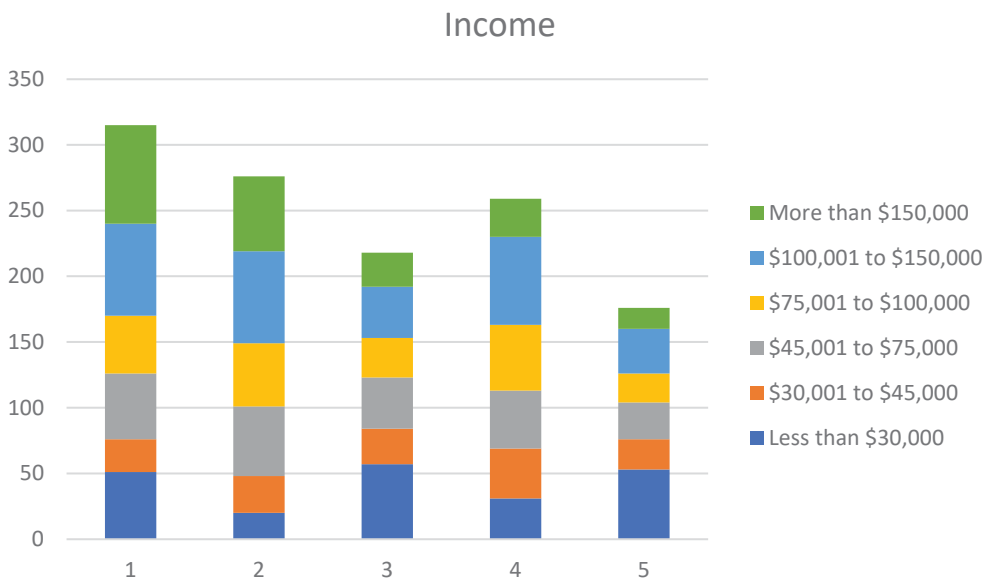


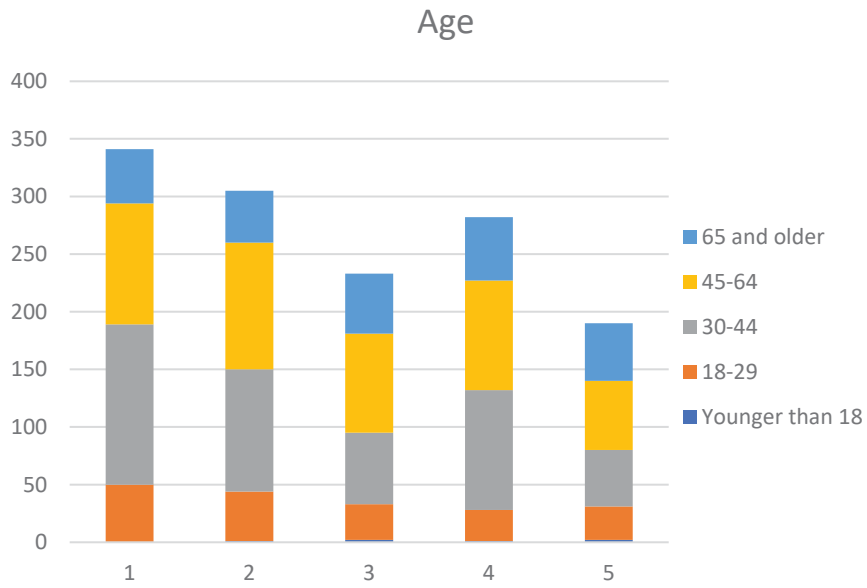


Route Design Rating	Suburban	Urban
1	198	184
2	213	128
3	160	104
4	190	123
5	123	87
Grand Total	**884**	**626**

Route Design Rating	Native Hawaiian/ Pacific Islander	American Indian/ Alaskan Native	Two or more	Asian	Hispanic/ Latino	Black/ African American	White/ Caucasian
1			13	17	20	52	220
2	1	5	10	12	20	24	223
3		4	9	8	31	32	136
4		1	15	9	12	37	203
5	2	2	7	10	15	45	100
Grand Total	**3**	**12**	**54**	**56**	**98**	**190**	**882**

Route Design (1 = Speed, 5 = Access)

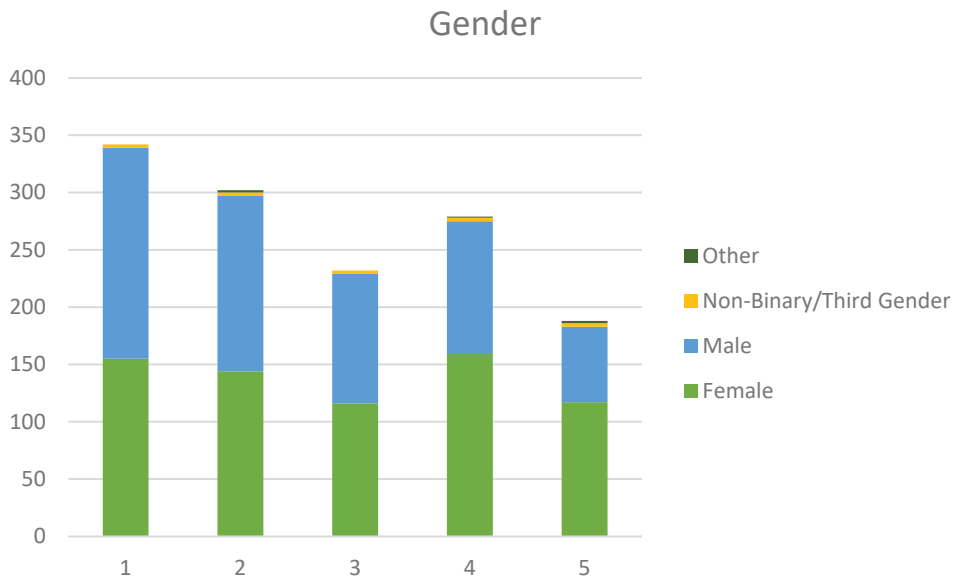


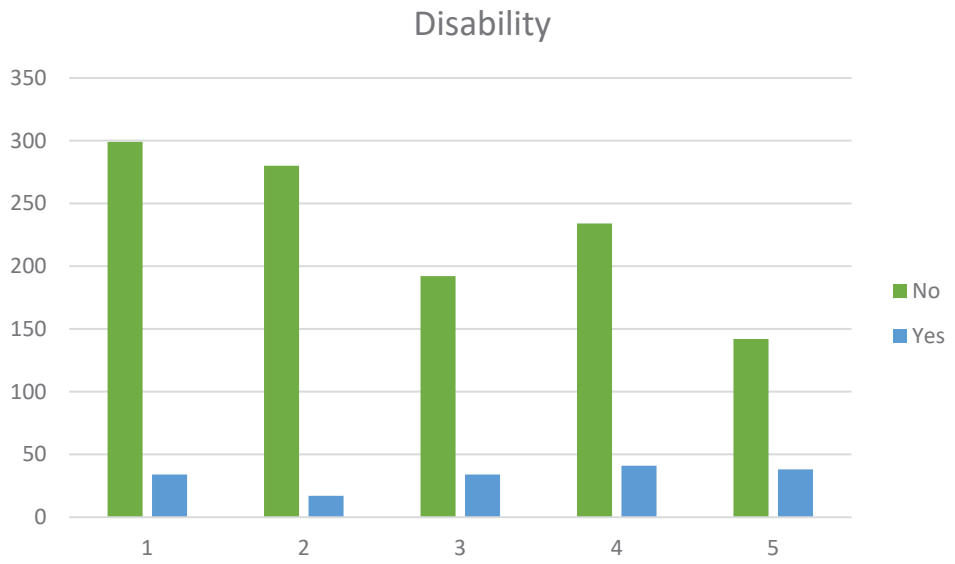


Route Design Rating	Less than $30,000	$30,001 to $45,000	$45,001 to $75,000	$75,001 to $100,000	$100,001 to $150,000	More than $150,000
1	51	25	50	44	70	75
2	20	28	53	48	70	57
3	57	27	39	30	39	26
4	31	38	44	50	67	29
5	53	23	28	22	34	16
Grand Total	**212**	**141**	**214**	**194**	**280**	**203**

Route Design Rating	Younger than 18	18-29	30-44	45-64	65 and older
1		50	139	105	47
2	1	43	106	110	45
3	2	31	62	86	52
4	1	27	104	95	55
5	2	29	49	60	50
Grand Total	**6**	**180**	**460**	**456**	**249**

Route Design (1 = Speed, 5 = Access)

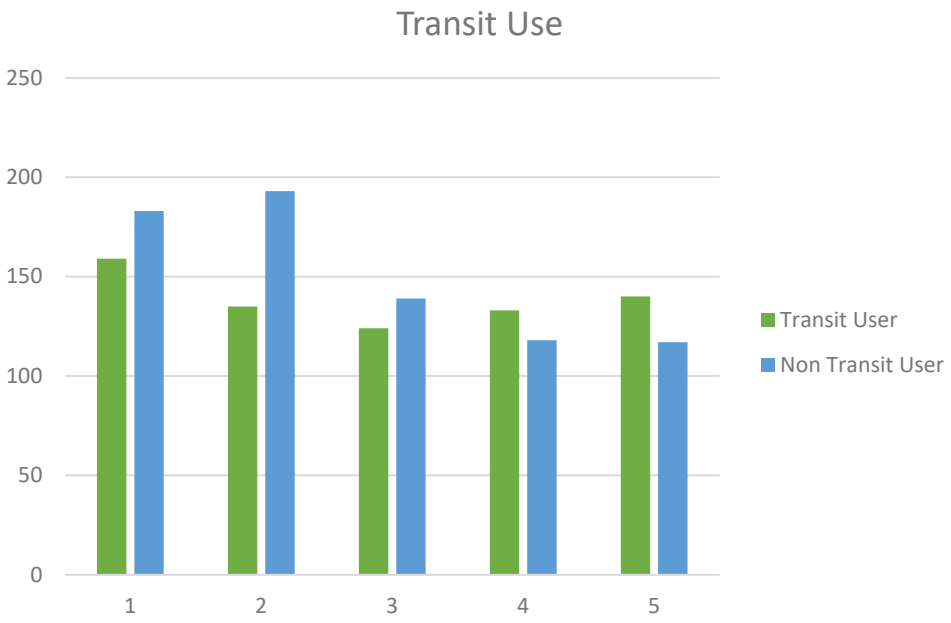


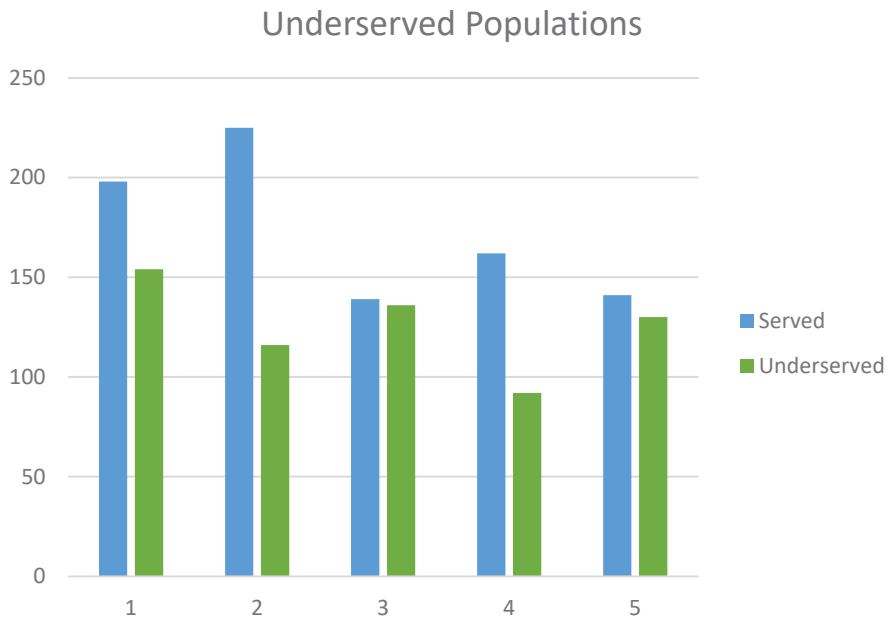


Route Design Rating	Female	Male	Other	Non-Binary/Third Gender
1	155	184		3
2	144	153	2	3
3	116	113		3
4	159	116	1	3
5	117	66	2	3
Grand Total	**691**	**632**	**5**	**15**

Route Design Rating	No	Yes
1	299	34
2	280	17
3	192	34
4	234	41
5	142	38
Grand Total	**1147**	**164**

Connectivity (1 = Regional, 5 = Local)

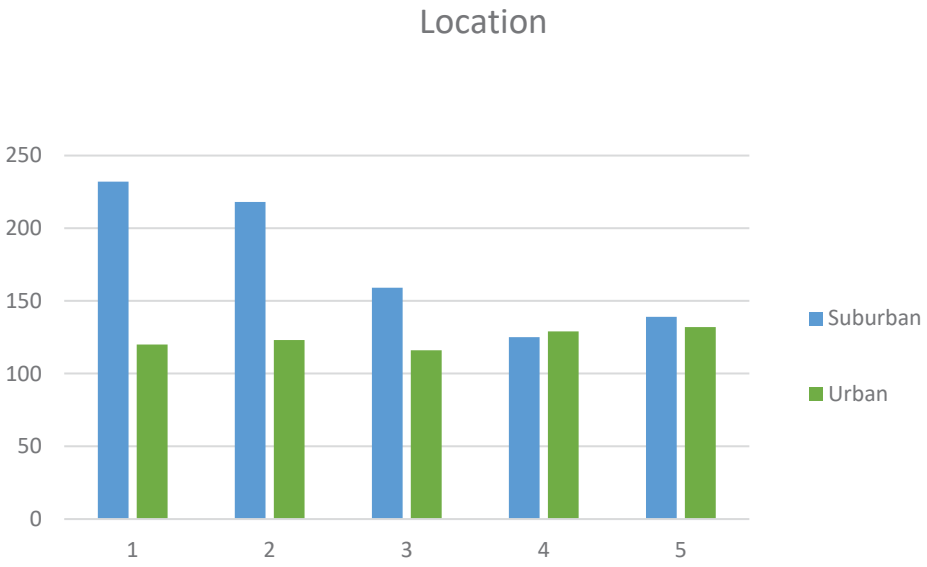


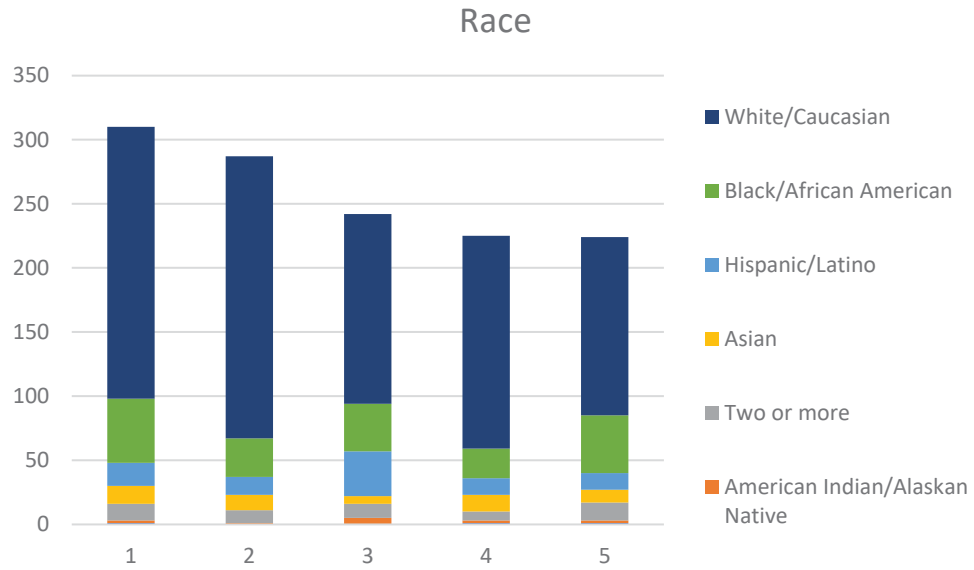


Connectivity Rating	Transit User	Non-Transit User
1	159	183
2	135	193
3	124	139
4	133	118
5	140	117
Grand Total	**691**	**750**

Connectivity Rating	Served	Underserved
1	198	154
2	225	116
3	139	136
4	162	92
5	141	130
Grand Total	**865**	**628**

Connectivity (1 = Regional, 5 = Local)

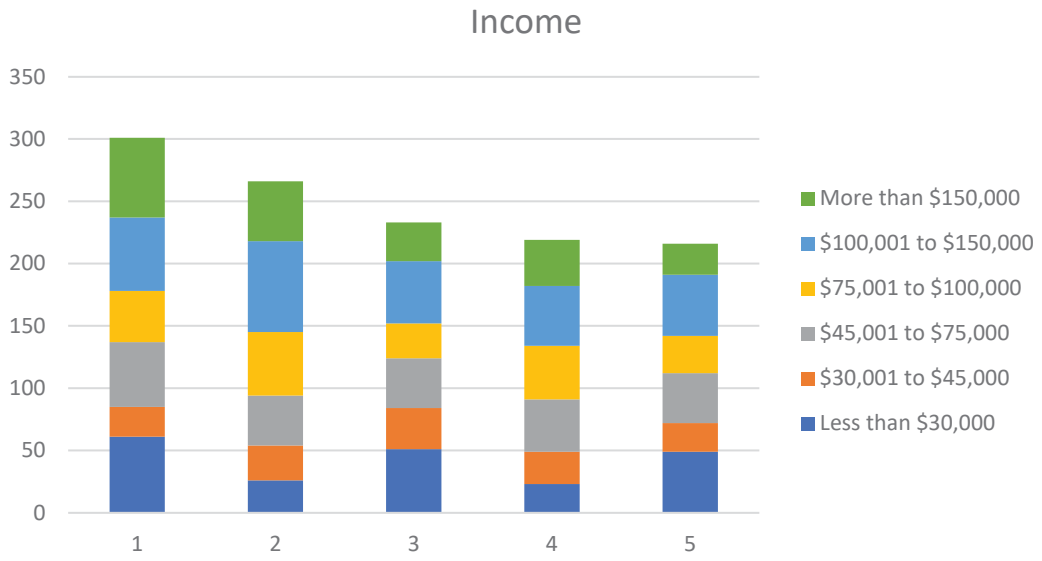


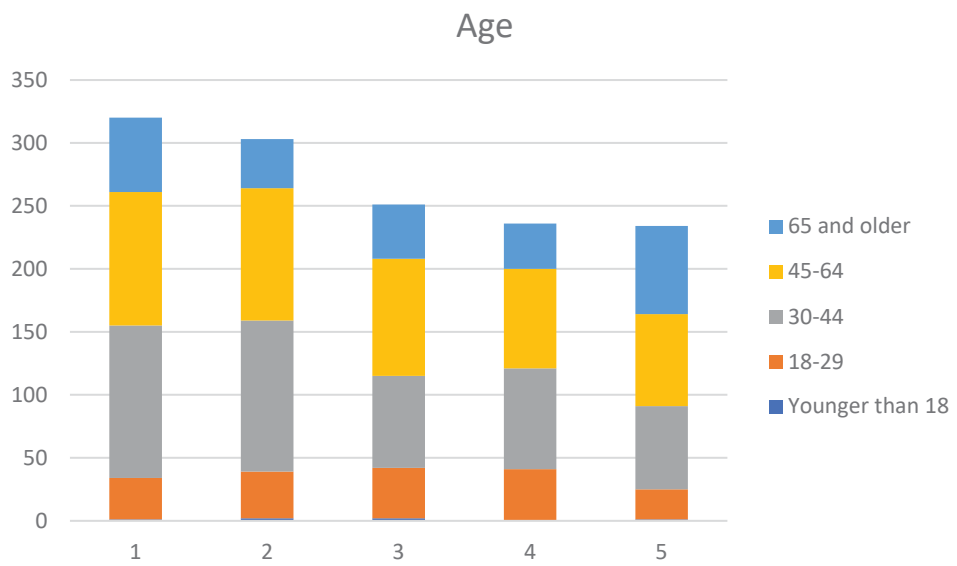


Connectivity Rating	Suburban	Urban
1	232	120
2	218	123
3	159	116
4	125	129
5	139	132
Grand Total	**873**	**620**

Connectivity Rating	Native Hawaiian/ Pacific Islander	American Indian/ Alaskan Native	Two or more	Asian	Hispanic / Latino	Black/ African American	White/ Caucasian
1	1	2	13	14	18	50	212
2		1	10	12	14	30	220
3		5	11	6	35	37	148
4	1	2	7	13	13	23	166
5	1	2	14	10	13	45	139
Grand Total	**3**	**12**	**55**	**55**	**93**	**185**	**885**

Connectivity (1 = Regional, 5 = Local)

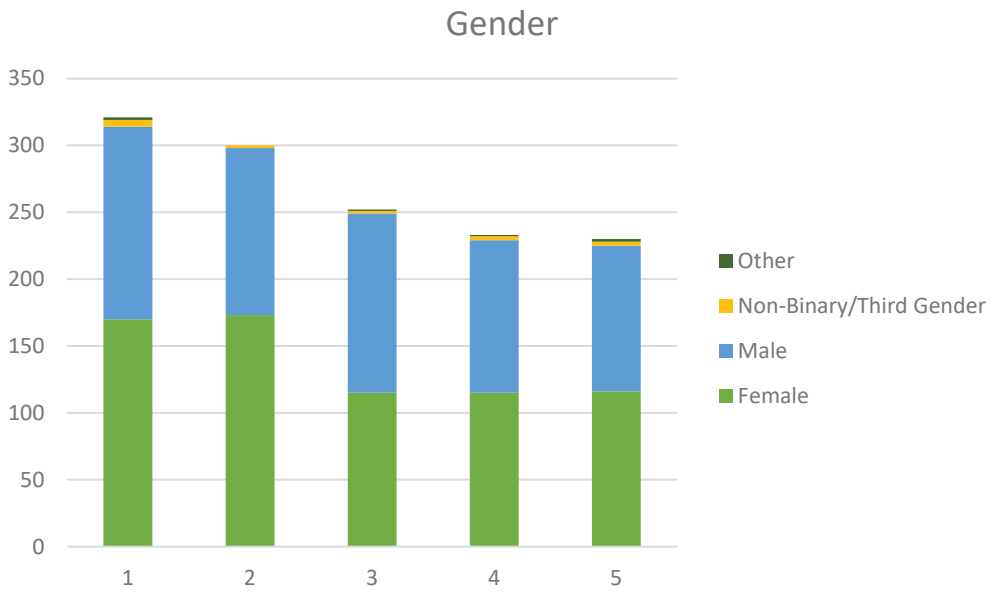


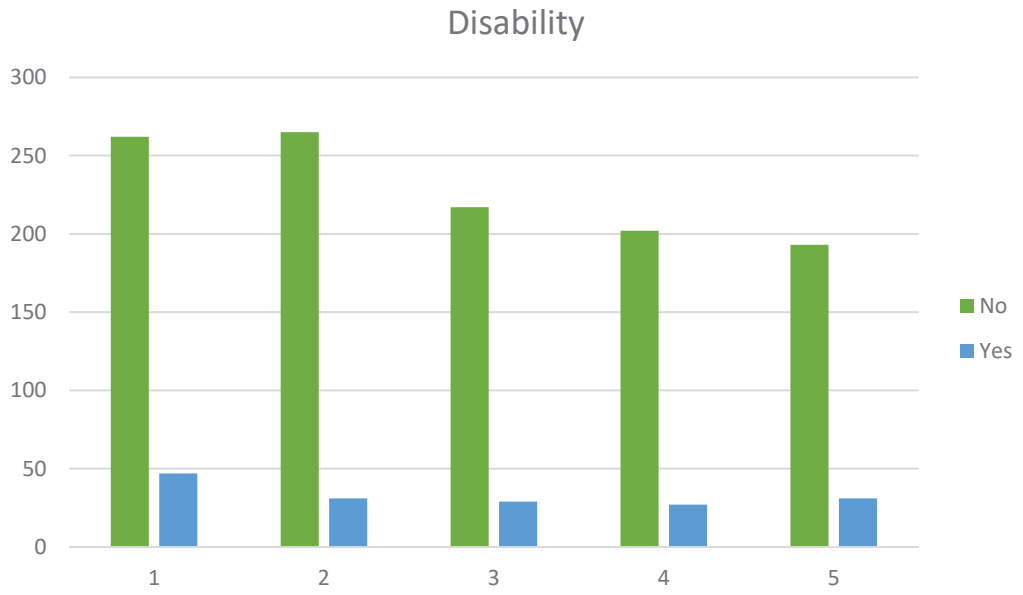


Connectivity Rating	Less than $30,000	$30,001 to $45,000	$45,001 to $75,000	$75,001 to $100,000	$100,001 to $150,000	More than $150,000
1	61	24	52	41	59	64
2	26	28	40	51	73	48
3	51	33	40	28	50	31
4	23	26	42	43	48	37
5	49	23	40	30	49	25
Grand Total	**210**	**134**	**214**	**193**	**279**	**205**

Connectivity Rating	Younger than 18	18-29	30-44	45-64	65 and older
1	1	33	121	106	59
2	2	37	120	105	39
3	2	40	73	93	43
4		41	80	79	36
5	1	24	66	73	70
Grand Total	**6**	**175**	**460**	**456**	**247**

Connectivity (1 = Regional, 5 = Local)

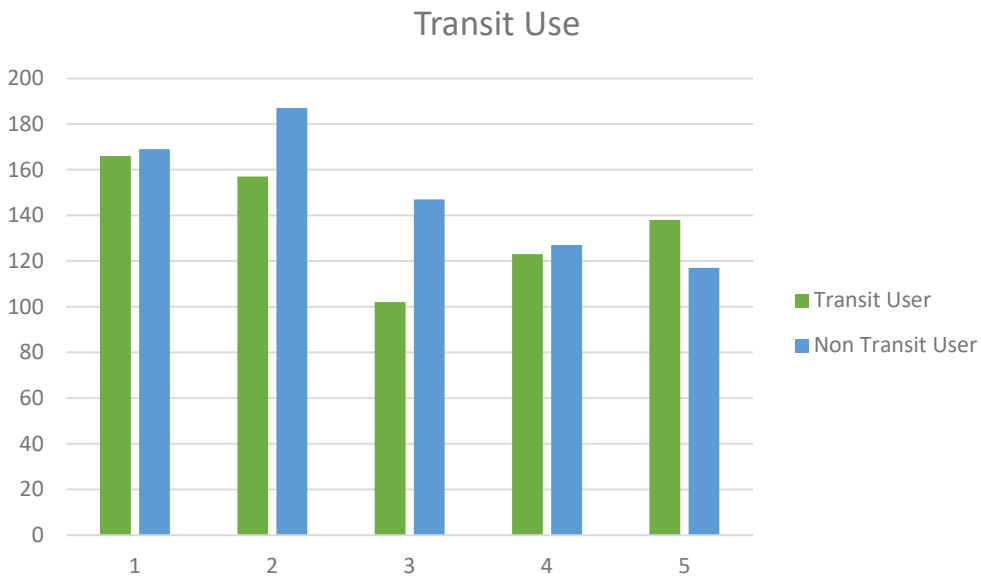


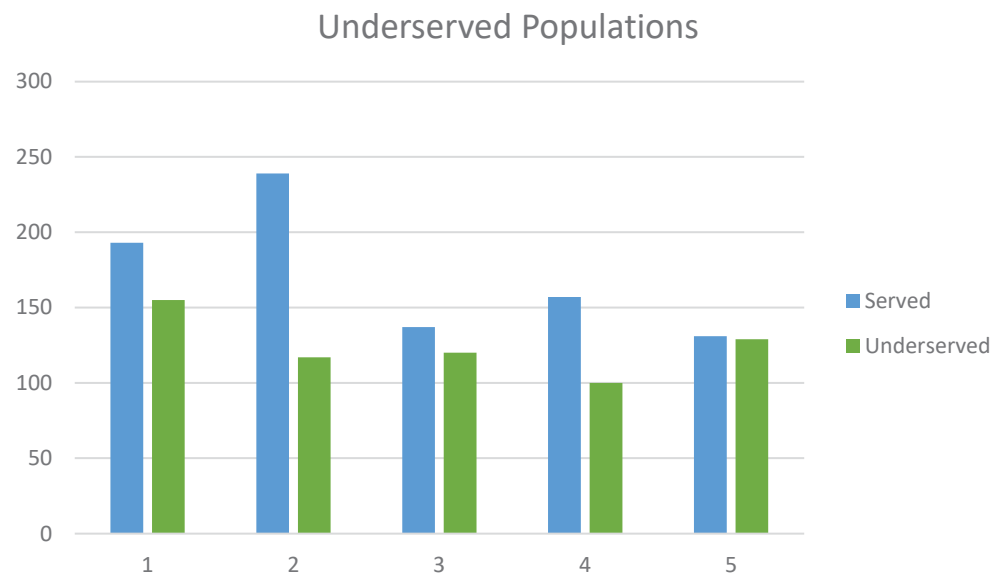


Connectivity Rating	Female	Male	Other	Non-Binary/Third Gender
1	170	144	2	5
2	173	125		2
3	115	134	1	2
4	115	114	1	3
5	116	109	2	3
Grand Total	**689**	**626**	**6**	**15**

Connectivity Rating	No	Yes
1	262	47
2	265	31
3	217	29
4	202	27
5	193	31
Grand Total	**1139**	**165**

Investment Type (1 = Service, 5 = Infrastructure)

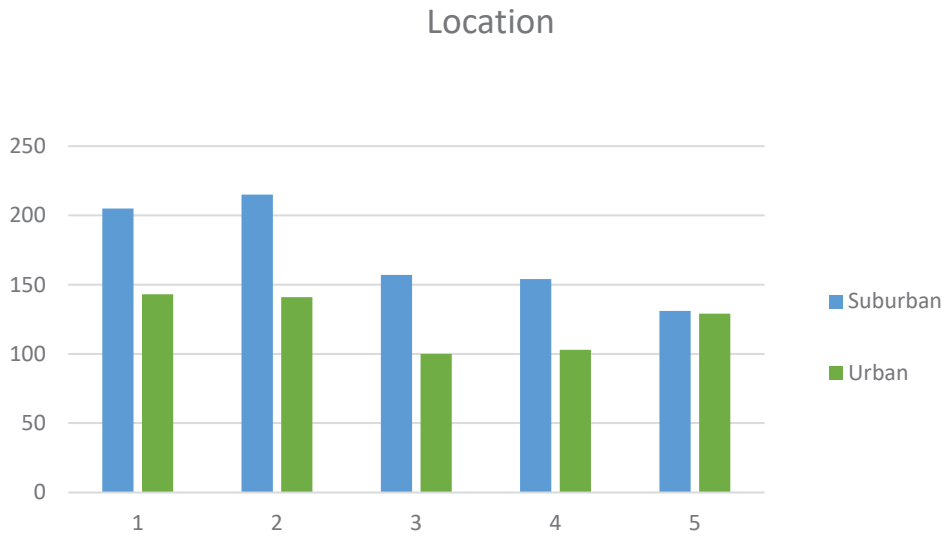


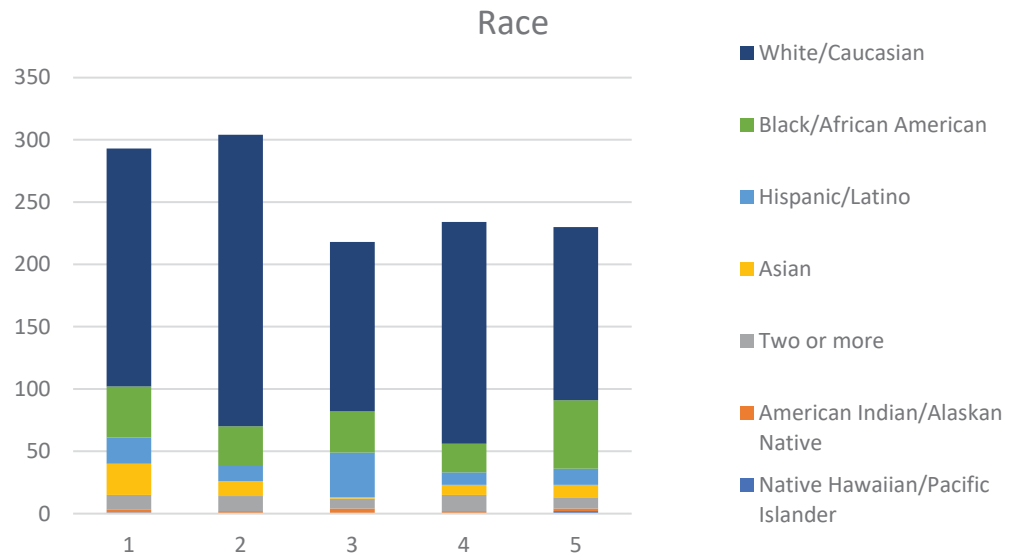


Investment Type Rating	Transit User	Non-Transit User
1	166	169
2	157	187
3	102	147
4	123	127
5	138	117
Grand Total	**686**	**747**

Investment Type Rating	Served	Underserved
1	193	155
2	239	117
3	137	120
4	157	100
5	131	129
Grand Total	**857**	**621**

Investment Type (1 = Service, 5 = Infrastructure)

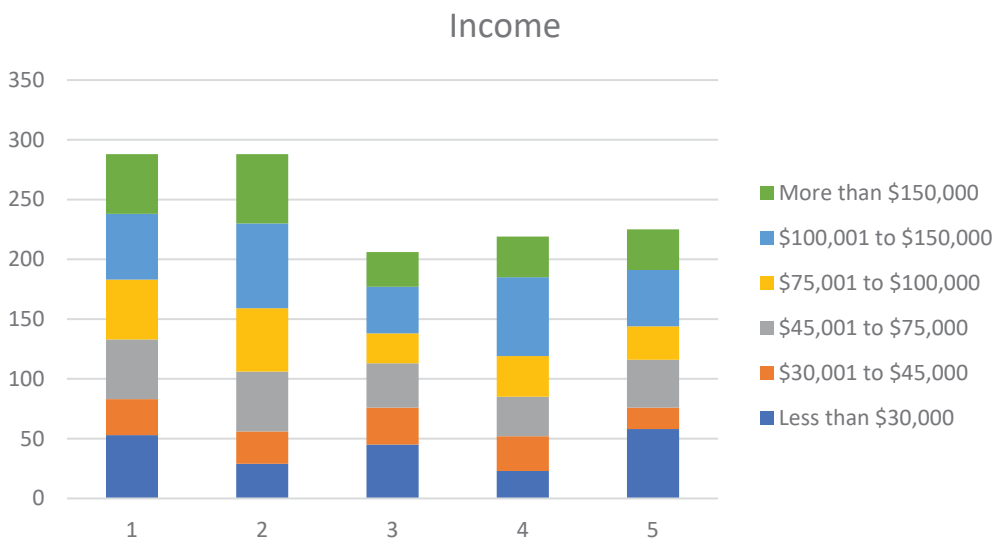


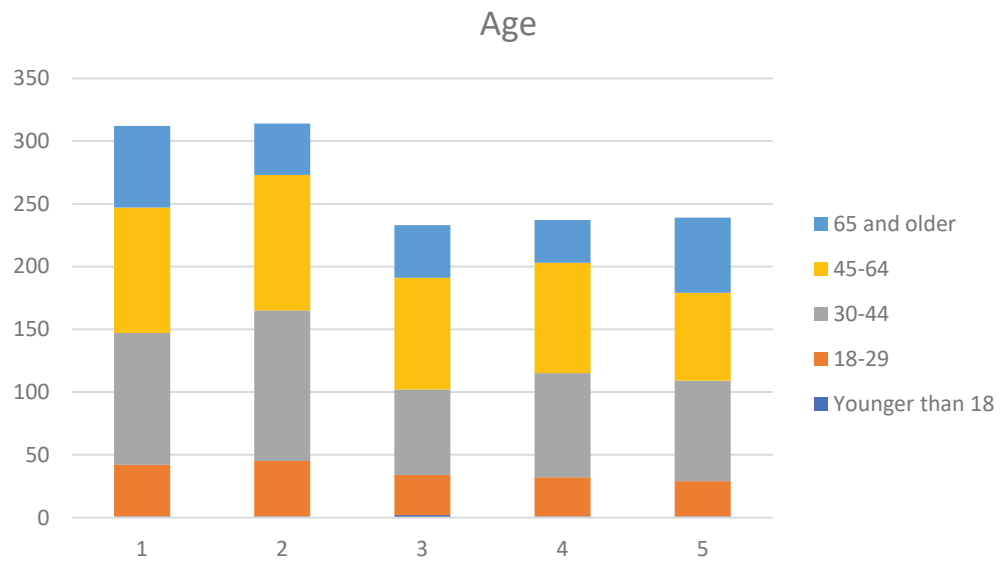


Investment Type Rating	Suburban	Urban
1	205	143
2	215	141
3	157	100
4	154	103
5	131	129
Grand Total	**862**	**616**

Investment Type Rating	Native Hawaiian/ Pacific Islander	American Indian/ Alaskan Native	Two or more	Asian	Hispanic / Latino	Black/ African American	White/ Caucasian
1	1	2	12	25	21	41	191
2		2	12	12	13	31	234
3		4	8	1	36	33	136
4		2	13	8	10	23	178
5	2	2	9	10	13	55	139
Grand Total	**3**	**12**	**54**	**56**	**93**	**183**	**878**

Investment Type (1 = Service, 5 = Infrastructure)

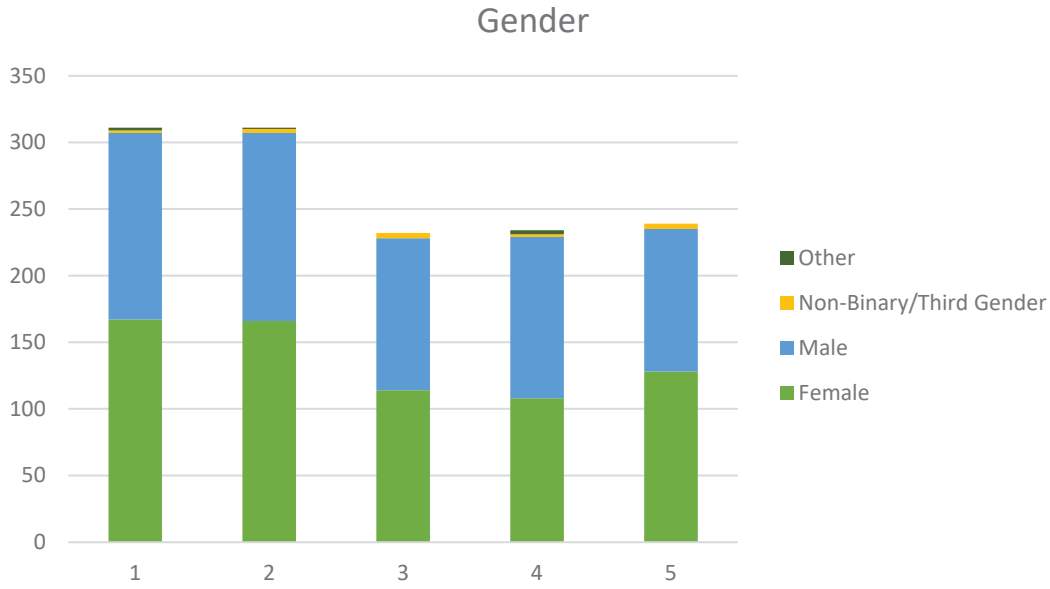


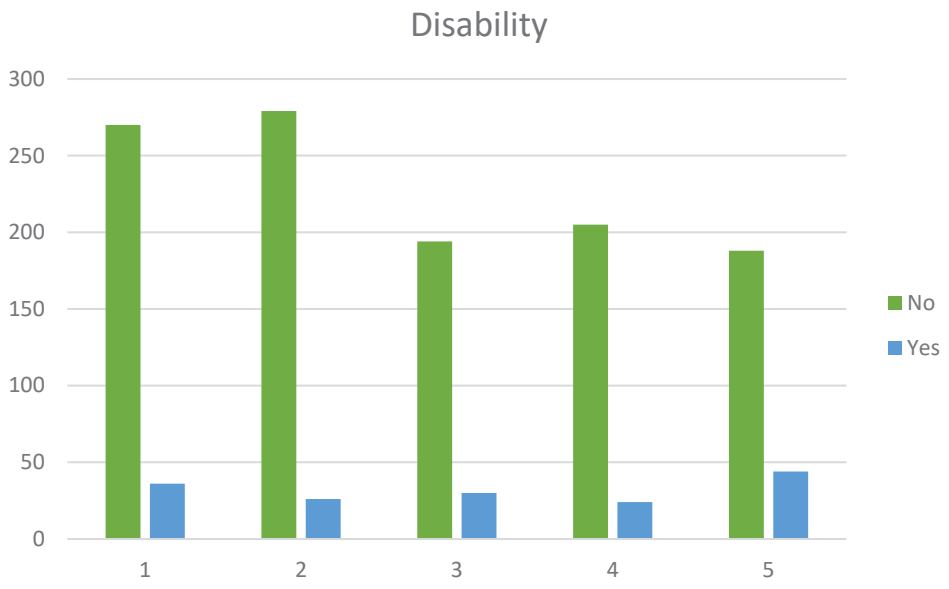


Investment Type Rating	Less than $30,000	$30,001 to $45,000	$45,001 to $75,000	$75,001 to $100,000	$100,001 to $150,000	More than $150,000
1	53	30	50	50	55	50
2	29	27	50	53	71	58
3	45	31	37	25	39	29
4	23	29	33	34	66	34
5	58	18	40	28	47	34
Grand Total	**208**	**135**	**210**	**190**	**278**	**205**

Investment Type Rating	Younger than 18	18-29	30-44	45-64	65 and older
1	1	41	105	100	65
2	1	44	120	108	41
3	2	32	68	89	42
4	1	31	83	88	34
5	1	28	80	70	60
Grand Total	**6**	**176**	**456**	**455**	**242**

Investment Type (1 = Service, 5 = Infrastructure)





Investment Type Rating	Female	Male	Other	Non-Binary/Third Gender
1	167	140	2	2
2	166	141	1	3
3	114	114		4
4	108	121	3	2
5	128	107		4
Grand Total	**683**	**623**	**6**	**15**

Investment Type Rating	No	Yes
1	270	36
2	279	26
3	194	30
4	205	24
5	188	44
Grand Total	**1136**	**160**

Exhibit C

Survey Comments

Wake County Transit Vision Plan Update - Summer 2020 Public Engagement Comments - Priorities

Comment Item	Comment
Suggestion Infrastructure	Mandatory face coverings
Suggestion Infrastructure	Reloadable bus cards
Suggestion Infrastructure	We have someone visually impaired in our household. Bus service is very very important to her. She rides often, rain or shine .
Suggestion Infrastructure	BRT
Suggestion Infrastructure	BRT
Suggestion Infrastructure	BRT
Suggestion Infrastructure	brt
Suggestion Infrastructure	BRT
Suggestion Infrastructure	Bus Rapid Transit
Suggestion Infrastructure	BRT
Suggestion Infrastructure	Bus Rapid Transit (BRT) is a great mode of transportation that should be prioritized for expanding mobility and accessibility across Wake County and in the Triangle.
Suggestion Infrastructure	BRT
Suggestion Infrastructure	BRT
Suggestion Infrastructure	BRT
Suggestion Infrastructure	BRT
Suggestion Infrastructure	BRT
Suggestion Infrastructure	BRT
Suggestion Infrastructure	BRT
Suggestion Infrastructure	BRT
Suggestion Infrastructure	BRT
Suggestion Infrastructure	Public Transportation to parks that my tax money pays to maintain, yet I am not able to enjoy due to Public Transportation to most of these locations.
Suggestion Infrastructure	BRT
Suggestion Infrastructure	BRT
Suggestion Infrastructure	Before COVID, the buses needed some "deep cleaning" Some of them were getting nasty. There should be some emphasis placed on keeping the fleet clean. I think you might turn off some riders based on the condition of the buses.
Suggestion Infrastructure	BRT
Suggestion Infrastructure	BRT
Suggestion Infrastructure	Speed and reliability important; services like Bus Rapid Transit help with this
Suggestion Infrastructure	Enough with buses! That puts me in the same traffic as if I had driven!
Suggestion Infrastructure	BRT will give us the speed and reliability to get people onto the bus!
Suggestion Service	Speed and reliability important. Focus on services like Bus Rapid Transit
Suggestion Service	Disinfect the buses regularly.
Suggestion Service	Any usable service would be better
Suggestion Service	Need a better way for drivers. Not too take break while passengers on bus not leave. Passengers when they see them coming +they leave them one never called ahead too stop bus for me too get off and on other bus both drivers left me in the rain
Suggestion Service	Find way for drivers not toontake breaks while passengers on bus and need sensitivity training not leave people one driver didnt call other bus then left me out.in the rain
Suggestion Service	How about airport service? That would be a 5 star for me.
Suggestion Service	Bus Rapid Transit connection Cary to Raleigh is very important!
Suggestion Service	BRT
Suggestion Service	Reliability -- What you do, where you do it, make sure to do it well.
Suggestion Service	BRT
Suggestion Service	BRT
Suggestion Service	BRT
Suggestion Service	Uber, Lyft

Suggestion Service	Have a bike share program to reduce emissions congestion and traffic.
Suggestion Service	BRT
Suggestion Service	BRT
Suggestion Service	BRT
Suggestion Service	BRT
Suggestion Service	BRT
Suggestion Service	BRT
Suggestion Service	BRT
Suggestion Service	BRT
Suggestion Service	BRT
Suggestion Service	Bus Rapid transit
Suggestion Service	BRT
Suggestion Service	Bus Rapid Transit
Suggestion Service	BRT
Suggestion Service	brt
Suggestion Service	BRT
Suggestion Service	BRT
Suggestion Service	Connect transit lines with affordable housing locations.
Suggestion Service	Where is the rapid train from Raleigh to Durham?? That was voted on YEARS AGO...
Suggestion Service	Promote better and ensure stops are more accessible for less populated areas.
Suggestion Service	Highest priority: implement rerouting of Route 16 to include NCSU and North Hills
Suggestion Service	best load factor
Suggestion Service	More stops and covered shelters be put in along busy or main roadways and streets to set and be covered during bad weather! Blue Ridge Rd and Glenwood Ave needs more stops.
Frequency	idk
Frequency	Maybe more frequency and expand some connectors.
Frequency	the bus has to come at least every 15 minutes to be a viable source of transport to a job. otherwise, you have to build in a MUCH larger transport time (ie car is way easier) or be unpredictable in your arrival time to your job (not usually OK)
Frequency	Terrible. Stop take a break people trying too go to work or appointments make them late 45 minutes in stop some times not fair at all need to study other states systems
Frequency	More frequent in high volume routes. Less in low volume routes.
Frequency	Frequency is everything. Without it, it generates hardships, stress, economic loss to name a few. Concentrate the resources to serve fewer routes in order to increase frequency & design with transit centers that also feature secure bike storage, bike-share services, Active Transportation infrastructure to increase safety for all modes of traffic, and dedicate space for car-ride services at the Centers.
Frequency	Worse system stopping tontske break while passengers on bus make people late for work or appointments. Three times is 45 minutes
Frequency	We MUST BUILD COMMUTER RAIL SERVCE, please!!!
Frequency	Buses won't be used, we need train service from Rogers Rd. to Downtown Raleigh! Much faster & with Northerners here it would be used!
Frequency	We only have a couple buses into Raleigh in the morning and afternoon.
Frequency	WRX - need mid-day service to and from Raleigh.
Frequency	Especially with the travel pattern changes due to COVID, we need to first focus on providing high frequency on local routes as those continue to have demand and need. After a high freq local network is created, a regional network will be more successful as there will be more destinations available.
Frequency	Loop
Frequency	I think consistency of timing is more important. People who take the bus need to be able zo plan accordingly. Every hour should be reliable etc. Is appropriate.
Frequency	This needs to be coordinated with employment centers and shifts
Frequency	When I depended on the bus to get to work, I only had the option to get to work an hour before my shift. This took away a lot of my ability to handle my own business in order to get to work in a timely way. Giving more frequent pick up and drop off times would help folks in the same situation, and would prevent endangering their work situation should they miss a bus.
Frequency	I appreciate your service as a valued rider of the go transit line transportation system. Truly, a valued rider.
Frequency	They need to stop sitting at the Moore square to much and leave on time and stop sitting at the time point to long
Frequency	Yes please! This would make it so much easier to plan my day around the bus instead of calling a lyft
Frequency	Need more buses running better

Frequency	Buses run around empty way too often. Look toward a demand-driven model built from data. The next couple 10 years will change the way we commute dramatically as a society.
Frequency	With more frequency social distancy can be easier to obtain. Keeping riders safe should be top priority.
Frequency	Travel is speed up if the stops are spread out.
Frequency	It would be great if the #70X Brier Creek Express stopped at the Lynn/Grove Barton stop at least twice an hour, or simply ran it's entire route twice as often - I think it was only hitting stops once an hour. In addition, because the #6 and #16 both head to downtown Raleigh, it would be beneficial to many regular commuters to have those buses scheduled to leave the Crabtree Valley Mall station about 5-10 minutes after the numerous connection buses arrive there. I work downtown, and as a regular commuter, I often saw many other regular commuters missing their connections because of the way buses are currently scheduled to arrive/leave that station and the impact traffic had on those schedules. Most often I saw commuters missing the 23L connections by just a few minutes - they would then have to wait for their bus to come around again. I use the Park & Ride at Crabtree, so I never had this issue, but I saw many regulars deal with this.
Frequency	I believe having frequency of an hour prevents people from using the bus. I know it's a reason why I only use the bus for work. I would hate to barely miss my bus and have to wait an hour for the next one.
Frequency	Stop the socialist transit system all together and give our tax money back.
Frequency	Buses should run every 20 mins.
Frequency	The buses should run at least every 30 minutes not every hour.
Frequency	Depends on the route not all buses run enough
Frequency	I rarely use public transit. I do not expect that to change greatly.
Frequency	Depending the place, the frequency is adequate. Right now it's OK.
Frequency	A bus that only comes once or twice an hour isn’t a bus that’s reliable enough to use instead of driving.
Frequency	Choice riders are more likely to choose services that are more frequent.
Frequency	Frequency is everything! It enables me to feel confident I’ll make it on time. 30 minute frequency does not provide that assurance.
Frequency	Areas of Cary / Morrisville need more transit options
Frequency	I'd always welcome greater frequency, but recognizing that until such a time (if ever) there are more buses than cars on the road the current frequency may be all that I can expect.
Frequency	Most popular lines should stop every 10 min or less, less popular shouldl be 10-15 min. Riders should not have to coordinate timetables and Transloc, but should just be able to go to a stop and get a bus whenever they want. This is the only way to replace cars.
Frequency	Some routes definitely need more than 1 bus coming by per hour.
Frequency	Most important factor whether I use public transportation or not. Hour wait times not acceptable.
Frequency	Half hour frequencies on routes are too low
Frequency	The buses are 95% empty 90% of the time. Stop wasting our tax dollars!!!
Frequency	Accurate apps are critical for setting wait time expectations
Frequency	don’t just pass by stops
Coverage	Strategize which communities get coverage based on land uses and projected ridership.
Coverage	Focus on serving the neighborhoods that will see heaviest ridership
Coverage	The buses are 95% empty 90% of the time. Stop wasting our tax dollars!!!
Coverage	There are way too many transit deserts. Even when there are neighborhoods within .5 miles of a bus stop, transit use is impractical (poorly designed streets that don't favor walkability + low bus frequency make trips a nightmare)
Coverage	I believe lower socioeconomic communities should have priority.
Coverage	There are some areas that effectively have no coverage - effectively because the only way to reach them is to travel from N. Raleigh to downtown and back out again. I'll just drive.
Coverage	In my neighborhood in west Cary they won't put a bus stop.
Coverage	Areas of Cary / Morrisville need more options
Coverage	More sidewalks & pathways for Active modes of travel works to empower alternate modes of travel. We can access transit better with it.
Coverage	Need more accessibility to move communities e.g.Knightdale, Cary Durham etc
Coverage	road ten ten needs bus service between Cary and Garner
Coverage	Loop
Coverage	There are no connecting routes
Coverage	Covering traditionally underserved areas like SE Raleigh is important, but I’m less concerned about improving coverage in North Raleigh beyond 440
Coverage	Right now, around the Raleigh city is OK.

Coverage	I rarely use public transit, and I do not expect that to change. I am not enthusiastic about empowering people who do not belong here to come here easily.
Coverage	Honestly, just having more trails (walking or biking) that connect to transit stops would be a big step.
Coverage	Every bus stop should have shelter not just certain communities.
Coverage	Connecting more of the dense neighborhoods near downtown Raleigh, especially in East Raleigh.
Coverage	I wasn't happy with my previous coverage so I moved to an area where it is a little better. Being closer to bus routes, I'm still lacking the frequency. If I had a close bus route to my previous residence, but it would take an hour and a half to get where I'm going (due to frequency issues), then I still wouldn't use the bus.
Coverage	Whatever public transit system is available in the next 10 years should be made available to all tax payers that need access, not just those along today's antiquated paths.
Coverage	Apex is not a big city but we live near one. Busses act as a car pool system so with more stops available more people could use it.
Coverage	I have to walk a mile to the nearest transit. There is no nearby parking. I would use it more if it was easier to access
Coverage	Need more area coverage like moriesvile,cary,durham etc.
Coverage	Even just one bus stop in a new area is better than none - I'd love more coverate in the RTP area and Brier Creek
Coverage	I would love a stop closer to my house. West Chatham and cray parkway
Coverage	low income communities, public housing and human service centers need to be connected. Check out how disconnected Section 8 housing is from safe bus stops.
Coverage	Brier Creek Express only runs four hours on week days and four hours weekends. Needs improvement. Can it run more than four hours on week days and four hours weekends. Not four hours week days and weekends.
Coverage	As housing costs skyrocket the essential workers are forced to live further from their places of employment.
Coverage	Despite repeated requests NO additional stops in Wendell / Zebulon have been established since starting the service. Need better access to Eastern Regional Center.
Coverage	Broader coverage opens more folks to the option of transit while also allowing more people ease of access. This will encourage folks who hadn't tried transit before especially if it goes directly to popular areas
Coverage	county is spread out, but population is aging. any way to have stops closer together?
Coverage	No service on my route to office
Coverage	Example, i live in Morrisville and commute to Duke Hosp in Durham, shift starts at 7am. I am zero options for public transit for this early in the morning.
Coverage	Need more buses to travel. More stops. And drivers
Coverage	Shuttle vehicles from transit centers may be an alternative to a full run bus routes.
Coverage	Need to base it on potential number of riders. Not just servicing an area just to service it with no riders. Move to park and ride for those areas.
Coverage	Hardly anything in Holly Springs. Why should I support/ vote for more taxes for transportation if there is hardly anything in my part of the county and we are the ones who have to pay to use 540?
Coverage	Coverage can be important for individuals Without access to a car in low-density areas, but should not be used simply to show that a geographic area has gotten their "tax money's worth"
Coverage	Need too go to johnston county. For one
Coverage	more communities served in Morrisville
Coverage	this quiz is too complicated. I'm not sure what I am rating.
Span	I don't know current hours so I can't say "more or Less"
Span	Only some routes with many passengers.
Span	weekend service to museums, parks and entertainment venues would be helpful
Span	Yes but number 1 stops running after seven a hour apart people still trying too get home nfrom work terrible
Span	Again, need to base number of runs days and hours on the volume of users.
Span	Yes but. Number one stops at seven then run every hour terrible
Span	Essential work all days of the week and all hours of the day
Span	Hours are already pretty long.
Span	better hours would help
Span	should run on holidays such as Christmas or THanksgiving
Span	Sunday transportation for Loop would be helpful for those who work in WF on Sundays.
Span	Add a mid-day to and from Raleigh on the WRX.
Span	Critical for part-time/flexible workers!
Span	Again, this is really around employment. Transportation deficient families need to be able to get to work and during shifts that go beyond peak hours and 8 to 5.
Span	So many people rely on public transit to get to work, but also to get groceries and have access to medical care. Expanding span would improve food insecurity and decrease the need for EMS.
Span	This isn't as important as frequency for me, but I think it's important for people who work night shifts!
Span	PLEASE consider running the #20 Garner Rd route on the weekends.

Span	I would like decent frequency (30 mins) up until 9pm each weekday on some routes. Fridays/Saturdays would make sense to have later operating hour. Maybe do a subsidized late night rideshare like RTP Connect, but have a proof of late night purchase (such as a restaurant receipt).
Span	A mid-day run of the FRX would allow commuters to work 1/2 day schedules without having to drive in to Raleigh and pay parking expenses.
Span	Seeing how Raleigh is growing buses need to run 24/7.
Span	I rarely use public transit and do not expect that to change.
Span	Depending the areas and the hours, the coverage is good right now. When the areas grown, increase the coverage.
Span	More frequent service during M-F rush hours will be important if you really want to get people out of their cars and on transit.
Span	The hours of coverage are pretty good.
Span	Yes! They must run later so that riders can take transit to late night places.
Span	The buses are 95% empty 90% of the time. Stop wasting our tax dollars!!!
Span	Frequency should depend on route popularity
Span	More service during weekdays for express routes.
Local Service	Having a two colored R-Line could expand ridership/reach of service. Small busses are appreciated in urban environments.
Local Service	The buses are 95% empty 90% of the time. Stop wasting our tax dollars!!!
Local Service	I don't want to change buses frequently. I would prefer a single seat ride to my destinations or a maximum of one transfer rather than having to swap from walk to stop -> local transit -> gotriangle -> local transit again -> walking again
Local Service	Yes!
Local Service	I take 11 from the Kaplan and pineview stop to work, but coming home I have to ride much longer for the bus to get back to this point since this part of the route is a loop. It would be nice if there were more two buses that both just went out and back and circled around deboy / western/ Schwarb from both east and west. Or something similar.
Local Service	Areas of Cary and Morrisville, especially down Chapel Hill Road need more options closer to homes
Local Service	Raleigh city is a big area, Go Raleigh need expand or modified some routes and L routes.
Local Service	It is a given that Raleigh has a public transit system, and it is desirable that it work well.
Local Service	For the near term while COVID restrictions are in place, local service routes are far more important as those tend to be riders who are going to jobs/critical trips and/or do not drive. Most regional service is designed for peak commuters which has largely moved to WFH.
Local Service	For local travel, expanding the trail system for walkers and bicyclists would be a good alternative to transit. Or a complement to the transit solution.
Local Service	How is this different than coverage?
Local Service	*dense cities or towns
Local Service	Apex has poor options. Maybe a local connector to an express to Raleigh and RTP would help.
Local Service	I think this goes with more frequency. The more frequent the bus comes, the local service will also go up.
Local Service	2nd best option in this pandemic.
Local Service	In Wake Forest
Local Service	Need the wake forest bus to run all day from the mall need rolves bill bus running all day
Local Service	Last mile and first mile on-call services are needed to get people to work or to connect geographically isolated communities to the amenities in the urban core.
Local Service	Should have a bus run to johnston county
Local Service	Fewer routes, high frequency & Active Transportation infrastructure
Local Service	Yes put bid in with state for more drivers and busses so dont have to take break while passengers on bus that is terrible
Local Service	easy connection between Wendell Falls and downtown Wendell would make it easier to support local businesses
Local Service	Only same connectors.
Local Service	Maybe find a different way to be able to take a return trip in knightdale because for example, if I take the bus to target in knightdale from first Avenue, I have to cross knightdale Blvd. To get the bus back with a toddler and it's very dangerous... so to me it's a little inconvenient to enjoy the bus service if thats the only way to get home.
Local Service	Maynard Crossing 4 bus stop is very dangerous to elderly...forcing them to climb onto a curb and navigate very dangerous ground cover. I almost fell on two occasions and 1 driver refused to move bus forward so I could board easily. I am 67 and using a cane.
Local Service	what does this even mean?
Regional Service	need to be able to go from Fuquay to the airport or Durham without having to go to Raleigh first. Also connecting Fuquay with Holly Springs and Apex
Regional Service	baby steps. make one of the triangle cities awesome at transportation, so the others can see the benefits. then wire it all up. with how sprawled this region is, you are going to stretch too thin if you try to do it all at once

Regional Service	Would be nice tongontoonother towns
Regional Service	Regional service is most effective when there is a strong local network, especially for those without access to a car
Regional Service	It's a full service
Regional Service	Yes need more towns. More stops
Regional Service	Garner needs more stops and a border service. I think you do not necessarily need to use the big bus at this time.
Regional Service	With multiple bicycle racks
Regional Service	need a better way to change to a different area--everyone going to a crappy location in downtown Raleigh is horrible. It feels unsafe. A Stop near the Farmer's market could be a transit to the airport. It takes too long and is too unreliable to take a bus to Raleigh and then to RDU and then to the airport.
Regional Service	work is already being done to add transfer stations to satellite communities to reduce transit travel times.
Regional Service	I moved here from Wilmington in November and was frustrated and disappointed at the lack of bus service further out from Raleigh, which severely limited my options as someone who doesn't drive.
Regional Service	Expand more to surrounding cities such as Holly Springs.
Regional Service	Need to have bus in garner running weekend and every 30/routes 20
Regional Service	This is paramount! People live and work all over the triangle so to make taking the bus feasible at all this is paramount.
Regional Service	Would like to see transit from Raleigh to RDU. Perhaps a place to drive my car, park it, and take transit to the airport as well as Durham and Chapel Hill.
Regional Service	But all these are terribly important. Giving more irregular and unreliable transit to more places won't help. All these are priorities.
Regional Service	with light rail NOT busses
Regional Service	Since Rail is not going to happen, pls. Connect The Triangle (CTT) as a Triangle as we have known for so long, but not accessible for many.
Regional Service	Seems like regional service is currently weaker than local service.
Regional Service	Essential workers cannot all afford to live in Raleigh
Regional Service	On all items, I do not use the services.
Regional Service	Especially regional service that operates all day, all week, serving essential workers. Park-and-ride-based peak-only service will probably be less relevant for a while, especially to places like RTP that are not very transit friendly.
Regional Service	I moved closer to my work, so regional service is not as important to me. I think overall regional service is important, but only during peak work hours or events such as sporting events, concerts, etc. I hate dealing with parking and getting out of arenas because of traffic. I would prefer to take a bus and not have to worry about it.
Regional Service	Rapid connects to other municipalities will play a significant role in how our area develops.
Regional Service	Bus to apex fuqure bus better
Regional Service	This is important and working pretty well now. I think service could be improved with a star topology providing express transit between cities and local buses making frequent stops.
Regional Service	The city needs more connecting bused between the City/Town of Cary and City/Town of Raleigh. More routes are needed
Regional Service	There needs to be a better way to get between Chapel Hill Raleigh and Durham! The light rail would've been so amazing...still sad about it.
Regional Service	Increased bus service along the CRT corridor including midday and evening service.
Regional Service	I would love to see more Park and Ride locations. Even Park and Ride locations within Raleigh are needed.
Regional Service	Strategically located carpool lots could allow transit to work better to RTP, particularly from more remote areas. Also, transit to major venues, such as "front door" drop off for PNC arena, shopping districts or Durham ball park would help. Finally, while widening and revitalizing bridges and roads, why not include bike lanes and Bus on shoulder lanes?
Regional Service	Need mid day zebulon wendell knightdale run
Regional Service	Express travel from each cities bus hub. Raleigh, Cary, Durham , WF
Regional Service	Regional service if it's light rail.
Regional Service	airports, trains, buses lines, hospitals and libraries, parks stops
Regional Service	Having a mass transit option for commuting rather than a long drive stuck in traffic will definitely allow people to have more choices about which cities/towns they decide to live and work in.
Regional Service	Connecting cities and towns provides a capability for the residents of the towns. The presence of local law enforcement alleviates some of the potential law enforcement concerns.
Regional Service	Ex: My commute is Wake Forest to Garner.
Regional Service	Right now the service is good. Expand/enhance the service depends of the funds more ahead.
Regional Service	A Cary to Durham Express would be a great option
Regional Service	Connecting all towns in Wake County with frequent, reliable service to the places people want to go will create more choice riders.
Regional Service	Yes, more direct routes like DRX and CRX. And take away car lanes in order to replace with BRT.
Regional Service	Where I live in Wake Country there is currently NO public transportation. If our region want so to enter the 21st century, you need to figure out how to provide services for ALL citizens, not just those within the inner city limits
Regional Service	Connecting the region is critical. Light rail is the best option for this

Regional Service	The buses are 95% empty 90% of the time. Stop wasting our tax dollars!!!
Regional Service	provide more direct service than peak service for some GoTriangle services (DRX, CRX, etc.). Expand these services to get beyond the white-collar crowd.
Regional Service	Popularize evening routes for Durham Bulls games, date nights, etc.
Facilities	More park & rides servicing downtowns
Facilities	Make stations noticeable
Facilities	Completely unnecessary/ stop wasting our tax dollars!!!!
Facilities	More bus stops or a more appealing regional transit center would be nice, but are not terribly necessary. I would prefer frequency/speed over enhanced facilities if I had a choice.
Facilities	Make bus facilities the pride of a city. Encourage businesses to take an interest in beautifying and maintaining places near them. Hire artists to turn them into local art objects. Make them objects of NC pride!
Facilities	Park and ride lots should be paved
Facilities	More covered bus stops
Facilities	Add secure bike parking so if the bus rack is full, I can still catch the bike by locking it at the station.
Facilities	As long as they are clean and safe, that is most important. And the Technology in the next question. Not sure what other types of "upgrades" there would be.
Facilities	Don’t need fancy bus stops. The new custom ones in Raleigh are waste of money. Just good traditional bus shelters
Facilities	All stops need to have benches and be coved from the weather.
Facilities	Bus stop improvements are important, but I believe park and ride projects should be delayed for the near term. Most target riders for P&R are not going to be using transit in the near term. Plus, P&R generally don't induce a great deal of ridership. Improving service and facilities where people can walk to transit should see a better ROI.
Facilities	Having a well-lit shelter is really important for hot days and rainy days.
Facilities	Maintenance and improvement everything is good.
Facilities	Standing in the rain is undesirable. Some form of basic weather protection is desirable. If you want public transit to be successful, it should work reasonably well.
Facilities	I catch the bus at Millbank and Euston. I wish we had a bench to sit on and wait for the bus. I wish all bus stops at least had a bench.
Facilities	If you are installing a bus stop, it needs a rain shelter.
Facilities	Park & rides are important I believe. Most bus stops I've seen are typically upgraded or are good enough. I'm not planning at being a bus stop too long.
Facilities	Bus stop by where the old food lion was & where they are putting big lots. Needs a covered area for the people to wait when it’s raining. There are a few others around town but this stop in particular should be a priority. A lot of elderly in the community use this stop.
Facilities	Every bus stop should at least have a basic cover to protect riders from the elements, as well as a bench for anyone with mobility challenges.
Facilities	More park and rides
Facilities	Every bus stop should at least have a basic cover to protect riders from the elements, as well as a bench for anyone with mobility challenges. Lastly, I think it is VITAL that addition Park & Rides are created and advertised - this would incentivize ridership and reduce traffic.
Facilities	Especially transfer points and transit centers in strategic locations. Facility siting should focus on locations that will make service faster and allow for better timed connections.
Facilities	Signage at bus stops should be larger to help identify the route and schedule.
Facilities	With the amount of time that commuters we displaced and had to board buses at the park while Moore Square was being renovated, one would expect more than received. Commuters are still out in the elements during hot, cold and rainy weather. There is NO PLACE to go for protection from cold wind and rain.
Facilities	more bus stops would of course be amazing!
Facilities	No one is going downtown anymore Thanks for ruining it
Facilities	covered benches. Wake Forest just renovated the bus areas but there is no shelter from rain or sun.
Facilities	better covered bus shelters, not enough
Facilities	more bus shelters
Facilities	more covered bus shelters on routes
Facilities	I am visually impaired and have a hard time knowing exactly which bus is coming in my direction to waive down... they only stop when you waive them. A button, app or indicator of who is waiting at the stop would be a huge improvement. I have been left many times...
Facilities	more accessible
Facilities	more covered bus shelters
Facilities	Having bus stops with shelters is very important, park and riders are less important. P&R don't lead to a high amount of ridership compared to people who can walk to a bus stop, especially in a region where it's currently very easy to drive and park everywhere.
Facilities	Drivers bring there problems too work treat passengers bad its not always passenger's. No sensitivity training

Facilities	If there is high frequency, waiting for the service does not require much. Transit Centers are better investment b/c it requires more time to make the connection. Imagine what you can do & accomplish while in the Center & you'll design it to fit everyone's need.
Facilities	Customers should be able to wait with dignity at bus stops. All stops should be universally accessible by 2027.
Facilities	Customers should be able to wait with dignity at bus stops. All stops should be universally accessible by 2027. Park and rides should be a lower priority than both safe walking access and accessible covered stops. For reasons of racial as do economic equity, safety, and sustainability.
Facilities	Make more Wi-Fi on buses and make sure they work
Facilities	shelters
Facilities	Definitely more covered stations
Technology	Each stop has a number but some stops do not have signs in raleigh or knightdale so it's hard to see where the bus is.
Technology	Similar to NCSU the where students can track the location of the bus and it's arrival at the stop.
Technology	Investing in the latest transit technology is critical to providing a valuable transportation resource to the community.
Technology	I DO NOT have a smart phone
Technology	These technology investments are important, but they should not come at the expense of safe access and universally accessible stops.
Technology	Some bus dont have Wi-Fi or it does not work
Technology	I should be able to purchase a one time ticket on my mobile or with credit card on bus.
Technology	This will help make usage broader across generations.
Technology	real time travel info is the most important
Technology	The inability to accurately track the buses is a nightmare for all planning. The apps don't work, the bus gps doesn't work, the station tvs glitch and freeze for days at a time. The inclusions of actual bus service changes or service issues notifications would be nice. Nothing sucks more than having waited for your bus to call over and over then to finally reach someone and find out the bus won't be coming at all.
Technology	Don't need Wifi, most people have unlimited mobile data plans I suspect. Real-time travel info is very basic, there's no excuse for not having it.
Technology	Real time travel is important but wifi on the bus is not.
Technology	make it more easier or accessible for people with disabilities
Technology	make it more senior friendly
Technology	more info. for seniors
Technology	Departure time need to be better bus need to have the fought up five minute to the departure time not one minute departure time
Technology	Being able to predict when your bus will be there is very important! The existing transit apps are pretty okay but they mess up a little sometimes
Technology	Wi-Fi is weak. I ride two buses to work during the weekday and three on the weekends, my total commute time is approximately 50-60 min. The USB ports are almost always not working.
Technology	Would prioritize these enhancements after more "basic" elements of the transit network are addressed such as connecting bus stops with trip generators via pedestrian infrastructure.
Technology	Real-time travel information is important, mobile ticketing would be great, but if I can buy a ticket at a grocery store, then I'm good. Wifi is not necessary. It's nice, but I have my phone.
Technology	Technology is relatively cheap but makes a big difference. Good project management is essential.
Technology	Use the data to drive the routing and planning decisions. Look towards different technologies coming to market. Would a fleet of Tesla's solve a portion of the transit needs? Think outside the box that we call a bus or train today.
Technology	Need an app for real-time ETA
Technology	My family uses the Rider app faithfully for real-time travel information. This is very important to me.
Technology	I would be on the bus to go from point A to point B. This is a very basic simple purpose.
Technology	I have not complaints about this service. For me, this is a very good service.
Technology	Mobile pay options would be fantastic! Current real-time information works well enough. Onboard WiFi doesn't matter to me at all
Technology	More kiosk. The ones at Crabtree valley mall are a game changer
Technology	No wi fi at this time. Too expensive
Technology	Passengers will expect to have technology that makes it convenient and easy to ride.
Technology	Monthly passes and Senior/Disabled ID's should be available at more locations.
Technology	I'm very pleased with the technology. I don't travel as I once did, but I still get around the country some and I've never seen a system that is better in this regard than RTPs and many that aren't as good.
Technology	Transloc is terrible. It often is wrong. A big upgrade is needed.
Technology	reduce the barriers to ridership. Make ticketing through an app or allow for contactless payments in otherways.
Technology	Transloc app & tracking is good. One area of improvement that would be to open up real time transit data to developers. As of right now, I can only view the static GTFS data for routes
Technology	Completely unnecessary - stop wasting our tax dollars!!!!

Technology	Accurate arrival times in app, fast e-ticketing are appreciated
Connecting Infrastructure	Remove the bus parking that screens the Blount St Moore Square mid-block crossing or relocate the crossing before someone is killed
Connecting Infrastructure	Completely unnecessary/ stop wasting our tax dollars!!!!
Connecting Infrastructure	Triangle area neighborhoods & streets (especially suburban ones like most of the region) are not well integrated with transit. Try walking 1 mile in the middle of the summer to a bus stop along a busy, unshaded, 2-3 lane road.
Connecting Infrastructure	This should be a goal in partnership with municipalities in the triangle.
Connecting Infrastructure	Yes, a vast, protected, separated bike/ped network is needed. Stop building parking lots, parking decks, reduce car lanes, and start building for people! End the reign of car domination!
Connecting Infrastructure	More bike paths and fewer dead end streets and fewer fences that cut off different apartment complexes and streets from one another- yes please!
Connecting Infrastructure	Almost all transit riders are also pedistrians when they travel to/from stops to their homes or businesses they frequent. In many cases sidewalks, crosswalks, etc., are insufficient to do this safely.
Connecting Infrastructure	Access transit is life threatening due to high speed vehicle traffic. Drivers have little awareness for vulnerable road users. More traffic calming & traffic light signals w/o Ped Buttons.
Connecting Infrastructure	Currently Raleigh-Wake Forest area is not pedestrian friendly. Need more crosswalks and sidewalks to walk safely to transit stops
Connecting Infrastructure	Accessible connections to sidewalks and nearby destinations should be a minimum feature. We shouldn't be leaving behind residents with disabilities.
Connecting Infrastructure	This area's needs more attention.
Connecting Infrastructure	Safety focused. I am not a fan of bike lanes, and bicycles can be a safety concern, particularly when sharing a road with cars.
Connecting Infrastructure	Big fan of this type of investment. Connecting infrastructure benefits more than just the transit situation. It benefits lifestyles for Wake residents.
Connecting Infrastructure	Enhancements should only be made where there are real safety concerns.
Connecting Infrastructure	Pedestrian safety is important. If the results from this form would make a difference in getting a crosswalk at Lead Mine Rd. across Glenwood, then this would be my absolute top priority.
Connecting Infrastructure	Pedestrian safety is important. If the results from this form would make a difference in getting a crosswalk at Lead Mine Rd. across Glenwood, then this would be my absolute personal top priority.
Connecting Infrastructure	Pedestrian safety is important. If the results from this form would make a difference in getting a crosswalk at Lead Mine Rd. across Glenwood, then this would be my absolute personal top priority. Bikes can use roads, so bike paths are not as important.
Connecting Infrastructure	I will always support greenways.
Connecting Infrastructure	This is very important, but the cities and towns have a responsibility to improve this infrastructure even without the transit plan. Transit plan funding shouldn't be used to fund sidewalk connections and ped safety improvements that cities and towns should be funding themselves anyway.
Connecting Infrastructure	My son was hit by a car & died because there were no sidewalks !
Connecting Infrastructure	Extremely important!
Connecting Infrastructure	More bike paths please for safer commuting by bike.
Connecting Infrastructure	Improving the bus experience means improving the pedestrian experience! Accessibility for people with low vision and mobility aids is also really important.
Connecting Infrastructure	This is the most important part in my opinion- people have to walk and cross streets to get to public transit. Currently, some of those paths are ADA inaccessible, and have traffic whizzing by a few inches away. Make access to transit safe, accessible, and comfortable for people to get to it.
Connecting Infrastructure	In cities that have safe, robust systems, the connections of infrastructure are really n icely done and maintained.
Connecting Infrastructure	I am visually impaired and have a hard time knowing exactly which bus is coming in my direction to waive down... they only stop when you waive them. A button, app or indicator of who is waiting at the stop would be a huge improvement. I have been left many times...
Connecting Infrastructure	This is important in putting "words into action" if we want to create a safe environment to "induce demand" for getting around in ways other than driving.
Connecting Infrastructure	Most transit customers walk to the stop. Safe access is fundamental to a high-quality system.
Connecting Infrastructure	Yes need too go too. Other towns
Connecting Infrastructure	At Maynard crossing I would love a "real" bus stop WHERE WE CAN all get on safely. others have told me the same story frightening them, they avoid shopping there.
Connecting Infrastructure	Sidewalk connectivity is needed on Hodge Road in Knightdale. We walk and bike that area and the current travel conditions are not safe or suitable for foot traffic. Please make connecting this sidewalk a priority.
Connecting Infrastructure	sidewalks and bike paths are so important right now for social distancing exercise
Connecting Infrastructure	Neither Edwards Mill nor Blue Ridge routes stop at the District Drive Park and Ride. Need to interconnect all transportation systems.
Connecting Infrastructure	A safe way to cross knightdale Blvd and some very distinguished bus stops because half the time I don't know where they are on knightdale blvd. I dont drive and have toddler so these things would make it easier for me not to rely on my husband to be able to shop for my family.
Connecting Infrastructure	Almost impossible to commute by foot. More side/ crosswalks and lights
Speed Reliability	Dedicated bus lane on knightdale blvd may be nice, half the time I don't know the bus route or which streets it takes around the commerce area of knightdale.
Speed Reliability	Dedicated Bus lanes, Maybe. Rail Tra
Speed Reliability	Dedicated Bus lanes, Maybe. Rail Transit, No, rider base to support system isn't there.
Speed Reliability	Dedicated Bus lanes, Maybe. Rail Transit, No, rider base to support system isn't there. Bus priority at intersections, No sound dangerous.

Speed Reliability	BRT is not a good place to invest our money with Covid's Current restrictions.
Speed Reliability	Not reliable if stop too take breaks make people late for work
Speed Reliability	absolutely not
Speed Reliability	Again, we are sick of our Regional Transit only being bused! We want & have voted for light rail. If it's only going to be bus service only, you will get ZERO support from me, and encourage others to do the same!
Speed Reliability	You should have separated these options....rail versus dedicated bus lanes.
Speed Reliability	You should've separated rail transit versus dedicated bus lanes.
Speed Reliability	I cannot hit this 5th star fast enough. Is there a 6th star? Or higher? THIS is the key to increasing ridership and participation in the Raleigh/Triangle region public transportation system. I WANT to use the buses as my primary transport; I WANT to avoid driving and traffic and parking. Buses offer that, and I'm happy to support. But in the overwhelming majority of situations when I want to use a bus, the times and frequency available are insufficient for me to be able to choose transit over driving. I am personally invested in supportive the improvement of our local public transit system, but the reliability and speed of that system is impractical for almost all but necessary users it seems.
Speed Reliability	BRT - yes, it's cost effective and has most of the benefits of rail transit, plus many more. Rail transit - NO, takes too long to build, and regional rail will require a >$20 subsidy per trip; do the math.
Speed Reliability	Rail Transit
Speed Reliability	This is important to make transit competitive with driving, and thus more attractive for people who drive to choose transit. If buses have to contend with the same traffic as cars, what's the point?
Speed Reliability	This question should separate out rail transit from bus infrastructure; I would put rail infrastructure at a much lower priority in our region
Speed Reliability	This is the most important out of all of them! Buses not being delayed by traffic and being a part on your life you can count on is the most important!
Speed Reliability	Number 6 sit at the mall to much to much time
Speed Reliability	the bus system needs to be reliable and quick.
Speed Reliability	It is impractical to take bus service from Apex or Holly Springs to Raleigh or RTP. It takes longer to get to a destination by bus than driving my car. While I would not expect it to be the same amount of time, it is laughable that service from western wake to Raleigh takes over 1 hour. Why would I take the bus if I have a car? It is true that some in our communities do not have options and hey need the bus, but if you want people who have cars to use transit instead there needs to be a comparable service to get to places in a respectable amount of time.
Speed Reliability	The traffic signals are getting out of hand. This would be too much. Rail transit needs to supplement bus transit.
Speed Reliability	dedicated lames PLEASE and light rail
Speed Reliability	We need light rail!
Speed Reliability	Reliability will always be #1. Don't work on rail until we get a good bus system. Charlotte has a really good bus system with high frequency and they just put their light rail in.
Speed Reliability	We need commuter rail. No one wants to ride buses for regional commutes.
Speed Reliability	Everything that is needed for improvement the service, is very good
Speed Reliability	Keep it simple and straightforward. Complexity causes accidents.
Speed Reliability	Illiminate rail options, too costly
Speed Reliability	A partnership with Amtrak to offer commuter service would be a win win for both the region and Amtrack ridership
Speed Reliability	Must provide a fast and efficient experience to convince people not to drive!
Speed Reliability	Yes! Redirect money from cars to transit. This is the only way to build a more equitable, sustainable future.
Speed Reliability	My highest priority is a rail system for commuters.
Speed Reliability	This is an area that I think improvements could be made. I know that you're considering BRT. I think such things as BRT and priority at lights would be useful innovations.
Speed Reliability	This is an area that I think improvements could be made. I know that you're considering BRT. I think such things as BRT and priority at lights would be useful innovations...things to make taking the bus faster (better) than driving.
Speed Reliability	This is an area that I think improvements could be made. I know that you're considering BRT. I think such things as BRT and priority at lights would be useful innovations...things to make taking the bus faster (better) than driving. I read once that in some cities in Scandanavia (I haven't seen it myself) they force all the traffic through one lane at the bus stop. When the bus stops, everyone stops. No one goes faster than the bus. Maybe not take things that far, but try to make the bus faster than driving.
Speed Reliability	Rail transit is critical in getting more ridership.
Speed Reliability	Yes! Redirect money from cars to transit. This is the only way to build a more equitable, sustainable future. Also, reliability is key. Once transit becomes as reliable and efficient as cars, ridership will increase.
Speed Reliability	Completely unnecessary/ stop wasting our tax dollars!!!! The buses are a nuisance on I-40 and other roads.
Speed Reliability	Buses are way too slow (they are fairly reliable though). A trip time 1.5-2 times the length of a car ride is acceptable to me (or a max of 45 minutes), but any longer than that is not very useful.
Speed Reliability	Build transit corridors with infrastructure so those who choose to ride transit can, seemlessly.

Vehicle	build existing ridership first
Vehicle	Completely unnecessary/ stop wasting our tax dollars!!!!
Vehicle	Working A/C and appropriately sized vehicles
Vehicle	Buses feel fairly modern now.
Vehicle	Only if they are not natural gas buses. Natural Gas is NOT a bridge fuel.
Vehicle	The buses are pretty good. I like the natural gas buses, no diesel smell.
Vehicle	Electric buses!
Vehicle	Emissions-free electric or hydrogen buses!!! They are the both environmental and fiscally responsible choice for Wake County.
Vehicle	Unless you are investing in electric or hydrogen, I would hold off on upgrading buses. They're fine.
Vehicle	The buses seem pretty comfortable and nice to me.
Vehicle	Stop the socialist transit system from wasting more money and give our tax money back.
Vehicle	Limited value, as I expect to be an infrequent rider.
Vehicle	This area's need continuous attention.
Vehicle	Current Gillig stock is sufficient.
Vehicle	This may encourage increased ridership.
Vehicle	The buses I have been on have all been sufficient (GoRaleigh 1, 4, 6, 16, GoTriangle 100/105). I do not see a need to upgrade the buses except for reliability/environmental responsibility (hybrid/electric).
Vehicle	Vehicle upgrades can be addressed during routine bus replacements at end of useful life. Prefer scare dollars to be spent on infrastructure with longer useful life. Better investment.
Vehicle	Buses are expensive hollow vessels that traverse the area without passengers. Either figure out how to use them effectively or think differently.
Vehicle	EV Busses should be prioritized.
Vehicle	Replace all of the giant buses that are largely empty with smaller, more fuel efficient vans.
Vehicle	less dangerous emissions into the air is a huge plus
Vehicle	Many of the Raleigh buses are very loud and harsh to ride. They handle bumps and potholed like there's no suspension at all. It's definitely not a good rider experience.
Vehicle	Phone plugs working beeter driver stop being so late
Vehicle	The buses are pretty comfortable as they are - no need to spend money here
Vehicle	better wheelchair access
Vehicle	buses don't have to be elegant, just fitting for the service offered. Smaller buses on some less popular routes would be a great efficiency.
Vehicle	We need many small busses within the community to feed the larger busses that Connect to others and Regional
Vehicle	Huge busses drive around empty. Terrible waste.
Vehicle	more accessible
Vehicle	more accessible
Vehicle	more accessible for older adults using walkers
Vehicle	Overall, the current bus fleet is mostly good shape. People would rather have a bus that comes twice as often, than an infrequent bus that's slightly newer.
Vehicle	More electric buses
Vehicle	I don't really care but new busses as long old busses functions properly.
Vehicle	make more accessible for people in wheelchairs or scooters
Vehicle	I don't like riding the current buses. Worn out shocks make for a bouncy ride. Not that clean and seats are not comfortable. Metal bars above the seat in front of you, and lack of seat belts, are safety hazards. I'm happy to ride a nice high floor coach, but typical city buses are - ugh, no thanks.
Vehicle	more accessible for people with disabilities
Vehicle	Light Rail is what we want, not more buses!
Vehicle	New buses they run raggedy no breaks with passegers late for work or appointments
Vehicle	some buses sound like tin cans constantly rolling along. screw them in or cushion the connections with something.
Vehicle	They need to be cleaned more often on the inside where you sit.
Vehicle	GoTriangle buses are pretty up to date so no need here

Wake County Transit Vision Plan Update - Summer 2020 Public Engagement Comments - Tradeoffs

Comment Item	Comment
Comment on Service vs Infrastructure	We use the bus in Europe when we travel--and the vast majority of bus stops there is literally just a sign and route map--no shelter, no bench, no nothing.
Comment on Service vs Infrastructure	More frequent
Comment on Service vs Infrastructure	You need both of these options.
Comment on Service vs Infrastructure	Arrows won't move the button from neutral
Comment on Service vs Infrastructure	The buses are already severely under-used, cut service all around! Stop wasting our tax dollars!!
Comment on Service vs Infrastructure	This is an absurd trade-off.
Comment on Service vs Infrastructure	A lot of this depends on which specific routes/capital projects. Service should be added to high ridership routes and infrastructure should be added where ridership (or potential ridership) is highest.
Comment on Service vs Infrastructure	Bus lanes are cheap as long as local elected officials and NCDOT are willing to reallocate existing space on the road.
Comment on Service vs Infrastructure	Bus lanes!
Comment on Service vs Infrastructure	Leave that up to the towns to determine how to invest
Comment on Service vs Infrastructure	The infrastructure has got to be able to support the service. Make the long-term infrastructure investments upfront and increase routes/buses where possible.
Comment on Service vs Infrastructure	The city will have to decide what works for the city. I don't expect to be a part of this often.
Comment on Service vs Infrastructure	These need to be balanced because both impact the accessibility & effectiveness of the transit system. It doesn't matter if the bus comes frequently to a location the rider can't safely reach, and it doesn't matter if the rider can reach a stop that has no routes or times that serve the rider's needs.
Comment on Service vs Infrastructure	The more comfortable and easier to use, it may be more successful in gaining new riders
Comment on Service vs Infrastructure	Stop wasting our tax money!
Comment on Service vs Infrastructure	Facilities can be really nice, but if I have to wait an hour to make a connection or after shopping at a store, then I'm using my car. Frequency is better.
Comment on Service vs Infrastructure	BRT
Comment on Service vs Infrastructure	What's the point of having a nice bus shelter to wait several hours? Ideally people aren't spending a lot of time waiting around a bus but actually just getting on a bus
Comment on Service vs Infrastructure	BRT
Comment on Service vs Infrastructure	brt
Comment on Service vs Infrastructure	Bus Rapid Transit
Comment on Service vs Infrastructure	Make the service work better, then make it pretty.
Comment on Service vs Infrastructure	BRT
Comment on Service vs Infrastructure	BRT
Comment on Service vs Infrastructure	BRT
Comment on Service vs Infrastructure	BRT
Comment on Service vs Infrastructure	BRT
Comment on Service vs Infrastructure	BRT
Comment on Service vs Infrastructure	BRT
Comment on Service vs Infrastructure	BRT
Comment on Service vs Infrastructure	BRT
Comment on Service vs Infrastructure	better bus shelters
Comment on Service vs Infrastructure	more covered bus shelters at stops
Comment on Service vs Infrastructure	more shelters at stops
Comment on Service vs Infrastructure	more bus shelters
Comment on Service vs Infrastructure	more bus stops/shelters
Comment on Service vs Infrastructure	I do not think this is one or the other. It depends on the community you are serving. Equity has to be a consideration and communities historically challenged with deficient transportation, need more stops. Communities where longer commutes to the RTP are encouraged need more frequency.
Comment on Service vs Infrastructure	BRT
Comment on Service vs Infrastructure	BRT
Comment on Service vs Infrastructure	Need much earlier bus and rail service for people who's shifts begin really early like 7am.
Comment on Service vs Infrastructure	More shelters for bad weather
Comment on Service vs Infrastructure	There is more work to do in improving the infrastructure or access to Transit and the conditions of the stuff that needs to proceed your service or go along with the
Comment on Service vs Infrastructure	These two are compatible and complete one another.
Comment on Service vs Infrastructure	Have to do things to entice car drives out of there car and onto the bus. Faster, easier is way to do it.

Comment on Service vs Infrastructure	Yes bus shelters are an absolute must. Half the time I do not know where the bus stops are located in knightdale (and Raleigh like north if north hills. When it rains if I'm traveling with my toddler it is not a fun experience since there are no bus shelters along the First ave area or knightdale blvd especially. Having a dedicated light and crosswalk to safely cross this street for my return trip is also extremely important.
Comment on Service vs Infrastructure	I want the sidewalks so I can get to a bus stop but don't care about fast lanes for buses.
Comment on Ridership vs Coverage	Ridership
Comment on Ridership vs Coverage	Seniors have designated seats up front.
Comment on Ridership vs Coverage	Outlining communities where people live in areas that are affordable but work lower income jobs in Raleigh need access to job areas without so many stops in between and at more hours of the day not just morning and evening. Some have to go to second job in different location and getting to both means having a vehicle rather than being able to use bus.
Comment on Ridership vs Coverage	Stop all the service and give our tax money back.
Comment on Ridership vs Coverage	No serve all people.in order to give better service and get sensitivity trading not leave people if they can fit see them trying too make it too bus pull off they stop any way what is one or two minutes
Comment on Ridership vs Coverage	This should be considered along with racial and economic equity. If high demand is among low-income, Black and Brown residents then that should be the highest priority for service improvement.
Comment on Ridership vs Coverage	BRT
Comment on Ridership vs Coverage	BRT
Comment on Ridership vs Coverage	This trade needs to be done only as a "we absolutely must". Both sides of the argument have folks who need transit or some assist from transit. This is a hard choice. But I'd rather wait a little longer for a bus if I know I can go more places on it.
Comment on Ridership vs Coverage	We should start by serving areas where there's a lot of demand/opportunity for ridership first. Once those are high frequency routes, it's easier to start building out the lower ridership/coverage routes that can be feeder routes. More coverage routes don't help either group because service and transfers are too long and unreliable.
Comment on Ridership vs Coverage	BRT
Comment on Ridership vs Coverage	I would ask first where is the demand over service capacity currently? I work with low income communities and families that need to get to work. Depending on their location in the county - they may have no alternative and lose opportunities to get their families off public assistance.
Comment on Ridership vs Coverage	more accessible for people with disabilities
Comment on Ridership vs Coverage	BRT
Comment on Ridership vs Coverage	BRT
Comment on Ridership vs Coverage	BRT
Comment on Ridership vs Coverage	BRT
Comment on Ridership vs Coverage	BRT
Comment on Ridership vs Coverage	BRT
Comment on Ridership vs Coverage	BRT
Comment on Ridership vs Coverage	BRT
Comment on Ridership vs Coverage	Consider how COVID changes demand for transit. Consider where increased frequency may be needed to provide safe travel for essential in person workers.
Comment on Ridership vs Coverage	BRT
Comment on Ridership vs Coverage	What does transit ridership data show? While more people might be served by expanding service to more places, mass transit should meet known existing needs, whether that means a larger footprint or more saturation in the current footprint.
Comment on Ridership vs Coverage	Door to door service.
Comment on Ridership vs Coverage	higher coverage would be more helpful to me personally, but ridership would be more helpful to more people
Comment on Ridership vs Coverage	Whichever has the greatest need that hasn’t been met.
Comment on Ridership vs Coverage	Perhaps some of those areas are busier because there are areas that are not covered. Like a bottlenecking effect. If that's the contributing factor to higher volume of ridership in an area, I reverse my selection.
Comment on Ridership vs Coverage	I prioritize coverage until all communities have some coverage; then I'd prioritize ridership over adding coverage. Also, if ridership is needed to fund coverage, that becomes the priority.
Comment on Ridership vs Coverage	Make it work well where it is a preferred means of transit and where it works well. Park and ride is not a bad thing if security is provided. Such as Crabtree mall.
Comment on Ridership vs Coverage	Why is it either or. I like both. Invest in transport massively and get traffic off the road. Let’s be like every otjer developed country!
Comment on Ridership vs Coverage	Generally, I believe serving more people in denser areas makes public transit a more convenient alternative to driving. However, it also sounds increasingly unrealistic and unsustainable from a cultural perspective due to COVID-related social distancing (and rampant distrust of public infrastructure and other "stupid people")
Comment on Ridership vs Coverage	The buses are already severely under-used, cut service all around! Stop wasting our tax dollars!!
Comment on Ridership vs Coverage	Implement rerouting for #16 to include NCSU & North Hills, while increasing frequency of #6
Comment on Ridership vs Coverage	you need both of these.
Comment on Speed vs Access	you need both of these options or you will not convince commuters to use bus system
Comment on Speed vs Access	I would favor more stations only in certain select areas where there is demonstrated need (such as urban cores or in poorer neighborhoods).
Comment on Speed vs Access	The buses are already severely under-used, cut service all around! Stop wasting our tax dollars!!

Comment on Speed vs Access	Rely on communities for local service shuttles (RTP, downtown Durham, Raleigh, Cary)
Comment on Speed vs Access	Speed would be great with fewer stops but this requires major investment in sidewalks. So many places lacking connecting sidewalks
Comment on Speed vs Access	From city to city more direct routes however within the city more stops
Comment on Speed vs Access	Depends on the length of the route. Longer routes could benefit from fewer stops
Comment on Speed vs Access	I can't really tell the city how they should be, especially when I don't have any personal interest. However, at the present time, I'm not afraid of walking a little.
Comment on Speed vs Access	Modes stations and stops in other places
Comment on Speed vs Access	Definitely speed here, but that requires good infrastructure (sidewalks, accessibility ramps, etc.) so that people are able to safely get to the stops in their community.
Comment on Speed vs Access	Having more stops doesn't help if people don't take transit because it turns a 15 minute drive into a 45 minute ride.
Comment on Speed vs Access	If there are faster routes will this significantly decrease the wait time for the next bus arrival?
Comment on Speed vs Access	You scale is biased. You say "Longer trip from A to B" but are not accounting for the implied opposite of "shorter walk to a stop" which is a longer walk to a stop and thus would make "Faster Routes" take longer if folks have to walk further to get to a stop.
Comment on Speed vs Access	If my walk is too far, then I'm driving. I feel most people are this way. Faster routes are good only during peak times.
Comment on Speed vs Access	If my walk is too far, then I'm driving. I feel most people are this way. Faster routes are good only during peak times. Stops don't necessarily need to be covered.
Comment on Speed vs Access	Might be more complicated, but could you have a combination of both? Have more access points but also a bus line that was more direct for those that want it.
Comment on Speed vs Access	I believe a mix would be more appropriate. Create faster options during peak hours between most used destinations.
Comment on Speed vs Access	I'd like to see a balance - right now denser areas have more stops and the bus stops literally every couple of feet. But farther-flung neighborhoods have to walk for hours to get to a bus stop.
Comment on Speed vs Access	BRT
Comment on Speed vs Access	This should take into context the particular route and what stops make sense based on where the ridership is boarding. There needed to be enough stops where people can reasonably walk with either kids or bags without stopping the bus every few feet
Comment on Speed vs Access	BRT (or tram). Accessibility. More. "Regular" bus services is not enough to help our community growing! The triangle area is one of the top 5 fastest growing regions in the U.S. We need more mass transit otherwise jobs will go somewhere else!
Comment on Speed vs Access	BRT
Comment on Speed vs Access	Address coverage through first mile/last mile strategies such as microtransit, enhanced pedestrian connectivity
Comment on Speed vs Access	I really like the direct buses for the GoTriangle system, like the Raleigh direct to Chapel Hill, so adding more of those in between stops would be best
Comment on Speed vs Access	BRT
Comment on Speed vs Access	BRT
Comment on Speed vs Access	BRT
Comment on Speed vs Access	BRT
Comment on Speed vs Access	BRT
Comment on Speed vs Access	BRT
Comment on Speed vs Access	BRT
Comment on Speed vs Access	BRT
Comment on Speed vs Access	BRT
Comment on Speed vs Access	shorter walks/shelters for seniors
Comment on Speed vs Access	Depends on the locations and the routes.
Comment on Speed vs Access	BRT
Comment on Speed vs Access	Frequent and direct routes will bring more ridership and better service. We have seen over and over that people will fine with walking a little further if there's a more frequent route with reliable service.
Comment on Speed vs Access	BRT
Comment on Speed vs Access	Depends Upon having safe access and universally accessible stops
Comment on Speed vs Access	Bus Rapid Transit projects
Comment on Speed vs Access	Have daughter who uses service 3 days a week and her route takes 1 1/2 hours by bus and by car it is 23 minutes.
Comment on Speed vs Access	May work with multiple mini hubs. Like airlines not like FedEx with everything going to Memphis.
Comment on Speed vs Access	More stops
Comment on Regional vs Local	Regional
Comment on Regional vs Local	Where I work needs bus service in the town so that the children in the lower income areas can have safe access to resources like the library. Many don't have a vehicle available to bring them to library for book and internet use for homework assignments. Only vehicle a family has is with parent at work till hours for library are over. With budget cuts to libraries reducing hours need is even greater for transportation to these resources. Location of library is not easily walked due to distance and lack of sidewalks in areas of higher traffic.
Comment on Regional vs Local	I would love the ability to go to raleigh and connect easily. If we could install a train connection like a commuter rail to knightdale that connects to downtown raleigh and beyond that would be amazing.

Comment on Regional vs Local	Only need a few routes that connect cities and towns with the exception of RTP.
Comment on Regional vs Local	I live in Knightdale and work in Durham. We need better commute (less stops and faster routes).
Comment on Regional vs Local	Please add rail service!!!
Comment on Regional vs Local	Most travel is local and regional service works best when there are high-quality local networks
Comment on Regional vs Local	We should focus on having a frequent local network before we continue to invest in regional routes. A high frequency local network will provide more ridership per hour of service, and once in place, will allow for more people to access/transfer to the regional service, making it more successful as well. Especially in the near-ish term, a lot of regional trips have moved to work from home, so we should focus on where transit is still needed.
Comment on Regional vs Local	Our cities aren't that big, our issue is we are an entire Triangle area, so making it easier to get from city to city is so much more needed based on our layout here. I'd go to Durham from Raleigh more if there was a rail!
Comment on Regional vs Local	Regional service currently seems weaker than local service.
Comment on Regional vs Local	305 need to run all day and hourly
Comment on Regional vs Local	We need both. I feel we're late on mass transit in general compared to other booming metropolitan areas.
Comment on Regional vs Local	Many city/town boundaries in Wake County don't affect travel demand. Planning should think about strong travel markets rather than whether a route crosses a line or not.
Comment on Regional vs Local	better connections between cities makes trips so much easier - would love better connections to RTP too
Comment on Regional vs Local	Having good local service would provide better access to regional service.
Comment on Regional vs Local	We will need to connect the towns surrounding Raleigh to Raleigh. Folks cannot afford to live in Raleigh but need to maintain their employment in Raleigh. They should have a means to get into town from their affordable housing.
Comment on Regional vs Local	these complement each other -- they should be developed in tandem
Comment on Regional vs Local	Vulnerable populations during covid and pre-covid coming from Zebulon must catch bus once and day and return at end of day. And where are these stops? Are they near critical resources. Need easy access for better connection to broader employment and critical needs.
Comment on Regional vs Local	Both are important, but regional focus is more important while it can be planned ahead of time.
Comment on Regional vs Local	Regional connectivity adds a basic capability that is available at some price. Additional services inside a town add convenience for the residents. As an infrequent rider, I favor enhanced capability. However, since I'm not paying the price, I have limited standing to impose hardship on those who are.
Comment on Regional vs Local	Local service should be the priority for the near term. Local service is far more likely to serve riders who rely on transit to get to jobs/services. Regional service has largely moved to WFH/online.
Comment on Regional vs Local	The buses are already severely under-used, cut service all around! Stop wasting our tax dollars!!
Comment on Regional vs Local	Increase service in town
Comment on Regional vs Local	Local service should be reimagined beyond the spokes on a wheel. There should be multiple hubs throughout Raleigh, durham, etc.
Comment on Regional vs Local	Prefer regional express routes between municipal hubs and then more services branching out from hubs
Comment on Regional vs Local	Yes
Comment on Regional vs Local	Again you need both of these not either or.

APPENDIX G: POST-2030 UNCONSTRAINED HIGH-CAPACITY TRANSIT CORRIDORS

Near-Term Corridors

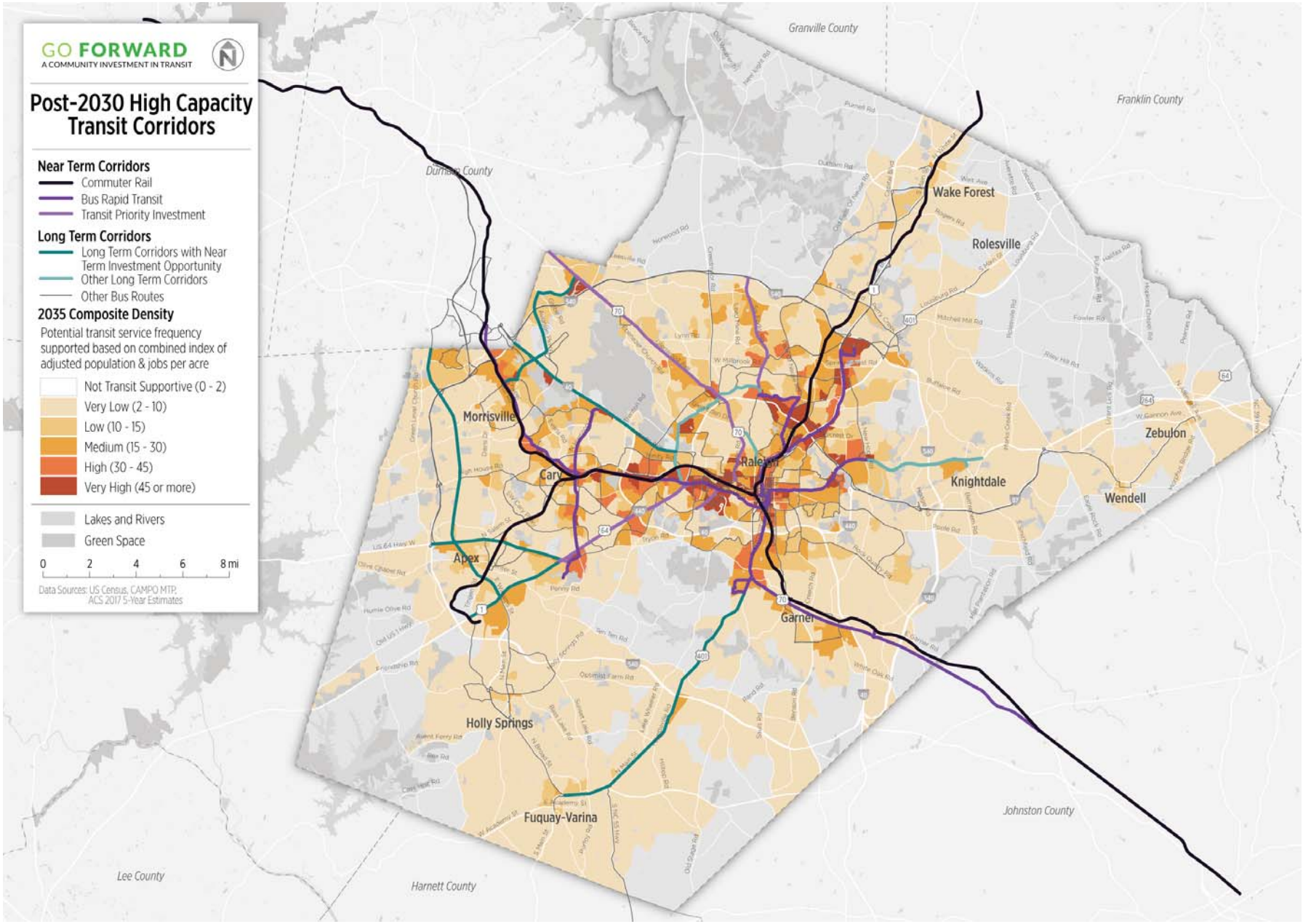
Corridor Limits	Investment Type
CSX 'S' Line Corridor from Southern Apex to Youngsville	Regional/Commuter Rail
Harrison Avenue and Kildaire Farm Road from I-40 to Tryon Road in Cary	Bus Rapid Transit
U.S. 1 from Crabtree Blvd to I-540	Bus Rapid Transit
Wake Forest Road and St. Albans Drive from U.S. 1 to Six Forks Road	Bus Rapid Transit
Avent Ferry Road from Gorman Street to Western Blvd	Potential Dedicated Transit Lanes, Transit Signal Priority
Oberlin Road from Hillsborough Street to U.S. 70	Potential Dedicated Transit Lanes, Transit Signal Priority
U.S. 70 from Oberlin Road to Durham County Line	Potential Dedicated Transit Lanes, Transit Signal Priority
Six Forks Road from I-440 to I-540	Potential Dedicated Transit Lanes, Transit Signal Priority
U.S. 1/64 from U.S. 1/64 split to I-40	Potential Dedicated Transit Lanes/Shoulder Use

Long-Term Corridors with Near-Term Investment Opportunity

Corridor Limits	Investment Type
U.S. 64 from NC 540 to U.S. 1 (2035 horizon widening)	Potential Dedicated Transit Lanes/Shoulder Use
U.S. 1 from NC 540 to U.S. 64 (2035 horizon widening)	Potential Dedicated Transit Lanes/Shoulder Use
NC 55 from U.S. 1 to RTP (intermittent 2035 horizon widening)	Potential Dedicated Transit Lanes/Shoulder Use, Transit Signal Priority
U.S. 401 from Fuquay-Varina to Garner (2035 horizon widening)	Potential Dedicated Transit Lanes/Shoulder Use, Transit Signal Priority
McCrimmon Parkway/Airport Blvd/Aviation Blvd/Brier Creek Pkwy from NC 54 to U.S. 70 (intermittent 2035 horizon widening)	Potential Dedicated Transit Lanes/Shoulder Use, Transit Signal Priority
I-40 from Durham County Line to Wade Avenue and Wade Avenue to Blue Ridge Road (2035 horizon widening/managed lanes)	Transit Use in Managed Lanes, Shoulder Use, Transit Vehicle Access Points

Long-Term Corridors

Corridor Limits	Investment Type
New Bern Avenue/Knightdale Blvd from New Hope Road to Old Knight Road	Bus Rapid Transit, Potential Dedicated Transit Lanes/Shoulder Use, Transit Signal Priority
Blue Ridge Road/North Hills Drive/Northbrook Drive from Western Blvd to Six Forks Road	Potential Dedicated Transit Lanes, Transit Signal Priority
Glenwood Road from Oberlin Road to Wade Avenue	Potential Dedicated Transit Lanes, Transit Signal Priority


GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
Post-2030 High Capacity Transit Corridors
Near Term Corridors
Commuter Rail
Bus Rapid Transit
Transit Priority Investment
Long Term Corridors
Long Term Corridors with Near Term Investment Opportunity
Other Long Term Corridors
Other Bus Routes
2035 Composite Density
Potential transit service frequency supported based on combined index of adjusted population & jobs per acre
Not Transit Supportive (0 - 2)
Very Low (2 - 10)
Low (10 - 15)
Medium (15 - 30)
High (30 - 45)
Very High (45 or more)
Lakes and Rivers
Green Space
0 2 4 6 8 mi
Data Sources: US Census, CAMPO MTP, ACS 2017 5-Year Estimates
Granville County
Franklin County
Durham County
Wake Forest
Rolesville
Morrisville
Cary
Raleigh
Knightdale
Zebulon
Wendell
Apex
Garner
Holly Springs
Fuquay-Varina
Johnston County
Lee County
Harnett County