



SOUTHEAST AREA STUDY UPDATE

FINAL REPORT

SEAS

S O U T H E A S T A R E A S T U D Y

U P D A T E

December 2023

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ACKNOWLEDGMENTS

On behalf of the Capital Area Metropolitan Planning Organization (CAMPO), thank you to the Upper Coastal Plain Rural Planning Organization (UCPRPO), the North Carolina Department of Transportation (NCDOT), the Core Technical Team (CTT), the Stakeholder Oversight Team (SOT), local jurisdiction planners, and elected officials for the time and persistent dedication over the course of the Southeast Areas Study (SEAS) Update planning process. The SEAS Update was a collaborative effort across key stakeholders and the public and the success of this plan can be attributed to the collective efforts of the project partners.

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INTRODUCTION

In 2016, the Capital Area Metropolitan Planning Organization (CAMPO) initiated the Southeast Area Study (SEAS) to define the area's land use strategy and accommodate existing and future travel needs. The SEAS Update revisited the original SEAS, completed in 2017, for the purpose of reevaluating the unified vision and comprehensive transportation strategy and to refresh its policies and practices and produce recommendations for land use and transportation.

The recommendations from the SEAS Update will inform Johnston County's Comprehensive Transportation Plan (CTP), update CAMPO's overall CTP, and identify project priorities to be considered in the next Metropolitan Transportation Plan (MTP), the financially constrained, long-range transportation plan for the region. These recommendations are also intended to be used as a basis for ongoing planning and policy work in local town plans.

The Study Area—Then and Now

The original SEAS study area included portions of both Wake and Johnston Counties and 12 municipalities—Archer Lodge, Benson, Clayton, Four Oaks, Garner, Kenly, Micro, Raleigh, Selma, Smithfield, and Wilson’s Mills. For the 2023 update, the study area was expanded to reflect current growth patterns. The expanded area adds the US 401 corridor west of Garner and areas east of I-95, including Pine Level and areas within the extraterritorial jurisdictions of Benson, Four Oaks, Smithfield, and Selma.

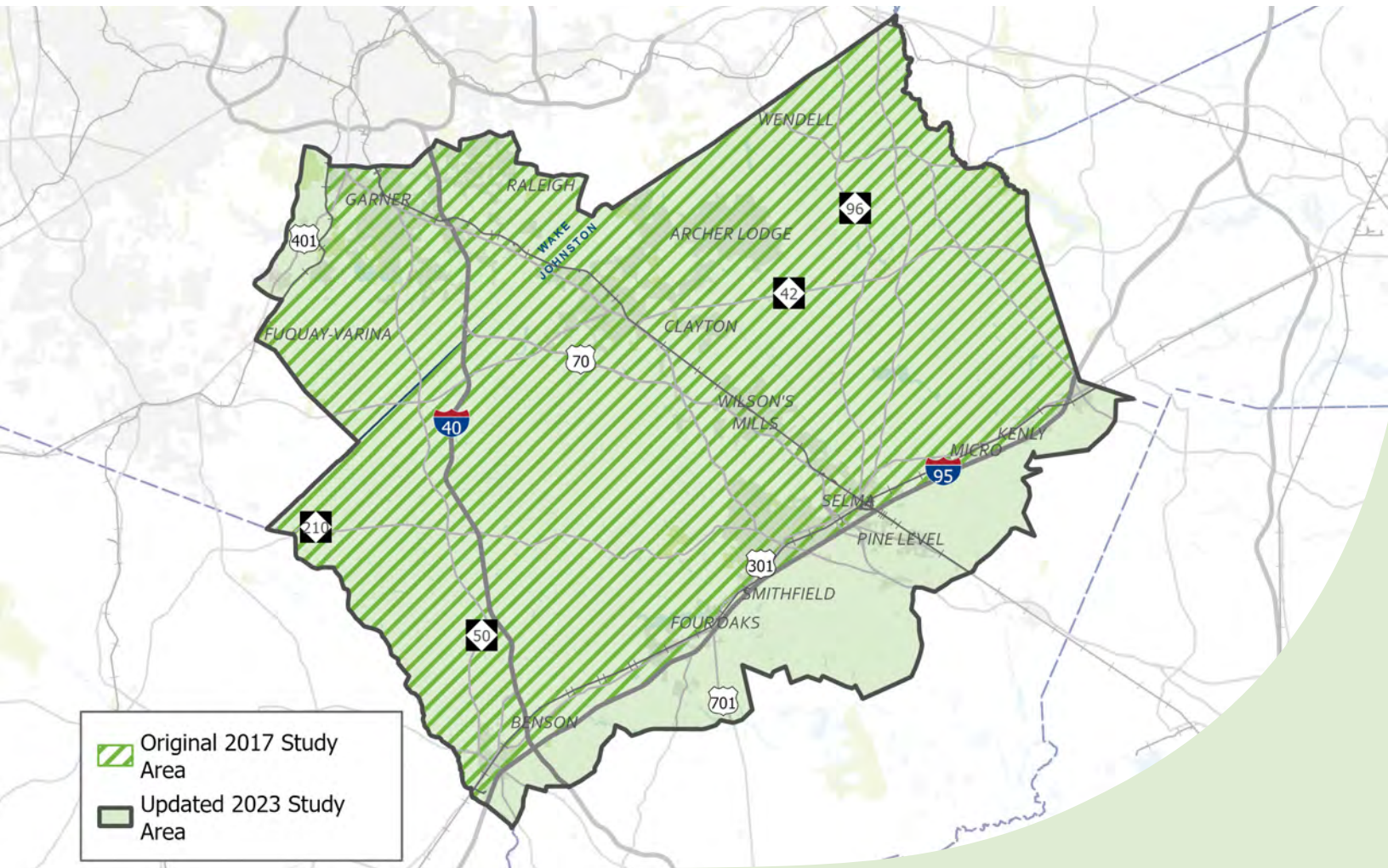
In the five years since the completion of the original study, the Southeast Area has experienced unforeseen growth with Johnston County being one of the fastest-growing regions of North Carolina. This rapidly changing environment makes the update of the SEAS even more vitally important.

Source: North Carolina Department of Commerce

What is an Area Study?

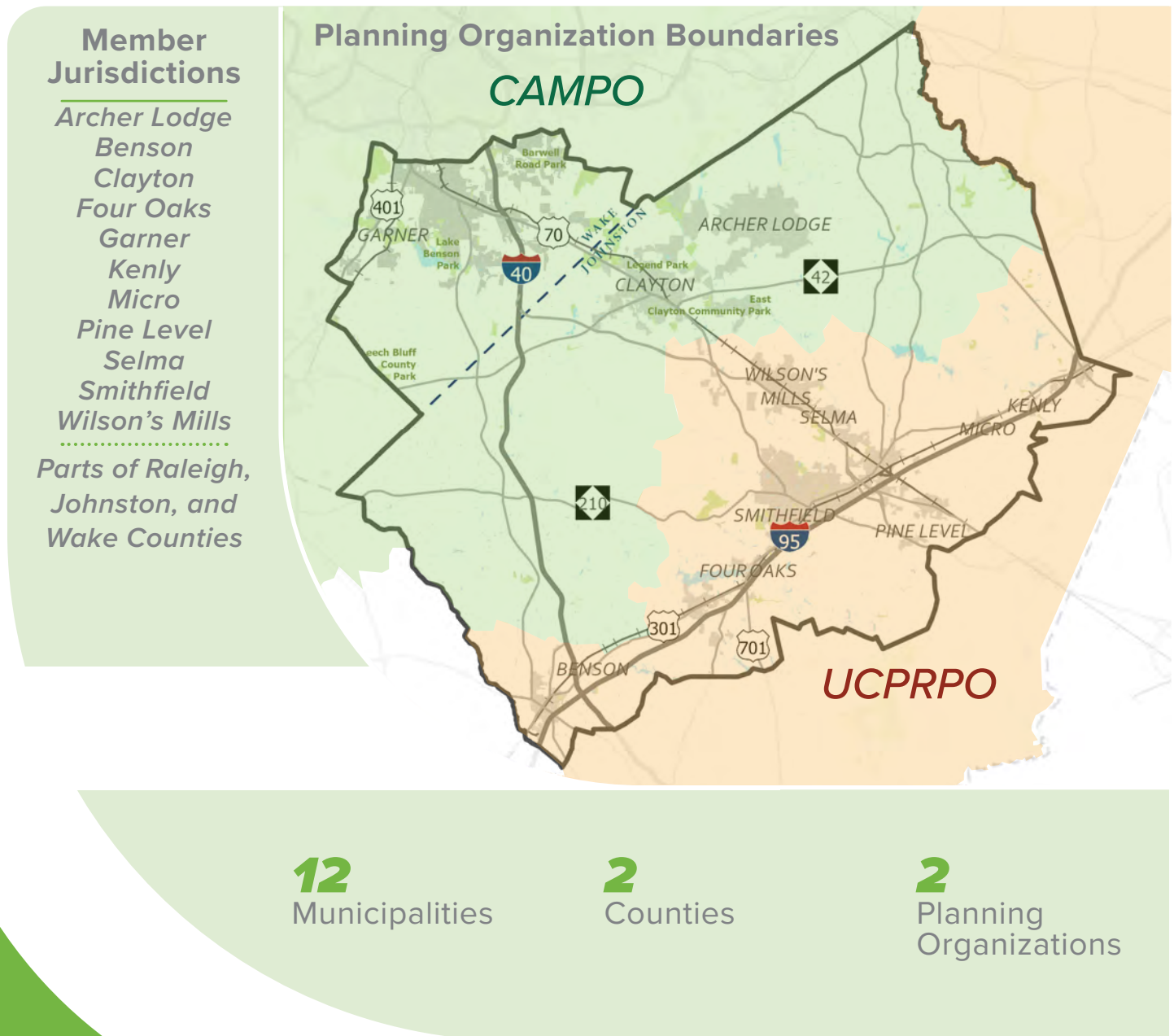
CAMPO conducts area studies to allow a deep dive into the local road network, multimodal plans, and opportunities in a smaller study area of the region. There are three existing area studies: the Northeast Area Study, the Southwest Area Study, and the Southeast Area Study.

2017	2023
570 Square Miles	668 Square Miles
2,550+ Miles of Road	2,850+ Miles of Road
227,000 People	290,500 People



Project Partners

The SEAS Update was a collaborative effort between CAMPO, the Upper Coastal Plain Rural Planning Organization (UCPRPO), and the North Carolina Department of Transportation (NCDOT). The updated study area includes 12 municipalities and spans portions of both Johnston and Wake counties. With a large footprint that crosses the border between CAMPO and UCPRPO and includes part of a city, 11 towns, and two counties, coordination in developing recommendations and strategies is integral to the success of the region. The map below displays the boundaries of both CAMPO and UCPRPO.



Involved Parties

In addition to the establishing agencies and study area jurisdictions, the SEAS Update was a collaborative effort between technical committees, technical experts, stakeholders, and the public. The various involved parties are described below.

Capital Area Metropolitan Planning Organization

CAMPO is a regional transportation planning organization serving communities in Franklin, Granville, Harnett, Johnston, and Wake Counties. CAMPO has a Technical Coordinating Committee (TCC), comprised of staff from member and stakeholder agencies, that provides technical recommendations to the CAMPO Executive Board. The CAMPO Executive Board was the endorsing body of the SEAS Update.

Upper Coastal Plain Rural Planning Organization

UCPRPO is a Rural Planning Organization (RPO) in North Carolina consisting of Edgecombe, Johnston, Nash, and Wilson Counties. UCPRPO works cooperatively with NCDOT to plan rural transportation systems and to advise the department on rural transportation policy.

Stakeholder Oversight Team

A Stakeholder Oversight Team (SOT) consisting of member jurisdictions, transit providers, school systems, chambers of commerce, community groups, and local and state agencies worked as a representative committee for the planning process. The SOT acted as an advisory board for findings and recommendations of the study. SOT members also provided assistance with public engagement and communication efforts.

Core Technical Team

A Core Technical Team (CTT), composed of local and state agency staff as a subset of the SOT, was the guiding review body that gave direction, input, and monitored the project study as it took place.

Key Community Stakeholders

In addition to the SOT, key stakeholders from a variety of organizations including advocacy groups, major employers, community groups, neighborhood organizations, and agencies were engaged throughout the planning process.

Public

The general public that reside, work, recreate, and make up the communities in the Southeast Area were engaged in the development process to encourage investment with the goal of creating a plan that is reflective of the various communities' needs.



This chapter outlines the engagement strategies and outcomes that informed the development of the SEAS Update. More detailed engagement summaries can be found in Appendix A.

Engagement Phases

The purpose of engagement was to inform and gather input on the SEAS Update. Engagement was divided into two distinct phases, each with unique objectives that informed the development of this plan. A blend of outreach strategies was used to engage the community in a variety of ways.

Phase 1 | Discover

May 2022 - August 2022

Educate the public after a review of previous studies and data collection to seek input on vision, guiding principles, and study area challenges. This phase focused outreach to answer the following questions:

- What guiding principles do we see as most important?
- What are the most critical transportation issues in the Southeast Area?
- How much growth and what kind of growth is ideal?
- What would improve how we travel as the area grows?
- What are some places that need improvement?
- What places should we protect and preserve?

Phase 2 | Involve

September 2022 - August 2023

Educate the public about Phase 1 public input, alternative options, and seek input on potential preferred alternatives. This phase focused outreach to answer the following questions:

- What tradeoffs would we have to make for our preferred land use future?
- Do proposed transportation recommendations meet our current and future needs?
- What criteria should be emphasized in recommending and prioritizing transportation projects?

Outreach at a Glance

Public engagement occurred throughout the development of this plan and informed vision, goals, and recommendations. A snapshot summarizing public outreach can be found below.

1,115+
Total Participants

1,100+
Survey Responses

1,075+
Total Comments

Public Engagement

The foundation of all planning efforts is community input. The SEAS Update made an intentional effort to involve the public in both direct and indirect ways. A variety of public engagement opportunities helped bolster excitement about the planning effort.



Phase 1 | Discover

Phase 1 involved raising awareness and educating the public about the SEAS Update. The purpose of Phase 1 was to:

- Revisit and reevaluate the 2017 Guiding Principles
- Identify transportation and land use needs and opportunities
- Raise awareness about the SEAS Update

Project Website

As part of Phase 1, the SEAS project website was created to be the engagement hub for this plan. During the development of the study, the website was regularly updated and maintained. The site provided relevant information, documents, and maps for the public to stay informed on the project's progress. The website also had a calendar with past and upcoming events to document project milestones and events.

SEAS
SOUTHEAST AREA STUDY
UPDATE

[Home](#) [Stakeholder Oversight Team](#)

Archer Lodge | Benson | Clayton | Four Oaks | Garner | Kenly | Micro | Pine Level | Raleigh | Selma | Smithfield | Wilson's Mills | Johnston County | Wake County

Project Overview

The Capital Area Metropolitan Planning Organization (CAMPO) is updating the 2017 Southeast Area Study (SEAS) to refresh its policies and practices and produce recommendations for land use and transportation. The study focuses on the evolving priorities and needs in parts of Wake and Johnston County. The SEAS Update will review the existing conditions of the study area and recommend regional improvements for future land use and development and multiple modes of transportation including roadways, bicycle, and pedestrian needs, transit, and even freight and rail considerations. The recommendations that come out of the SEAS Update will inform the Metropolitan Transportation Plan (MTP), a region-wide long-range transportation plan that is updated every four years.

In addition to a technical analysis, public feedback will heavily inform the SEAS. We need to hear from you!

Study Area Map

Archer Lodge
Clayton
Wilson's Mills
Selma
Smithfield
Pine Level
Four Oaks
Benson

Pop-Up Events

A challenge of standard public engagement is reaching members of the entire community. An intentional effort was made to reach members of the community that might otherwise not engage in the planning process. There were eight pop-up events held across the study area in July 2022 to engage with people in person for feedback regarding vision and goal setting and issues identification. The pop-up events were located at events like downtown festivals and farmers' markets or at the Garner regional library on days of scheduled activities with the hopes of meeting people where they were.

Online Survey

A public survey was used to target online feedback. The first online survey was open from July 6, 2023 to July 29, 2023. The questions on the survey targeted participants thoughts on the overarching vision for this plan, transportation priorities, and growth preferences. While a summary of the online survey results can be seen below, a more robust analysis of input can be found in Appendix A.

600+

Survey Participants

800+

Total Comments

180+

Map Comments

Visioning

As part of the survey, participants were asked to select the three guiding principles that were most important to them. A full list of the guiding principles can be found on the following page. The major takeaways from this question included:

- Concerns about uncontrolled growth and resulting congestion
- The need to preserve natural resources and natural land
- The desire for more greenways, trails, and open spaces
- The need for alternative modes to provide transportation choices

Percent of Respondents

Livability **68%**

Traffic Flow **61%**

Sustainable Growth **60%**

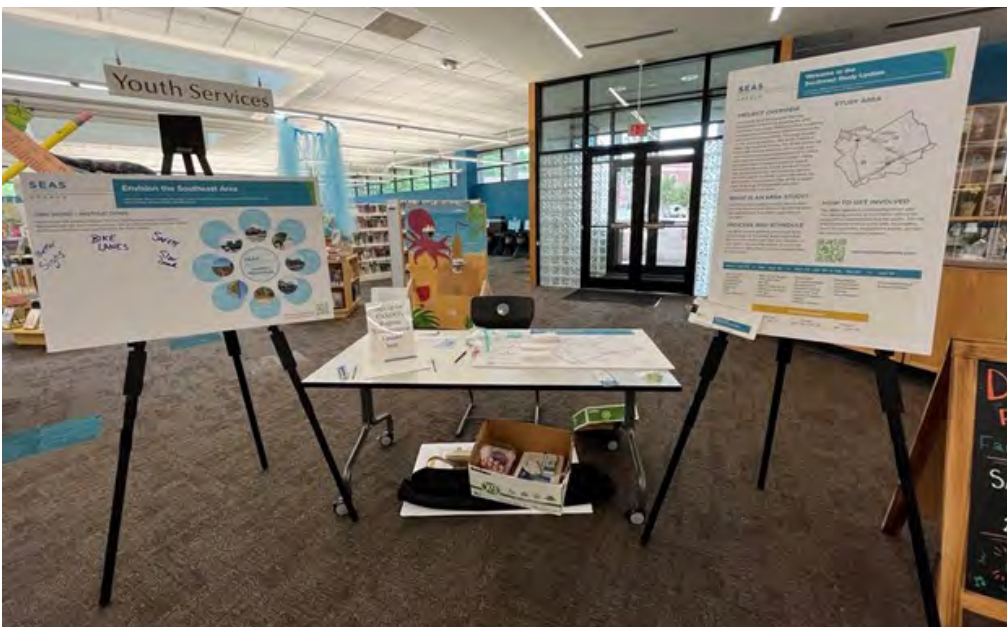
Travel Safety **33%**

Active Transportation **28%**

Network Connectivity **24%**

Economic Vitality **18%**

Freight Movement **5%**



Guiding Principles

The eight guiding principles identified and refined in the SEAS Update reflect the regional vision for the southeast area. Throughout this plan's development, the guiding principles influenced the direction and development of all planning elements. The principles are listed below in no particular order.



LIVABILITY

Enhance and promote our region's quality of life through transportation and land use decisions that equitably support public health, education, parks and recreation, public art, and local character.



TRAFFIC FLOW

Make it easier to move within and through our region by reducing congestion and improving roadway operations.



SUSTAINABLE GROWTH

Blend development decisions and transportation strategies to promote and sustain employment and population growth by offering housing and neighborhood choices to meet diverse needs while preserving the area's natural features.



TRAVEL SAFETY

Promote a safer, more secure transportation system by reducing crashes, enhancing reliability and predictability, and improving emergency coordination.



ACTIVE TRANSPORTATION

Integrate our transportation network to provide travel choices, especially walking and cycling, for all users, regardless of age and ability.



NETWORK CONNECTIVITY

Link local and regional destinations through improved connections and enhanced integration among travel modes.



ECONOMIC VITALITY

Grow our economy through a transportation network that connects residents to jobs, goods, services, and opportunities within and beyond our region.



FREIGHT MOVEMENT

Support global competitiveness of our region through a transportation network that efficiently moves goods and services.



Phase 2 | Involve

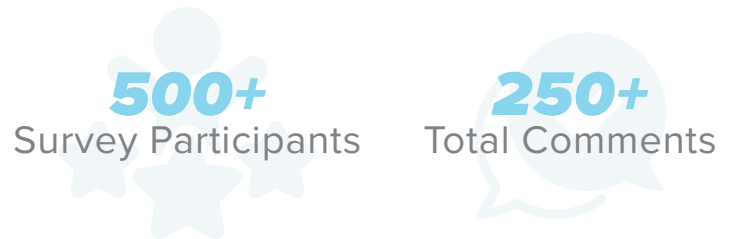
Phase 2 Engagement presented initial findings through an educational approach with the goal of seeking valuable input on draft recommendations. The purpose of Phase 2 was to:

- Educate the public on the preferred growth scenario
- Gather feedback on draft transportation recommendations and priorities

A full summary of Phase 2 Engagement can be found in Appendix A.

Online Survey

An online survey was used to gather public input on the draft bicycle, pedestrian, transit, intersection, and roadway recommendations. The survey was open from June 16, 2023 to July 16, 2023. The survey included a mapping component that invited respondents to leave comments on specific transportation projects.



Jurisdictional Meetings

As part of the SEAS Update, a series of meetings were held with staff from member jurisdictions across the southeast area to understand local priorities. The meeting discussions focused on preferred locations for growth, the state of land use policies, and safety issues.

Public Symposium

A public symposium was held at Garner Town Hall on June 22, 2023. The symposium consisted of two parts. The first was an SOT presentation and orientation to the boards and public engagement materials. The second half of the meeting was a public open house where people were welcomed to drop in and ask questions or provide feedback on the draft transportation recommendations, prioritization criteria, and associated tradeoffs.



Pop-Up Events

As in the first phase of engagement, an intentional effort was made to reach members of the community by attending ongoing, local events across the region. The project team went out to six pop-up events in July 2023 to engage with people in person for feedback regarding the draft recommendations and transportation priorities.



What We Heard



Roadway

Improve congestion and prepare for future traffic with incoming growth

- Address congestion on routes into the Triangle and on rural roads not made to handle projected traffic
- Address lack of alternatives to driving on major corridors
- Keep traffic from worsening on major arteries



Pedestrian

Make communities more walkable and bikeable through infrastructure and safety improvements

- Maintain and expand sidewalk networks/pedestrian facilities
- Provide safe crossings for major arterials, highways, rail corridors, etc.
- Provide dedicated paths/lanes to separate and protect cyclists and pedestrians from traffic



Growth

Grow with purpose and direction by balancing growth with community and natural area preservation

- Preserve community character and tailor development to the needs of each community
- Ensure infrastructure can keep up with growth
- Avoid uncontrolled sprawl that encroaches on rural areas and worsening traffic



Bicycle

Create regional connectivity for bicyclists and pedestrians

- Provide bike and pedestrian facilities connecting different communities across the region
- Add greenways and shared use paths parallel to major travel corridors that can act as alternatives to driving
- Create connections between major destinations and residential developments



Transit

Make transit a viable alternative to driving

- Emphasize transit as an opportunity for mode shift to relieve congestion
- Prioritize regional transit connections into the Triangle
- Coordinate transit with land use strategy
- Provide first-mile/last-mile connections



Equity

Ensure recommendations are developed through a lens of equity

- Include equity as a focus of the study by considering access to transportation and opportunity
- Equitably distribute project benefits
- Ensure that projects do not adversely impact historically disadvantaged communities and communities of concern



REGIONAL SNAPSHOT

The Regional Snapshot is an assessment of the conditions and trends that affect how people live, work, and travel in and through the Southeast Area. It sets the stage for defining and shaping a new land use and transportation future. This context along with the input from Phase 1 Engagement provides the information needed for the development of recommendations responsive to the needs and values of the Southeast Area.

This chapter leverages a variety of data sources from the local, regional, and state levels. Individual data sources are noted where they are referenced. In many places throughout this document comparisons are made between the study area as a whole, as well as comparisons between the counties, region, or state.

Format

The Regional Snapshot takes a threefold look at **people**, **places**, and **mobility** to paint a full picture of the Southeast Area as it exists in terms of demographics, land use and the environment, and the transportation system.

People

A look at the demographic trends in the study area

Places

A look at land use trends around growth and the environment

Mobility

An analysis of the existing and planned transportation network

Building Blocks

The SEAS Update is just what the name implies—an opportunity to revisit the groundwork that has already been laid for the future of transportation and growth in the Southeast Area. In addition to it being an update to the existing SEAS, the towns, counties, and agencies working in the study area have a combined collection of almost 30 plans that are in progress or have been adopted in just the past five years since the 2017 SEAS was completed. These plans are the building blocks of transportation and land use decision making and are important considerations when identifying investments over the coming years. This section lists the concurrent and adopted plans since the completion of the 2017 SEAS, many of which stemmed from recommendations of the previous planning process. While not a comprehensive list, all of the plans summarized in this section were collected because they are relevant to the SEAS Update. The following pages give a brief overview of these plans.

Concurrent Plans

Jurisdiction or Agency	Plan	Summary
CAMPO	Garner-Clayton BRT Extension Study	Studying extending the South Wake BRT line from its planned Garner terminus further into Garner and Clayton roughly following the US 70 corridor
Clayton	Clayton Pedestrian Plan	An analysis of existing pedestrian infrastructure conditions and challenges, recommendations for improvements
GoTriangle	Greater Triangle Commuter Rail Study	Studying the potential creation of a commuter rail between West Durham and Garner/Clayton and what would be needed (e.g., cost, infrastructure)
Johnston County	Envision Johnston Update	Continuing from the original Envision Johnston analysis with more specific policies and an initial land use proposal
Smithfield	Smithfield Pedestrian Plan	An inventory of existing pedestrian infrastructure and proposals for needed sidewalk and shared path connections
UCPRPO	Neuse River Trail Clayton-Smithfield Study	Studying an extension of the Neuse River Trail to connect its current end in Clayton with the Buffalo Creek Greenway in Smithfield
Wake County	Lower Swift Creek Area Study	A new area land use plan for a small section of unincorporated Wake County within Garner's urban service area

Adopted Plans

Jurisdiction or Agency	Plan	Year	Summary
Archer Lodge	Town of Archer Lodge Bicycle and Pedestrian Plan	2020	Analysis of current and planned pedestrian and bike facilities, policy/program recommendations
Benson	2019 Town of Benson Community Transportation Plan	2019*	An analysis of existing transportation services and recommendations for various modes
CAMPO	Fayetteville-Raleigh Passenger Rail Feasibility Study	2020	A study of two potential corridors for passenger rail from Raleigh to Fayetteville
Four Oaks	Report of Economic Development Assessment	2020	An analysis of community assets; a vision, goal, and strategy for economic development
	Downtown Streetscape Master Plan	2020	A design plan for the public realm around Main Street, Wellons Street/US-301, and surrounding parts of downtown Four Oaks
	Land Use Plan Analysis and Update	2022	Comparing status quo, previously planned, and smart growth approaches to town land uses
Garner	Garner Forward	2018	Long term comprehensive and transportation plans for the future outlook of the town, leading into a planned development ordinance rewrite
	Town of Garner Transit Study	2020	Summary of community engagement, analysis of transit needs/demands, recommendations
Johnston County	Johnston County Parks and Recreation Master Plan	2021	Analysis of current park amenities in Johnston County, recommendations
	Envision Johnston (Comprehensive Land Use Plan)	2021	Analysis of where certain land uses were most suitable based on needs of each use and community engagement
Pine Level	Pine Level Comprehensive Land Use Plan	2022	Analysis of current trends, community vision, and future land use for the Pine Level area
Raleigh	Southeast Special Area Study Phase 2 Report	2020	Policy guidance for the rural and natural areas southeast of Raleigh based on public engagement
	Raleigh Community Climate Action Plan	2021	An analysis of climate risks facing Raleigh and detailed strategies and actions for equity and resilience

*Plan not formally adopted.

Adopted Plans (Continued)

Jurisdiction or Agency	Plan	Year	Summary
Selma	Eastfield Conceptual Master Plan	2017	A master plan map for a planned development south of I-95 in Selma
	Economic Development Strategic Plan	2019	Strategic plan for attracting and retaining jobs based on an analysis of the town's assets and opportunities
	Town of Selma Land Use Plan 2040	2021	Analysis of community conditions and a plan for future land uses and ordinance changes
Smithfield	Smithfield Town Plan	2019	Comprehensive town plan including growth management and transportation elements
Central Pines Regional Council	Close to Home: An Affordable Housing Analysis of The Triangle's Passenger Rail Corridor	2021	Existing and planned affordable housing types, locations, and opportunities along the commuter rail corridor
	Opportunity Analysis (of Greater Triangle Commuter Rail Corridor)	2022	Analysis of what could happen along the commuter rail corridor (travel markets, land use, affordable housing, and economic impact)
Wake County	2019 Community Health Needs Assessment	2019	Analysis of community health needs and inventory of available or needed health resources
	PLANWake Comprehensive Plan	2021	Comprehensive plan for Wake County
	Wake County Transit Plan Update	2021	Update to plans for future transit improvement in Wake County (GoTriangle, GoRaleigh)
Wake County Public Schools (WCPSS)	Capital Investment Plan Update	2022	Summary of major planned facility work (new construction and major renovations), comparison to previous CIP
Wilson's Mills	Town Plan 2040 Comprehensive Land Use and Master Plan	2019	Analysis of town resources and community wants; goals and objectives for future land use, economic development, and community character

***Formerly Triangle J Council of Governments (TJCOG)*

People

This section examines demographic trends in the Southeast Area. It includes an assessment of population makeup, growth, prosperity, education, and vulnerable groups. Understanding who lives and works in the Southeast Area today will inform important considerations for who to plan for in the future. The “present day” information in this section was analyzed using the 2020 Decennial Census and the 2020 American Community Survey, 5-year estimates.

Population and Growth

The Southeast Area study area contains about 21% of the Raleigh-Cary Metropolitan Statistical Area (MSA)’s population. Since the original plan, the study area has not only outpaced the growth of the Raleigh MSA and the state, but even exceeded estimates in the original study, growing by over 21,600 people in three years when the original SEAS predicted only growing by 10,000 in five years. Preserving the area’s character in the midst of rapid population growth and change highlights the importance of coordinating strategies for both land use and transportation.

Age

The study area has an older population than the Raleigh-Cary MSA at large. 12.5% of the study area population is above age 65, an increase from 11.5% in 2015 and a higher percentage than within the Raleigh-Cary MSA. The study area also has a higher median age (38.5) than the Raleigh-Cary MSA (36.9), both increases from their 2015 medians (37.7 for the study area, 35.8 for the MSA). Men have a slightly lower median age than women within the study area at 36.9 and 39.8, respectively.

Educational Attainment

89.6% of the study area population has obtained, at the least, a high school diploma, and 29% have a bachelor’s degree or higher. While these numbers are lower than the Raleigh-Cary MSA and state rates of educational attainment, they still reflect an educated population well equipped for skilled employment.

Owned vs. Rented Households

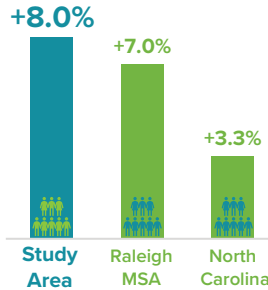
Around 74% of households in the study area are owner-occupied, compared to about 26% renter-occupied. This is a slight increase in owner-occupied households since 2017 when about 73% of properties were occupied by their owners. Most rental properties are concentrated in more dense areas within towns and cities, largely matching the land use patterns of the study area.

Community Snapshot

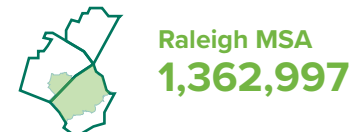
Population Growth



Study area population growth from 2017 to 2020 outpaced the growth of the Raleigh MSA and North Carolina



Population



Vehicle Access



4.1%
have no vehicle



23.9%
have 1 vehicle

Diversity



32.7% Minorities
compared to Raleigh MSA's 34.3%

Sex



51%
female



49%
male

Household Tenure



73.8%
owner-occupied

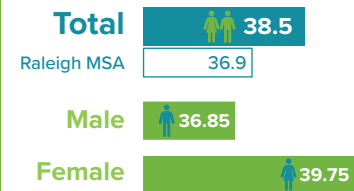
26.3%
renter-occupied

Age

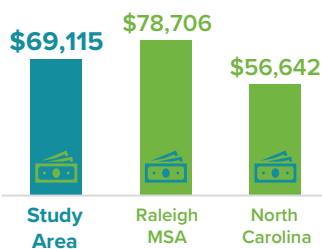


12.5% Elderly
compared to Raleigh MSA's 12.1%

Median Age



Median Income

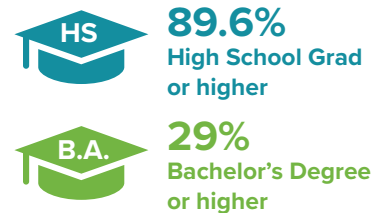


Poverty



10.2% of Households in Poverty
compared to Raleigh MSA's 8.3%

Education



Source: 2017 and 2020 American Community Survey 5-year estimates; 2020 Census

Median Household Income

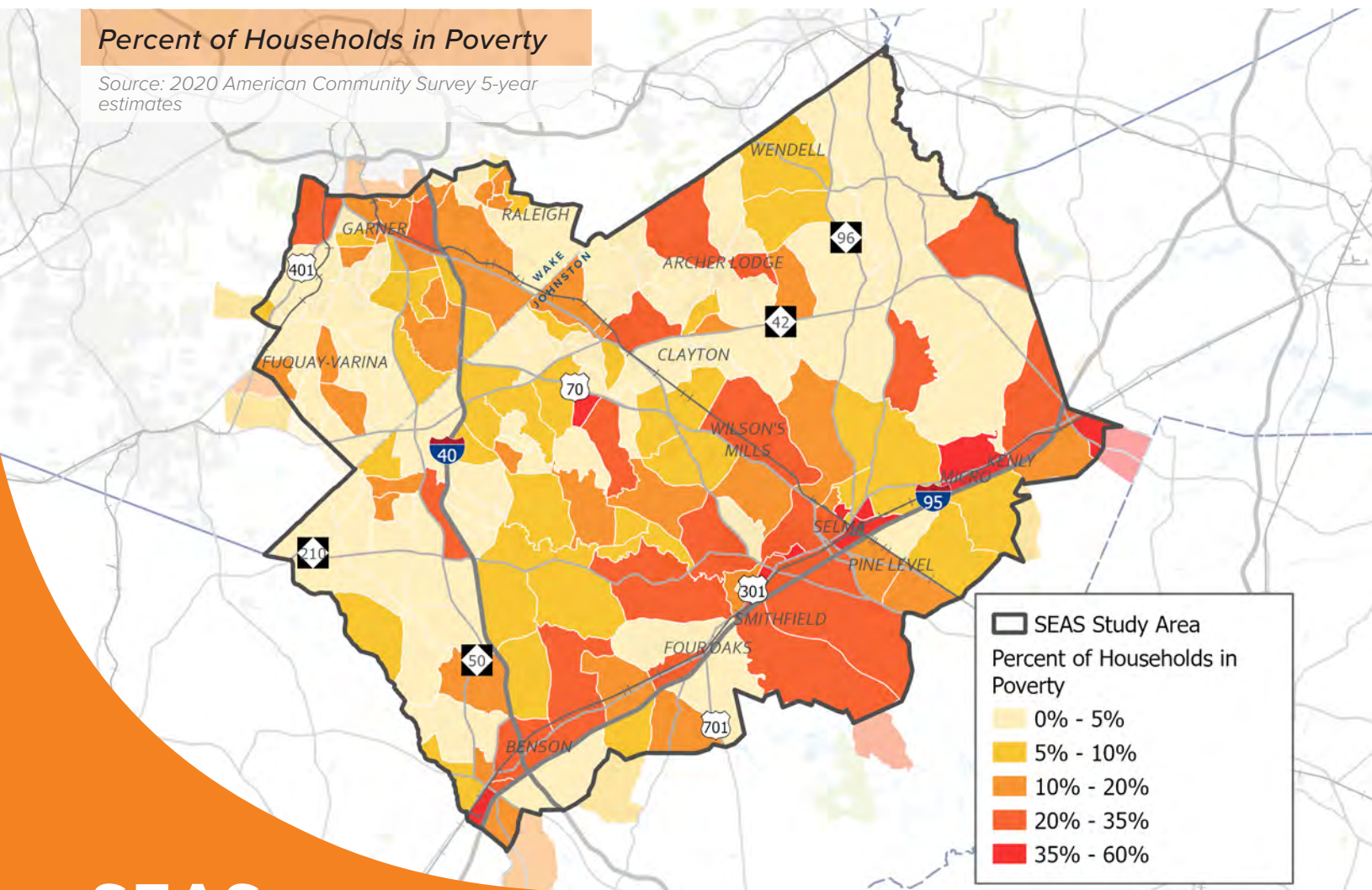
The median household income in the study area is \$69,115, an increase from \$67,046 in 2015. While significantly lower than the Raleigh-Cary MSA's median (\$78,706), it still exceeds the statewide median of \$56,642.

Households in Poverty

Just over 10% of study area households are in poverty, a higher rate than that of the larger Raleigh-Cary MSA, but a decrease from the study area's 12% in 2013. Most parts of the study area with the worst poverty are along the US 301/I-95 corridor, with a smaller area of less severe poverty roughly following the US 70 corridor. Other than the areas around southeast Raleigh and Garner, the poverty rate generally increases further out from downtown Raleigh, matching a nationwide pattern of poverty being pushed further out into suburbs as urban housing costs increase.

Percent of Households in Poverty

Source: 2020 American Community Survey 5-year estimates



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Population Density

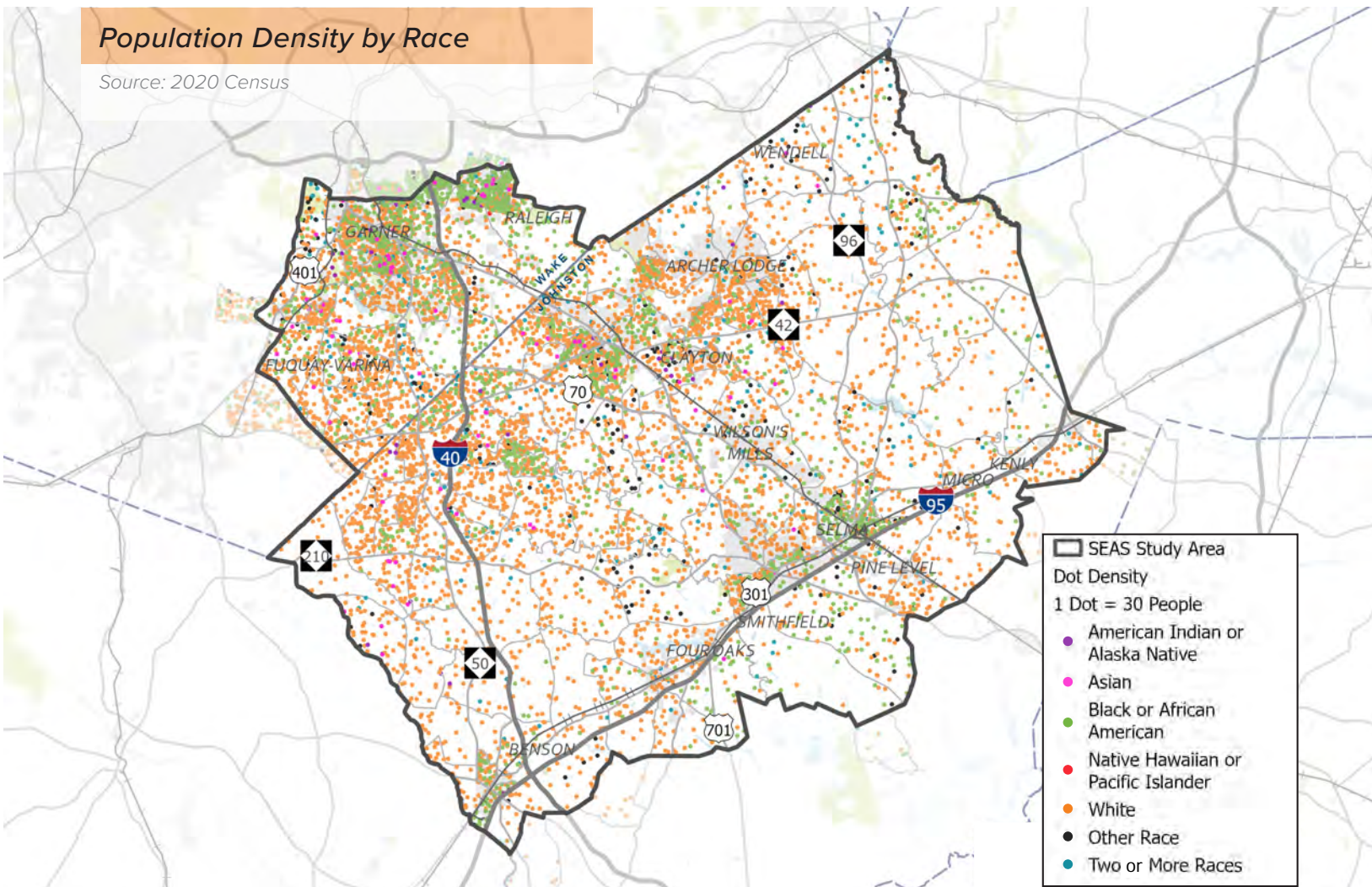
The bulk of the study area's population is located within proximity to areas surrounding the Wake/Johnston County border, with population growth spreading from Raleigh and Garner outward further into Johnston County along I-40, US 70, and NC 42. There is slightly less density in the towns along the US 301/I-95 corridor, which have not seen as much growth.

Race

Around 67.3% of the study area population is White/Caucasian, while 32.7% of the study area's population is non-white or mixed. This is a slight increase in non-white or mixed populations since the original SEAS, which made up about 30% of the study area population in 2017. Combined, White/Caucasian and Black/African American populations make up the vast majority of the study area's population. Notably, the White/Caucasian population is spread out across the area, while the Black/African-American population is largely clustered in towns and in the area near the I-40/NC 42 interchange.

Population Density by Race

Source: 2020 Census



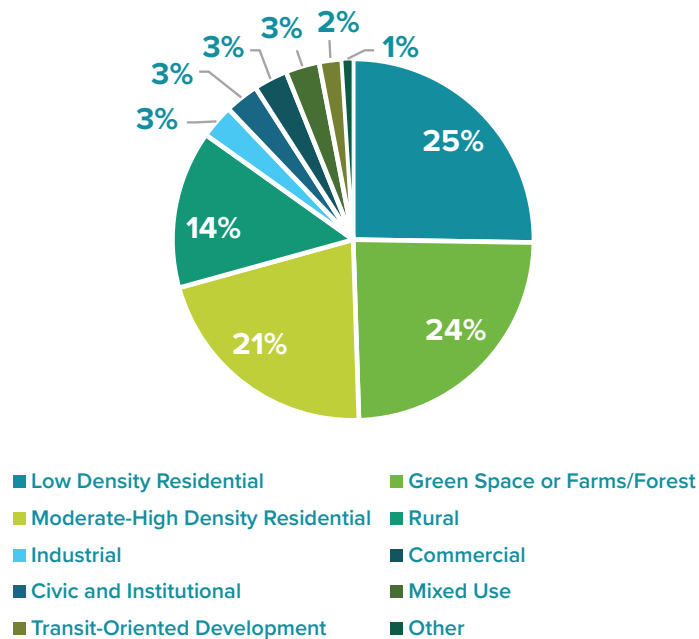
Places

The Research Triangle Region, anchored by the cities of Raleigh and Durham and the town of Chapel Hill, has been one of the fastest growing areas in the state over the last decade. Due to available and affordable land and proximity and access to employment centers, the Southeast Area is anticipated to continue to experience high growth for the foreseeable future.

Places Snapshot

Future Land Use

Based on Existing Plans



Growth in Perspective

Between 2010-2019



Johnston and Wake were the two fastest growing counties in the Research Triangle



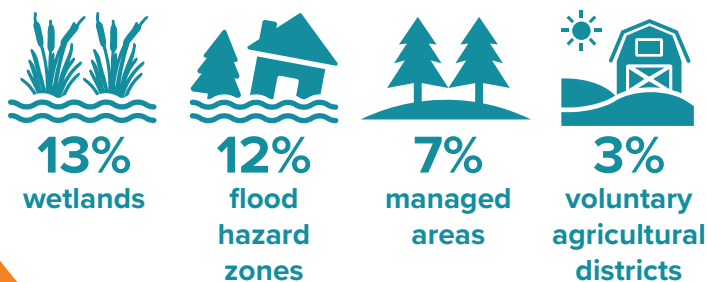
The Triangle was one of the three fastest growing regions in North Carolina



North Carolina was the fourth fastest growing state in the nation

Environmental Features

Percent of Study Area



Housing Unit Stats

Unit Types



77.8%
single-family

12.1%
mobile homes

10.1%
multifamily

Percent Cost Burdened*



39.3%
of renters



7.2%
of owners

Year Built*

23.6%
1990-1999

23.3%
2000-2009

11.9%
1980-1989



*Within all of Johnston County

Source: 2017 and 2020 American Community Survey 5-year estimates; 2020 Census; Triangle J Council of Governments (TJCOG) CommunityViz Growth Model; North Carolina Department of Environmental Quality (NCDEQ); North Carolina Flood Risk Information System (FRIS); National Wetlands Inventory (NWI); North Carolina Natural Heritage Program (NHP)

Growth Over the Last Decade

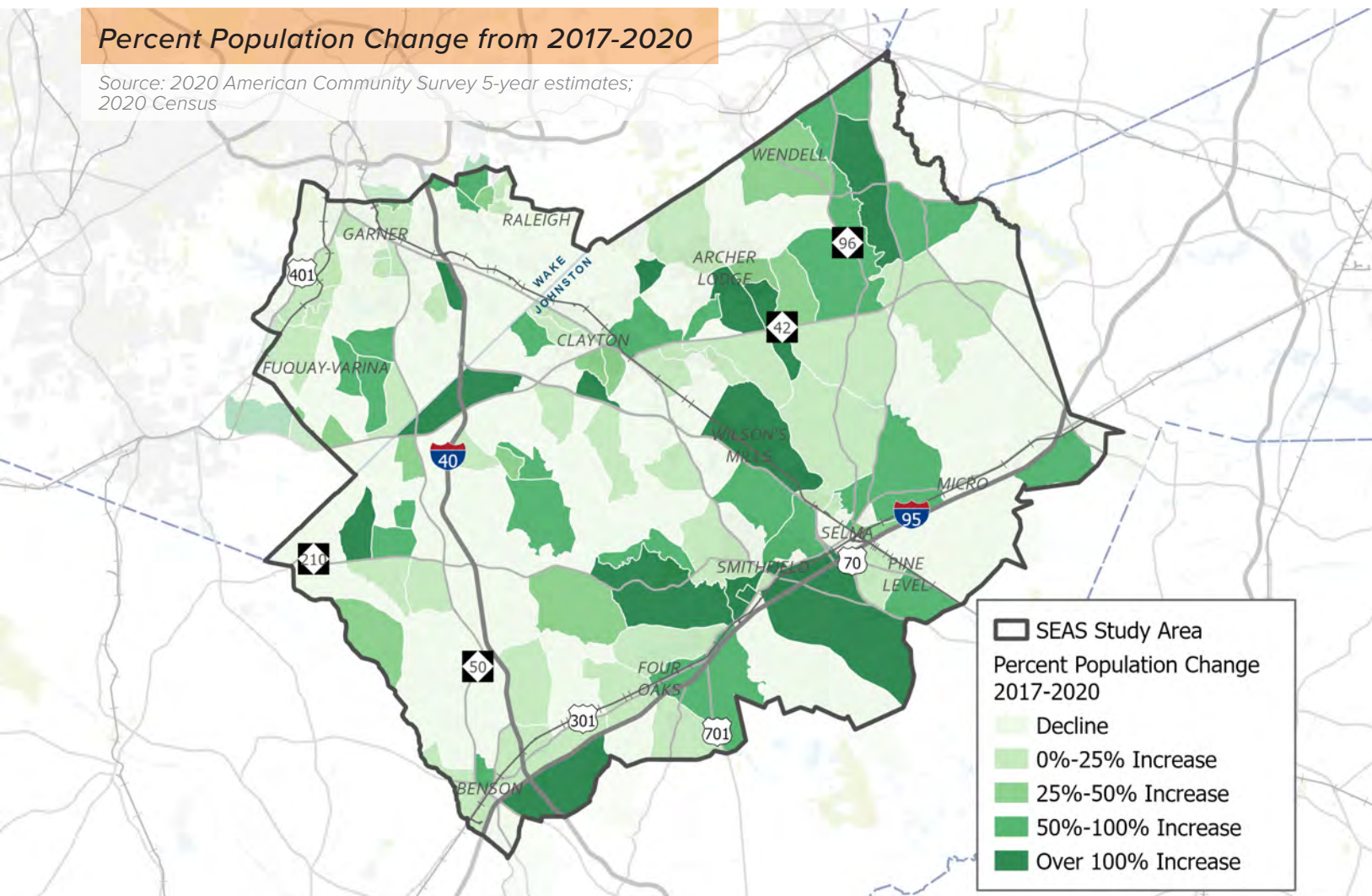
Between 2010-2019, North Carolina was the third highest growth state in the Southeast and fourth in the nation. During that same time period, the fastest growing regions in the state were Charlotte, the Research Triangle, and Wilmington. Wake County and Johnston County were the two highest population growth counties in the Triangle. According to the Central Pines Regional Council, Johnston County led the state in population growth from 2010 to 2020 with the Town of Clayton being at the forefront of this growth.

Recent Household and Population Trends

Looking at 2017-2020 (the period since the last SEAS update), the Census estimated change in households shows that growth trends are shifting further south and east in Johnston County. The Census areas that had the highest increase in number of households were near Benson, Four Oaks, and Smithfield with other significant increases near Selma and Wilson's Mills. For this same time period, population growth in the SEAS has occurred primarily in areas within or surrounding existing municipalities, following the overall state trends of population growth in urbanizing areas. Overall population change was highest in Benson, Smithfield, Wilson's Mills and near Archer Lodge, Fuquay-Varina, and Wendell.

Percent Population Change from 2017-2020

Source: 2020 American Community Survey 5-year estimates;
2020 Census



Housing Unit Trends

There are approximately 108,029 total housing units within the Southeast Area according to the ACS 2020 5-year estimates. The majority of the housing units in the study area are single family homes (77.8%), the majority of which are detached (75.1% detached vs 2.8% attached). The next largest category of housing units are mobile homes (12.1%), followed by a variety of multiple unit housing types (10.1%). While not representative of the entire study area, housing unit data from the US Census for Johnston County also helps illustrate area trends. Most housing units in Johnston County were built between 1990-1999 (23.6%), 2000-2009 (23.3%), or 1980-1989 (11.9%). Within Johnston County, 39.3% of renters are cost burdened, meaning that they spend 35.0% or more of their household income on rent. In comparison, 7.2% of homeowners spend 35.0% or more of their household income on their mortgage.

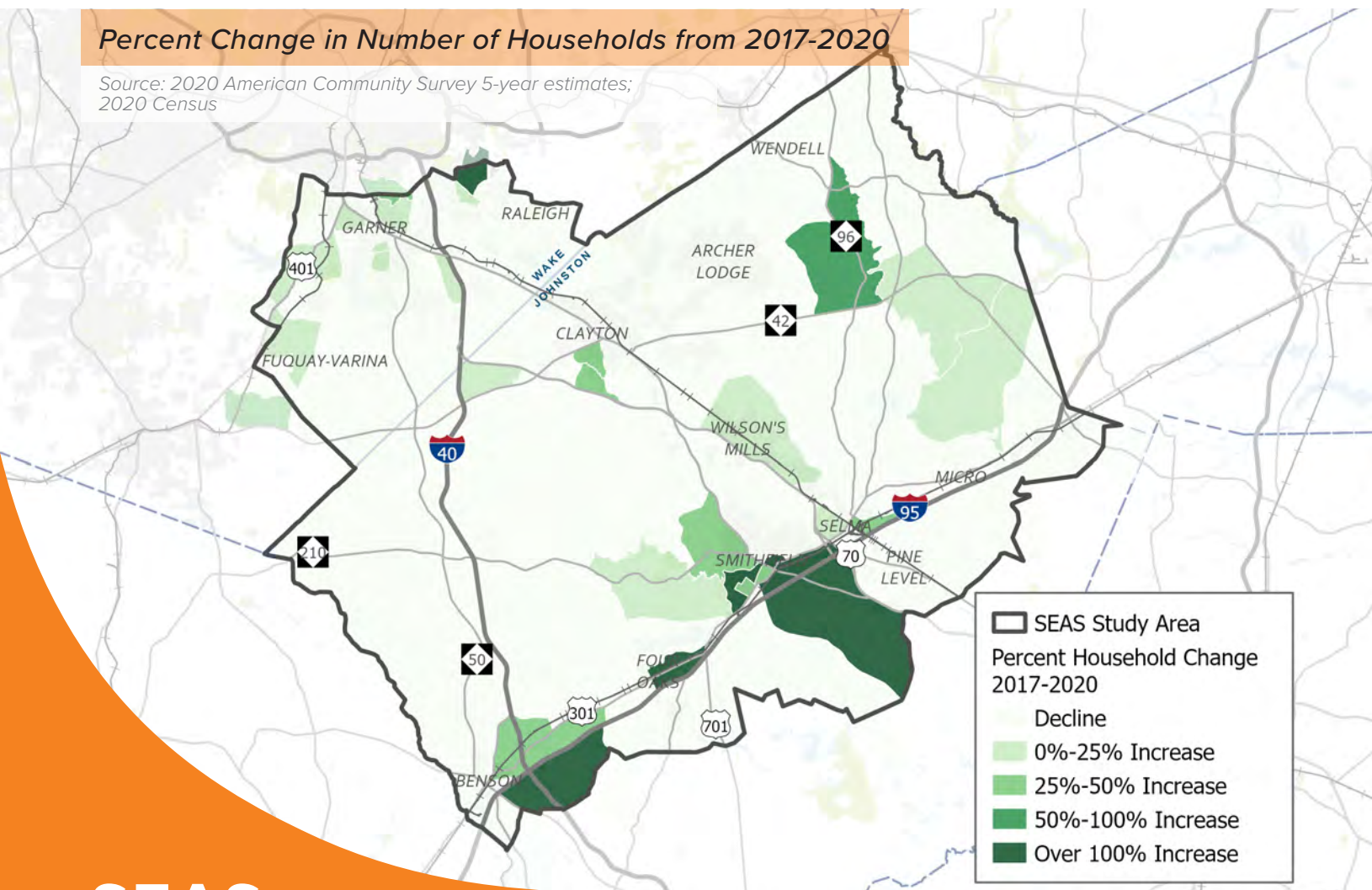
Housing and Transportation Costs

Expanding on the definition of cost burdened, The Housing + Transportation (H+T) Affordability Index provides a comprehensive view of affordability that includes both the cost of housing and the cost of transportation. The H+T Index sets a benchmark of affordability where housing and transportation costs should cost no more than 45% of household income. In Johnston County, about 48% of the population is cost burdened with housing and transportation costs accounting for over 45% of household income.

Source: Center for Neighborhood Technology's H+T Index

Percent Change in Number of Households from 2017-2020

Source: 2020 American Community Survey 5-year estimates;
2020 Census



SEAS

SOUTHEAST AREA STUDY

UPDATE

Natural Environment

The SEAS has a diversity of environmental resources that are important considerations when planning future growth and development. Highlights include the Neuse River, Swift Creek, and Holts Lake. Approximately 13% of the study area is in the National Wetland Inventory, and 12% of the study area are in Flood Hazard Zones.

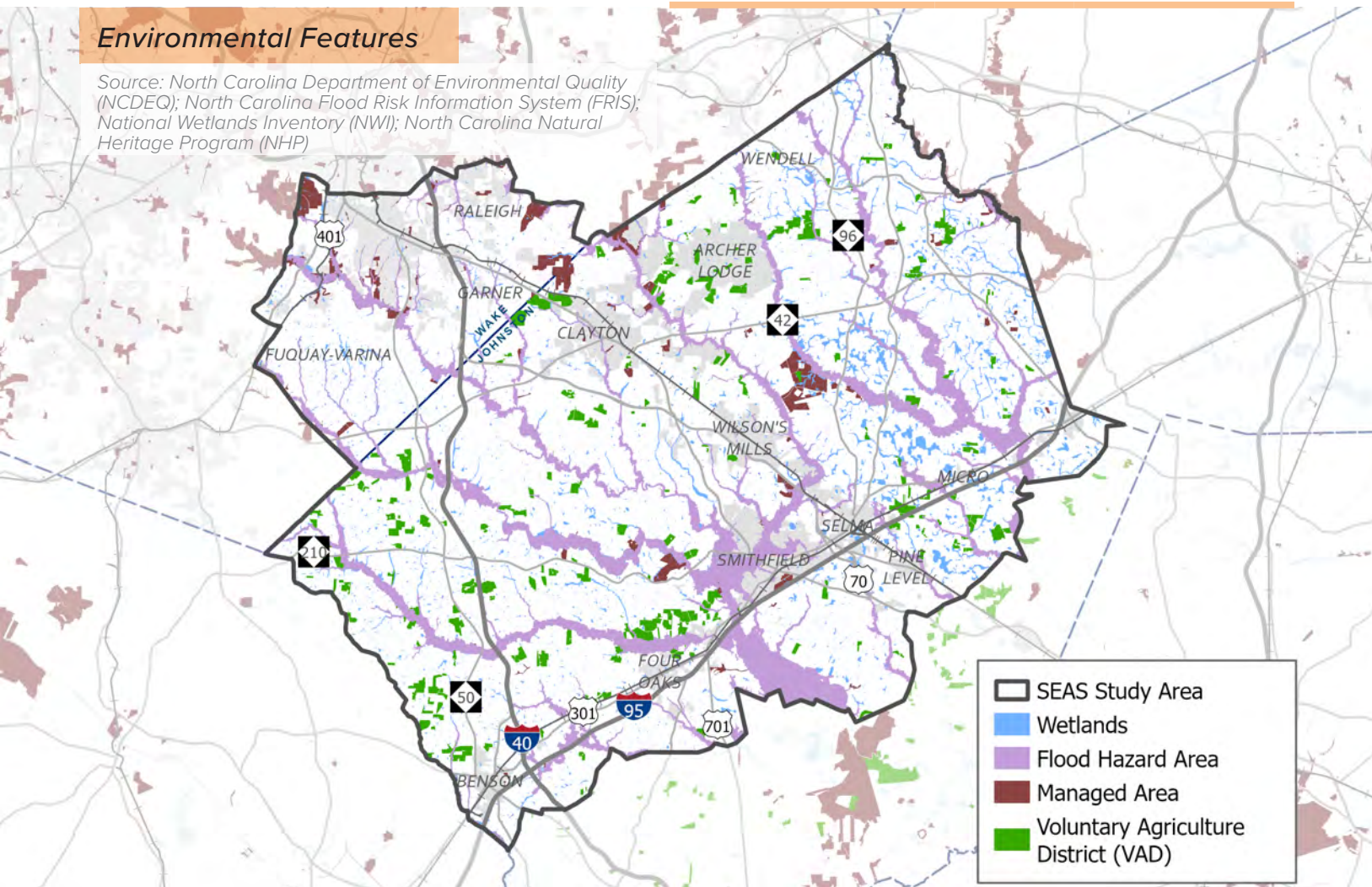
Voluntary Agriculture Districts (VADs) encourage the preservation and protection of farmland and working forests (defined by the North Carolina Department of Agriculture and Consumer Services). VADs involve a voluntary agreement for farmers to maintain their land as a source of agricultural production for a set time. Both Wake County and Johnston County have enrolled properties in the Voluntary Agricultural District program. Approximately 3% of the study area is considered part of VADs.

The Natural Heritage Program, under the North Carolina Department of Natural and Cultural Resources, is a conservation land management program. Managed Areas include properties and easements maintained with the goal of conservation of biodiversity and ecosystem function. Managed Areas are 7% of the SEAS.

Environmental Feature	Acres	Percent of Study Area
Voluntary Agriculture Districts (VADs)	14,318	3%
Managed Areas	28,253	7%
Flood Hazard Zones	50,192	12%
Wetlands	57,551	13%

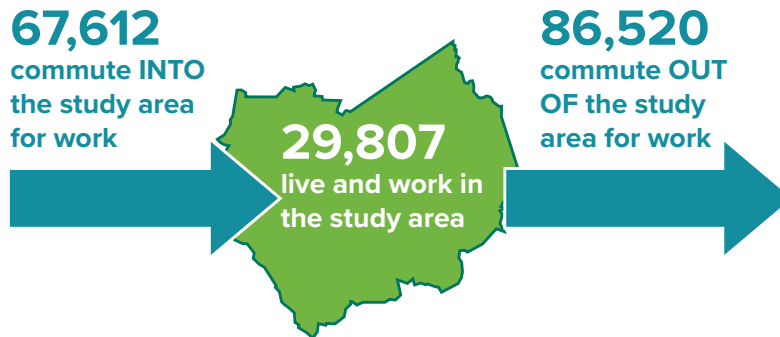
Environmental Features

Source: North Carolina Department of Environmental Quality (NCDEQ); North Carolina Flood Risk Information System (FRIS); National Wetlands Inventory (NWI); North Carolina Natural Heritage Program (NHP)

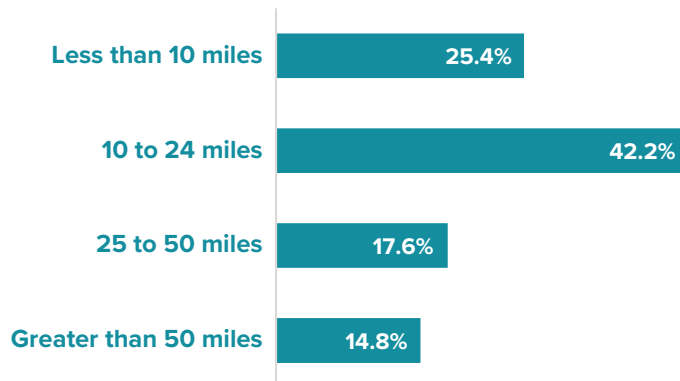


Mobility Snapshot

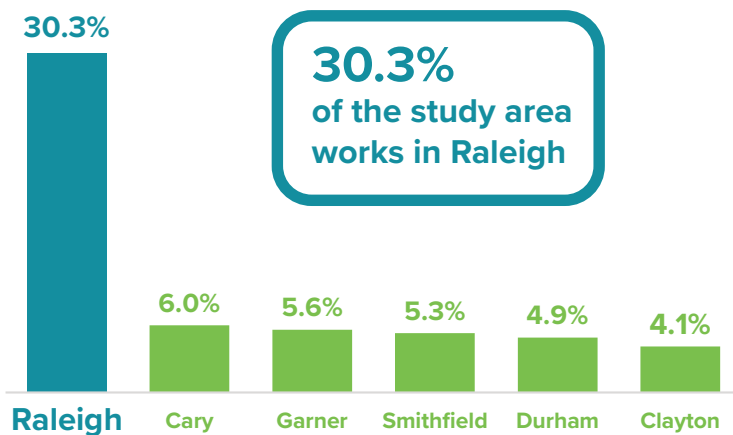
Inflow/Outflow



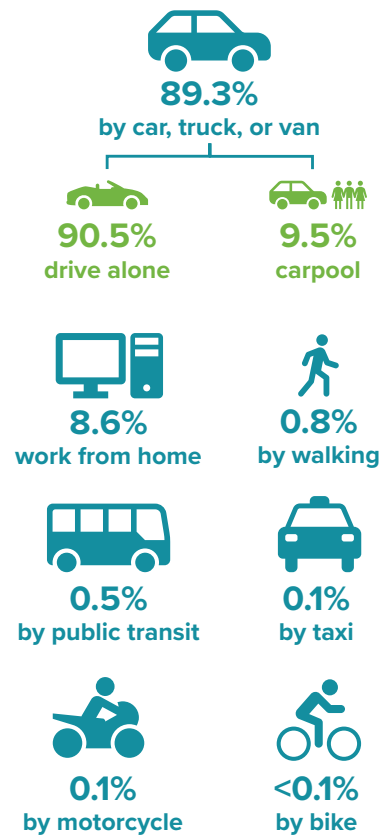
Commute Distance



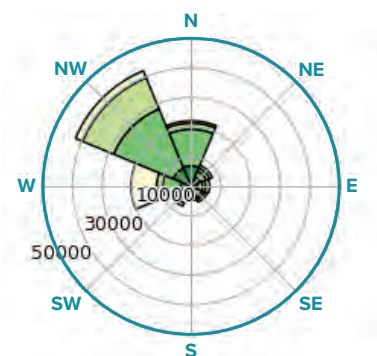
Workplace Destination



Mode to Work



Commute Direction



Most commute north-west towards or into the Triangle

Source: 2020 American Community Survey (ACS) 5-year estimates; 2019 Longitudinal Employer-Household Dynamics (LEHD) Data

Mobility

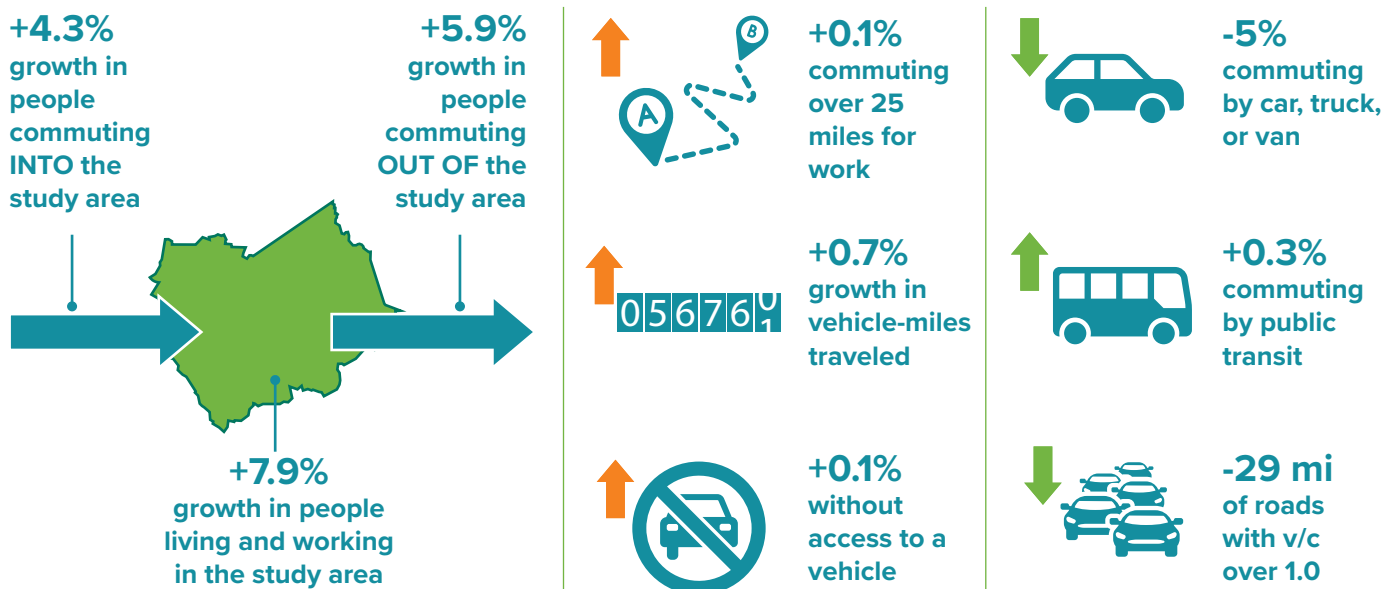
Creating recommendations that support improved movement of people within and through the Southeast Area requires a thorough analysis of the state of mobility as it exists today. This section also looks at the modal improvements and projects that are already proposed in the study area based on existing plans to understand what the SEAS Update needs to do to respond to or support these existing recommendations. Mobility can be measured in different ways using many metrics. This section looks at the study area's transportation system through measures of quality, quantity, connectivity, traffic, and safety in order to create a picture of current and planned mobility in the Southeast Area.

Travel Patterns, Mode Split, and Vehicle Access

The Southeast Area is fairly car reliant, with over 89% of commuters driving in a car, truck, or van. Out of those that commuted by car, truck, or van, just over 90% drove alone, while 9.5% carpooled. Another 8.6% work from home and do not commute. 0.8% commute by walking, 0.5% by transit (primarily bus), and 0.1% each by taxi and motorcycle. Notably, less than 0.1% biked to work, which may reflect on the lack of bike infrastructure in the region and long commute distances. Despite the continued high car reliance, there has been a noticeable shift. At the time of the original SEAS plan, nearly 94% commuted by car, truck, or van, and only around 0.2% took public transit.

While just under 30,000 people both live and work in the study area, most people (just over 86,500) commute out of the study area for work. The vast majority commute northwest towards or into the Triangle, with 30.3% of the study area working in Raleigh. Most workers (42.2%) commute 10 to 24 miles to work, followed by those that commute less than 10 miles (25.4%). However, a sizable amount (14.8%) commute over 50 miles to work. 4.1% of the study area population lacks access to a vehicle, while 23.9% only has access to one vehicle. Parts of Garner, Smithfield, Selma, and Benson have some of the highest rates of people without access to a vehicle.

Since 2017...



Safety and Crashes

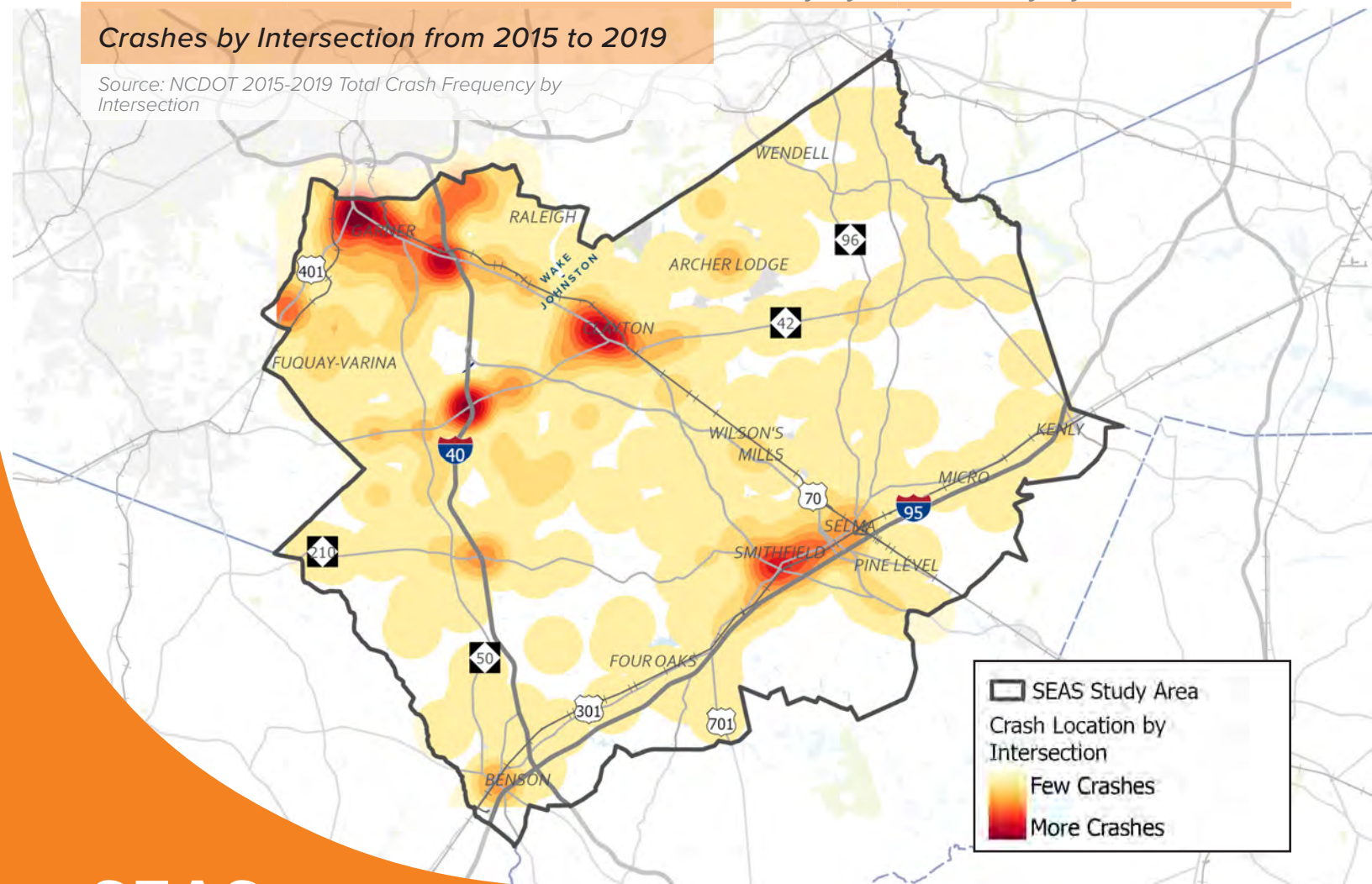
Crash data can be used to help identify safety issues on roadways and at intersections with frequent crashes. Locations with some of the most severe crashes often have safety concerns or unsafe designs that need to be addressed.

Between 2015 and 2019, most crashes were largely concentrated along major highways and thoroughfares throughout the study area. Minor crashes that only caused property damage made up the largest percentage of crashes. Only a small percentage of crashes during this period resulted in injuries or death. Out of just over 10,000 crashes, 1.1% of crashes were fatal or caused serious injury, while 28.2% of crashes caused only minor injuries. This is an improvement from 2012-2014, where there were about 12,300 crashes over less time and 9.1% were fatal or caused serious injury. Most areas with the worst density of fatal or severe crashes were located around major highway interchanges or roughly followed major highways (I-40, I-95, US 70). Some major rural intersections and major routes through municipalities also saw clusters of serious crashes.

2012-2014	12,313 Total Crashes	1,115 (9.1%) Fatal or Serious Injury	2,697 (21.9%) Minor Injury
2015-2019	10,061 Total Crashes	118 (1.1%) Fatal or Serious Injury	2,837 (28.2%) Minor Injury

Crashes by Intersection from 2015 to 2019

Source: NCDOT 2015-2019 Total Crash Frequency by Intersection



Congestion and Traffic Volumes

Sophisticated models can simulate the interaction of estimated demand and available supply at a regional scale. The Triangle Regional Model (TRM) comprises the Raleigh urbanized area, the Durham-Chapel Hill urbanized area, and a portion of the UCPRPO area. For the purposes of this document, current congestion levels are derived from the TRM 2020 Base Year Model and are symbolized based on volume-to-capacity (V/C) ratios. Modeled traffic congestion provides system level insights into congestion issues and can indicate corridors that warrant higher levels of study and analysis or capacity improvements. Roads are typically approaching capacity at a V/C of 0.75 and above, considered at capacity at a V/C of 1.0, and considered over capacity above that threshold. Roadways reflecting a V/C approaching capacity in the 2020 model are concentrated in Raleigh, Garner, and along major corridors. These roadways are shown on the following map and a selection of them are listed at right.

Vehicle miles traveled (VMT) is the total miles of vehicle travel along a roadway. VMT is essentially a measure of the demand for vehicle travel on roadways. The daily VMT for the study area in 2016 and 2020 is displayed in the table below, there was a less than 1% increase between the years.

2016	36.6 miles V/C greater than 1.0	8,108,663 VMT
2020	7 miles V/C greater than 1.0	8,166,948 VMT

Congested Corridors

I-40 (from I-440 to the Wake/Johnston County line)

US 70 (I-40/US 70 Junction)

US 401 (Garner)

NC 42 (between Archer Lodge and Clayton)

NC 50 (Garner)

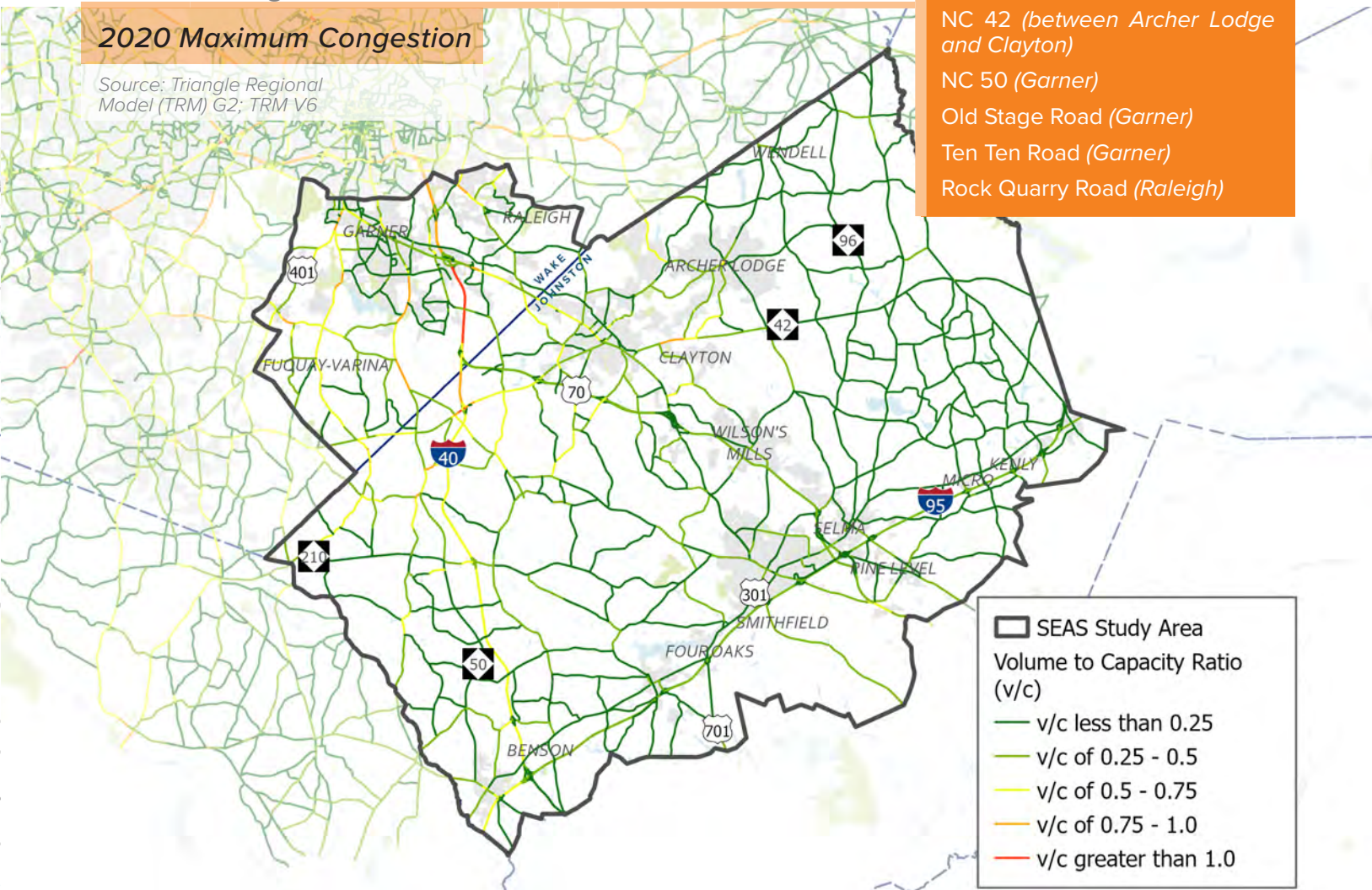
Old Stage Road (Garner)

Ten Ten Road (Garner)

Rock Quarry Road (Raleigh)

2020 Maximum Congestion

Source: Triangle Regional Model (TRM) G2; TRM V6



Roadways

The Southeast Area, which encompasses southeastern Wake County and a significant majority of Johnston County, is mostly composed of rural two-lane roadways with posted speed limits of 45 or 55 miles per hour. This network is layered with a few major interstates and state routes that cross the area. For many people and even users of this document, the roadways and their capacity serve as the primary basis for driving recommendations in a transportation plan – this aspect is vital to the SEAS Update as well with an added factor of considering a roadway’s “completeness” in terms of supporting other modes of travel besides the private automobile.

Major Roadways

Major thoroughfares throughout the study area include:

- **US 70 and US 70 Business** serve as the gateway into the heart of the study area from Raleigh. US 70 Bypass serves as the faster route through from I-40 to Selma, Princeton, and Goldsboro, while US 70 Business connects the downtowns of Garner, Clayton, and Smithfield.
- **I-40** connects Raleigh to the Cleveland Township area and Benson while serving as the main route from Raleigh to Wilmington.
- **NC 42** serves as a major east-west connector from the Cleveland Township area near I-40/NC 42 through Clayton east to Archer Lodge and the growing Flowers Plantation area.
- **I-95 and US 301** connect a string of towns across Johnston County including Benson, Four Oaks, Smithfield, Selma, Micro, and Kenly, with I-95 acting as a bypass for long distance trips while US 301 runs through the heart of each town.

Other major roads include **US 401**, which runs west of Garner and connects Raleigh to Fuquay-Varina, **NC 96** and **NC 39**, connecting north-south through the eastern part of the study area to Selma, **NC 210** connecting Smithfield to the western parts of the study area, and **NC 50** paralleling I-40 from Garner to Benson.

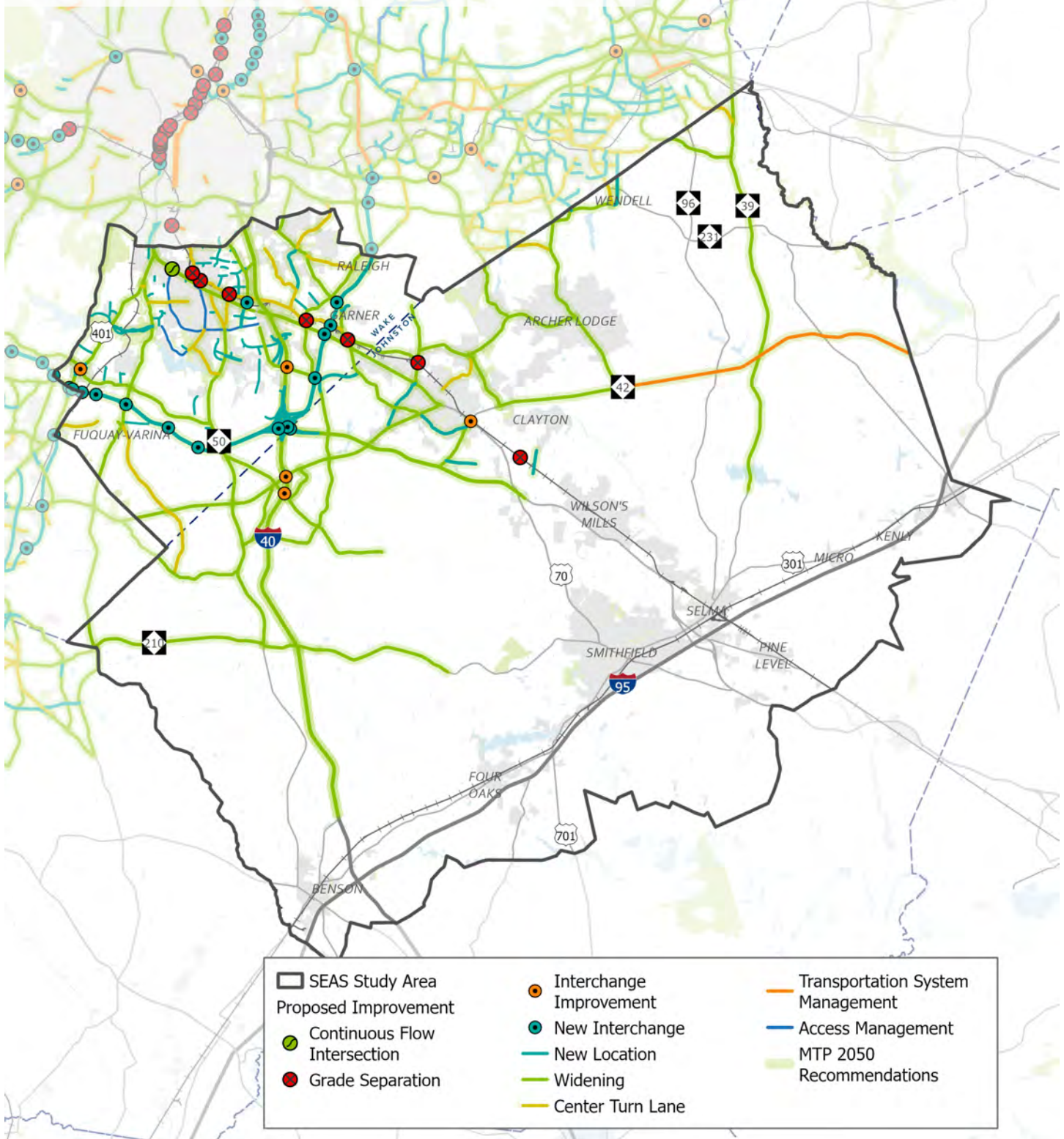
Projects

The map at right includes all 2050 MTP projects. The following are select projects in the study area:

- **Complete 540 Project:** Triangle Expressway southern extension from NC 55 Bypass in Apex to US-64/Future I-87 in Knightdale, completing the I-540/NC 540 outer loop around Wake County. The completed loop will improve driving connections across the southern part of the Raleigh area and make it easier for study area residents to reach different parts of the Triangle without having to drive further in to the I-440 Beltline.
- **Future I-42:** US 70 east of Raleigh is designated as one of NCDOT’s Strategic Transportation Corridors (STC), an initiative to create a network of efficient and safe roadways that will drive economic development throughout the state. Portions of US 70 are programmed and funded for upgrades to interstate standards, with plans to close at-grade intersections and add interchanges. Within the study area, work on a stretch through Wilson’s Mills between US 70 Bypass and the Smithfield-Selma Bypass is underway.
- **I-40:** Widening from Cornwallis Road in Clayton north into Raleigh. Construction is underway and expected to be completed in 2023. There are also interchange improvements funded and underway at I-40/NC 42.
- **NC 42, Ranch Road:** Widening from two lanes to divided four lane roadways. NC 42 East (east of Business US-70) has recently been completed, with plans on NC 42 West currently under development. Construction has also begun on the Ranch Road extension, which will connect NC 42 East directly to US-70 without needing to turn onto Business US-70.
- **I-95 bridges and interchanges:** A series of interchange improvements and bridge replacements are planned for the I-95 corridor to accommodate future widening and make the corridor more resilient to floodwaters. Currently, interchange improvements are underway between Benson and Fayetteville.

Proposed Roadway and Intersection Improvements

Source: 2050 MTP; Forward Garner



Active Transportation

Planning for the future of the Southeast Area requires a holistic view of the area's transportation network, including multiple modes of travel and a variety of trip types. Priorities for the study area must be considered when planning a cohesive bicycle and pedestrian network. Investments in large, semi-regional vehicular connections may serve a higher number of people, but may also require an extensive amount of time and money. Creating active transportation connections by removing gaps and barriers can return significant quality of life benefits by promoting walking and bicycling while also providing alternatives that can result in less cars on the road.

Existing Conditions

Most municipalities within the study area have sidewalk networks, though with several gaps recommended for completion in county plans and comprehensive transportation plans (CTP). Subdivisions, particularly recently built ones, have comprehensive sidewalk networks but these lack connections outside of the neighborhood.

The area does have a series of existing greenways and sidepaths, most prominently:

- **Neuse River Trail**, extending from east of Clayton north into Wake County and Raleigh
- **Sam's Branch Greenway and Clayton Downtown Connector**, both completed since the original SEAS plan and connecting the current end of the Neuse River Trail to Legend Park, Clayton Municipal Park, and downtown Clayton.
- **Buffalo Creek Greenway**, connecting Smithfield Community Park with downtown Smithfield
- **Front Street Sidepath** in downtown Clayton
- **Neuse River Parkway sidepath**, connecting the Flowers area to east Clayton

Besides the shared greenways, very little existing dedicated bicycle infrastructure exists in the study area.

Projects

The largest current project in the study area is the **Neuse River Trail Extension**, a key missing connection between Clayton and Smithfield and a missing link in the regional and national greenway network. The trail currently extends from the Sam's Branch Greenway in Clayton north through eastern Raleigh, where it connects with other greenways that stretch across the Triangle.

UCPRPO, Johnston County, and NCDOT are planning an extension of the Neuse River Trail to connect the Clayton end of the Neuse River Trail to the existing Buffalo Creek Greenway in Smithfield. The project is currently in the preferred route selection phase. Once the connection is completed, the Neuse River Trail will become part of the **Mountains-to-Sea Trail** within the state and it will be possible to walk or bike completely on off-road greenways from Hillsborough to Smithfield. The connection will also play a role in the larger **East Coast Greenway** network which will eventually span the entire eastern seaboard from Florida to Maine.

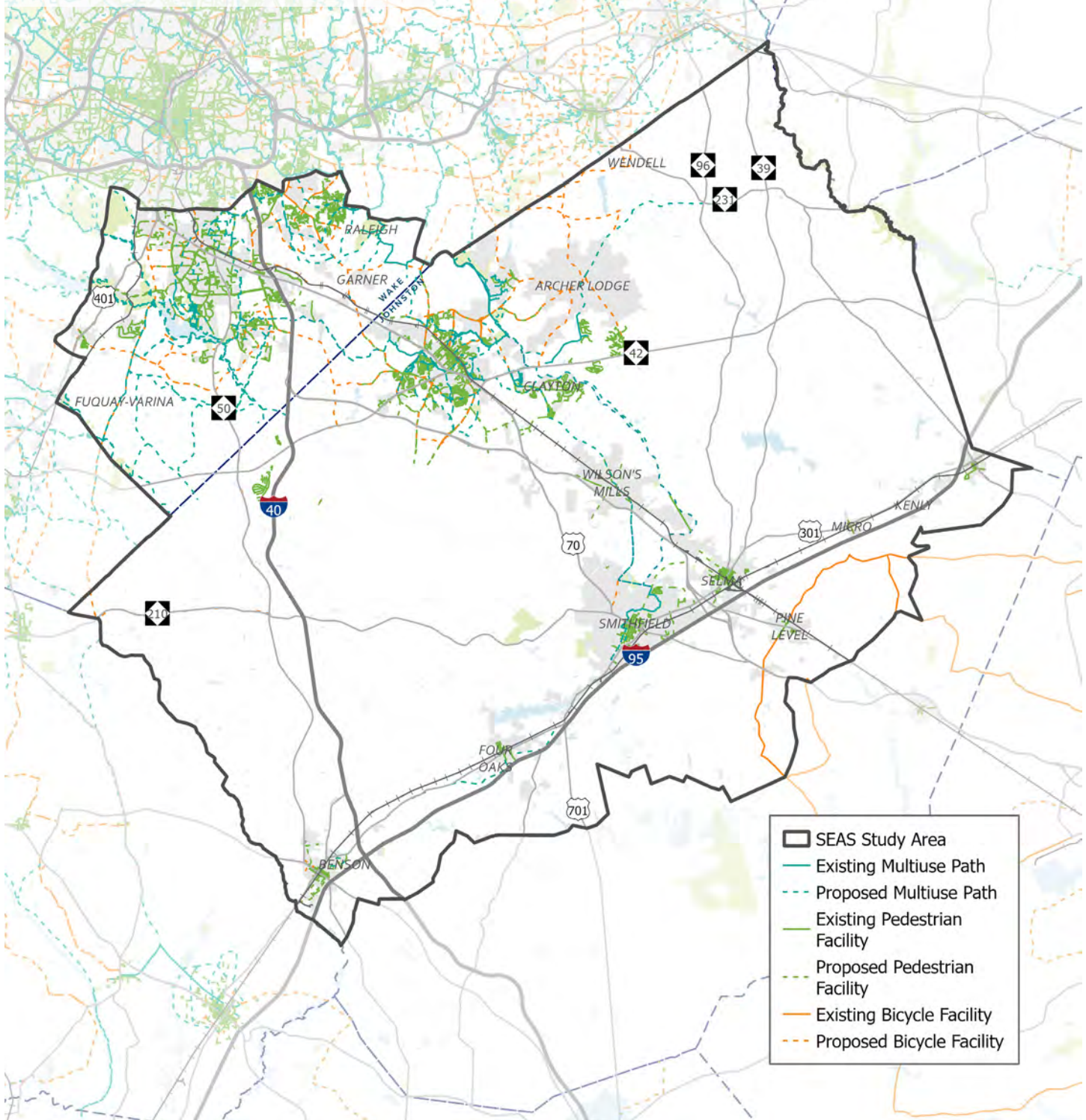
Several greenways are also proposed in Garner, with the **Creech Road Greenway** (from the Walnut Green Greenway to Garner Recreational Park) and the **Buffaloe Road Greenway** (from White Deer Park to Centennial Park) prioritized to help bridge gaps in the network.

Existing and Planned Bicycle and Pedestrian Facilities

Source: 2050 MTP; Garner Forward, Town of Clayton; Wake County Greenway System Plan; NCDOT Pedestrian and Bicycle Infrastructure Network (PBIN)

350+

Miles of Existing Bicycle and Pedestrian Facilities



Transit

At its best, transit provides an efficient and inexpensive transportation mode for persons making the traditional suburban or rural-to-urban commute and those traveling between key activity centers. It is important that public transit service remain a viable, efficient mobility option for those who need it most—senior citizens, the physically or economically disadvantaged, and other patrons who choose to ride. As the region has grown, interest in transit has increased both with the public and at the governmental level. Several recent studies for commuter rail, bus rapid transit, and expanded passenger rail service have explored and reinforced that interest.

Existing Transit

GoTriangle (regional routes) and **GoRaleigh** (local routes) operate fixed bus route service within the Wake County portion of the study area. GoRaleigh routes 17 and 18 serve Southeast Raleigh, while Garner is primarily served by routes 20-A and 20-B, which operate a weekday-only bus loop around the town.

GoTriangle Access and **GoRaleigh Access** operate curb to curb paratransit service for individuals with disabilities within 3/4 mile of fixed route transit service.

Johnston County Area Transit System (JCATS) offers curb to curb human services and general public transportation within Johnston County, and includes Raleigh, connecting Johnston County residents to areas outside of the county. JCATS does not currently operate any fixed route transit, however, JCATS is constructing a new transfer facility to better accommodate drivers and riders.

JCATS also participates in the **Down East Express** program, a daily by-reservation transit service between Morehead City and the Triangle with transfer centers at the JCATS facility and in the other counties along the way.

For intercity transit, Selma's **Amtrak** station (Selma-Smithfield Union Station) is served daily by the Carolinian (Charlotte-New York) and Palmetto (Savannah-New York) trains.

Proposed Transit

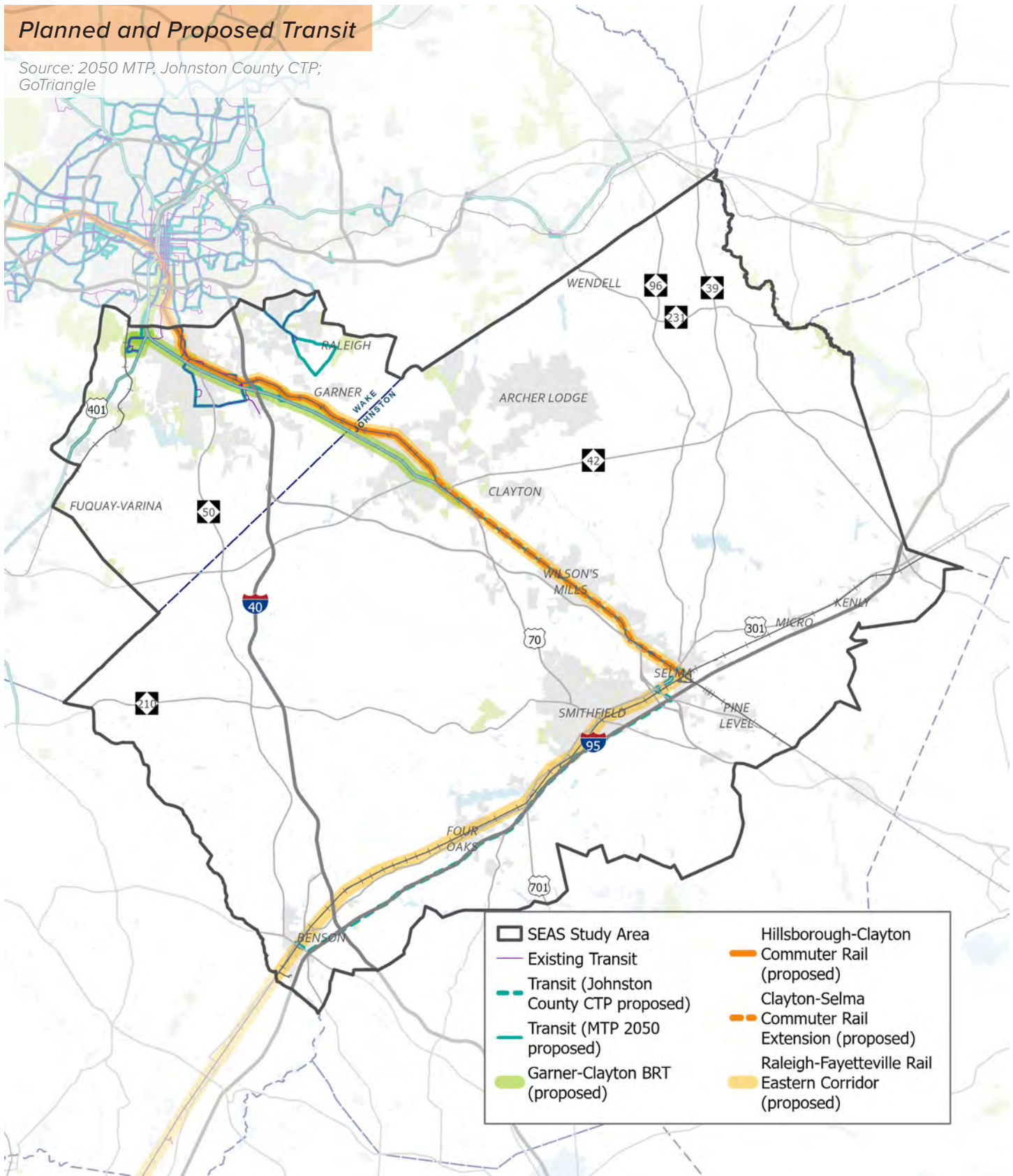
There are several planned or proposed transit projects being studied that would serve the study area:

- **A bus rapid transit line** officially planned from downtown Raleigh to Garner, with studies underway considering a future extension from the planned Garner terminus into Clayton.
- **A commuter rail line between Raleigh and Garner** with potential long-term extensions through Clayton, Wilson's Mills, and Selma.
- **A passenger rail connection between Raleigh and Fayetteville.** Two potential corridors have been proposed. The eastern corridor, which was forecasted for faster speeds and higher ridership, would have stops in Dunn, Benson, Selma, and Clayton.
- **A microtransit pilot between Smithfield and Selma.** JCATS' board has authorized funding for a microtransit pilot in the Smithfield-Selma area using existing buses.

The most recent Johnston County CTP also proposed a bus route between the Amtrak train station in Selma and a park and ride near downtown Benson along I-95.

Planned and Proposed Transit

Source: 2050 MTP, Johnston County CTP;
GoTriangle



Freight Transport

A comprehensive transportation network that supports freight movement is an important component of the economy and often an indicator for economic investment. There is a relation between the capacity of transport infrastructure and the level of economic activity where high-density transport infrastructure and highly connected networks are commonly associated with high levels of investment. When a transportation network is able to move both people and goods efficiently it can provide economic and social benefits such as access to investments and employment opportunities. The existing rail and truck infrastructure discussed below strategically place the Southeast Area to be a receiver of this investment. The SEAS Update has to ensure the freight network is set up for potential growth while staying intentional and deliberate about where that growth is directed.

Rail

The Southeast Area has three rail corridors that run through it. The North Carolina Railroad Company (NCR) owns the railway that runs from the northwest to southeast of the study area, parallel to US 70. This rail corridor connects Charlotte, Greensboro, Durham, Raleigh, the Southeast Area, Goldsboro, New Bern, and finally, Morehead City, where it ends at the Port of Morehead City. The CSX line runs parallel to I-95 and connects South Carolina, running through Fayetteville, Selma, Wilson, Rocky Mount, and into Virginia. The final corridor is owned by Norfolk Southern and passes at the edge of the study area through Garner and Raleigh.

Truck

The key state and regional corridors running through the Southeast Area are designated truck routes, including: I-40, I-95, US 70, and US 401. The highest percent of trucks, about 15%-20% of the given corridor's traffic, takes place on I-95. All of these routes, in addition to NC 42, NC 50, NC 96, NC 210, Shotwell Road/Bethlehem Road, and Covered Bridge Road/Buffalo Road are all identified in the Triangle Regional Freight Plan as Strategic Freight Corridors (SFC), a core network of roadways identified for future investment to accomplish the goals of the plan.

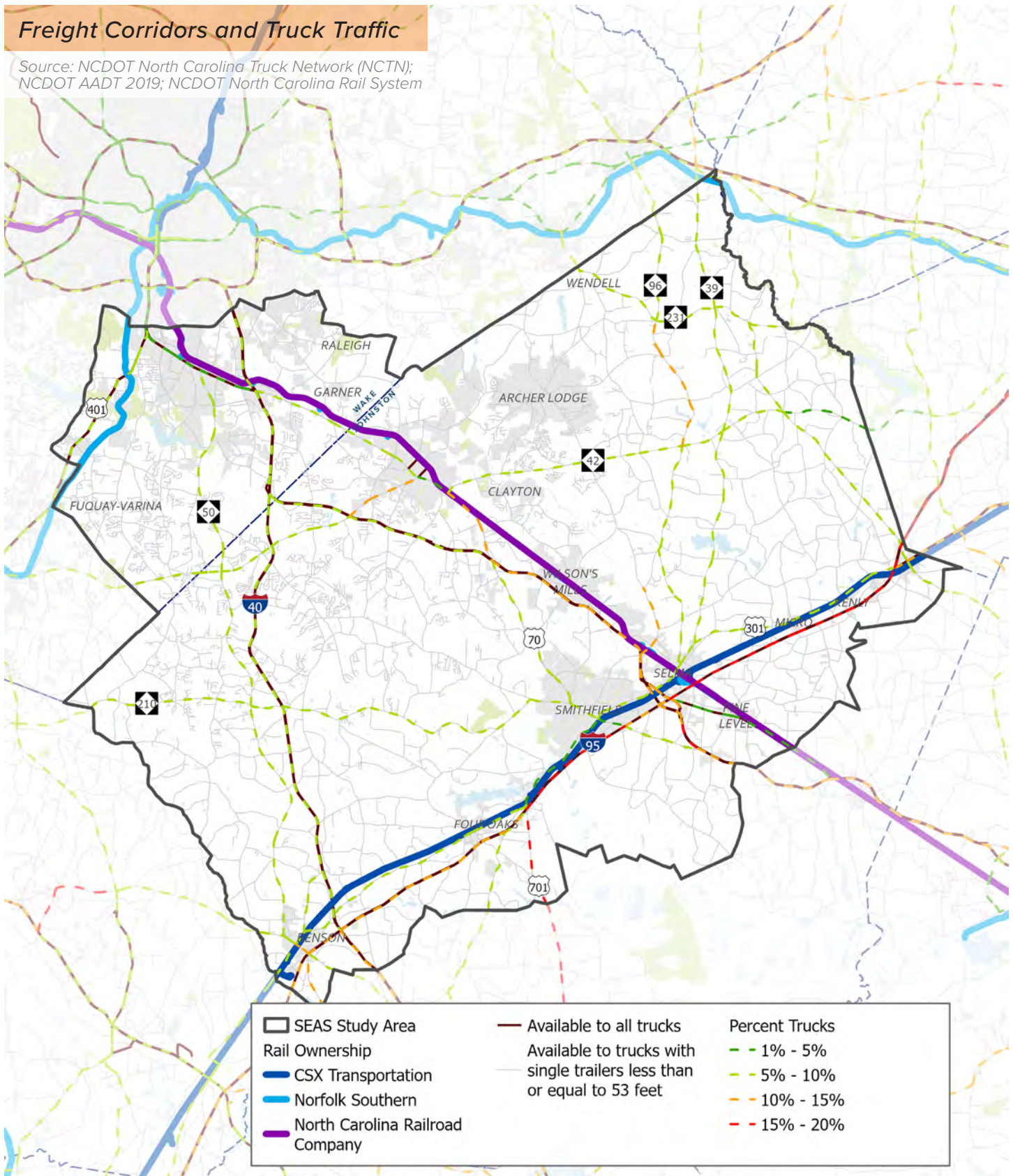
Rail Safety

Another component to rail is safety, particularly when considering at-grade rail crossings. The Southeast Area has several locations where the railway is on the same elevation as the roadway network, often bisecting each other as depicted in the photo below. While grade separating these crossings is an expensive undertaking, the SEAS Update will be mindful of select opportunities where this improvement may be critical to the efficiency and safety of travel.



Freight Corridors and Truck Traffic

Source: NCDOT North Carolina Truck Network (NCTN);
NCDOT AADT 2019; NCDOT North Carolina Rail System





LAND USE AND SCENARIO PLANNING

A critical component in the planning process was the establishment of a vision for future land use for the purposes of integrating and coordinating land use, development, and transportation investments. As part of the land use scenario planning process, the SEAS Update tested several scenarios to understand the impacts of growth in the study area. The scenario planning process explored various growth scenarios based on a combination of assumptions, alternatives, and sentiments from community input. The ultimate preferred scenario will act as a guide for future growth that blends land use and mobility needs in the study area. This chapter explores the questions, alternatives, and outcomes of the scenario planning effort and suggests policies and strategies to implement the preferred scenario's land use suggestions. Additional detail on the land use implementation toolkit is available in Appendix B.

Scenario Planning

What is Scenario Planning?

Land use scenario planning compares different possible futures of an area to help decide where and how we should grow. Rather than a prediction or prescription, scenario planning is an exploration of what could be—comparing the pros and cons of various potential growth patterns to see what could best fit community priorities.

For the SEAS Update, scenario planning considered:

- What will our future look like if things **keep going like they are now**?
- What are some **alternative paths** we could take that might better meet our goals?

Scenario planning for the Southeast Area started with three initial scenarios. One scenario looked at current trends to envision what the Southeast Area could look like if built out according to the more sprawling and car-centric existing plans. The other two alternative scenarios looked at different ways growth could be focused in more compact locations, along major corridors or in significant mixed-use centers, to better reflect the SEAS Update’s guiding principles.

Each scenario was then scored based on how well they advanced our guiding principles. The best parts of the original three scenarios were then combined to create a blended preferred scenario, which guided the policy and transportation recommendations later in this plan.

What Does Scenario Planning Inform?

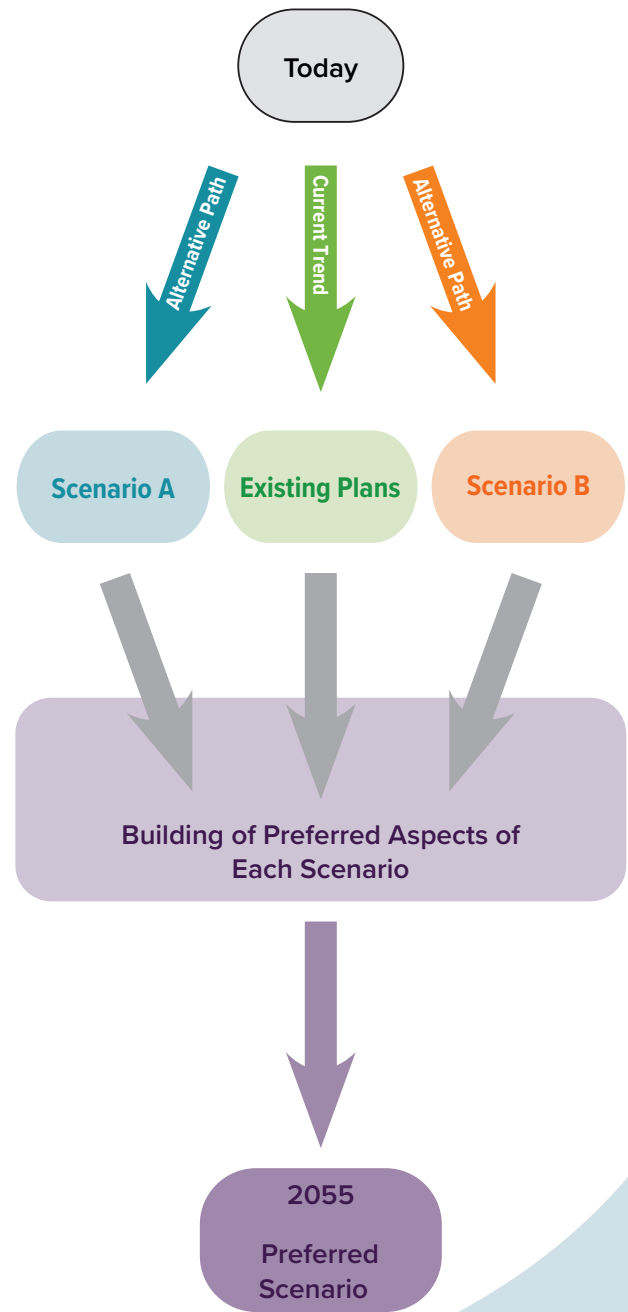
Knowing where we want growth will help make decisions about land use and transportation, such as:

- Where to put **new homes and job centers** versus where to **preserve farms and forests**
- Where to invest in **paths, roads, trails, and transit** that can **support more people**
- What **policies** are needed to focus growth where we want it

The land use and transportation recommendations created as part of the SEAS Update support the preferred scenario.

What is the Process?

The following graphic outlines the scenario planning process. The development and refinement of the alternatives and preferred scenario were heavily influenced by CTT and SOT input as well as assumptions about growth and development throughout the region.

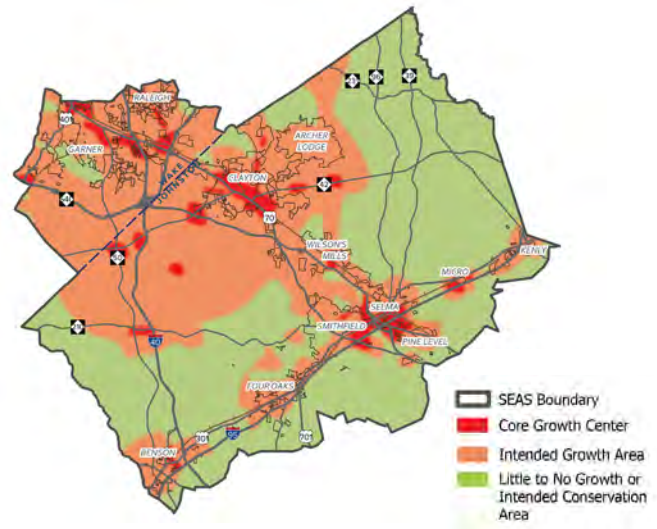


Scenario Growth Alternatives

Existing Plans Scenario

The Existing Plans Scenario acted as a **status quo** look at land use in the Southeast Area. The project team looked at existing jurisdictional land use plans alongside existing zoning and growth patterns to map out where growth was currently being directed.

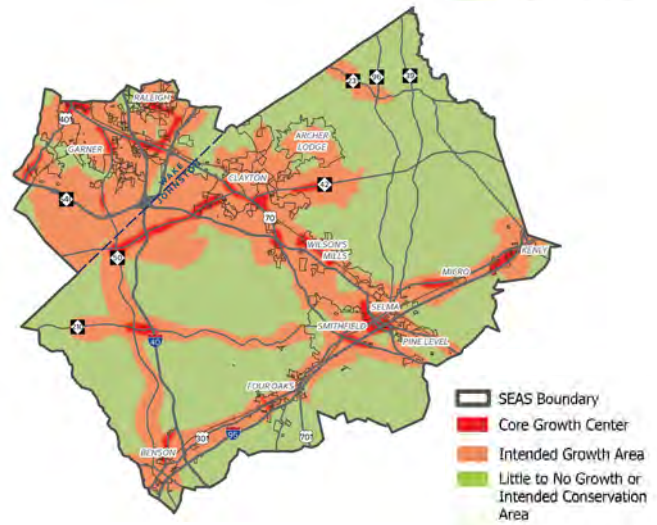
The current plans somewhat concentrate growth in centers along US 70 and NC 42, but existing planning currently invites growth into surrounding areas in Wake and Johnston County as well as Benson and Four Oaks. These types of development patterns can lead to sprawl, place strains on existing infrastructure, and lead towards a loss of farmland and rural areas. With more spread out growth, it can also make providing transit and other transportation alternatives more expensive and more challenging.



Corridors Scenario

The Corridors Scenario attempted to concentrate growth primarily along **major corridors** throughout the Southeast Area. In this scenario, the local jurisdictions identified the corridors that were best suited for growth and development.

The Corridors Scenario focused a significant amount of growth along the NC 42 and US 70 corridors around Clayton, and along major corridors within Raleigh, Garner, Smithfield, Selma, Wilson's Mills, and Benson. In more suburban areas, the growth is clustered around corridors like NC 210, US 301, NC 50, and Old Stage Road to reduce the amount of impact on rural areas in western Johnston County and Archer Lodge.

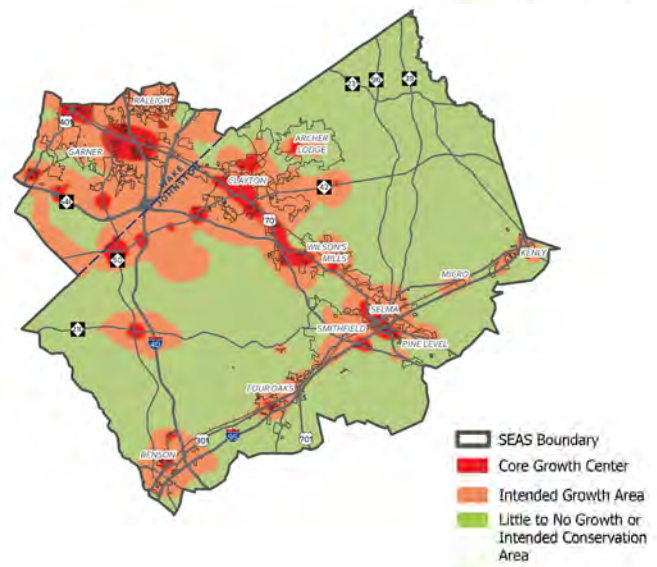


Centers Scenario

The densest of the alternatives is the Centers Scenario. This scenario concentrates growth in existing and newly proposed **mixed-use centers**, including downtowns and major crossroads as well as other growth centers identified in collaboration with member jurisdictions.

In this scenario, growth is focused around centers in Clayton, Garner, and parts of Smithfield and Selma, as well as parts of western Johnston County and areas along Ten-Ten Road in Wake County. Other towns such as Benson, Four Oaks, Wilson's Mills, and Archer Lodge would see growth outward from their centers.

Like the Corridors Scenario, much less of the rural parts of Johnston County would be impacted by sprawling growth than in existing plans.



Preferred Scenario

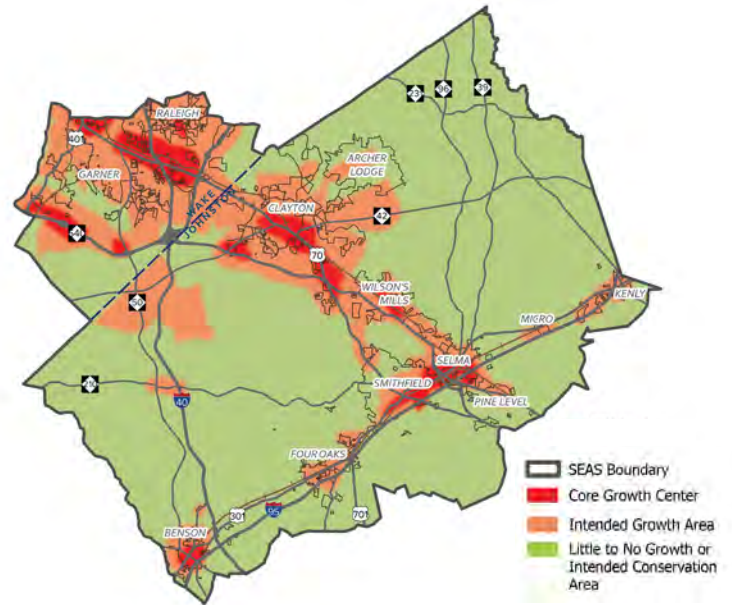
The Preferred Scenario takes the aspects of the original three scenarios that best achieve the guiding principles and combines them into a final, preferred scenario that enhances those desired features. Throughout the scenario planning process, a strong preference for the compact development represented in the Centers scenario emerged. The Preferred Scenario built upon the Centers scenario by further concentrating growth in more urban centers that are best suited for it while avoiding sprawl in areas that are traditionally more rural and agrarian. The Preferred Scenario was able to densify even more with an increase in multi-family housing. The Plan's committees and planners noted the benefits of focusing growth in specific centers including:

- **Lower cost** of extending infrastructure
- Increased viability of **walking, biking, and transit to help ease congestion**
- **Preserving much more of the rural and agricultural areas** in the western, southern, and eastern parts of the Southeast Area

By concentrating growth in these core centers, **most rural, environmentally sensitive, and agricultural areas of the Southeast Area are preserved.** New residents would mostly live in walkable mixed-use areas with easier access to employment centers nearby and elsewhere in the Triangle, whether driving or taking public transit.

Using Scenario Planning Outcomes

A key objective of the SEAS Update is to build upon policy frameworks that are already in place to recommend adjustments to work towards community goals. The Preferred Growth Scenario serves as guidance for local governments to aspire towards in their land use and transportation decisions. With an increase in density and multifamily housing, the Preferred Growth Scenario prioritizes compact development to concentrate density in town cores while preserving rural character in surrounding areas.



Scenario Scorecard

The performance of the Preferred Scenario against the Existing Plans.

Indicator	Preferred
Urban Land Use Shift (sq mi)	▲
Suburban Land Use Shift (sq mi)	▼
Rural Land Use Shift (sq mi)	▲
Net Residential Density	▲
Mix of Housing Types	▲
Developable Area of Walkable Place Types (sq mi)	▲
Homes Near Transit	■
Jobs Near Transit	▲
Job and Home Balance	▲
Vehicle Miles Traveled	■
Vehicle Hours of Delay	■
Lane Miles of Congested Corridors	■

Excellent	Good	Neutral	Poor	Bad
Major Improvement	Minor Improvement	Negligible Change	Minor Worsening	Major Worsening

Land Use

All SEAS communities have made progress towards the implementation of the 2017 SEAS land use recommendations. The majority of the communities updated their comprehensive land use plans, adjusted their land development regulations, and took steps to provide a range of housing types through policies in regulatory planning documents. The SEAS Update can build on the progress made by each member jurisdiction to create new priorities, strengthen existing plans, and revisit past priorities based on the Preferred Growth Scenario.

The SEAS Update focuses on operationalizing policies for key focus areas, such as housing, bicycle and pedestrian improvements, mixed-use development, and more. The matrix below provides recommendations for each jurisdiction to focus on to accomplish the goals of the SEAS Update based on their current environment and progress to date.

2023 Land Use Recommendation Matrix

	Implementation Focus Area												
	Economic Development	Support Higher Densities	Range of Housing Options	Preserve Lower Densities	Mixed-Use	Design Guidelines	Downtown Redevelopment Strategies	Building Re-Use	Right-Size Parking Requirements	Connect Street Network	Bicycle- Pedestrian Expansion	Street Cross Sections	Responding to Parking Unknowns
Johnston County	✓	☆	☆	★		✓				☆	☆		☆
Archer Lodge	☆	☆		☆	☆		☆		☆	★	★	☆	☆
Clayton	✓	✓	✓		★		✓	✓	☆	☆	☆		☆
Wilson's Mills	✓	✓	✓		✓			☆	✓	✓	✓		☆
Selma	✓	✓	✓		✓		✓	☆	✓	✓	✓		☆
Smithfield			★				✓	☆	✓	✓	☆		☆
Four Oaks	✓	☆	☆		★		✓	☆	☆	☆	☆		☆
Benson	✓	☆	☆		★		✓	☆	☆	☆	✓		☆
Micro	✓	★	✓		★		✓			☆			☆
Kenly		☆	☆		☆		☆	☆	☆	☆	☆		☆
Wake County			✓	★		✓			☆	☆			☆
Garner	✓	✓			✓		✓	☆	☆	✓	☆		☆
Raleigh	✓	★	☆			✓			✓	☆			☆
Pine Level	☆	☆					☆			★		☆	☆

Legend



Accomplished from 2017 SEAS Recommendation



SEAS Update: Highest Priority



SEAS Update: Important Consideration

SEAS

SOUTHEAST AREA STUDY

UPDATE

Benefits of Compact Development

The SEAS Update land use recommendations support more compact development patterns. As part of the SEAS Update, the project team created an educational video about the benefits of compact development that supports the recommendations detailed in this chapter. The brief, persuasive video identifies the ongoing, negative consequences of the current development patterns in Wake and Johnston counties and highlights the many benefits of compact development including housing diversity and choice, infrastructure cost savings, and quality of life improvements among others. This video should be shared with planners, the public, and decision-makers to educate and inform them about the ultimate goal—and the benefits—of compact development and the Land Use Implementation Toolkit.

Check out the video for yourself here: www.youtube.com/@nccapitalareampo2526

Implementation Tools

	Policy			Regulatory			Interjurisdictional	
	Comprehensive Plan Updates	Corridors and Area Plans	Operationalize Policies	Zoning & Code Updates	Conditional Zoning	Zoning Incentive System	Interlocal Agreement	CIP and Growth Guided Infrastructure
Johnston County	✓	★	☆	★	★		★	★
Archer Lodge	★	☆	☆	★			★	
Clayton	✓	☆	☆	★			☆	★
Wilson's Mills	✓	★	☆	✓	☆	☆	☆	★
Selma	✓	★	☆	✓	☆	☆	☆	★
Smithfield	✓	★	☆		☆	☆	☆	★
Four Oaks	★		☆	★				☆
Benson	✓	★	☆	★	☆	☆		★
Micro	✓	☆	☆	✓	☆	☆		☆
Kenly	★	☆	☆	★			☆	★
Wake County	✓	☆	☆	✓	☆		✓	★
Garner	✓	☆	☆	✓	☆	★		
Raleigh		★	☆					★
Pine Level	✓	☆	☆	✓	☆		☆	

Legend

- ✓ Accomplished from 2017 SEAS Recommendation
- ★ SEAS Update: Highest Priority
- ☆ SEAS Update: Important Consideration

Land Use Implementation Toolkit

Many local governments within the Southeast Area have already taken steps and adopted policies/ordinances that will help achieve the land use objectives set out in the SEAS. Additional work to coordinate those efforts and create new initiatives in each community will move the entire area in the direction of the Preferred Growth Scenario. A list of potential local tools and planning focus areas that are recommended for consideration by local governments has been constructed. The SEAS Update Land Use Implementation Toolkit includes two key components: Focus Areas and Tools.

Focus Areas

Utilized to implement policy, regulatory, or other interjurisdictional coordination actions.

- Coordinate Future Land Use with Economic Development Priorities
- Support Higher Densities in Growth and Redevelopment Areas
- Support a Range of Housing Options in Growth Areas
- Preserve Lower Densities in Rural and Agricultural Areas
- Encourage Mixed-Use at Key Growth Nodes
- Create Design Guidelines for Key Nodes
- Develop Downtown Redevelopment Strategies
- Facilitate Building Re-Use
- Right-Size Parking Requirements
- Connect Street Networks
- Support Bicycle-Pedestrian Expansion
- Street Cross-Sections that Support Land Use and Character Goals
- Flexibility to Respond to Market Shifts and Planning “Unknowns”

Tools

Guide the development of and provide objectives for land use management, organized by policy, regulatory, and interjurisdictional coordination.

Policy

Policies and strategies written in a municipality’s planning documents and used as guidance.

- Comprehensive Plan Updates
- Corridor and Small Area Planning
- Operationalize Policies

Regulatory

Use to identify permissible land uses and help shape the character of an area.

- Zoning and Code Updates
- Newer Zoning Tools

Interjurisdictional Coordination

Allow for governing bodies to coordinate with each other related to infrastructure, planning, and growth.

- Interlocal Agreements (Joint Plans and Annexation)
- Capital Improvement Plan (CIP) and Plan-Guided Infrastructure Investment

The planning tools within the Implementation Toolkit serve to help municipalities achieve the high-level actions within the focus areas.

Recommendations by Community

The following recommendations include two types of planning strategies for each jurisdiction to consider in their continued work: first; the highest priority strategies that can be tackled first to have the greatest impact on their community and second; important strategies for consideration. To learn more about implementing these strategies, see the Land Use Implementation Toolkit in Appendix B.

Archer Lodge

Archer Lodge updated their land development regulations in 2022. Additionally, Archer Lodge is in the process of adopting a new comprehensive plan by the end of 2023, including a new future land use map (FLUM). For more detailed information on Archer Lodge's planning history and process since the 2017 SEAS, see Appendix B.

Highest Priority Strategies

- **Comprehensive Plan Updates:** The update will likely be key to providing a Future Land Use Map and policies surrounding the planning strategies below. Ideally, this will include the consideration of the SEAS Preferred Growth Scenario.
- **Zoning and Code Updates:** Archer Lodge can continue to adjust their code to protect environmental and agricultural resources, allow higher densities, encourage mixed-use, and provide a range of housing. Ideally, this will include the consideration of the 2023 SEAS Preferred Growth Scenario.
- **Interlocal Agreements:** Tied to plan-guided infrastructure investment, interlocal agreements will be key for Archer Lodge's future growth. In particular, addressing sewer capacity to support density and new development will be important.
- **Connect Street Network:** The SEAS Update includes emphasis on connectivity as an important factor in making road networks function as efficiently as possible. This can be accomplished through comprehensive plan policies regarding street connectivity and ultimately by including a street connectivity index in the code or requirements within the subdivision ordinance. Street connectivity can include connecting neighborhoods, limiting cul-de-sacs, requiring multiple points of access for all residential developments of a certain size, and other approaches.
- **Support Bicycle-Pedestrian Expansion:** Archer Lodge can further adjust policies and regulations to support bicycle and pedestrian infrastructure, with emphasis on these facilities as important factors in a more efficient transportation network.

Other Considerations

- Corridor and Small Area Planning
- Capital Improvement Plan (CIP) and Plan-Guided Infrastructure Investment
- Coordinate Future Land Use with Economic Development Priorities
- Preserve Lower Densities in Rural and Agricultural Areas
- Encourage Mixed-Use at Key Growth Nodes
- Develop Downtown Redevelopment Strategies
- Right-Size Parking Requirements
- Operationalize Policies
- Street Cross-Sections that Support Land Use and Character Goals
- Flexibility to Respond to Market Shifts and Planning "Unknowns"

Benson

Benson adopted a comprehensive plan in 2021 and is currently working on updating their land development regulations. For more detailed information on Benson's planning history and progress since the 2017 SEAS, see Appendix B.

Highest Priority Strategies

- **Corridor and Small Area Planning:** Small Area Plans can serve to focus on particular geographic areas that need attention because of changing circumstances, new opportunities, or community objectives. An example is the NC-242 Highway corridor, which is a primary opportunity for mixed-use development.
- **Zoning and Code Updates:** Benson is currently working on a UDO update to allow conditional zoning and to implement policies from the comprehensive plan.
- **Capital Improvement Plan (CIP) and Plan-Guided Infrastructure Investment:** As Benson grows, planning will need to coordinate and re-calibrate capital investment plans for key infrastructure. The comprehensive plan included utility infrastructure as a focus area, which can be implemented through infrastructure investment and the Town's CIP in the future.
- **Encourage Mixed-Use at Key Growth Nodes:** Tied to Corridor and Small Area Planning, Benson can encourage mixed-use at key growth nodes to spur commercial and residential development.

Other Considerations

- Conditional Zoning
- Zoning Incentive System
- Interlocal Agreements
- Support Higher Densities in Growth and Redevelopment Areas
- Support a Range of Housing Options in Growth Areas
- Facilitate Building Re-Use
- Right-Size Parking Requirements
- Connect Street Networks
- Operationalize Policies
- Flexibility to Respond to Market Shifts and Planning "Unknowns"

Clayton

Clayton adopted the 2045 Comprehensive Growth Plan in 2021 and is currently updating their land development regulations. For more detailed information on Clayton's planning history and progress, see Appendix B.

Highest Priority Strategies

- **Zoning and Code Updates:** Finalizing the updates to the Clayton Unified Development Ordinance (UDO) will provide land development regulations to implement the newly adopted comprehensive plan.
- **Capital Improvement Plan (CIP) and Plan-Guided Infrastructure Investment:** As the Town experiences growth, capital improvement planning and growth-guided infrastructure can be carried forward as a high priority recommendation for Clayton.
- **Encourage Mixed-Use at Key Growth Nodes:** Clayton's comprehensive plan encourages mixed-uses and higher densities in a number of districts, which is supported by the UDO updates for mixed-use districts. Clayton can advance this planning strategy by considering a points-based or incentive system in key growth nodes to allow for a reduction in performance standards, which aligns with the 2045 Comprehensive Plan recommendation for mixed-use developments downtown. These efforts can be coordinated with the Downtown Master Plan.

Other Considerations

- Corridor and Small Area Planning
- Interlocal Agreements
- Right-Size Parking Requirements
- Connect Street Networks
- Support Bicycle-Pedestrian Expansion
- Operationalize Policies
- Flexibility to Respond to Market Shifts and Planning "Unknowns"

Four Oaks

Four Oaks adopted the Downtown Streetscape Master Plan and Economic Development Assessment in 2020. For more detailed information on the planning history and progress in Four Oaks since the 2017 SEAS, see Appendix B.

Highest Priority Strategies

- **Comprehensive Plan, Zoning, and Code Updates:** Updating the comprehensive plan for Four Oaks will be key for setting the vision and policy direction in the community. In addition, Zoning and Code Updates should follow the comprehensive plan's policy guidance and could include updates regarding the strategies below.
- **Encourage Mixed-Use at Key Growth Nodes:** Four Oaks can advance the 2023 Preferred Growth Scenario by encouraging mixed-use at key growth nodes, including allowing higher density in key locations through the Town's comprehensive plan future land use map (FLUM) or creating a mixed-use zoning district in the development ordinance.

Other Considerations

- Capital Improvement Plan (CIP) and Plan-Guided Infrastructure Investment
- Support Higher Densities in Growth and Redevelopment Areas
- Support a Range of Housing Options in Growth Areas
- Facilitate Building Re-Use
- Right-Size Parking Requirements
- Connect Street Networks
- Support Bicycle-Pedestrian Expansion
- Operationalize Policies
- Flexibility to Respond to Market Shifts and Planning "Unknowns"

Garner

Garner adopted the Garner Forward Comprehensive Plan in 2018 and updated their land development regulations in 2022. For more detailed information on Garner's planning history and progress since the 2017 SEAS, see Appendix B.

Highest Priority Strategies

- **Zoning Incentive System:** Following their land development regulation updates in 2022, Garner could consider implementing a zoning incentive system. Garner's policies suggest that zoning incentives like a points-based system could be appropriate for mixed-use, residential, or commercial development to see more affordable or missing middle housing or redevelopment.
- **Right-Size Parking Requirements:** The Garner Forward Comprehensive Plan, adopted in 2018, recommends revisiting and revising parking requirements comprehensively. This strategy can be advanced in a future UDO update.

Other Considerations

- Corridor and Small Area Planning
- Conditional Zoning
- Zoning Incentive System
- Facilitate Building Re-Use
- Right-Size Parking Requirements
- Support Bicycle-Pedestrian Expansion
- Operationalize Policies
- Flexibility to Respond to Market Shifts and Planning "Unknowns"

Kenly

Kenly is currently working on a comprehensive plan update, as of 2023. For more detailed information on Kenly's planning history and progress since the 2017 SEAS, see Appendix B.

Highest Priority Strategies

- **Comprehensive Plan, Zoning, and Code Updates:** Updating the comprehensive plan for Kenly will be key for setting the vision and policy direction in the community. In addition, zoning and land development code updates should follow the comprehensive plan's policy guidance and could include updates regarding the strategies below.
- **Capital Improvement Plan (CIP) and Plan-Guided Infrastructure Investment:** Kenly can advance the 2023 Preferred Growth Scenario coordinating capital improvement planning with their comprehensive plan and using that plan to guide infrastructure investment.

Other Considerations

- Corridor and Small Area Planning
- Interlocal Agreements
- Support Higher Densities in Growth and Redevelopment Areas
- Support a Range of Housing Options in Growth Areas
- Encourage Mixed-Use at Key Growth Nodes
- Develop Downtown Redevelopment Strategies
- Facilitate Building Re-Use
- Right-Size Parking Requirements
- Connect Street Networks
- Support Bicycle-Pedestrian Expansion
- Operationalize Policies
- Flexibility to Respond to Market Shifts and Planning "Unknowns"

Micro

Micro adopted their Comprehensive Land Use Plan in 2019 and updated their land development regulations in 2021. For more detailed information on Micro's planning history and progress since the 2017 SEAS, see Appendix B.

Highest Priority Strategies

- **Zoning and Code Updates:** Micro updated their code in June 2021, and can continue to advance the 2023 Preferred Growth Scenario by adjusting their zoning and development regulations to support the strategies below.
- **Support Higher Densities in Growth and Redevelopment Areas:** Micro can update their comprehensive plan future land use map (FLUM) to allow for denser development in key locations that may experience more growth and redevelopment, as well as create a corresponding zoning district that allows for denser development.
- **Encourage Mixed-Use:** Micro can adjust zoning to encourage mixed-use development through adding a mixed-use district.

Other Considerations

- Corridor and Small Area Planning
- Conditional Zoning
- Zoning Incentive System
- Capital Improvement Plan (CIP) and Plan-Guided Infrastructure Investment
- Connect Street Networks
- Operationalize Policies
- Flexibility to Respond to Market Shifts and Planning "Unknowns"

Pine Level

Pine Level updated their land use regulations in 2021 and adopted a land use plan in 2022. For more detailed information on Pine Level's planning history, see Appendix B.

Highest Priority Strategies

- **Connect Street Networks:** The Southeast Area Study includes emphasis on connectivity as an important factor in making road networks function as efficiently as possible. This can be accomplished through comprehensive plan policies regarding street connectivity, including a street connectivity index in the code, or requirements within the subdivision ordinance. Street connectivity can include connecting neighborhoods, limiting cul-de-sacs, requiring multiple points of access for all residential developments of a certain size, and other approaches.

Other Considerations

- Corridor and Small Area Planning
- Conditional Zoning
- Interlocal Agreements
- Coordinate Future Land Use with Economic Development Priorities
- Support Higher Densities in Growth and Redevelopment Areas
- Develop Downtown Redevelopment Strategies
- Operationalize Policies
- Street Cross-Sections that Support Land Use and Character Goals
- Flexibility to Respond to Market Shifts and Planning "Unknowns"

Raleigh

Raleigh has adopted small area plans for Cameron Village and Hillsborough Street, Midtown-St Albans, and Falls North as well as the Raleigh Strategic Plan and the Downtown Plan. For more detailed information on Raleigh's planning history and progress since the 2017 SEAS, see Appendix B.

Highest Priority Strategies

- **Corridor and Small Area Planning:** As Raleigh experiences growth and development, corridor and small area planning will be key. Small Area Plans can serve to focus on particular geographic areas that need attention because of changing circumstances, new opportunities, or community objectives.
- **Capital Improvement Plan (CIP) and Plan-Guided Infrastructure Investment:** Prioritizing capital improvement planning and plan-guided infrastructure investment ensures that utility investments are guided by community growth plans, and not solely by individual development requests. CIPs and other plans pertaining to infrastructure investment should be aligned with community growth, specifically in operationalizing the policies of documents like comprehensive plans. Coordinating anticipated growth and infrastructure needs with the objectives of policies ensures that growth lines up with the future needs and desires of the community. These efforts will be important for Raleigh, especially as the City evaluates service delivery related to ETJ expansion.
- **Support Higher Densities in Growth and Redevelopment Areas:** Raleigh's current comprehensive plan future land use map (FLUM) includes several higher-density categories and mixed-use categories for new development. Continuing to support higher density development in growth and redevelopment areas and advancing this through code updates will be important for Raleigh.

Other Considerations

- Support a Range of Housing Options in Growth Areas
- Connect Street Networks
- Operationalize Policies
- Flexibility to Respond to Market Shifts and Planning "Unknowns"

Selma

Selma adopted the 2040 Comprehensive Land Use Plan in 2021. For more detailed information on Selma's planning history and progress since the 2017 SEAS, see Appendix B.

Highest Priority Strategies

- **Corridor and Small Area Planning:** Small Area Plans can serve to focus on particular geographic areas that need attention because of changing circumstances, new opportunities, or community objectives. Encouraging mixed-use, downtown development, and bicycle and pedestrian improvements could be considerations in corridor or small area planning efforts.
- **Capital Improvement Plan (CIP) and Plan-Guided Infrastructure Investment:** Prioritizing capital improvement planning and plan-guided infrastructure investment ensures that utility investments are guided by community growth plans, and not solely by individual development requests. CIPs and other plans pertaining to infrastructure investment should be aligned with community growth, specifically in operationalizing the policies of documents like comprehensive plans. Coordinating anticipated growth and infrastructure needs with the objectives of policies ensures that growth lines up with the future needs and desires of the community. This strategy is carried forward as a high priority for Selma.

Other Considerations

- Conditional Zoning
- Zoning Incentive System
- Interlocal Agreements
- Facilitate Building Re-Use
- Operationalize Policies
- Support Bicycle-Pedestrian Expansion
- Flexibility to Respond to Market Shifts and Planning "Unknowns"

Smithfield

Smithfield adopted the Smithfield Town Plan in 2020, including three volumes (Introduction, Growth Management Element, and Transportation Element). For more detailed information on Smithfield's planning history and progress since the 2017 SEAS, see Appendix B.

Highest Priority Strategies

- **Corridor and Small Area Planning:** As Smithfield receives new economic development sites and development or redevelopment downtown, corridor and small area planning can serve to focus on particular geographic areas that need attention because of changing circumstances, new opportunities, or community objectives.
- **Capital Improvement Plan (CIP) and Plan-Guided Infrastructure Investment:** As Smithfield grows, planning will need to coordinate and re-calibrate capital investment plans for key infrastructure. Prioritizing capital improvement planning and plan-guided infrastructure investment ensures that utility investments are guided by community growth plans, and not solely by individual development requests. CIPs and other plans pertaining to infrastructure investment should be aligned with community growth, specifically in operationalizing the policies of documents like comprehensive plans. Coordinating anticipated growth and infrastructure needs with the objectives of policies ensures that growth lines up with the future needs and desires of the community.
- **Support a Range of Housing Options in Growth Areas:** Smithfield's Town Plan includes policy recommendations around increasing residential density and providing a range of housing options. Smithfield can advance this by supporting a range of housing types in land use regulations.

Other Considerations

- Conditional Zoning
- Zoning Incentive System
- Interlocal Agreements
- Facilitate Building Re-Use
- Connect Street Networks
- Support Bicycle-Pedestrian Expansion
- Operationalize Policies
- Flexibility to Respond to Market Shifts and Planning "Unknowns"

Wilson's Mills

Wilson's Mills adopted their 2040 Comprehensive Land Use Plan and a new Development Ordinance in 2019. For more detailed information on Wilson's Mills planning history and progress since the 2017 SEAS, see Appendix B.

Highest Priority Strategies

- **Corridor and Small Area Planning:** As Wilson's Mills experiences growth, corridor and small area planning will be especially important. Small Area Plans can serve to focus on particular geographic areas that need attention because of changing circumstances, new opportunities, or community objectives. Wilson's Mills plans to update its UDO to incentivize density and provide a range of housing options; as large developments occur, small area planning can support and guide zoning updates.
- **Capital Improvement Plan (CIP) and Plan-Guided Infrastructure Investment:** Prioritizing capital improvement planning and plan-guided infrastructure investment ensures that utility investments are guided by community growth plans, and not solely by individual development requests. CIPs and other plans pertaining to infrastructure investment should be aligned with community growth, specifically in operationalizing the policies of documents like comprehensive plans. Coordinating anticipated growth and infrastructure needs with the objectives of policies ensures that growth lines up with the future needs and desires of the community. Wilson's Mill's is provided utilities by Johnston County, which will require interlocal agreements or other interjurisdictional coordination as Wilson's Mills continues to grow.

Other Considerations

- Conditional Zoning
- Zoning Incentive System
- Interlocal Agreements
- Facilitate Building Re-Use
- Operationalize Policies
- Flexibility to Respond to Market Shifts and Planning "Unknowns"

Johnston County

Johnston County is currently in the process of adopting the Envision Johnston - 2040 Comprehensive Land Use Plan. For more detailed information on Johnston County's planning history and progress since the 2017 SEAS, see Appendix B.

Highest Priority Strategies

- **Zoning and Code Updates:** Following comprehensive plan adoption, Johnston County can advance the 2023 SEAS Preferred Growth scenario by updating land use regulations accordingly. Johnston County can provide specific provisions within the code that promotes density where infrastructure is supported, or expansion is planned.
- **Corridor and Small Area Planning:** Johnston County has identified corridor and small area planning as a high priority strategy. This can be advanced by interjurisdictional coordination and identifying areas of common interest along jurisdictional lines.
- **Conditional Zoning:** To provide flexibility for working with developers to create projects that support community goals, the County could allow conditional zoning. This voluntary, legislative zoning tool allows for specific conditions to be applied to a project and allows for some negotiation between the local government and developer to agree on a set of conditions.
- **Interlocal Agreements:** Johnston County can serve in the role of convener with local jurisdictions, specifically for water, sewer, and its related growth management.
- **CIP and Plan-Guided Infrastructure Investment:** Utility expansion and provision in Johnston County will need to be aligned with the County's comprehensive plan, municipal comprehensive plans, and the SEAS 2023 Preferred Growth Scenario. Johnston County can advance this by promoting growth within the town centers instead of unincorporated areas of the county to maintain levels of service and promote compact development.
- **Preserve Lower Densities in Rural and Agricultural Areas:** Advancing the 2023 Preferred Growth Scenario will preserving lower densities in these areas and higher densities around the municipalities, following water and sewer provision, will reduce sprawl. Johnston County can implement this by updating the code accordingly.

Other Considerations

- Support Higher Densities in Growth and Redevelopment Areas
- Support a Range of Housing Options in Growth Areas
- Connect Street Networks
- Support Bicycle-Pedestrian Expansion
- Operationalize Policies
- Flexibility to Respond to Market Shifts and Planning "Unknowns"

Wake County

Wake County adopted their comprehensive plan, PlanWake, in 2021, as well as the Lower Swift Creek Area Plan in 2022. For more detailed information on Wake County's planning history and progress since the 2017 SEAS, see Appendix B.

Highest Priority Strategies

- **Capital Improvement Plan (CIP) and Plan-Guided Infrastructure Investment:** Wake County's PlanWake Development Framework Policies include the Municipal Capital Improvement Plan and Service Expansion Alignment, which requires a municipality to demonstrate appropriate infrastructure for requested ETJ area. Continuing to advance this strategy will require interjurisdictional coordination.
- **Preserve Lower Densities in Rural and Agricultural Areas:** Wake County's comprehensive plan included reducing sprawl as a priority. This could be followed with zoning and code updates to support these policies, in order to support their metrics around growth in rural areas and funding open space conservation efforts. By preserving lower densities in rural and agricultural areas, Wake County can support the 2023 SEAS Preferred Growth Scenario.

Other Considerations

- Corridor and Small Area Planning
- Conditional Zoning
- Create Design Guidelines for Key Nodes
- Right-Size Parking Requirements
- Support Bicycle-Pedestrian Expansion
- Operationalize Policies
- Flexibility to Respond to Market Shifts and Planning "Unknowns"



MULTIMODAL RECOMMENDATIONS

The SEAS Update's transportation recommendations consider the regional system holistically rather than focusing on each travel mode individually. The resulting recommendations provide a comprehensive multimodal network that invests in a fast-growing region.

Since a complete transportation network cannot be created without understanding the land use context, the SEAS Update transportation recommendations respond to the preferred growth strategy described in Chapter 4. The recommendations were also refined using the travel demand model to project the region's needs 20 years in the future.

The project team drew from the previous planning efforts, input from the Core Technical Team, the Stakeholder Oversight Team, and feedback from the community to create a universe of projects for **roadway**, **bicycle** and **pedestrian**, and **transit** modes. The recommendations were built on the understanding that the transportation network should include safe facilities for pedestrians, bicyclists, motorists, and drivers and passengers of public transportation.

Roadway
Outlines the region’s plan to mitigate and improve congestion

Bicycle and Pedestrian
Illustrates a blend of facilities for various users and trip purposes

Transit
Identifies opportunities to enhance or add service

Recommendations Development

The transportation recommendations were developed through a five-step process that began with the cataloging of all existing projects proposed as part of past planning efforts. From there, any gaps were evaluated using the results of the existing conditions analysis, the preferred scenario, the regional travel demand model, and public input to create our first set of draft recommendations. The recommendations were then reviewed by the Core Technical Team, the Stakeholder Oversight Team, and the public, and they were then revised based on feedback received to create the final set of recommendations. This development process is outlined below.



Complete Streets

Complete Streets is a concept that stresses the importance of planning and designing streets to prioritize access, comfort, and safety for people of all ages and abilities. By implementing Complete Street principles, communities can be more accessible and welcoming particularly for vulnerable populations, including older adults, children, people with disabilities, and people who do not have access to a vehicle. NCDOT has a Complete Streets policy that directs the department to consider the needs of pedestrians, cyclists, transit, and other modes when building or improving roadway infrastructure. The guiding principles of the SEAS Update embrace the blend of multimodal recommendations to create a transportation network that serves all types of users.

Equity in Planning

Another key consideration during the development of the SEAS Update was equity. The following pages outline in greater detail how socioeconomic and transportation data was leveraged to evaluate the burden or lack thereof on historically underserved or vulnerable populations in the study area.

Equitable Planning Analysis

An analysis of transportation need and transportation disadvantages informs the identification of priority areas for transportation investments within the Southeast Area. A Transportation Need Index identifies areas with a greater need for transportation infrastructure, while a Transportation Disadvantage Index identifies areas with more individuals with unique barriers to mobility, as well as those historically marginalized by transportation investments. Collectively, these indices represent a means for the identification of areas to target with transportation investments to enhance the quality and safety of residents' connections to jobs, schools, doctors, grocery stores, places of worship, and other destinations.

The results of this analysis most directly helped inform the bicycle, pedestrian, and transit recommendations, as multimodal infrastructure and transit access play a major role in providing more equitable access to opportunity in communities with safety needs or populations unable to drive. When considering the implementation of multimodal infrastructure, planners should reference the results of this analysis to make informed decisions about potential pockets of the community where resources might need to be directed towards. More information on the equitable planning analysis is available in Appendix C.

Transportation Disadvantage

To highlight geographies that may require special consideration to ensure that everyone has a means of accessing jobs and services, the NCDOT Transportation Disadvantage Index identifies areas with higher proportions of disadvantaged populations. In other words, the index identifies, describes, and quantifies relative barriers that may limit access to transportation. To do this, the transportation disadvantage index scores Census block groups based on their relative proportion of:

- **Individuals living in low-income households**, who are more likely to rely on walking, bicycling, and transit to meet their transportation needs, because as income falls, the cost of owning and operating a private vehicle becomes more burdensome.
- **Individuals living with disabilities**, whose unique transportation needs demand deliberate planning.
- **Carless households**, whose transportation needs, particularly in regions characterized by auto-oriented development such as the Southeast Area, are likely significant.
- **Older adults**, aged 65 years and older, who may choose not to or are unable to drive, resulting in their reliance on other modes of transportation.
- **Minors**, aged 15 years and younger, who are more likely to rely on active transportation and/or transit because the vast majority cannot drive.
- **Non-white individuals**, whose transportation requirements deserve additional consideration, reflecting a legacy of racism and ongoing marginalization.

The largest swath of high Transportation Disadvantage Index scores is found in the Smithfield and Selma area. High scores are also found in and around Garner in Wake County, as well as in Benson, west of Four Oaks, and east of NC 39 in Johnston County. Because the index is based on the relative population sizes, some block groups receive high scores despite very low population densities and total number of disadvantaged individuals (e.g., north of Selma).

Transportation Need

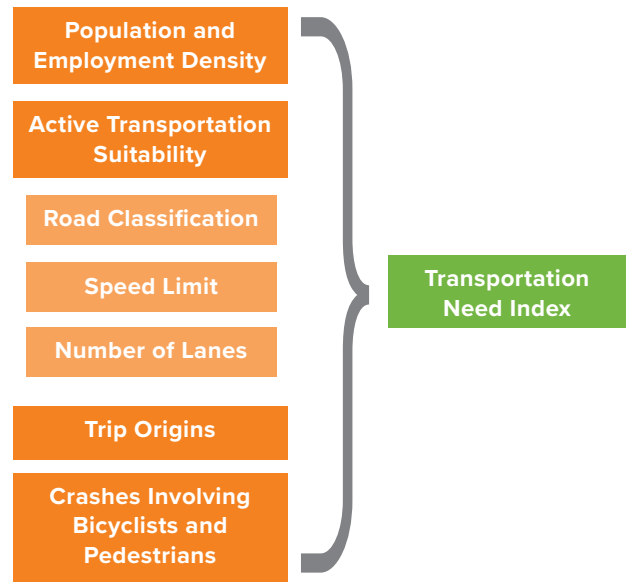
A Transportation Need Index, developed for the SEAS Update, leverages job and population density, active transportation suitability, crashes involving bicyclists and pedestrians, and trip origins to identify areas of greater transportation need.

The figure to the right summarizes the methodology used to calculate this index. Block groups receive a score in the range of zero to one for each variable, with higher values indicating greater transportation need¹. Weighting and summing these scores provides the relative Transportation Need Index figure for each block group.

Reflecting the location of people and jobs, prevailing roadway conditions, travel patterns, and crashes involving bicyclists and pedestrians (detailed throughout this chapter), areas of high transportation need are located in and around Selma and Smithfield, Clayton, and Garner.

¹ Scores are assigned using feature scaling (i.e., min-max normalization) to normalize the range of each variable.

Transportation Need Index Methodology



Combined Transportation Need and Disadvantage Analysis

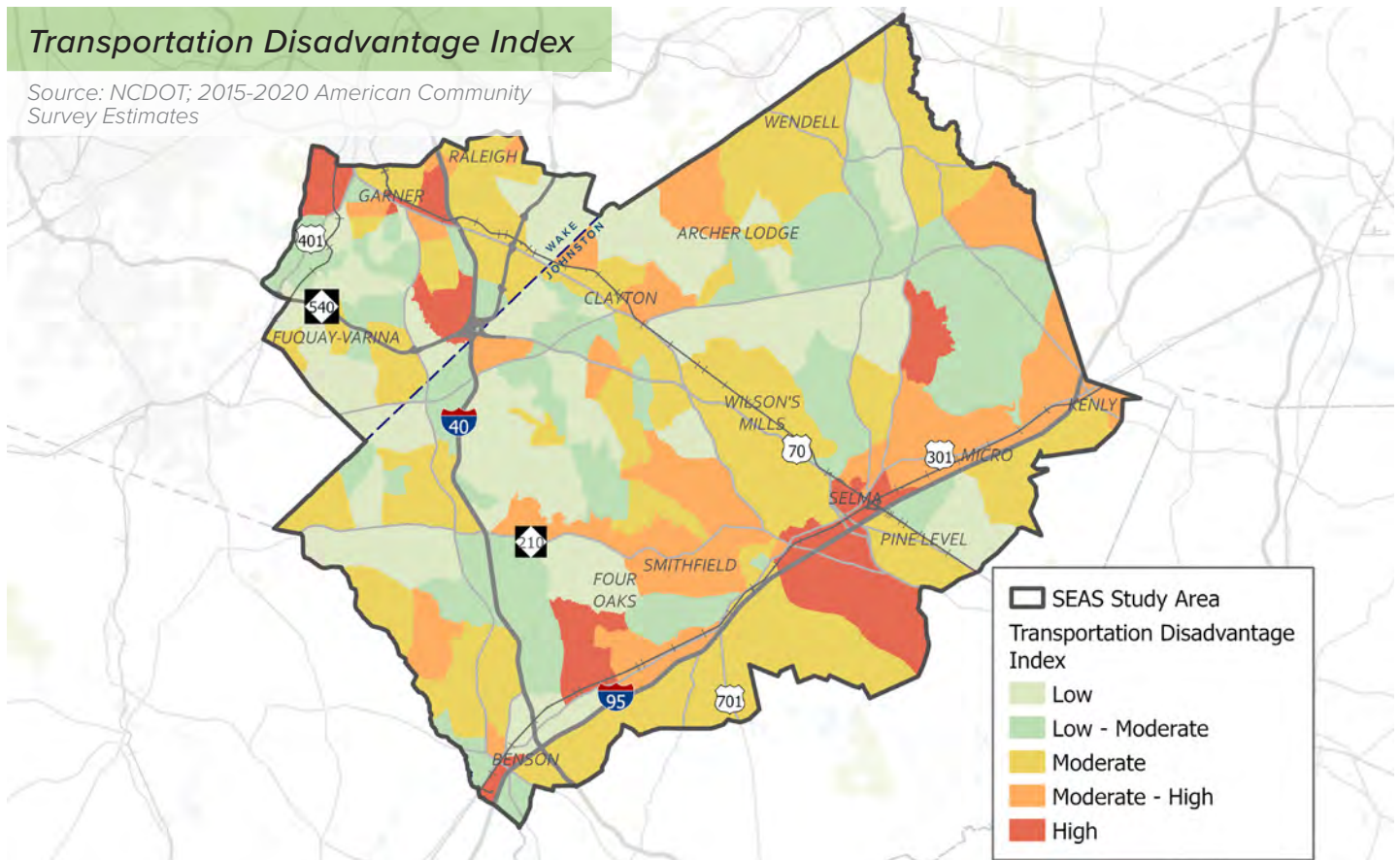
An analysis combining the transportation need and disadvantage indices identifies areas where transportation investments will be most impactful for the people who need them most. The figure on the facing page combines these indices, with dark purple depicting block groups scoring high on both the Transportation Need Index and Transportation Disadvantage Index.¹ Based on these results, general priority areas for investments include the following areas:

- The US 301 corridor running through Four Oaks, Smithfield, Selma, and Kenly
- Garner, particularly along the US 70 corridor
- Clayton, northeast of US 70
- Pine Level

¹ Light green depicts block groups scoring low on both the Transportation Need Index and Transportation Disadvantage Index; dark blue depicts block groups scoring high on the Transportation Need Index but low on the Transportation Disadvantage Index; conversely, dark green depicts block groups scoring low on the Transportation Need Index but high on the Transportation Disadvantage Index

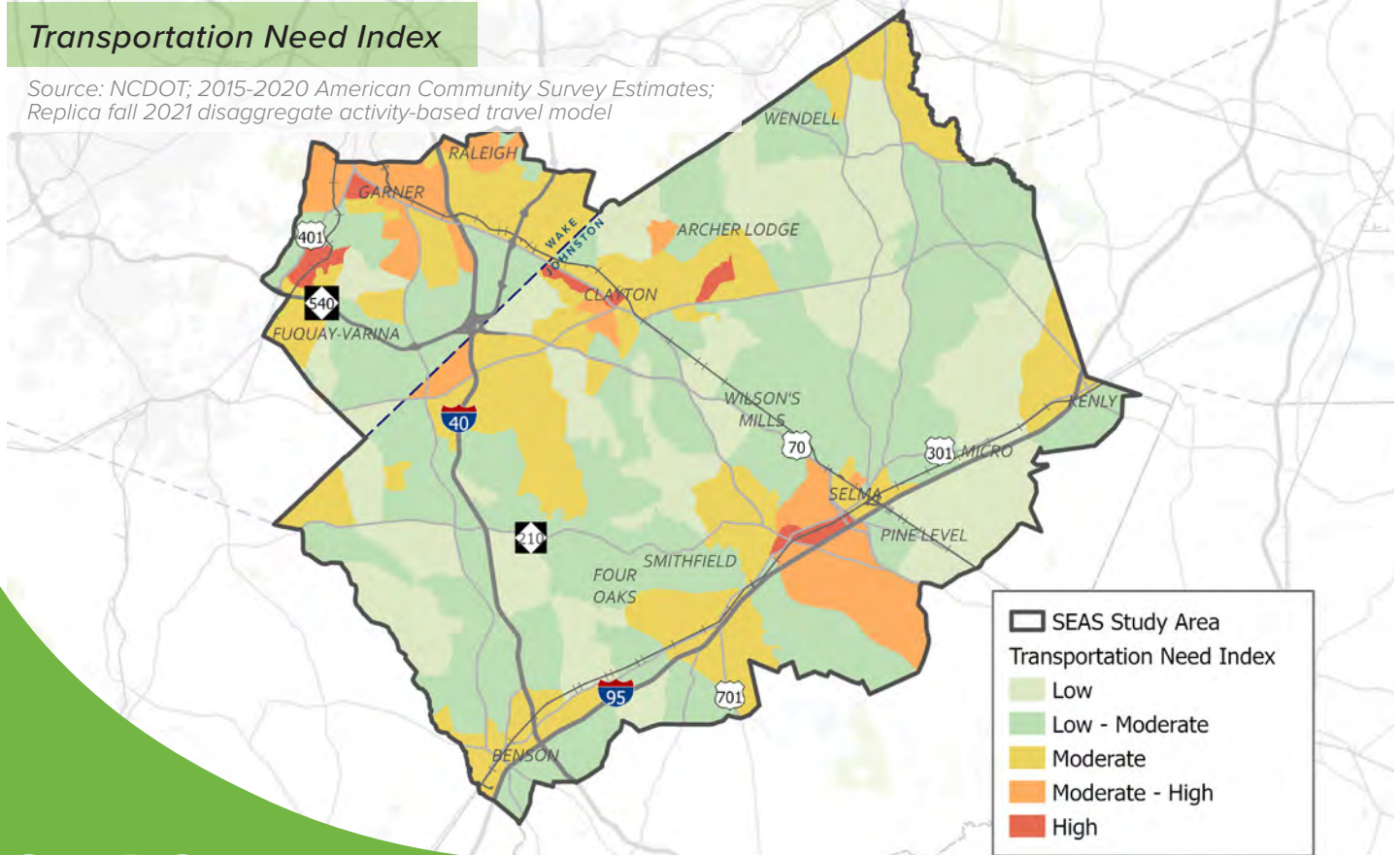
Transportation Disadvantage Index

Source: NCDOT; 2015-2020 American Community Survey Estimates



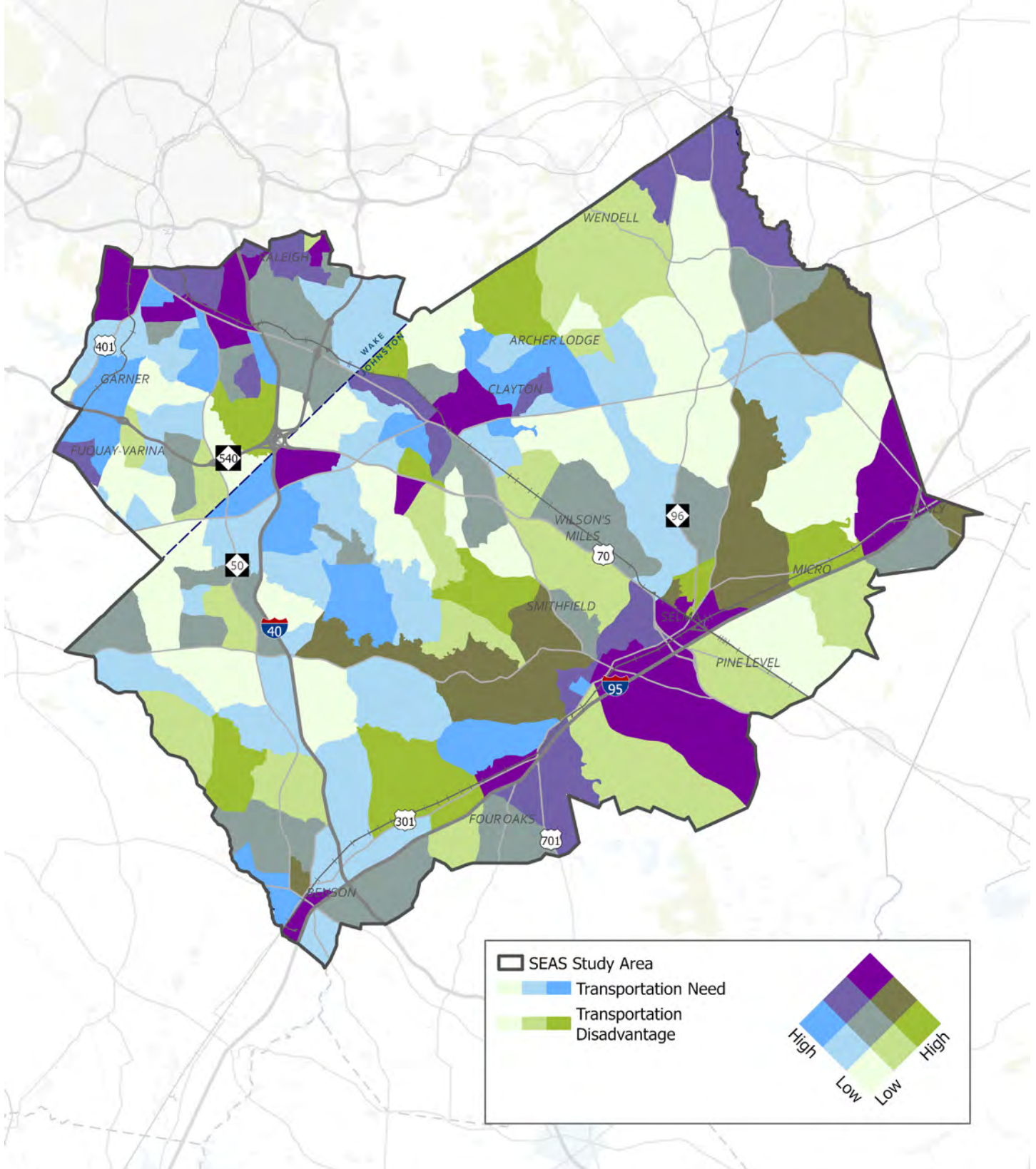
Transportation Need Index

Source: NCDOT; 2015-2020 American Community Survey Estimates;
Replica fall 2021 disaggregate activity-based travel model



Transportation Need and Disadvantage Indices

Source: NCDOT; 2015-2020 American Community Survey Estimates;
Replica fall 2021 disaggregate activity-based travel model



Roadway

To create an efficient transportation network, the transportation recommendations must balance connectivity and access with mobility. The proposed roadway recommendations consider a variety of improvements to the transportation network to improve infrastructure for all users and to mitigate congestion.

Access Management

Access management strategies include, restriction of certain turning movements, consolidation of driveways, implementation of non-traversable medians, and other means of enhancing mobility and safety along the corridor

These strategies can make turning movements more predictable, minimize congestion, and potentially reduce the number of crashes.



Center Turn Lane

A center turn lane is a lane where vehicles can turn left. The addition of a two-way left turn lane down the center of an existing two-lane corridor can improve safety and overall traffic flow.



Modernization

A modernization project can include the resurfacing, repairing, or rehabilitation of a roadway to enhance the corridor without expanding the number of travel lanes. This type of recommendation can be coordinated with bicycle, pedestrian, and transit improvements to create multimodal corridors through lower-cost means.



New Location

The construction of a new roadway provides drivers with increased options and distributes vehicular traffic on alternative routes. A new location road can provide relief for corridors with existing congestion issues.



Operational Improvements

Operational improvements can include upgrading traffic signals or altering signal timing to enhance mobility along a particular corridor. Operational improvements can be low-cost improvements to enhance the flow of traffic by leveraging existing infrastructure. These improvements are beneficial to all roadway users since movements may become more predictable and well-timed.



Operational Improvements

Widening

A widening project includes the addition of at least one lane of travel in each direction to address congestion and capacity concerns. Widening—or capacity enhancing—projects are meant to address pervasive congestion.



Widening

Superstreet

A superstreet contains a series of reduced conflict intersections that are designed to enhance safety and travel flow. Typically, the superstreet eliminates left turning movements on busy roads. While there are a variety of designs, they all function by reducing the number of conflict points where drivers and pedestrians or bicyclists can collide.



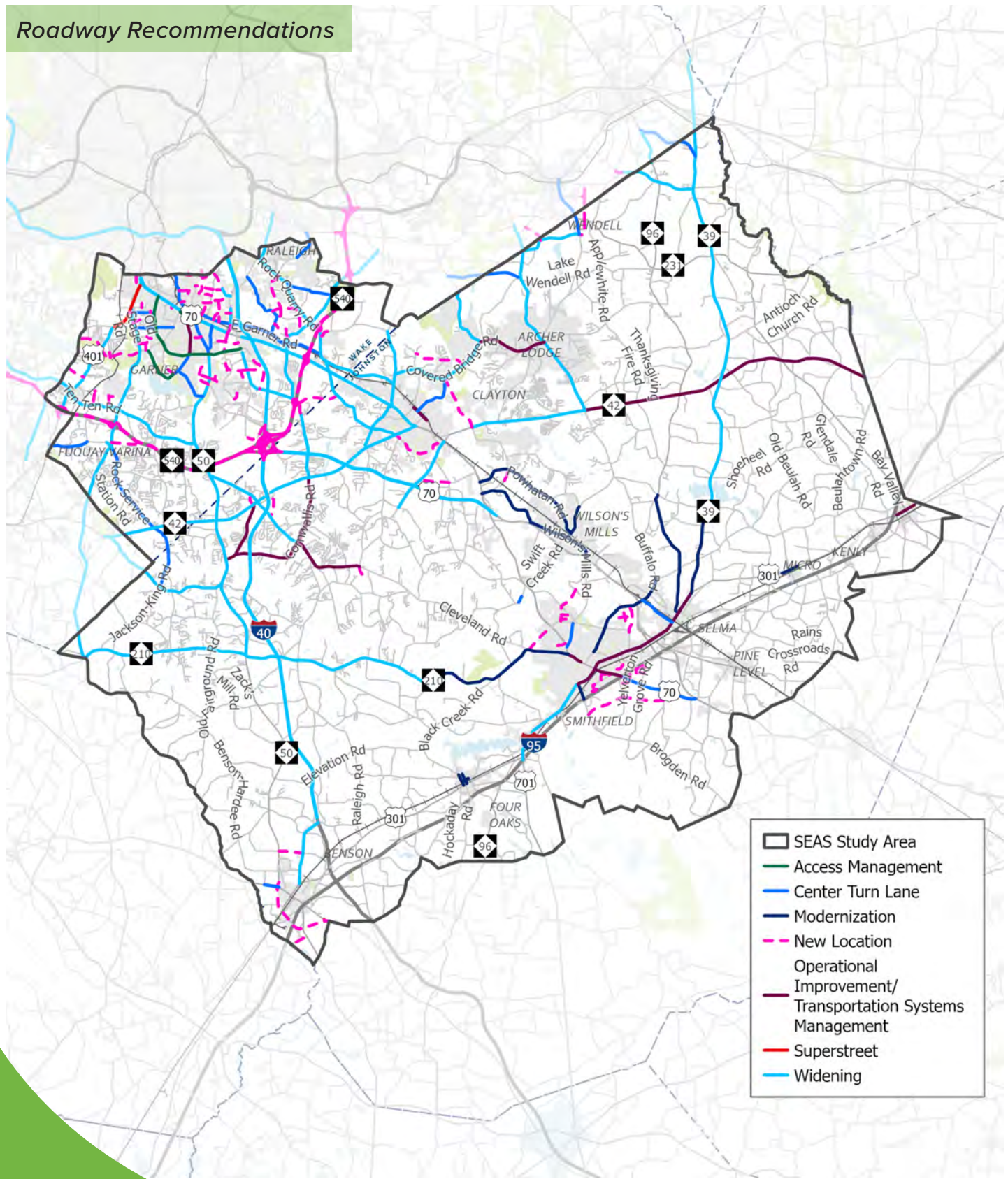
Superstreet

Roadway Snapshot

There are over 200 linear roadway recommendations as part of the SEAS Update. The blend of these seven roadway recommendation types helps create a holistic, multimodal network for all roadway users. The development of the roadway recommendations was heavily influenced by input from the community, the Complete Streets principles, and equitable planning criteria. The roadway recommendations help create the vision for the region over the next 20 years.

The following pages include maps of the linear roadway recommendations.

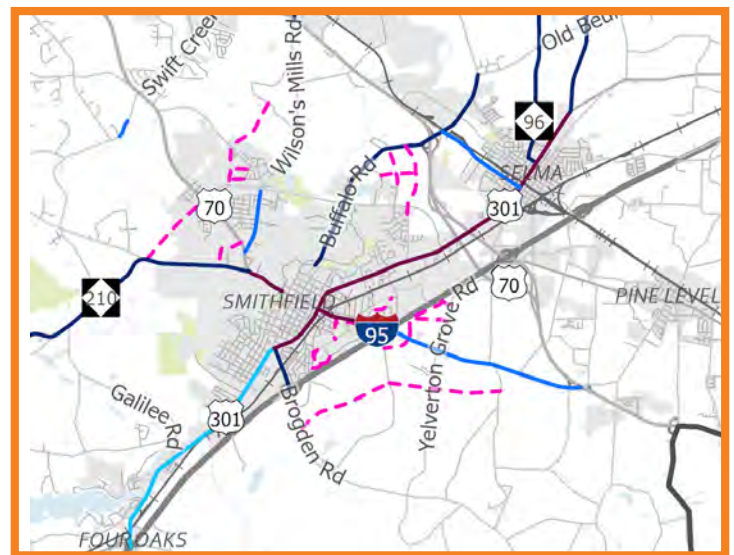
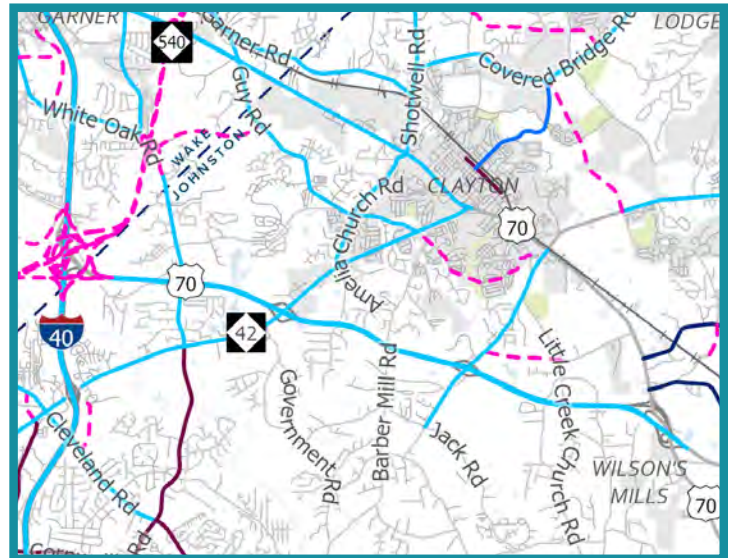
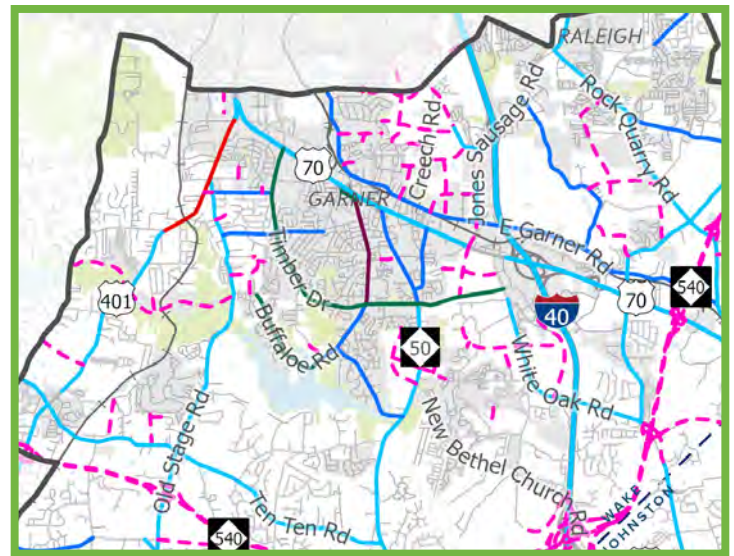
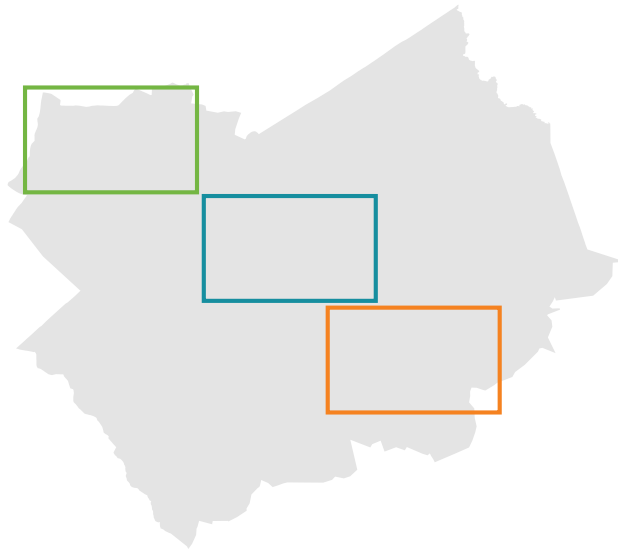
Roadway Recommendations



The previous page shows the roadway recommendations at the scale of the entire study area. The following inset maps, for three subareas of the southeast area, provide a closer look at the roadway recommendations.

The three areas include:

- Garner and Southeast Raleigh
- Clayton and NC 42
- Smithfield and Selma



- SEAS Study Area
- Access Management
- Center Turn Lane
- Modernization
- New Location
- Operational Improvement/Transportation Systems Management
- Superstreet
- Widening

Intersection

Intersection recommendations are created in coordination with the roadway recommendations to ensure that the access points between our traveled corridors provide for safe and efficient connections. The following are the intersection projects included in the SEAS Update.

Closed Railway Crossing

The closure of an existing railway crossing can increase the safety of an intersection by no longer allowing cars or people to interact with trains. By reducing the number of railway crossings, rail can move more efficiently and effectively without having to slow; similarly, motorists can also travel without having to stop and wait for freight or passenger rail.

Interchange Improvement

Interchange improvements can consist of a variety of improvements. The interchange improvements identified for the SEAS Update include ramp redesign or improved signal coordination to enhance the movement of vehicles. These improvements can improve the efficiency and flow of heavily traveled corridors.

New Interchange

A new interchange project involves adding a point of access from a grade separated limited access highway to another highway or local street. New interchange projects help enhance the flow of corridors by allowing vehicles to access adjacent roadways while maintaining speed and avoiding conflict points..

New Grade Separation

A grade separation involves realigning a roadway under or over a railway or other roadway to eliminate conflict between the corridors. Grade separation projects are vital to promoting and ensuring safety and efficient travel flow.

Intersection Realignment

An intersection realignment involves the shift or relocation of intersection access or exit points to simplify vehicular movements or enhance safety. A realignment project can improve visibility for all roadway users and create more direct approaches towards an intersection.

Intersection Improvement

An intersection improvement identifies a problem but requires further study to determine what type of improvement is needed. Potential recommendations may include striping, signal timing changes, turn lanes, or other infrastructure to reduce conflict between motorists, bicycles, and pedestrians and improve flow.

Multimodal ICE Toolkit

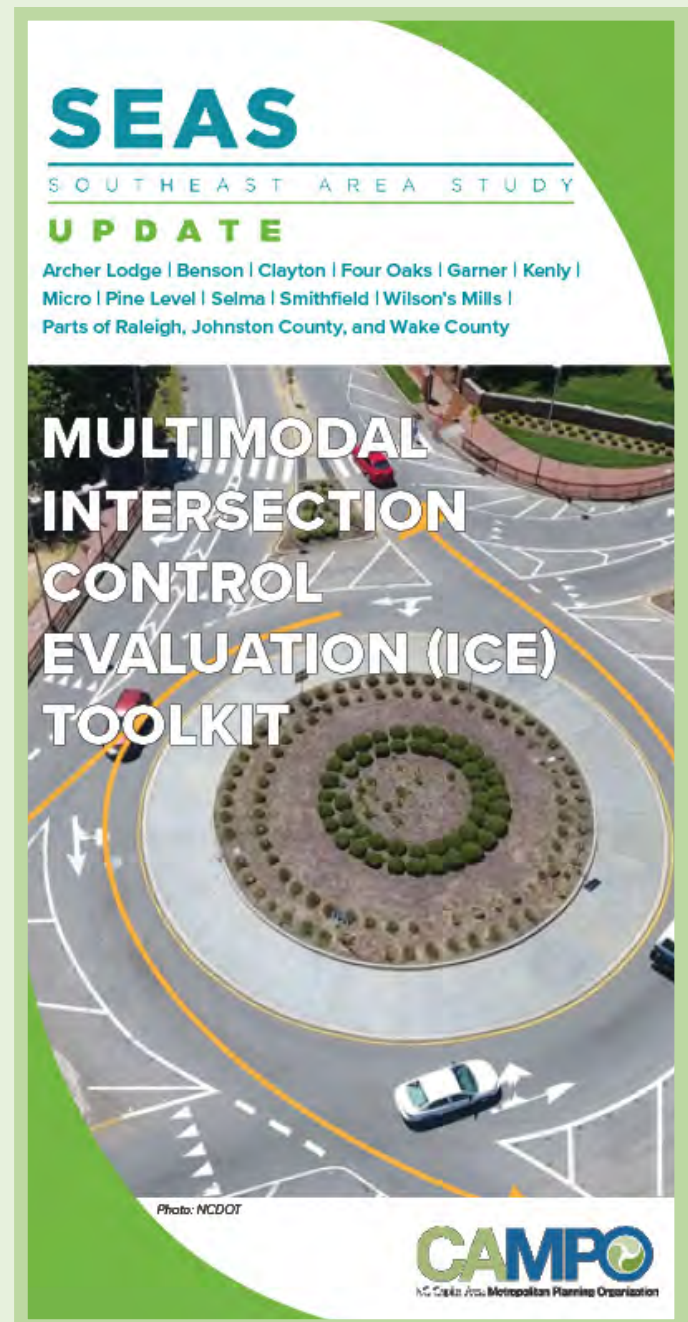
As the Southeast Area grows and builds out plans for sidewalks, greenways, transit service, new roadways, and mixed-use centers, it will become increasingly important for access, mobility, and safety to include accommodations for multimodal users in roadway design.

Intersection Control Evaluation (ICE) is a performance-based process and framework used to identify optimal solutions for intersection improvements. Intersection Control Evaluations typically focus on safety and delay reduction benefits; however, some ICEs focus more heavily on delay first and vehicle safety second, and have very limited focus on how alternative designs impact the safety and convenience of multimodal users.

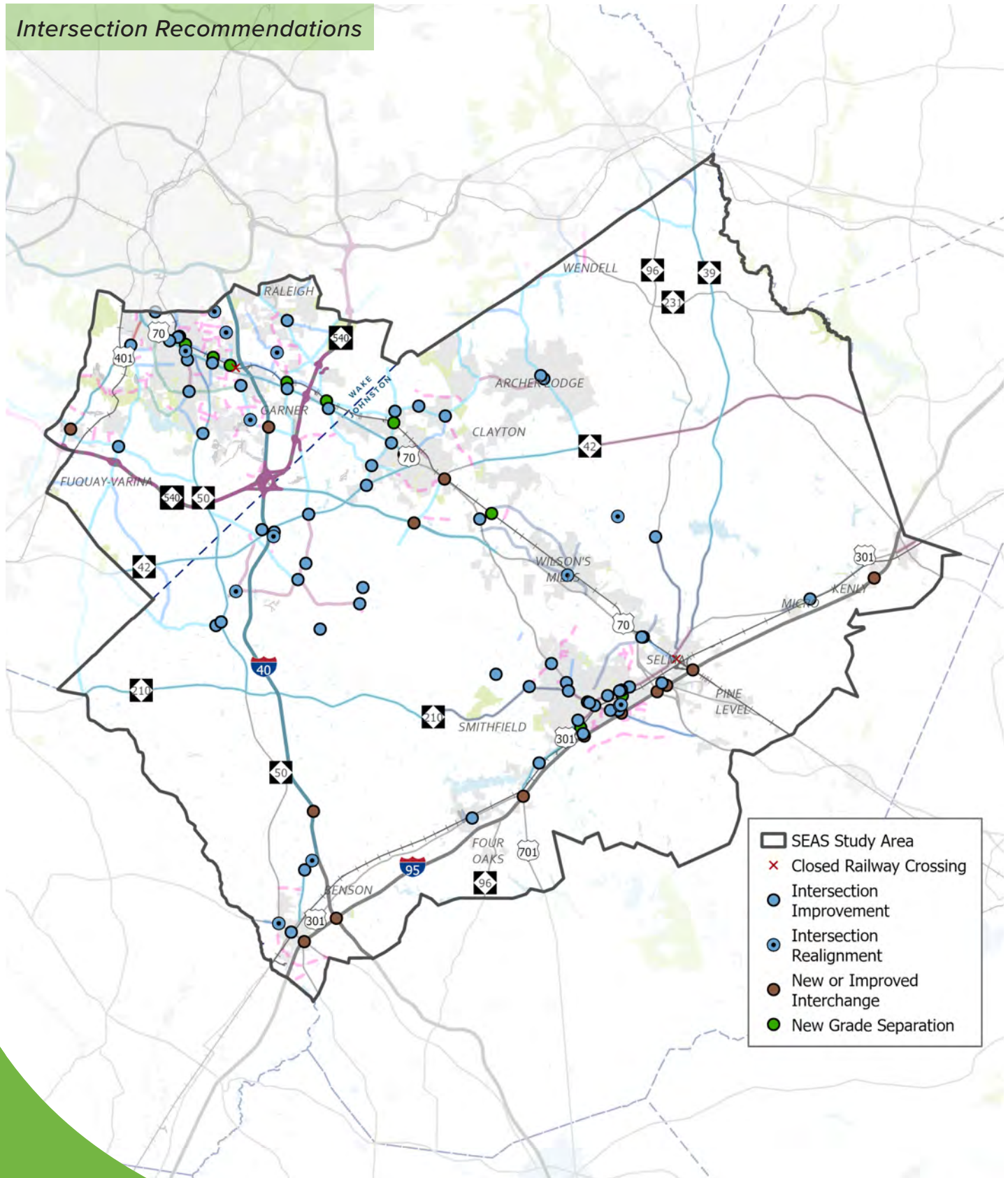
The needs of multimodal users, including people walking and rolling, biking, and taking transit, must be considered from the beginning to ensure that intersections are safe and efficient for everyone. As part of the SEAS Update, a toolkit was created to provide a resource for planners, engineers, developers, and decision-makers about a multimodal-friendly Intersection Control Evaluation process. The toolkit, which comes in both a long-form booklet and a shorter pamphlet, includes information like:

- Mobility, equity, and financial benefits of designing intersections for multiple modes,
- Things to consider when evaluating a location,
- Key multimodal design principles to emphasize safety and efficiency,
- Case studies and design resources as examples and additional guidance,
- An explanation of how multimodal intersection design advances the SEAS Update's guiding principles.

This toolkit can be found in full in Appendix D.



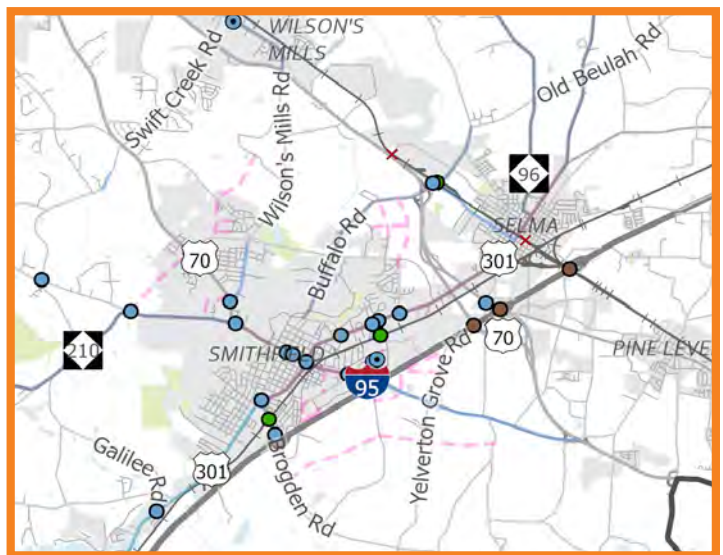
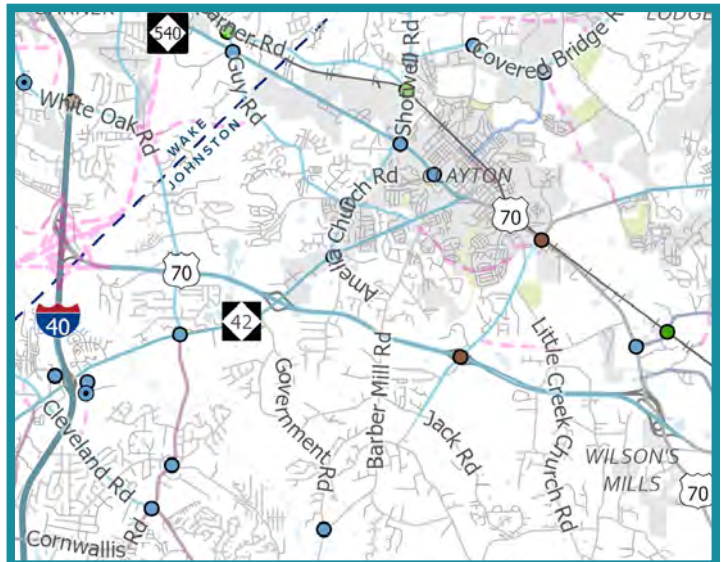
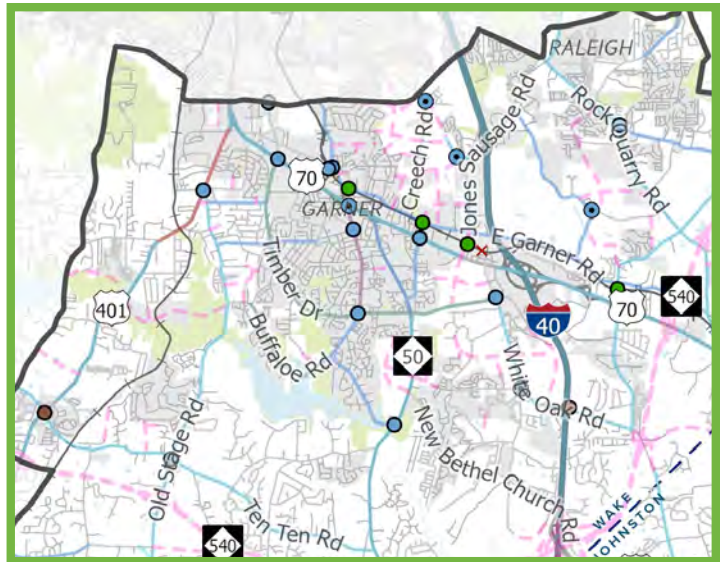
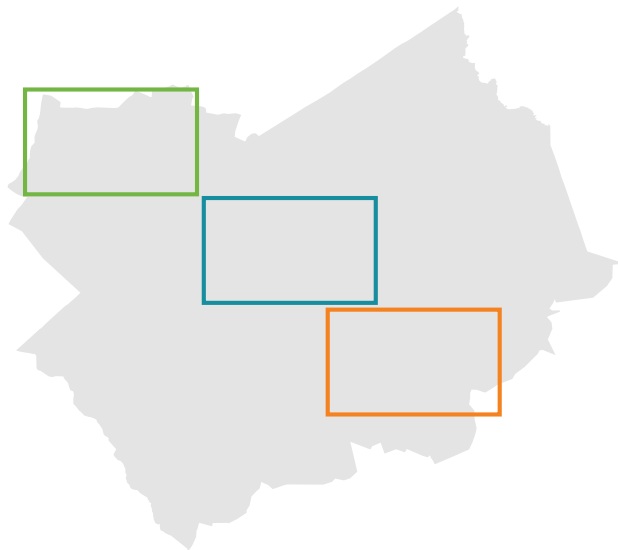
Intersection Recommendations



The previous page shows the intersection recommendations at the scale of the entire study area. The following inset maps, for three subareas of the southeast area, provide a closer look at the intersection recommendations.

The three areas include:

- Garner and Southeast Raleigh
- Clayton and NC 42
- Smithfield and Selma



- SEAS Study Area
- x Closed Railway Crossing
- Intersection Improvement
- Intersection Realignment
- New or Improved Interchange
- New Grade Separation

Hot Spot Highlight: US 70 Business/NC 42/Ranch Road

As part of the Southeast Area Study Update, a hot spot study was conducted to examine a complex transportation issue at US 70 Business/NC 42/Ranch Road (Rose Street). The purpose of this hot spot was to find a long-term transportation solution in a growing and developing area. More information on the hot spot study can be found in Appendix E.

Current Configuration

The intersection of US 70 Business at NC 42 East and Future Ranch Road (Rose Street) is a traditional signalized four-way intersection. At this location, US 70 Business is a four-lane median-divided roadway with exclusive left- and right-turn lanes onto NC 42 East and Rose Street.

This intersection is planned to be developed through three phases.

- The first phase, currently under construction, is the extension of Ranch Road to connect to NC 42 East at US 70 Business to create a direct connection between NC 42 and the US 70 Clayton Bypass.
- The second phase, planned for 2040 as part of the 2050 MTP, would widen Ranch Road between the US 70 Clayton Bypass and US 70 Business to four lanes, built to state highway standards, and officially reroute NC 42 along Ranch Road.
- The third phase, and the focus of this Hot Spot Study, would place an interchange and rail grade separation at US 70 Business/NC 42 East.

As the area is rapidly changing and developing, this study is intended to identify potential feasible interchange design alternatives and associated footprints for this location long-term. With the area's expected growth, it's critical to ensure that development does not impede the ability to construct the interchange in the future. This study also considers impacts to existing and planned development and accounts for planned transit expansion of the Southern Corridor Rapid Bus Extension and the Greater Triangle Commuter Rail.



Alternative Recommendations

Based on the known needs and constraints, two conceptual interchange alternatives were created, one using a quadrant loop in the south quadrant and one widening Little Creek Church Road/Boling Street to operate as the interchange access road.

ALTERNATIVE 1

Astor Street Quadrant Interchange

The first alternative would create a quadrant interchange in the south quadrant of the intersection. The quadrant roadway ties into existing roads, partially using Astor Street to connect to US 70 Business.

This alternative would heavily impact the neighborhood of homes to the bridge's east and west along Tulip Street and Astor Street, as well as a set of homes at the end of Buckhorn Bridge Park; however, a new connection to Tulip Street southeast of the bridge maintains right in/right out access to/from US 70 Business for remaining homes within the quadrant loop. The Rose Street connection would partially remain north of the bridge, allowing right turns from eastbound US 70 Business and left turns from westbound US 70 Business, but restricting exiting traffic to right turn onto eastbound US 70 Business. The quadrant movement in Alternative 1 would result in significant impacts to nearby streams.



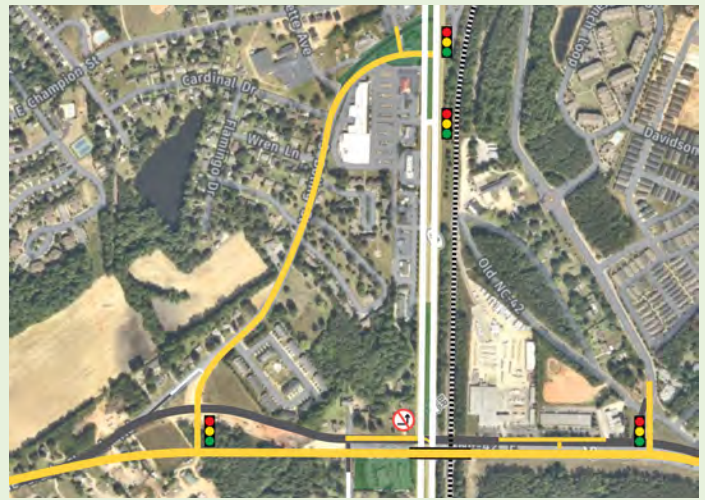
\$58,284,000

ALTERNATIVE 2

Little Creek Church Road/Boling Street Interchange

The second alternative would use an improved Little Creek Church Road/Boling Street as the interchange access road connecting US 70 Business to NC 42. Boling Street would be widened from two to three lanes. In addition, the intersection between Boling Street and US 70 Business would be realigned to intersect at a wider angle and slightly further from the Main Street/US 70 Business intersection, with significant impacts to the Clayton Village and the Wendy's properties.

While this alternative would cause additional impacts to properties along Boling Street, it would have significantly less impacts on the neighborhood of homes along Tulip Street when compared to Alternative 1. The Rose Street connection would partially remain north of the bridge, allowing right turns from eastbound US 70 Business and left turns from westbound US 70 Business, but restricting exiting traffic to right turn onto eastbound US 70 Business.



\$54,326,000

Following consultation with key stakeholders and a review of potential impacts, Alternative 1 is considered the preferred alternative. Note that these alternatives and associated Opinions of Probable Construction Costs (OPCC) are conceptual only and designs and costs will need to be reevaluated in the design phase.

Truck, Freight, and Rail

The previous and ongoing truck, rail, and freight planning efforts were reviewed as part of the recommendations development process. The following planning efforts should be closely considered as member jurisdictions move forward with implementing the recommendations in the Southeast Area Study Update.

Triangle Regional Freight Plan

CAMPO partnered with the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) and NCDOT to develop a coordinated regional freight plan for the Triangle. The Regional Freight Plan identified linear project improvements along strategic freight corridors (SFCs) to fund over the next 20 years. The plan identifies programmatic recommendations to further support the investments in the SFC network. The proposed roadway recommendations within the SEAS Update are aligned with the recommendations outlined in the Triangle Regional Freight Plan. In future decision-making processes, both the Triangle Regional Freight Plan and SEAS Update should serve as a guide for future investments in the regional freight network.

Fayetteville-Raleigh Passenger Rail

In partnership with the Fayetteville Area Metropolitan Planning Organization (FAMPO), CAMPO supported a study to determine the feasibility of connecting Fayetteville and Raleigh by passenger rail. The Passenger Rail Feasibility Study explored two alignments and identified economic impacts associated with the proposed service. While the study was completed in 2020, there are currently no plans to create a passenger rail service between the two municipalities.

FRA Corridor Identification Program

In March of 2023, NCDOT submitted 12 corridor proposals to the Federal Railroad Administration (FRA) Corridor Identification and Development program. If selected, the Raleigh-Wilmington and Raleigh-Morehead City corridors would receive funding for initial scoping, scheduling, and cost estimates. Both routes were included in the 2015 NC State Rail Plan as potential future intercity services. However, it is still early in the proposal process, and there are currently no short-term plans for passenger service on either corridor.

Greater Triangle Commuter Rail

In 2016, Wake County voters approved a half-cent sales tax to fund public transportation improvements in Wake County and throughout the region. CAMPO—in collaboration with DCHC MPO and GoTriangle—completed an exploratory study of commuter rail service in 2019, and in 2020, GoTriangle; Wake, Johnston, Durham, and Orange Counties; the Research Triangle Foundation; CAMPO; and DCHC MPO further studied implementation options.

Feasibility and Challenges

The feasibility study found the corridor to be well-positioned to serve future growing travel markets. Initial surveys also found strong resident and business community support.

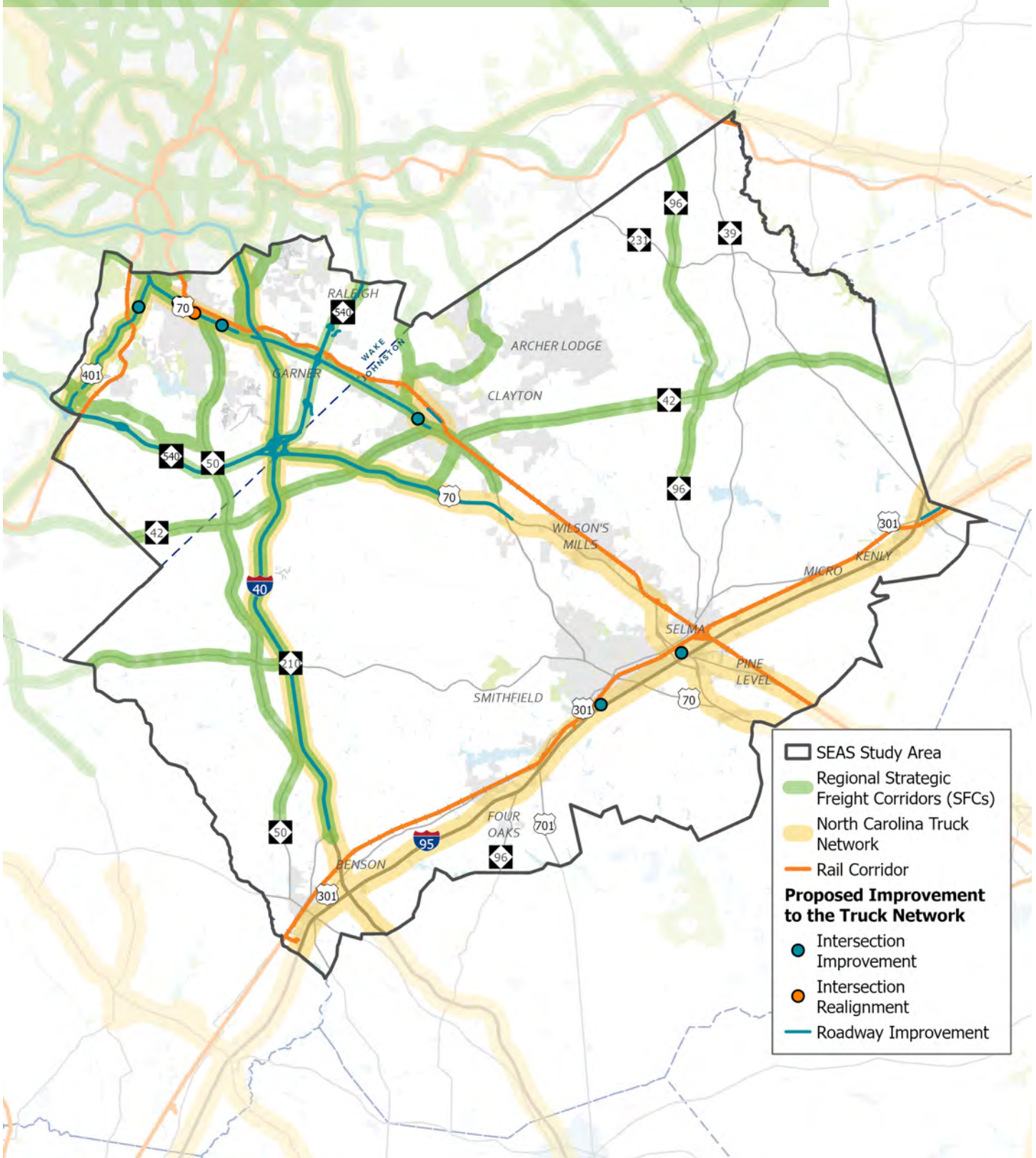
The study also found significant technical and financial challenges. Major upgrades would be needed to avoid conflicts between commuter, intercity passenger, and freight trains. Service would need to be implemented in smaller phases. Cost also remains a challenge, and as August of 2023, the corridor does not qualify for federal funds.

Short-Term Rail Corridor Improvements

Funding challenges prompted a shift to a longer-term approach focused on strategic upgrades to the corridor that can improve safety and conditions for Amtrak and freight trains today while making future implementation of regional rail easier. These upgrades include grade separations, crossing closures, signal upgrades, station improvements, and new track and sidings.

The SEAS Update includes recommendations for rail crossings along the corridor, including grade separations and crossing closures that would help work towards commuter rail service long-term while improving conditions for current and short-term passenger and freight trains. Continued coordination will be increasingly important as regional partners continue to work towards commuter rail.

Truck Network Recommendations and Strategic Freight Corridors



Bicycle and Pedestrian

Proposed Linear Improvements

As traffic volumes and traffic speeds increase on roadways, there is a greater need for facilities to have a wider buffer and physical barrier between bicyclists and pedestrians and vehicles. Achieving physical separation should be a central component of almost every facility design process in the Southeast Area Study Update to ensure the safety of its users.

The map on page 77 displays the bicycle and pedestrian recommendations in three broad categories with each of these categories generally including:

Pedestrian Facilities

Pedestrian facility recommendations generally refer to sidewalks. Sidewalks achieve physical separation for pedestrians from the travel lanes. Most of the communities in the Southeast Area have extensive sidewalk networks in their downtown core.

From 2007-2021, there were **547 crashes** involving pedestrians.

88% (122 of 139) of all pedestrian fatalities and serious injuries occurred in places without sidewalks.

While the existing sidewalks are primarily concentrated in downtowns, there are still significant gaps in these areas. The sidewalk gaps particularly occur along corridors with higher traffic volumes and higher speeds. When overlaid with historic crash data, the opportunities to create safer, dedicated pedestrian facilities was evident. The pedestrian facility recommendations focus on filling the identified gaps and creating safer intersections to reduce conflict between pedestrians and other roadway users.



Sidewalk



Sidewalk

Bicycle Facilities

Bicycle facility recommendations generally refer to bike lanes. In most cases, bike lanes should be designed with a physical buffer between the bike lane and roadway corridor. In limited circumstances, bicycle facilities can include shared lanes (sharrows) on roads such as neighborhood streets that have very low traffic volumes and speeds.

From 2007-2021, there were **209 crashes** involving bicyclists.

100% of all bicyclist fatalities and serious injuries (30) occurred in places without bike facilities.

When choosing a facility type, the National Association of City Transportation Officials (NACTO) provides design guidance for people of all ages and abilities based on vehicle speed and volume. The guidance considers the different types of cyclists and identifies key considerations to user safety. More information on the NACTO guidance can be found in Appendix F.

The existing bicycle network primarily consists of multiuse paths. In order to provide a more robust bicycle network, a variety of facility types were considered in order to provide a range of safe, appropriate facilities for people of all ages and abilities.

Multiuse Paths

Multiuse path recommendations include both sidepaths (multiuse paths along a road) and greenways (multiuse paths away from the roadway network). Multiuse paths achieve physical separation and generally serve all ages and abilities of bicyclists and pedestrians.

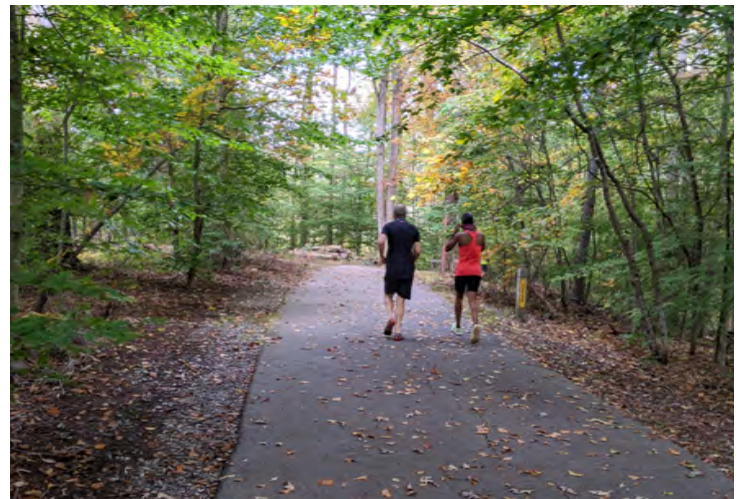
The multiuse path recommendations included in this plan help connect regional destinations through dedicated facilities for both pedestrians and bicyclists. By leveraging existing connections provided by the Mountains-to-Sea Trail, the Great Trails State Network, and the East Coast Greenway, the Southeast Area can further build upon its extensive multiuse path network.



Protected Bike Lane

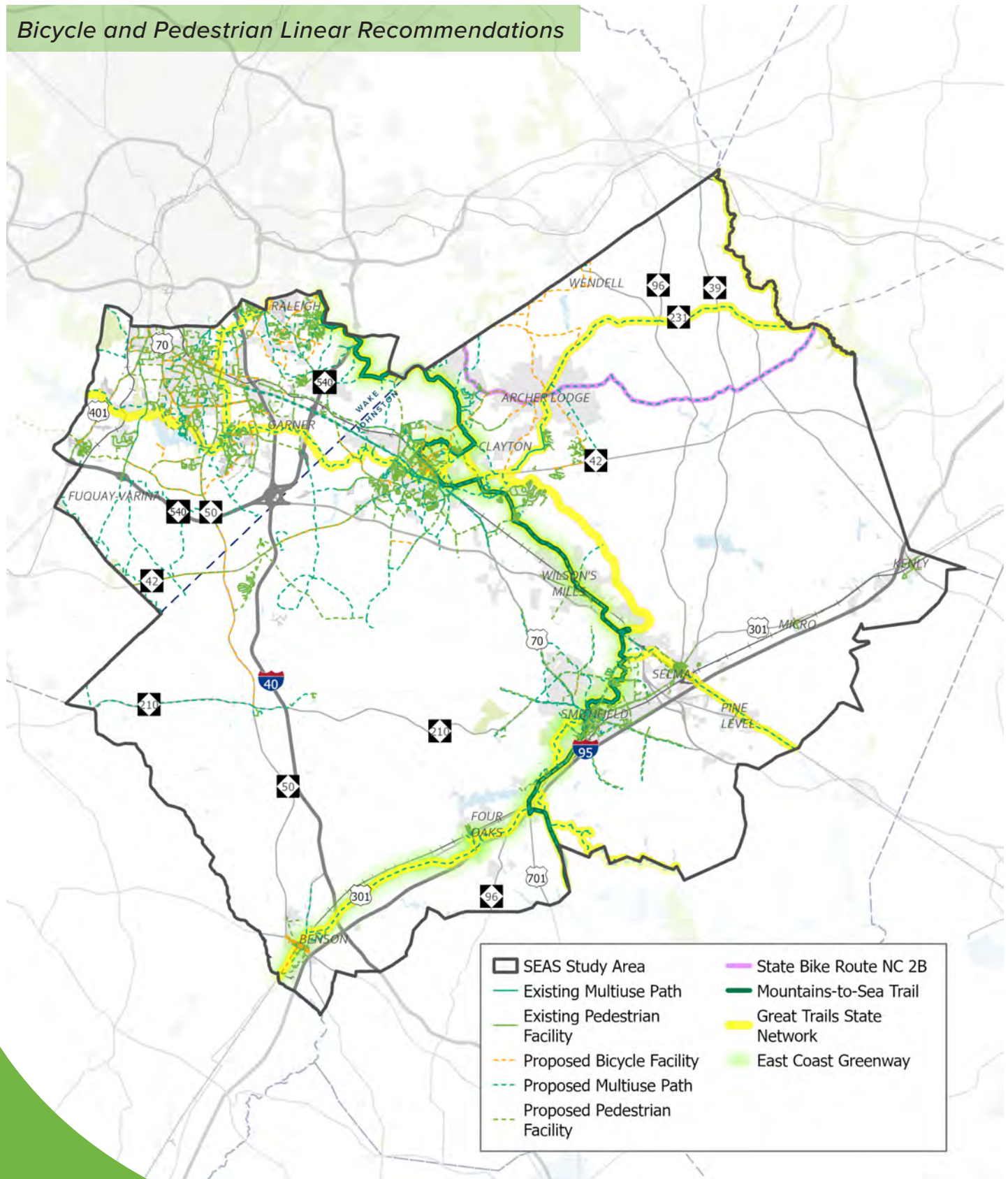


Buffered Bike Lane

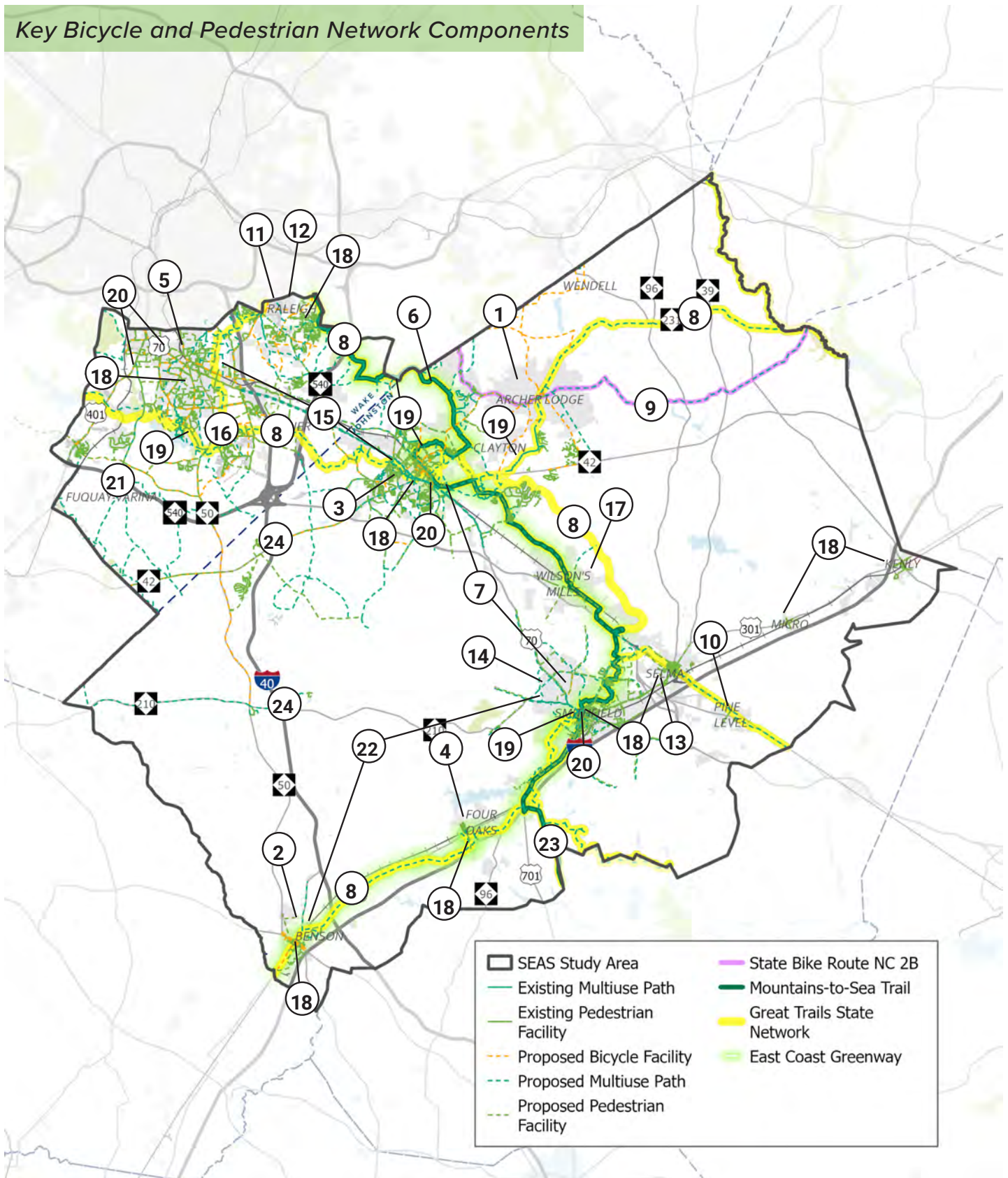


Greenway

Bicycle and Pedestrian Linear Recommendations



Key Bicycle and Pedestrian Network Components



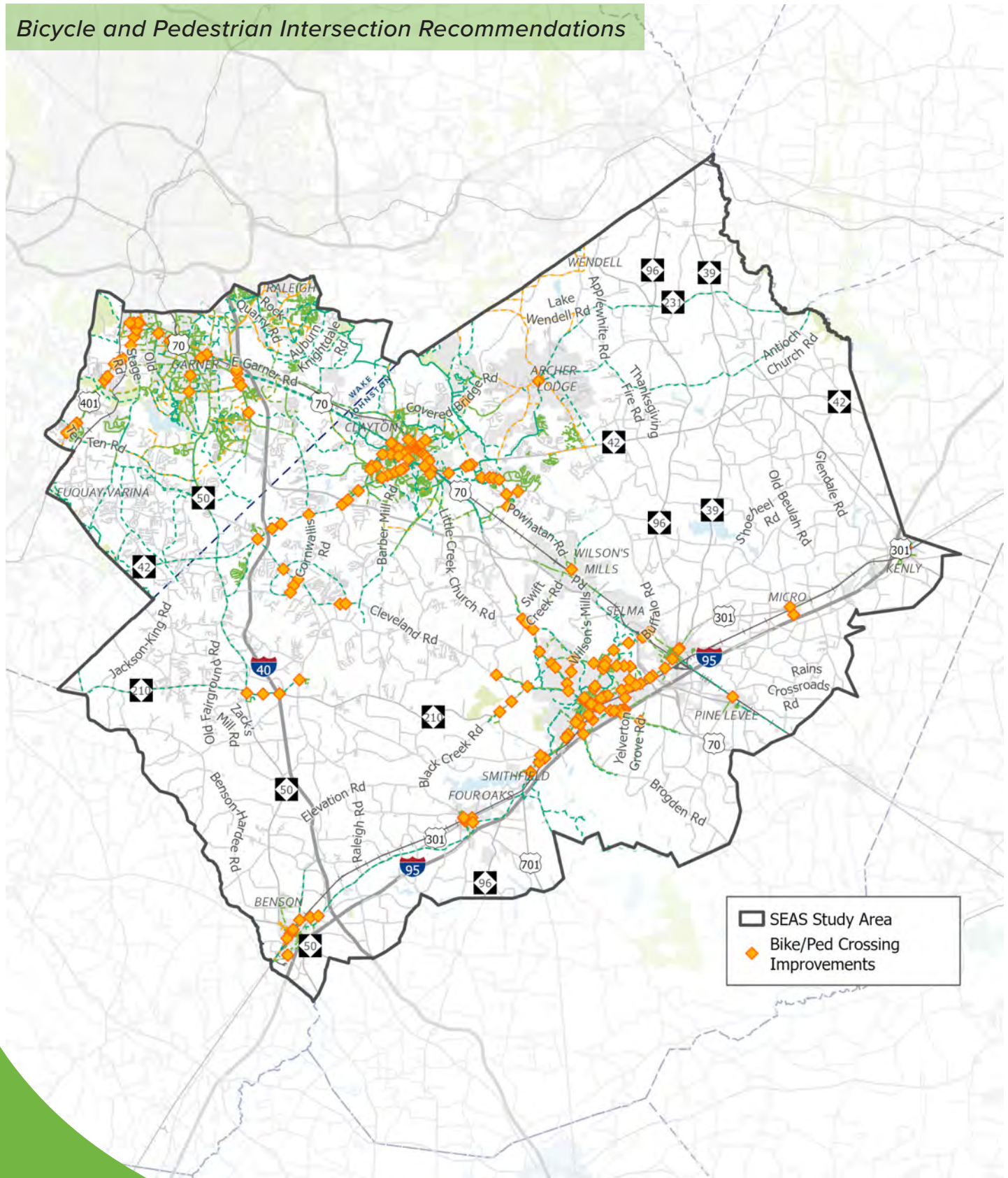
Key Bicycle and Pedestrian Network Components

Map ID	Note
1	The Town of Archer Lodge Bicycle and Pedestrian Plan (2020) identifies priority projects connecting neighborhoods, parks, schools, downtown, and trails.
2	The Town of Benson Community Transportation Plan (2019) identifies a network of bike/pedestrian recommendations, including projects to be combined with upcoming roadway projects.
3	The Town of Clayton Pedestrian Plan (2022) identifies a set of priorities and safe routes to schools and parks projects.
4	The Four Oaks Downtown Streetscape Master Plan (2020) includes recommendations for sidewalks, safer crosswalks with bulbouts, street trees/landscaping, and ADA and accessibility improvements.
5	The Town of Garner Pedestrian Plan (2023) includes comprehensive network recommendations including six priority projects that fill key gaps in the local network.
6	The Johnson County Parks and Recreation Master Plan (2021) action steps include: Greenways/hiking/biking trails: "After the MST connection the most requested connections were: (1) Connecting Benson to Four Oaks, Four Oaks to Smithfield; (2) Connecting Selma to Smithfield [note connections from Selma to MST should be sought]; (3) Connecting Pine Level to Selma; (4) Connection between Greater Cleveland area and Clayton."
7	The Neuse River Trail Feasibility Study (2022) identifies a recommended alignment to extend the Neuse River Trail from Clayton to Smithfield. Recommendations include four segments/phases mostly along rural roadway corridors (sidepaths) and includes a Neuse River bike/pedestrian bridge crossing near Selma.
8	The Great Trails State Plan (2022) incorporates regional trails such as the East Coast Greenway and Mountains to Sea Trail and pulls key connections from local plans to identify statewide connectivity opportunities.
9	State Bike Route NC 2B is currently unsigned, but was identified as a new state bike route in WalkBike NC (2013) (North Carolina's Statewide Bicycle and Pedestrian Plan).
10	The Pine Level Comprehensive Plan (2022) goals and objectives include the desire for a well-connected multi-modal transportation system and investment in walking/biking/trails, walkability of new developments.
11	The Raleigh Bike Plan (2016) includes priority projects - a prioritization map updated in 2020 was created to reflect completed and funded projects.
12	The Capital Area Greenway Master Plan Update (2022) includes recommendations and action items (near, mid, and long term); includes a new trail classification system, updated trail prioritization criteria and results; and an emphasis on reinvestment in existing trails.
13	The Town of Selma Land Use Plan 2040 (2021) includes greenway and sidewalk recommendations.
14	The Smithfield Town Plan (2019) includes bicycle and pedestrian recommendations.

Key Bicycle and Pedestrian Network Components Continued

Map ID	Note
15	Bike and pedestrian facilities will play a key role in supporting bus rapid transit (BRT) service. Opportunities inside station areas depend on safe, high quality sidewalks, intersections and bicycle/scooter facilities. Opportunities outside station areas but within the corridor depend on first mile/last mile bus service and safe bicycle/scooter facilities. BRT stations are planned for Garner and Clayton.
16	The Wake County Greenway System Plan (2018) includes recommendations by project category (bridge the gaps, connect parks and lakes, connect the communities, and longer term proposed trails).
17	Wilson's Mills Comprehensive Land Use and Master Plan (2019) includes planned sidewalk projects.
18	Existing Sidewalks: Each community has a core sidewalk network that serves as a key building block for both local and regional connectivity. Newer developments are building pedestrian infrastructure more consistently.
19	Existing Greenways: The Neuse River Trail and Sam's Branch Greenway provide a key walking/biking regional connection from Raleigh to Clayton as part of both the East Coast Greenway and the Mountains to Sea Trail. Other shared use path segments such as the S. Garner Trail, Neuse River Pkwy sidepath, neighborhood greenways in Clayton, and the Buffalo Creek Greenway in Smithfield provide local greenway connectivity.
20	High traffic volume, high speed corridors such as US 401 and US 70 in Garner, US 70 in Clayton, US 301, and US 70 Business in Smithfield are where some of the highest amounts of bicycle, pedestrian, and motorist collisions happen. These types of corridors, with limited (or no) physical buffering between pedestrian and bicycle spaces can significantly deter higher amounts of walking and biking.
21	The I-540 extension through the southeastern part of Wake County: This project is programmed to include greenway undercrossings where greenways are shown on previous plans.
22	A feasibility study for the proposed East Coast Greenway section from Smithfield to Benson is scheduled to begin in 2023. From Benson, the East Coast Greenway is proposed to connect to Dunn and the Dunn-Erwin Rail Trail.
23	The Mountains to Sea Trail Coastal Crescent section branches from the East Coast Greenway between Smithfield and Four Oaks. When complete, the Coastal Crescent will connect SEAS to Sampson and Bladen Counties before continuing on to the coast. The Neuse River serves a blueway connection for the Mountains to Sea Trail from SEAS to Goldsboro, Kinston, and New Bern.
24	Roadway widening projects such as Cleveland Rd and NC 210 in southwestern Johnston County and NC 42 west through Clayton and Johnston County are opportunities to build bicycle and pedestrian facilities such as sidepaths as part of the project.

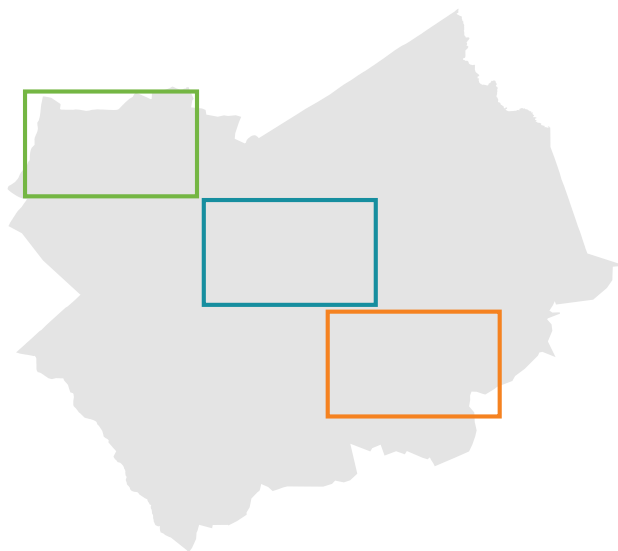
Bicycle and Pedestrian Intersection Recommendations



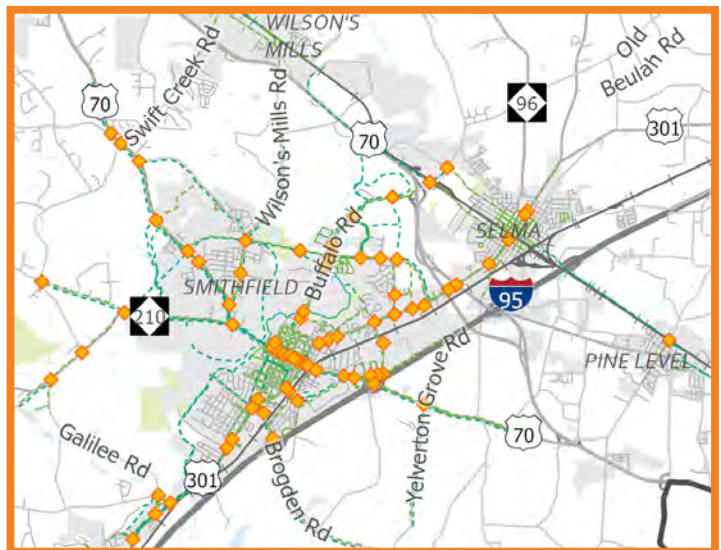
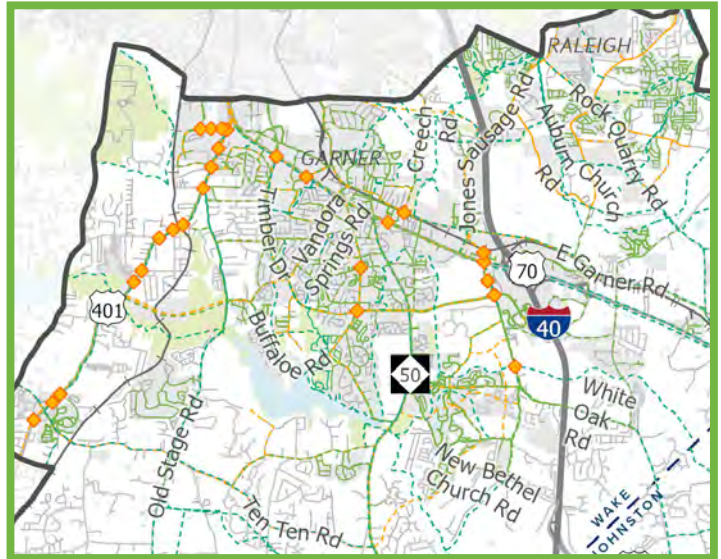
Many bicycle and pedestrian crossing improvements were identified as part of the SEAS Update both from locally adopted plans and through a safety analysis. Considering the small nature of most of these improvements, these recommendations should be considered as part of larger corridor projects as they get implemented and improved. The previous page showed the bicycle and pedestrian intersection recommendations at the scale of the entire study area. The following inset maps, for three subareas of the southeast area, provide a closer look at the crossing recommendations.

The three areas include:

- Garner and Southeast Raleigh
- Clayton and NC 42
- Smithfield and Selma



- SEAS Study Area
- Bike/Ped Crossing Improvements



Transit

Proposed Improvements

As outlined in Chapter 3, the existing and planned transit projects will create more efficient mobility options for those who most need it. As part of the recommendations development process, a transit demand analysis identified locations that could support dedicated, fixed-route service. The primary factors used to determine transit demand or transit propensity include population and employment density as well as other demographic cohorts including low-income households, zero-car or one-car households, and older adults. In addition to the demographic factors, understanding the variety of public transportation solutions was equally important. A microtransit suitability analysis was conducted to assess the viability of service for areas with lower population and employment density. The full inventory of transit propensity and suitability analyses can be found in the Appendix C.

The proposed transit recommendations focus on appropriately-scaled solutions that build on existing plans and services, and prioritize investments that will benefit the most people. The recommendations create connections to existing transit infrastructure in the greater Raleigh metropolitan area, ensuring that residents of the Southeast Area can access opportunity throughout the region—and even throughout the state.

Circulator

A frequent fixed-route service connecting key destinations and transfer points within communities with higher volumes of trips and shorter stop spacing. Circulators are most appropriate for denser communities with higher population, more walkability, and a variety of local destinations.

- **Garner–Clayton Circulator** is a proposed 39.1-mile route, round-trip, between Garner North-South Station and Powhatan Road in Clayton via US 70.
- **Selma–Smithfield Circulator** is a proposed 19.5-mile route, round-trip, between Selma Amtrak Station and the Smithfield Outlets via US 301, Second Street, and Market Street.
- **Garner–West Johnson Circulator** is a proposed 25.2-mile route, round-trip, between Garner North-South Station and Forty-Two Forty Plaza in western Johnston County via NC 50.
- **Clayton–Willow Springs Circulator** is a proposed 27.7-mile route, round-trip, between the Walmart Supercenter - Clayton and Willow Springs, via Cleveland Road, NC 42, and US 70.

Connector

An extended connection between communities with lower volumes of longer distance trips with select stops in areas with high population and employment densities. These are most appropriate for connecting the broader region, regional destinations, and activity centers.

- **Clayton–Selma Connector** is a proposed 41.1-mile route, round-trip, between Selma Amtrak Station and Walmart Supercenter - Clayton via US 70.
- **Benson–Garner Connector** is a proposed route between Benson and Garner North-South Station.
 - **Alternative 1** (via NC 50): Moderate transit need and disadvantage, pockets of high transit propensity and potential. Serves the residents of Edmondson.
 - **Alternative 2** (via Raleigh, Mclemore, and Cleveland roads): Relatively high population and employment densities. Serves the residents of Willow Springs.
- **Benson–Selma Connector** is a proposed 39.2-mile, round-trip, between Selma Amtrak Station and Benson via US 301.
- **Kenly–Selma Connector** is a proposed 24.1-mile route, round-trip, between the Selma Amtrak Station and Downtown Kenly via US 301.
- **Selma–Raleigh Connector** is a proposed 73.0-mile route, round-trip, between Downtown Raleigh and Selma Amtrak Station, via US 70 and US 401.

Microtransit Zone

An on-demand, curb-to-curb service, connecting residents to destinations throughout their community, as well as circulator and connector routes. Microtransit zones are most appropriate in areas with demand for transit but that may not yet have the employment density, population, or walkability to support fixed-route transit.

- **Garner Microtransit Zone** serves portions of southwest and northeast Garner in Wake County. The zone is bordered by US 70, Garner Road, and Jones Sausage Road to the north; Clifford Road and Lake Benson to the south; Rock Quarry Road and White Oak Road to the east; and Old State Road to the west. The transfer opportunities include GoRaleigh Routes 7, 17, 18, 20, 40x, the Garner–Clayton Circulator, and Garner–West Johnston Circulator.
- **Clayton Microtransit Zone** serves Clayton in northern Johnston County. The zone is bounded by the Wake County/Johnston County Line to the north; Ranch Road and NC 42 to the south; the Neuse River, Covered Bridge Road, and Shotwell Road to the east; and Guy Road and Amelia Church Road to the west. The transfer opportunities include GoRaleigh Routes 7, 17, 18, 20, 40x, the Garner–Clayton Circulator, and Garner–West Johnston Circulator.
- **Selma/Smithfield Microtransit Zone** serves the Towns of Selma and Smithfield in southern Johnston County. The zone is bounded by the Neuse River, US 70, Buffalo Road, and Old Beulah Road to the north; I-95 to the south; Lizzie Mill Road, Moccasin Creek, and NC 39 to the east; and the Neuse River to the west. The transfer opportunities include Amtrak, the Selma–Smithfield Circulator, the Benson–Selma Connector, the Clayton–Selma Connector, and the Kenly–Selma Connector.
- **McGee–Willow Springs Microtransit Zone** serves the population area at the Edmondson and McGee Crossroads in the Township of Pleasant Grove. The zone also serves Willow Spring in the Township of Cleveland. The zone is bounded by NC 42 and Cleveland Road to the north; NC 210 and North Pleasant Coates Road to the south; Cornwallis Road, I-40, and Sanders Road to the east; and the White Memorial Church Road to the west. The transfer opportunities include the Garner–West Johnston Circulator.

Transit Transfer Facilities

A transit transfer facility (TTF) complements fixed-route and microtransit recommendations. TTFs present an opportunity to utilize underused spaces to enhance the rider's experience by providing a comfortable environment for riders to wait for their service. Amenities could include bus shelters, real-time information, lighting, bicycle racks, and restrooms. The following locations are recommended TTFs.

- **Garner North South Station**
- **White Oak Crossing**
- **Walmart Supercenter (Clayton)**
- **Powhatan Road (Clayton)**
- **Downtown Smithfield**
- **Selma Amtrak**

Bus Stop Amenities

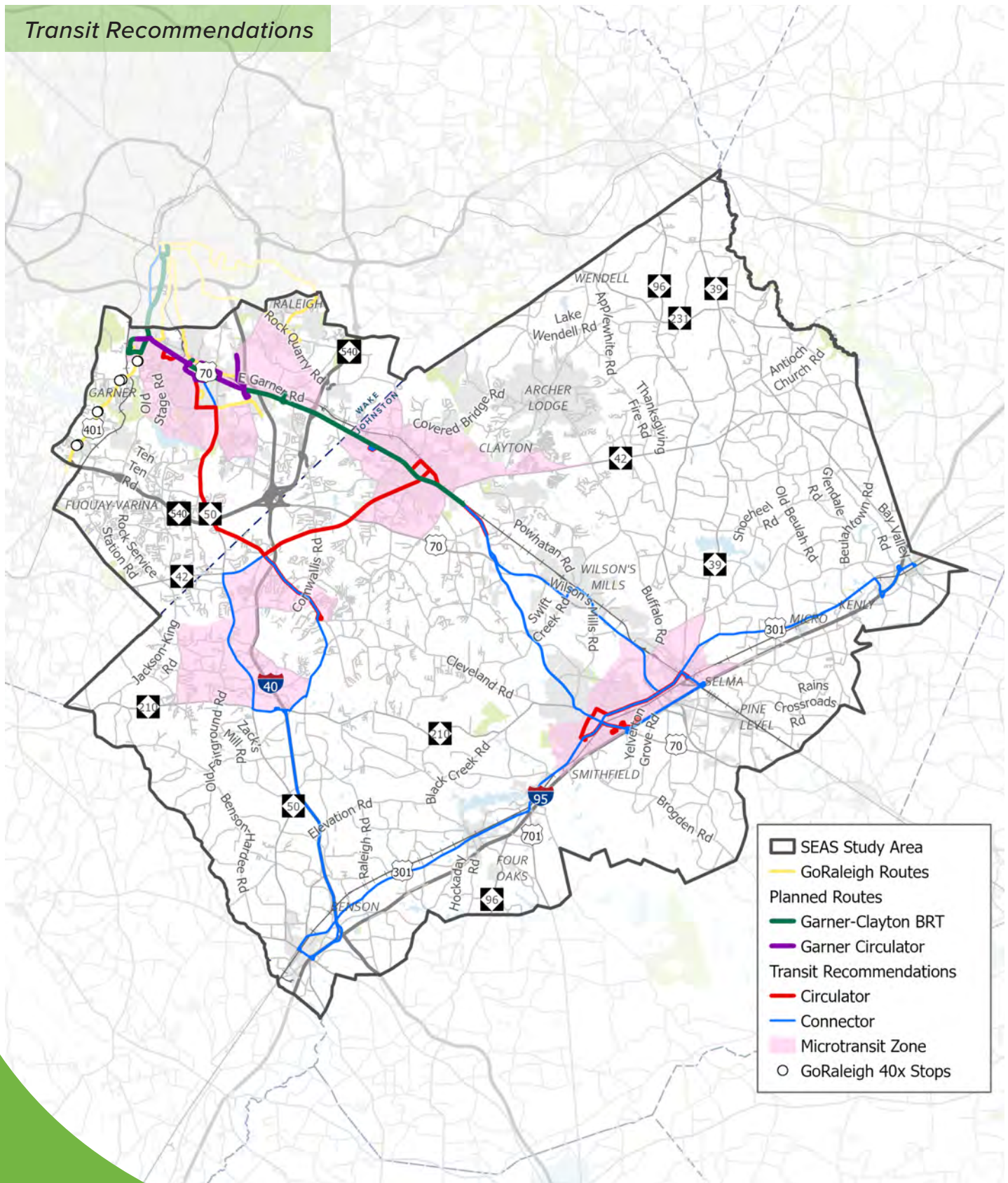
Amenities to promote the comfort of transit riders that are not TTFs. All bus stops should strive to include the following amenities:

- **Bus shelters**
- **Seating**
- **Trash receptacles**
- **Clear signage with printed schedules**
- **Transit-supportive land uses**
- **Active transportation infrastructure**

New GoRaleigh 40X Stops

In Garner, along US 401, there are pockets of moderate-to-moderately high transit-oriented populations who live in high transportation need areas. Based on these trends, along with public feedback, additional stops on the GoRaleigh 40X are warranted. The locations were chosen based on land use, existing infrastructure (i.e. traffic lights or presence of sidewalks), and areas nearby with high transit potential. With these stops, residents of Wake County along US401 can utilize the 40X to Downtown Raleigh or Wake Tech Community College. In addition, at Garner North-South Station, residents can transfer to microtransit or additional fixed-route options that go as far south as Clayton on a one-seat ride.

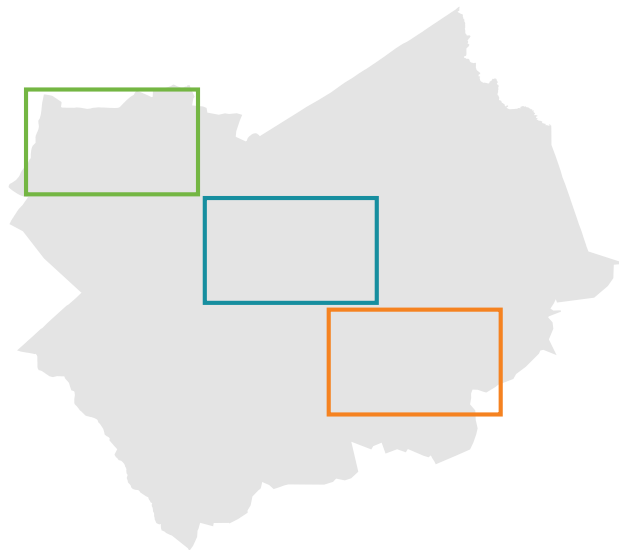
Transit Recommendations



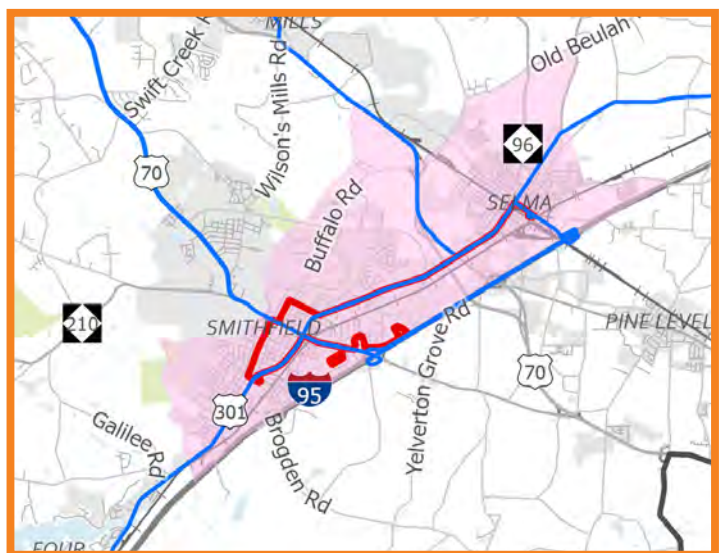
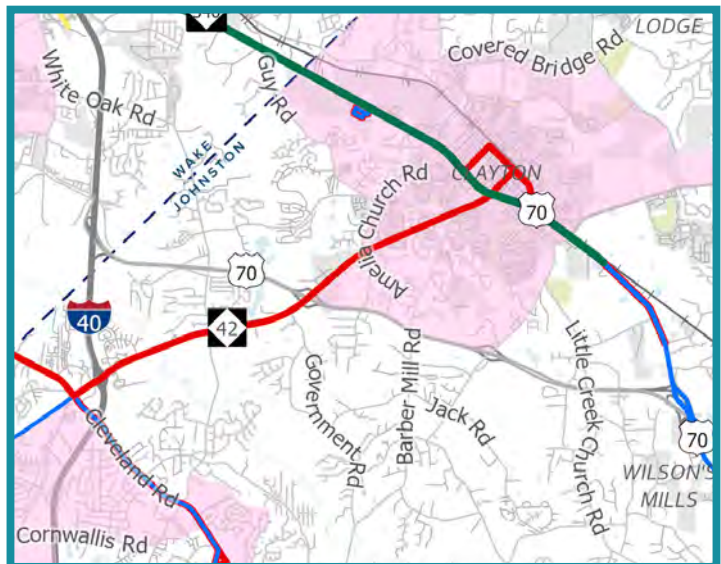
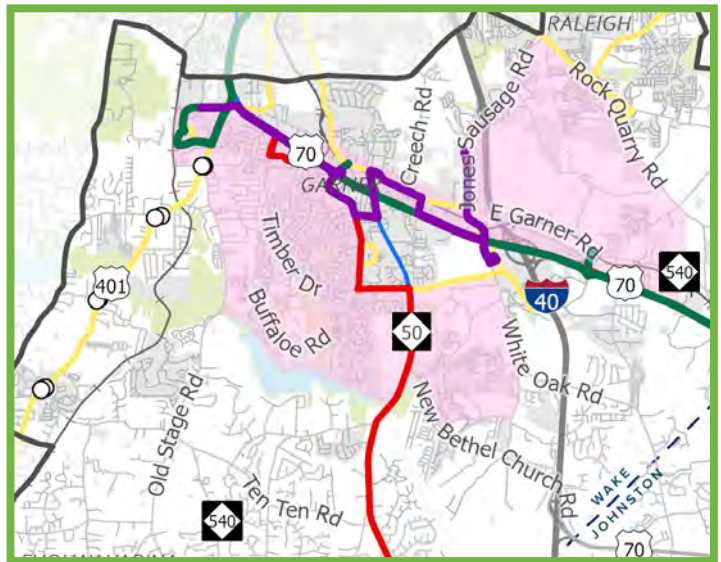
The previous page showed the transit recommendations at the scale of the entire study area. The following inset maps, for three subareas of the southeast area, provide a closer look at the transit recommendations.

The three areas include:

- Garner and Southeast Raleigh
- Clayton and NC 42
- Smithfield and Selma



- SEAS Study Area
- GoRaleigh Routes
- Planned Routes**
- Garner-Clayton BRT
- Garner Circulator
- Transit Recommendations**
- Circulator
- Connector
- Microtransit Zone
- GoRaleigh 40x Stops





ACTION PLAN

The Southeast Area Study represents an opportunity to create a unified planning approach across boundaries and jurisdictions. As the first integrated planning effort between CAMPO and UCPRPO, the original Southeast Area Study brought together the larger region for idea sharing between jurisdictions, consideration of regional project impacts, identification of a shared vision, and a better understanding of where the region needs to go in the future. Now, the SEAS Update continues to build on that foundation, as CAMPO, UCPRPO, and Southeast Area jurisdictions update their vision for the region and take the next step towards implementing the land use policy, growth strategy, and transportation recommendations needed to meet their shared goals.

This chapter contains project maps and tables. Larger scale maps are found in Appendix G.

How the SEAS Influences Regional Planning

The SEAS Update land use and transportation recommendations were created with a combined effort of stakeholders from the CAMPO and UCPRPO areas. Each area will benefit from the enhanced knowledge of the types of improvements that are important to the region.

Land Use

Addressing transportation issues facing the Southeast Area such as congestion, safety, connectivity, and multimodal access requires coordination with changes in land use policies and strategies and collaboration across jurisdictions. The Preferred Growth Scenario developed as part of the SEAS Update has a strong foundation rooted in multijurisdictional support, and the SEAS Update includes specific land use priority strategies for each Southeast Area jurisdiction in Chapter 4 to help guide the implementation of land use policy that supports the SEAS Update guiding principles.

Transportation

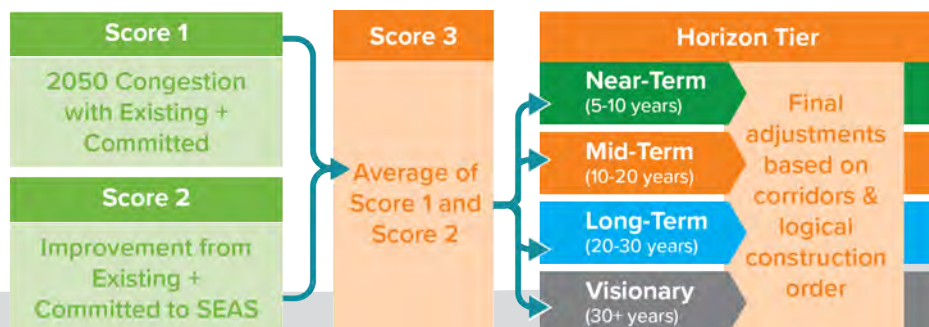
The transportation recommendations within the SEAS Update will become the base of area Comprehensive Transportation Plans (CTP) as aspirational region-wide snapshots of recommended projects based on local needs and desires. Recommendations within the CAMPO area will be considered for evaluation in the fiscally constrained Metropolitan Transportation Plan (MTP), which considers priority needs, project costs, and expected funding to plan out what can be funded and built by 2055. The UCPRPO area is not subject to the development of a Metropolitan Transportation Plan, but UCPRPO can look to the SEAS Update's prioritization to help identify the best candidate projects to be considered and scored through the State Transportation Improvement Program process. CAMPO and UCPRPO will work with NCDOT to determine how projects recommended in the Southeast Area Study advance into funding and implementation.

Project Prioritization

Project prioritization is a method to determine the highest priority projects based on measurable data, known factors influencing project development, and local input. The projects identified in the SEAS Update are generally sorted into four tiers of horizon years: Near-Term (5-10 years), Mid-Term (10-20 years), Long-Term (20-30 years), and Visionary (30+ years), where the time bands are suggested estimates for full build out of a given project. This prioritization process is intended to be a decision making tool for local jurisdictions and elected officials. The prioritization being considered for the SEAS Update is not tied to funding availability. As such, projects prioritized within a given tier may move to a later tier if funding is not available; conversely, results of the prioritization should not necessarily preclude a given project should funding become available sooner than the horizon tier. In the SEAS Update, each transportation mode was prioritized independently with different methods, as explained in this chapter.

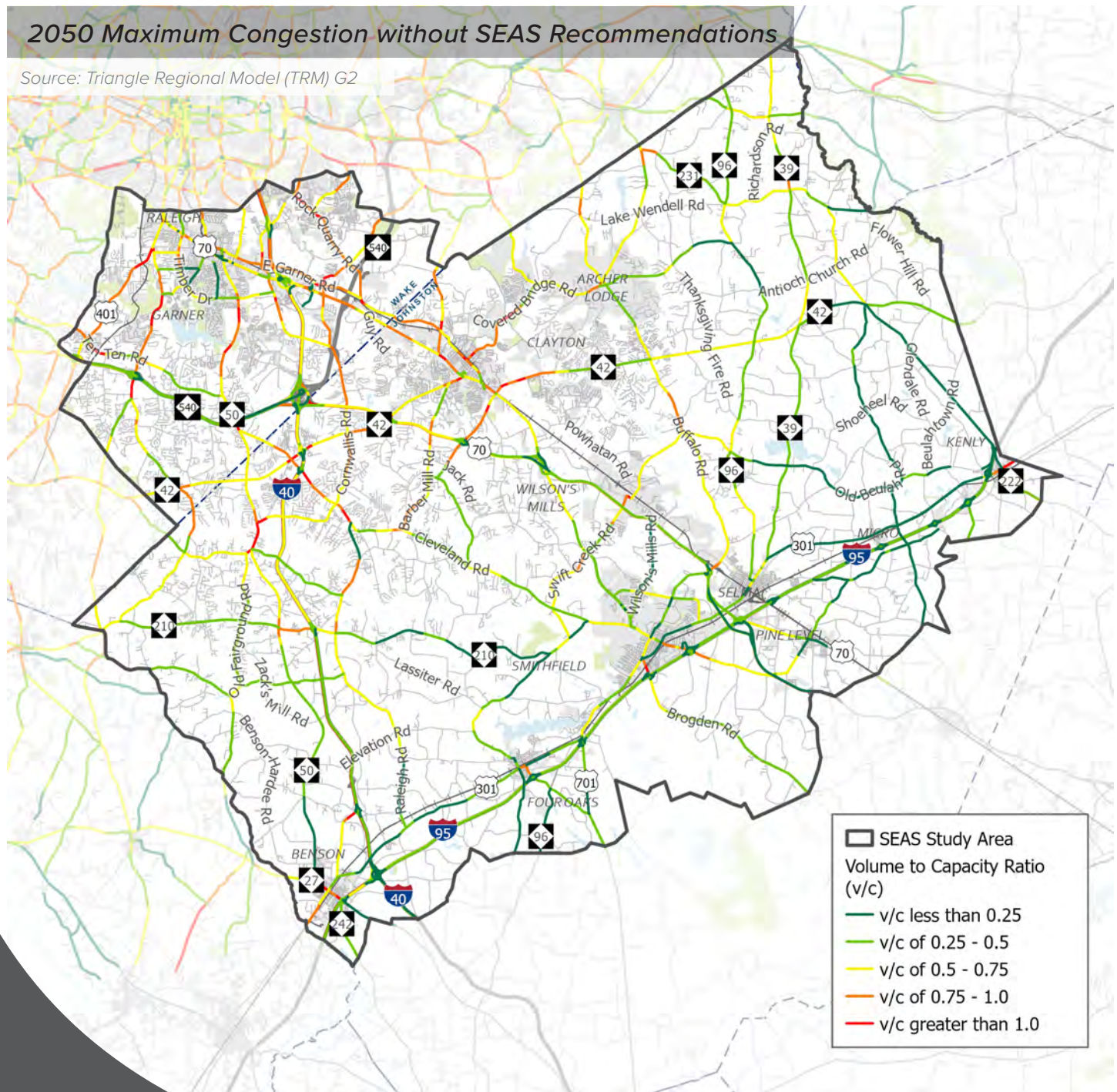
Roadway and Intersection

The prioritization process for roadway and intersection projects scored recommendations based on expected 2050 congestion as a measure of volume over capacity (V/C) and the anticipated congestion improvement a given project would provide if implemented. Projects were sorted into the horizon tiers based on their scoring, with adjustments made as needed to pair projects along specific corridors and ensure a connected network.



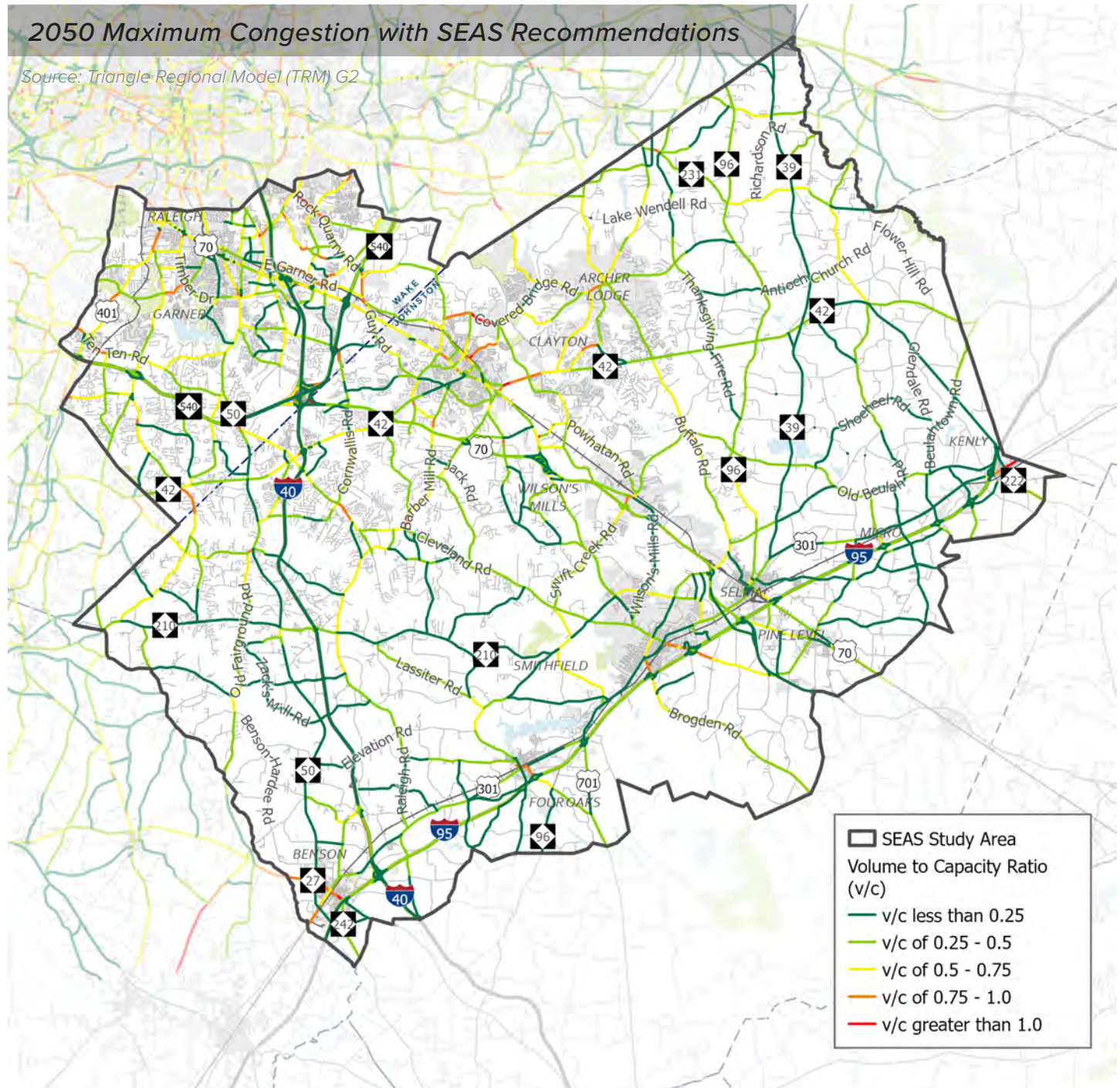
Congestion

The maps below and on the following page shows forecasted maximum congestion as volume over capacity (V/C) during the afternoon peak hour in 2050 if the recommendations of the SEAS Update are not and are implemented, respectively. The map below does include existing projects and projects committed with funding.



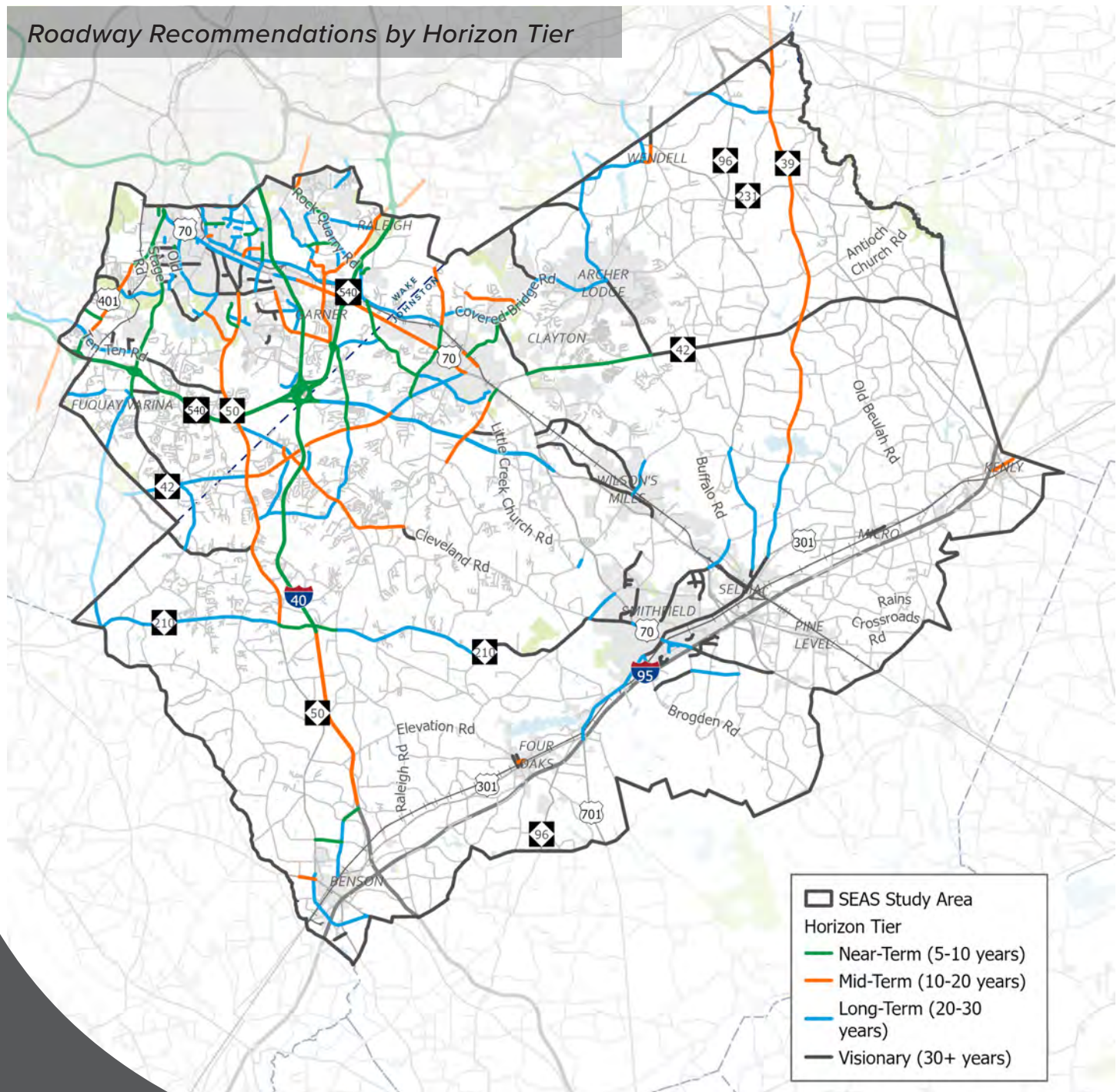
Congestion Improvement

This map below shows that just small, largely segmented portions of roads remain congested (V/C at or greater than 1.0) in 2050, indicating that the SEAS recommendations help to mitigate congestion growth on several major area corridors.



Roadway Prioritization

The map below and the tables on the following pages show the SEAS Update roadway recommendations by their suggested phasing based on the congestion-based prioritization described at the beginning of this chapter.



Roadway Projects by Tier

ID	Project Location	Improvement	Cost	Horizon
A136a	Lake Wheeler Rd from Tryon Rd to Penny Rd	Center Turn Lane	\$24,640,000	Near-Term
A137a	Old Stage Rd from US 401 to Ten Ten Road	Widening	\$55,190,000	Near-Term
A138c1	Jones Sausage Rd from Amazon Driveway to E. Garner Rd	Widening	\$14,100,000	Near-Term
A143b	Cornwallis Rd from NC 540 to NC 42	Widening	\$40,530,000	Near-Term
A201a	Rock Quarry Rd from New Hope Rd to Battle Bridge Rd	Widening	\$23,560,000	Near-Term
A406a	Shotwell Rd from Old US 70 to US 70 Business	Widening	\$13,780,000	Near-Term
A406b	Amelia Church Rd; Shotwell Rd from NC 42 to US 70	Widening	\$26,280,000	Near-Term
A480a1	US 401 from US 70 to Garner Station Rd	Widening	\$27,790,000	Near-Term
A480a2	US 401 from Garner Station Rd to Old Stage Rd	Superstreet	\$24,900,000	Near-Term
A480a3	US 401 from Old Stage Rd to Simpkins Rd	Superstreet	\$24,890,000	Near-Term
A480b	US 401 from Ten Ten Rd to Wake Tech Wy	Widening	\$51,930,000	Near-Term
F41	I-40 from Wade Ave to NC 540	Widening	\$244,580,000	Near-Term
F44a	I-40 from I-440 to US 70 Business	Widening	\$225,890,000	Near-Term
F44b	I-40 from US 70 to NC 42	Widening	\$323,440,000	Near-Term
F44c	I-40 from NC 42 to NC 210	Widening	\$163,850,000	Near-Term
Hrnt3c1	NC 210 from NC 50 to Raleigh Rd	Widening	\$90,910,000	Near-Term
Jhns1b	NC 42 from Glen Laurel Rd to Buffalo Rd	Widening	\$104,440,000	Near-Term
Jhns7a	Guy Rd from Old US 70 to Amelia Church Rd	Widening	\$49,900,000	Near-Term
Jhns13a	NC 42 from US 70 Business to Ranch Rd	New Location	\$2,960,000	Near-Term
Jhns16	N O'Neil St from W. Main St to Clayton Northern Connector	Center Turn Lane	\$28,670,000	Near-Term
SEAS2	Old Stage Rd from Ten Ten Road to Rock Service Station Rd	Widening	\$14,060,000	Near-Term
SEAS8	Covered Bridge Rd from O'Neil St to east of Club Connection Blvd	Center Turn Lane	\$13,620,000	Near-Term
SEAS63	Whitfield Rd from Auburn Church Rd to Rock Quarry Rd	New Location	\$15,060,000	Near-Term
SEAS185	Charles St from current end to Wilmington Rd	New Location	\$6,490,000	Near-Term
SEAS188	New Roadway from W. Garner Rd to Weston Rd	New Location	\$7,090,000	Near-Term
SEAS198	New Bethel Church Rd from Ackerman Rd Extension to NC 50	New Location	\$6,440,000	Near-Term
SEAS199	New Bethel Church Rd from November St to Ackerman Rd Extension	New Location	\$5,210,000	Near-Term
SEAS206	Denlee Rd from Lake Wheeler Rd to US 401	New Location	\$7,980,000	Near-Term
SEAS208	New Roadway from Cindy Dr to Grovemont Rd	New Location	\$880,000	Near-Term
SEAS224	Wilmington St from Tryon Rd to rear of Belk/Carlie C's Shopping Center	New Location	\$4,540,000	Near-Term
SEAS287	Banner Elk Rd from NC 50 to NC 242	New Location	\$10,570,000	Near-Term
SEAS291	NC 242 from Tarheel Rd to I-40	Widening	\$9,820,000	Near-Term
A65	NC 39 from Debnam Rd to Hatcher Rd	Widening	\$167,390,000	Mid-Term
A117	New Hope Rd from Old Poole Rd to Rock Quarry Rd	Widening	\$28,840,000	Mid-Term
A136b	Lake Wheeler Rd from Penny Rd to Ten Ten Rd	Widening	\$51,070,000	Mid-Term
A136c	Lake Wheeler Rd from Ten Ten Rd to Hilltop-Needlemore Rd	Widening	\$48,910,000	Mid-Term
A143a	White Oak Rd from US 70 to NC 540	Widening	\$48,060,000	Mid-Term
A169d2	Southern Wendell Bypass from NC 231 to Wendell Rd	New Location	\$13,230,000	Mid-Term

Roadway Projects by Tier (Continued)

ID	Project Location	Improvement	Cost	Horizon
A203	Auburn-Knightdale Rd; Raynor Rd from Grasshopper Rd to White Oak Rd	Widening	\$99,600,000	Mid-Term
A228b	NC 50 from Cleveland Rd to NC 42	Widening	\$24,310,000	Mid-Term
A228c	NC 50 from NC 42 to NC 210	Widening	\$74,520,000	Mid-Term
A301	US 70 Business from I-40 to NC 42	Widening	\$64,840,000	Mid-Term
A406c	Shotwell Rd from Old Baucom Rd to Old US 70	Widening	\$27,860,000	Mid-Term
A407b3	NC 42 from NC 50 to Glen Rd	Widening	\$26,860,000	Mid-Term
A480a4	US 401 from Simpkins Rd to Ten Ten Rd	Widening	\$74,950,000	Mid-Term
A576	Buffaloe Rd from Aversboro Rd to Benson Rd	Center Turn Lane	\$21,610,000	Mid-Term
F41b	I-40 from NC 540 to Cornwallis Rd	Widening	\$23,690,000	Mid-Term
F44d	I-40 from NC 210 to NC 242	Widening	\$172,790,000	Mid-Term
F45	I-40 from Cornwallis Rd to NC 210	Widening	\$31,170,000	Mid-Term
F46	I-40 from NC 210 to NC 242	Widening	\$41,890,000	Mid-Term
Jhns2b	NC 42 from I-40 to US 70 Bypass	Widening	\$48,390,000	Mid-Term
Jhns13b	NC 42 from US 70 Bypass to US 70 Business	Widening	\$28,680,000	Mid-Term
SEAS4	NC 50 from Timber Dr to Cleveland Rd	Widening	\$37,380,000	Mid-Term
SEAS12	Main St from Robertson Rd to Smith St	TSM	\$6,540,000	Mid-Term
SEAS61	Loop Rd from Bobbitt Rd to Covered Bridge Rd	New Location	\$22,410,000	Mid-Term
SEAS62	Ranch Rd from US 70 Bypass to Jack Rd	Widening	\$20,520,000	Mid-Term
SEAS70	US 301 from W. Goldsboro St to W. 7th St	TSM	\$9,160,000	Mid-Term
SEAS73	New roadway from Auburn Church Rd to Auburn-Knightdale Rd	New Location	\$8,830,000	Mid-Term
SEAS190	Curtiss Dr from W. Garner Rd to current end	New Location	\$1,860,000	Mid-Term
SEAS191	New Rand Rd from E. Garner Rd to Jones Sausage Rd	New Location	\$11,040,000	Mid-Term
SEAS233	New roadway from Whifield Rd Extension to Wall Store Rd	New Location	\$20,580,000	Mid-Term
SEAS252	Cleveland Rd from NC 42 to Cornwallis Rd	Widening	\$40,980,000	Mid-Term
SEAS253	Cleveland Rd from Cornwallis Rd to Barber Mill Rd	TSM	\$24,030,000	Mid-Term
SEAS271	E Sanders St from N. Main St to Maple Ave	Modernization	\$340,000	Mid-Term
SEAS278	Glen Rd from Cleveland Rd to NC 42	New Location	\$5,340,000	Mid-Term
SEAS290	NC 27 from Mingo Rd to Main St	Center Turn Lane	\$6,160,000	Mid-Term
A137c	Old Stage Rd from Rock Service Station Rd to NC 42	Widening	\$42,970,000	Long-Term
A137d	Old Stage Rd from NC 42 to NC 210	Widening	\$70,820,000	Long-Term
A138a	Jones Sausage Rd from US 70 to Timber Dr Ext	New Location	\$15,160,000	Long-Term
A138b	Jones Sausage Rd from Garner Rd to US 70	New Location	\$31,960,000	Long-Term
A138d	Escondido Farm Rd from White Oak Rd to Guy Rd	New Location	\$35,840,000	Long-Term
A148c	Eagle Rock Rd; Buffalo Rd from Lake Myra Rd to Covered Bridge Rd	Widening	\$65,850,000	Long-Term
A201b	Rock Quarry Rd from Battle Bridge Rd to E. Garner Rd	Widening	\$52,860,000	Long-Term
A202	Garner Rd from Rock Quarry Rd to Shotwell Rd	Widening	\$42,310,000	Long-Term
A214	Garner Rd from Tryon Rd to Rock Quarry Rd	Center Turn Lane	\$104,520,000	Long-Term
A300	US 70 Business from US 401 to I-40	Widening	\$164,420,000	Long-Term

TSM = Transportation Systems Management

Roadway Projects by Tier (Continued)

ID	Project Location	Improvement	Cost	Horizon
A400a	Ten Ten Rd from Bells Lake Rd to Old Stage Rd	Widening	\$67,010,000	Long-Term
A407b2	NC 42 from study area boundary to NC 50	Widening	\$57,680,000	Long-Term
A435	Battle Bridge Rd from Rock Quarry Rd to Auburn-Knightdale Rd	Center Turn Lane	\$14,800,000	Long-Term
A539	Banks Rd from US 401 to Fanny Brown Rd	Center Turn Lane	\$22,630,000	Long-Term
A540b	Rock Service Station Rd from NC 42 to Mt Pleasant Rd	Center Turn Lane	\$33,560,000	Long-Term
A578	Auburn Church Rd from Jones Sausage Rd to Garner Rd	Center Turn Lane	\$37,230,000	Long-Term
A683b	Barwell Rd from Poole Rd to Berkely Lake Dr	Center Turn Lane	\$17,520,000	Long-Term
A690	Stotts Mill Rd from Buffalo Rd to Wendell Rd	Widening	\$35,960,000	Long-Term
A691	New roadway from Lake Glad Rd to Stotts Mill Rd	New Location	\$10,060,000	Long-Term
A693	S. Selma Rd from Old Wilson Rd to Stotts Mill Rd	Center Turn Lane	\$21,380,000	Long-Term
A741	Aversboro Rd from Timber Dr to Thompson Rd Extension	Center Turn Lane	\$14,600,000	Long-Term
F14	US 70 Bypass from I-40 to US-70 Business	Widening	\$180,660,000	Long-Term
Hrnt3b	NC 210 from Old Stage Rd to NC 50	Widening	\$85,420,000	Long-Term
Hrnt3c2	NC 210 from Raleigh Rd to Lassiter Pond Rd	Widening	\$67,010,000	Long-Term
Jhns2a	NC 42 from US 70 Bypass to US 70 Business	Widening	\$40,520,000	Long-Term
Jhns4b	Covered Bridge Rd from Shotwell Rd to N. O'Neil St	Widening	\$26,150,000	Long-Term
Jhns7b	Guy Rd from Amelia Church Rd to NC 42	Widening	\$14,340,000	Long-Term
Jhns10a	Cleveland Rd from NC 50 to NC 42	Widening	\$33,800,000	Long-Term
Jhns14	Clayton Northern Connector from N. O'Neil St to Covered Bridge Rd	New Location	\$1,850,000	Long-Term
SEAS10	Earpsboro Chamblee Rd; Earpsboro Rd from Morphus Bridge Rd to NC 39	Widening	\$43,430,000	Long-Term
SEAS19	Swift Creek Rd from 0.5mi north of Airport Industrial Dr to Airport Industrial Dr	Center Turn Lane	\$2,700,000	Long-Term
SEAS27	New Pearl Rd from Barwell Rd to Auburn Church Rd	New Location	\$30,320,000	Long-Term
SEAS30	Beichler Rd from US 70 to Beichler Rd	New Location	\$1,570,000	Long-Term
SEAS44	Stotts Mill Rd from Buffalo Rd to Wendell Rd	Modernization	\$3,930,000	Long-Term
SEAS65	New roadway from Wall Store Rd to Auburn-Knightdale Rd	New Location	\$6,680,000	Long-Term
SEAS69	Fox Walk Pth from White Oak Rd to Timber Drive E. Extension	New Location	\$8,580,000	Long-Term
SEAS71	Cleveland Crossing Dr from Cleveland Crossing Dr to Cleveland Rd	New Location	\$8,310,000	Long-Term
SEAS180	Timber Dr from US 70 to Vandora Springs Rd	Access Management	\$24,010,000	Long-Term
SEAS183	Timber Dr from Vandora Springs Rd to Aversboro Rd	Access Management	\$23,010,000	Long-Term
SEAS184	Jewell St from current end to Wilmington Rd	New Location	\$3,070,000	Long-Term
SEAS186	New roadway from Longview St to Creech Rd	New Location	\$3,490,000	Long-Term
SEAS187	Cofield Aly from new roadway to Garner Rd	New Location	\$5,500,000	Long-Term
SEAS189	Quiet Refuge Ln from current end to new roadway	New Location	\$1,310,000	Long-Term
SEAS192	New roadway from Charles St Extension to E. Garner Rd	New Location	\$10,650,000	Long-Term
SEAS197	Skipping Rock Ln from current end to Ackerman Rd Ext	New Location	\$2,400,000	Long-Term
SEAS209	Roan Dr from Poplar Springs Church Rd to Vandora Springs Rd	New Location	\$7,220,000	Long-Term
SEAS212	Thompson Rd from current end to Aversboro Rd	New Location	\$3,360,000	Long-Term

TSM = Transportation Systems Management

Roadway Projects by Tier (Continued)

ID	Project Location	Improvement	Cost	Horizon
SEAS214	Crosspine Dr from Bentpine Dr to Maxwell Dr	New Location	\$2,340,000	Long-Term
SEAS215	Ackerman Rd from New Bethel Church Rd Extension to NC 50	New Location	\$8,520,000	Long-Term
SEAS216	Wrenn Rd from current end to New Bethel Church Rd Extension	New Location	\$9,810,000	Long-Term
SEAS219	Creek Commons Ave from Muirfield Ridge Dr to Creech Rd	New Location	\$3,370,000	Long-Term
SEAS220	Timber Drive E. from Adeline Wy to White Oak Rd	New Location	\$26,090,000	Long-Term
SEAS222	Meadowbrook Dr from Weston Rd to Creech Rd	New Location	\$8,730,000	Long-Term
SEAS223	Tryon Rd from Cyrus St to Rivermist Dr	New Location	\$30,200,000	Long-Term
SEAS226	Johnson St from Creech Rd to Avery St	New Location	\$14,420,000	Long-Term
SEAS244	Vandora Springs Rd from US 401 to Old Stage Rd	New Location	\$21,420,000	Long-Term
SEAS245	Ackerman Rd from NC 50 to Anton Wy	New Location	\$6,490,000	Long-Term
SEAS246	Market St from Brightleaf Blvd to I-95	TSM	\$13,160,000	Long-Term
SEAS248	New roadway from Mallard Rd to Hill Rd	New Location	\$18,710,000	Long-Term
SEAS251	Market St from NC 210 to Front St	TSM	\$3,650,000	Long-Term
SEAS259	US 301 from I-95 to Brogden Rd	Widening	\$68,010,000	Long-Term
SEAS263	Brogden Rd from S. Brightleaf Blvd to I-95	Modernization	\$1,030,000	Long-Term
SEAS264	Buffalo Rd from US 70 to Old Beulah Rd	Modernization	\$2,600,000	Long-Term
SEAS266	Clayton Southern Connector from Little Creek Church Rd to NC 42	New Location	\$34,460,000	Long-Term
SEAS268	Fire Dept Rd from Southerland Rd to Wilson's Mills Rd	Modernization	\$3,100,000	Long-Term
SEAS272	Covered Bridge Rd from Pritchard Rd to Clayton Northern Connector	Widening	\$37,230,000	Long-Term
SEAS279	Covered Bridge Rd from Pritchard Rd to Buffalo Rd	TSM	\$53,000,000	Long-Term
SEAS281	New roadway from Market St to College Rd	New Location	\$7,530,000	Long-Term
SEAS282	West Smithfield Connector from NC 210 to Market St	New Location	\$15,310,000	Long-Term
SEAS283	NC 39 from Little Devine Rd to US 301	Modernization	\$7,650,000	Long-Term
SEAS284	NC 96 from Little Devine Rd to Poole Dr	Modernization	\$10,080,000	Long-Term
SEAS288	Benson Western Bypass from NC 50 to NC 50	New Location	\$37,330,000	Long-Term
SEAS289	Benson Western Bypass from NC 50 to NC 50	New Location	\$740,000	Long-Term
SEAS292	NC 242 from Tarheel Rd to N. Wall St	Widening	\$34,410,000	Long-Term
SEAS294	Cornwallis Rd from Old Drugstore Rd to NC 42	TSM	\$54,000,000	Long-Term
SEAS303	Old Drug Store Rd from NC 42 to NC 50	TSM	\$33,310,000	Long-Term
SEAS304	Wilmington Rd from Creech Rd to current end	New Location	\$16,910,000	Long-Term
SEAS305	Wilmington Rd from current end to Jones Sausage Rd	Widening	\$16,770,000	Long-Term
A88	New Rand Rd from US 70 Business to Benson Rd	Center Turn Lane	\$16,060,000	Visionary
A144	Garner Rd from US 70 to Timber Dr	Center Turn Lane	\$21,900,000	Visionary
A148d	Buffalo Rd from Covered Bridge Rd to NC 42	Widening	\$40,470,000	Visionary
A169d1	Eastern Wendell Bypass from Morphus Bridge Rd to NC 231	New Location	\$26,590,000	Visionary
A400b	Ten Ten Rd from Old Stage Rd to NC 50	Widening	\$45,070,000	Visionary
A540a	Rock Service Station Rd from Old Stage Rd to NC 42	Center Turn Lane	\$48,780,000	Visionary
A541	Mt Pleasant Rd from NC 42 to NC 50	Widening	\$76,380,000	Visionary
A574	Grovmont Rd from US 401 to Timber Dr	Center Turn Lane	\$14,610,000	Visionary

TSM = Transportation Systems Management

Roadway Projects by Tier (Continued)

ID	Project Location	Improvement	Cost	Horizon
A575	Woodland Rd from Old Stage Rd to Vandora Springs Rd	Center Turn Lane	\$21,460,000	Visionary
A582	Bissette Rd/Lake Wendell Rd from Smithfield Rd to Medlin Rd	Center Turn Lane	\$36,440,000	Visionary
A665	Perry Curtis Rd/Wake County Line Rd from S. Arendale Av to NC 39	Center Turn Lane	\$23,160,000	Visionary
A798	NC 96 from Green Grove Rd to Rice Rd	Widening	\$21,200,000	Visionary
Jhns4a1	Clayton Northern Connector from NC 42 to N. O'Neil St	New Location	\$20,060,000	Visionary
Jhns4a2	Clayton Northern Connector from N. O'Neil St to NC 42	Widening	\$29,040,000	Visionary
Jhns6	Prichard Rd; Smithfield Rd from Wake County Line to Covered Bridge Rd	Widening	\$34,530,000	Visionary
Jhns15	NC 42 from Buffalo Rd to CAMPO Boundary	TSM	\$24,550,000	Visionary
Jhns17	Pony Farm Rd from Ranch Rd to Little Creek Church Rd	New Location	\$20,320,000	Visionary
SEAS16	Moss Rd from Morphus Bridge Rd to Earpsboro Chamblee Rd	New Location	\$67,780,000	Visionary
SEAS29	Aversboro Rd from US 70 to Timber Dr	TSM	\$27,580,000	Visionary
SEAS54	New roadway from Mallard Rd to US 70 Business	New Location	\$4,620,000	Visionary
SEAS55	New roadway from US 70 Business to new roadway	New Location	\$9,610,000	Visionary
SEAS56	New roadway from US 70 Business to Yelverton Grove Rd	New Location	\$9,700,000	Visionary
SEAS60	New roadway from new roadway to Yelverton Grove Rd	New Location	\$1,570,000	Visionary
SEAS64	Majestic Peak Dr from Bryan Rd to Alderbranch Ct	New Location	\$3,630,000	Visionary
SEAS179	Grovemont Rd from Fayetteville Rd to Old Stage Rd	New Location	\$1,950,000	Visionary
SEAS181	Fifth Ave from Vandora Springs Rd to Aversboro Rd	Access Management	\$3,140,000	Visionary
SEAS182	Timber Dr from Aversboro Rd to White Oak Rd	Access Management	\$26,010,000	Visionary
SEAS193	Wakeland Dr from Long Ave to White Oak Rd	New Location	\$9,720,000	Visionary
SEAS194	Poole Dr from Lawndale St to NC 50	New Location	\$2,940,000	Visionary
SEAS195	Coffeeberry Ct from Fox Walk Pth Extension to Twinberry Ln	New Location	\$980,000	Visionary
SEAS196	Fox Walk Pth from Fox Trap Ct to White Oak Rd	New Location	\$11,260,000	Visionary
SEAS200	Bayberry Woods Dr from Fox Walk Pth to current end	New Location	\$3,740,000	Visionary
SEAS201	Banks Rd from Old Stage Rd to Holland Church Rd	New Location	\$10,560,000	Visionary
SEAS202	Landsburg Dr from Okamoto Dr to current end	New Location	\$5,340,000	Visionary
SEAS203	South Mountain Dr from Landsburg Dr Extension to current end	New Location	\$300,000	Visionary
SEAS204	Kanaskis Rd from current end to Ten Ten Rd	New Location	\$5,960,000	Visionary
SEAS205	Hurst Dr from Kanaskis Rd Extension to current end	New Location	\$2,190,000	Visionary
SEAS207	Legend Rd from Old Stage Rd to Lakeside Trail	New Location	\$3,230,000	Visionary
SEAS210	New roadway from new roadway to Hall Blvd	New Location	\$1,100,000	Visionary
SEAS211	New roadway from Old Stage Rd to new roadway	New Location	\$3,230,000	Visionary
SEAS213	Malibu Drive from current end to Vandora Springs Rd Extension	New Location	\$2,450,000	Visionary
SEAS217	Buffaloe Rd from Vandora Springs Rd to Garner Town Limits	Access Management	\$13,640,000	Visionary
SEAS218	Buffaloe Rd from Garner Town Limits to Garner Town Limits	Access Management	\$5,630,000	Visionary
SEAS221	Lake Wheeler Park from Lake Wheeler Park to US 401	New Location	\$16,140,000	Visionary
SEAS225	Idlewood Village Dr from current end to Tryon Rd Extension	New Location	\$1,200,000	Visionary
SEAS247	New roadway from Brogden Rd to Mallard Rd	New Location	\$16,770,000	Visionary

TSM = Transportation Systems Management

Roadway Projects by Tier (Continued)

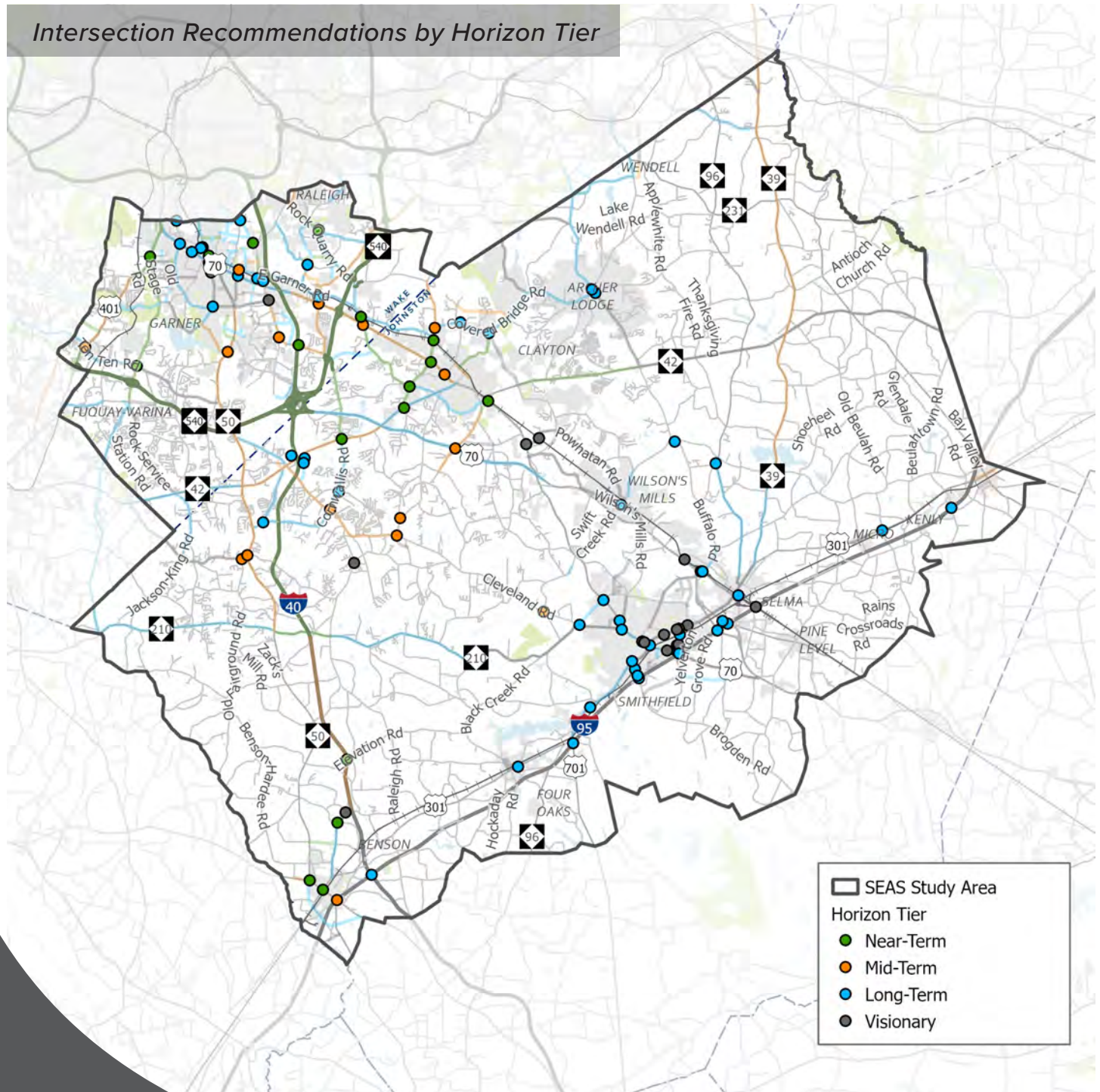
ID	Project Location	Improvement	Cost	Horizon
SEAS249	Old Farm Rd from new roadway to current end	New Location	\$2,760,000	Visionary
SEAS250	Peedin Rd from Outlet Center Dr to Venture Dr	New Location	\$6,360,000	Visionary
SEAS254	Clayton Industrial Connector from NC 42 to GLP One Wy	New Location	\$18,690,000	Visionary
SEAS255	Brightleaf Blvd from Brogden Rd to Market St	TSM	\$10,520,000	Visionary
SEAS256	Pollock St from US 70 Bypass to NC 39	TSM	\$29,620,000	Visionary
SEAS257	Brightleaf Blvd from Booker Dairy Rd to Ricks Rd	TSM	\$9,590,000	Visionary
SEAS258	Brightleaf Blvd from Market St to Booker Dairy Rd	TSM	\$18,210,000	Visionary
SEAS260	US 301 within Micro Town Limits	Modernization	\$1,080,000	Visionary
SEAS261	NC 210 from Lassiter Pond Rd to Market St	Modernization	\$10,340,000	Visionary
SEAS262	N. Baker St from E. Hatcher St to E. Wellons St	Modernization	\$670,000	Visionary
SEAS265	Buffalo Rd from US 70 to Hospital Rd	Modernization	\$6,030,000	Visionary
SEAS267	N. Church St from W. Hatcher St to W. Wellons St	Modernization	\$890,000	Visionary
SEAS269	Powhatan Rd from US 70 Business to Fire Dept Rd	Modernization	\$10,810,000	Visionary
SEAS270	W. Sanders St from N. Church St to N. Main St	Modernization	\$120,000	Visionary
SEAS273	Wilson's Mills Rd from Swift Creek Rd to US 70	Modernization	\$2,140,000	Visionary
SEAS274	Wilson's Mills Rd from Gordon Rd to Swift Creek Rd	Modernization	\$2,220,000	Visionary
SEAS275	Gordon Rd from US 70 Business to Wilson's Mills Rd	Modernization	\$4,200,000	Visionary
SEAS276	Wilson's Mills Rd from M Durwood Stephenson Hwy to Market St	Center Turn Lane	\$13,100,000	Visionary
SEAS277	Barber Mill Rd from Cleveland Rd to Monroe Rd	New Location	\$7,560,000	Visionary
SEAS280	Jaguar Dr from Martin Luther King Jr Rd to Jaguar Rd	New Location	\$8,640,000	Visionary
SEAS285	N. Sumner St from W. Richardson St to Poole Dr	Modernization	\$430,000	Visionary
SEAS286	W. Richardson St from N. Sumner St to Pollock St	Modernization	\$230,000	Visionary
SEAS293	Ashley Rd/Massengill Farm Rd from Massengill Farm Rd to NC 242	New Location	\$5,140,000	Visionary
SEAS295	Noble St from Buffalo Rd to Pollock St	Center Turn Lane	\$17,870,000	Visionary
SEAS296	US 70 Business from I-95 to US 70	Center Turn Lane	\$41,250,000	Visionary
SEAS297	Booker Dairy Rd from Buffalo Rd to M Durwood Stephenson Pkwy	New Location	\$18,470,000	Visionary
SEAS298	New roadway from M Durwood Stephenson Pkwy to Lee Youngblood Rd	New Location	\$12,800,000	Visionary
SEAS299	New roadway from NC 210 to US 70 Business	New Location	\$6,910,000	Visionary
SEAS300	New roadway from Kellie Rd to Booker Dairy Rd Extension	New Location	\$8,700,000	Visionary
SEAS301	Bradford Rd from Buffalo Rd to current end	New Location	\$6,550,000	Visionary
SEAS302	Stephenson Dr from new roadway to current end	New Location	\$2,430,000	Visionary

TSM = Transportation Systems Management



Intersection Prioritization

The map below and the tables on the following pages show the SEAS Update intersection recommendations by their suggested phasing based on the congestion-based prioritization described at the beginning of this chapter.



Intersection Projects by Tier

ID	Project Location	Improvement	Cost	Horizon
A143a1	I-40/White Oak Rd	Interchange	\$20,455,050	Near-Term
A742	Vandora Hills Rd/RR	Grade Separation	\$5,644,918	Near-Term
Jhns13c	US 70 BUS/NC 42/Ranch Rd	Interchange	\$58,284,000	Near-Term
SCI-1	Guy Rd/RR	Grade Separation	\$6,320,000	Near-Term
SCI-1	Shotwell Rd/RR	Grade Separation	\$6,320,000	Near-Term
SEAS7	NC 42/Cornwallis Rd	Intersection Improvement	\$1,710,000	Near-Term
SEAS15	NC 50/W Main Street/Benson Western Bypass	Intersection Realignment	\$1,580,000	Near-Term
SEAS20	Ten Ten Rd/Old Stage Rd	Intersection Improvement	\$1,710,000	Near-Term
SEAS21	US 301/NC 50	Intersection Improvement	\$1,710,000	Near-Term
SEAS26	Garner Rd/Yeargan Rd	Intersection Improvement	\$1,710,000	Near-Term
SEAS39	NC 242/Tarheel Rd	Intersection Improvement	\$100,000	Near-Term
SEAS74	Guy Rd/Amelia Church Rd	Intersection Improvement	\$1,710,000	Near-Term
SEAS75	I-40/Elevation Rd	Interchange	\$41,980,000	Near-Term
SEAS78	US 70 BUS/Shotwell Rd	Intersection Improvement	\$1,710,000	Near-Term
SEAS120	Rock Quarry Rd/Battle Bridge Rd	Intersection Improvement	\$100,000	Near-Term
SEAS137	Wilmington Rd/Charles St Ext	Intersection Realignment	\$970,000	Near-Term
SEAS178	NC 42/Amelia Church Rd	Intersection Improvement	\$1,710,000	Near-Term
SEAS231	Fayetteville Rd/Old Stage rd	Intersection Improvement	\$1,710,000	Near-Term
A678	US 401/Ten Ten Rd	Interchange	\$95,050,000	Mid-Term
SCI-1	New Rand Rd/RR	Grade Separation	\$7,510,000	Mid-Term
SEAS4a	Cleveland Rd/Barber Mill Rd	Intersection Improvement	\$100,000	Mid-Term
SEAS4b	Barber Mill Rd/Government Rd	Intersection Improvement	\$100,000	Mid-Term
SEAS5	Cleveland Rd/Cornwallis Rd	Intersection Improvement	\$1,710,000	Mid-Term
SEAS23	US 70/Guy Rd	Intersection Improvement	\$3,420,000	Mid-Term
SEAS32	Mount Pleasant Rd/Old Fairground Rd/Edmonson Dr	Intersection Improvement	\$4,100,000	Mid-Term
SEAS33	I-95/NC 50	Interchange	\$20,140,000	Mid-Term
SEAS50	US 70/Raynor Rd	Intersection Improvement	\$1,710,000	Mid-Term
SEAS52	White Oak Rd/Hebron Church Rd/Ackerman Rd	Intersection Realignment	\$1,070,000	Mid-Term
SEAS79	NC 50/Mount Pleasant Rd/Sanders Rd	Intersection Improvement	\$1,710,000	Mid-Term
SEAS82	US 70/Ranch Road	Interchange	\$10,240,000	Mid-Term
SEAS119	US 70 BUS/Amelia Church Rd/Robertson St	Intersection Improvement	\$1,710,000	Mid-Term
SEAS165	Shotwell Rd/Covered Bridge Rd	Intersection Improvement	\$100,000	Mid-Term
SEAS230	Benson Rd/Bufalo Rd	Intersection Improvement	\$1,710,000	Mid-Term
SEAS307	Cleveland Rd/Swift Creek Rd	Intersection Improvement	\$2,097,595	Mid-Term
A138b	Jones Sausage Rd/RR	Grade Separation	\$27,604,000	Long-Term
A139	US 70/Timber Dr	CFI	\$17,830,000	Long-Term
SCI-1	Auburn Knightdale Rd/RR	Grade Separation	\$7,510,000	Long-Term
SCI-1	Yeargan Rd/RR	Grade Separation	\$7,510,000	Long-Term
SEAS1	Timber Dr/Aversboro Rd	Intersection Improvement	\$1,710,000	Long-Term

CFI = Continuous Flow Intersection

Intersection Projects by Tier (Continued)

ID	Project Location	Improvement	Cost	Horizon
SEAS3	Jones Sausage Rd/RR	Road Closure	\$31,960,000	Long-Term
SEAS3a	Buffalo Rd/Noble St/Baugh Rd	Intersection Improvement	\$1,710,000	Long-Term
SEAS3b	Buffalo Rd/RR	Grade Separation	\$6,320,000	Long-Term
SEAS6	Cornwallis Rd/Josephine Rd	Intersection Improvement	\$100,000	Long-Term
SEAS9	Buffalo Rd/Covered Bridge Rd/Wendell Rd	Intersection Improvement	\$1,710,000	Long-Term
SEAS11	US 301/Keen Rd	Intersection Improvement	\$1,710,000	Long-Term
SEAS13	Market St/NC 210	Intersection Improvement	\$1,710,000	Long-Term
SEAS14	Market St/Wilson's Mills Rd	Intersection Improvement	\$3,072,532	Long-Term
SEAS17	Covered Bridge Rd/O'Neil St	Intersection Improvement	\$1,710,000	Long-Term
SEAS18	US 70/Ricks Rd/Outlet Center Drive	Intersection Improvement	\$1,710,000	Long-Term
SEAS22	Market St/Brightleaf Blvd	Intersection Improvement	\$1,710,000	Long-Term
SEAS24	I-95/US 70	Interchange	\$25,940,000	Long-Term
SEAS25	US 70/New Rand Rd	Intersection Improvement	\$1,710,000	Long-Term
SEAS31	Buffalo Rd/Archer Lodge Rd	Intersection Improvement	\$1,710,000	Long-Term
SEAS35	NC 96/Live Oak Church Rd	Intersection Improvement	\$100,000	Long-Term
SEAS38	NC 210/Cleveland Rd	Intersection Improvement	\$1,710,000	Long-Term
SEAS45	Hammond Rd/Tryon Rd	Intersection Improvement	\$1,710,000	Long-Term
SEAS47	I-95/US 70 BYP	Interchange	\$35,000,000	Long-Term
SEAS48	Mechanical Blvd/Yeargan Rd	Intersection Improvement	\$100,000	Long-Term
SEAS51	I-40/I-95	Interchange	\$219,770,000	Long-Term
SEAS53	I-95/Market St	Interchange	\$34,500,000	Long-Term
SEAS66	Auburn Church Rd/Wall Store Rd	Intersection Realignment	\$2,140,000	Long-Term
SEAS68	Cleveland Crossing Dr/Walmart access	Intersection Improvement	\$3,080,000	Long-Term
SEAS72	Cleveland Crossing Dr/Cleveland Crossing Dr Ext	Intersection Realignment	\$490,000	Long-Term
SEAS77	Brightleaf Blvd/Galilee Rd	Intersection Improvement	\$1,710,000	Long-Term
SEAS81	Cornwallis Rd/Old Drug Store Rd	Intersection Realignment	\$680,000	Long-Term
SEAS83	Covered Bridge Rd/City Rd	Intersection Improvement	\$1,710,000	Long-Term
SEAS99	Webb St/RR	Road Closure	\$115,000	Long-Term
SEAS100	Peedin Rd/RR	Grade Separation	\$7,510,000	Long-Term
SEAS101	Brogden Rd/RR	Grade Separation	\$7,510,000	Long-Term
SEAS121	US 70/Yeargan Rd	Intersection Improvement	\$1,710,000	Long-Term
SEAS151	I-95/Brogden Rd/Wal-Pat Rd/MLK Jr Dr	Intersection Improvement	\$1,403,719	Long-Term
SEAS164	US 301/Oak Grove Inn Rd	Intersection Improvement	\$1,710,000	Long-Term
SEAS227	Creech Rd/Wilmington Rd	Intersection Realignment	\$1,180,000	Long-Term
SEAS228	US 70/Aversboro Rd/5th Ave	Intersection Realignment	\$250,000	Long-Term
SEAS308	Market St/M Durwood Stephenson Hwy	Intersection Improvement	\$3,072,532	Long-Term
SEAS313	Brightleaf Blvd/Brogden Rd/Third St	Intersection Improvement	\$1,710,000	Long-Term
SEAS314	Outlet Center Dr	Intersection Improvement	\$354,523	Long-Term
SEAS315	I-95/Brogden Rd	Interchange	\$59,300,000	Long-Term

Intersection Projects by Tier (Continued)

ID	Project Location	Improvement	Cost	Horizon
SEAS316	I-95/Truck Stop Rd	Interchange	\$20,480,000	Long-Term
SEAS317	I-95/US 701/NC 96	Interchange	\$64,120,000	Long-Term
SEAS318	Buffalo Rd/Fire Dept Rd/Little Divine Rd	Intersection Realignment	\$16,120,000	Long-Term
SEAS320	Wilson's Mills Rd/Fire Dept Rd	Intersection Realignment	\$4,610,000	Long-Term
SEAS321	Glen Rd/Technology Dr	Intersection Improvement	\$3,080,000	Long-Term
SCI-1	Powhatan Rd/RR	Grade Separation	\$6,320,000	Visionary
SEAS36	Market St/Fourth St	Intersection Improvement	\$2,363,487	Visionary
SEAS37	Market St/Fifth St	Intersection Improvement	\$1,710,000	Visionary
SEAS41	Polenta Rd/McLemore Rd	Intersection Improvement	\$1,710,000	Visionary
SEAS76	I-95/Selma-Pine Level Rd	Interchange	\$46,760,000	Visionary
SEAS80	US 70 BUS/Powhatan Rd	Intersection Improvement	\$1,710,000	Visionary
SEAS118	Timber Dr E/White Oak Rd	Intersection Improvement	\$1,710,000	Visionary
SEAS173	US 70/Oak St/RR	Road Closure	\$115,000	Visionary
SEAS232	Aversboro Rd/7th Ave/Vandora Ave	Intersection Improvement	\$1,710,000	Visionary
SEAS306	Market St/College Rd	Intersection Improvement	\$8,142,212	Visionary
SEAS309	Brightleaf Blvd/Booker Dairy Rd	Intersection Improvement	\$3,072,532	Visionary
SEAS310	Brightleaf Blvd/Peedin Rd	Intersection Improvement	\$3,072,532	Visionary
SEAS311	Brightleaf Blvd/Dail St	Intersection Improvement	\$3,072,532	Visionary
SEAS312	Brightleaf Blvd/Hospital Rd	Intersection Improvement	\$3,072,532	Visionary
SEAS319	NC 242/Woodall Dairy Rd/Federal Road Ext	Intersection Realignment	\$3,830,000	Visionary
SEAS433	Equity Dr/Peedin Rd Ext	Intersection Realignment	\$900,000	Visionary
SEAS434	Equity Dr/Peedin Rd Ext	Intersection Realignment	\$950,000	Visionary

Bicycle and Pedestrian Prioritization

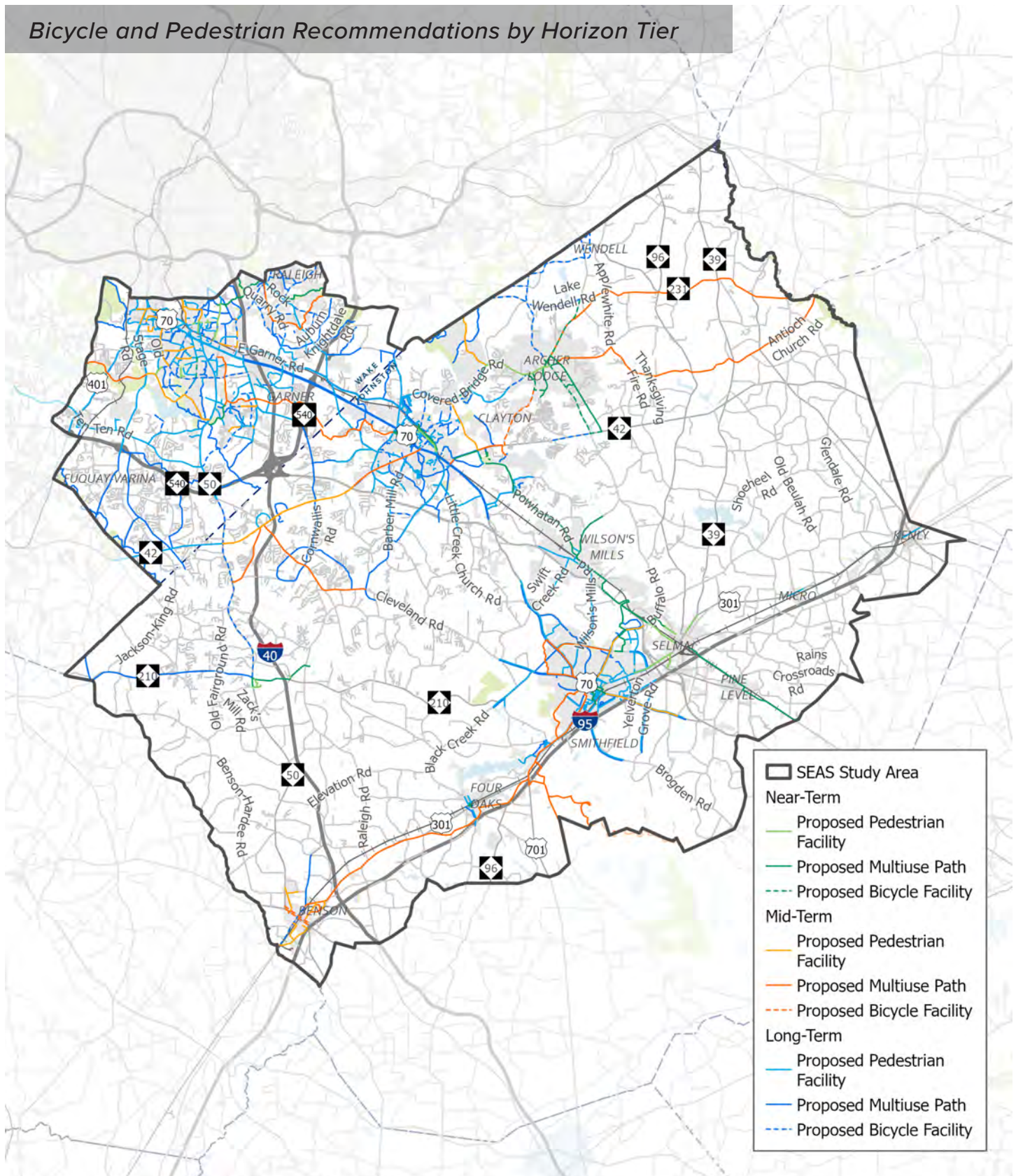
The bicycle and pedestrian recommendations are generally prioritized by the location and purpose of a facility. Near-Term priorities are projects that would fill in gaps in the network, particularly those internal to municipalities, Mid-Term recommendations are meant to connect towns and recreational resources, and Long-Term priorities are intended to complete the regional multimodal system.

As Southeast Area communities implement local bicycle and pedestrian priority projects incrementally across their communities, new multi-jurisdictional opportunities also become increasingly available. Below are important elements of building out a regionally connected bicycle and pedestrian network:

- **Local Planning** - Most jurisdictions have identified priorities in local planning processes that can serve as key building blocks for regional connectivity. Each jurisdiction should have an up-to-date comprehensive bicycle and pedestrian plan.
- **Regional Trail Systems** - Regional systems such as the Wake County Greenway System Plan, the Great Trails State Network, the Mountains-to-Sea trail, the East Coast Greenway, and North Carolina's State Bike Route System can serve as bicycle and pedestrian spines of connectivity for SEAS jurisdictions.
- **Complete Streets** - New development and major roadway projects such as widenings (e.g. NC 42 through Clayton, NC 210 through McGee's Crossroads, etc.) are critical opportunities to implement bicycle and pedestrian facilities that are physically separated from the roadway.
- **'All Ages and Abilities'** - Local planning and design efforts should reference the 'all ages and abilities' guidance provided in Appendix F for bikeway facility selection when planning and designing for bicycle facilities.
- **Multi-jurisdictional Collaboration** - Further regional connectivity analysis is needed to identify key gaps between local bicycle and pedestrian networks. This will also require improved bicycle and pedestrian data at both the local and regional level.

The map on the following page shows the SEAS Update recommendations for walking and biking infrastructure by their suggested phasing.

Bicycle and Pedestrian Recommendations by Horizon Tier



Transit Prioritization

Near-Term transit projects are those providing key high-demand regional connections and routes through areas that have, or are projected to have, transit supportive land use in the near future. In areas that may warrant transit service in the future but that may not be able to support it now, microtransit was recommended as a supplement to fixed-route service that traverses longer distances. Mid- to Long-Term considerations for transit include areas that are projected to grow and eventually support transit in the future.

Near-Term Recommendations

Near-Term transit recommendations, by corridor, include:

- US-70: Garner – Clayton Circulator, and Clayton – Selma Connector
- US-401: New GoRaleigh 40X stops
- NC-50: Garner – West Johnston Circulator
- US-301: Selma – Smithfield Circulator, Benson – Selma Connector, Kenly – Selma Connector

Additionally, transit transfer facilities (TTF) and other supporting infrastructure should be pursued in the Near-Term, promoting a positive rider experience as new transit services are implemented.

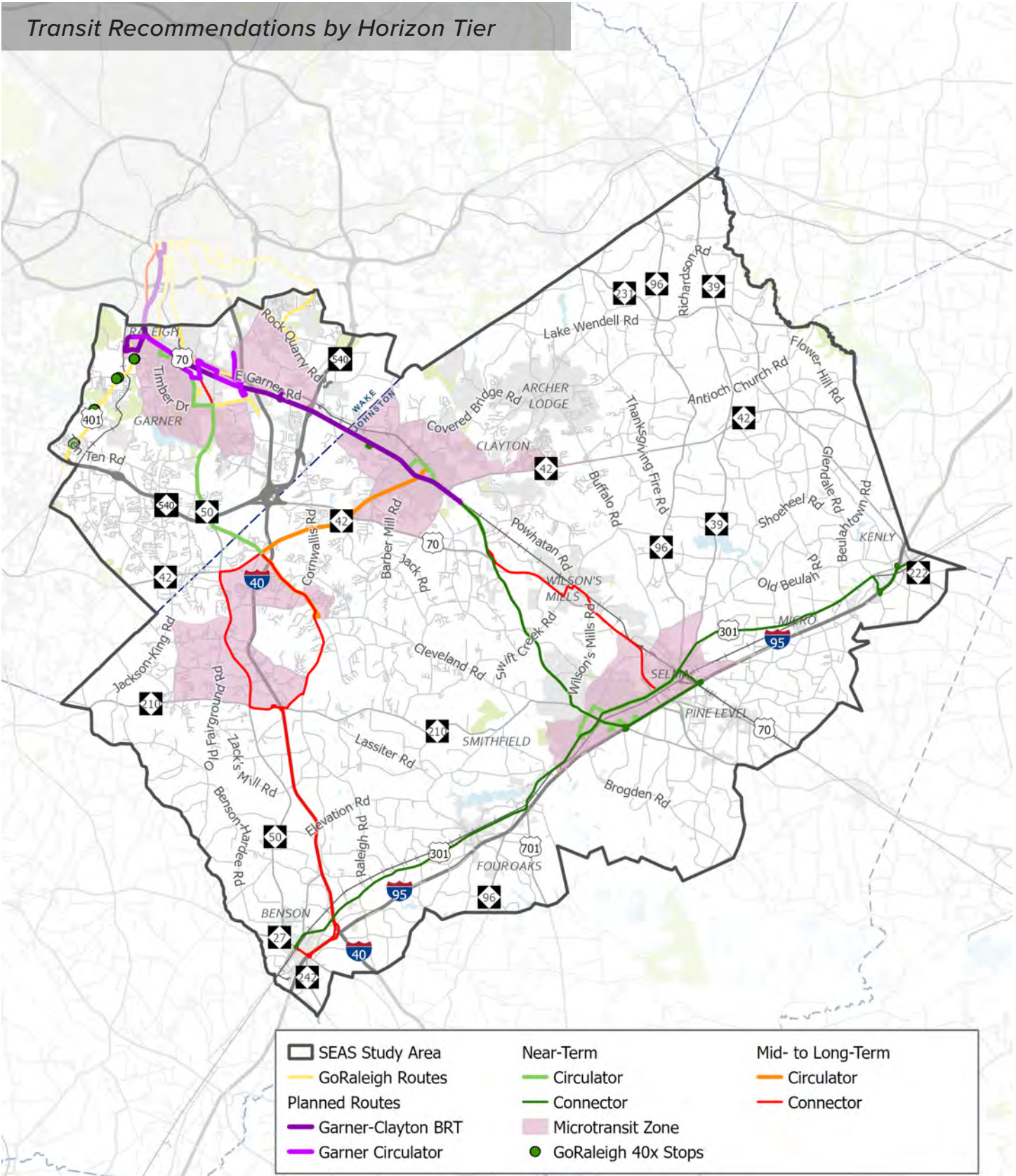
Mid- to Long- Term Considerations

Based on public feedback, ridership data, and analyses of new development and subsequent changes in regional population trends, future considerations for transit include:

- Clayton – Willow Springs Circulator,
- Selma – Raleigh Connector, and
- Benson – Garner Connector.

The map on the following page shows the SEAS Update recommendations for transit routes and microtransit zones by their suggested phasing. These recommendations are contingent upon the continued development of transit-supportive land uses along these corridors.

Transit Recommendations by Horizon Tier



Unified Approach

The Southeast Area Study Update has resulted in the development of a series of land use and transportation strategies that will serve its member jurisdictions in both CAMPO and UCPRPO. The transportation recommendations detailed in Chapter 5 will become the bedrock of CAMPO's Comprehensive Transportation Plan for this region, and will also inform the creation of CAMPO's Metropolitan Transportation Plan. While the UCPRPO area is not subject to the development of a Metropolitan Transportation Plan, these transportation recommendations can be incorporated into the area's Comprehensive Transportation Plan. Perhaps most importantly, the SEAS Update transportation recommendations were created with a combined effort of stakeholders from the CAMPO and UCPRPO areas. Each area will benefit from the enhanced knowledge of the types of improvements that are important to the region.

While serving as a framework for transportation and land use decision-making, the SEAS Update also seeks to provide tools for implementation:

Land Use Implementation Toolkit — The SEAS Update is built upon an understanding of the interrelationship of transportation and land use decision-making. An analysis of land use is essential to produce an effective and implementable transportation study. Transportation issues facing the region such as congestion, safety, connectivity, and multimodal linkages cannot be fully addressed with the resources available. To close the gap, changes in land use policies and strategies can make the largest positive impact. This toolkit, detailed in Chapter 4, explores the current conditions and future needs and strategies for each of the jurisdictions within the study area. Following a plan and policy review, a series of recommended land use priority strategies were developed for each jurisdiction. These priority strategies are explored in detail along with steps for implementation.

Benefits of Compact Development Video — The Benefits of Compact Development video should be used as an educational tool to help inform the public, planners, and decision makers of the ongoing negative consequences of the existing development patterns in Wake and Johnston counties that allow sprawl. The video delivers a persuasive, action-oriented message that is meant to encourage the implementation of the recommendations in the Land Use Implementation Toolkit. This video can be viewed here: <http://www.youtube.com/@nccapitalareampo2526>

Near-Term Projects — CAMPO and UCPRPO will work with NCDOT to determine how projects recommended in the Southeast Area Study advance into funding and completion. To aid in this process, a series of Near-Term roadway projects were identified that help respond to existing and future congestion needs while also considering public and committee feedback. These projects can function as a starting point for recommendations that should be considered for inclusion in the NCDOT Strategic Transportation Investments (STI) process. This is particularly beneficial for the UCPRPO area, which does not have the benefit of a financially constrained Metropolitan Transportation Plan to help identify the best candidate projects to be considered and scored through the STI process.

Hot Spot Study — Chapter 5 and Appendix E explore the US 70/NC 42/Future Ranch Road intersection as a complex location in need of a long-term transportation solution. The hot spot study resulted in two alternative interchange concept-designs with estimated opinions of probable construction costs (OPCC) to be used for future consideration of the project. The hot spot study provided the outcomes needed to ready this location for the next phase of project development.

Multimodal ICE Toolkit — This Intersection Control Evaluation (ICE) toolkit expands on the typical ICE guidelines to include design elements that improve safety across all modes of transportation and enhance the experience for active transportation users. This booklet and accompanying short-form pamphlet should be leveraged by planners, engineers, developers, and decision makers when during project development and design.

Call to Action and Conclusion

Achieving the full vision of the SEAS Update will require decades of investment, continued commitment from CAMPO, UCPRPO, NCDOT, and support from local and regional partners. The return on investment for these groups will be a more cohesive and unified area, sharing prosperity among the member jurisdictions, and making the Southeast Area more competitive and attractive among its regional peers. The full implementation of the Southeast Area Study will incorporate planned growth and result in improved multimodal access, while accommodating the trips that are being made in the area both today and into the future.



A

SEAS

S O U T H E A S T A R E A S T U D Y

U P D A T E

APPENDIX A:

Engagement Compendium

PHASE 1 OUTREACH SUMMARY: DISCOVER

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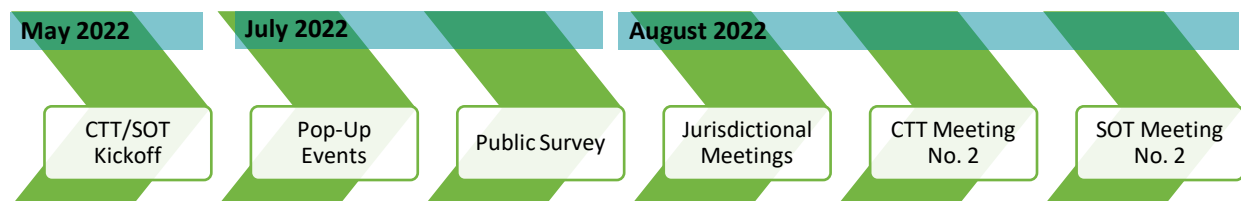
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Executive Summary

Purpose of Engagement

Phase 1 of the engagement process involved raising awareness and educating the public about the Southeast Area Study (SEAS) Update while discovering public sentiments and concerns. This phase focused on outreach to inform the development of goals, visioning, and issues. Phase 1 engagement lasted from May through August 2022.

ENGAGEMENT TIMELINE



Engaging with Committees

Phase 1 Engagement included a series of meetings with the Core Technical Team (CTT) and Stakeholder Oversight Team (SOT) to get a higher level look at what has been done since the 2017 SEAS and big picture concerns.

Work with the CTT and SOT began with a kickoff meeting in May 2022. Committee members were asked what they love about the survey area and what they'd most want the plan to address. Most comments about what members loved focused on the rural and small town feel with proximity to the city. Traffic, walkability and bike/ped infrastructure, public transportation, the link between transportation and land use, and economic growth were some of the most reiterated things for the plan to address.

The meeting also included a mapping activity where members were asked to map and comment on places, transportation, and other ideas or concerns. These included development sites for different uses (along with general development opportunities), downtowns to be preserved and enhanced, areas of congestion, roadways in need of improvement, opportunities for public transit and areas with need for bike/pedestrian infrastructure.

The project team also held meetings with planners from the different jurisdictions within the planning area in early August 2022 to get more specific feedback on each municipality's needs. Planners discussed the state of each municipality, areas of progress, lingering or emerging needs since the 2017 SEAS, their understanding of public sentiments in their jurisdictions, and their number one priority issues.

After the jurisdiction group meetings, two final meetings with the CTT and SOT respectively were held to discuss the comments received from the various jurisdictions and other previous engagement and to review implications and key takeaways. These meetings also kicked off scenario development.

Engaging with the Public

The project team also engaged the public through eight pop-up tables at events and destinations throughout the study area in July 2022, as well as an online survey open for responses throughout July 2022.

Pop-ups were located at events like downtown festivals and farmers' markets or at locations like the Garner regional library on days of scheduled activities in hopes of meeting people where they were. Each pop-up included a board explaining the project, a mapping activity board where participants were asked to map and comment on places, transportation, or other ideas or concerns, and a vision and goals board that asked people to give one word about their hopes for the Southeast Area.

Most mapping comments were about places that need intersection improvements for safety or congestion, while several others left comments on alternative modes such as public transit and bike lanes. Other comments addressed disparities in school quality and a demand for restaurants near new employment centers. Comments on the vision board centered around safety and navigation, transportation alternatives, and growth patterns. Fewer responses were received at the pop-up events than the project team had hoped, but the feedback received provided additional info to supplement the results from other engagement activities.

The online survey included general questions about vision, transportation priorities, and growth preferences, as well as a series of interactive map questions for people to map their ideas and areas of concern. Through the survey, public comments were received from people across the study area, with the vast majority living in the study area or having other meaningful connection to the area.

Livability was the most important guiding principle to survey respondents, emphasizing quality of life, local character, public health, and art and recreation. Traffic flow and sustainable growth were also ranked very important. Concerns about congestion, traffic flow, and a need for safe and reliable alternatives to get cars off congested arteries dominated the transportation responses, while the land use section indicated a desire to allow but limit growth and to try for more shops/job growth rather than increased residential. In the interactive mapping section, respondents marked problem spots for congestion, driver safety, and bike/pedestrian access, along with natural areas to preserve, potential areas for increased development, and limitations like school capacity.

Success and Next Steps

The following table identifies how successful this phase of engagement was by the performance measures established in the Public Engagement Plan (PEP). All of the measures were met and the method through which they were achieved is detailed in the table as well. Though they were met, improvements can still be made. The second phase of engagement should attempt to reach lower income households, those in the age demographic younger than 17 and greater percentage of minority population, especially those of Hispanic or Latino ethnicity.

MEASURES OF SUCCESS

Measure	Indicator	Met	Achieved With
Number	Active participation by SOT/CTT members through events they attend/host, social media posts/emails they send	✓	Pop-up events; CTT/SOT meetings; outreach toolbox
	Project email updates sent at the beginning and end of each public engagement phase	✓	Email updates
	Geographic coverage of study area in event locations and social media targeting	✓	Social media blasts; pop-up events; zip codes of survey
	Materials translated to or available in Spanish	✓	Website, video, online survey, pop-up event materials
Inclusivity	Ensuring that engagement materials and activities are broadly available in four ways:		
	Across a variety of mediums (i.e., online, in-person, and passively)	✓	Website; video; pop-up events; online survey
	Dispersed geographically (i.e., in both the urban and rural areas of the study area)	✓	Pop-up events; zip codes of survey
	Cognizant of user types (i.e., commuters, visitors, residents, recreational users, renters, property owners, etc.)	✓	Pop-up events; online survey; social media
	Accessible to a diverse audience regardless of race, ethnicity, sex, education level, disability, or language	✓	Pop-up events; website; social media
Quality	The intentional timing of engagement with project milestones to ensure feedback aligns with decision points	✓	Visioning; Guiding Principles; Needs Identification
	The evaluation of feedback for its value added to the planning process	✓	Visioning; Guiding Principles; Needs Identification

NEXT STEPS

Taking the feedback received from committee members and using it to create a first set of draft recommendations. Those recommendations will then be brought back to the public and committees for feedback and changes as part of Phase 2 engagement.

Engagement Approach

Purpose and Goals

Phase 1 of the engagement process involved raising awareness and educating the public about the SEAS Update while listening to public sentiments and concerns. This phase focused on outreach to inform the development of goals, visioning, and issues. Phase 1 engagement lasted from May through August 2022.

Promotion Methods

The following platforms were used to advertise and promote awareness of the SEAS Update.

TRAIN THE TRAINER LUNCH AND LEARN (JULY 11)

The CTT and SOT members were invited to join a virtual lunch-and-learn on July 11, 2022. In this information session, members were given an overview of the outreach materials, became familiarized with the “Outreach Toolbox,” scheduled pop-up, and the ways in which they could help promote this round of engagement.

EMAIL AND SMS MESSAGE BLAST

An email blast welcoming recipients to the process and letting them know about the online survey open in July was sent out on July 15th to over 1,200 email addresses. Identical information was also sent out on July 15th via text message to 19 mobile sign ups.

SOCIAL MEDIA POSTS

Between July and August, 13 social posts about different parts of the SEAS Update were made across Twitter, Facebook, and Instagram, including posts about pop up events across the study area and news articles about the project.

SEAS UPDATE SOCIAL MEDIA - PHASE 1 ENGAGEMENT - JULY 2022

n/p = not posted to this platform		Twitter		Facebook		Instagram
Date	Content Notes	Retweet	Likes	Share	Like	Likes
4-Aug	WRAL article	n/p	n/p			n/p
29-Jul	Garner Popup	4	2		1	1
28-Jul	Clayton/JoCo Popup	1	1	3		
27-Jul	General			7		
26-Jul	Garner Popup	5	4			
24-Jul	Smithfield (Brightleaf Flea)	3	3			
22-Jul	Clayton/JoCo Popup			n/p	n/p	n/p
21-Jul	Selma Popup	1	1	n/p	n/p	n/p
20-Jul	General (eblast/video link)	n/p	n/p	10		2
15-Jul	General (eblast link)	7	7	2		3
12-Jul	General (video)	3	2	2	3	1
11-Jul	General (map)	1	1	5	3	
11-Jul	General (logo)	8	3	1		3

Outreach Materials

The following materials were developed, and platforms used to collect feedback during Phase 1 Engagement. These are included in Appendix C.

OUTREACH TOOLBOX

Committee members were provided with an “Outreach Toolbox” located on the project website that included email and social media post templates to further engage and spread awareness of the SEAS Update in their communities.

ONE-PAGER

An informational one-pager was shared with CTT and SOT members, shared via email, and brought to the pop-up events.

BOOKMARKS

Bookmarks advertising the project and providing a QR code to the project website were given to CTT members to display at town halls or bring to council and board meetings. These were also handed out at the pop-up events.

NARRATED PRESENTATION

The project team recorded a brief narrated presentation that gave an overview of the study, reviewed the project timeline, and advertised the upcoming engagement opportunities.

POP-UP EVENT BOARDS

Each pop-up event included three boards; one with project background and information, and two intended to collect visioning feedback and identify needs regarding transportation and land use.

Events and Activities

The following section describes the events and activities that occurred during Phase 1 Engagement. The full summaries of each event are included in the appendices.

CTT/SOT KICKOFF MEETING (MAY 19TH)

The kickoff meeting on May 19th introduced the CTT and SOT to the plan and process, get initial feedback from them, and establish roles.

The committee members listed plans and projects they recently completed or are currently working on within the study area. The committee members were also asked to help identify underrepresented stakeholders that need to be included in the SEAS update and who they could bring into the process.

For initial feedback on the study area, committee members were asked what they love about the study area and what they would most want the plan to address. The meeting also included a mapping activity where members were asked to map and comment on places, transportation, and other ideas or concerns.

POP-UP EVENTS (THROUGHOUT JULY)

Eight pop-up events were held across the study area during July 2022 to engage with people in person for feedback regarding vision and goal setting and issue identification.



A picture of a pop-up event at the Southeast Regional Library in Garner.

Pop-ups were located at events like downtown festivals and farmers' markets or at locations like the Garner regional library on days of scheduled activities in hopes of meeting people where they were. Each pop-up included a board explaining the project, a mapping activity board where participants were asked to map and comment on places, transportation, or other ideas or concerns, and a vision and goals board that asked people to give one word about their hopes for the Southeast Area.

PUBLIC SURVEY (OPEN DURING JULY)

A public survey using the Public Input platform to target online feedback regarding issue identification and vision and goal setting. The survey was open for open for most of the month of July and included general questions about overarching vision, transportation priorities, and growth preferences, as well as a series of interactive map questions for people to map their ideas and areas of concern. The survey also asked a series of demographic questions about respondents' relation to the study area.

JURISDICTIONAL GROUP MEETINGS (8/3, 8/4, 8/5)

The project team also had meetings with planners from the different jurisdictions within the planning area in early August 2022 to get more specific feedback on each municipality's needs. Three meetings were held, each focusing on a specific group of jurisdictions.

- August 3rd: Archer Lodge, Clayton, Garner, Raleigh, Wake and Johnston Counties
- August 4th: Benson, Four Oaks, Pine Level, Kenly, and Johnston County
- August 5th: Smithfield, Selma, Wilson's Mills, and Johnston County

Planners discussed the state of things in each municipality, focusing on transportation and land use conditions, lingering or emerging needs since the 2017 SEAS, areas of progress towards fixing issues or meeting goals including plan updates and projects underway, their understanding of public sentiments in their jurisdictions, and their number one priority issues.

CTT MEETING (8/19)

Later in August the project team held a hybrid meeting that took place in-person at the Clayton Town Hall and virtually on Microsoft Teams. CTT members were able to elect the method by which they attended. This meeting kicked-off the scenario planning development of the SEAS Update with introductory and background information about scenario planning.

At the meeting, CTT members were tasked with updating and validating the existing land use place type and development status data via a mapping activity. Members who attended in person wrote on physical maps in the room, and members who attended virtually could provide comments on an online web-based mapping platform. The results of the mapping activity resulted in the study's first scenario, the Existing Land Use scenario.

SOT MEETING (8/23)

Following the CTT meeting, the whole SOT was brought together in a virtual meeting. In this meeting, SOT members were given a project update including a summary of the public survey, the pop-up events, and the jurisdictional meetings. The SOT was given information on the scenario planning process and answered interactive polling questions to inform scenario development.

Engagement Results

Demographics and Representation

CTT/SOT

The Core Technical Team includes individuals from planning departments across the study area jurisdictions as well as people with CAMPO, UCPRO, and NCDOT. Entities represented include:

- Archer Lodge
- Benson
- CAMPO (MCC, TRM, Wake Transit)
- Clayton
- Four Oaks
- Garner
- GoRaleigh
- GoTriangle
- GoWake Access Transportation Advisory Board
- Johnston County
- NCDOT TPD
- NCDOT-Div 4
- NCDOT-Div 5
- Raleigh
- Selma
- Smithfield
- UCPRO
- Wake County
- Wilson's Mills

The Stakeholder Oversight Team includes individuals from town and county leadership from jurisdictions in and surrounding the study area, as well as representatives from different agencies and organizations including school systems, the Triangle J COG, area chambers of commerce, visitors' bureaus, transit systems (and rider representatives), and advocacy groups for things like parks, land conservation, and transportation options. Major employers Grifols and Novo Nordisk also had representatives on the committee. Locations and agencies represented include:

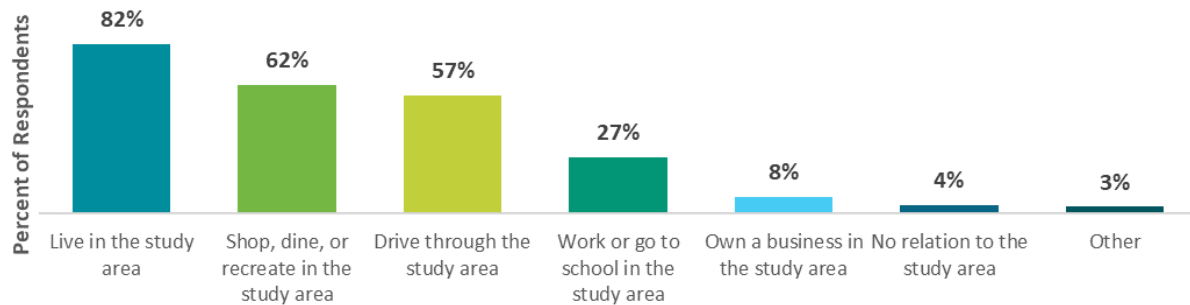
- Benson
- Clayton
- Clayton Chamber of Commerce
- Community Partner Network of Raleigh
- Garner
- Garner- Transit/Transportation Citizen Representative
- GoRaleigh
- GoTriangle
- Grifols
- JCATS
- Johnston County
- Johnston County Association of Realtors
- Johnston County Parks, Greenways, and Open Space
- Johnston County Visitors Bureau
- Johnston-Lee-Harnett Community Action
- Knightdale
- NCDOT Rail
- NCDOT TPD
- NCDOT-Div 5
- Novo Nordisk
- Raleigh
- RTA
- Selma
- TJCOG
- Triangle East Chamber
- Triangle Land Conservancy
- Triangle Transportation Choices
- Wake County Schools
- Wake County Planning Board
- Wake up Wake County
- Zebulon

POP-UP EVENTS

Pop-up engagement events were held at events and locations across the study area in Smithfield (both near downtown and in South Smithfield towards Four Oaks) Selma, Clayton, Garner, and Wilson's Mills to reach and engage with different communities at major events and popular destinations. These events met the public in places they were already visiting, allowing for some feedback but mostly as an opportunity to promote the project and spread awareness.

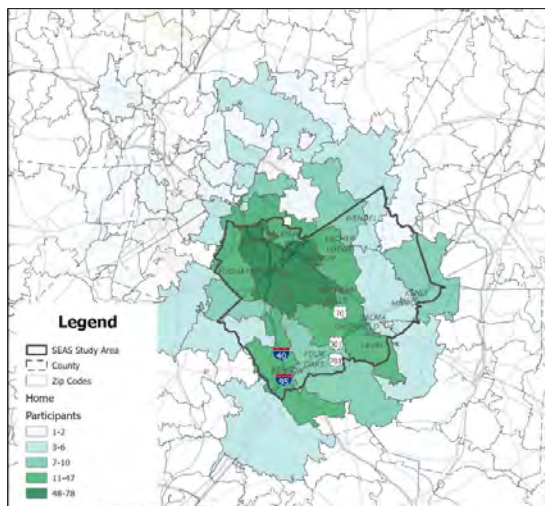
PUBLIC SURVEY

To ensure that the survey responses reflected the views of people who live, shop, work, or are otherwise invested in the study area, respondents were asked to describe their relation to the study area by choosing the options that described them from a list. 82% responded that they lived in the study area, and a majority also shopped, dined, or recreated within the study area and/or drove through the study area. A significant amount (about a fourth) also worked or went to school in the study area.

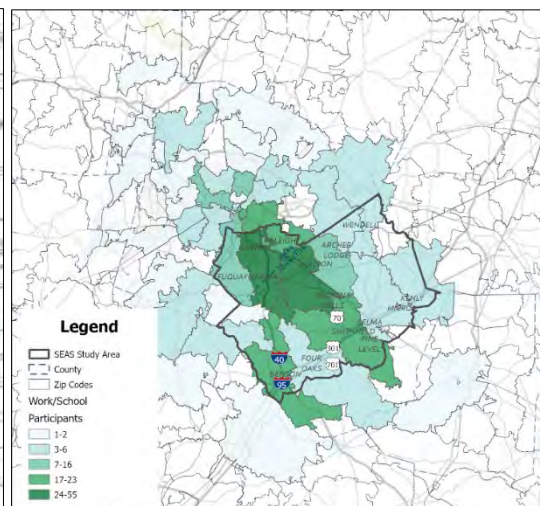


The survey also collected zip codes to get a better understanding of where respondents were from. Of those who answered, most lived in or very close to the study area, with at least one participant from every zip code within the area. Roughly the same pattern emerged in where people worked and went to school, through with slightly more respondents working in the Raleigh area. In all, 86.2% of survey respondents who answered the zip code questions lived in study area zip codes, and 66.1% worked in study area zip codes.

Home Zip Codes

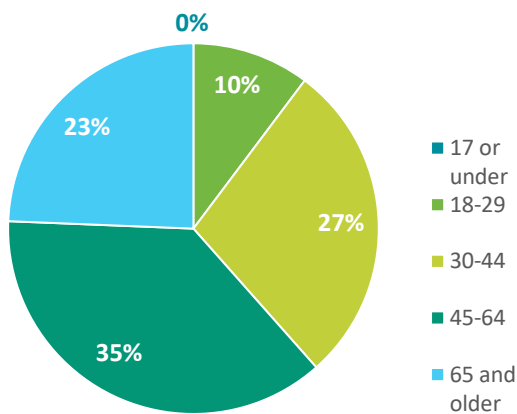


Work/School Zip Codes

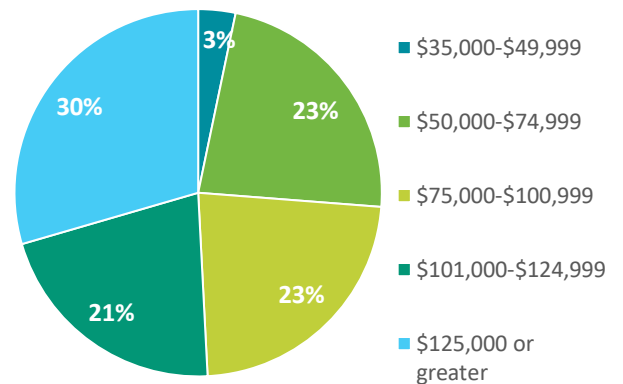


Participants who took the survey and answered the demographic questions were distributed fairly evenly across all age and income ranges with the exception of those under 17 years of age and those with a household income of less than \$50,000. Moving forward, engagement should attempt to reach more lower income groups of people.

What is your age group?

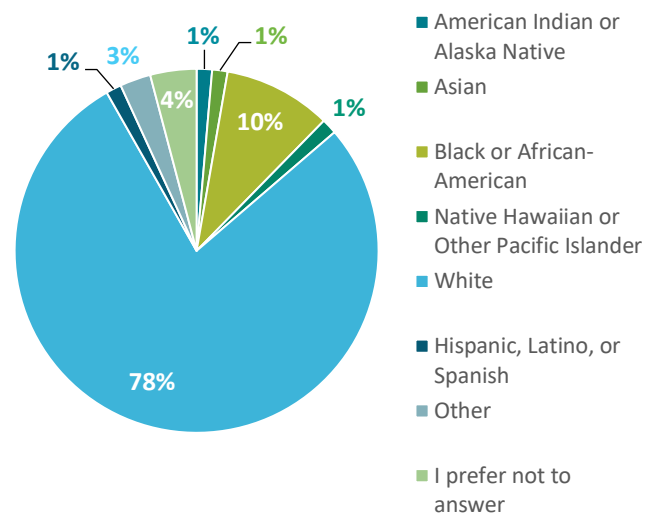


What is your household income range?



Approximately 78% of participants who also answered the demographic questions were white, this is about 10% greater than the study area's white population. About 22% of the respondents answered that they were people of color, with the largest (10%) being Black or African American. This representation is about 10% less than the representation of people of color in the study area according to the 2020 Census. While the racial representation of those who took the SEAS Update survey is not extremely far off from the demographic makeup of the study area, future outreach efforts should strive to match the demographic makeup even more closely.

What is your race/ethnicity?



Themes and Key Takeaways

The following section identifies themes that arose from the feedback received from Phase 1 Engagement. Themes are organized by transportation and land use topics and key takeaways are identified for each theme.

ROADWAY

Improve congestion and prepare for future traffic with incoming growth

- Rural congestion was noted as a problem, as rural roads were not made to handle current/projected levels of traffic
- Congestion on routes into the Triangle, both rural routes and highways
- Traffic congestion seen as the worst transportation issue by far in survey
- “Traffic Flow” (reducing congestion, improving roadway operations) seen as second most important guiding principle
- Problem intersections with congestion issues
- Lack of alternatives to driving on major corridors worsens traffic
 - Limited or non-existent transit options
 - Lack of safe ways to walk or bike to destinations
 - Concentration of shops and jobs in certain towns, requiring driving longer distances for many to reach
 - Lack of connections between developments, minor roads concentrate traffic onto larger already-congested roadways
- Emphasis on keeping traffic from worsening on major arteries
 - Reducing how much/how far people must drive for shopping, groceries, parks, libraries, and other amenities
 - Roadway connections that provide alternatives to major arteries for local traffic, bypasses for through traffic
- Some major corridors are being or need widening to address flow, expected growth (ex. NC-42 from two lane rural road to divided four-lane highway)

BIKE/PED

Create regional connectivity for bicyclists and pedestrians

- Increased desire for bike/ped facilities connecting different jurisdictions, communities across the region
 - Neuse River Trail Extension & future connections will help
- Greenways and shared use paths parallel to major travel corridors that can act as alternatives to driving
 - Part of multimodal strategy- should connect to transit stations/connections, etc.
 - Need access points to communities, developments along routes
- Bike lanes or shared-use paths along major corridors
 - Shared-use paths can help address both bike & ped needs
- Connections between major destinations (shopping, schools, etc.) and residential developments

Make communities more walkable and bikeable through infrastructure and safety improvements

- Safe walkability within communities, jurisdictions in high demand
- Safety and lack of adequate pedestrian facilities 3rd and 4th highest transportation priorities in survey, relatively high emphasis
- Both maintenance of existing sidewalk networks and expansion needed
- Safe pedestrian crossings for major arteries, highways, rail corridors, etc.
- Providing dedicated paths/lanes that get cyclists and pedestrians out of traffic lanes, protect from traffic
 - Protected bike lanes and bike intersections in dense areas

TRANSIT**Make transit a viable alternative to driving**

- Emphasis on transit as opportunity for mode shift to relieve congestion
 - Lack of adequate transit second biggest transportation priority in survey, partially because of transit as an alternative to driving on congested roads per comments
- Prioritize regional transit connections between study area and Triangle
 - Alternatives to congested car commute
- Coordinate transit with land use strategy
 - Areas of transit-supportive density around routes could help support residential growth with less of a growth in car traffic
 - Affordable housing with transit access needed
- Will need first-mile last-mile connection options for routes into Triangle
 - Adequate park-and-rides
 - Connections to greenways, walking trails, bike lanes for walking/biking to and from stops/stations
 - Potentially neighborhood bus routes where possible, though likely far future
- Potential for microtransit within communities & areas not dense enough to support fixed route service
- Consider needs of individuals who need alternatives to driving (ex. senior citizens aging in place)

LAND USE/DEVELOPMENT**Growth with purpose and direction by balancing it with both community and natural area preservation**

- Area growing very fast, especially high residential growth
- Population seems increasingly okay with growth, but sees need to moderate growth
- Cannot be at the expense of livability/community character
 - Livability most important guiding principle in survey- "...quality of life through transportation and land use decisions that support public health, education, parks and recreation, public art, and local character"
- Infrastructure like water/sewer, internet, and schools need to be able to keep up with and support growth
- Ensure rural, agricultural areas, natural areas are preserved

- Rural/country/natural character is part of what people love about the area- work to preserve
- Development tailored to needs of each community (level of density, types, mix of uses)
- Density as compact walkable nodes/corridors along highways, transit corridors, in central/downtown areas
 - Avoid encroachment on rural/agricultural areas
 - Avoid uncontrolled sprawl/development patterns that could worsen congestion
- Desire to attract more shops, jobs to help fill gaps of missing amenities in different communities
 - Shopping, restaurants, destinations in each community help take people off the road, reduce need to drive longer distance to reach amenities in other communities
 - Growth in local jobs that don't require a commute to the Triangle
 - Less increase in congestion than residential growth
 - Food deserts that need grocery stores/supermarkets
- Desire for more public amenities (parks, libraries, etc.) in areas that currently lack them
 - Unincorporated parts of the study area, especially in west Johnston County

EQUITY

Ensure recommendations are developed through a lens of equitability

- Committees and jurisdictions noted equity needed to be a focus of the study

Next Steps

The project team will take the feedback we received from this first phase of engagement and use it to create a first draft of recommendations that will be taken into the second phase of engagement.

Phase 2 engagement will involve presenting initial study findings back to the CTT, SOT, and public through an educational approach with the goal of seeking valuable input on draft recommendations.

Phase 2 engagement is anticipated to last from September 2022 through March 2023.

APPENDICES



Appendix A: CTT and SOT Meeting Summaries

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A

SEAS

S O U T H E A S T A R E A S T U D Y

UPDATE

What:

Joint Core Technical Team and Stakeholder Oversight Team Kickoff Meeting

When:

Thursday, May 19, 2022
2 - 4 pm

Where:

Zoom | <https://zoom.us/join>
Meeting ID: 968 9607 4165
Passcode: 890220
Phone: +1 301 715 8592

SEAS UPDATE CTT/SOT KICKOFF MEETING

Introduction

This document summarizes the Southeast Area Study (SEAS) Update kickoff meeting with the project's Core Technical Team (CTT) and Stakeholder Oversight Team (SOT). This summary provides an overview of the meeting agenda, presentation, and discussion. It's accompanied by a video recording of the meeting and a presentation that includes the results of the interactive polling. These items are found on the project website at: <https://seareastudyupdate.com/>

Summary

Introductions

The project team initiated the meeting by reviewing the agenda and explaining meeting logistics including the use of the online interactive polling tool, Mentimeter. The project team then established the purpose and intended outcome of the meeting, shown in the table below. Introductions began by highlighting the partnership between the Capital Area Metropolitan Planning Organization (CAMPO), the Upper Coastal Plain Rural Planning Organization (UCPRPO), and the North Carolina Department of Transportation (NCDOT) that is involved in the development of the SEAS Update. Following introductions of the project team, participants were asked to introduce themselves using the polling feature. The meeting had a total of 72 attendees. The full participant list is included as an attachment at the end of this document.

<i>Meeting Purpose</i>	<i>Meeting Outcome</i>
The objective of this meeting was to initiate the SEAS Update with both the Core Technical Team (CTT) and Stakeholder Oversight Team (SOT) members.	Members came away with a clear understanding of the 2017 SEAS, the purpose of the SEAS Update, and their role and responsibility in the planning process. Participants also initiated conversations about opportunities and challenges facing the Southeast Area.

Project Background

WHAT'S BEEN ACCOMPLISHED AND WHAT'S CHANGED

In the next section, the project team detailed the purpose of the study which is to integrate land use and transportation planning in an effort to accommodate existing and future travel needs through recommendations that will ultimately be included in the next Metropolitan Transportation Plan (MTP) update. The presenters then identified roadway improvement projects that have been accomplished since the 2017 SEAS. Meeting participants were then asked to identify completed and ongoing plans in their jurisdictions because these plans will inform the SEAS Update. The answers are displayed below. The presenter then demonstrated changes from 2017 by comparing the previous study area boundary to the new one which extends east of I-95.

Are there plans or projects that you have completed since 2017 or have underway?

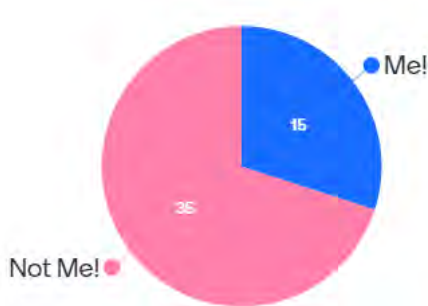
- 2020 Raleigh-Fayetteville passenger rail study, 2019 Commuter Corridor Study, R.E.D. Priority Bus Lanes Study
- 2045 Growth Plan; Unified Development Code Update; Future I-42/NC 42 Small Area Plan; Downtown Master Plan Update
- 3 small area plans - along 540 corridor (2022/2023) upcoming
- Benson Exit 79 interchange and roundabout at Us 301 and Hwy 50 begins soon
- BRT extension to Knightdale, BRT corridor to Garner, and the commuter rail to Clayton
- CAMPO Northeast Area Study Update completed last year
- Capital Boulevard North Corridor Study- City of Raleigh goes to council this summer
- Commuter rail technical study will be completed this summer
- Completed Local Comprehensive Transportation Plan 2021.
- County Wide Recreation Master Plan Update 2020 Neuse River Trail Feasibility Study (MST and ECG) Scheduled to complete June 2022 Johnston County Comprehensive Trail and Greenway Plan (Grant Applied For)
- Development and opening of new Wake County Public Schools in/near the study area
- Eastfield Crossing project (Exits 97 and 98 of I-95); Selma 2040 LUP
- Four Oaks Under way
- Garner - Character and Land Use elements update (2022 - upcoming)
- Garner Forward - Comprehensive Land Use Plan & Transportation Plan Update;
- Garner Transit Plan; Garner UDO Update
- Garner Pedestrian Plan (underway)
- Greater Triangle Commuter Rail impacts the SEAS area (Raleigh-Garner-Clayton portion)
- Habitat Wake's Garner development
- JCATS long range plan
- JoCo Land use plan update
- Johnston Co. Land Use Plan
- Johnston County Neuse river trail Commuter rail Transportation plan concurrent with SEAS
- Mobility Management Implementation Study underway
- Neuse River Trail Feasibility Study
- New UDO, New Comprehensive Land Use Plan, new Future Land Use Plan, Working on Transportation Study
- New Unified Development Ordinance for the Town of Archer Lodge, Working on updates to Comprehensive Land Use Plan
- Open space preservation via Triangle Land Conservancy (Marks Creek, Walnut Hill/Williamson Preserve and Smithfield/Johnston Co.)
- Planning for Unified Development Code Update; Completed Comprehensive Land Use Plan
- PLANWake Wake County Comprehensive Plan; Lower Swift Creek Area Plan (first of six area plans)
- PLANWake; Lower Swift Creek Area Plan
- Proposed Amendments to Wake County Voluntary Agricultural Districts Code Ordinance
- Public transportation-rapid bus or rail
- Raleigh Community Climate Action Plan
- Raleigh Southeast Special Study, in progress expected for Council review in July
- Rapid Bus Extension Major Investment Study - Garner to Clayton is underway
- Robeson County CTP - underway
- Smithfield Ped Plan
- Smithfield updated its comp plan and transportation plan using K-H. Data has already been sent.
- Smithfield's transportation and land use plan was completed.
- Southeast Special Area Study- City of Raleigh
- Southern and Western BRT, Station Area Planning- Design Phase
- The Town of Knightdale is underway with a Comprehensive Transportation Plan. Adoption is anticipated in early fall 2022.
- TJCOG Land Use and Affordable Housing analysis done as part of the Greater Triangle Commuter Rail study.
- Town of Benson Community Transportation Plan and Comprehensive land use plan
- US 70 upgrade to Interstate I-42
- W-5704E and 80094
- Wake County Board of Education 7-year Capital Improvement Plan Update
- Wake County Consolidated Open Space, Affordable Housing
- Wake County Health Needs Assessment
- Wake Transit Plan Update
- White Oak Roundabout (Hebron Church/Ackerman roads)

SCHEDULE AND INVOLVEMENT

Next, the project team talked through the 15-month planning process and the project schedule, detailing what would occur during each phase of the study. The CTT and SOT members were then informed of their job descriptions, as defined in the table below. Participants were then asked to vote in a poll indicating their involvement in the SEAS in 2017, shown in the pie chart below. To close this section of the presentation, the project team explained the other parties involved in this process including the CAMPO Technical Coordinating Committee (TCC) and Executive Board, elected officials, local jurisdiction members, key community stakeholders, and the general public.

<i>SOT Job Description</i>	<i>CTT Job Description</i>
<ul style="list-style-type: none"> • Represent diverse community interests • Provide guidance and direction on substance • Provide input at key decision points • Participate at public events • Disseminate information through individual networks • Meet formally up to four times at key steps 	<ul style="list-style-type: none"> • Represent various planning entities and jurisdictions within the southeast area in the process and substance of the plan • Provide local insight and institutional knowledge on planning issues • Aid in engagement and communication • Plan liaison for agency staff, elected officials, and SOT • Meet formally up to seven times and informally throughout

How many of you participated in the 2017 SEAS?



Public Engagement Plan and Member Involvement

In the next section of the presentation, the project team discussed the engagement strategy for the SEAS Update which is broken up into three phases:

- Phase 1: *Discover*: Educate the public after a review of previous studies and data collection to seek input on vision, goals, and study area challenges
- Phase 2: *Involve*: Educate the public about Phase 1 public input, alternative options, and seek input on potential preferred/recommended alternatives
- Phase 3: *Consult*: Present final recommendations to the public for review and comment

The events and activities planned to occur during each of the phases are detailed in the Public Engagement Plan (PEP). The PEP also establishes engagement goals and performance measures to guide participation and outreach throughout the planning process. The project team then emphasized the importance of involving historically underrepresented communities in the process and asked attendees for resources to engage these communities. The members were then asked to provide any contacts for stakeholders that need to be active participants in this process. The answers provided to those two questions are below. The feedback received was used to inform the PEP.

What are some historically underrepresented neighborhoods/businesses/organizations in your area?

- Affordable Housing Advocates/Developers (DHIC/Raleigh-based)
- African American pop
- Agricultural areas. Sharing road with vehicles
- All chambers in the area map
- Are there especially large multifamily developments/complexes?
- Churches known for partnering to help spread the word, etc?
- Blind Disabled
- Brightleaf Fleamarket
- business in general
- CASA?
- child and elder care providers
- Community and senior services
- Community and Senior Services in Smithfield
- Commuters - both residents of the area that commute out daily (big percentage) and others who commute into area daily. When, where are how to engage so their input can be captured.
- Directors of the Wake Health and Human Services Regional Centers
- El Centro Hispano
- Focus housing near transit and walkable nodes
- Food Banks
- Friends of Johnston County Parks Johnston County Ag Ext
- Hispanic and Latino populations (we have 40%); incredibly low income residents
- Homeless shelters
- Johnston County NAACP
- latino/hispanic organizations
- Local developers
- Low Income Areas
- mobile homes
- Mobile homes, agriculture, POCs
- Most Southeast Raleigh neighborhoods
- Non-profit organizations that serve underrepresented communities
- Our engagement efforts in this area have been challenging because of large size of area and lack of central gathering places.
- People that don't have a vehicle
- People with disabilities such as being wheelchair bound
- Progressive Men's Club (Smithfield)
- Raleigh Regional Association of Realtors
- Rental tenants (vs. landowners/business owners)
- residents living in public housing and mobile home park communities; farmers of all operations types and scales
- Residents/business beyond the study area that regularly travel the study area and stand to benefit from improvements.
- Seasonal / migrant farm workers and their families.
- Selma has underserved neighborhood of Hispanic, Black as well as poor Whites who have both housing and transportation issues.
- Small business owners- especially businesses focused on serving ethnic communities. Gaining trust in these communities takes time.
- Students needing to get to Johnston Community College campuses and workforce development center
- Support existing walkable nodes and create more.
- there are no real public transportation options in our area
- There are places along the 96 and 39 corridors south of Downtown Zebulon
- Tier 1 areas of JoCo to be more complete answer
- Transit dependent
- Use Regional Centers and churches to access poor people. Let them tell you what the issues are.
- Wake Tech (potentially on the edge of the area) or other community colleges

What groups of people can you help bring into this process?

- Affordable Housing Advocates/Developers (DHIC/Raleigh based)
- Also have done some recent outreach to apartment complex managers in Garner - typically are also residents.
- Benson Chamber of Commerce
- Chambers of Commerce, Relators Associations
- Churches, Regional Centers, Oak City Cares, JCATS drivers/staff
- Construction Waste Landfill
- Contacts with large, private landowners
- County Soil & Water Conservation Districts; Wake County Public Housing; Capital Area Workforce Development
- Department of Health/Health and Human Services
- Downtown Garner Association
- Everyone - Planning Board, community, BOC
- Food Bank of Central NC
- Garner Economic Development Corporation
- Garner Senior Center & PRCR Advisory Committee
- Johnston Co. Health Dept
- Johnston County Airport - JNX
- Johnston-Lee-Harnett Community Action, Inc.
- Local Housing Authorities
- Local Planning Boards
- Local religious, social organization leaders
- Neighborhood Associations
- Neuse River Resource Recovery Facility
- New Garner Indoor Recreation Center is open - high traffic. Also Senior Center is a good resource
- Progressive Men's Club Smithfield
- JoCo NAACP
- Friends of JoCo parks
- JoCo Ag Ext
- Public Schools (have had success sending information / links to public surveys to schools and then the teachers distribute to students who give it to their parents)
- Raleigh Regional Association of Realtors
- Recreational Partners and Schools. Friends of Johnston County Parks
- SNAP
- SRTS
- Triangle Land Conservancy
- Truck route considerations to alleviate bin town truck traffic
- Wake County Reentry Council
- Wake County Schools
- Contacts for Springfield Baptist Church and a few others in the area who have been doing expansion/development work
- WIC

The project team ended this section by explaining the information sharing logistics with the CTT and SOT. Members were also told that their facilitation of engagement in this process would be accompanied by an Outreach Toolbox—to be added to the project website—that includes educational information and resources for public involvement.

Idea Gathering

The next portion of the meeting was an interactive activity intended to spur discussion and gather feedback about opportunities and challenges in the southeast area. The presenter first asked polling questions about what people most love about the study area and what opportunities this study can address. The answers to those questions are below.

What do you love most about the southeast area today?

- Affordability (although this is shifting, it's still more affordable than neighboring areas)
- Agriculture and open space still around
- As for Garner, it's got that small town feel but is still close to everything...
- BBQ
- Closely located to major industry and education centers
- Community, close to city with town feel
- Convenience and affordability & opportunities for growth.
- Diversity of people. Unique towns. Safe.
- Downtown breweries and cool small businesses.
- Easy access to highways
- Farm stands and agribusiness
- Funding
- Get plans in place before homes are built. Subdivisions account for future transportation rather than the other way around
- Getting everyone to work together.
- Good highway system, in spite of ongoing work on I40!
- Growing more and more diverse each day, walkable neighborhoods
- growing more and more diverse each day, walkable neighborhoods
- Growth and job opportunities
- I love the rural setting, the natural areas, and the simpler life. It is hard to watch it disappear one development at a time.
- I think you will find this season a volatile time to speak in some communities if your methods are not culturally sensitive and open to their real challenges.
- I-40 improvements.
- Improving access for all, not just people in cars
- Improving coordination between land use and transportation
- Inclusion and equity
- Increase in development/market activity associated with I-540
- JCATS expansion
- Keeping small towns compact and walkable. Preserving natural areas and agriculture. Increasing opportunities for trails and biking. Making it easier to travel between towns and getting from the metro areas to the small towns without a car
- Laid back lifestyle and friendliness of people overall
- Location, location, location
- Main Street communities—shopping, local restaurants, and events
- Mountain to sea trail and east coast greenway other greenways
- Neuse river
- Neuse River and trail, Williamson Preserve
- Neuse River Trail
- Open space & rural feel
- Opportunities for families to live work learn and play
- Our location
- People in JoCo
- Politics
- Proximity to Ocean
- Proximity to Triangle area
- Quiet country setting. Away from the big city, even though I drive into Raleigh daily.
- Rural landscapes and buying foods from local farms.
- rural/small town feel
- Shopping opportunities, new residential housing stock
- Small town feel, access to many amenities
- Small town feel
- Small town feel/community close to urban areas and activities
- small town feeling
- Still holds onto a small town feel for the most part, and a "neighborly" atmosphere, despite the growth
- That plans today to be implemented in the next ten years will not be sufficient - think bigger
- That rural roads can handle the volume of traffic from growth
- The diversity of places. Rural, urban, suburban
- The long time it takes to build and make improvements
- The people
- The rolling landscape, trees and agriculture, Natural areas, and trails. Beautiful backroads and charming and walkable downtowns
- Transition farm to market road network to better match current/future development patterns
- Transportation options
- Transportation, housing, jobs, education
- Variety of lifestyles
- Vision for next 20 years and beyond

What are some of the most important opportunities for this plan to address?

- Address tools available for us to help keep congestion off of the main arteries.
- addressing congestion
- Affordable housing near transit
- Aging in place & access to transportation services for senior citizens
- Attitudes against managed growth
- Better bike facilities
- Bike & Ped accommodation
- bike facilities
- Bus routes that don't require me to go downtown and then catch a connection, it kill so much time...
- Climate change
- Connectivity
- Continued improvements to transportation infrastructure.
- Coordination with all freight Railroads
- Economic Development opportunities and impacts of transportation decisions and prioritization
- Economic growth
- Equity in transportation decision making
- FUNDING!!!!
- How to support that diversity of land uses - where you can have urban areas and farm/ag areas
- How travel patterns and project needs may change after 540 is fully completed
- I think you need to identify where people need to access public assistance and communicate with human services to understand in which communities their clients and participants live. They can provide a lot information about these communities.
- Identifying grocery store locations would help flag food deserts
- Inclusive planning
- Increase public transit opportunities for those who need it most
- Keeping Johnston county residents working in Johnston County
- Land use and transportation connection
- land use planning that is supportive of transportation investment decisions and vice versa
- Maintain livability and diversity
- Multimodal access for Selma, Smithfield, Wilson Mills as the populations expand will definitely be needed
- Multi-modal transportation
- One day Neighborhood routes in Garner, right now it's hard to ride transit due to having to park and ride
- Ongoing funding for road improvements, behind the eight ball on addressing traffic congestions in rural areas. Horrible traffic on rural roads.
- Planning for transit services
- public transportation needs
- Public transportation needs in RURAL communities in the project area
- Reduced VMTs
- Road Conditions
- Smart growth
- the need for multimodal transportation, rather than focusing on automobile dependent uses
- The Tomato Map (2050 congestion, even after factoring in all of the new highway improvements)
- Traffic
- Transit oriented development
- Transit supportive land use
- Transit, housing affordability, and land use
- transportation alternatives that provide for health and well-being while giving opportunities for varied experiences
- walkability
- Walkability and connectivity

MAPPING ACTIVITY

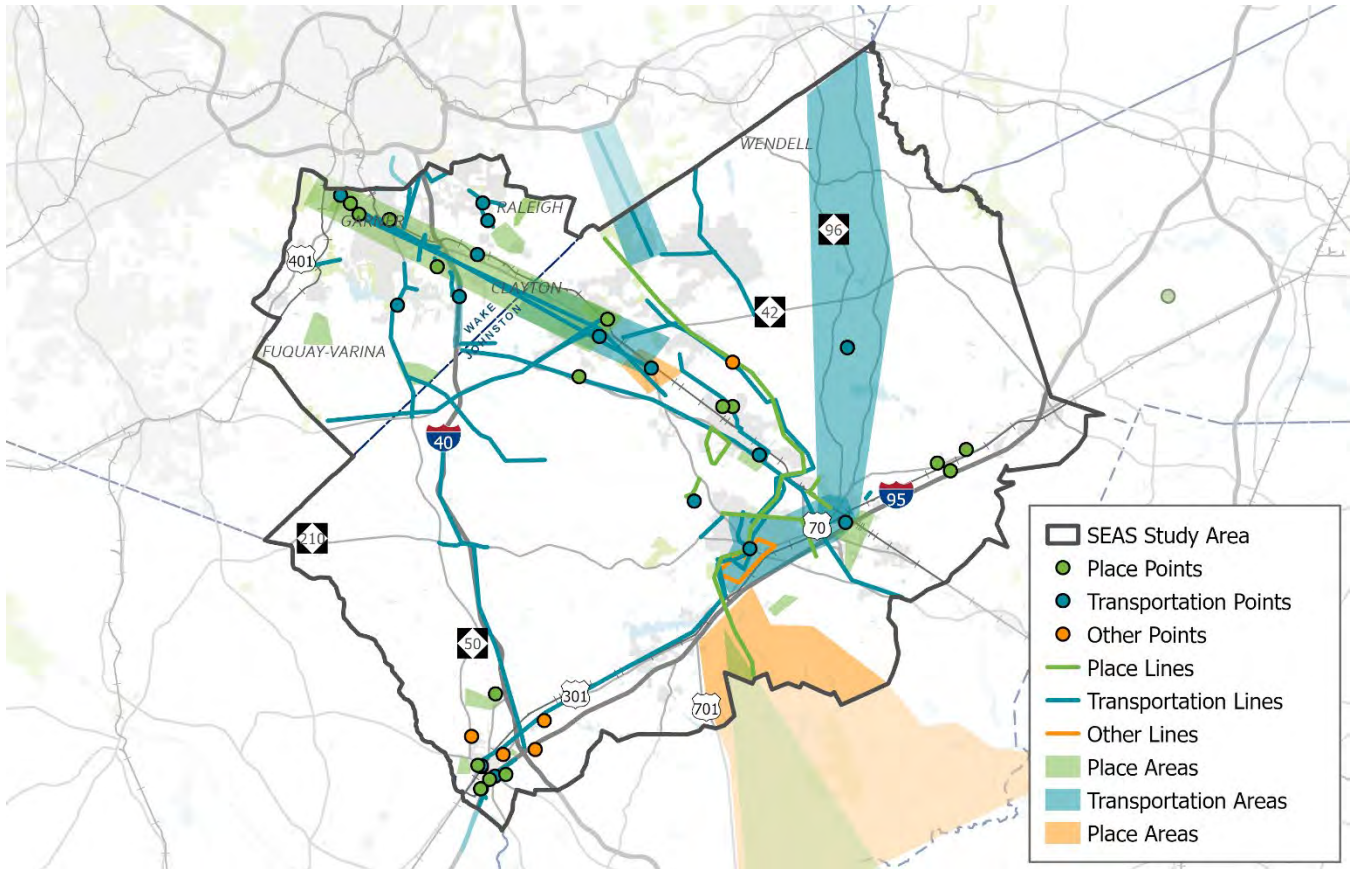
The next and final activity of the meeting was identifying needs and opportunities related to places, transportation, and any other ideas on an interactive online map. The mapping activity posed the questions below. The results of the activity are on the following page, both shown on a figure and summarized in a table.

Activity Instructions

Places	Transportation	Other Ideas
<p>As the area grows, what would make the places better? Share your ideas about:</p> <ul style="list-style-type: none"> • Places that reflect well on the community • Places that need to be improved • Places that need to be protected, maintained, or preserved 	<p>As the area grows, what would improve how people travel? Share your ideas about:</p> <ul style="list-style-type: none"> • Safety • Congestion • Transit • Bike/ped infrastructure 	<p>What else should be considered in this plan? Share your ideas about:</p> <ul style="list-style-type: none"> • Utilities • Schools • Economic development • Regional collaboration

Activity Results

The map below shows that needs and opportunities are mostly concentrated in the existing urban, or built, areas and along exiting roadways.



Places	Transportation	Other Ideas
<ul style="list-style-type: none"> Schools and their student capacity were marked Development sites were identified for industrial, residential, and commercial land uses Downtowns to be preserved and enhanced were denoted General development opportunities were drawn 	<ul style="list-style-type: none"> Areas of high traffic were highlighted Roadway and intersection improvement opportunities were noted Existing transit options and potential transit opportunities were identified Bike/ped improvements were marked 	<ul style="list-style-type: none"> Comments identified areas of preservation and economic development Schools at or above capacity were noted Sewer expansion in Benson was marked

Wrap Up and Next Steps

Following the interactive mapping and discussion, the project team wrapped up the presentation with a review of next steps which included launching the project website, initiating the State of the Region Report, and beginning Phase 1 engagement in July. The meeting concluded with the project team thanking the CTT and SOT members for their time and any closing remarks.

Attachment 1 | Attendance List

First Name	Last Name	Agency	SEAS Role
Julie	Maybee	Archer Lodge	CTT
Erin	Joseph	Benson	CTT
Jerry	Medlin	Benson	SOT
Kimberly	Pickett	Benson	CTT
Bonnie	Parker	CAMPO	Project Team
Shelby	Powell	CAMPO	Project Team
Alex	Rickard	CAMPO	Project Team
Brandon	Watson	CAMPO	Project Team
Crystal	Odum	CAMPO - MCC	CTT
Mike	Bruff	CAMPO - TRM	CTT
Anna	Stokes	CAMPO - Wake Transit	CTT
Porter	Casey	Clayton	SOT
Ben	Howell	Clayton	CTT
Dana	Wooten	Clayton Chamber of Commerce	SOT
Frances	Bisby	Community Partner Network of Raleigh	SOT
Pauline	Ketchum	Four Oaks	CTT
Kathy	Behringer	Garner	SOT
John	Hodges	Garner	CTT
Gaby	Lontos-Lawlor	Garner	CTT
Ken	Marshburn	Garner	SOT
Jeff	Trizenberg	Garner	CTT
Elmo	Vance	Garner	SOT
Lamara	Williams-Jones	Garner - Transit/Transportation Citizen Representative	SOT
David	Eatman	GoRaleigh	SOT
David	Walker	GoRaleigh	CTT
Will	Allen	GoTriangle	SOT
Jay	Heikes	GoTriangle	CTT
Sharon	Peterson	GoWake Access Transportation Advisory Board	CTT
Brian	Stoker	Grifols	SOT
Neal	Davis	JCATS	SOT
Butch	Lawter	Johnston County	SOT
Braston	Newton	Johnston County	CTT
Bonnie	White	Johnston County Association of Realtors	SOT
Adrian	O'Neal	Johnston County Parks, Greenways, and Open Space	SOT
Donna	Bailey-Taylor	Johnston County Visitors Bureau	SOT
Tina	Ray	Johnston-Lee-Harnett Community Action, Inc.	SOT
Samantha	Borges	Kimley-Horn	Project Team
Allison	Fluitt	Kimley-Horn	Project Team
Kristina	Whitfield	Kimley-Horn	Project Team
Andrew	Spiliotis	Knightdale	SOT
Neil	Perry	NCDOT Rail	SOT
Carlos	Moya	NCDOT TPD	CTT
Scott	Walston	NCDOT TPD	SOT
Jennifer	Collins	NCDOT-Div 4	CTT
Sam	Lawhorn	NCDOT-Div 4	CTT
Bob	Deaton	NCDOT-Div 5	CTT
Brandon	Jones	NCDOT-Div 5	SOT
David	Keilson	NCDOT-Div 5	CTT
Shaylah	Nunn Jones	NovoNordisk	SOT
Anne	Conlon	Raleigh	CTT
Chris	Golden	Raleigh	SOT
Paul	Kallam	Raleigh	SOT
Bynum	Walter	Raleigh	SOT
Joe	Milazzo	RTA	SOT

SEAS Southeast Area Study Update
Joint CTT and SOT Kickoff Meeting Summary
May 19, 2022

First Name	Last Name	Agency	SEAS Role
Randy	Cahoon-Tingle	Selma	CTT
Bruce	McKay	Selma	SOT
Michael	Scott	Smithfield	CTT
Stephen	Wensman	Smithfield	CTT
Matt	Day	TJCOG	SOT
Maureen	McGuinness	Triangle East Chamber	SOT
Brenna	Thompson	Triangle Land Conservancy	SOT
Kim	Johnson	Triangle Transportation Choices	SOT
James	Salmons	UCPRPO	CTT
Betty	Parker	Wake Co Schools	SOT
Tim	Gardiner	Wake County	CTT
Akul	Nishawala	Wake County	CTT
Terry	Nolan	Wake County	CTT
Sharon	Peterson	Wake County	CTT
Asa	Fleming	Wake County Planning Board	SOT
Danny	Kadis	Wake County Planning Board	SOT
Nathan	Spencer	Wake up Wake County	SOT
Wendy	Oldham	Wilson's Mills	CTT
Mike	Clark	Zebulon	SOT

SEAS

S O U T H E A S T A R E A S T U D Y

UPDATE

What: Core Technical Team Meeting No.2**When:** Friday, August 19, 2022
1:00-2:30 pm**Where:** Hybrid
In-Person: Clayton Town Hall | 111 E. Second St
Virtual: Microsoft Teams Call

SEAS UPDATE CTT MEETING NO. 2

Introduction

This document summarizes the second Core Technical Team (CTT) meeting for the Southeast Area Study (SEAS) Update. This summary provides an overview of the meeting agenda, presentation, and discussion, and is accompanied by the meeting presentation. A total of 31 people attended the meeting, including those in-person and online. The full participant list is included as an attachment at the end of this document.

Summary

Project Progress

The project team initiated the meeting by introducing themselves, reviewing the agenda, and explaining meeting logistics including the unique hybrid format. The project team then established the purpose and intended outcome of the meeting, shown in the table below.

<i>Meeting Purpose</i>	<i>Meeting Outcome</i>
The objective of this meeting is to update the Core Technical Team (CTT) on project progress, finalize the plan's Vision and Guiding Principles, and initiate scenario planning.	Members will be informed of the plan's progress and be introduced to the scenario planning process in order to provide information on known developments and future land use.

Next, the presentation kicked off with some information about progress since the last meeting in July. The presenters reviewed some key results from the existing conditions analysis including demographic data and mobility trends in the SEAS area.

Phase 1 Engagement

The next portion of the presentation was a review of the public outreach efforts that occurred as part of Phase 1 Engagement. This included information about the advertising and social media sharing, the eight pop-up events that were held, initial online survey results, and the small group jurisdictional meetings.

The preliminary survey results showed that over 600 people took the survey, all living, working, or owning property in the study area. The jurisdictional meetings included in-person meetings in small groups with the jurisdictions involved in the SEAS. The project team shared the key takeaways from these meetings broken down by category. The takeaways spurred discussion between the CTT members about what it might mean to address safety issues and if that conflicts with congestion problems.

Vision & Guiding Principles

The next part of the presentation presented the SEAS Update guiding principles using the SEAS guiding principles from 2017 as a starting point and feedback from the public survey to update and adjust them.

The CTT suggested some edits to wording and descriptions of the guiding principles. These edits were incorporated into the final guiding principles.

Land Use Scenario Planning

Most of the meeting was spent discussing land use scenario planning and educating the CTT members about the process. The project team described the scenario planning process within the construct of the Five W's and H: who, what, where, when, why, and how.

GROUP ACTIVITY

The CTT members were tasked with updating and validating the existing land use place type and development status data via a mapping activity. Members who attended in person wrote on physical maps in the room, and members who attended virtually could provide comments on an online web-based mapping platform.

The results of the mapping activity will result in the study's first scenario, the Existing Land Use scenario. These results will be included in upcoming documentation.

Wrap Up and Next Steps

The project team wrapped up the presentation with a review of next steps including finalizing the Regional Snapshot existing conditions report. The team discussed upcoming meetings with the CTT, and asked the group to complete the breakout activity as a homework assignment.

Attachment 1 | Attendance List

First Name	Last Name	Agency	SEAS Role
Erin	Joseph	Benson	CTT
Kimberly	Pickett	Benson	CTT
Bonnie	Parker	CAMPO	Project Team
Shelby	Powell	CAMPO	Project Team
Alex	Rickard	CAMPO	Project Team
Tim	Shortley	CAMPO	Project Team
Mike	Bruff	CAMPO - TRM	CTT
Anna	Stokes	CAMPO - Wake Transit	CTT
Ben	Howell	Clayton	CTT
Pauline	Ketchum	Four Oaks	CTT
John	Hodges	Garner	CTT
Gaby	Lontos-Lawlor	Garner	CTT
Braston	Newton	Johnston County	CTT
Samantha	Borges	Kimley-Horn	Project Team
Allison	Fluitt	Kimley-Horn	Project Team
Kristina	Whitfield	Kimley-Horn	Project Team
Nick	Morrison	NCDOT IMD	CTT
Brian	Murphy	NCDOT Safety	CTT
Phil	Geary	NCDOT TPD	CTT
Carlos	Moya-Astudillo	NCDOT TPD	CTT
Jennifer	Collins	NCDOT-Div 4	CTT
James	Salmons	NCDOT-Div 4	CTT
Bob	Deaton	NCDOT-Div 5	CTT
David	Keilson	NCDOT-Div 5	CTT
Don	Belk	Raleigh	CTT
Anne	Conlon	Raleigh	CTT
Chris	Golden	Raleigh	CTT
Randy	Cahoon-Tingle	Selma	CTT
Stephen	Wensman	Smithfield	CTT
Ben	Bearden	TJCOG	
Terry	Nolan	Wake County	CTT

SEAS

S O U T H E A S T A R E A S T U D Y

UPDATE

What: Stakeholder Oversight Team Meeting No. 2**When:** Tuesday, August 23, 2022
11:00am - 12:30pm**Where:** Zoom (meeting link below)

SEAS UPDATE SOT MEETING NO. 2

Introduction

This document summarizes the second Stakeholder Oversight Team (SOT) meeting for the Southeast Area Study (SEAS) Update. This summary provides an overview of the meeting agenda, presentation, and discussion, and is accompanied by the meeting presentation and recording. A total of 63 people attended the meeting via Zoom. The full participant list is included as an attachment at the end of this document.

Summary

Project Progress

The project team initiated the meeting by introducing themselves, reviewing the agenda, and explaining meeting logistics including the use of an online polling tool. The project team then established the purpose and intended outcome of the meeting, shown in the table below.

<i>Meeting Purpose</i>	<i>Meeting Outcome</i>
The objective of this meeting is to update the Stakeholder Oversight Team (SOT) on project progress, finalize the plan's Vision and Guiding Principles, and introduce the members to scenario planning.	Members will be informed of the plan's progress and be introduced to the scenario planning process initiated during the most recent Core Technical Team (CTT) meeting.

Next, the presentation kicked off with some information about the progress since the last meeting in July. The presenters reviewed some key results from the existing conditions analysis including demographic data and mobility trends in the SEAS area.

Phase 1 Engagement

The next portion of the presentation involved a review of the public outreach efforts that occurred as part of Phase 1 Engagement. This included information about the advertising and social media sharing, the eight pop-up events that were held, select online survey results, and the small group jurisdictional meetings.

The survey results showed that over 600 people took the survey, all living, working, or owning property in the study area. The project team shared some key takeaways from the survey feedback.

The jurisdictional meetings included in-person meetings in small groups with the jurisdictions involved in the SEAS. The project team shared the key takeaways from these meetings broken down by category. The project team emphasized that the takeaways would not be fully representative of the SEAS project area as a whole, but rather would provide ideas tailored to the different area communities.

Attendees also engaged in discussion about the role of transit for the future of the Southeast Area and asked about to what level of detail the SEAS Update transit recommendations would be. Shelby Powell clarified that the study would evaluate transit propensity throughout the study area, but recommendations would not result in specific routing designations.

Vision & Guiding Principles

The next part of the presentation presented the SEAS Update guiding principles using the SEAS guiding principles from 2017 as a starting point and feedback from the public survey to update and adjust them. A consensus of the SOT approved of the draft guiding principles.

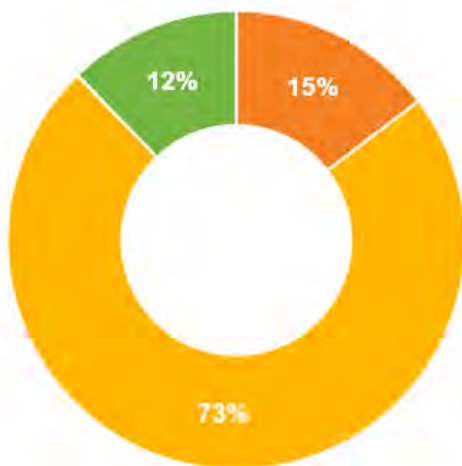
Land Use Scenario Planning

Most of the meeting was spent discussing land use scenario planning and educating the SOT members about the process. The project team described the scenario planning process within the construct of the Five W's and H: who, what, where, when, why, and how.

POLLING ACTIVITY

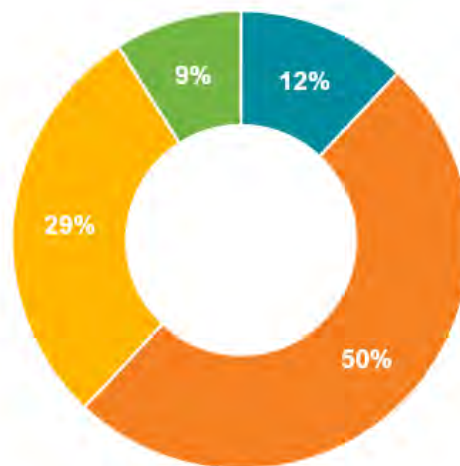
The interactive polling activity collected feedback to guide scenario development. This feedback was compared with survey results and some information from the 2017 SEAS to understand changes between 2017 and now, and where the SOT and the public might agree or disagree. The results of the online polling activity are below:

How much growth is ideal for the Southeast Area?



■ No growth ■ A little growth
■ More growth ■ A lot of growth

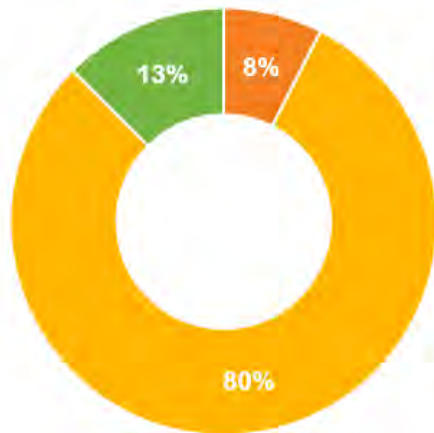
SOT Feedback



■ No growth ■ A little growth
■ More growth ■ A lot of growth

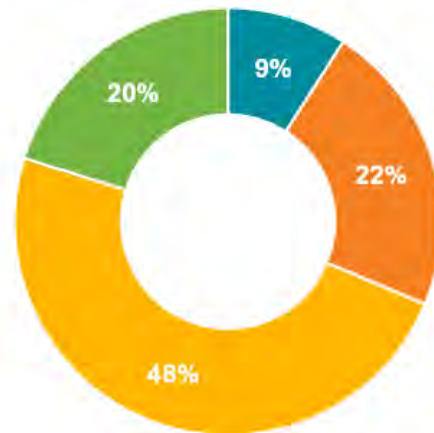
Public Survey Feedback

What type of growth is ideal for the Southeast Area?



- Mostly residential
- Somewhat more residential
- Somewhat more shops and jobs
- Mostly shops and jobs

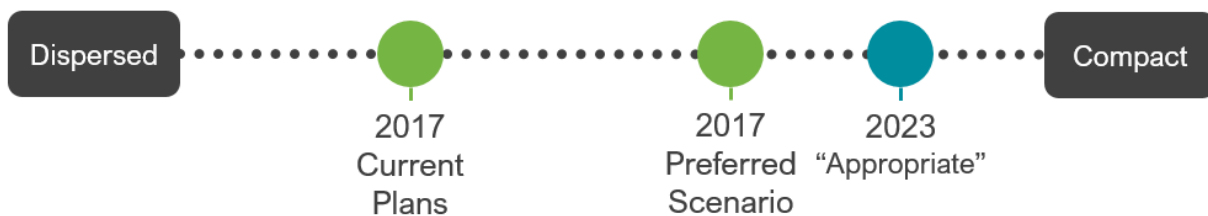
SOT Feedback



- Mostly residential
- Somewhat more residential
- Somewhat more shops and jobs
- Mostly shops and jobs

Public Survey Feedback

In the last SEAS we considered compact vs dispersed growth. What do you think is appropriate for the SEAS Study Area now?



- 2017 SEAS
- 2023 SEAS Update

Wrap Up and Next Steps

The project team wrapped up the presentation with a review of next steps including finalizing the Phase 1 Engagement Summary and finalizing the Regional Snapshot existing conditions report. The team identified upcoming meetings with the CTT.

Attachment 1 | Attendance List

First Name	Last Name	Agency	SEAS Role
John	Buzzeli	Archer Lodge	SOT
Julie	Maybee	Archer Lodge	CTT
Erin	Joseph	Benson	CTT
Kimberly	Pickett	Benson	CTT
Bonnie	Parker	CAMPO	Project Team
Shelby	Powell	CAMPO	Project Team
Alex	Rickard	CAMPO	Project Team
Crystal	Odum	CAMPO - MCC	CTT
Mike	Bruff	CAMPO - TRM	CTT
Anna	Stokes	CAMPO - Wake Transit	CTT
Porter	Casey	Clayton	SOT
Ben	Howell	Clayton	CTT
Patrick	Pierce	Clayton	CTT
Dana	Wooten	Clayton Chamber of Commerce	SOT
Joe	Geigle	FHWA	SOT
Pauline	Ketchum	Four Oaks	CTT
Kathy	Behringer	Garner	SOT
Gaby	Lontos-Lawlor	Garner	CTT
Jeff	Triezenberg	Garner	CTT
David	Walker	GoRaleigh	CTT
Will	Allen	GoTriangle	SOT
Anita	Davis-Haywood	GoWake Access	SOT
Brian	Stoker	Grifols	SOT
Neal	Davis	JCATS	SOT
Butch	Lawter	Johnston County	SOT
Braston	Newton	Johnston County	CTT
Bonnie	White	Johnston County Association of Realtors	SOT
Chris	Johnson	Johnston County Econ Dev	SOT
James	O'Neal	Johnston County Parks, Greenways, and Open Space	SOT
Donna	Bailey-Taylor	Johnston County Visitors Bureau	SOT
Samantha	Borges	Kimley-Horn	Project Team
Allison	Fluitt	Kimley-Horn	Project Team
Andrew	Spiliotis	Knightdale	SOT
Carlos	Moya-Astudillo	NCDOT TPD	CTT
Scott	Walston	NCDOT TPD	SOT
Jennifer	Collins	NCDOT-Div 4	CTT
Sam	Lawhorn	NCDOT-Div 4	CTT
James	Salmons	NCDOT-Div 4	CTT
Bob	Deaton	NCDOT-Div 5	CTT
David	Keilson	NCDOT-Div 5	CTT
Tracy	Parrott	NCDOT-Div 5	SOT
Shaylah	Nunn Jones	NovoNordisk	SOT
Anne	Conlon	Raleigh	CTT
Chris	Golden	Raleigh	SOT
Paul	Kallam	Raleigh	SOT
Bruce	McKay	Selma	SOT
Stephen	Wensman	Smithfield	CTT
Matt	Day	TJCOG	SOT
Maureen	McGuinness	Triangle East Chamber	SOT
Kim	Johnson	Triangle Transportation Choices	SOT
Tim	Gardiner	Wake County	CTT
Akul	Nishawala	Wake County	CTT
Chris	Snow	Wake County Parks, Recreation, and Open Space	SOT

SEAS Southeast Area Study Update

SOT Meeting No. 2 Summary

August 23, 2022

First Name	Last Name	Agency	SEAS Role
Asa	Fleming	Wake County Planning Board	SOT
Danny	Kadis	Wake County Planning Board	SOT
Mike	Clark	Zebulon	SOT

There were five unidentifiable attendees

Appendix B: Jurisdictional Group Meetings Summary

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B

JURISDICTIONAL GROUP MEETINGS SUMMARY

As part of the Southeast Area Study Update, a series of three meetings were held with planning staff from jurisdictions across the Southeast Area to better understand their biggest desires and concerns and how things have changed in their jurisdictions since the 2017 study. Between August 3rd and August 5th, the SEAS Project Team met with groups of planning staff from Southeast Area municipalities as well as from county planning departments (Wake and Johnston Counties) to discuss land use and transportation priorities.



Meeting 1

August 3rd

- Archer Lodge
- Clayton
- Garner
- Raleigh
- Johnston and Wake Counties



Meeting 2

August 4th

- Benson
- Four Oaks
- Kenly*
- Pine Level
- Johnston County



Meeting 3

August 5th

- Smithfield
- Selma
- Wilson's Mills*
- Johnston County

**Planners from Kenly and Wilson's Mills were unable to attend.*

Meeting 1- August 3rd

The August 3rd meeting focused on the northwestern area of the study area, including Archer Lodge, Clayton, Garner, Southeast Raleigh, and Johnston and Wake Counties.

Archer Lodge

GROWTH PATTERNS

- Updating ordinance and plans for density

TRAFFIC AND ROADWAY

- Ongoing concerns about high traffic
 - Impact on the town, projected increase
 - Castleberry Road is congested
 - Buffalo Road continues to be congested even after widening

BIKE AND PEDESTRIAN

- Importance of multimodal connections
- Recently adopted a bicycle and pedestrian plan in 2020 that showed a desire for connections to Clayton

POLICIES AND PROGRAMS

- Retail leakage analysis to promote mixed use development as tool for influencing elected officials

TOP PRIORITIES

- Need for interconnectivity and supportive policies to make it happen.
 - Recently finished updating their Unified Development Ordinance with density in mind
 - Currently working on updating their Comprehensive Land Use Plan.

Clayton

GROWTH PATTERNS

- Clayton and its surrounding areas seeing massive growth, see need for growth to be multimodal
 - Adding about 15,000 new units of residential, with industrial and commercial growth following suit.
 - Need development to mitigate sprawl
 - Comprehensive plan encourages mixed-growth and higher density, town is rewriting UDO & modernizing it to create density
 - Major highways as transit corridors with dense development around and along them
 - Opportunity for BRT, but also consideration for future phase of commuter rail

TRAFFIC AND ROADWAY

- Significant traffic needs overall
 - Congestion along connections from Clayton and Archer Lodge into Raleigh
 - Church and Cornwallis backing up during peak periods
 - BUS-70 sees traffic comparable to I-95
 - Shotwell Rd backing up to the Walmart for about a mile
- Projects to alleviate some traffic
 - I-40 East project
 - Need to finish 540
- NC-42 serves as the main east-west corridor through Clayton.
 - NC-42 East- widening and work on Ranch Road to connect NC-42 East to US-70 bypass both noted as accomplishments since the 2017 SEAS.
 - NC-42 West is a major priority for the town
 - Improvement/widening of the road itself
 - Growth and development along the corridor, especially around Johnston Medical Center Clayton.
 - Small area plan along NC-42 West from Amelia Church to Cornwallis

BIKE AND PEDESTRIAN

- Need bike/ped access across Business 70
- Greenways parallel to transit corridors that could branch out to create connections to transit
- Prioritize critical connections between jurisdictions

POLICIES AND PROGRAMS

- Clayton starting work on their transportation plan in coming months.

TOP PRIORITIES

- Further evaluating the planned Northern and Southern Connectors. Both roadway proposals are needed and planned, but neither is currently funded. Wants to study closer to see if one should be prioritized over the other.
- Identifying projects that cross jurisdictional lines to work towards together

Garner

GROWTH PATTERNS

- Significant pushback locally to higher density
 - Older residents oppose
 - Challenge to get mix of housing types

TRAFFIC AND ROADWAY

- Need to maximize efficiency of the roadway network
 - Trying to improve connectivity of smaller roads to get people off major roads
- Not a lot of east-west connectivity in town
 - Kills projects when town wants development to pay for road connections
- Doesn't see benefit in widening roads, would like to shift away from single occupancy vehicles
- US 70 needs better access management
- 70/Mechanical/US 401 – needs some LU planning and access management recommendations
- Will see more growth at 540/50/401- want to maximize potential
- 40/70 Catalyst site
 - Timber Dr East extension- looked at crossing 40 on other side but not feasible
 - Didn't feel like recommendations in area were as realistic

TOP PRIORITIES

- Access Management Standards, especially along US-70

Raleigh

GROWTH PATTERNS

- Amend Future Land Use Map to incentivize mixed-use, denser, compact development
- Rock Quarry Rd and Auburn-Knightdale Rd are being amended for future land use to incentivize density & walkability, city growth area
 - Raleigh's newest growth center, future hot spot
 - Future 540 at Auburn-Knightdale/Hodge Rd area is expecting development

- Rock Quarry Rd will stay the same but be node-focused (Rock Quarry at Whitefield, Battle Bridge)

TRAFFIC AND ROADWAY

- Working with Garner to change Tryon Rd recommendation to 2 lanes instead of 4
- Street plan designations are being revisited for 6 lane cross sections to see if they can be recommended for 2 or 4 with multimodal accommodation

TOP PRIORITIES

- BRT and regional transit connections- what policy needs to be adopted for them to succeed

Wake County

TRAFFIC AND ROADWAY

- Trying to improve intersections in lieu of costly widenings
- Interchange locations along 540 need connectivity between modes
- I-87/401 corridor

POLICIES AND PROGRAMS

- Adopted PLANWake to identify community/walkable areas

TOP PRIORITIES

- Funding

Meeting 2- August 4th

The August 4th meeting focused on the areas of the study area in unincorporated Johnston County and jurisdictions roughly along I-95 outside of the Smithfield-Selma area, including Benson, Four Oaks, Pine Level, and Kenly. Planners from Kenly were unable to attend the meeting.

Benson

GROWTH PATTERNS

- Lots of residential growth and major subdivisions throughout town
- Growing significantly close to 95/40 interchange
- Subdivisions off Tarheel Road
- Farm, commercial, & residential land for sale
- Older buildings being improved and redeveloped

TRAFFIC AND ROADWAY

- Exit 79 to Main Street has improvements being made
- The bridge on NC 50/Main St connects the east and west parts of town
- Planned traffic circle at US-301 and Main- important
- The I-95 widening is important
- Plans to add flyover bridge to connect Cub Road and Market St over I-95, will take traffic off 301 and East Main St

- NC-242 near I-40 taken out of STIP, but could be put back in
 - Widening of NC 242 between Tar Heel and I-40
 - 242 North is a major commuter corridor

BIKE AND PEDESTRIAN

- Good base network of sidewalks
- More walking trails wanted
- Would like connectors to Selma & Wilson's Mills

POLICIES AND PROGRAMS

- Update to Comprehensive Land Use Plan completed last year, working on UDO this year
 - UDO will require sidewalks
- CTP that's not yet adopted- new facility on farm is controversial
- Banner Elk Road- circulate access to 242
- Wants to revisit connectivity beyond CTP
 - Connect road stub out streets
 - CTP has good greenway connection

TOP PRIORITIES

- Parking and Zoning
- Diverting freight traffic with help of STIP projects

Four Oaks

GROWTH PATTERNS

- Main subdivision in town has 33 houses now and will build out to 100 (Civitan & Hatcher)
- Major subdivision coming on Thunder Rd
- Just got funds for Main St maintenance
- 2 developments off Old School Road coming

TRAFFIC AND ROADWAY

- NCDOT Roundabouts on NC-90
- Civitan Road and Hatcher Rd needs a turn lane
- Just got funds for Main St maintenance- NCDOT gave town control of street, concern about trucks speeding down Church

BIKE AND PEDESTRIAN

- Desire for safe bike facilities
 - Black Creek has bicycle event twice a year

TOP PRIORITIES

- Historic mixed use of buildings
- Dealing with freight traffic through BD plant

Pine Level

GROWTH PATTERNS

- About 600 homes coming in, but no sewer capacity or water infrastructure to serve them so subdivision on hold until hopeful sewage capacity increase in 2024-2025
- Led to a moratorium on subdivisions- need to be able to provide water/sewer/trash pickup, but can't yet
- Town anticipating further growth from new I-42 designation

TRAFFIC AND ROADWAY

- Turn lane on Micro-Pine Level Rd

BIKE AND PEDESTRIAN

- Desire for new, improved sidewalks (citizens asking)
- Existing sidewalks that need maintenance
- Not much desire for bike facilities
- Most people drive to large park, but park is walkable and accessible to the town

POLICIES AND PROGRAMS

- No current connectivity policies
- New Land Use Plan adopted this summer

TOP PRIORITIES

- Density in the center of town in historic part
- Parking in downtown (important and a challenge because of the railroad running through)

Johnston County

TRAFFIC AND ROADWAY

- NC-210 from Raleigh Rd to NC 50
 - Funded project, targeted for small area plan
- I-95 getting worse- increased speeding, congestion, volumes
 - Widening I-95 is an NCDOT priority
- Unincorporated areas of the county have freight issues

BIKE AND PEDESTRIAN

- Neuse River Trail Extension should be adopted in September by McAdams/RPO
- Johnston County & RPO plan to do a county-wide greenway study
 - Goal to connect schools

POLICIES AND PROGRAMS

- ~2 months away from adopting new land use plan
 - Identifying growth areas and densities
 - Creating an action plan, prioritizing next steps
 - Used implementation toolkit in Johnston County Land Use Plan
 - Data from original SEAS policy review was used in updating the plan

TOP PRIORITIES

- Cornwallis Road

Meeting 3- August 5th

The August 5th meeting focused on the area around and including Smithfield, Selma, and Wilson's Mills as well as some of the surrounding unincorporated areas of Johnston County. Planners from Wilson's Mills were unable to attend the meeting.

Smithfield

GROWTH PATTERNS

- Smithfield Land Use Plan talked about dense nodes
- Supporting mixed use – the “compact” areas
- Need lateral connectivity between developments
- Focus on economic toolbox
- Expecting growth on east BUS-70, development east of I-95 wasn't part of the last study
 - Potential to expand water/sewer east of I-95
- Development along 210 to Cleveland
- Potential for new industrial demand around Smithfield

TRAFFIC AND ROADWAY

- Concerns about control of access along 301/39/96, US 70 Business
- Priority projects: 301, Wilsons Mills Rd, Buffalo Rd
- US 301 from Smithfield to Four Oaks is important, but only the bridge replacement is funded
- All projects identified in original SEAS still critical
- Amazon is driving up truck traffic on Swift Creek Rd, which is being addressed in upcoming updates to town Transportation Plan
 - Piece of Swift Creek Rd in front of airport is funded
- NC 210 is seeing lots of development, difficult to preserve ROW for improvements without NCDOT support
- Interchanges important to the town – I-42 / US 70 interchange, and Brogden Rd interchange (funded for 2029)
- Roundabouts on Exit 90 are in STIP
- Truck route around downtown would be ideal
- Wilsons Mills Rd from Durwood Stephenson to Market St widening

BIKE AND PEDESTRIAN

- NC 210 at Market St is a terrible angle for adequate bike/ped access/visibility
- Pedestrian crossing lights downtown poorly timed – need more pedestrian facilities
- Need ways to move people across the freight corridors safely
- Wants trails and sidewalk on all major corridors in Smithfield to be multimodal
- West side of town lacks Bike/Ped facilities

- Need NCDOT to plan more ROW for bike/ped improvements

#1 ISSUES TO ADDRESS

- US-301- Improvement, visualization

Selma

GROWTH PATTERNS

- Buffalo Rd is a priority – town thought NCDOT had completed ROW acquisition, but it appears not
- On US 301/NC 39 area – appx 500 proposed residential structures
- The new Food Hall is driving some redevelopment on the southeast side of I-95
- New developments forthcoming on Old Beulah Rd and on old Sysco property
- Eastfield Business Park is developing with office and retail
- Solar farm near ETJ

TRAFFIC AND ROADWAY

- US 301 between Smithfield and Selma is funded in the STIP for ROW 2025 and CON 2027
 - Potential hotspot at Ricks Rd/US 301/39/96
- Anderson Street / Rail yard coming into Selma is an issue
 - Would like to study for gateway into Selma, has been trying to get feasibility study
- Preserving ROW during new developments is a priority
- Traffic calming is needed in neighborhoods
- Problems with access control
 - Industrial sites are not allowed to turn left

#1 ISSUES TO ADDRESS

- US-301- expedite project

Other Topics

Hot Spot Discussions

- NC-210 from Raleigh Rd or Lassiter Rd to NC 50 is funded but delayed; needs small area plan
- US 301 at E Main St (Benson) is on the way
- Cub Rd (Benson)
- NC-242 North – subdivisions from Tarheel Rd
- I-42 new crossovers needed – has a few service roads
- US-301 Smithfield to Selma – needs access management

Transit

- JCATS Pilot study, potential for microtransit
- RPO pushing to extend Piedmont Amtrak service through the study area to serve Selma, Pine Level, Clayton

- BRT being studied to Clayton
- Potential future extension of commuter rail through Clayton (& beyond)

Key Takeaways

Roadway

- Congestion needs from 2017 SEAS still prevalent
- Desire for a safety-first strategy
- Strategic connections of road network needed
 - Connections between developments, smaller roads to provide alternative routes to major corridors
 - Connections that reduce travel time/provide more direct routes
 - Connections around jurisdictions (strategic bypasses)

Bike/Ped

- Increased demand/desire especially for facilities providing regional connectivity
 - Intermodal strategy- greenway/sidewalk connections to transit, etc.
 - Walkability within nodes/areas
- Need for safe bike/ped accommodation both along and across major corridors
- NCDOT Complete Streets Policy may provide more funding
- Need NCDOT assistance preserving right-of-way for bike/ped infrastructure along major corridors amidst development

Transit

- Prioritize regional connectivity to the Triangle
- Emphasis on opportunity for mode shift to relieve congestion
- Coordination between transit corridors/stations and land use

Land Use/Development

- Fast growing, especially high residential growth
- Mixed-use development is more desired now vs 5 years ago
 - Important to consider different types and tailor to needs of each jurisdiction
 - Options for gentle density, missing middle housing- doesn't have to be all vertical density
- Need to consider infrastructure (ex. water, sewer) as growth expands to new areas
- Policies and plans need to be updated to incentivize type of development desired
 - ex. Zoning, UDOs, Land use plans. Progress being made.

Other

- Develop standardized guides and educational materials
 - Access management retrofit standards

- Cost of sprawl educational materials
 - Traffic generation by lot guide
 - Transit supportive density guide
- Equity should be a focus of the study

Appendix C: Pop-Up Events Summary and Materials

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C

POP-UP EVENTS SUMMARY

As part of the process of developing the Southeast Area Study Update, a series of eight pop-up events were held at community events and locations throughout the study area to further engage with the public about their desires and concerns. Representatives were stationed at the following eight events throughout July 2022:

Smithfield StrEATery

July 15th 6-9pm in Smithfield

Wilson's Mills Farmers Market

July 16th 8am-2pm in Wilson's Mills

Rockin' on Raiford Concert Series

July 21st 5-8pm in Selma

Clayton Farmers Market

July 23rd 9am-1pm in Clayton

Brightleaf Flea Market

July 24th 9am-2:30pm in Smithfield

SE Regional Library (Storytime & Yoga)

July 27th 10am-12pm in Garner

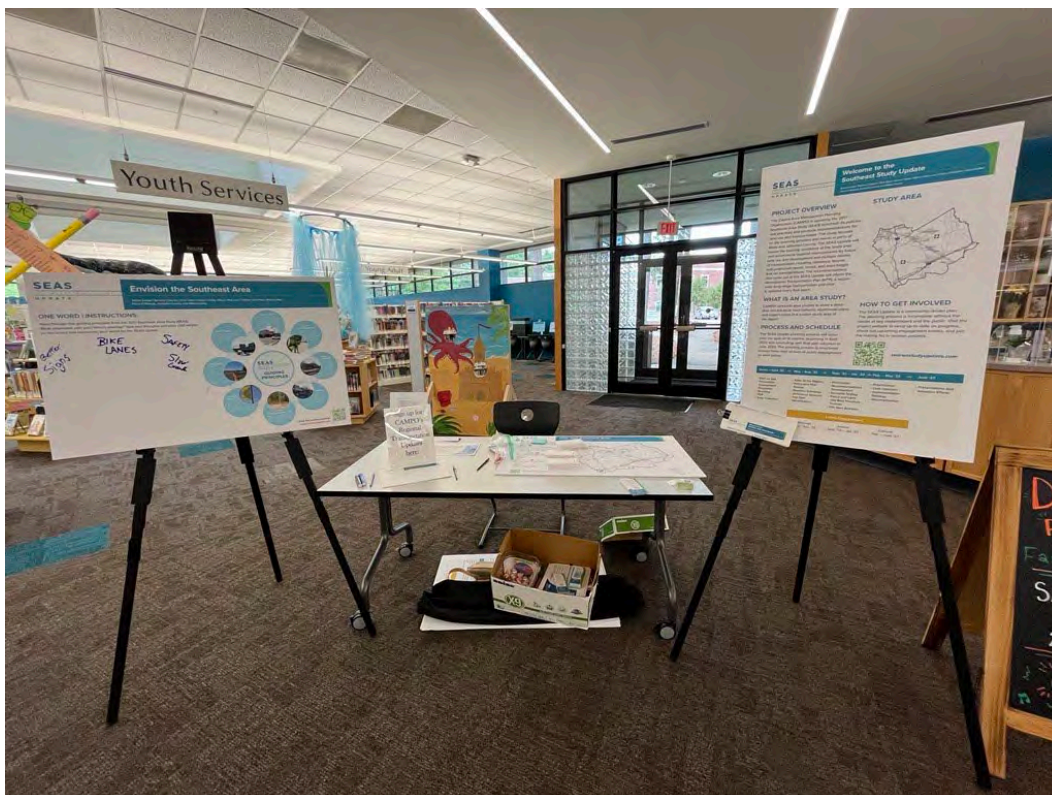
Clayton Last Friday Event

July 29th 6-9pm in Clayton

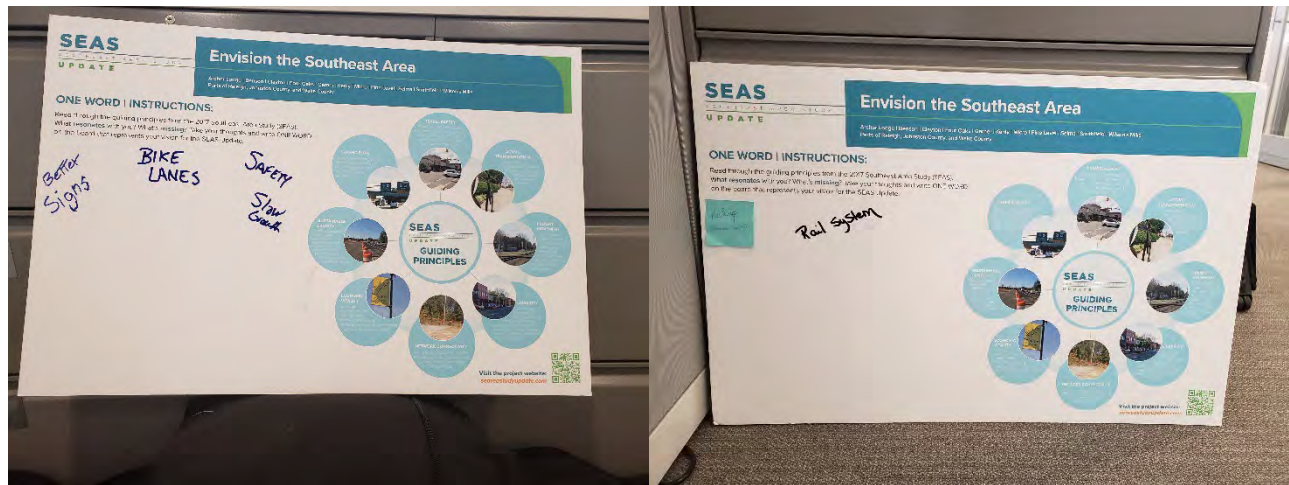
SE Regional Library (Drum Performance & Workshop)

July 30th 1:30-4pm in Garner

Each pop-up station included three boards, one with an overview of the SEAS Update project, one with a place for comments on the vision and planning principles for the study area, and one with a map of the study area for to mark thoughts and suggestions on transportation, places, or other ideas.

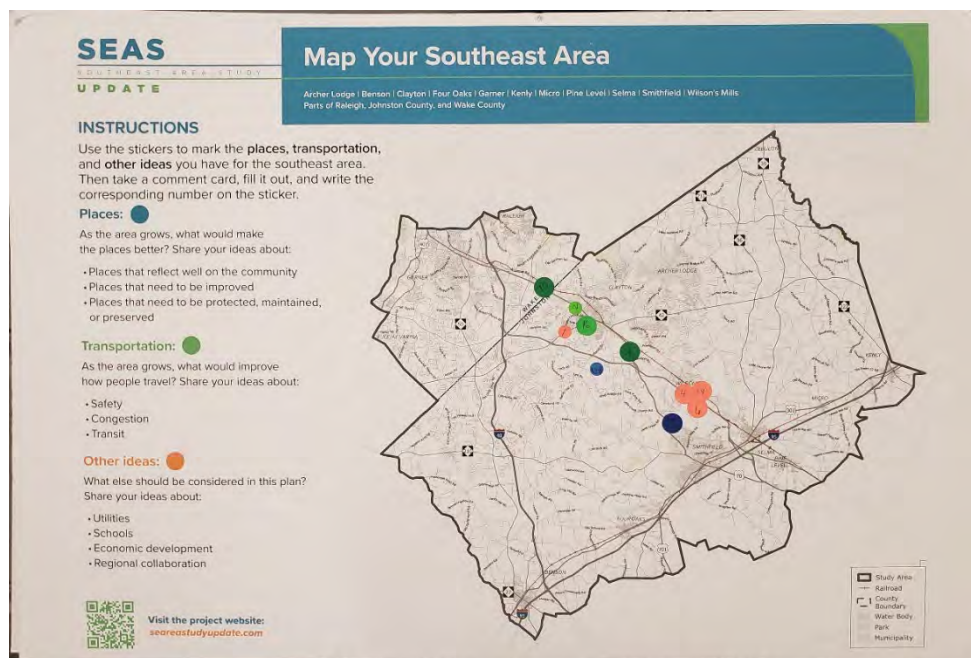


VISION AND PLANNING ACTIVITY



As part of the vision and planning section, participants were asked to give one word about their vision for the study area, either about what resonated with them or what they felt was missing. Comments centered around safety and navigation, transportation alternatives, and growth patterns.

MAPPING ACTIVITY



At the mapping board, participants were asked to leave comments about places, transportation, or other ideas about the study area and to mark the relevant location on the map. Most comments were about places that need intersection improvements for safety or congestion, while several others left comments on other modes such as public transit and bicycling. Other comments addressed disparities in school quality and a demand for restaurants near new employment centers.

SEAS

S O U T H E A S T A R E A S T U D Y

U P D A T E

Archer Lodge | Benson | Clayton | Four Oaks | Garner | Kenly | Micro | Pine Level | Selma | Smithfield | Wilson's Mills
Parts of Raleigh, Johnston County, and Wake County

The
***Southeast
Area Study***
is being
updated and
we need to
hear from
YOU!

Share *your vision*
for the future of
transportation and
land use in the area.



SCAN HERE for
more information
and upcoming
engagement
events.

seareastudyupdate.com



SEAS

S O U T H E A S T A R E A S T U D Y

U P D A T E

Archer Lodge | Benson | Clayton | Four Oaks | Garner | Kenly | Micro | Pine Level | Selma | Smithfield | Wilson's Mills
Partes de Raleigh, Condado de Johnston, y Condado de Wake

El *Estudio del Área del Sureste* está siendo actualizado ¡y queremos escucharte!

Comparte *tu visión* del futuro del transporte y el uso de tierras en el área.



**ESCANEA
AQUÍ** para más
información de
los eventos de
participación.

seareastudyupdate.com

Welcome to the Southeast Study Update

Archer Lodge | Benson | Clayton | Four Oaks | Garner | Kenly | Micro | Pine Level | Selma | Smithfield | Wilson's Mills
Parts of Raleigh, Johnston County, and Wake County

PROJECT OVERVIEW

The Capital Area Metropolitan Planning Organization (CAMPO) is updating the 2017 Southeast Area Study (SEAS) to refresh its policies and practices and produce recommendations for land use and transportation. The study focuses on the evolving priorities and needs in parts of Wake and Johnston County. The SEAS Update will review the existing conditions of the study area and recommend regional improvements for future land use and development and multiple modes of transportation including roadways, bicycle, and pedestrian needs, transit, and even freight and rail considerations. The recommendations that come out of the SEAS Update will inform the Metropolitan Transportation Plan (MTP), a region-wide long-range transportation plan that is updated every four years.

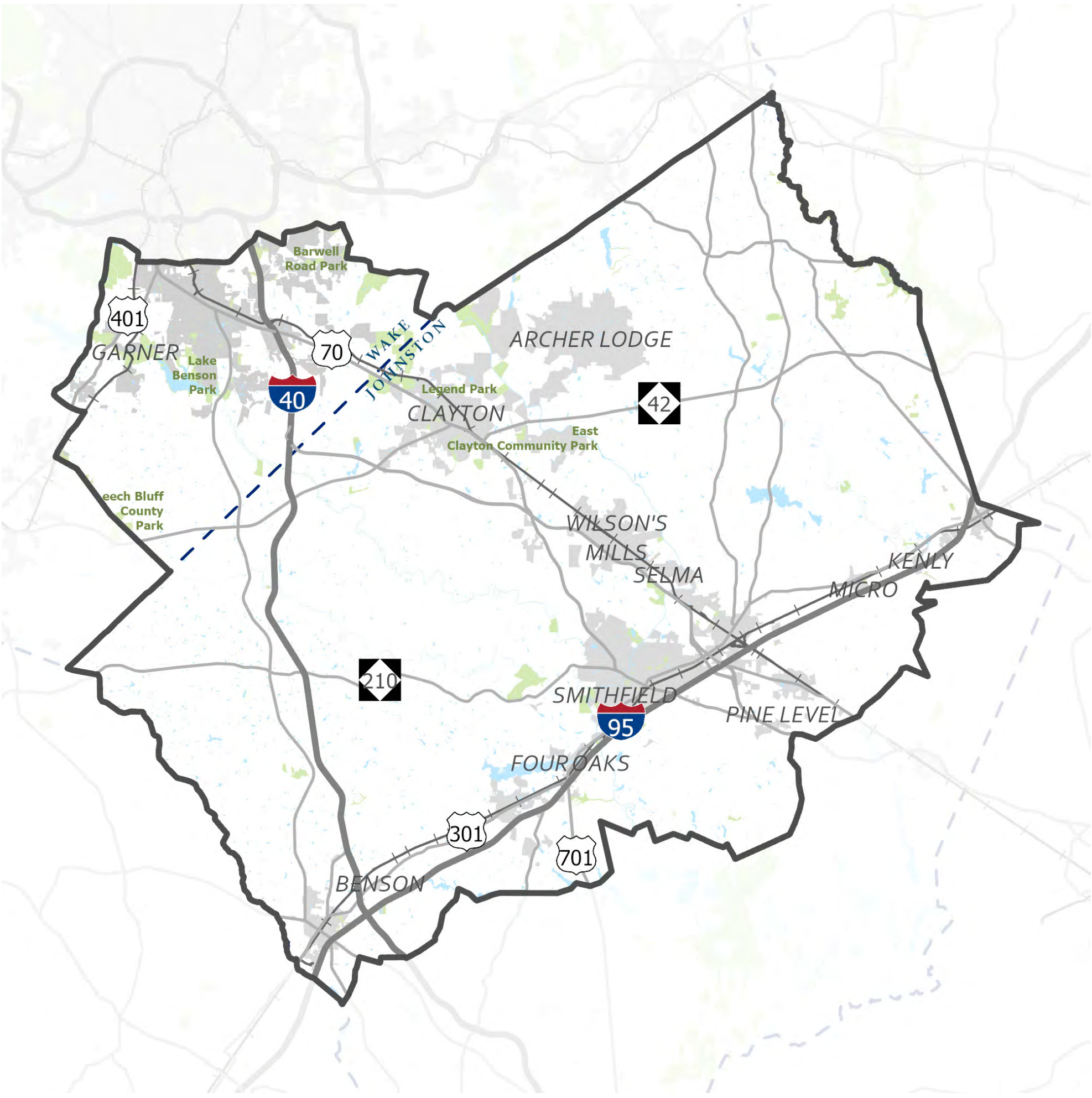
WHAT IS AN AREA STUDY?

CAMPO conducts area studies to allow a deep dive into the local road network, multimodal plans, and opportunities in a smaller study area of the region.

PROCESS AND SCHEDULE

The SEAS Update planning process will occur over the span of 14 months, beginning in April 2022 and concluding with final plan adoption in June 2023. The planning process is structured around three main phases of public engagement as seen below:

STUDY AREA



HOW TO GET INVOLVED

The SEAS Update is a community-driven plan. The planning process is incomplete without the voices of key stakeholders and the public. Visit the project website to keep up-to-date on progress, check out upcoming engagement events, and join the mailing list to receive updates.



seareastudyupdate.com

March – April '22 ➡ May – Aug. '22 ➡ Sept. '22 – Jan. '23 ➡ Feb. – May '23 ➡ June '23				
<ul style="list-style-type: none">• Start up and Preparation• Engagement Diagnostic• Branding• PEP• Data Collection	<ul style="list-style-type: none">• State of the Region• Policy and Plan Review• Baseline Scenarios• Deficiency Analysis• Hot Spot Identification	<ul style="list-style-type: none">• Multimodal Recommendations Development• Scenario Testing• Policy and Land Use Best Practices Toolbox• Hot Spot Analysis	<ul style="list-style-type: none">• Prioritization• Cost Opinions• Implementation Strategy• Documentation	<ul style="list-style-type: none">• Presentations and Adoption Efforts
	Public Engagement			
	Discover May – Aug. '22	Involve Sept. '22 – Jan. '23	Consult Feb. – June '23	

DESCRIPCIÓN DEL PROYECTO

La organización de planificación del area metropolitana (CAMPO) está actualizando el Estudio del Área Sureste (SEAS en inglés) de 2017 para actualizar las políticas y prácticas y crear recomendaciones para el uso de tierras y transporte. El estudio se enfoca en las prioridades que evolucionan y las necesidades en partes de los Condados de Wake y Johnson. La actualización del SEAS revisará las condiciones existentes en el área de estudio y recomendará mejoras regionales para el uso futuro de tierras y múltiples modos de transporte incluyendo calles, necesidades de bicicletas y peatones, tránsito, carga y ferrocarril. Las recomendaciones que vengan del SEAS informarán el Plan Metropolitano de Transporte (MTP en inglés), que es un plan de largo plazo de transporte que se actualiza cada cuatro años.

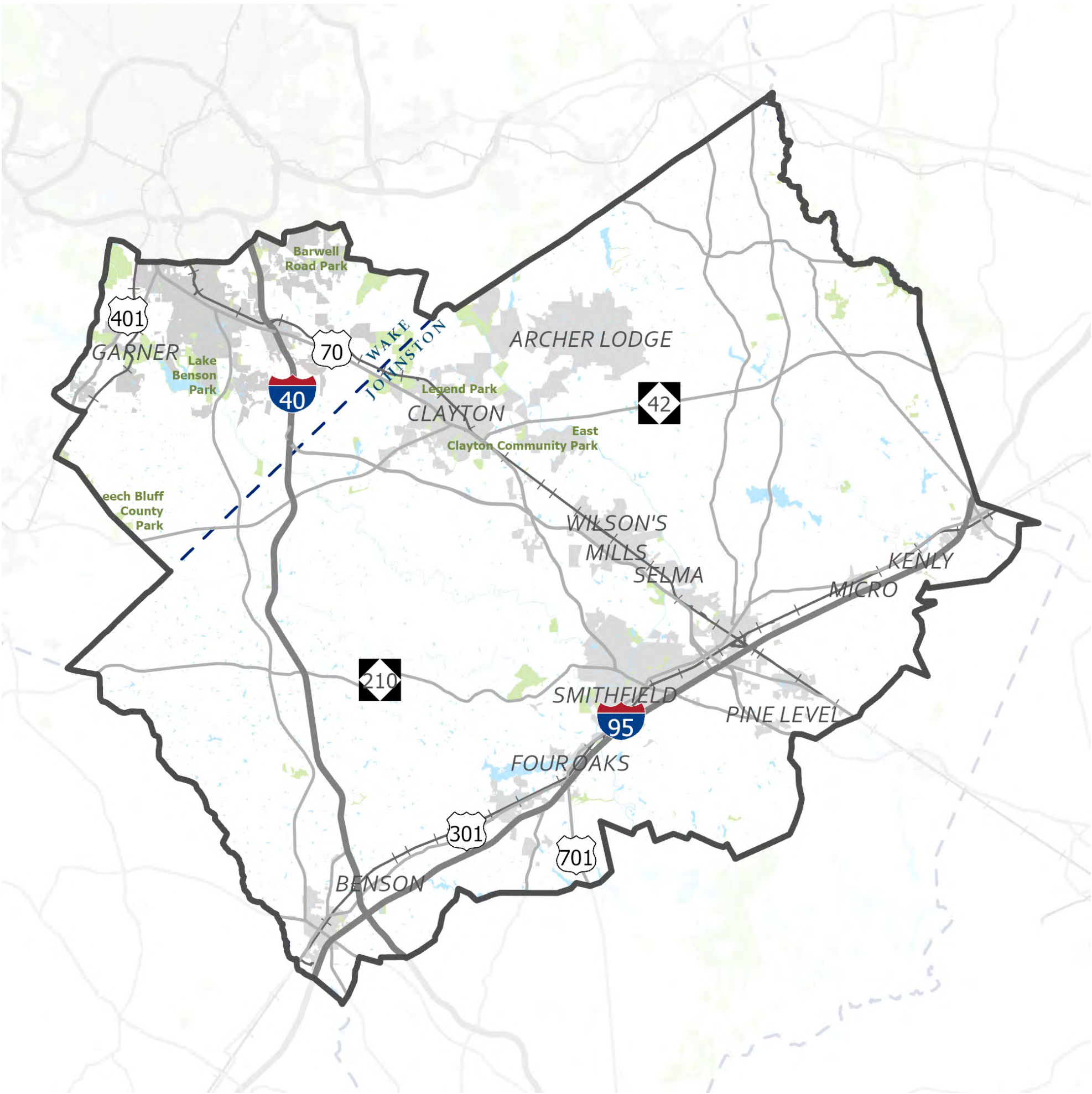
¿QUE ES UN ESTUDIO DE ÁREA?

CAMPO conduce estudios de áreas que permitan enfocarse en la red de calles, planes multimodos y oportunidades en un área más pequeña de la región.

PROCESS AND SCHEDULE

Las actualizaciones del SEAS ocurrirán en los próximos 14 meses, empezando en Abril de 2022 and concluyendo en Junio de 2023. El proceso está estructurado en tres fases de involucramiento:

ÁREA DE ESTUDIO



CÓMO INVOLUCRARTE

La actualización del SEAS es un plan guiado por la comunidad. El proceso estaría incompleto sin las voces de los entes interesados y el público. Visita la página web para mantenerte al día con el progreso, eventos y unirte a la lista de correos para recibir notificaciones.



seareastudyupdate.com

Mar – Abr '22	May – Ag '22	Sept '22 – Ene '23	Feb – May '23	Junio '23
<ul style="list-style-type: none">Comienzo y PreparaciónDiagnóstico de ParticipaciónMarcaPEPRecolección de Datos	<ul style="list-style-type: none">Estado de la RegiónRevisión de Política y PlanesEscenarios referenciaAnálisis DeficienciasIdentificación Zonas	<ul style="list-style-type: none">Desarrollo de Recomendaciones MultimodoPruebas de EscenariosHerramientas de Prácticas de Políticas y Uso de TierrasAnálisis de Zonas	<ul style="list-style-type: none">PrioritizaciónOpiniones de CostosImplementación de EstrategiasDocumentación	<ul style="list-style-type: none">Presentación y Esfuerzos de Adopción
	Opinión Pública			
	Descubrir Mayo – Ag '22	Involucrar Sept '22 – Ene '23	Consultar Feb – Junio '23	

Envision the Southeast Area

Archer Lodge | Benson | Clayton | Four Oaks | Garner | Kenly | Micro | Pine Level | Selma | Smithfield | Wilson's Mills
Parts of Raleigh, Johnston County, and Wake County

ONE WORD | INSTRUCTIONS:

Read through the guiding principles from the 2017 Southeast Area Study (SEAS).
What **resonates** with you? What's **missing**? Take your thoughts and write ONE WORD
on the board that represents your vision for the SEAS Update.



Visit the project website:
seareastudyupdate.com



Imagina el Área Sureste

Archer Lodge | Benson | Clayton | Four Oaks | Garner | Kenly | Micro | Pine Level | Selma | Smithfield | Wilson's Mills
Partes de Raleigh, Condado de Johnston, y Condado de Wake

UNA PALABRA | INSTRUCCIONES:

Lee sobre los principios directores del Estudio del Área del Sureste (SEAS) de 2017.
¿Qué **resona** contigo? ¿Qué **hace falta**? Escribe UNA PALABRA en la pizarra que represente tu visión para la actualización del SEAS.



Map Your Southeast Area

Archer Lodge | Benson | Clayton | Four Oaks | Garner | Kenly | Micro | Pine Level | Selma | Smithfield | Wilson's Mills
Parts of Raleigh, Johnston County, and Wake County

INSTRUCTIONS

Use the stickers to mark the places, transportation, and other ideas you have for the southeast area. Then take a comment card, fill it out, and write the corresponding number on the sticker.

Places: ●

As the area grows, what would make the places better? Share your ideas about:

- Places that reflect well on the community
- Places that need to be improved
- Places that need to be protected, maintained, or preserved

Transportation: ●

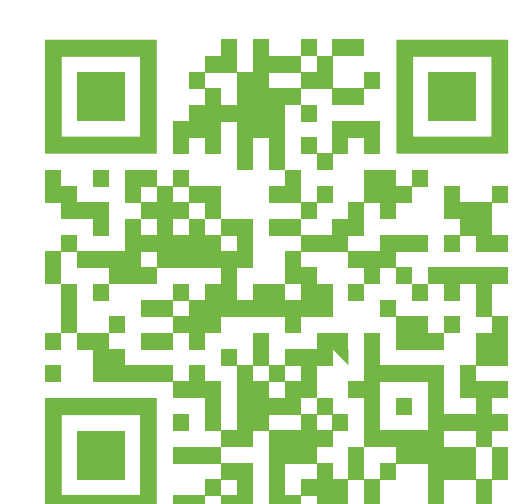
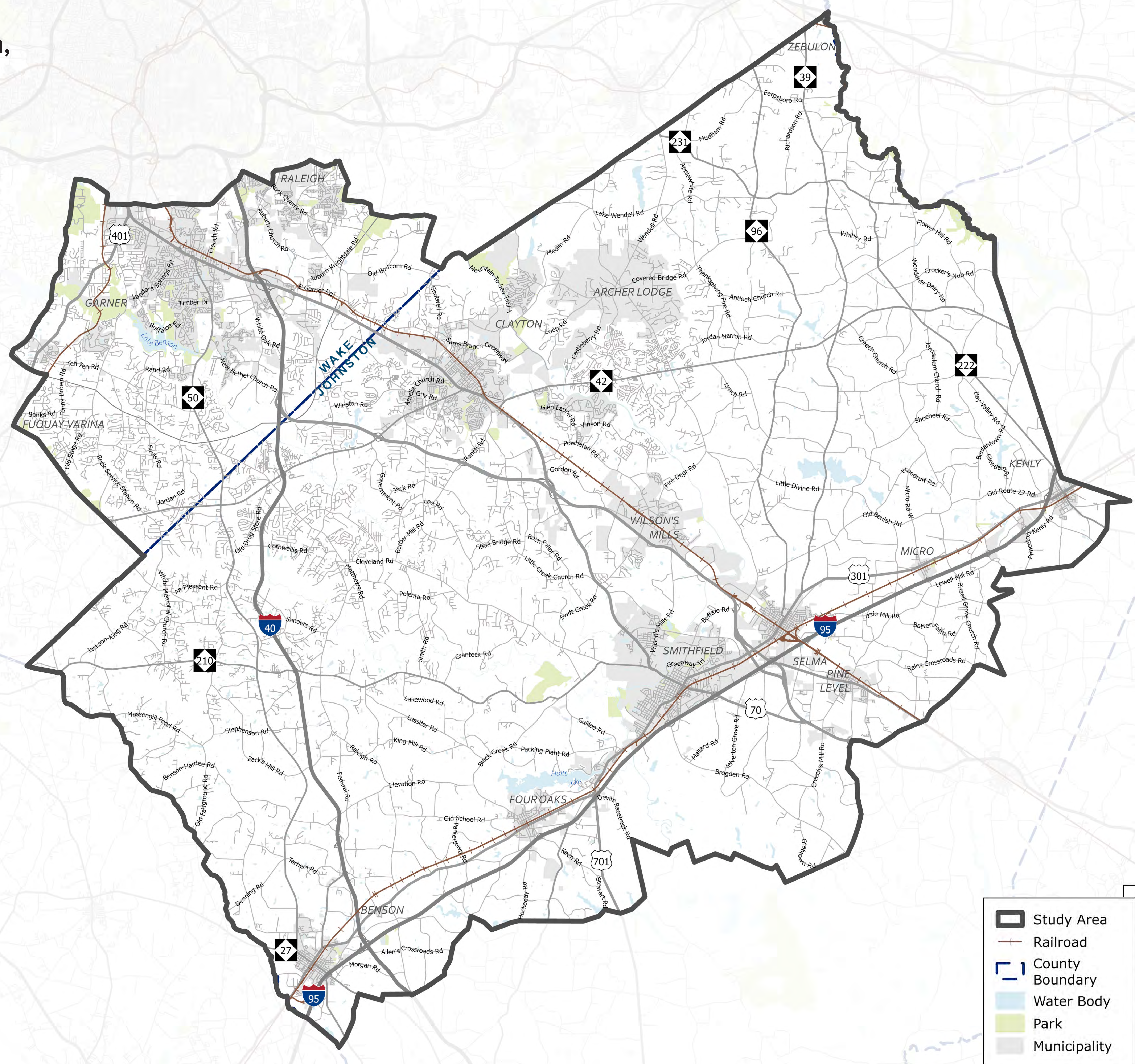
As the area grows, what would improve how people travel? Share your ideas about:

- Safety
- Congestion
- Transit

Other ideas: ●

What else should be considered in this plan? Share your ideas about:

- Utilities
- Schools
- Economic development
- Regional collaboration



Visit the project website:
seareastudyupdate.com

Localiza en el Área Sureste

Archer Lodge | Benson | Clayton | Four Oaks | Garner | Kenly | Micro | Pine Level | Selma | Smithfield | Wilson's Mills
Partes de Raleigh, Condado de Johnston County, y Condado de Wake

INSTRUCCIONES

Usa las pegatinas para identificar sitios, transporte u otras ideas que tengas para el área sureste. Luego usa una tarjeta de comentarios, rellénala y escribe el número correspondiente con la pegatina.

Sitios: ●

Así como el área crece, ¿Qué haría falta para hacer los sitios mejores? Comparte tus ideas sobre:

- Sitios que reflejen bien tu comunidad
- Sitios que necesiten mejoras
- Sitios que tienen que ser protegidos, mantenidos o preservados

Transporte: ●

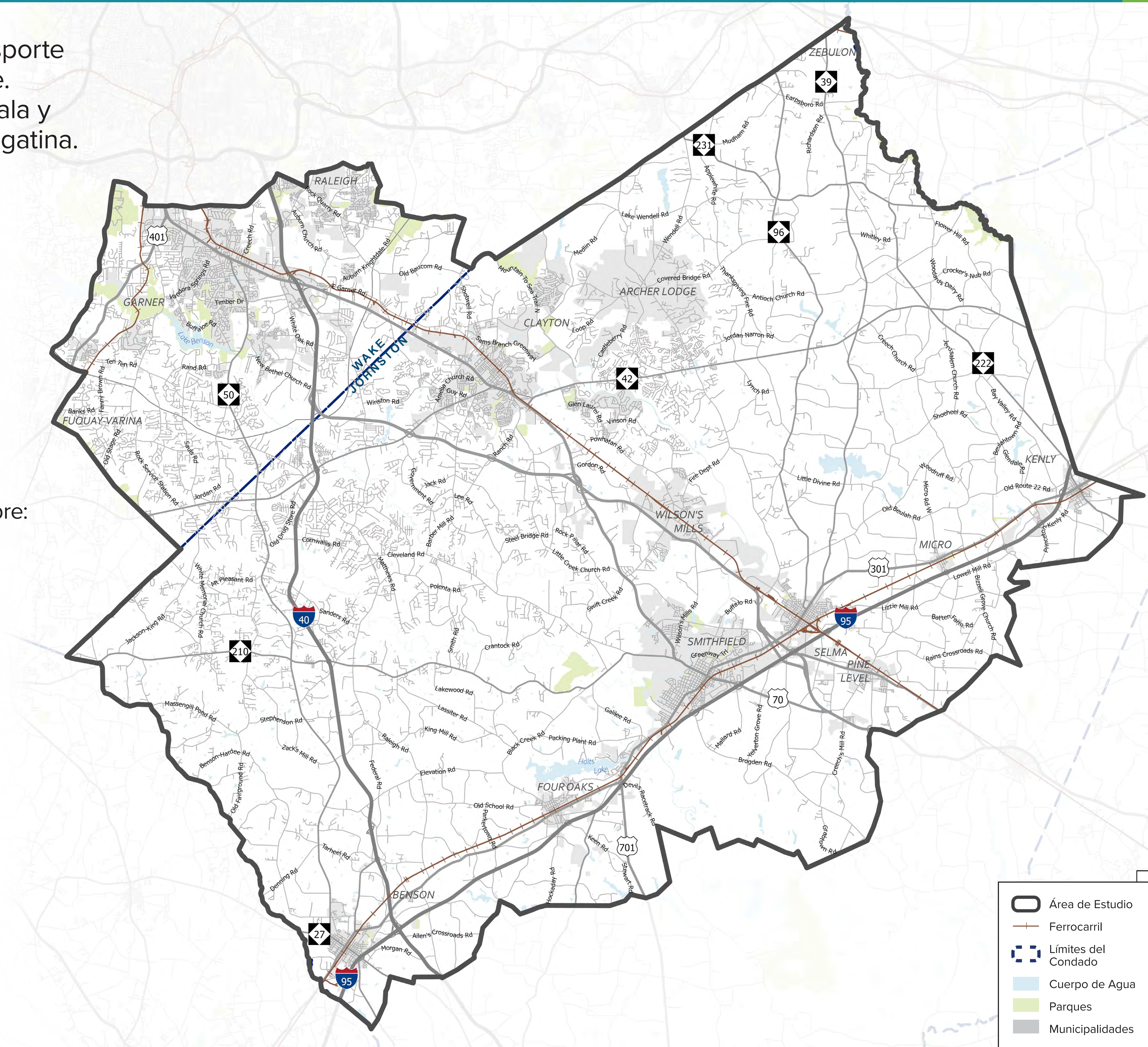
Así como el área crece, ¿Qué haría falta para mejorar cómo viaja la gente? Comparte tus ideas sobre:

- Seguridad
- Tráfico
- Tránsito

Otras Ideas: ●

¿Qué otras cosas considerarías en este plan? Comparte tus ideas sobre:

- Servicios públicos
- Escuelas
- Desarrollo económico
- Colaboración regional



Visita la página web del proyecto:
seareastudyupdate.com

Appendix D: Public Survey Summary

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D

SURVEY RESULTS SUMMARY

Introduction

As part of the process of developing the Southeast Area Study Update, an online survey was used to gain public feedback. The survey ran from July 6th, 2022 to July 31st, 2022. **601 individuals participated**, answering questions on their vision and priorities for the study area and their thoughts on transportation and land use. A subset of these questions included a mapping component that invited respondents to map locations of concerns or needs. Several questions within the survey also invited respondents to leave open-ended comments if desired. A total of **818 comments** were received.

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Visioning

THE LIST BELOW SHOWS THE EIGHT (8) GUIDING PRINCIPLES OF THE 2017 SEAS. PLEASE SELECT THREE (3) THAT ARE MOST IMPORTANT TO YOU.

Guiding Principles

Livability: Enhance and promote our region's quality of life through transportation and land use decisions that support public health, education, parks and recreation, public art, and local character.

Traffic Flow: Make it easier to move within and through our region by reducing congestion and improving roadway operations.

Sustainable Growth: Blend development decisions and transportation strategies to promote and sustain employment and population growth while preserving the area's natural features.

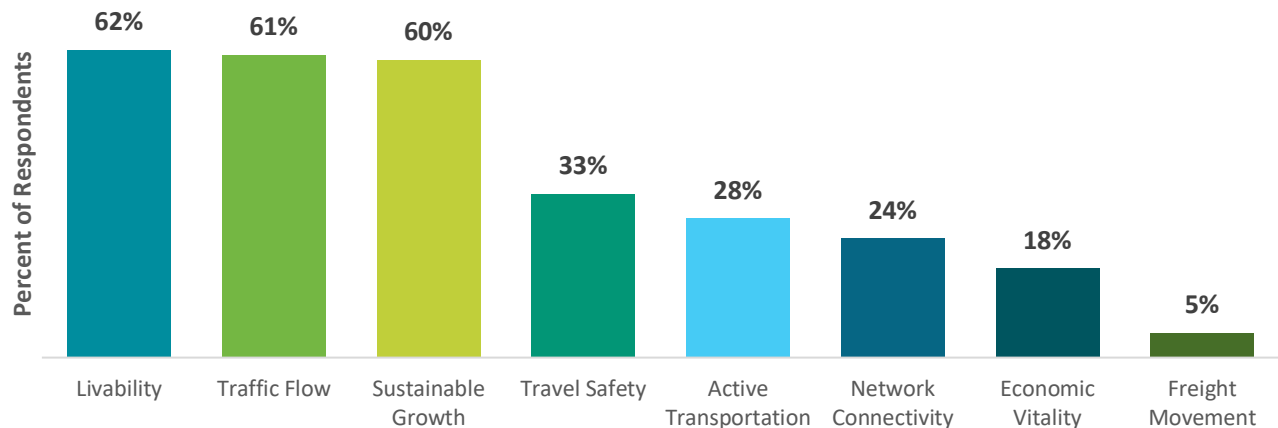
Travel Safety: Promote a safer, more secure transportation system by reducing crashes, enhancing reliability and predictability, and improving emergency coordination.

Active Transportation: Integrate our transportation network to provide travel choices, especially walking and cycling, for all users.

Network Connectivity: Link local and regional destinations through improved connections and enhanced integration among travel modes.

Economic Vitality: Grow our economy through a transportation network by connecting goods and services to opportunities within and beyond our region.

Freight Movement: Support global competitiveness of our region through a transportation network that efficiently moves goods and connects residents with jobs and services.



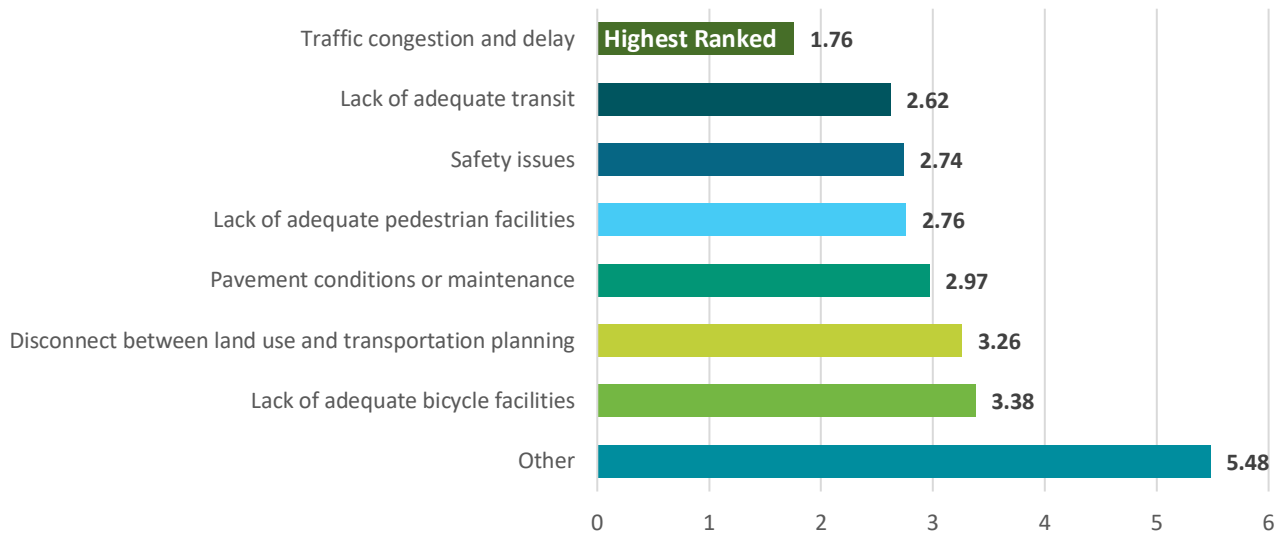
Comments included:

- concerns about uncontrolled growth and resulting congestion
- need to preserve natural resources and natural land
- desire for more greenways, trails, and spaces
- need for alternative modes to provide alternatives to driving that won't worsen congestion

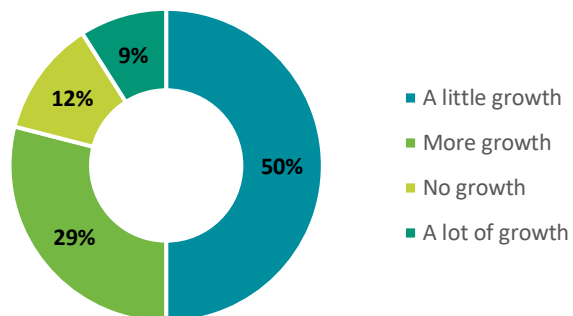
Priorities

WHAT ARE THE MOST CRITICAL TRANSPORTATION ISSUES TO ADDRESS IN THE STUDY AREA?

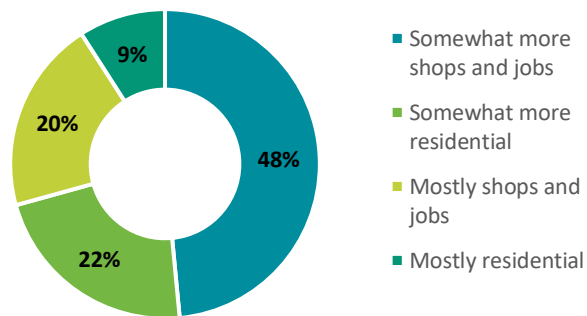
A lower number value indicates a higher ranking because the value is closest to 1, representing respondents' highest priority.



HOW MUCH GROWTH IS IDEAL FOR THE STUDY AREA?

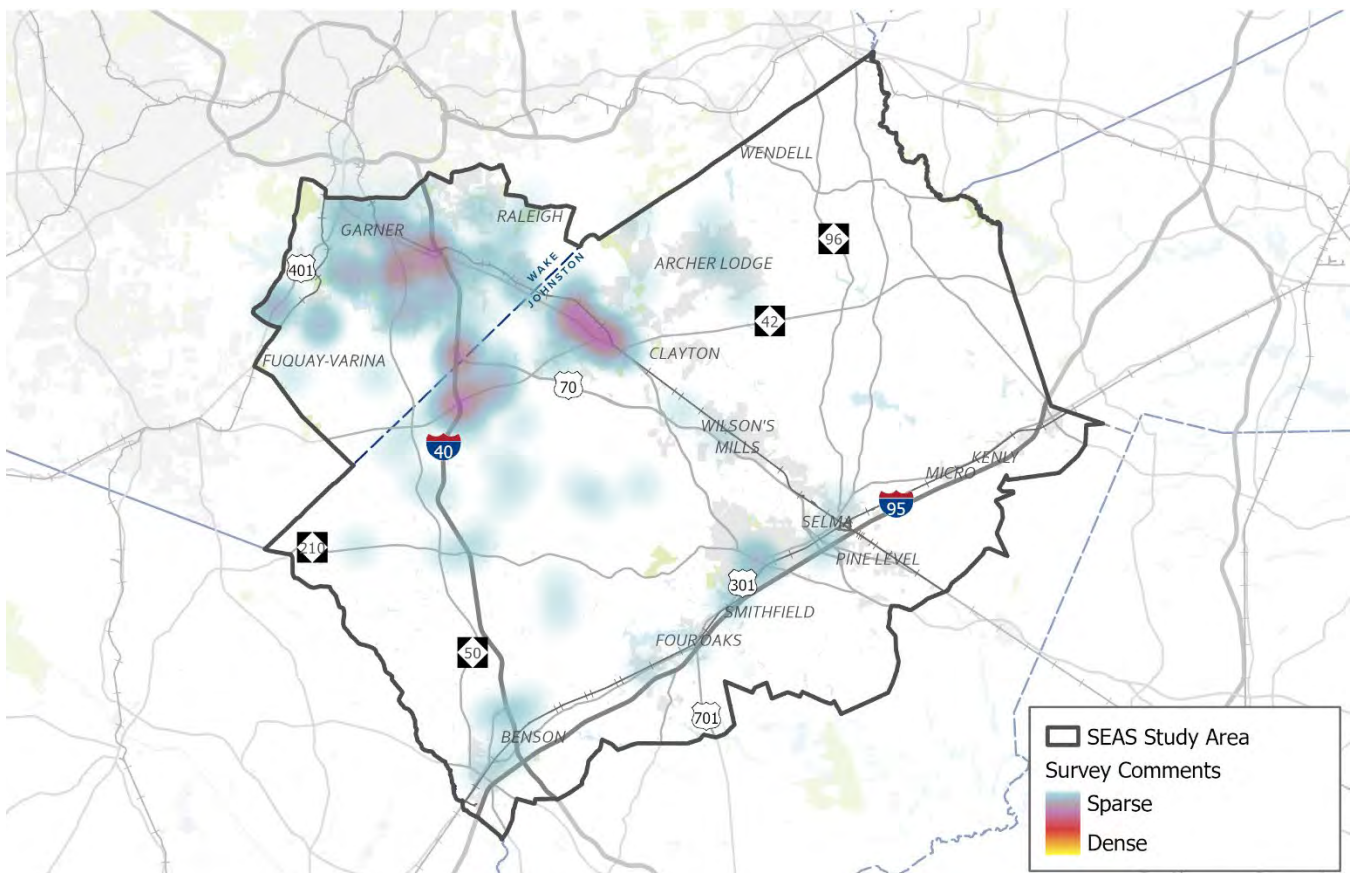


COMPARED TO TODAY, WHAT KIND OF GROWTH IS IDEAL FOR THE STUDY AREA?



Interactive Maps

TRANSPORTATION: AS THE AREA GROWS, WHAT WOULD IMPROVE HOW PEOPLE TRAVEL? SHARE YOUR IDEAS ABOUT SAFETY, CONGESTION, TRANSIT, BICYCLE, AND PEDESTRIAN INFRASTRUCTURE.



Comments focused primarily on the following:

Roadway

- I-40 Corridor
 - I-40 congested from Raleigh to Benson
 - I-40 at 70 Business- congestion and poor ramp design
 - I-40 at 70 bypass start of worst delays commuting into Triangle
 - Entire area surrounding I-40/NC-42 interchange needs major rework
 - Turn lanes
 - Lane reduction bottlenecks
 - Issues with Cleveland Rd/NC-42 & Cornwallis Rd/NC-42
 - I-40 interchanges with NC-242, NC-210 getting worse
 - New interchanges from I-40 to Sanders Rd, New Bethel Rd could help
- NC-42 Corridor
 - NC-42 congested all the way from NC-50 to Clayton
 - Widen and improve NC-42 for better east-west connection
 - NC-42W and NC42E need more direct connection
- US-70 Corridor
 - US-70/US-401 merge needs improvement, Tryon Rd intersection dangerous with merging traffic
 - Grade separate US-70 Business through Clayton
 - Improve signal timing on US-70 through Garner
 - Finish realignment of Jones Sausage across US-70, widen Jones Sausage
 - Widen South Market St/Business US-70 in Smithfield
- Connections
 - Extend Vandora Springs to US-401
 - Extend New Bethel to connect to White Oak or beyond
 - Connect Timber Dr Ext to Greenfield Rd
 - Bypasses for East Clayton and Archer Lodge
- Other roadway comments
 - Shotwell Rd intersections (Covered Bridge, Business US-70) need improvement
 - Routes into Archer Lodge not built for current level of traffic, unsafe
 - Widen NC-50 (reiterated by several comments)
 - Widen Ten-Ten Rd
 - White Oak Road congested
 - Old Stage Road congested
 - Improve lighting on NC-210 west of I-40
 - Widen US-301 south of Smithfield
 - Direct commuter traffic around Smithfield where possible
 - Fix turn lanes on Timber Dr and Aversboro Rd
 - Reduce parking on Market St/Business US-70 through downtown Smithfield to one side
 - Road improvements not keeping pace with pace of development

Bike/Pedestrian

- Add greenways
 - In Garner
 - In Benson/South Johnston area
 - Connecting Smithfield through Wilson's Mills to Clayton (planned Neuse River Trail extension)
 - Paralleling I-95 and I-40
- Add bike lanes and Sidewalks
 - Bike lanes and sidewalks along NC-50
 - Sidewalks/walkways around I-40/NC-42
 - Sidewalks and bike lanes along Cleveland Rd from NC-42 to Grill Rd or beyond- demand with schools, residential, and growing cyclist population
 - Pedestrian access to south Garner neighborhoods from White Oak Rd
 - Connect White Oak area to sidewalks on Timber Dr and White Oak Rd
 - Sidewalks and bike lane or greenway from Buffaloe Grove neighborhood to Lake Benson Park
 - Sidewalks around Clayton Middle School
 - Bike lanes and safe pedestrian access around Timber Dr and US-70
 - Bike/ped access around Battle Bridge Rd and Rock Quarry Rd
 - Crosswalk at Main St/US-70 Business in Clayton
 - Safe bike/ped access along US-301 between Smithfield and Four Oaks
 - Safe bike/ped access from I-95 into central Four Oaks
 - Provide protected bike facilities and bike intersections in dense areas

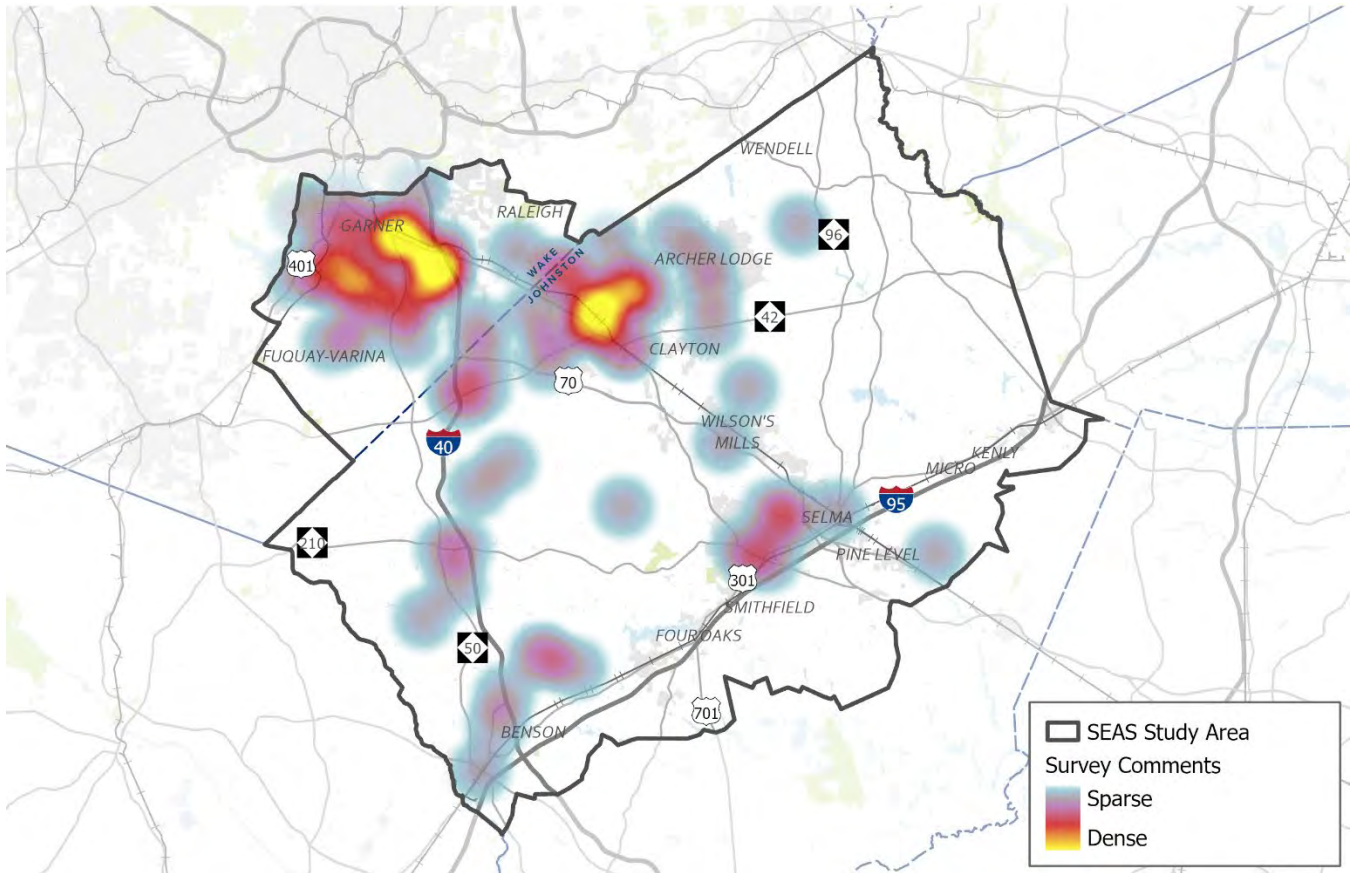
Transit

- Commuter Rail
 - At least from Clayton and Garner into Raleigh, but comments wanted service from Smithfield/Selma and even Benson
 - Transit-oriented development zoning around stations
 - Adequate park and rides
- Frequent Transit options to Clayton (potentially BRT extension)
- Transit needed from I-95 towns into Raleigh
- Transit to 40/42
- Transit to Archer Lodge
- Intermodal connections between local bus, BRT, commuter rail, potentially RDU airport

Other

- I-40 corridor, west Johnston County lacking in parks, libraries, safe walk and bike areas
- Not enough grocery stores
- Need more goods and services for amount of people
- Limited economic development in rural areas (along NC-210, etc), but strictly controlled to protect environment
- Economic development needed in Garner but not at cost of livability or environment
- Commercial development needed away from Business US-70 in Clayton area
- Retail and commercial development in Clayton so people don't have to drive to Garner or Smithfield

PLACES: AS THE AREA GROWS, WHAT WOULD MAKE THE PLACES BETTER? SHARE YOUR IDEAS ABOUT PLACES THAT REFLECT WELL ON THE COMMUNITY, PLACES THAT NEED TO BE IMPROVED, PLACES THAT NEED TO BE PROTECTED, MAINTAINED, OR PRESERVED.

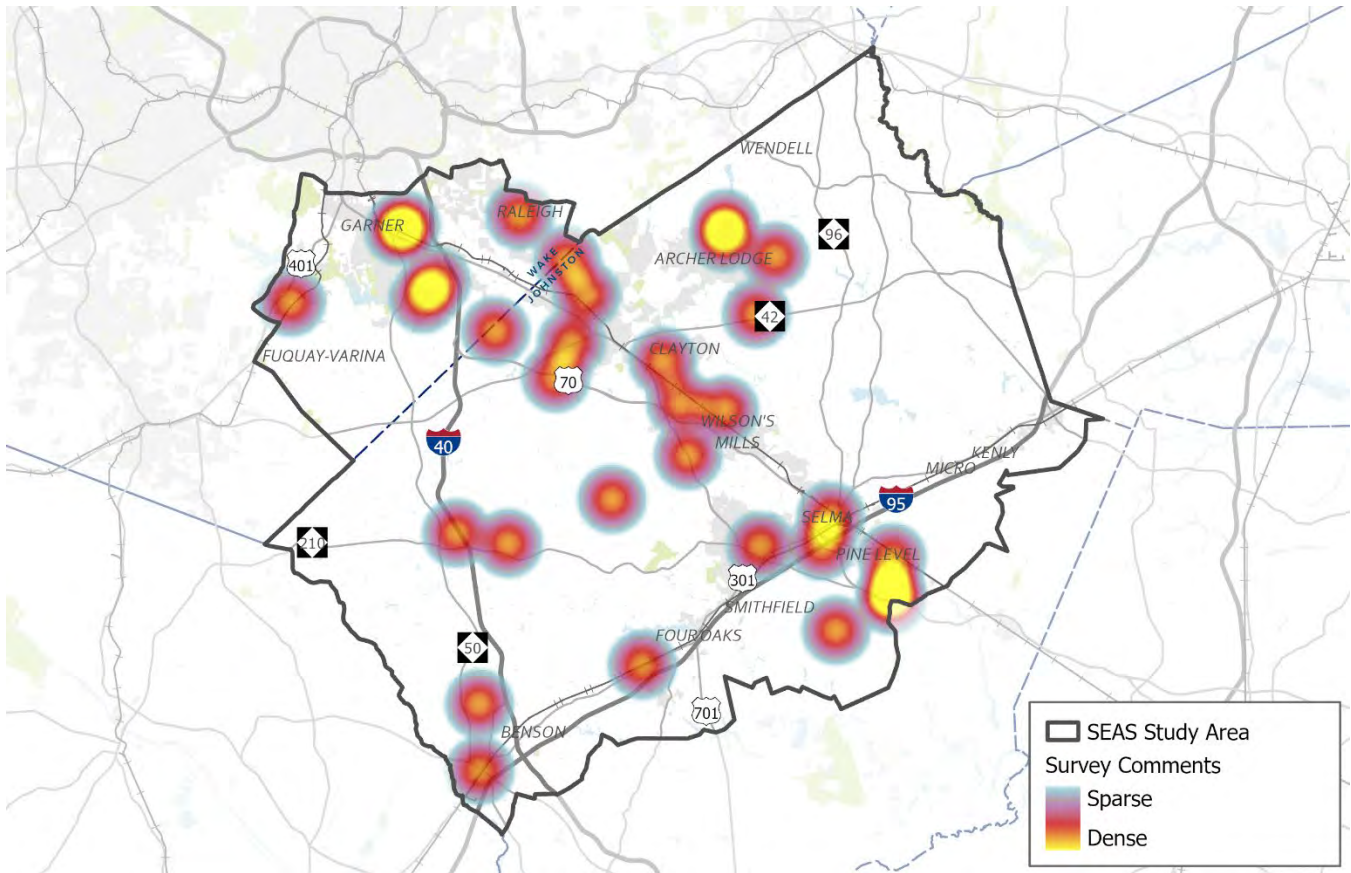


Comments mostly focused on the following themes:

- Infrastructure
 - Development outpacing school/water/sewer capacity (especially west Johnston County from Benson north)
- Missing Amenities/Access
 - Restaurants/shops in Benson
 - Recreational facilities in Cleveland, West Johnston area
 - Supermarkets near S. Garner/White Oak
 - Supermarkets in North Smithfield
 - Diversification of uses by US-401/US-70
 - Diversification uses in Forest Hills Area
 - Restaurants, boutiques along Main St in Clayton
 - Places to hang out in Clayton
 - Fitness facilities in Garner
- Preserve
 - Rural farms and open spaces, especially in E. Clayton, Benson, area south of White Oak
 - Creeks, rivers, and bodies of water

- Historic sites
 - Lake Benson/White Deer Park
 - Historic Yates Mill Park
 - Avoid mass clearing for developments
- Transportation
 - Roadway
 - NC-42 Congestion
 - Connect NC-42W more directly to NC-42E
 - Fix interchanges at 40-42, US-401/US-70
 - Bike and Pedestrian Infrastructure
 - NC-210 near I-40
 - Aversboro Rd
 - Buffalo Rd
 - Garner Rd
 - Around White Oak
 - Safe access to schools
 - Transit
 - Commuter rail (Raleigh, Garner, Clayton, Selma/Smithfield)
 - City based microtransit or rideshare
 - Transit service along 401
 - Better transit near White Oak
- Assets
 - Downtown Clayton
 - Johnston Medical Center Clayton
 - Historic Yates Mill Park
 - Lake Benson/White Deer Park
 - Juniper Level Botanical Garden
 - Selma (noted for vibrancy)

OTHER: WHAT ELSE SHOULD BE CONSIDERED IN THIS PLAN? SHARE YOUR IDEAS ABOUT UTILITIES, SCHOOLS, ECONOMIC DEVELOPMENT, ETC.

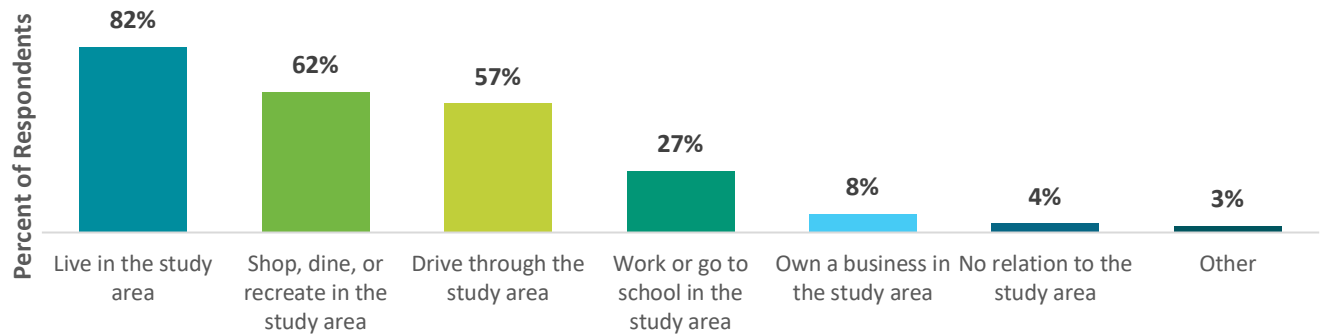


Comments largely focused on the following themes:

- Development where needed or optimal
 - More entertainment, restaurants outside of Smithfield/Clayton
 - More retail and commercial in Clayton to reduce congestion to destinations in Garner or Smithfield
 - Attracting more high paying jobs (bio, pharma, engineering) to Clayton/Powhatan
 - Potential density and mixed use
 - along Business 70 between Clayton and Smithfield
 - near Randleigh Park (Garner)
 - Transit to reduce vehicle dependency to Triangle work sites/jobs
- Planning for growth/understanding of limitations
 - Safety in/around Garner as it grows
 - Concerns about uncontrolled growth east of I-95, disrupted floodplain & agriculture
 - Need more schools around Clayton, Flower's Plantation, Benson
 - Internet access, cable, and more recreation facilities needed in west Johnston County, in/around Benson to support growth
 - Water/Sewer needed north of Clayton, south of Pine Level
 - Schools causing congestion on Buffalo Rd near Archer Lodge

Demographics

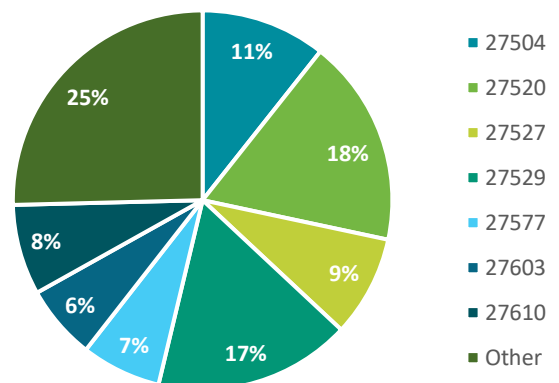
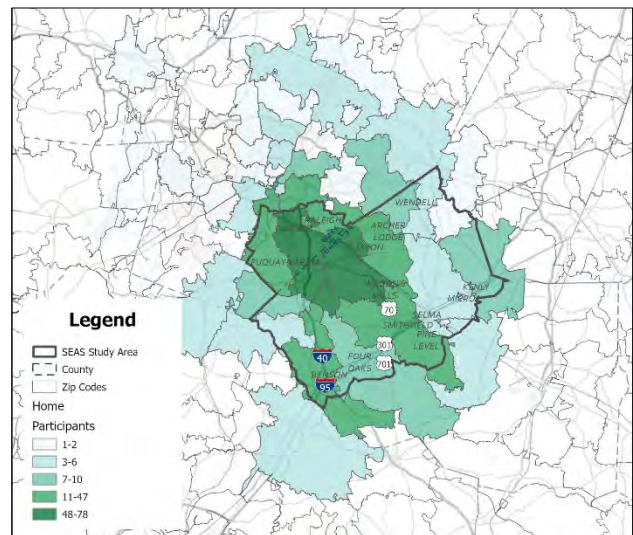
USING THE STUDY AREA MAP FOR REFERENCE, WHICH OF THE FOLLOWING DESCRIBES YOU? (CHECK ALL THAT APPLY.)



WHAT IS YOUR HOME ZIP CODE?

Highlighted zip codes in table are within or partially within the study area.

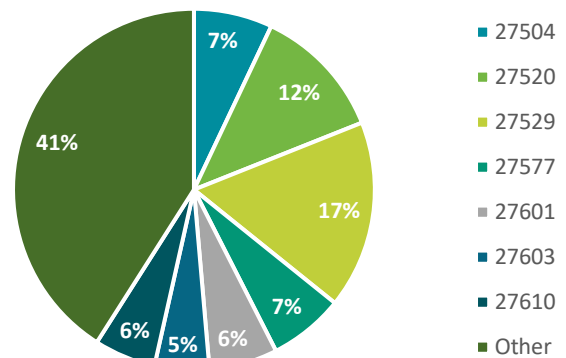
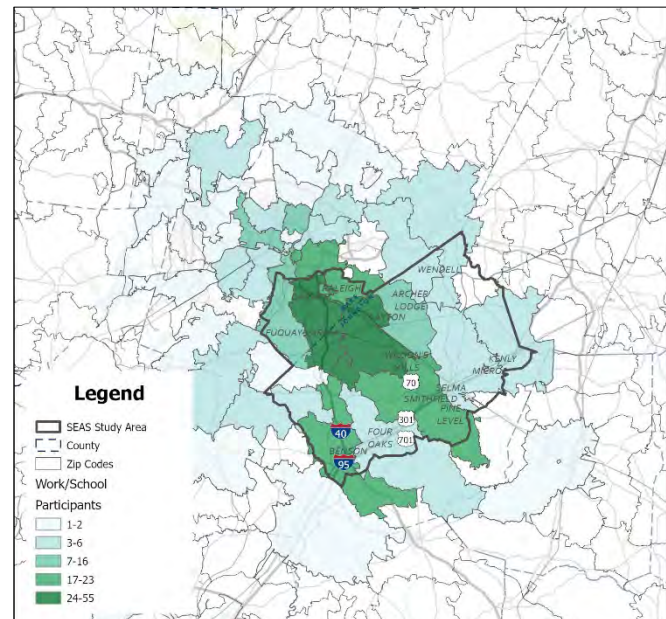
Zip Code	Count	Zip Code	Count
19006	1	27597	4
27358	1	27601	4
27501	5	27603	28
27504	47	27604	9
27511	1	27605	2
27519	1	27606	6
27520	78	27607	2
27524	10	27608	1
27526	4	27609	3
27527	38	27610	34
27529	74	27612	2
27542	7	27613	1
27545	1	27614	1
27557	2	27615	5
27568	1	27619	1
27569	3	27701	1
27571	1	27705	1
27576	4	28334	3
27577	30	28345	1
27587	4	28527	1
27591	8	28614	1
27592	7	28756	1
27596	1		



WHAT IS YOUR WORK/SCHOOL ZIP CODE?

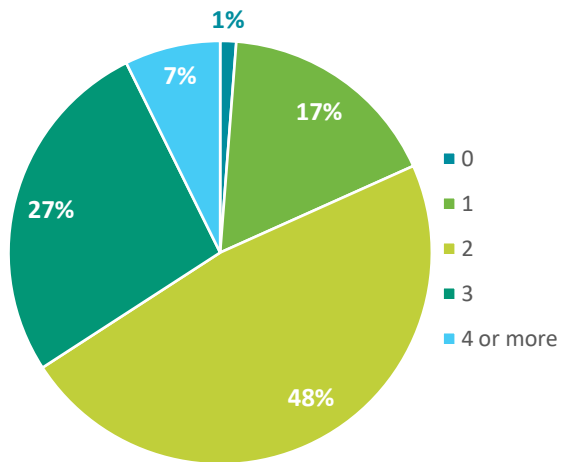
Highlighted zip codes in table are within or partially within the study area.

Zip Code	Count	Zip Code	Count
27407	1	27601	20
27501	4	27602	2
27502	1	27603	16
27504	23	27604	5
27506	2	27605	3
27511	3	27606	4
27513	1	27607	10
27518	5	27608	1
27520	39	27609	10
27524	3	27610	18
27526	3	27612	4
27527	14	27614	2
27529	55	27615	2
27530	1	27616	3
27531	1	27617	1
27540	2	27695	3
27542	6	27701	2
27546	1	27703	4
27560	2	27707	2
27568	1	27709	1
27576	6	27712	1
27577	22	27713	2
27587	1	28310	1
27591	5	28334	1
27592	1	28594	1
27597	3	28607	2

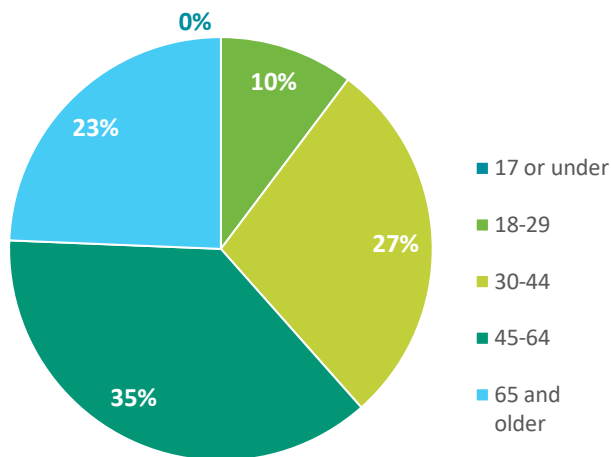


27601 is not within the study area. However, it contains much of downtown Raleigh, so the respondents who work in 27601 may commute to work in Raleigh from homes within the study area.

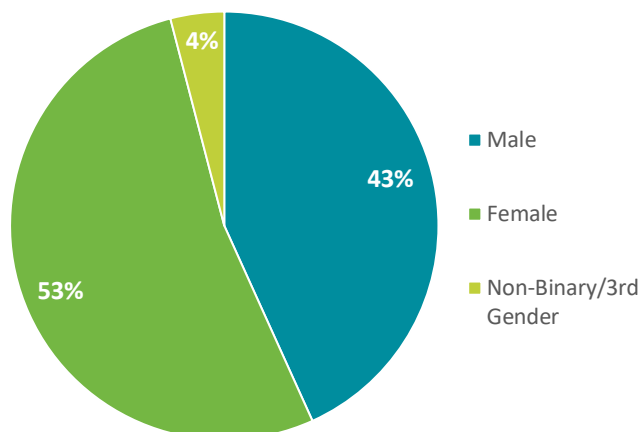
HOW MANY MOTOR VEHICLES ARE AVAILABLE FOR USE IN YOUR HOUSEHOLD?



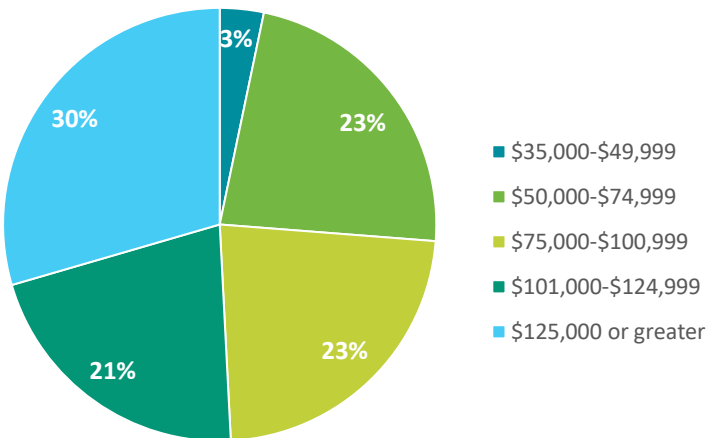
WHAT IS YOUR AGE GROUP?



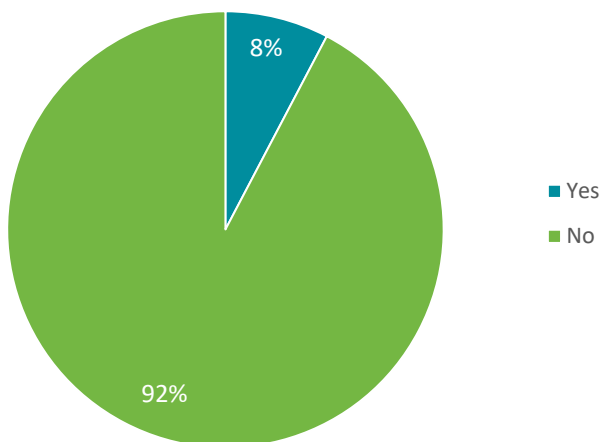
WHAT IS YOUR GENDER?



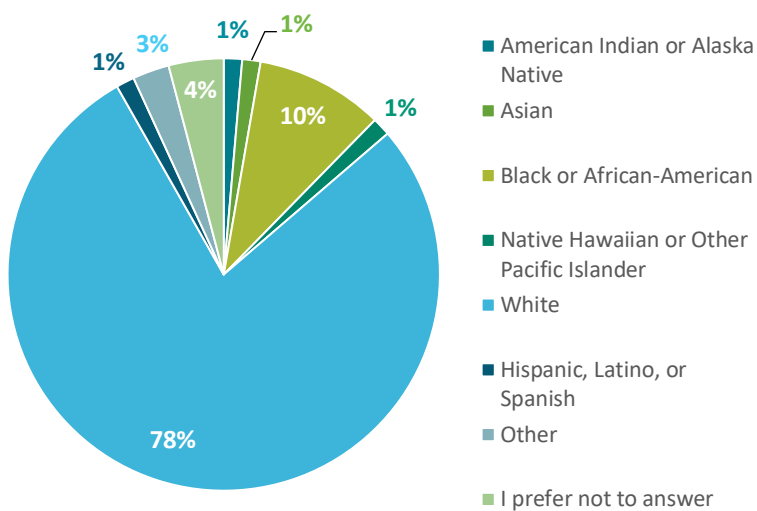
WHAT IS YOUR HOUSEHOLD INCOME RANGE?



DO YOU HAVE A DISABILITY?



WHAT IS YOUR RACE/ETHNICITY?



PHASE 2 OUTREACH SUMMARY: INVOLVE

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Executive Summary

Purpose of Engagement

Phase 2 of the engagement process involved educating the public about the results of previous public input on visions, goals, and challenges from Phase 1, while discovering public sentiments and about initial transportation recommendations. This phase focused on seeking input on potential preferred/recommended modal alternatives. Phase 2 engagement lasted from October 2022 through July 2023.

ENGAGEMENT TIMELINE



Engaging with Committees

Phase 2 Engagement included a series of meetings with the Core Technical Team (CTT) and Stakeholder Oversight Team (SOT) where stakeholder and local jurisdiction input informed the scenario planning process and helped guide initial recommendations.

Work with the SOT continued with a meeting in October 2022. As part of the scenario planning process, committee members were asked to rank the guiding principles on a spectrum by whether, in order to achieve a given principle, land use should be more compact or more dispersed and whether the transportation should lean towards more mode choices or be more car oriented. Livability, Sustainable Growth, Travel Safety, Active Transportation, Network Connectivity, and Economic Vitality all had most responses favoring more mode choices and more compact land use, while Traffic Flow and Freight had more varied results with even splits on land use and only a slight lean towards mode choice.

Committee members were also asked to rank potential indicators for measuring each guiding principle by importance.

The project team also held meetings with planners from the different jurisdictions within the planning area in January 2023 to get more specific feedback on each municipality's needs. Planners discussed priority growth corridors and centers, areas with unique needs or considerations, progress on priority land use policy strategies since the 2017 SEAS, and the direction of the hot spots going forward.

After the jurisdiction group meetings, additional meetings with the CTT, Capital Area Metropolitan Planning Organization's (CAMPO) Technical Coordinating Committee (TCC) and Technical Advisory Committee (TAC), and the Upper Coastal Plain Rural Planning Organization's (UCPRPO) TCC and TAC were held to discuss the comments received from the various jurisdictions, specific land use scenarios,

early draft modal recommendations, and other previous engagement to review key takeaways. A final SOT meeting was held in combination with a public symposium.

Engaging with the Public

The project team also engaged in-person with the public through a public symposium and 6 pop-up events held throughout the study area in June and July 2023, as well as online through a survey open for responses from June 16-July 16 2023.

The public symposium was held at Garner Town Hall on June 22nd, and included an overview of the project, the outcomes of the scenario planning process and various tradeoffs of compact development, recommendation boards for each mode, and a survey where participants were asked to comment on draft recommendations and prioritization criteria.

Acting as an abbreviated version of the symposium, pop-ups were located at events like downtown festivals and farmers' markets or at locations like the Garner regional library on days of scheduled activities in hopes of meeting people where they were. Each pop-up included an overview board, a one-page worksheet, and the survey. All pop-up materials were provided in English and Spanish.

The online survey was crafted to mirror the information and feedback receive at the public symposium and pop-up events by including background information and questions about project priorities as well as a series of interactive maps that allowed people to comment on the different recommendations. Public comments were received from people across the study area, with the vast majority living in the study area or having other meaningful connections to the area.

Success and Next Steps

The following table measures the success of this phase of engagement against the performance measures established in the Public Engagement Plan (PEP). All the measures were met and the method through which they were achieved is detailed in the table as well.

MEASURES OF SUCCESS

Measure	Indicator	Met	Achieved With
Number	Active participation by SOT/CTT members through events they attend/host, social media posts/emails they send	✓	Pop-up events; CTT/SOT meetings; outreach toolbox
	Project email updates sent at the beginning and end of each public engagement phase	✓	Email updates
	Geographic coverage of study area in event locations and social media targeting	✓	Social media blasts; pop-up events; zip codes of survey; Justice 40 block groups
	Materials translated to or available in Spanish	✓	Website, video, online survey, pop-up event and symposium materials
Inclusivity	Ensuring that engagement materials and activities are broadly available in four ways:		
	Across a variety of mediums (i.e., online, in-person, and passively)	✓	Website; video; public symposium; pop-up events; online survey
	Dispersed geographically (i.e., in both the urban and rural areas of the study area)	✓	Pop-up events; zip codes of survey
	Cognizant of user types (i.e., commuters, visitors, residents, recreational users, renters, property owners, etc.)	✓	Pop-up events; online survey; social media
	Accessible to a diverse audience regardless of race, ethnicity, sex, education level, disability, or language	✓	Pop-up events; website; social media
Quality	The intentional timing of engagement with project milestones to ensure feedback aligns with decision points	✓	Draft Multimodal Project Recommendations; Prioritization
	The evaluation of feedback for its value added to the planning process	✓	Draft Multimodal Project Recommendations; Prioritization

NEXT STEPS

The project team will take the feedback received from committee members and the public to finalize the modal recommendations and draft the final summary report. The SEAS Update will be released for public comment during the final touchpoint with the community.

Engagement Approach

Purpose and Goals

Phase 2 of the engagement process involved educating the public about the results of previous public input on visions, goals, and challenges from Phase 1, while discovering public sentiments about initial transportation recommendations. This phase focused on seeking input on potential preferred/recommended alternatives. Phase 2 engagement lasted from October 2022 through July 2023.

Promotion Methods

The following platforms were used to advertise and promote awareness of the SEAS Update.

EMAIL AND SMS MESSAGE BLAST

An email blast updating recipients on the process and informing them about the public symposium and online survey opening in June was sent out. Identical information was also sent out via text message to mobile sign ups.

SOCIAL MEDIA POSTS

Between June and July social posts about Phase 2 Engagement were made across Twitter, Facebook, and Instagram, including posts about pop-up events across the study area.

Outreach Materials

The following materials were developed, and platforms used to collect feedback during Phase 2 Engagement. These are included in Appendix C.

OUTREACH TOOLBOX

Committee members were provided with an “Outreach Toolbox” located on the project website that included email and social media post templates, a digital advertisement, bookmarks, presentation slides, a one-pager informational sheet, a paper survey, overview boards, and the Phase 2 Engagement video to further engage and spread awareness of the SEAS Update in their communities.

EMAIL TEMPLATE

The email template allowed CTT and SOT members to conveniently tailor a pre-written email for their communities and constituents.

SOCIAL MEDIA BLASTS

Social media advertisements were created for Facebook, NextDoor, and Twitter to allow CTT and SOT members to post on their organizational and personal socials about the SEAs Phase 2 Engagement events and public survey,

BOOKMARKS

Bookmarks advertising the project and providing a QR code to the project website were given to CTT members to display at town halls or bring to council and board meetings. These were also handed out at the public symposium and the pop-up events.

ONE-PAGER

An informational one-pager that provided a project update and established the purpose of Phase 2 Engagement was shared with CTT and SOT members and shared via the Outreach Toolbox, email, the public symposium, and the pop-up events.

POP-UP EVENT BOARDS

Each pop-up event included two overview boards in English and Spanish with project background and information.

NARRATED PRESENTATION

The project team recorded a brief narrated presentation that gave an update to the study, including the outcomes of the scenario planning process and the draft modal recommendations.

PRESENTATION SLIDES

An in-depth presentation was made available to the CTT/SOT members via the Outreach Toolbox for the purposes of allowing them to give local board and council updates about the SEAS Update.

Events and Activities

The following section describes the events and activities that occurred during Phase 2 Engagement. The full summaries of each event are included in the appendices.

CTT AND SOT MEETING (10/23 [2022])

The meeting on October 23rd acted as a visioning session for the SOT to:

- understand and shape how the scenario planning process would aim to reflect the plan's guiding principles
- decide what criteria could be used to measure the performance of the scenario planning process

As part of the scenario planning process, committee members were asked to rank the guiding principles on a spectrum by whether, in order to achieve a given principle, land use should be more compact or more dispersed and whether the transportations should lean towards more mode choices or be more car oriented. Committee members were also asked to rank potential indicators for measuring each guiding principle by importance.

JURISDICTIONAL GROUP MEETINGS (1/11)

The project team held meetings with planners from the different jurisdictions within the study area in January 2023 to get more specific feedback on each municipality's needs. Two meetings were held, each focusing on a specific group of jurisdictions.

- Benson, Four Oaks, Kenly, Micro, Pine Level, Smithfield, Selma, Wilson's Mills, and Johnston County
- Archer Lodge, Clayton, Garner, Raleigh, Wake and Johnston Counties

Planners discussed the result of the SOT guiding principles activity and noted priority growth corridors and centers, areas with unique needs or considerations, progress on priority land use policy strategies since the 2017 SEAS, and the direction of the hot spots going forward.

CTT MEETING (3/30)

The March 30th CTT meeting was held virtually over Zoom and focused on discussing the scenario planning process, performance measures, and presenting the initial three future land use scenarios (*Existing Plans, Corridors, and Centers*).

CAMPO TCC AND TAC MEETINGS (4/6; 4/19)

These meetings were with CAMPO leadership to inform and update them on the study's progress.

UCPRPO TCC AND TAC MEETINGS (5/2; 5/10)

These meetings covered largely the same topics as the April TCC and TAC meetings to inform and update UCPRPO leadership.

CTT MEETING (5/24)

The May 24th CTT meeting was in person at Clayton Town Hall and focused on the results of the scenario planning process and an intro to the modal recommendations. The project team recapped the scenario planning process and presented the *Preferred* land use scenario and its scored results. There was also a brief discussion of the Best Practices Toolbox and what tools should be prioritized before discussing in more detail the first draft of the modal recommendations.

PUBLIC SURVEY (OPEN JUNE 16-JULY 16, 2023)

A public survey using the Public Input platform was used to target online feedback regarding prioritization criteria and individual modal project recommendations. The survey was open for one month and included general questions about the draft recommendations and prioritization criteria, as well as a series of interactive maps for people to leave comments on individual projects. The survey also asked a series of demographic questions.

PUBLIC SYMPOSIUM (6/22)

A public symposium was held at Garner Town Hall on June 22nd to introduce the public to the draft recommendations and the prioritization process. The first half of the meeting consisted of an SOT Orientation where members were "walked through" the display boards via a formal presentation given by the project team. Boards included information about the scenario planning process and results, the land use best practices toolbox, the multimodal recommendations, and an overview of the CAMPO project prioritization process. Following this, the event became open for the public to view the boards and speak with the project team.

POP-UP EVENTS (THROUGHOUT JUNE/JULY 2023)

Six pop-up events were held across the study area during June and July 2023 to engage with people in person across the study area. Pop-ups were located at events like downtown festivals and farmers' markets or at locations like the Garner regional library on days of scheduled activities in hopes of meeting people where they were. Each pop-up included an overview board, the project one-pager, bookmarks, and paper surveys. These materials were intended to summarize the feedback received from Phase 1 Engagement, introduce the purpose of Phase 2 Engagement, and allow for meaningful feedback from the public.

Engagement Results

Demographics and Representation

CTT/SOT

The Core Technical Team includes individuals from planning departments across the study area jurisdictions as well as people with CAMPO, UCPRO, and NCDOT. Entities represented include:

- Archer Lodge
- Benson
- CAMPO (MCC, TRM, Wake Transit)
- Clayton
- Four Oaks
- Garner
- GoRaleigh
- GoTriangle
- GoWake Access Transportation Advisory Board
- Johnston County
- NCDOT TPD
- NCDOT-Div 4
- NCDOT-Div 5
- Raleigh
- Selma
- Smithfield
- UCPRO
- Wake County
- Wilson's Mills

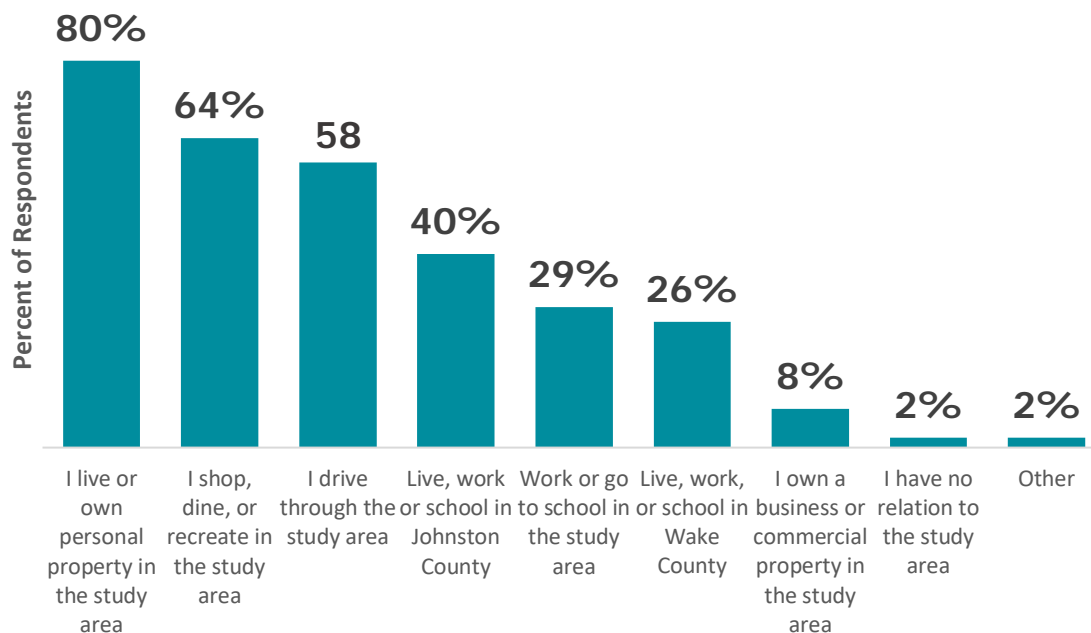
The Stakeholder Oversight Team includes individuals from town and county leadership from jurisdictions in and surrounding the study area, as well as representatives from different agencies and organizations including school systems, the Triangle J COG, area chambers of commerce, visitors' bureaus, transit systems (and rider representatives), and advocacy groups for things like parks, land conservation, and transportation options. Major employers Grifols and Novo Nordisk also had representatives on the committee. Locations and agencies represented include:

- Benson
- Clayton
- Clayton Chamber of Commerce
- Community Partner Network of Raleigh
- Garner
- Garner- Transit/Transportation Citizen Representative
- GoRaleigh
- GoTriangle
- Grifols
- JCATS
- Johnston County
- Johnston County Association of Realtors
- Johnston County Parks, Greenways, and Open Space
- Johnston County Visitors Bureau
- Johnston-Lee-Harnett Community Action
- Knightdale
- NCDOT Rail
- NCDOT TPD
- NCDOT-Div 5
- Novo Nordisk
- Raleigh
- RTA
- Selma
- TJCOG
- Triangle East Chamber
- Triangle Land Conservancy
- Triangle Transportation Choices
- Wake County Schools
- Wake County Planning Board
- Wake up Wake County
- Zebulon

PUBLIC SURVEY

A digital public survey was open for most of June and July allowing the public to provide feedback on the draft transportation recommendations and prioritization criteria.

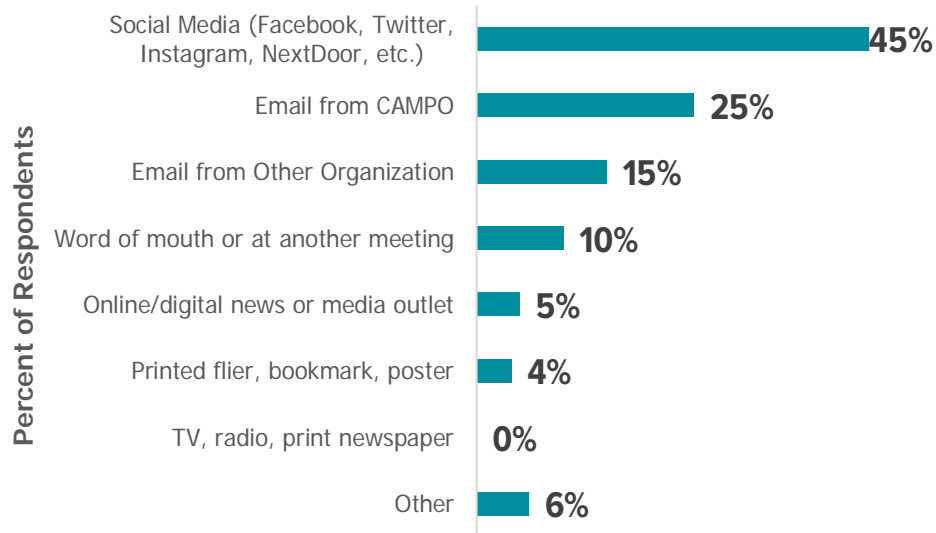
To ensure that the survey responses reflected the views of people who live, shop, work, or are otherwise invested in the study area, respondents were asked to describe their relation to the study area by choosing the options that described them from a list. 80% responded that they lived in the study area, and a majority also shopped, dined, or recreated within the study area and/or drove through the study area. Of respondents, about 40% lived, worked, or went to school in Johnston County versus 26% in Wake County.



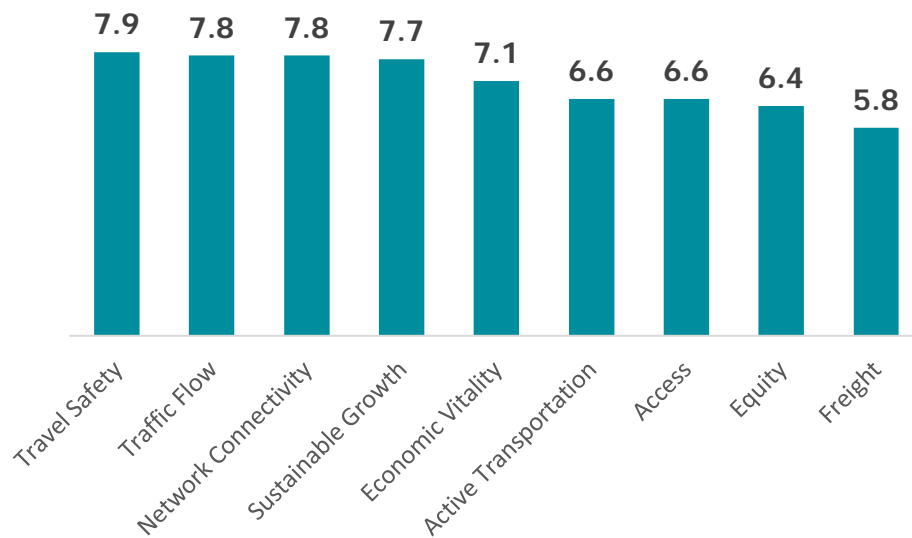
Out of participants who took the survey and answered the demographic questions:

- **94%** of respondents were **fluent or primary English speakers**
- **73%** were **25-64 years old**, while **21%** were **65 years or older** and only **3%** were **under 24** (2% 18-24 years old, 1% 17 years old or younger)
- **11%** of respondents were from households with **incomes under \$53,000 a year**
- **10%** were **minority races or multiple races**; **3%** were of **Hispanic, Latino, or Spanish origin**.
- **47%** of respondents identified as a **woman**, **36%** identified as a **man**. Two respondents identified as non-binary or other gender.
- **8%** were from **households of five people or more**.
- **3%** were or were considered to be **disabled**

Almost half of respondents heard about the SEAS Update survey from social media, while others heard about it from emails from CAMPO or other organizations.



When asked to rank importance of a series of criteria for selecting roadway projects to recommend and prioritize on a scale of 1 (least important) to 10 (most important), participants emphasized travel safety, traffic flow, network connectivity, and sustainable growth as the most important. Freight was ranked as the least important.



Themes and Key Takeaways

The following section identifies themes that arose from the feedback received from Phase 2 Engagement. Themes are organized by transportation and land use topics and key takeaways are identified for each theme.

SCENARIO PLANNING/LAND USE

Note that the following represents Jurisdiction, CTT, and SOT feedback

Compact development that favors more mode choices best accomplishes the guiding principles

- In SOT activity, Livability, Sustainable Growth, Travel Safety, Active Transportation, Network Connectivity, and Economic Vitality all had most responses favoring more mode choices and more compact land use
- Only Traffic Flow and Freight had more varied results, split on land use and with a slight lean towards mode choices

Focus growth in centers to minimize sprawl and conserve rural areas

- Based on committee feedback, the preferred scenario was created as a variation of the centers scenario that focused growth in agreed upon town clusters and new centers while going further to minimize encroachment on rural areas and rural corridors

Focus growth in centers and corridors identified by jurisdictions

- Some jurisdictions were working from centers and corridors already identified in local plans
 - Ex. Smithfield (Town Plan), Wake County (PlanWake)
- Some jurisdictions noted existing growth areas to shape
 - Benson noted growth along NC 242, NC 27, and US 301
 - Johnston County noted increases in development along NC 96/NC 231 and up near Wendell
- Other jurisdictions noted areas they wanted to shape going forward
 - Wilson's Mills is working to create new mixed-use center near downtown as the shape of the town changes from US 70 grade separation
 - Raleigh working to shape the
- Corridors suggested were often not the biggest highways, but centers tended to be at key nodes
 - Major crossroads (ex. US 70/NC 42, US 70 Bus/I-95, NC 50/NC 540, White Oak area)
 - Future transit nodes (ex. Garner Station area around BRT stop)

ROADWAY AND INTERSECTION RECOMMENDATIONS

Note that the following represents public feedback

Widenings and new connections sometimes concern the public due to the potential for decreased safety and environmental impacts

- Some new location connections faced opposition due to the risk of adding more fast moving through traffic into local communities posing safety risks to people living and playing along the route
- Widenings also faced opposition for safety reasons, concerned about more lanes and faster traffic.
- Other new location roadways or roadway widenings faced opposition due to concern of environmental impacts on parks, natural areas, and wetlands

Minimize or deprioritize widenings if intersection improvements, modernization, and transit alternatives can help resolve most issues

- Several intersection and roadway comments noted locations where proper turn lanes, better signal timing, and other improvements could potentially resolve issues enough to not need a widening
- Added or improved transit alternatives in some cases may be enough to make substantial widenings unnecessary, especially if rail

Prioritize intersections that are unsafe or confusing and intersections that are regional congestion points

- Several intersections noted as priorities were either actively unsafe or caused significant backups or other needs/issues that caused additional backups

BIKE/PED

Note that the following represents public feedback

Ensure areas of new development are included in recommended connections

- Some areas of growing development would benefit greatly from connections to the planned network
 - These new subdivisions increasingly have internal sidewalk and path networks but currently lack connections to any key destinations or surrounding areas

Greenways should be carefully planned with natural environment to maximize usefulness and minimize environmental impact

- Greenways and shared use paths should minimize harm to wetlands, riparian buffers, etc
- Provide alternative routes at points of greenways prone to flooding to ensure they remain usable during flooding

Provide bike and pedestrian crossing improvements for crossing dangerous roads, connecting key neighborhoods, or accessing key destinations like schools and parks

- Crossings at places like Powhatan Elementary, Smithfield Middle and Smithfield-Selma High School helps ensure children are connected to nearby parks and have safe routes to and from school
- Crossings in communities divided by large thoroughfares, especially with destinations like shopping centers
- Improve crossings at dangerous intersections where they do exist

Continue to provide additional alternative connections to major greenways from different neighborhoods for regional connectivity that allows greenways to be used both recreationally and occupationally for commuting

- The Clayton/Garner/Southeast Raleigh area saw a lot of support for connections that made it easier for different neighborhoods to safely access the Neuse River Greenway or continue into downtown Raleigh
 - Routes that connected into downtown Clayton from the northwest and southeast sides of town/continued the Sam's Branch Greenway were popular for providing additional connections more directly to downtown than the current connection

Adding paved shoulders on narrow country roads is also helpful for safety

- Paved shoulders are not a replacement for bike lanes, shared paths, or other dedicated infrastructure, but can make it safer for people who walk, bike, or run along the road
- In cases where a rural road is not expected to see development to warrant sidewalks or multiuse paths, ensuring adequate shoulders can make the road safer

Note that the following represents CTT and public feedback

Work to find solutions for tension between need to access destinations along major corridors and danger or major corridors themselves

- Some public and CTT comments noted that some major corridors may be too dangerous for certain kinds of shared or bike facilities (ex. NC 50, US 70/US 70 Business) due to speeds, width, and number of driveways. The CTT generally recommended parallel routes, and parallel routes in Clayton and Garner saw a lot of support
- However, some of these routes were also seen as important connections by the public due to destinations along the route

TRANSIT

Note that the following represents public feedback

Ensure sure major regional destinations are served/well connected

- Ensure strong regional connections to Johnston Community College, Johnston UNC Health, and Downtown Smithfield in addition to downtown Selma/Amtrak
 - Public comment suggested loop or continuation of Clayton-Selma Connector (potentially select trips)
 - Reliable access to regional destinations and employment centers can help drive core ridership
- Consider having Clayton-Garner Circulator include the Clayton Walmart

Note that the following represents CTT and public feedback

If feasible, include additional service for West Garner and future consideration of other centers in Johnston County

- Comments noted need for public transit beyond just the US 70 Corridor
- Multiple public comments noted need for improved transit in the US 401/Old Stage/NC 50 areas
- Comment expressed desire for connections from I-40/NC 42 and I-40/NC 210 areas to Smithfield and to Raleigh/BRT
 - CTT discussion implied additional or more direct connections to secondary centers around Benson and west Johnston County and into Raleigh, etc would most likely be a future consideration if demand warrants rather than a current one due to current lack of residential concentration

Note that the following represents CTT feedback

Work with the Raleigh-Garner N-S BRT to ensure routes support each other

- Routes need to feed into the BRT rather than compete with it to avoid sabotaging ridership
- System is codependent- need to show how lines meet needs and are codependent and work to have them connect efficiently

Next Steps

The project team will take the feedback received from committee members and the public to finalize the modal recommendations and begin drafting the final summary report. The SEAS Update summary report will then be released for public comment during the final touchpoint with the community with the goal of plan endorsement by CAMPO.

APPENDICES



Appendix A: CTT and SOT Meeting Summaries

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A

SEAS

S O U T H E A S T A R E A S T U D Y

UPDATE

CTT and SOT Land Use Scenario Planning Workshop

When: October 21, 2022
12:00 – 2:00 PM

Where: Johnston County Ag
Center

JOINT CTT AND SOT SCENARIO PLANNING WORKSHOP

Introduction

This document summarizes the Southeast Area Study (SEAS) Update scenario planning workshop held with the project's Core Technical Team (CTT) and Stakeholder Oversight Team (SOT). This summary provides an overview of the meeting agenda, presentation, and discussion, and is accompanied by the meeting presentation and recording. A total of 24 people attended the meeting. The full participant list is included as an attachment at the end of this document.

Summary

Project Progress

The project team initiated the meeting by introducing themselves, reviewing the agenda, and explaining meeting logistics. The project team then established the purpose and intended outcome of the meeting, shown in the table below.

<i>Meeting Purpose</i>	<i>Meeting Outcome</i>
The objective of this meeting was to introduce the Existing Plans scenario to the Core Technical Team (CTT) and Stakeholder Oversight Team (SOT) members and to get feedback to guide the creation and evaluation of alternative scenarios.	Members were informed of the plan's progress, introduced to the Existing Plans scenario, and engaged in a conversation about tradeoffs and what they wanted to see in alternative scenarios.

Next, the project team briefly recapped the project schedule.

Land Use Scenario Planning

The next part of the presentation was a brief review of what scenario planning was and of the scenario planning process. The following scenario development and performance measure indicators portions made up the largest portion of the meeting.

Scenario Development

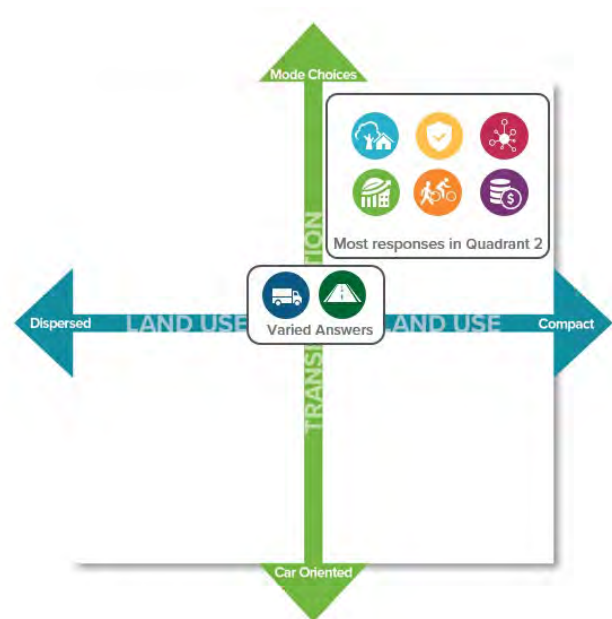
The next part of the presentation introduced the Existing Plans scenario to the committees and began a discussion about what the committees wanted to see emphasized in the two alternative scenarios. Questions included “How and where do we want to grow and transform?” And “What do we need to preserve?”.

The project team recapped previously discussed feedback from polling at previous SOT meetings on how much growth was ideal for the Southeast Area, with results reflecting a general preference for moderate growth leaning towards shops and jobs and more compact development. They also briefly covered noted as import

GROUP ACTIVITY

CTT and SOT members were given a key that explained each SEAS Update guiding principle. They were then asked to work in groups to rank the guiding principles on a spectrum by whether, in order to achieve a given principle, land use should be more compact or more dispersed and whether the transportation network should lean towards more mode choices or be more car oriented. The results of the activity are below:

- Livability, Sustainable Growth, Travel Safety, Active Transportation, Network Connectivity, and Economic Vitality all had most responses in the top right quadrant, favoring more mode choices and more compact land use.
- Traffic Flow and Freight had more varied results, split on land use and with a slight lean towards mode choices.



The results of the ranking activity were used to understand how our guiding principles should affect the development of the two alternative scenarios.

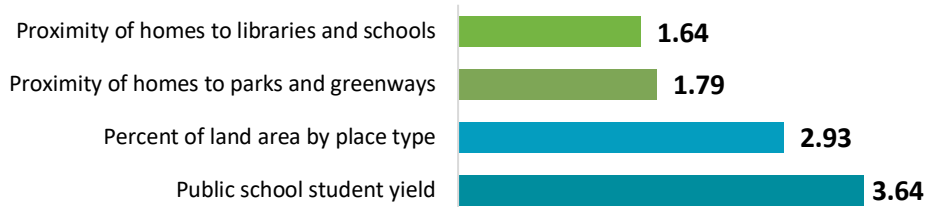
Performance Measure Indicators

The next part of the presentation explained the idea of performance measures and their purpose in comparing how each land use scenario performs based on measurable indicators.

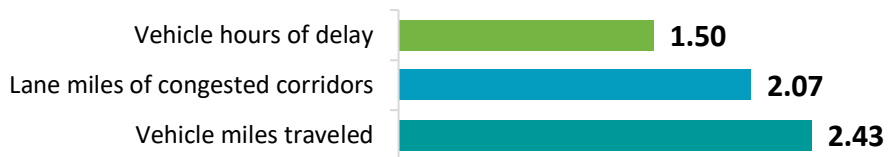
GROUP ACTIVITY

CTT and SOT members were given a key that included each guiding principle and what draft indicators were associated with each to evaluate how well a scenario was meeting that principle. They were asked to work in groups to rank the draft indicators by importance.

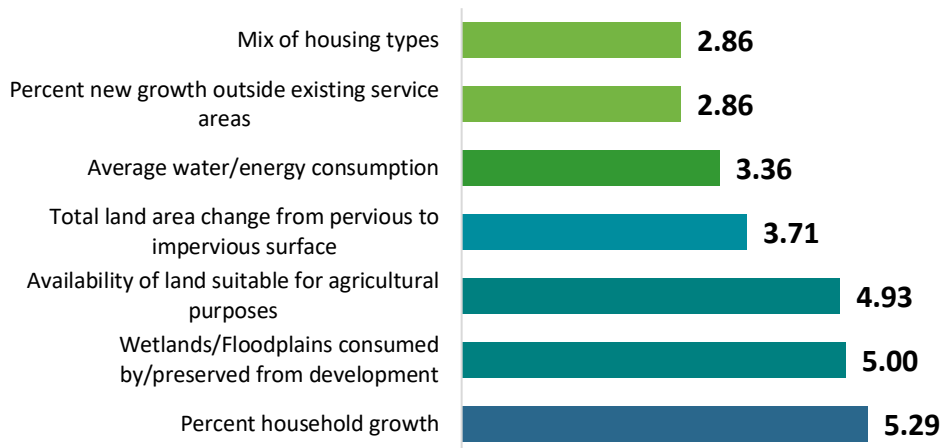
Livability Indicators



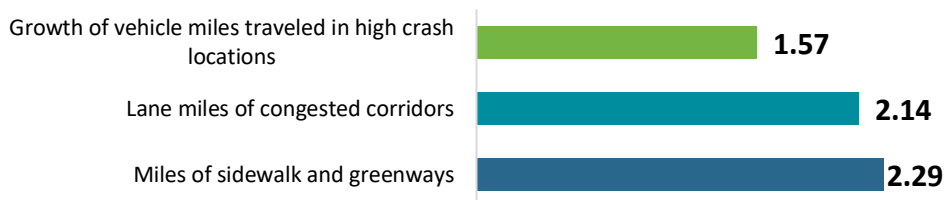
Traffic Flow Indicators



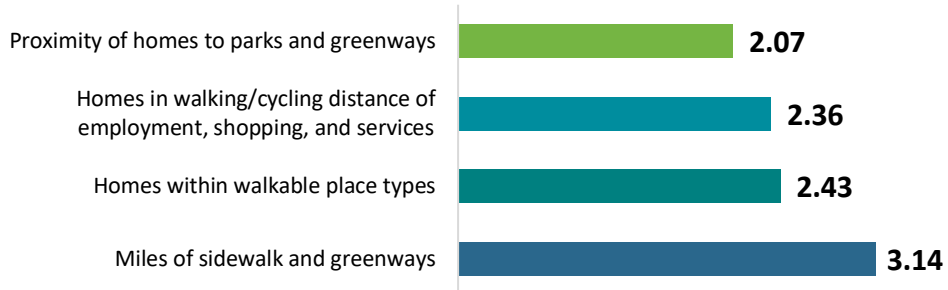
Sustainable Growth Indicators



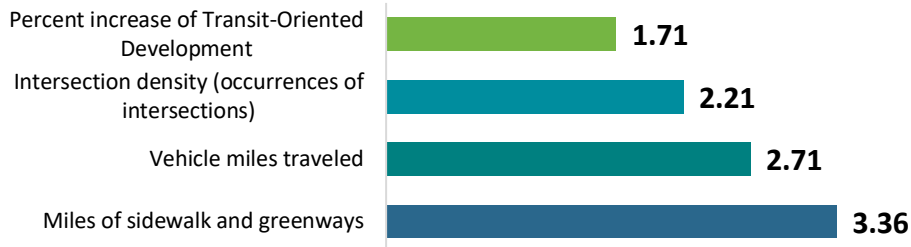
Travel Safety Indicators



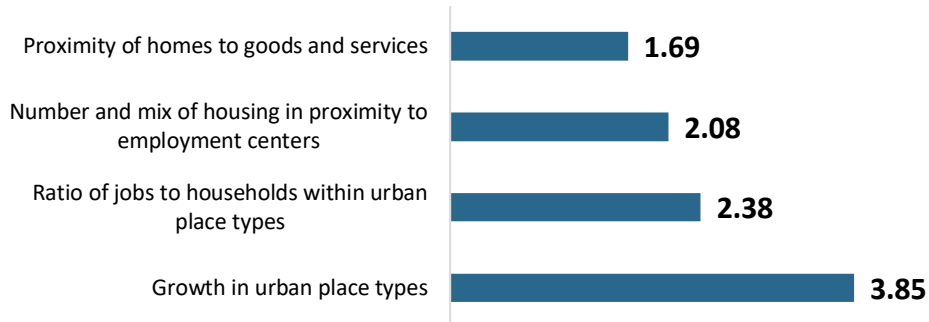
Active Transportation Indicators



Network Connectivity Indicators



Economic Vitality Indicators



Wrap Up and Next Steps

The project team wrapped up the presentation with a review of next steps including developing and testing the alternative scenarios, continuing policy review and diagnosis, and developing modal recommendations.

Attachment 1 | Attendance List

First Name	Last Name	Agency	SEAS Role
Erin	Joseph	Benson	CTT
Jerry	Medlin	Benson	SOT
Kimberly	Pickett	Benson	CTT
Shelby	Powell	CAMPO	Project Team
Matt	Day	Central Pines Regional Council (TJCOG)	SOT
Porter	Casey	Clayton	SOT
Ben	Howell	Clayton	CTT
Patrick	Pierce	Clayton	CTT
Kathy	Behringer	Garner	SOT
John	Hodges	Garner	CTT
Gaby	Lontos-Lawlor	Garner	CTT
Ken	Marshburn	Garner	SOT
Neal	Davis	JCATS	SOT
Todd	Marr	Johnston County Planning	
Samantha	Borges	Kimley-Horn	Project Team
Allison	Fluitt	Kimley-Horn	Project Team
James	Salmons	NCDOT-Div 4	CTT
Anne	Conlon	Raleigh	CTT
Bruce	McKay	Selma	SOT
Stephen	Wensman	Smithfield	CTT
Kim	Johnson	Triangle Transportation Choices	SOT
Tim	Gardiner	Wake County	CTT
Akul	Nishawala	Wake County	CTT
Asa	Fleming	Wake County Planning Board	SOT
Fleta	Byrd	Wilson's Mills	SOT

SEAS

S O U T H E A S T A R E A S T U D Y

UPDATE

What: Core Technical Team
Meeting No. 3

When: Thursday, March 30, 2023
10:30am -12pm

Where: Virtual | Zoom

CORE TECHNICAL TEAM MEETING NO.3

Introduction

This document summarizes the third Southeast Area Study (SEAS) Update meeting held with the project's Core Technical Team (CTT). This summary provides an overview of the meeting agenda, presentation, and discussion, and is accompanied by the meeting presentation.

Summary

Project Update

The project team initiated the meeting by establishing the purpose and intended outcome of the meeting, shown in the table below.

<i>Meeting Purpose</i>	<i>Meeting Outcome</i>
The objective of this meeting is to update the Core Technical Team (CTT) on the scenario development process, discuss the outcomes of the three previously identified scenarios, and get CTT feedback to move towards creating a preferred scenario.	Attendees will have a clear understanding of where the project is in the scenario planning process, will be familiar with the outcomes of each scenario, and be able to provide feedback and preferences that will lead to the development of a final preferred scenario.

Next, the project team briefly recapped the project schedule, progress made to date, and discussed changes to the schedule.

Scenario Development

In the next part of the presentation, the project team briefly reviewed the scenario planning process and recapped how the scenario narratives that led to the alternative scenarios were created

Scenario Testing

The majority of the meeting focused on the presentation/discussion of the three initial future land use scenarios. The project team presented the two newly developed alternative future land use scenarios, the Corridors and Centers scenarios, to the CTT for the first time while also showing the Existing Plans scenario in more detail for comparison and contrast. This presentation broke each scenario down by place types, distribution of different types of homes and employment, and detailed performance measures such as housing mix, homes and jobs near transit, and vehicle hours of delay.

DISCUSSION QUESTIONS

Throughout the presentation, the project team paused for questions and discussion, including:

- Identify what we should aim for in terms of density in our preferred scenario.
- How many (what percent of) homes/jobs should be transit accessible?
- Rank these performance measures in order of importance to you.
- Which Scenario is most consistent with your vision for the Southeast Area?

Wrap Up and Next Steps

The project team wrapped up the presentation with a review of next steps, including developing the Preferred scenario and the drafting of initial modal recommendations. A public symposium was scheduled to discuss the draft preferred scenario, continued policy review, and draft recommendations.

Attachment 1 | Attendance List

First Name	Last Name	Agency	SEAS Role
Erin	Joseph	Benson	CTT
Jerry	Medlin	Benson	SOT
Kimberly	Pickett	Benson	CTT
Shelby	Powell	CAMPO	Project Team
Matt	Day	Central Pines Regional Council (TJCOG)	SOT
Porter	Casey	Clayton	SOT
Ben	Howell	Clayton	CTT
Patrick	Pierce	Clayton	CTT
Kathy	Behringer	Garner	SOT
John	Hodges	Garner	CTT
Gaby	Lontos-Lawlor	Garner	CTT
Ken	Marshburn	Garner	SOT
Neal	Davis	JCATS	SOT
Todd	Marr	Johnston County Planning	
Samantha	Borges	Kimley-Horn	Project Team
Allison	Fluitt	Kimley-Horn	Project Team
James	Salmons	NCDOT-Div 4	CTT
Anne	Conlon	Raleigh	CTT
Bruce	McKay	Selma	SOT
Stephen	Wensman	Smithfield	CTT
Kim	Johnson	Triangle Transportation Choices	SOT
Tim	Gardiner	Wake County	CTT
Akul	Nishawala	Wake County	CTT
Asa	Fleming	Wake County Planning Board	SOT
Fleta	Byrd	Wilson's Mills	SOT

SEAS

S O U T H E A S T A R E A S T U D Y

UPDATE

What: Core Technical Team Meeting No. 4

When: Wednesday, May 24, 2023
2 – 4 pm

Where: Clavton Town Hall | 111 E.

CORE TECHNICAL TEAM MEETING NO. 4

Introduction

This document summarizes the fourth Southeast Area Study (SEAS) Update meeting held with the project's Core Technical Team (CTT). This summary provides an overview of the meeting agenda, presentation, and discussion, and is accompanied by the meeting presentation. A total of 21 people attended the meeting. The full participant list is included as an attachment at the end of this document.

Summary

Project Update

The project team initiated the meeting by establishing the purpose and intended outcome of the meeting, shown in the table below.

<i>Meeting Purpose</i>	<i>Meeting Outcome</i>
The objective of this meeting is to update the Core Technical Team (CTT) on the outcomes of the preferred land use scenario, introduce and discuss the draft modal recommendations, and discuss the next steps in community engagement.	Attendees will have a clear understanding of the outcomes of the preferred scenario and will be able to provide meaningful feedback on the draft modal recommendations.

Next, the project team briefly recapped the project schedule, progress made to date, and discussed changes to the schedule.

Scenario Planning

The project team briefly recapped the findings within the Existing Plans, Centers, and Corridors scenarios, then went over some key points that emerged in earlier scenario development meetings, including:

- General preference for the Centers scenario
- Increase Multifamily Housing
- More density was preferred
- Land consumed and housing mix are important metrics

The project team then introduced the preferred scenario, showed how it addresses these points, and presented how it performs against the Existing Plans scenario.

Land Use Best Practice Toolbox

Next the project team discussed policy priorities and best practice. The team presented findings from evaluating each SEAS communities' plans and codes. All SEAS communities had made progress towards implementing priority strategies through new plans, modified codes, etc. since the original SEAS. However, there were still additional opportunities noted to strengthen plan and code provisions, as well as new and modified priorities. The team emphasized a new focus on implementation through regulations, utility coordination, capital investments, and acting on policies.

Draft Modal Recommendations

The majority of the meeting was dedicated to presenting the first draft of the draft bike/ped, transit, roadway, and intersection recommendations. The project team explained the recommendation development process, then presented the draft of recommended projects by mode (bike/ped, transit, roadway and intersection) and opened for discussion. Additional policy-based recommendations and considerations were also presented.

The CTT primarily provided feedback about transit recommendations, emphasizing that the projects are dependent on each other. Members suggested tweaks to routes to reflect existing BRT/transit plans and needed connectivity between services.

The team also presented an update on the selected US 70 Business/NC 42/Future Ranch Road hot spot and the reasoning for its selection.

Public Engagement and Wrap Up

The project team wrapped up the presentation with a review of next steps, including details of the upcoming public symposium and the goals of engagement at the event.

Attachment 1 | Attendance List

First Name	Last Name	Agency	SEAS Role
Steve	Bzomowski	Alta	Project Team
Matt	Hayes	Alta	Project Team
Erin	Joseph	Benson	CTT
Gaby	Lontos-Lawlor	CAMPO	Project Team
Shelby	Powell	CAMPO	Project Team
Jasmine	Davidson	Clarion	Project Team
Emily	Gvino	Clarion	Project Team
Leigh Anne	King	Clarion	Project Team
	Clayton Intern	Clayton	
Patrick	Pierce	Clayton	CTT
Bruce	Venable	Clayton	
Kyle	Hearing	Foursquare	Project Team
John	Hodges	Garner	CTT
Braston	Newton	Johnston County	CTT
Samantha	Borges	Kimley-Horn	Project Team
Allison	Fluitt	Kimley-Horn	Project Team
Anne	Conlon	Raleigh	CTT
Christopher	Golden	Raleigh	CTT
Stephen	Wensman	Smithfield	CTT
Tim	Gardiner	Wake County	CTT
Akul	Nishawala	Wake County	CTT

Appendix B: Jurisdictional Group Meetings Summary

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B

JURISDICTIONAL GROUP MEETINGS SUMMARY

As part of the Southeast Area Study Update, a series of two meetings were held with planning staff from jurisdictions across the Southeast Area to better understand their preferred locations for growth and the state of their land use policies, as well as get feedback on potential hot spot study locations. On January 11th, the SEAS Project Team met with groups of planning staff from Southeast Area municipalities as well as from county planning departments (Wake and Johnston Counties) to discuss their priorities for future land use patterns.



Meeting 1

- Benson
- *Four Oaks**
- *Kenly**
- *Micro**
- *Pine Level**
- Smithfield
- *Selma**
- Wilson's Mills
- Johnston County



Meeting 2

- *Archer Lodge**
- Clayton
- Garner
- Raleigh
- Johnston and Wake Counties

**Planners from Archer Lodge, Four Oaks, Kenly, Micro, Pine Level, and Selma were unable to attend.*

Meeting 1- January 11th

The first January 11th meeting focused on the areas of the study area in unincorporated Johnston County, the Smithfield-Selma-Wilson's Mills area, and jurisdictions roughly along I-95. Planners from Four Oaks, Kenly, Micro, Pine Level, and Selma were unable to attend the meeting.

Benson

WHERE SHOULD WE DIRECT GROWTH?- CENTERS AND CORRIDORS

- NC 242 North Corridor
- Exit 325 (I-40 at NC 242)
 - Leads to McGees Crossroads
- New subdivisions on 242 North
- NC 27 and NC 301 are seeing growth

- ETJ expanded greatly recently

LAND USE POLICY AND CODE DIAGNOSTIC

- Benson is updating their UDO in 2023
- Mixed use along NC 242 is desired
- Area has seen infill development of residential homes
- Gap in affordability

Smithfield

WHERE SHOULD WE DIRECT GROWTH?- CENTERS AND CORRIDORS

- Follow the Town Plan
 - *Per Town Plan's future land use map:*
 - *significant mixed use along M. Durwood Stephenson Hwy north of US 301 and on east side of US 70 Business/I-95*
 - *several smaller mixed-use centers throughout the town (ex. US 70 Business at NC 210 and at M. Durwood Stephenson Hwy, Buffalo Rd at M. Durwood Stephenson and at US 70 Bypass, US 301 near Holt Lake, at Brogden Rd, near Hospital Rd)*
 - *Industrial growth along US 70 Business West, Outlet Center Dr, and Wal-Pat Dr*
- US 70 Business east of I-95

LAND USE POLICY AND CODE DIAGNOSTIC

- New Amazon facility on Business 70- when it opens, where to route trucks?
- New industrial growth in Buffalo Rd area

Wilson's Mills

WHERE SHOULD WE DIRECT GROWTH?- CENTERS AND CORRIDORS

- Has new business center coming
- Retail and business growth
- Downtown is considered at the railroad tracks
- Swift Creek Road and service roads as growth areas
 - Closing US 70 (grade separation/access management)
- Connecting between US 70 Bypass and US 70 Business

LAND USE POLICY AND CODE DIAGNOSTIC

- Developers want to build townhomes- Adding zoning category for just townhomes because the only zoning that currently allows townhomes is mixed-use district

Johnston County

WHERE SHOULD WE DIRECT GROWTH?- CENTERS AND CORRIDORS

- 96 and 231 have more development
- Growth in Wendell area
- James Salmons (NCDOT, former UCPRPO):

- NC 210 between McGee's Crossroads and Smithfield
- US 301 between Benson and Smithfield

LAND USE POLICY AND CODE DIAGNOSTIC

- Sewer capacity not being added until late 2024
- Now directing density to towns (might change with the comp plan on-going)
- Creating McGee small area plan
- Comp plan not yet adopted- delays
 - Agricultural district contention
 - Some don't want to direct density to towns
 - Concerns about residential growth (not preferred) over business/industrial - Benson

Other

LAND USE POLICY AND CODE DIAGNOSTIC

- Pine Level adopted a land use plan in June 2022

Meeting 2- January 11th

The second January 11th meeting focused on the northwestern area of the study area, including Archer Lodge, Clayton, Garner, Southeast Raleigh, and Johnston and Wake Counties. Planners from Archer Lodge were unable to attend the meeting.

Clayton

WHERE SHOULD WE DIRECT GROWTH?- CENTERS AND CORRIDORS

- Corridors
 - Ranch Road
 - Oneil Road; Covered Bridge Road
 - Amelia Church Road
 - Cornwallis Road
 - Shotwell Road (maybe)
 - Old US 70 to Amelia Church Rd
 - Guy Road
- Centers
 - Highway 42/US 70 Bypass area
 - Cornwallis/42

LAND USE POLICY AND CODE DIAGNOSTIC

- Clayton is currently rewriting UDO
- Downtown Master Plan will be adopted in 2023
- Future I-42/US 70

Garner

WHERE SHOULD WE DIRECT GROWTH?- CENTERS AND CORRIDORS

- Corridors
 - Old Stage Road
 - Rock Quarry Road
- Centers
 - NC 540/Old Stage
 - NC 540 at NC 50
 - North/South BRT Station area (US 401 at US 70)
 - Garner Station area

LAND USE POLICY AND CODE DIAGNOSTIC

- Working on amendment to GarnerForward that will address remaining questions
- Bike/Ped plan being adopted in early spring

Raleigh

WHERE SHOULD WE DIRECT GROWTH?- CENTERS AND CORRIDORS

- Rock Quarry Road to have growth at nodes
 - Whitfield Rd intersection
 - Battle Bridge Rd intersection (mixed use node)

LAND USE POLICY AND CODE DIAGNOSTIC

- Reference Southeast Special Area Study
- Implementing comprehensive plan is difficult

Wake County

WHERE SHOULD WE DIRECT GROWTH?- CENTERS AND CORRIDORS

- Follow PlanWake

Other

WHERE SHOULD WE DIRECT GROWTH?- CENTERS AND CORRIDORS

- White Oak area between I-40 and NC 540

Other Topics

Hot Spot Toolkits

- Rename from Hot Spot Toolkits to avoid confusion with location based Hot Spots
- Combine access management and safety to make an Intersection Control Evaluation (ICE) process to guide development
- Need a metric to measure accessibility

- Smithfield noted importance of Transit Oriented Development as a topic
- Suggestion to reframe cost of sprawl as benefit of compact development
- Student generation as a potential topic (how many new students do certain types of developments tend to create)
- Smithfield suggested video for the broadest audience- Benson added need to have something to take away in conjunction with video
- Any combination of toolkits and hot spot locations should have at least one toolkit

Hot Spot Locations

- Several hot spots **removed from consideration** based on current plans or projects:
 - US 70 at US 401
 - I-40 at NC 210
 - US 401 at Ten Ten Rd
 - Rock Quarry Rd at New Hope Rd
 - Buffalo Rd at NC 42
 - Garner Rd at Vandora Springs Rd
 - Infeasible to be grade separated so if it could have a different design solution that may be revisited
 - US 301 at Booker Dairy Rd
 - Ricks Rd/Outlet Center Dr
- Suggested hot spots:
 - South Brightleaf Boulevard/US 301
 - Railyard at Selma/I-95
 - Wilson's Mills Rd/Swift Creek Rd/Fire Department Road

Other

- Currently towns have first choice to sewer developments- conflict between sewer capacity needs vs policy
- Any plans should take into the consideration the fast pace of change
- Who has a strategic plan? Or a plan that sets up more immediate next steps?
 - Should the SEAS set this up?
 - Should tie CIPs, Comp Plans, Strategic Plans together
 - Need to define "strategic," potentially "Strategic Investment Plan"

Appendix C: Pop-Up Events Summary and Outreach Materials

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C

SEAS

S O U T H E A S T A R E A S T U D Y

U P D A T E

Archer Lodge | Benson | Clayton | Four Oaks | Garner | Kenly | Micro | Pine Level | Selma | Smithfield | Wilson's Mills
Parts of Raleigh, Johnston County, and Wake County

The ***Southeast
Area Study***
has draft
transportation
recommendations
and we need
YOUR input!

Share *your ideas* on
roadway, bicycle,
pedestrian, and
transit improvements.



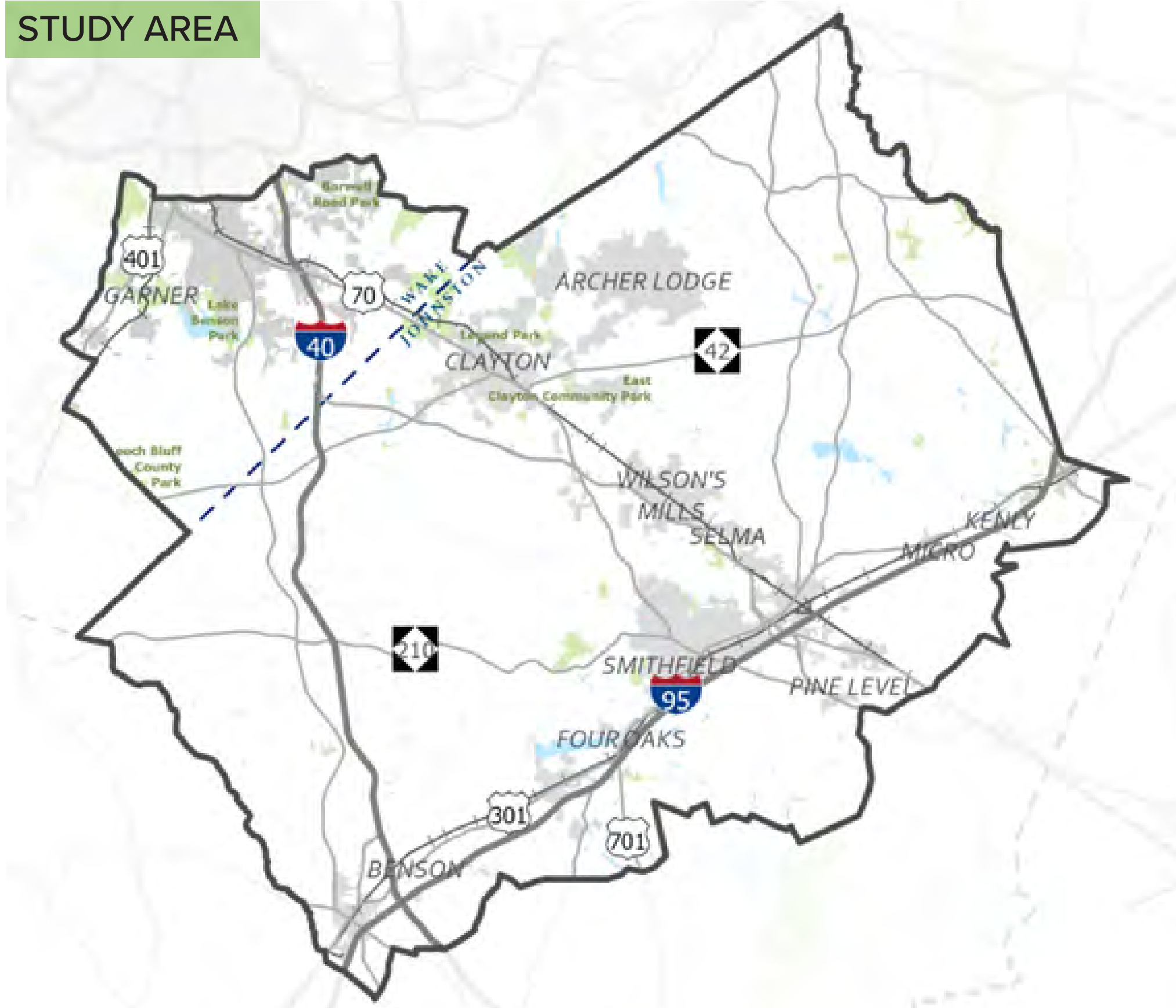
SCAN HERE to
take the online
survey and for
more information.

seareastudyupdate.com

PROJECT OVERVIEW

The Capital Area Metropolitan Planning Organization (CAMPO) is updating the 2017 Southeast Area Study (SEAS) to refresh its recommendations for land use and transportation. You can learn more about the study on the project website.

STUDY AREA



Critical Transportation Issues

We also asked you what the most critical transportation issues in the study area are, and you answered:



WHAT WE HEARD FROM YOU

Last summer, as part of Phase I Engagement, we asked you about your vision for the SEAS Update. From that feedback we updated the Guiding Principles from the 2017 SEAS to reflect the new goals of the SEAS Update.

Guiding Principles



LIVABILITY

Enhance and promote our region's quality of life through transportation and land use decisions that equitably support public health, education, parks and recreation, public art, and local character.



TRAFFIC FLOW

Make it easier to move within and through our region by reducing congestion and improving roadway operations.



SUSTAINABLE GROWTH

Blend development decisions and transportation strategies to promote and sustain employment and population growth by offering housing and neighborhood choices to meet diverse needs while preserving the area's natural features.



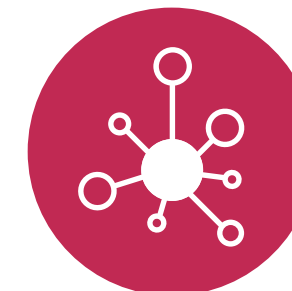
TRAVEL SAFETY

Promote a safer, more secure transportation system by reducing crashes, enhancing reliability and predictability, and improving emergency coordination.



ACTIVE TRANSPORTATION

Integrate our transportation network to provide travel choices, especially walking and cycling, for all users, regardless of age and ability.



NETWORK CONNECTIVITY

Link local and regional destinations through improved connections and enhanced integration among travel modes.



ECONOMIC VITALITY

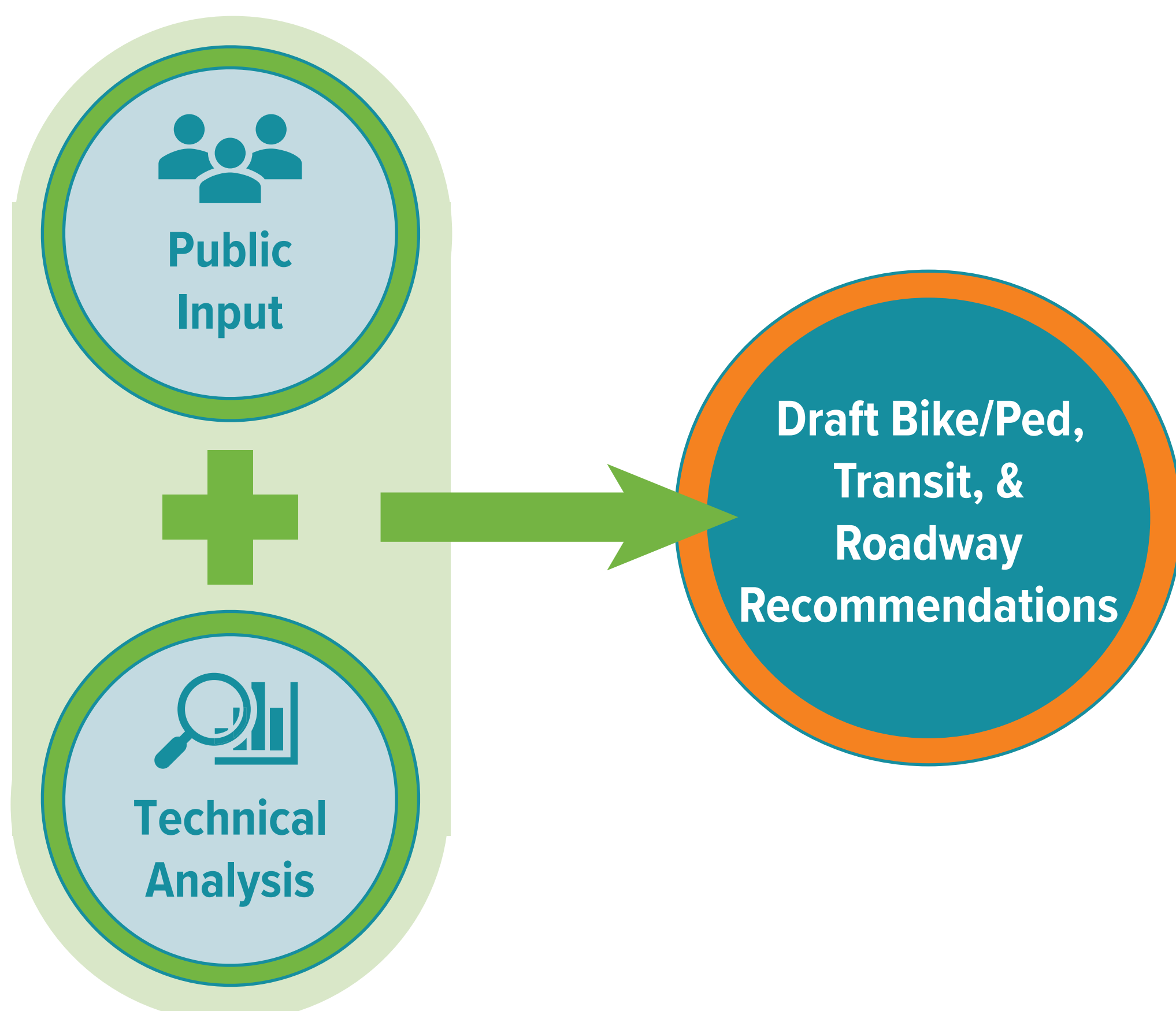
Grow our economy through a transportation network by connecting residents to jobs, goods, services, and opportunities within and beyond our region.



FREIGHT MOVEMENT

Support global competitiveness of our region through a transportation network that efficiently moves goods and services.

Visit the project website to read the full summary of Phase 1 Engagement.



WHAT WE'VE DONE SINCE

In the year since Phase 1 Engagement, we've completed the technical needs and gaps analysis. The results of the analysis combined with the public input helped the project team create draft bicycle and pedestrian, transit, and roadway recommendations.

WHAT WE NEED FROM YOU

We want to hear from you! We're asking for your feedback on our draft multimodal recommendations.

Do the recommendations address the issues you care about?

We also want to know about your priorities. **What's important to you?** We need your feedback on how we should prioritize these projects.

Take the online public survey!

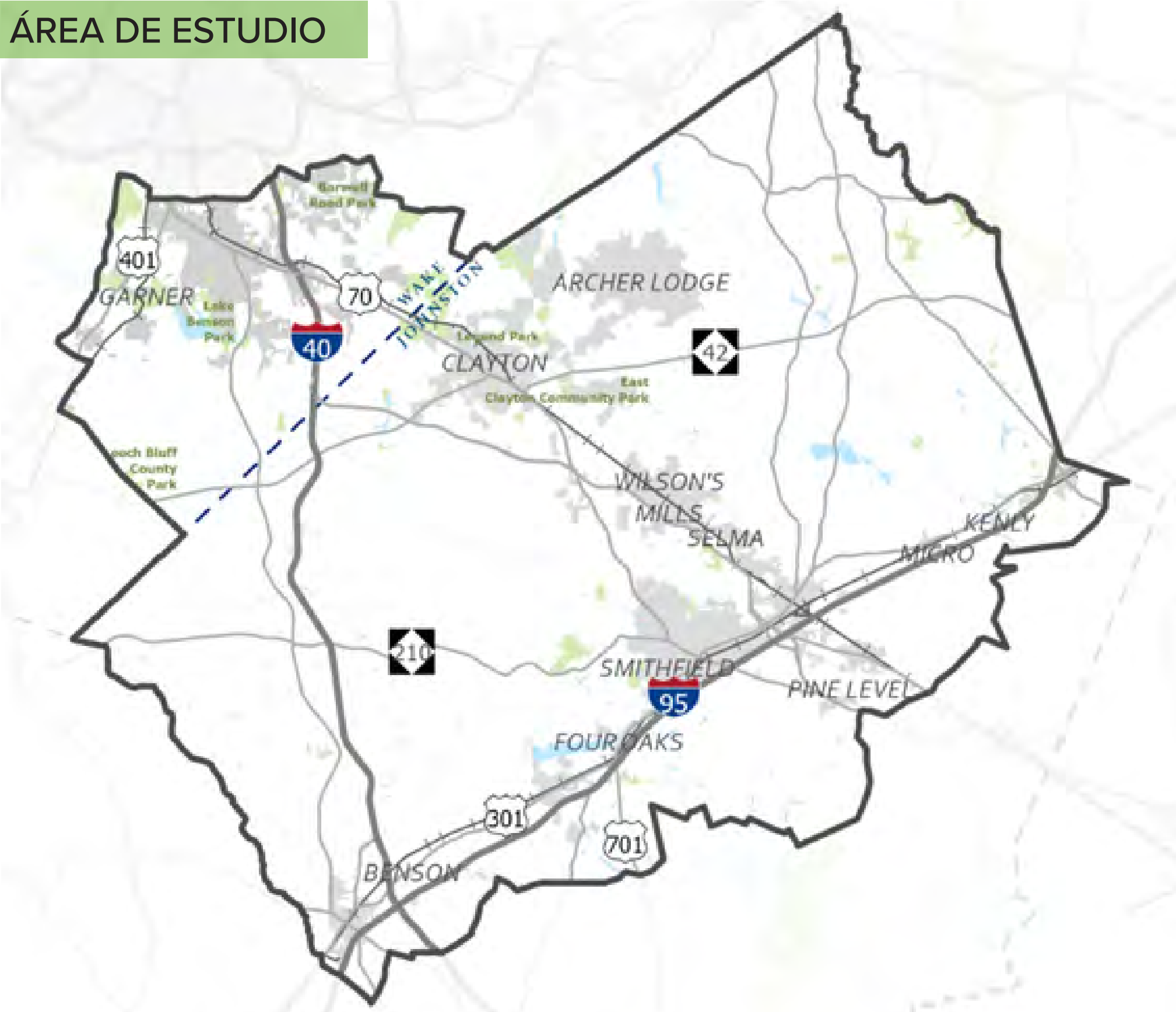


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DESCRIPCIÓN GENERAL DEL PROYECTO

La Organización de Planificación Metropolitana del Área Capital (CAMPO, por sus siglas en inglés) está actualizando el Estudio del Área Sudeste (SEAS, por sus siglas en inglés) del 2017 para actualizar sus recomendaciones para el uso del suelo y el transporte.

ÁREA DE ESTUDIO



Problemas Críticos de Transporte

También le preguntamos cuáles eran los problemas de transporte más críticos en el área del estudio, y usted respondió:



Congestión de Tráfico



Falta de Transporte Público



Problemas de Seguridad

LO QUE USTED NOS DIJO

El verano pasado, como parte de la Fase I, le preguntamos sobre su visión de la Actualización SEAS. En base a esos comentarios, actualizamos los Principios Rectores de SEAS 2017 para reflejar los nuevos objetivos de SEAS.

Principios Rectores



HABITABILIDAD

Mejorar y promover la calidad de vida de nuestra región a través de decisiones de transporte y uso de la tierra que respalden equitativamente la salud pública, la educación, los parques y la recreación, el arte público y el carácter local..



FLUJO DEL TRÁFICO

Facilitar el movimiento dentro y a través de nuestra región al reducir la congestión y mejorar las operaciones viales.



CRECIMIENTO SOSTENIBLE

Combinar las decisiones de desarrollo y las estrategias de transporte para promover y sostener el empleo y el crecimiento de la población al ofrecer opciones de vivienda y vecindario para satisfacer diversas necesidades mientras se preservan las características naturales del área.



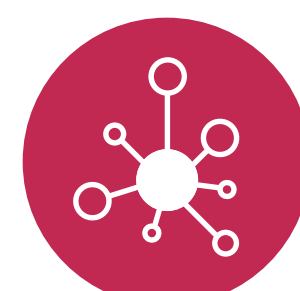
SEGURIDAD EN LOS VIAJES

Promover un sistema de transporte más seguro al reducir los accidentes, mejorar la confiabilidad y la previsibilidad y mejorar la coordinación de emergencias.



TRANSPORTE ACTIVO

Integrar nuestra red de transporte para brindar opciones de viaje, especialmente a pie y en bicicleta, para todos los usuarios, independientemente de su edad y capacidad.



CONECTIVIDAD DE LA RED

Vincular destinos locales y regionales a través de conexiones mejoradas y una mayor integración entre los modos de viaje.



VITALIDAD ECONÓMICA

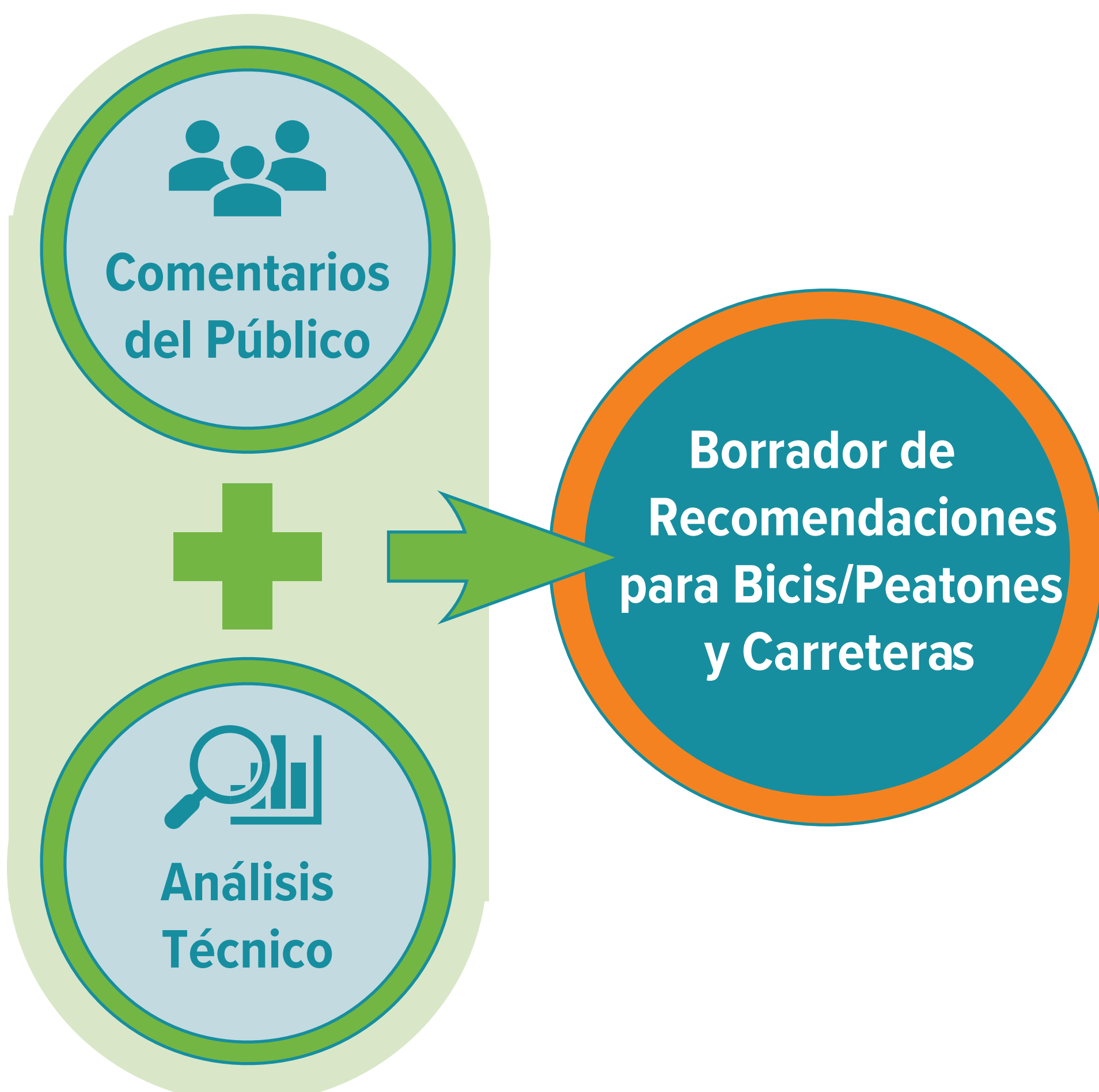
Hacer crecer nuestra economía a través de una red de transporte conectando a los residentes con trabajos, bienes, servicios y oportunidades dentro y fuera de nuestra región..



MOVIMIENTO DE CARGA

Apoyar la competitividad global de nuestra región a través de una red de transporte que mueva eficientemente bienes y servicios.

Visite el sitio del proyecto para saber más sobre el proyecto y leer el resumen completo sobre la Fase 1 Participación



LO QUE HEMOS HECHO DESDE ENTONCES

Desde la Participación de la Fase 1, hemos completado el análisis técnico que, combinado con los comentarios del público, ayudó al equipo del proyecto a crear un borrador de recomendaciones para ciclistas y peatones, tránsito y carreteras.

LO QUE NECESITAMOS DE USTED

¡Queremos saber de usted! Le pedimos su opinión sobre nuestro borrador de recomendaciones multimodales y su opinión sobre sus prioridades.

¿Las recomendaciones, abordan los problemas que le preocupan?

También queremos saber cuáles son sus prioridades. **¿Qué es importante para usted?** Necesitamos sus comentarios sobre cómo deberíamos priorizar estos proyectos.

¡Llene la Encuesta en Línea!



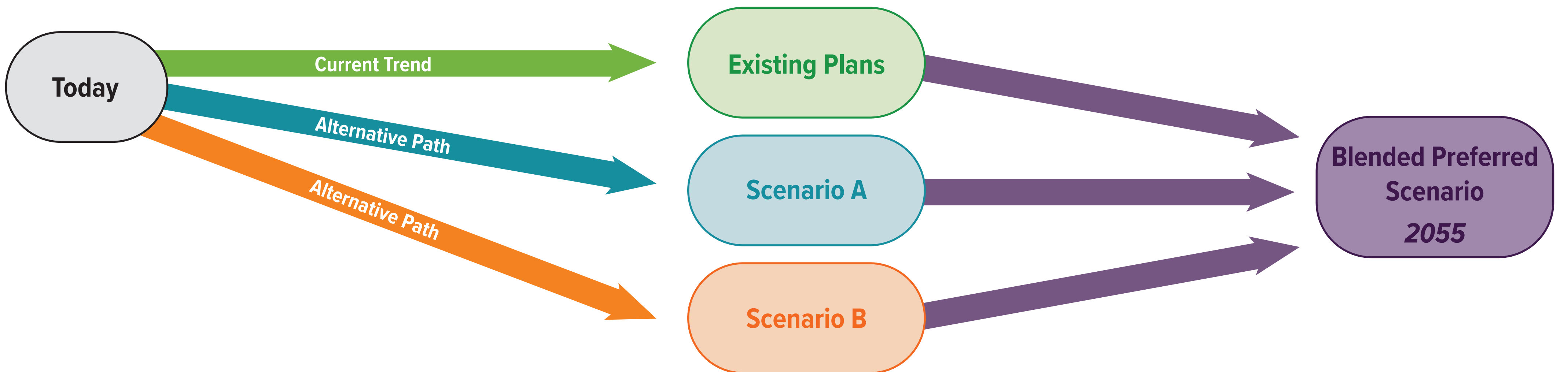
seareastudyupdate.com

SCENARIO PLANNING

Scenario planning compares different possible futures of an area to help decide where and how we should grow. For the SEAS Update, scenarios considered:

- What will our future look like if things **keep going like they are now?**
- What are some **alternative paths** we could take that might **better meet our goals?**

Each scenario was scored based on how well they advanced our guiding principles. The best parts of the original three scenarios were then combined to create a Preferred Scenario.



PREFERRED SCENARIO

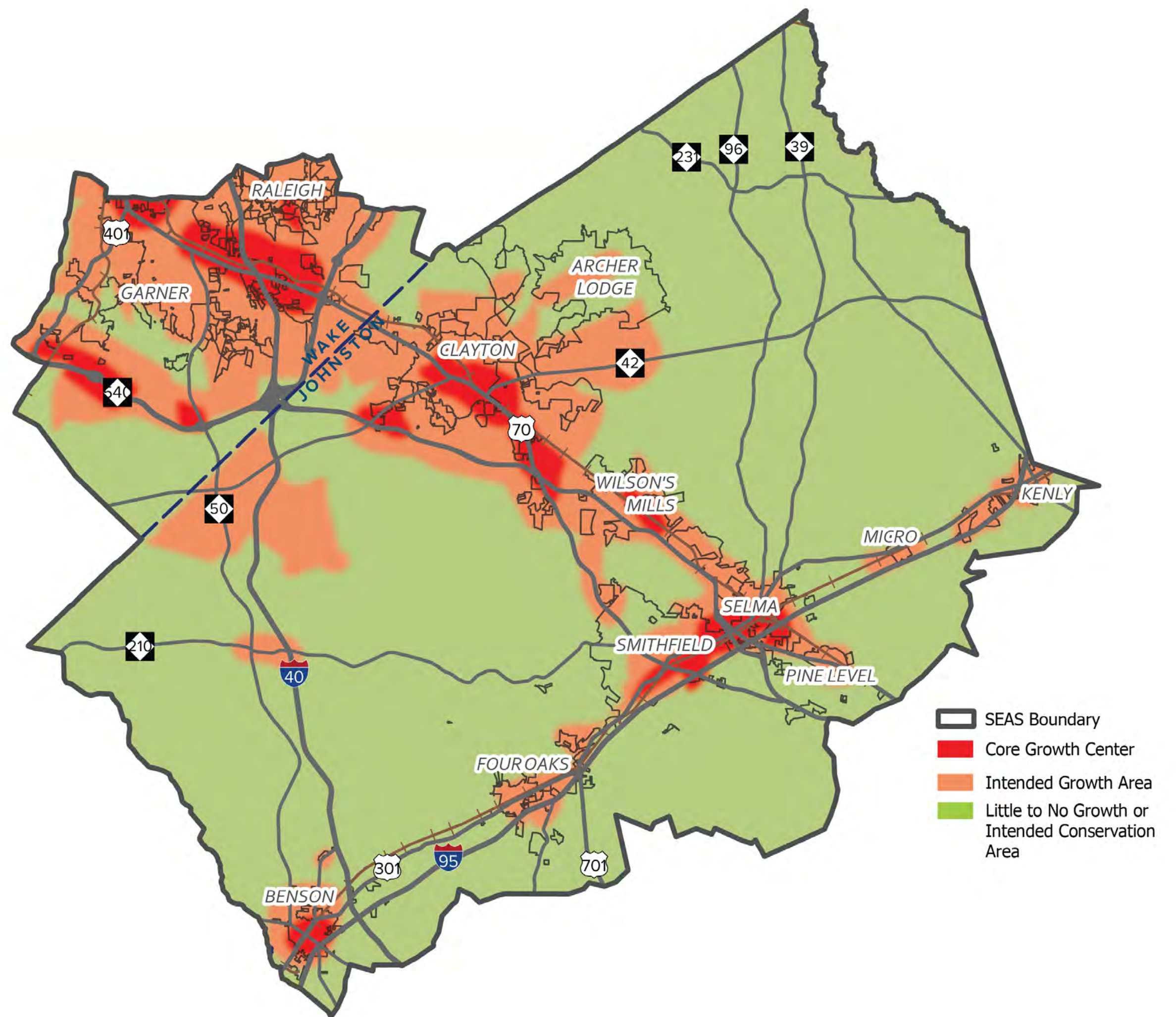
The preferred land use scenario focuses growth in towns and along major corridors like US 70 and US 301, while discouraging sprawl in rural areas. This scenario is intended to encourage more compact development while preserving the rural character of Johnston County.

WHAT THE SCENARIO INFORMS










Knowing where we want growth will help make decisions about land use and transportation, such as:

- where to put **new homes and job centers** versus where to **preserve farms and forests**
- where to invest in roads, trails, and transit that can **support more people**

The land use and transportation recommendations created as part of the SEAS Update support the Preferred Scenario.



Compared to the Existing Plans Scenario, the Preferred Scenario shows:

- | | | |
|---|--|---|
|  an increase in urban areas |  an increase in transit access to jobs |  an increase in residential density |
|  a decrease in suburban areas |  an increase in walkable homes and jobs |  a slight decrease in congested roads |
|  an increase in rural areas |  a better balance between homes and jobs |  a slight increase in delay |



PLANNING FOR THE BUILT ENVIRONMENT

Land Use Plans and Land Development Regulations

Land use plans are created by local governments to help guide growth and development in a community and efficiently use resources. **Land development regulations**, or zoning regulations, implement land use plans. The 2017 SEAS included recommendations for each jurisdiction, organized by Priority Strategies and Important Strategies to Consider.

What's Been Accomplished Since the 2017 SEAS

Since 2017, jurisdictions have made significant progress that advanced the recommendations of the SEAS.

Most SEAS communities updated their comprehensive land use plans and adjusted their land development regulations.

Example: Garner's adoption of the GarnerForward Comprehensive Plan in 2018 and update of their land development regulations in 2022.

Most SEAS communities took steps to provide a range of housing types through their comprehensive land use plans or regulations through zoning.

Example: Smithfield's 2019 Town Plan includes policy recommendations to allow for increased density and a variety of housing types.

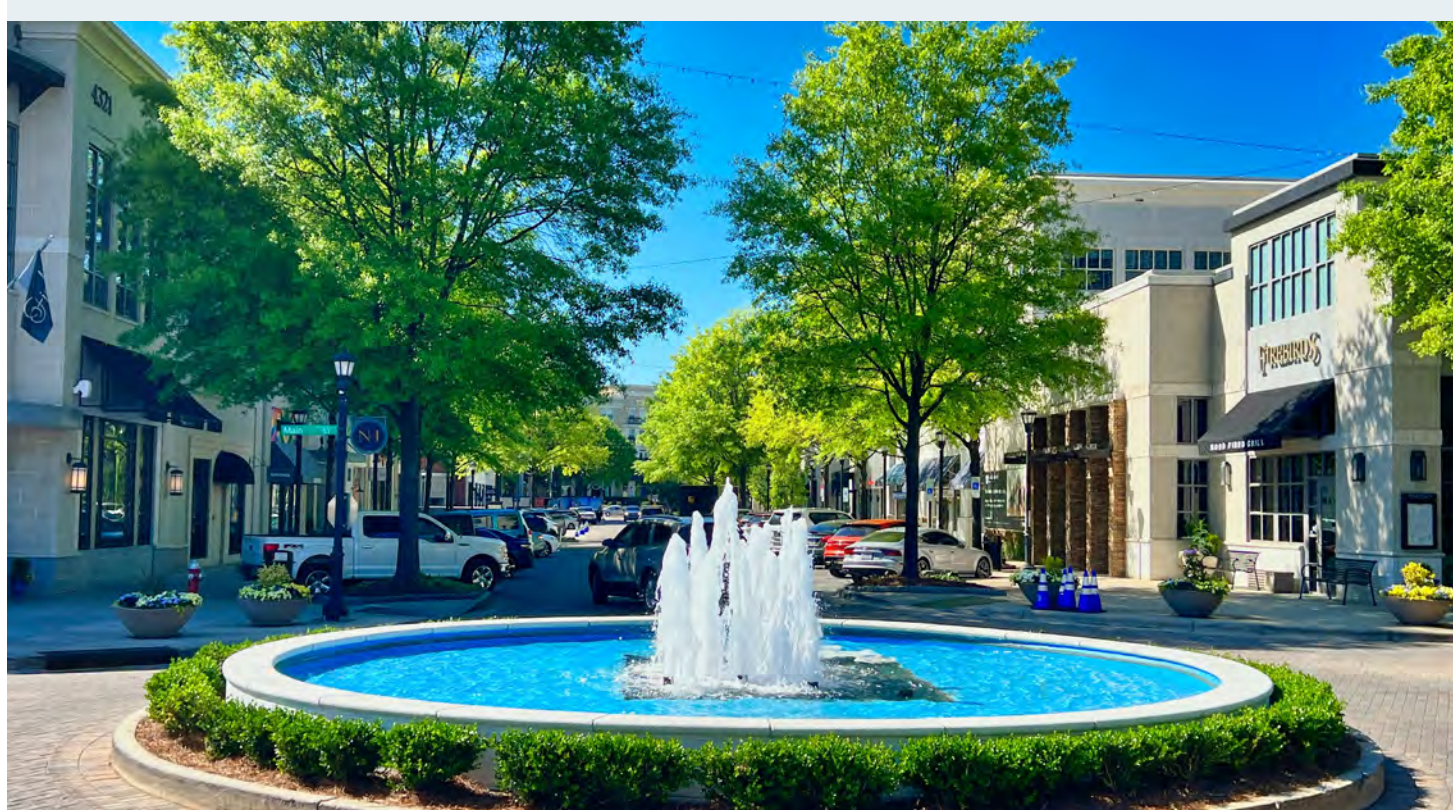
Some Ideas for the 2023 SEAS Update

The 2023 SEAS will focus on putting these policies to use in key focus areas, such as housing, bicycle and pedestrian improvements, mixed use development, and more. Examples include:



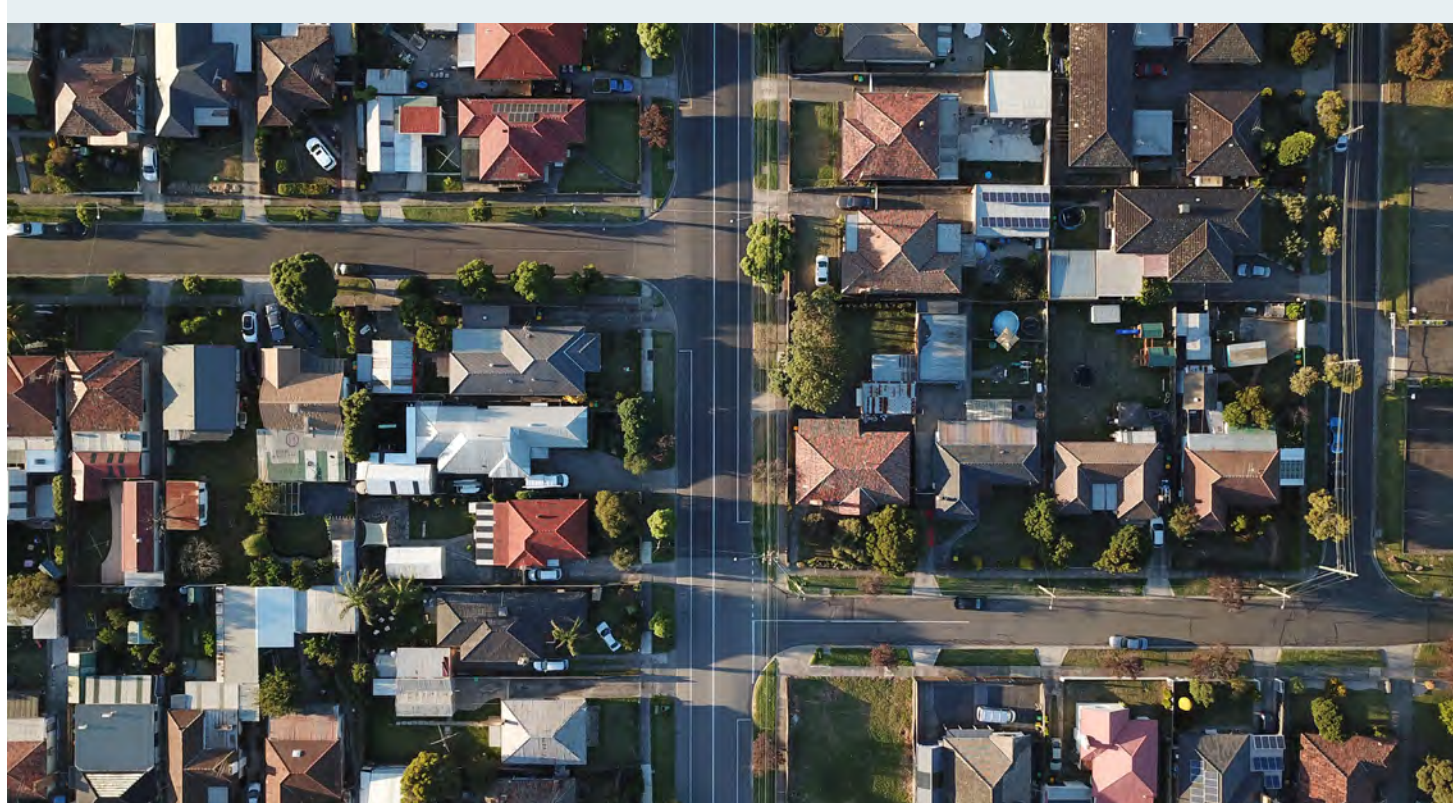
Transportation and Connectivity

- Street cross-sections that support land use and character goals
- Connect street networks
- Support bicycle and pedestrian expansion
- Right-size parking requirements
- Create design guidelines for key nodes



Economic Development and Downtown

- Coordinate future land use with economic development priorities
- Develop downtown redevelopment strategies
- Facilitate building re-use
- Flexibility and regular plan updates to respond to market shifts and planning "unknowns"



Growth and Housing

- Support higher densities in growth and redevelopment areas
- Preserve lower densities in rural and agricultural areas
- Support a range of housing options in growth areas
- Encourage mixed use at key growth nodes



BENEFITS OF COMPACT DEVELOPMENT

Land Use Trade-Offs

The **Scenario Planning Board** explained that we are working to achieve more compact development in the Southeast Area. Compact development is a type of land use that prioritizes higher density residences, active transportation, transit options, and a range of housing types. Land use decisions often require trade-offs. Consider the trade-offs below and place a sticker in the shaded box of the development type you prefer.

Density of Development

Higher density development increases the return on investment for public infrastructure and consumes less land but it can change the existing land use character.

Lower density development maintains existing low density character but requires more land and public infrastructure is more expensive on a per-person basis.

HIGHER DENSITY

LOWER DENSITY

Housing Types

A range of housing types provides more options for a variety of households, and increases the potential for more affordable housing.

A focus on single-family homes maintains single family character but doesn't meet a variety of household needs and can lead to suburban sprawl.

RANGE OF HOUSING

SINGLE-FAMILY

Transportation Options

Multimodal transportation includes people walking, biking, taking transit, and driving. This increases people's options for how they choose to travel to work, school, and everywhere else.

Road-focused transportation limits people's choices and does not offer recreational transportation options.

MULTIMODAL

ROAD FOCUS

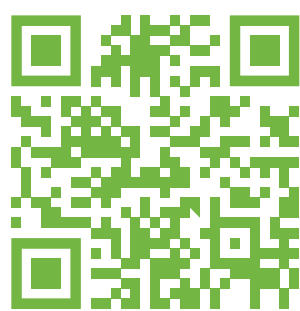
Utility Expansion

Plan-guided infrastructure identifies targeted areas for growth and plans for infrastructure in those areas. This helps with funding and investment planning.

Market determined infrastructure lets development guide where infrastructure is extended. This can lead to sprawl and less efficient infrastructure and utilities.

PLAN-GUIDED
INFRASTRUCTURE

MARKET DETERMINED
INFRASTRUCTURE



BICYCLE AND PEDESTRIAN RECOMMENDATIONS

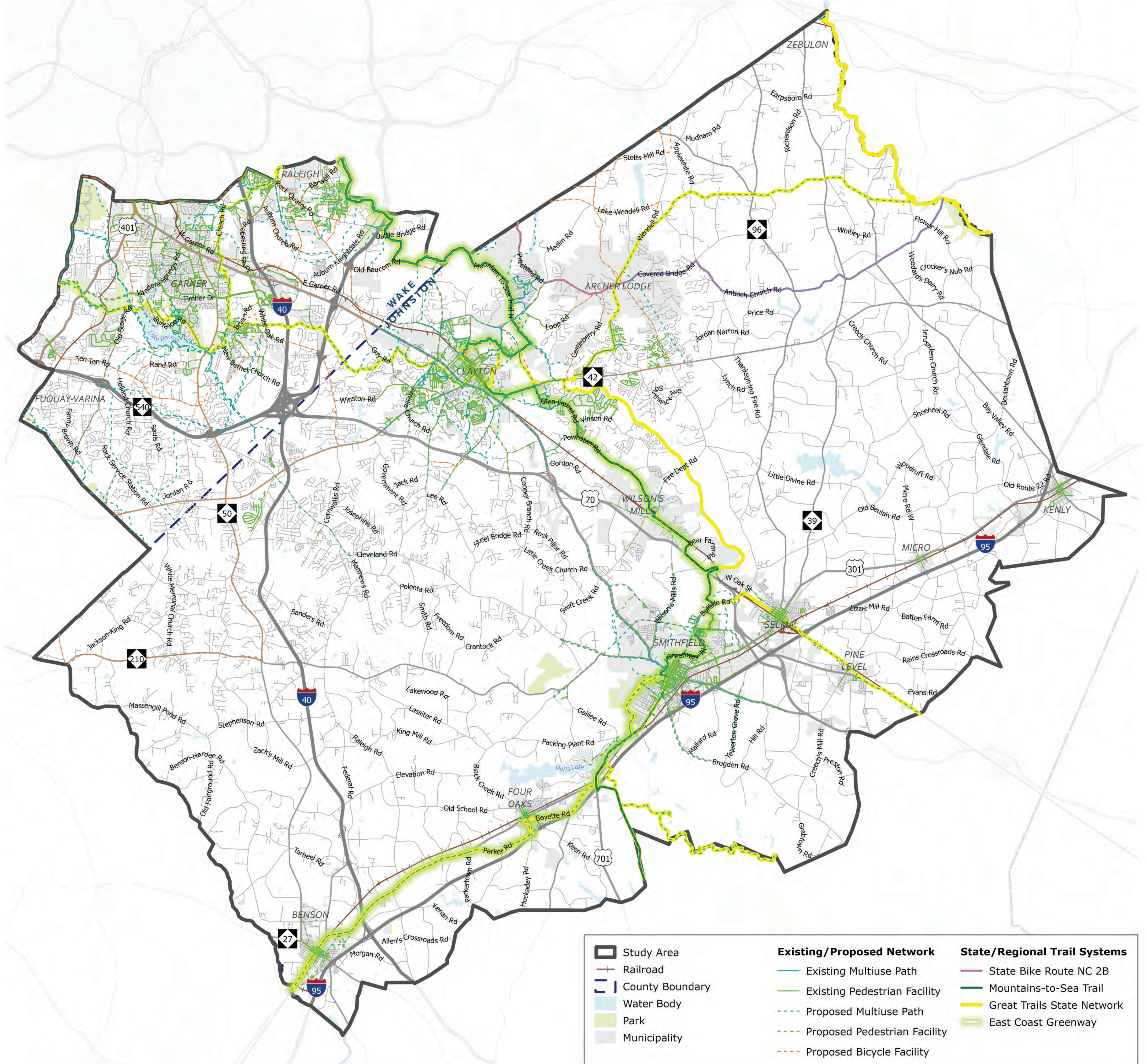
The recommendations below are a combination of previous local and regional planning efforts in the SEAS. This includes data from previous planning efforts such as the 2022 Smithfield Pedestrian Plan, 2022 Clayton Pedestrian Plan, the 2022 Neuse River Trail Feasibility Study, and many others.

BICYCLE AND PEDESTRIAN 'SPINES' OF THE SEAS

The 'spines' of the regional network are comprised of state and national trail systems such as the East Coast Greenway, Mountains to Sea Trail, Great Trails State network, and the NC State Bike Route System.

PROVIDE YOUR FEEDBACK

Use this board to provide your feedback on the bicycle and pedestrian recommendations in your worksheet or [take the online survey!](#)



TRANSIT RECOMMENDATIONS

Transit recommendations focus on appropriately-scaled solutions that build on existing plans and services and prioritize investments that will benefit the most people. Recommendations create connections to the planned Garner-Clayton bus rapid transit route, ensuring regular transit service to Raleigh for residents throughout the Southeast Area.

Circulators

Frequent fixed-route service connecting key destinations and transfer points within communities with higher volumes of short trips; may include deviations.

Connectors

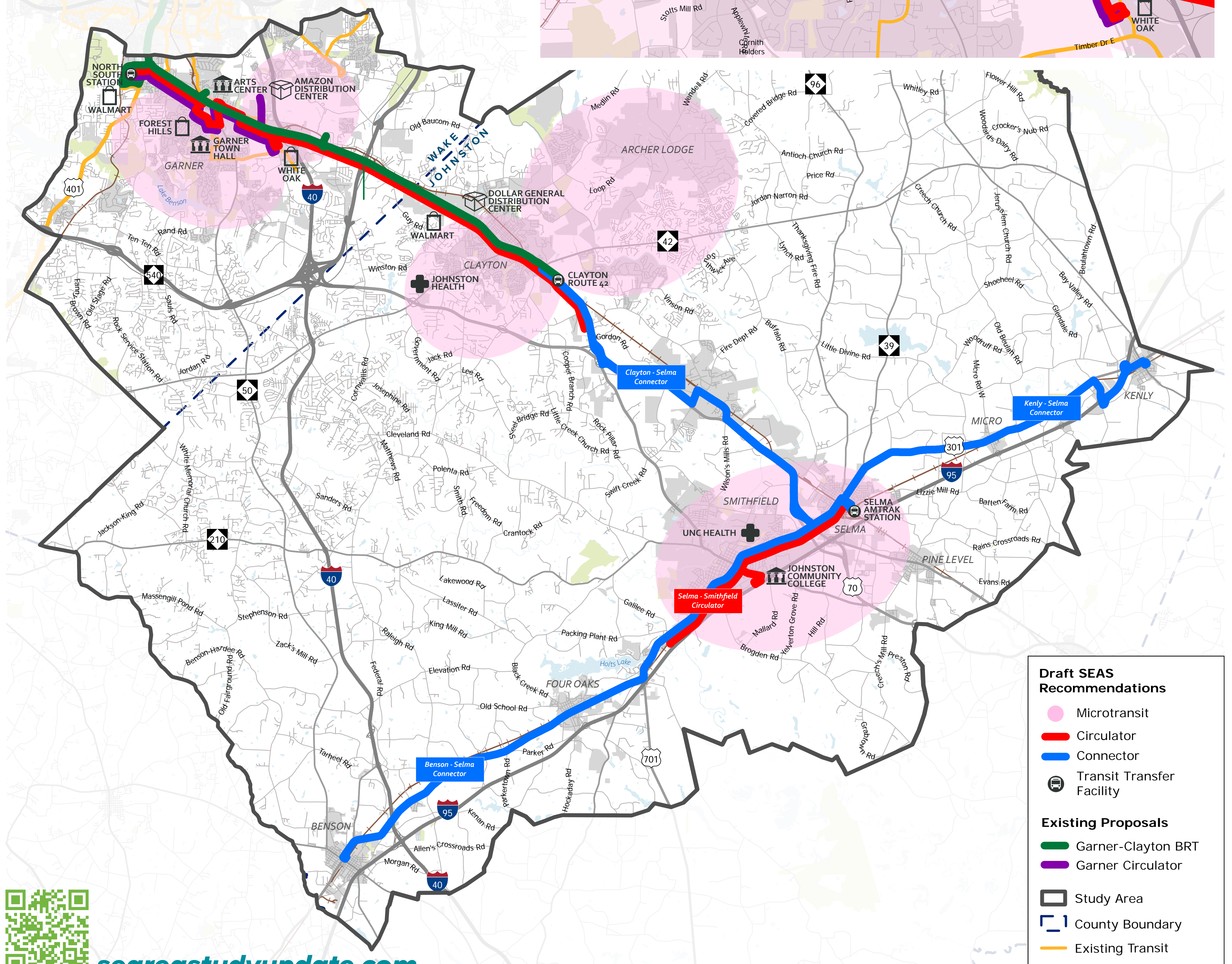
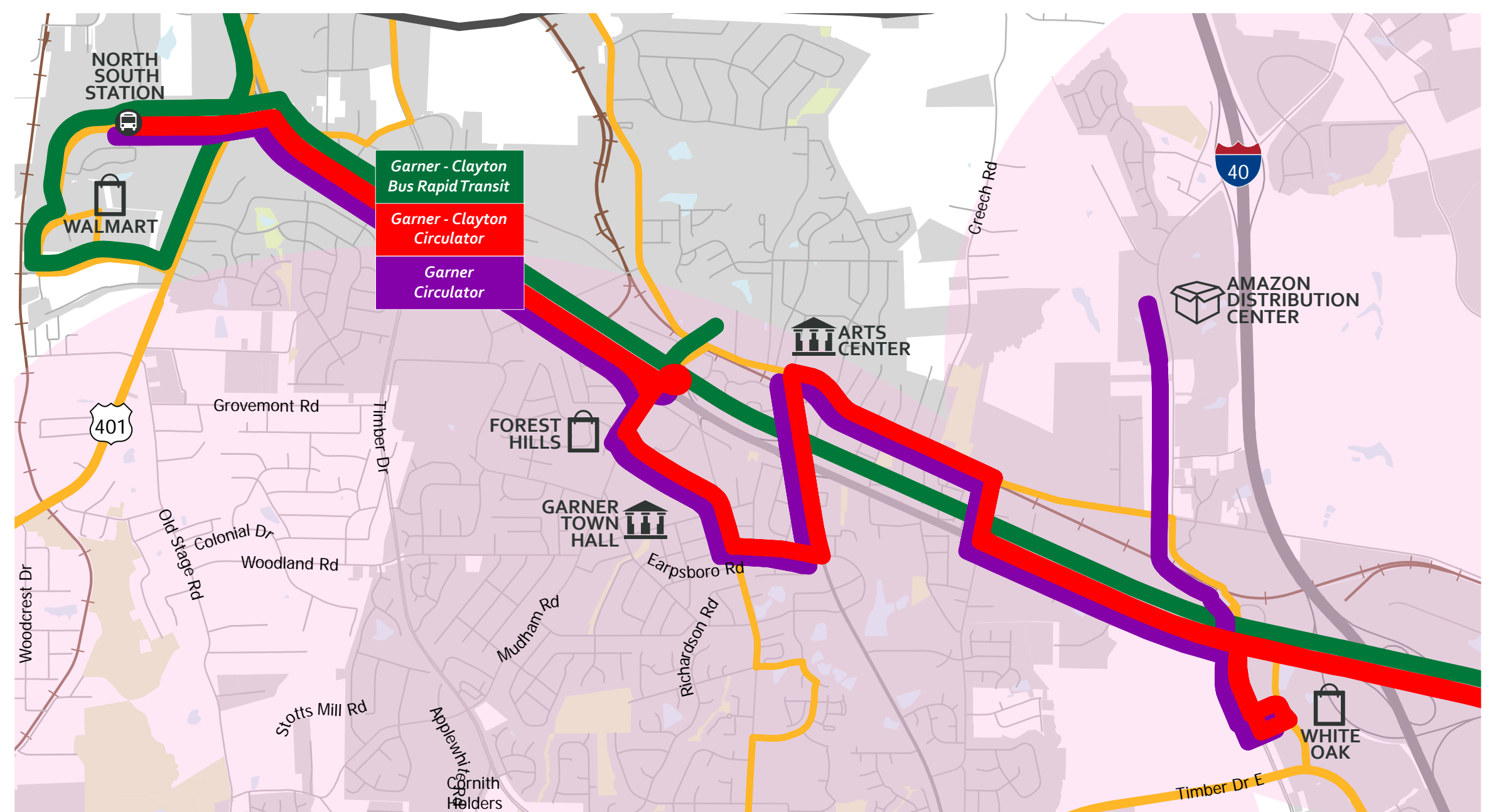
Extended connections between communities (all-day and peak-only).

Microtransit

On-demand, curb-to-curb service, connecting residents to destinations throughout their community, as well as circulators and connectors.

PROVIDE YOUR FEEDBACK!

Use this board to provide your feedback on the transit recommendations in your worksheet or [take the online survey!](#)



ROADWAY RECOMMENDATIONS

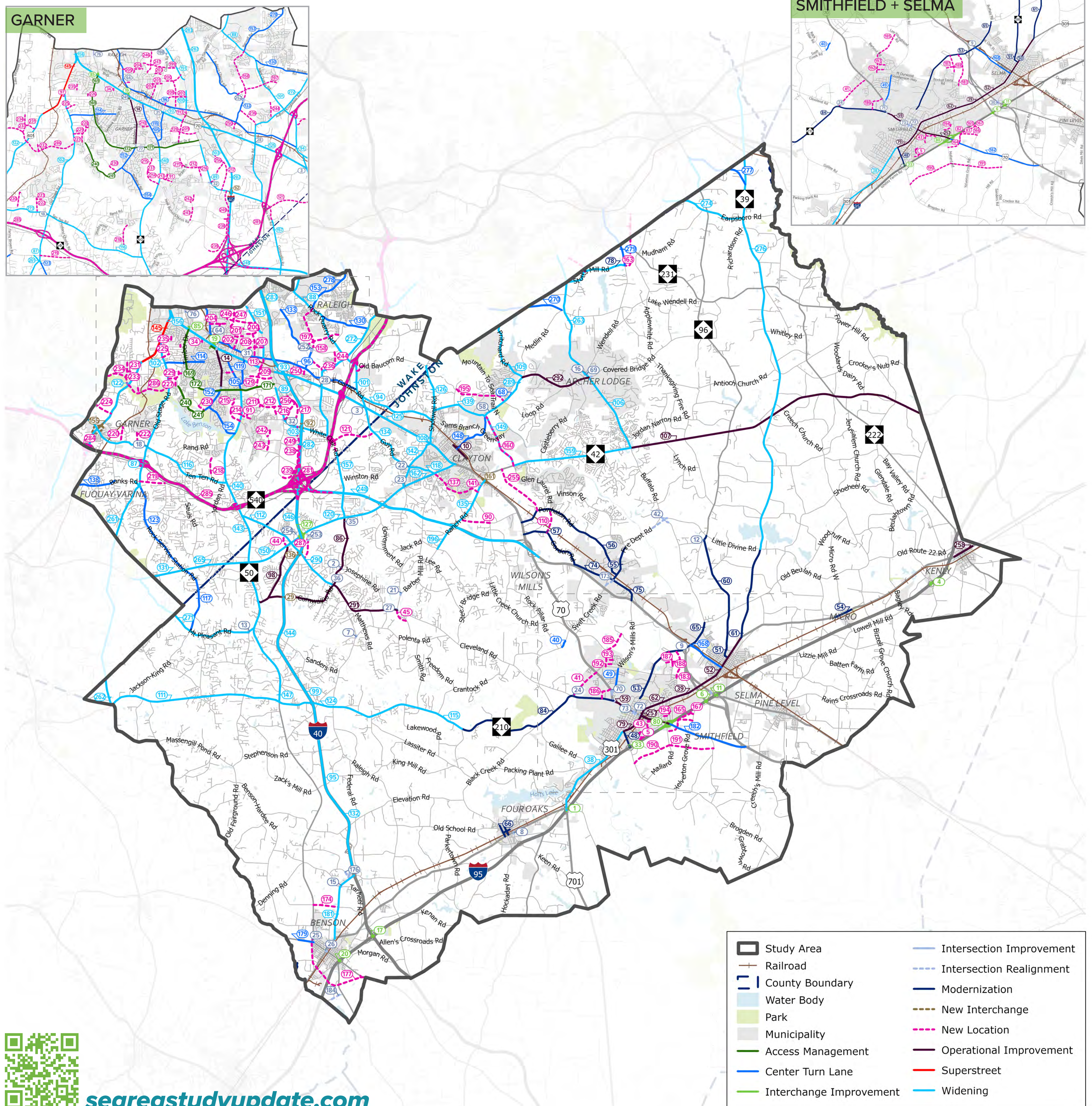
The recommendations below are a combination of previous local and regional planning efforts in the Southeast Area and additional recommendations created as part of the planning process for this SEAS Update. These build upon recommendations from previous plans including the CAMPO 2050 MTP, 2013 Johnston County CTP, 2018 GarnerForward, 2020 Smithfield Town Plan, 2021 Clayton Comprehensive Plan, and others.

IMPROVED CORRIDORS AND ADDED CONNECTIONS

These recommendations focus on improving safety, congestion, and travel flow throughout the roadway network as the area continues to grow. This includes added turn lanes, widenings, or other operational improvements along existing major corridors, while adding needed connections to create alternate routes for local traffic.

PROVIDE YOUR FEEDBACK

Use this board to provide your feedback on the roadway recommendations in your worksheet or [take the online survey!](#)



INTERSECTION RECOMMENDATIONS

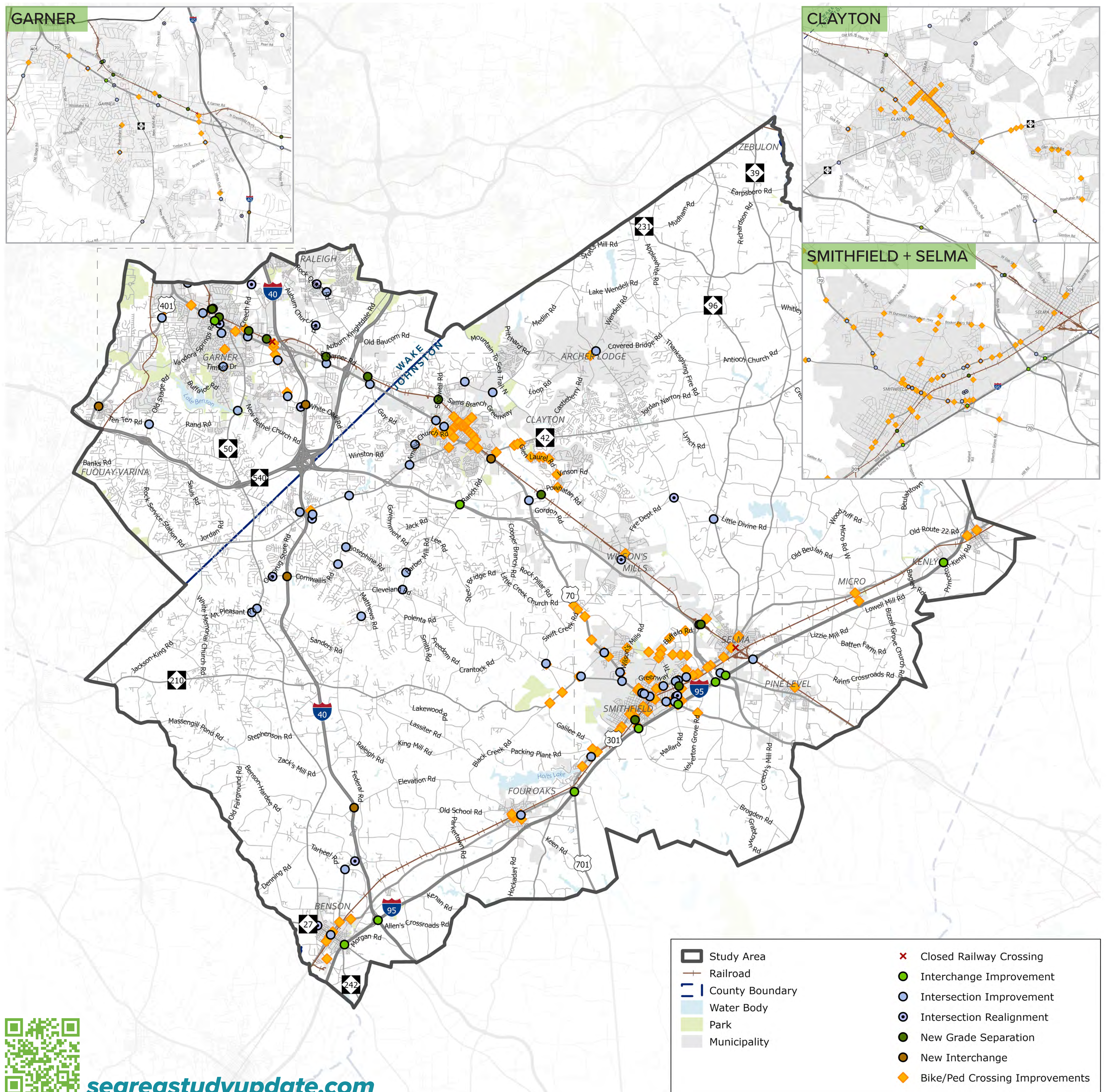
The recommendations below are a combination of previous local and regional planning efforts in the Southeast Area and additional recommendations created as part of the planning process for this SEAS Update. These build upon recommendations from previous plans including the CAMPO 2050 MTP, 2013 Johnston County CTP, local comprehensive plans, local pedestrian plans, and others.

SAFETY IMPROVEMENTS AND IMPROVED OPERATIONS

The intersection recommendations focus on improving safety, operations, and travel flow through the roadway network. This includes realigned or redesigned intersections, new or updated bridges, and new or improved interchanges. These also include pedestrian crossing improvements in coordination with the SEAS Update's bicycle and pedestrian recommendations.

PROVIDE YOUR FEEDBACK

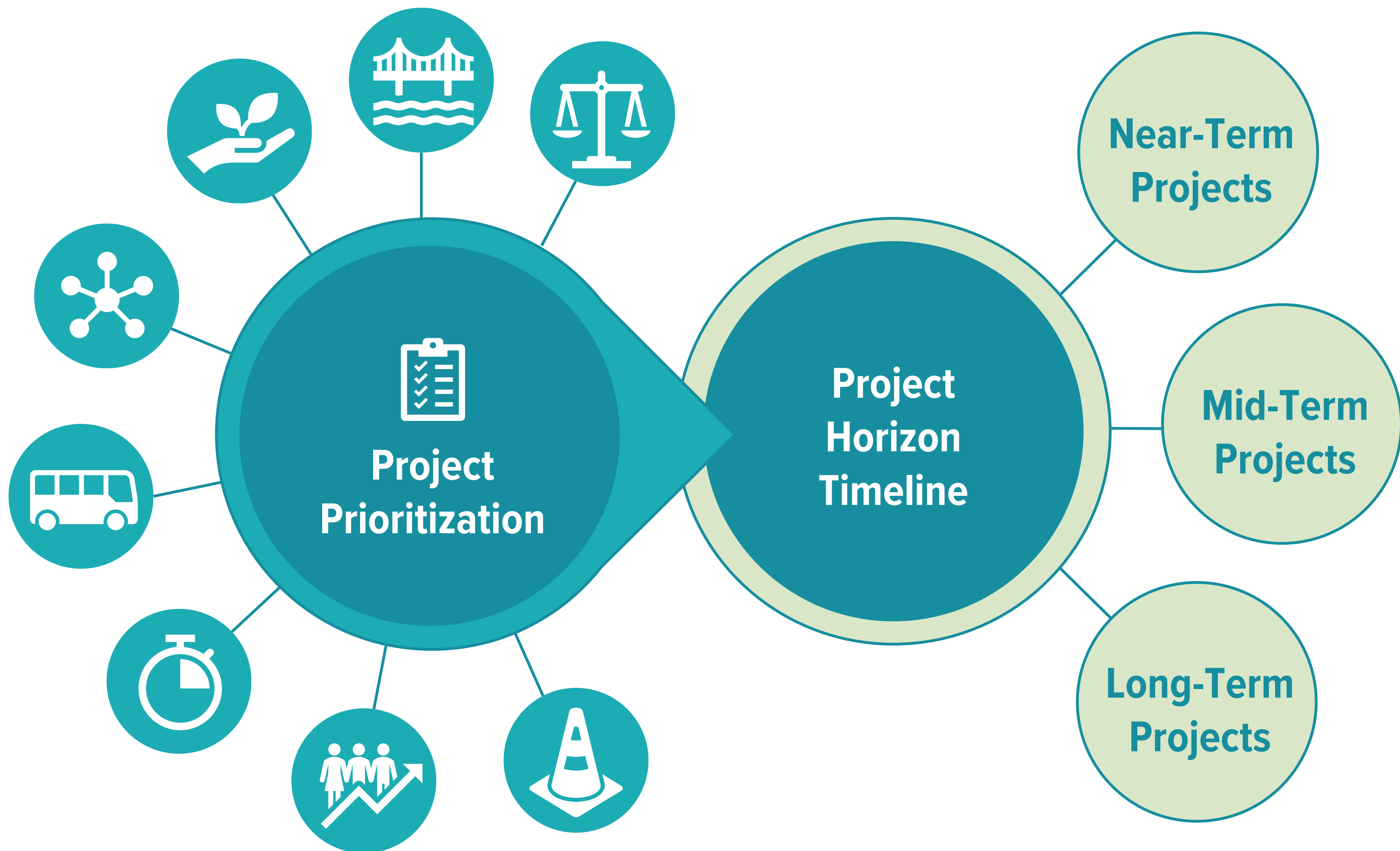
Use this board to provide your feedback on the intersection recommendations in your worksheet or [take the online survey!](#)



PROJECT PRIORITIZATION

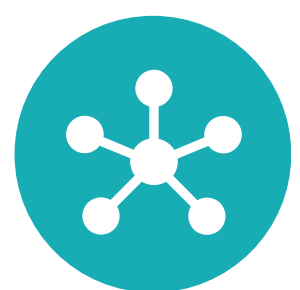
The recommendations in the Southeast Area Study Update are part of a long term vision that includes projects that may be constructed within the next 10 years and projects that likely would not be constructed until 2055 or later. While this collective vision attempts to address the many wants and needs across the Southeast Area, the reality is that there is limited funding available each year to make these recommendations a reality. Because of this, it's important to understand what the most desired, important, and time critical projects are so we know where to best invest our time, resources, and money.

PRIORITIZATION PROCESS



PRIORITIZATION CRITERIA

Each project addresses different needs and has different benefits; these benefits are shown in the Prioritization Criteria below. These are the criteria we will use to score our projects. We need to know which of these criteria are most important to you so we can identify our highest priority projects.



Connect people and places



Ensure equity and participation



Promote and expand multimodal and affordable transit choices



Improve infrastructure condition and resilience



Manage congestion and system reliability



Protect the human and natural environment and minimize climate change



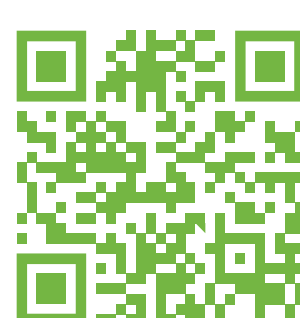
Stimulate inclusive economic vitality and opportunity



Promote safety, health, and well-being

PROVIDE YOUR FEEDBACK

Provide your feedback on project prioritization in your worksheet or [take the online survey!](#)



seareastudyupdate.com

INTRODUCTION

The Southeast Area Study (SEAS) is nearing the end of its two major phases. The project team is seeking feedback from the community on the draft set of recommendations for transportation improvements across the area and how to prioritize them.

Please take the following survey to provide your thoughts on potential roadway, bicycle, pedestrian, and transit improvements, along with the principles that will help identify high priority projects!

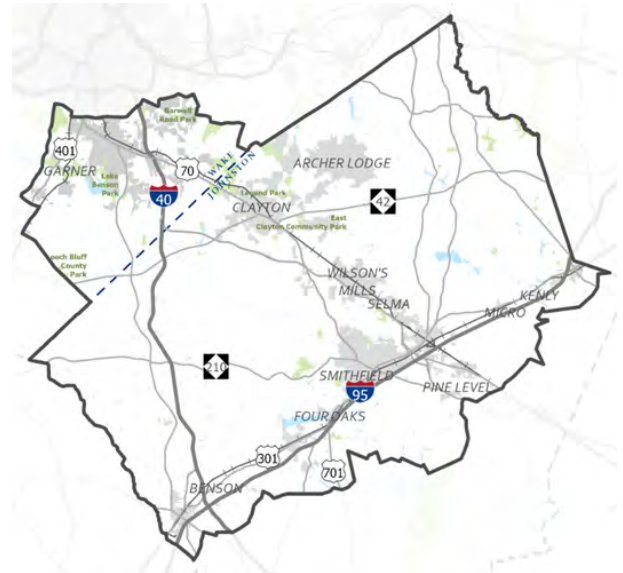
To read more about the project and take the [online version of this survey](http://www.seareastudyupdate.com), visit: www.seareastudyupdate.com

The SEAS Update area includes Archer Lodge, Benson, Clayton, Four Oaks, Garner, Kenly, Micro, Pine Level, Selma, Smithfield, Wilson's Mills, and parts of Raleigh, Johnston County, and Wake County.

Which of the following describes you?

(Check all that apply.)

- ☐ I live or own personal property in the study area
- ☐ I work or go to school in the study area
- ☐ I own a business or commercial property in the study area
- ☐ I shop, dine, or recreate in the study area
- ☐ I drive through the study area
- ☐ I live, work, or go to school in Johnston County
- ☐ I live, work, or go to school in Wake County
- ☐ I have no relation to the study area
- ☐ I have no relation to the study area
- ☐ Other (please specify): _____

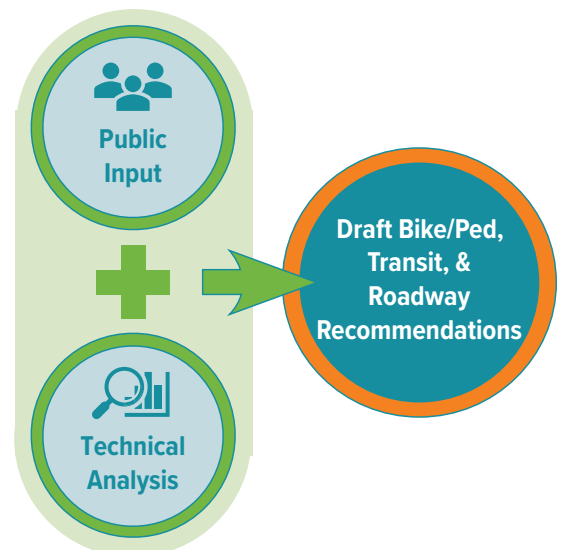


HOW RECOMMENDATIONS ARE DEVELOPED

Over the past year, the study team has completed a lot of technical analysis and worked to incorporate the first phase of public input. Combined with feedback from stakeholders and staff from SEAS jurisdictions, an initial set of draft transportation improvements were developed.

PROJECT PRIORITIZATION

Ultimately, the study will recommend a set of roadway, bicycle, pedestrian, and transit projects separated into short-, mid-, and long-term categories. The study team needs your help to identify the criteria that will be used to prioritize the draft set of projects.



How important are each of the criteria below for selecting priority ROADWAY projects to recommend? *(On a scale of 1 to 10, with 10 being most important)*

Improve **Traffic Flow** by managing congestion and system reliability to make it easier to move within and across our region.

Improve **Travel Safety** by reducing crashes, enhancing reliability and predictability, and improving emergency coordination.

Improve **Active Transportation** by including walking and bicycling facilities.

Improve **Access** by expanding affordable transit (public transportation) choices.

Improve **Network Connectivity** by improving infrastructure condition and resilience

Improve **Economic Vitality** by growing our economy by connecting residents to jobs, goods, services, and opportunities within and beyond our region.

Improve **Sustainable Growth** by protecting the human and natural environment and minimizing climate change.

Improve **Equity** by protecting transportation disadvantaged communities from disproportionately negative impacts.

Improve **Freight Movement** by supporting the competitiveness of our region through a transportation network that efficiently moves goods and services.

RECOMMENDATIONS

Overview maps for the draft set of recommendations are located on the boards around the room. [Interactive online maps can be viewed here:](#) _____



You can provide your comments in two ways:

1. Provide **general comments** in the comment box below
2. Provide **project-specific comments** using the **online interactive map** at the QR code

Share any **comments** you may have regarding the draft set of projects, or the study in general, here:

HOW TO SUBMIT THIS SURVEY

You have three options for submitting this survey, you can either:

1. **Hand** this survey to a member of the project team
2. Take the **online survey** instead at: www.publicinput.com/seasrecs
3. **Mail** this survey to:
CAMPO - ATTN Gaby Lawlor
One Fenton Main St., Suite 201
Cary, NC 27511



Thank you for participating in the second SEAS Update survey! A public feedback summary and the final draft of the study report will be posted to the project website later this year.

INTRODUCCIÓN

El Estudio del Área Sudeste (SEAS, por sus siglas en inglés) está llegando al final de sus dos fases principales. El equipo del proyecto busca comentarios de la comunidad sobre el borrador del conjunto de recomendaciones para mejoras de transporte en el área y cómo priorizarlas.

¡Por favor llene la siguiente encuesta para proporcionar su opinión sobre posibles mejoras para carreteras, bicicletas, peatones, y tránsito, junto con los principios que ayudarán a identificar proyectos de alta prioridad!

Para leer más sobre el proyecto y llenar la versión en línea de esta encuesta, visite:

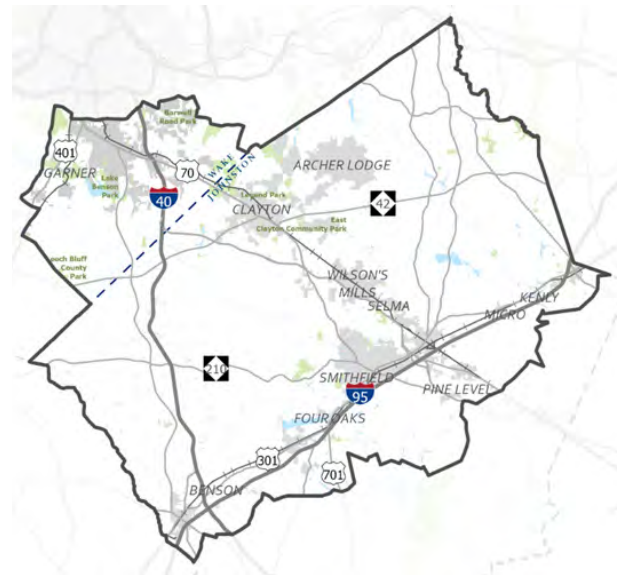
www.seareastudyupdate.com

El área de Actualización de SEAS incluye Archer Lodge, Benson, Clayton, Four Oaks, Garner, Kenly, Micro, Pine Level, Selma, Smithfield, Wilson's Mills, y partes de Raleigh, Johnston County, y Wake County.

¿Cuál de las siguientes respuestas lo describe a usted?

(Marque todas las que apliquen)

- ☐ Vivo o tengo propiedad personal en el área de estudio
- ☐ Trabajo o voy a una escuela dentro del área de estudio
- ☐ Soy dueño de un negocio o propiedad comercial en el área de estudio
- ☐ Compro, ceno, o me divierto en el área de estudio
- ☐ Conduzco por el área de estudio
- ☐ Vivo, trabajo o voy a una escuela en Johnston County
- ☐ Vivo, trabajo o voy a una escuela en Wake County
- ☐ No tengo relación con el área de estudio
- ☐ Otra (por favor especifíque): _____



COMO SE DESARROLLAN LAS RECOMENDACIONES

Durante el año pasado, el equipo de estudio completó una gran cantidad de análisis técnicos y trabajó para incorporar la primera fase de comentarios públicos. En combinación con los comentarios de las partes interesadas y del personal de las jurisdicciones de SEAS, se desarrolló un conjunto inicial de borradores de mejoras al transporte.

PRIORIZACIÓN DEL PROYECTO

Finalmente, el estudio recomendará un conjunto de proyectos para carreteras, bicicletas, peatones, y tránsito divididos en categorías a corto, mediano y largo plazo. El equipo de estudio necesita su ayuda para identificar el criterio que se utilizará para priorizar el borrador.



¿Qué tan importante es cada uno de los criterios a continuación para seleccionar proyectos ROADWAY y priorizar su recomendación? (En una escala del 1 al 10, siendo 10 el más importante)

Mejorar el **Flujo de Tráfico** mediante la gestión de la congestión y la confiabilidad del sistema para que sea más fácil moverse dentro y a través de nuestra región.

Mejorar la **Seguridad en los Viajes** al reducir los accidentes, mejorar la confiabilidad y la previsibilidad y mejorar la coordinación de emergencias.

Mejorar el **Transporte Activo** al incluir instalaciones para caminar y andar en bicicleta.

Mejorar el **Acceso** ampliando las opciones de tránsito asequible (transporte público).

Mejorar la **Conectividad de la Red** al mejorar la condición y la resiliencia de la infraestructura.

Mejorar la **Vitalidad Económica** haciendo crecer nuestra economía conectando a los residentes con trabajos, bienes, servicios y oportunidades dentro y fuera de nuestra región.

Mejorar el **Crecimiento Sostenible** protegiendo el entorno humano y natural y minimizando el cambio climático.

Mejorar la **Equidad** al proteger a las comunidades desfavorecidas en el transporte de impactos desproporcionadamente negativos.

Mejorar el **Movimiento de Carga** apoyando la competitividad de nuestra región a través de una red de transporte que mueva eficientemente bienes y servicios.

RECOMENDACIONES

Los mapas generales para el borrador del conjunto de recomendaciones se encuentran en los tableros alrededor de la sala. [Los mapas interactivos en línea se pueden ver aquí](#)



Puede proporcionar sus comentarios de dos maneras:

1. Proporcionar **comentarios generales** en la casilla de comentarios a continuación
2. Proporcionar **comentarios específicos al proyecto** utilizando el mapa interactivo en línea utilizando el código QR

Comparta algún **comentario** que pueda usted tener referente al borrador del conjunto de proyectos o el estudio en general, aquí:

COMO ENVIAR ESTA ENCUESTA

Tiene tres opciones para enviar esta encuesta, usted puede:

1. **Entregar** la encuesta a algún miembro del equipo del proyecto
2. O llenar la **encuesta en línea** en: www.publicinput.com/seasenesp
3. O **Enviar la encuesta** por correo a: CAMPO - ATTN Gaby Lawlor
One Fenton Main St., Suite 201
Cary, NC 27511



¡Gracias por participar en la encuesta de la segunda Actualización de SEAS! Un resumen de los comentarios del público y el borrador final del informe del estudio se publicarán en el sitio web del proyecto a finales de este año.

Appendix D: Public Symposium Summary

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D

SEAS

S O U T H E A S T A R E A S T U D Y

UPDATE

What: Public Symposium**When:** Thursday, June 22, 2023

SOT Orientation: 4pm - 5pm

Public Open House: 5pm – 7pm

Where: Garner Town Hall

PUBLIC SYMPOSIUM

Introduction

This document summarizes the Public Symposium held at Garner Town Hall on June 22nd, 2023. The meeting included a meeting orienting the Stakeholder Oversight Team (SOT) to the boards and public engagement materials, and a public open house to present and get public feedback on transportation recommendations, potential prioritization criteria, and possible tradeoffs. This summary provides an overview of the meeting and results.

Summary

SOT Orientation

Held before the symposium was opened to the public, the SOT orientation introduced the Stakeholder Oversight Team to the boards and public engagement materials. 20 people attended the SOT orientation.

Public Symposium

12 members of the public signed in at the symposium.

LAND USE TRADE-OFFS

A board explained some of the tradeoffs of different development patterns and asked attendees to leave sticky notes indicating their preference for the future land use of the area. Most questions received five responses, three for Garner and two for Clayton.

Density of Development

- **Two of three Garner responses** were placed in the middle to signify a **preference for moderate density**; the remaining response was in favor of higher density
- The two **Clayton responses** were in favor of **higher density**

Density of Development

Higher density development increases the return on investment for public infrastructure and consumes less land but it can change the existing land use character.

Lower density development maintains existing low density character but requires more land and public infrastructure is more expensive on a per-person basis.



Housing Types

- All responses for both Garner and Clayton were placed emphasizing a preference for **maximum range** of housing

Housing Types

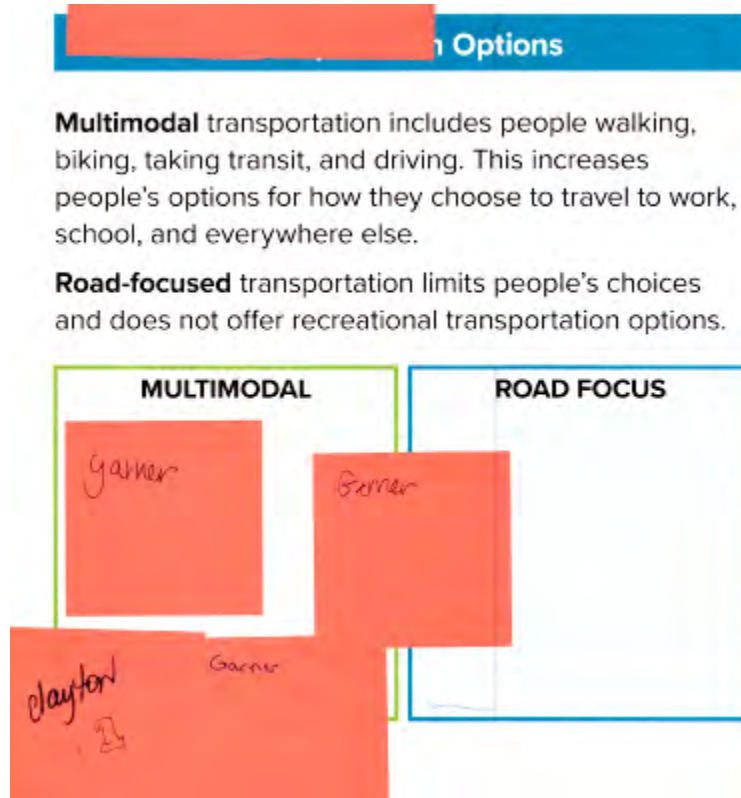
A range of housing types provides more options for a variety of households, and increases the potential for more affordable housing.

A focus on single-family homes maintains single family character but doesn't meet a variety of household needs and can lead to suburban sprawl.



Transportation Options

- **Two of three Garner responses** were in favor of a **preference for multimodal transportation**; the remaining response was placed in the middle to signify a preference for a balance between multimodal and roadway
- The two **Clayton responses** were in favor of **multimodal transportation**



Utility Expansion

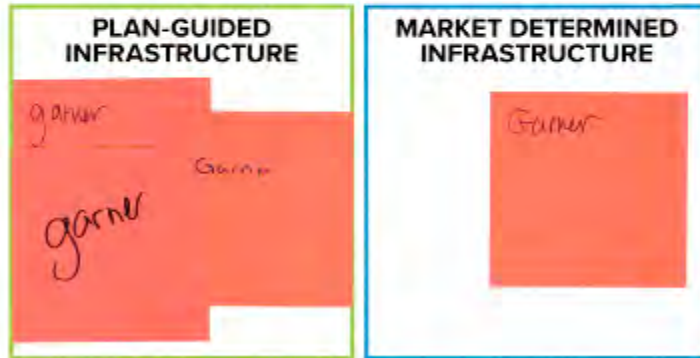
Unlike the prior three, this trade-off question received four Garner responses and no Clayton responses.

- **Three of four Garner responses** were in favor of plan-guided infrastructure; the remaining response was in favor of market determined infrastructure

Utility Expansion

Plan-guided infrastructure identifies targeted areas for growth and plans for infrastructure in those areas. This helps with funding and investment planning.

Market determined infrastructure lets development guide where infrastructure is extended. This can lead to sprawl and less efficient infrastructure and utilities.



SURVEY

Only one in-person survey was completed. While the single response cannot be considered representative, it is included here for completeness. Other survey responses were submitted online. The summary of the online survey results is available in Appendix E.

Of the one received in-person survey, **criteria for selecting priority roadway projects** were ranked in order of importance as follows:

1. Improve **Traffic Flow**
2. Improve **Active Transportation**
3. Improve **Travel Safety**
4. Improve **Equity**
5. Improve **Economic Vitality**
6. Improve **Network Connectivity**
7. Improve **Access**
8. Improve **Sustainable Growth**
9. Improve **Freight Movement**

The respondent also left a comment emphasizing the need for all new and improved facilities to include walking infrastructure so people can cross roads and bridges safely, as well as expressing support for more safety and traffic calming features and continuing to expand the transit network.

The respondent indicated that they lived, shopped, dined, and recreated in the study area, drove through the area, and lived, worked, or went to school in Wake County.

DEMOGRAPHIC CARDS

Of the six received responses:

- 5 had English as a primary language and spoke and read English fluently
- 5 were 25-64 years old (1 did not select an age range)
- 4 attendees identified as men, 1 identified as a woman (1 did not select a gender)
- 1 attendee was disabled
- 2 attendees represented a minority race or 2+ races
- 3 respondents heard of the outreach event through an email from CAMPO, 3 heard through another organization's email, and 1 attendee heard through Social Media.

Attachment 1 | Attendance List (SOT Orientation)

First Name	Last Name	Agency	SEAS Role
<i>Xuan</i>	<i>Wu</i>		
<i>Gaby</i>	<i>Lontos-Lawlor</i>	<i>CAMPO</i>	<i>Project Team</i>
<i>Crystal</i>	<i>Odum</i>	<i>CAMPO</i>	<i>Project Team</i>
<i>Shelby</i>	<i>Powell</i>	<i>CAMPO</i>	<i>Project Team</i>
<i>Alex</i>	<i>Rickard</i>	<i>CAMPO</i>	<i>Project Team</i>
<i>Matt</i>	<i>Day</i>	<i>Central Pines Regional Council (TJCOG)</i>	<i>SOT</i>
<i>Matthew</i>	<i>Burns</i>	<i>City of Raleigh</i>	
<i>Alicia</i>	<i>Thomas</i>	<i>City of Raleigh</i>	
<i>Emily</i>	<i>Gvino</i>	<i>Clarion</i>	<i>Project Team</i>
<i>Ben</i>	<i>Howell</i>	<i>Clayton</i>	<i>CTT</i>
<i>Patrick</i>	<i>Pierce</i>	<i>Clayton</i>	<i>CTT</i>
<i>Kathy</i>	<i>Behringer</i>	<i>Garner</i>	<i>SOT</i>
<i>Ken</i>	<i>Marshburn</i>	<i>Garner</i>	<i>SOT</i>
<i>Jeff</i>	<i>Triezenberg</i>	<i>Garner</i>	<i>CTT</i>
<i>Samantha</i>	<i>Borges</i>	<i>Kimley-Horn</i>	<i>Project Team</i>
<i>Allison</i>	<i>Fluitt</i>	<i>Kimley-Horn</i>	<i>Project Team</i>
<i>Stephanie</i>	<i>Richter</i>	<i>Micro</i>	<i>CTT</i>
<i>James</i>	<i>Salmons</i>	<i>NCDOT-Div 4</i>	<i>CTT</i>
<i>Chloe</i>	<i>Ochocki</i>	<i>Triangle Land Conservancy</i>	<i>SOT</i>
<i>Kim</i>	<i>Johnson</i>	<i>Triangle Transportation Choices</i>	<i>SOT</i>

Appendix E: Public Survey Summary

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E

SEAS

S O U T H E A S T A R E A S T U D Y

U P D A T E

Public Survey No. 2

Open: June 16th to July 16th, 2023**Focus:** Draft Modal Recommendations
and Prioritization

SURVEY RESULTS SUMMARY

Introduction

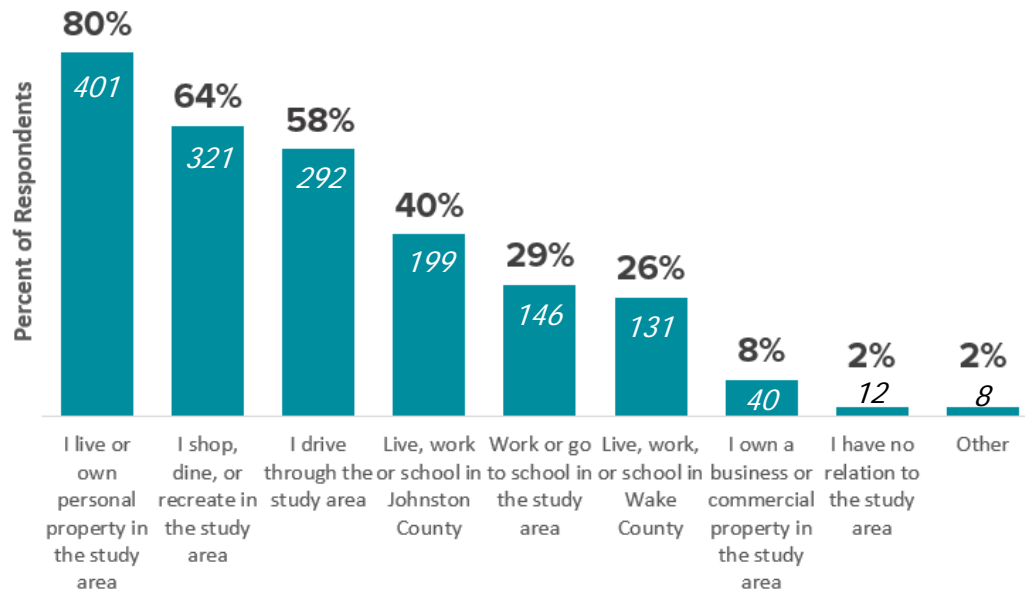
As part of the process of developing the Southeast Area Study Update, an online survey was used to gain public feedback. The survey ran from June 16th, 2023 to July 16th, 2023. **501 individuals participated**, commenting on draft bicycle and pedestrian, transit, and roadway/intersection recommendations and answering questions about what they saw as important to prioritize. The survey included a mapping component that invited respondents to leave comments on specific transportation projects, and a final question invited respondents to leave open-ended comments if desired. A total of **139 general comments** from 130 unique commenters were received, in addition to **118 project specific map comments**.

Contents

Introduction	1
Demographics.....	2
Priorities.....	4
General Comments.....	5
Interactive Maps.....	6
Bicycle and Pedestrian	6
Intersections	7
Transit	8
Roadway.....	9

Demographics

WHICH OF THE FOLLOWING DESCRIBES YOU? (SELECT ALL THAT APPLY).



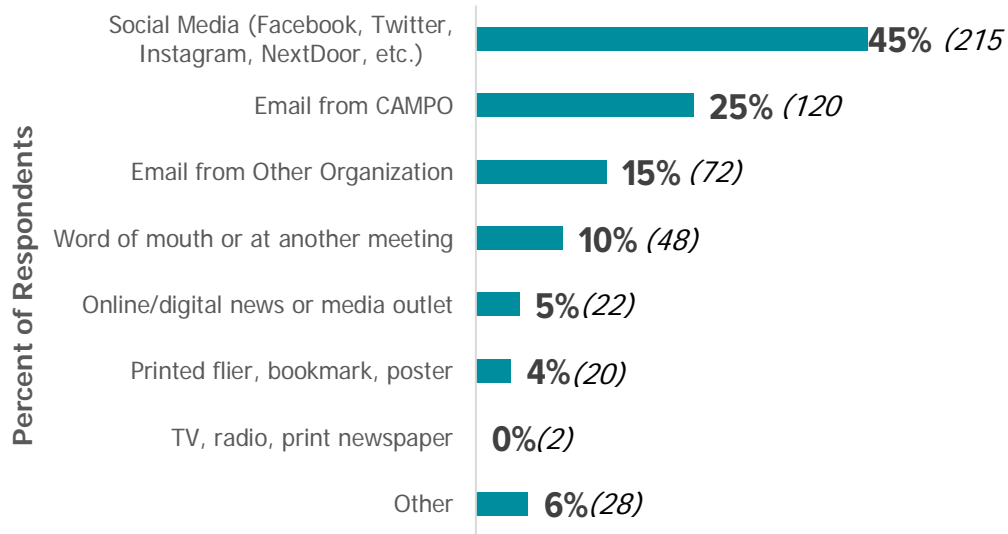
500 people responded.

SELECT ALL OF THE OPTIONS BELOW THAT APPLY TO YOU.

- My primary language is English or I speak and read English well | **94%** (453)
- I am 17 years old or younger | **1%** (5)
- I am 18-24 years old | **2%** (11)
- I am 25-64 years old | **73%** (354)
- I am 65 years old or older | **21%** (100)
- I identify as a woman | **47%** (225)
- I identify as a man | **36%** (172)
- I identify as non-binary or other gender | **0%** (2)
- I am or am considered to be disabled | **3%** (11)
- Five (5) or more people live in my household | **8%** (39)
- My household's total income is at or under \$53,000 per year | **11%** (53)
- I am of Hispanic, Latino, or Spanish origin of race | **3%** (16)
- I represent a minority race or 2+ races (African-American, Asian, South Asian, American Indian, Alaska Native, Middle Eastern, Hawaiian, Pacific Islander) | **10%** (47)

482 people responded.

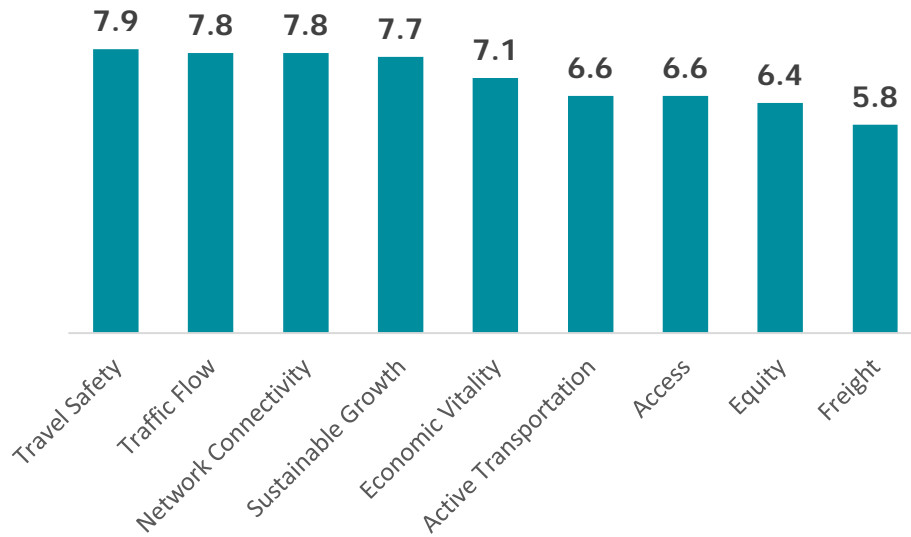
HOW DID YOU HEAR ABOUT THIS SURVEY? SELECT ALL THAT APPLY.



480 people responded.

Priorities

HOW IMPORTANT ARE EACH OF THE CRITERIA BELOW FOR SELECTING PRIORITY ROADWAY PROJECTS TO RECOMMEND? (SCALE OF 1 TO 10 WITH 10 BEING MOST IMPORTANT)



General Comments

SHARE ANY COMMENTS YOU MAY HAVE REGARDING THE DRAFT SET OF PROJECTS, OR THE STUDY IN GENERAL, HERE:

Comments focused primarily on the following:

Roadway/Intersection

- Widenings and new connections sometimes concern the public due to the potential for decreased safety and environmental impacts
 - Some new location connections faced opposition due to the risk of adding more fast moving through traffic into local communities posing safety risks to people living and playing along the route
 - Widenings also faced opposition for safety reasons, concerns about more lanes and faster traffic.
 - Other new location roadways or roadway widenings faced opposition due to concern of environmental impacts on parks, natural areas, and wetlands
- Minimize or deprioritize widenings if intersection improvements, modernization, and transit alternatives can help resolve most issues
- Prioritize intersections that are unsafe or confusing and intersections that are regional congestion points
 - Several intersections noted as priorities were either actively unsafe or caused significant backups or other needs/issues that caused additional backups
- Prioritize improvements to major regional corridors and connections that improve access between towns and across the study area

Bike/Ped

- Greenways should be carefully planned with natural environment to maximize usefulness and minimize environmental impact
- Greenways and shared use paths should minimize harm to wetlands, riparian buffers, etc
- Provide bike and pedestrian crossing improvements for crossing dangerous roads, connecting key neighborhoods, or accessing key destinations like schools and parks
 - Crossings in communities divided by large thoroughfares, especially with destinations like shopping centers
 - Improve crossings at dangerous intersections where they do exist
- Continue to provide additional alternative connections to major greenways from different neighborhoods for regional connectivity that allows greenways to be used both recreationally and occupationally for commuting
- Add or widen paved shoulders on narrow country roads for safety

Transit

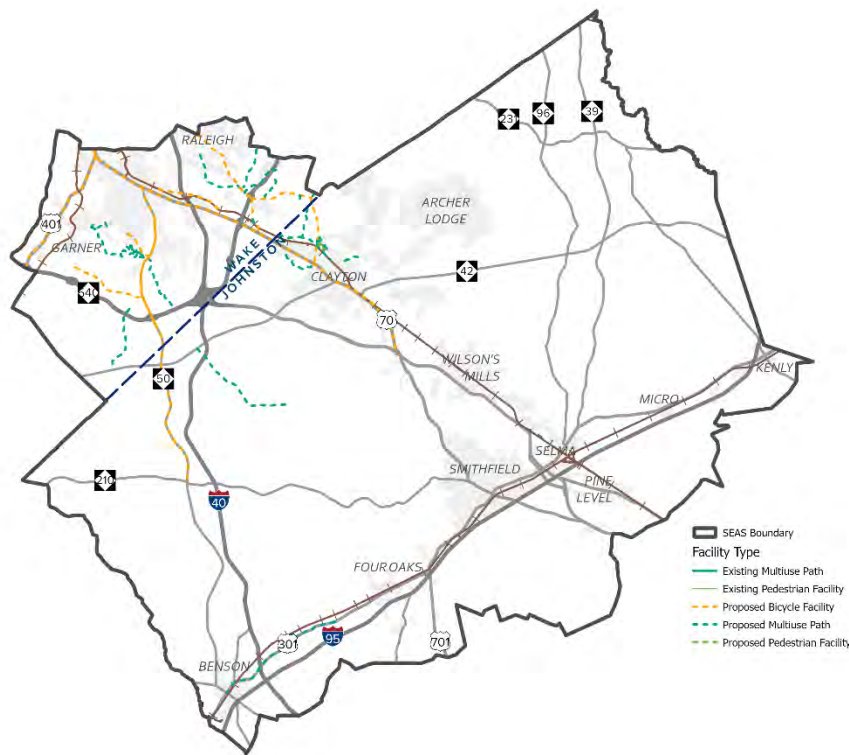
- Transit has strong support, but strong public desire for public transit beyond just the US 70 Corridor
 - NC 50 noted specifically

Interactive Maps

BICYCLE AND PEDESTRIAN

40 comments received

The following map shows all bicycle and pedestrian projects that received project-specific comments through the interactive maps.



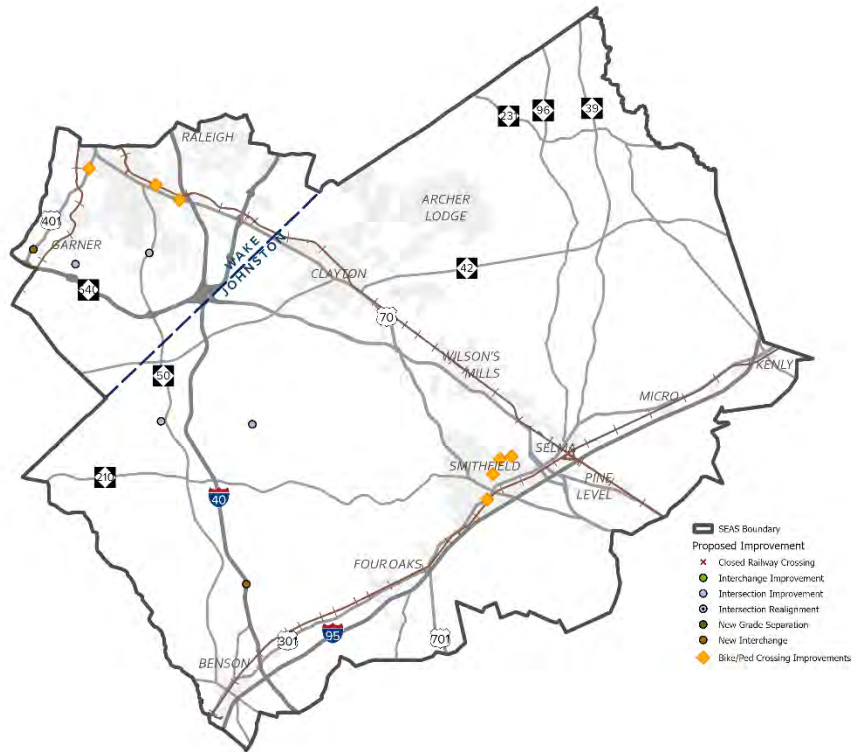
Comments focused primarily on the following:

- Support for paths/connections following or parallel to major corridors
 - US 70/Garner Road, NC 50, US 401
- Support for alternative greenway paths connecting Clayton, Garner, and SE Raleigh/SE Wake to Neuse River Greenway
- Support for more direct greenway connections to Clayton downtown
- Support for paths around Lake Benson
- Suggested project tweaks for safety and support for projects that address safety concerns
 - Avoiding having greenways cross roadways at dangerous curves
 - Providing facilities or shoulders along narrow winding roads
 - Rock Quarry Road, Old Baucom Road
 - Providing alternatives to dangerous underpasses
 - Path avoiding railway bridge underpass in Downtown Clayton with no shoulders
- Mitigating environmental impact

INTERSECTIONS

13 comments received

The following map shows all intersection projects that received project-specific comments through the interactive maps.



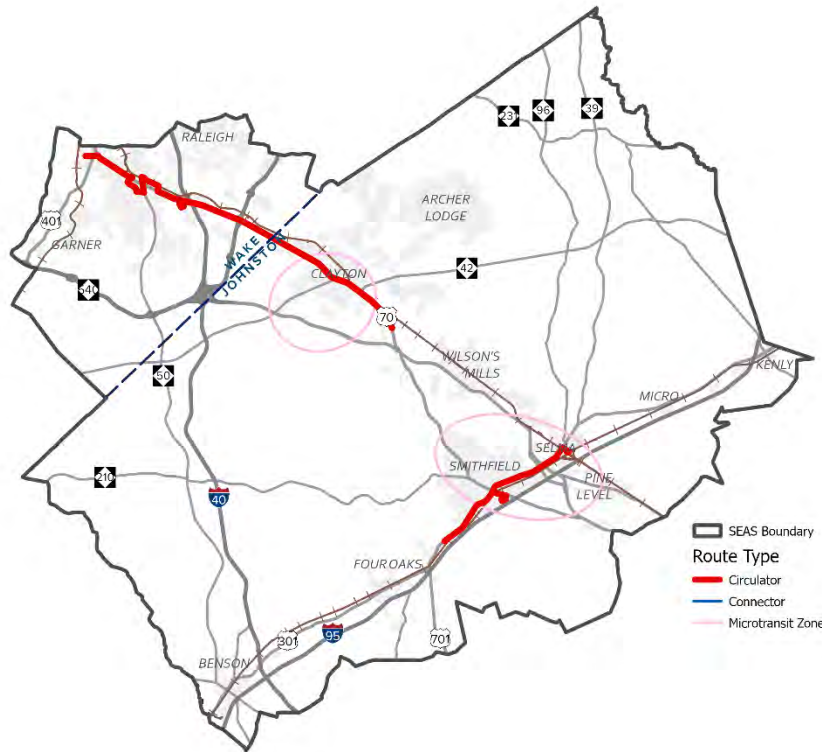
Comments focused primarily on the following:

- Support for improving confusing intersections
- Support for safe pedestrian connections to schools
- Need for safe pedestrian crossings in areas with neighborhoods and community assets like shopping, etc
 - US 401 near Garner Station noted specifically
- Places in need of signal timing fixes
- Pedestrian connections across the railroad

TRANSIT

7 comments received

The following map shows all transit projects that received project-specific comments through the interactive maps.



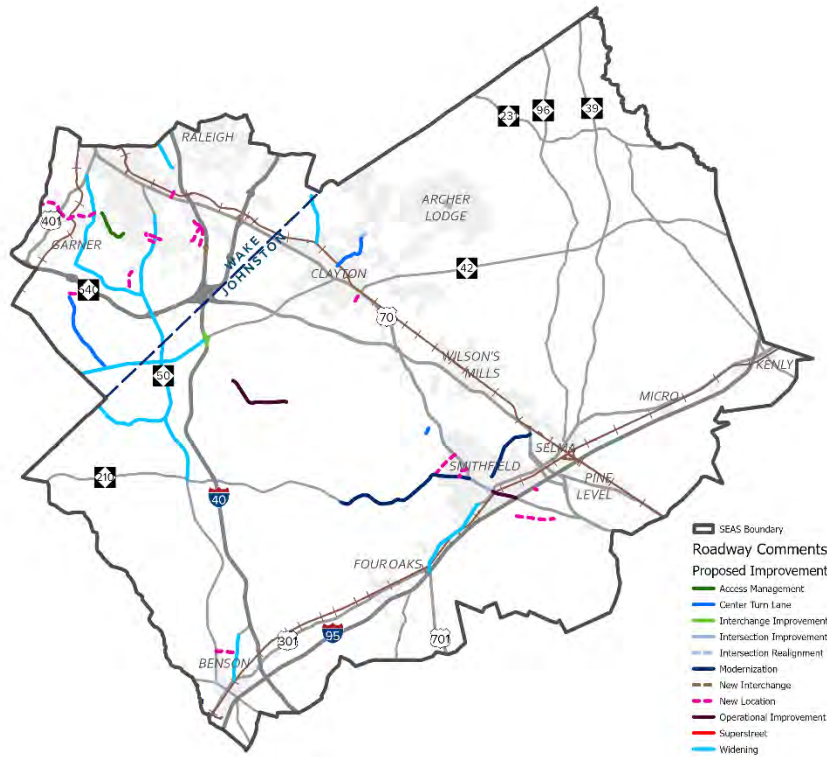
Comments focused primarily on the following:

- Connecting Clayton and Smithfield
- Need for connections to key destinations
 - Clayton Walmart, Downtown Smithfield, Johnston Community College, Johnston UNC Health
- Desire for connections from Smithfield to McGee's Crossroads and 40-42
- Need to include other major corridors
 - US 401, NC 50, Old Stage

ROADWAY

58 comments received

The following map shows all roadway projects that received project-specific comments through the interactive maps.



Comments focused primarily on the following:

- Support for intersection and interchange improvements
- Safety concerns and opposition to projects that would add additional fast-moving traffic to residential neighborhoods
 - Arbor Greene area
- Requests for better access management on major roads like Market Street, US 301, US 70 Business
- Opposition to some widenings
 - Corridors that didn't see enough traffic to warrant widening
 - Areas where widenings raised safety concerns
- Support for most new connections, but concerns in some areas of encouraging sprawl
- Emphasis on need for improvement along NC 50, NC 210

B

SEAS

S O U T H E A S T A R E A S T U D Y

U P D A T E

APPENDIX B:

Land Use Implementation Toolkit

Evaluation of 2017 SEAS: Land Use Strategy Implementation

Introduction

In the fall of 2022, an assessment was conducted of the SEAS communities' plans and regulatory codes. The results are visually summarized in the matrix below. The assessment evaluated the progress of each community toward achieving the strategies recommended in the 2017 SEAS, organized by Highest Priority versus Strategies for Important Consideration.

This assessment was presented to the Core Technical Team in January, where the 2017 SEAS implementation status and current planning issues were discussed. Several follow-up meetings were conducted with jurisdictions to confirm the status of implementation and discuss planning issues in the spring of 2023. Finally, recommendations and new planning ideas for the Toolkit were developed for individual communities in the summer of 2023. To review these recommendations, please see Chapter 4.

2017 Evaluation Matrix

	Comprehensive Plan	Zoning	Allow Higher Densities	Encourage Lower Densities/ Preservation	Corridors	Mixed Use	Downtown	Housing	Building Re-Use	Area Plans	Interlocal	Design	Freight	Parking	Connect	CIP	Blue-Ped	Economic Development
Johnston County	X	X	X		X			X		X		X	X			X	X	X
Archer Lodge	X	X	X	X		X		X					X				X	
Clayton	X	X	X			X	X	X	X				X	X	X	X	X	X
Wilson's Mills	X	X	X			X		X					X	X	X	X	X	X
Selma	X	X	X			X	X	X	X	X			X	X	X	X	X	X
Smithfield	X						X	X	X				X	X	X	X	X	
Four Oaks	X		X			X	X	X	X		X		X	X	X	X	X	X
Benson	X	X	X			X	X	X	X				X		X		X	X
Micro		X	X			X		X					X					
Kenly	X	X				X							X			X		
Wake County	X							X		X	X	X	X	X	X			X
Gamer	X	X	X			X	X		X				X	X	X		X	X
Raleigh			X					X		X		X	X	X	X	X		X
Pine Level	X	X											X					

	2017 SEAS Highest Priority Strategy for Consideration
	2017 SEAS Important Consideration Strategy
X	Progress made since 2017 SEAS

Summary of Community Accomplishments

Progress has been made in all SEAS communities to implement the 2017 SEAS recommendations. Nine communities updated or are currently updating their land development regulations or codes at the time of this writing. Twelve communities adopted or are currently adopted new comprehensive plans as of this writing.

- Archer Lodge updated their land development regulations in 2022.
- Benson adopted a comprehensive plan in 2021 and is currently working on updating their land development regulations.
- Clayton adopted the 2045 Comprehensive Growth Plan in 2021 and is currently updating their land development regulations.
- Four Oaks adopted the Downtown Streetscape Master Plan and Economic Development Assessment in 2020.
- Garner adopted the Garner Forward Comprehensive Plan in 2018 and updated their land development regulations in 2022.
- Micro adopted their Comprehensive Land Use Plan in 2019 and updated land development regulations in 2021.
- Pine Level updated their land use regulations in 2021 and adopted a land use plan in 2022.
- Selma adopted the 2040 Comprehensive Land Use Plan in 2021.
- Smithfield adopted the Smithfield Town Plan in 2019.
- Wilson's Mills adopted their 2040 Comprehensive Land Use Plan and a new Development Ordinance in 2019.
- Raleigh has adopted small area plans for Cameron Village and Hillsborough Street, Midtown-St Albans, and Falls North as well as the Raleigh Strategic Plan and the Downtown Plan.
- Johnston County is currently in the process of adopting the Envision Johnston - 2040 Comprehensive Land Use Plan.
- Wake County adopted their comprehensive plan, PlanWake, in 2021, as well as the Lower Swift Creek Area Plan in 2022.

Evaluation of 2017 Recommendations by Community

Archer Lodge

Report on Highest Priority Strategies

- **Comp Plan/Adjust LUP:** Archer Lodge is in the process of adopting a new comprehensive plan, including a new future land use map (FLUM).
- **Adjust Zoning:** Archer Lodge's new Unified Development Ordinance (UDO) was adopted in the summer of 2021. The town's UDO represented a comprehensive update of its zoning code and has been amended several times since its recent adoption.
- **Less Dense:** Carried forward into the 2023 SEAS recommendations for important consideration, as Archer Lodge can adjust regulations to further protect environmental and agricultural resources.
- **Bicycle and Pedestrian Requirements:** Carried forward into the 2023 SEAS recommendations as Archer Lodge can further adjust policies and regulations to support bicycle and pedestrian infrastructure.

Report on Strategies for Important Consideration

- **Allow Higher Densities:** As noted above, the town is still in the process of adopting a new comprehensive plan, which will include a new future land use map (FLUM). It is expected that specific changes to the map will be available in the comprehensive plan update.
- **Encourage Mixed-Use:** Archer Lodge's new UDO includes multiple districts that allows for a mix of uses (with restrictions) such as the office and institutional (OI) and neighborhood business (NB) districts. These districts will likely be included in the updated comprehensive plan. For example, the OI district allows for townhouses and multi-family buildings along with duplexes in addition to office uses. Archer Lodge could advance this implementation with a points-based or incentive system to allow for a reduction in performance standards seen in the updated UDO.
- **Range of Housing:** Archer Lodge's UDO allows for a range of housing types, including a mix of unit and use types in select districts. The town's Planned Development (PD) district allows for more flexibility in the range of housing types than other districts; planned developments may not be developed in the Agricultural (AR) or Single Family Residential (SFR)-1 districts.

Benson

Report on Highest Priority Strategies

- **Encourage Mixed-Use:** The 2021 comprehensive plan's future land use map (FLUM) includes a new Mixed-Use Junction (MUJ) category. The current UDO does not include a Mixed-Use Junction zoning district. The MUJ category is centered around I-40 and US 242. The Town Center (TC) category includes the potential for a mix of uses (apartments above stores). However, because it is guided towards the current code's B-1 district (which does not allow residential uses), a UDO update may be required for it to be formally utilized. Benson can advance this strategy by updating to UDO to include the mixed-use districts or including a points-based or other incentive system to allow for a reduction in performance standards.
- **Building Re-Use:** Neither the 2021 plan nor the code discuss adaptive reuse, nor do they call out types of flexibility related to redevelopment standards. This was carried forward into the strategies for important consideration.

- **Coordinate with Economic Development Plans:** The 2021 plan references the 2017 Benson Economic Development Strategic Plan, and “Increasing Quality Economic Development” is the third goal identified in the plan. There are a number of related action items within the plan, beginning on page 49. The plan notes that a follow-up study focusing on a couple specific outcomes was completed in 2019 as well.

Report on Strategies for Important Consideration

- **Comp Plan/Adjust LUP:** The Town of Benson adopted their new Comprehensive Plan in November 2021.
- **Adjust Zoning:** Benson is currently in the process of updating their Unified Development Code (UDC). Benson anticipates adopting the final UDC in October 2023.
- **Allow Higher Densities:** The 2021 plan’s future land use map (FLUM) allows density flexibility in three categories: single-family home construction in the Medium Density Residential (MDR) district; High Density Residential (HDR) district allowing townhomes, condos, apartment complexes, and “similar” residential development; and the Town Center district allows for traditional downtown residential uses above commercial storefronts, which is a form of slightly higher density. The formal zoning districts may change pending updates to the UDO. Under current zoning, denser development is allowed in the R-6 district, along with being allowed in PD/PUD residential and mixed-use projects, and potentially under conditional zoning as well. The R-11 district allows for some denser development under certain circumstances. The current R-6 and R-11 districts allow for no more than 10 units/acre, but do allow for townhouses, apartments, and upper-story residential units.
- **Downtown Strategies:** Benson’s 2021 comprehensive plan has specific guidance for their downtown, prioritizing walkable residential growth, street interconnectedness, and encouraging development in the Town Center land use category. Other downtown-specific guidance in the comp plan includes a formal goal to “Keep Downtown and the Historic District Viable, Quaint, and Thriving.” Land use Action Item 2 (p. 54) seeks to encourage more mixed-use residential development downtown.
- **Range of Housing:** Some land use categories and/or zoning districts in the 2021 plan allow for a mix of unit and housing types. Unit types other than single-family detached are allowed as a Major Special Use (MSU) as opposed to a Permitted use. The R-11 and R-16 districts (allowed as an MSU) include duplexes, townhomes, apartments, and upper-story residential. Density cannot be higher than 10 units/acre anywhere under the current code; Planned Development (PD) districts and conditional zoning districts may allow for greater flexibility. Benson can advance this planning strategy by including a range of housing in the UDC update.
- **Interlocal Agreements:** An interlocal agreement is carried forward as a 2023 recommendation under important consideration for Benson.
- **Freight Movement Areas:** Benson is within the area covered by the 2018 Triangle Regional Freight Plan, which provides a comprehensive look at freight conditions, trends, capacity, and future development, and goals for the greater Research Triangle region. Benson also developed a Community Transportation Plan (CTP) in 2019, which contains a detailed discussion of freight mobility, centered around the town’s desire to address truck traffic on NC Highway 50.
- **Adjust Parking Requirements:** The Town of Benson Parking Study (2018) found a large surplus of parking in the downtown area. Recommendations in the Parking Study included increasing the current parking system’s efficiency, discouraging the development of new private commercially owned lots downtown, and improving ADA and bicycle/pedestrian accessibility. Benson can advance this planning strategy by adjusting parking requirements in their code.

- **Connect Streets:** The 2021 plan highlights key recommendations from the town's **2019 CTP**. The plan emphasizes street interconnectedness and suggests requiring interconnection between subdivisions and stub streets to land-locked parcels in the future (currently in-progress) UDO update.
- **Bicycle and Pedestrian Requirements:** The 2021 comprehensive plan highlights key bicycle and pedestrian-related recommendations from the town's 2019 CTP. These recommendations include adding bicycle and pedestrian connections in general, creating a bicycle and pedestrian plan, with an emphasis on connecting adjoining residential neighborhoods to downtown, and using GIS to map the town's existing, planned, and needed bicycle and pedestrian networks. There is also a mention of creating connections to regional trails by creating a town-level greenway/trail network.
- **Coordinate with CIP:** Capital improvement planning and growth-guided infrastructure is carried forward as a high priority recommendation for Benson.

Clayton

Report on Highest Priority Strategies

- **Allow Higher Densities:** Clayton's 2045 Comprehensive Growth Plan includes an updated FLUM with several categories that allow for denser development. This includes the Medium Density Residential (MDR) and High Density Residential (HDR) categories. There are also multiple other categories that allow for medium to high residential densities. The downtown Support (DS) Downtown Core (DC), Neighborhood Center (NC) and Community Center (CC) districts all allow for medium to high residential (and commercial) densities; this includes multifamily housing and mixed-use development in some districts. The DC district allows the highest residential densities. The Downtown Neighborhood (DN) permits some "house-scale multifamily and townhomes."
- **Encourage Mixed-Use (Criteria 1):** Clayton's 2045 Comprehensive Plan encourages mixed-uses and higher densities in a number of different districts as outlined on the future land use map (FLUM) map, with a particular emphasis on encouraging mixed-use development in the DC district. Clayton's UDO includes residential and mixed-use districts that allow denser development, as outlined in the FLUM. In the UDO, there is a new Mixed-Use (MXD) district that allows mixed-uses by right; the MXD district description includes a focus on compact, more urban-style design and elements, as opposed to suburban density and design. Clayton can advance this planning strategy by considering a points-based or incentive system to allow for a reduction in performance standards, which aligns with the 2045 Comprehensive Plan recommendation for mixed-use developments downtown.
- **Parking:** Adjusting parking requirements is carried forward as a 2023 recommendation under important consideration for Clayton.
- **Coordinate with CIP:** The 2045 Comprehensive Plan includes a strategy (8.1.3, p. 59) that suggests the town "Incorporate facilities needs into future budgets and the Capital Improvement Plan." Capital improvement planning and growth-guided infrastructure is carried forward as a high priority recommendation for Clayton.

Report on Strategies for Important Consideration

- **Comp Plan/Adjust LUP:** The Town of Clayton adopted its 2045 Comprehensive Plan in November 2021. This modern plan articulates a clear vision for Clayton's future, one that includes taking steps to manage the area's high level of growth and development and addressing both infrastructural and cultural needs.
- **Adjust Zoning:** Clayton is currently updating its Unified Development Ordinance (UDO), with completion expected later in 2023. The final annotated outline of the UDO was made available on the Codify Clayton website in October of 2022, and represents a close to final version of what the updated UDO will look like.

- **Encourage Lower Densities/Preservation:** A Low Density Residential (LDR) district is included in the FLUM and the draft UDO. It is meant to support and create traditional low-density, suburban-style development and includes a provision for the preservation of open space.
- **Downtown Strategies:** The 2045 Comprehensive Plan has detailed strategies and policies designed to help support and grow Clayton's downtown while maintaining its historic aspects. For example, Goal 3 of the plan's economic development section includes six strategies specific to downtown Clayton.
- **Range of Housing:** The 2045 Comprehensive Plan and updated FLUM include several districts that allow for a mix of unit and housing types, including the conditional zoning districts that may allow for more flexibility and mixing of unit types. In their code, Clayton's HDR district allows for SF detached homes, townhomes, and apartments; the DS district allows for many unit types in addition to the HDR district and with higher density single family homes, along with apartments, mixed-use buildings with live/work units.
- **Building Re-Use:** The 2045 Comprehensive Plan includes Policy LU 2.1. (p. 25) which calls for encouraging "redevelopment or adaptive reuse of under-utilized commercial development." The plan also has a encourages the reuse of historic structures in the downtown district.
- **Adjust Parking Requirements:** The 2045 Comprehensive Plan has recommendations to consider modifying the town's parking requirements. The plan's downtown section includes recommendations to compare Clayton's downtown parking requirements (for residential uses) to peer towns' requirements, in order to use parking as efficiently as possible. There is also a strategy (DT 1.3.5, p. 33) that lists a "parking requirement reduction" as a potential mechanism to bolster downtown redevelopment efforts. Clayton can advance this planning strategy by adjusting parking requirements in their land use regulations, and this is carried forwarded as a strategy for important consideration.
- **Connect Streets:** The 2045 Comprehensive Plan includes policies about street connectivity. The current code includes a brief mention of certain pedestrian connection requirements through cul-de-sacs when key destinations or transportation corridors are nearby. This strategy is carried forward as a priority for important consideration, as Clayton can update their land use regulations to improve connectivity.
- **Bicycle and Pedestrian Requirements:** Clayton completed its first-ever Pedestrian Plan in 2022. The 2045 plan and draft UDO both specify pedestrian-related policies. The 2045 plan names policies specific to bicycle-related improvements. This strategy is carried forward as a priority for important consideration, as Clayton can update their land use regulations to support bicycle and pedestrian infrastructure and update their Comprehensive Bike Plan (2006).
- **Coordinate with Economic Development Plans:** The 2045 Comprehensive Plan coordinates an economic development policy with their 2020 Strategic Economic Development Plan, including supporting downtown as an economic asset.

Four Oaks

Report on Highest Priority Strategies

- **Encourage Mixed-Use:** Four Oaks completed a Land Use Plan Analysis and Update in May 2022; this document is not an update of their previous plan, but instead a pre-study (some public engagement and demographic analysis occurred) that examined three possible scenarios for the town's future land use. Two of the three future land use scenarios outlined included a mixed-use district. Encouraging mixed-use is carried forward as a high priority in the 2023 recommendations for Four Oaks.

- **Coordinate with Economic Development Plans:** Four Oaks' Economic Development Assessment was published in January 2020. The Assessment contains existing economic conditions information, a section on public engagement and idea-gathering, a vision section, and recommendations. Appendices include a SWOT analysis and a retail market analysis, with a market snapshot and a look at retail sales leakage/surplus.
- **Building Re-Use:** Encouraging building reuse is carried forward as a 2023 recommendation under important consideration for Four Oaks.

Report on Strategies for Important Consideration

- **Comp Plan/Adjust LUP:** Four Oaks completed a Land Use Plan Analysis and Update (LUPAU) in May 2022; this document is not an update of their previous plan, but instead a pre-study (some public engagement and demographic analysis occurred) that examined three possible scenarios for the town's future land use. This analysis represents Phase I of the town's updated plan; an upcoming Phase II will cover more extensive engagement, vision/goals and policy recommendations, and a decision on which of the three land use scenarios to adopt and incorporate into an updated FLUM. Updating the comprehensive plan is carried forward as a high priority in the 2023 recommendations for Four Oaks.
- **Adjust Zoning:** Adjusting zoning or updating land use regulations is carried forward as a high priority in the 2023 recommendations for Four Oaks.
- **Allow Higher Densities:** One of the three future land use map (FLUM) scenarios in the LUPAU is a "Smart Growth" scenario, which would aim to centralize growth and have a larger area of the town designated as mixed-use. Four Oaks can advance this by adjusting zoning district requirements to allow for denser development.
- **Downtown Strategies:** Four Oaks' Downtown Streetscape Master Plan was completed in 2020. This plan provides a comprehensive look at how best to update the pedestrian and built environment and aesthetic appeal of the downtown area in Four Oaks. It focuses on plans for sidewalk improvements (like extending and widening sidewalks), more outdoor restaurant spaces, greenery, and a new pedestrian square.
- **Range of Housing:** Based on recommendations in the LUPAU, it is likely that there will be a discussion about the mix of unit types allowed in certain land use categories while Phase II of the plan is developed. Encouraging a range of housing is carried forward as a 2023 recommendation under important consideration for Four Oaks.
- **Interlocal Agreements:** Developing interlocal agreements is carried forward as a 2023 recommendation under important consideration for Four Oaks.
- **Adjust Parking Requirements:** Adjusting parking requirements is carried forward as a 2023 recommendation under important consideration for Four Oaks.
- **Connect Streets:** The downtown plan and the LUPAU call for a connected downtown for both motorized and non-motorized transportation. Encouraging street connectivity is carried forward as a 2023 recommendation under important consideration for Four Oaks.
- **Coordinate with CIP:** Capital improvement planning and growth-guided infrastructure is carried forward as a 2023 recommendation under important consideration for Four Oaks.
- **Bicycle and Pedestrian Requirements:** Four Oaks has a focus on improving walkability and the pedestrian experience in the downtown area. Four Oaks can advance this topic by expanding policies to include bicycle infrastructure. Encouraging bicycle and pedestrian infrastructure is carried forward as a 2023 recommendation under important consideration for Four Oaks.

Garner

Report on Highest Priority Strategies

- **Comp Plan/Adjust LUP:** The Town of Garner adopted their **Garner Forward Comprehensive Plan** in December 2018.
- **Encourage Mixed-Use:** Several of Garner's zoning districts allow for a mix of uses: the two formal mixed-use districts—MX-A and B—established in the town's new 2022 UDO, along with the Commercial Mixed-used (CMX), Neighborhood Mixed-use (NMX), Activity Center (AC), and Traditional Business (TB) districts. One of the housing-related recommendations in the Garner Forward Comprehensive Plan was to help support affordable housing development through “development incentives such as density bonuses.” Garner can advance this recommendation by including it in a UDO update.
- **Downtown Strategies:** Garner Forward contains a section on downtown Garner as an “Opportunity Site,” with an exploration of ways that future public and private investment (including infill) can build on downtown's strengths. Other sections of the plan list ideas, goals, and strategies to improve the downtown area.

Report on Strategies for Important Consideration

- **Adjust Zoning:** The town adopted their new UDO in July of 2022.
- **Allow Higher Densities:** The town's FLUM in Forward Garner includes several categories that allow for denser development, such as Medium and High-Density Residential, Multi-Family Residential, Mixed Density Neighborhood Center, and more. The town's new UDO includes updated zoning districts that allow for denser development, primarily including the Residential 8 (R8) district, which allows a mix of “house-scale” multi-family units and mixed-uses in certain locations. Two districts—Multifamily A and B (MF-A and MF-B) allow for various types of apartment structures. Denser development is also allowed under the new UDO in multiple mixed-use/business districts.
- **Range of Housing:** The UDO allows for a range of housing/unit types in a number of districts. For example, the Residential 2 and 4 (R2 and R4) districts allow for duplexes as a principal use, in addition to SF homes. The R8 district allows for a variety of small, missing-middle-type units, including townhouses (3-4 dwelling units/structure), triplexes, and quadplexes as primary uses. The MR-A and B districts allow for all of the above multi-family unit types, plus larger townhouse structures, larger multi-family apartment buildings of over 4 units/structure, and “upper story residential,” or units over smaller-scale storefront commercial uses. See plan for details on the NMX, CMX, and AC unit types allowed.
- **Building Re-Use:** Forward Garner includes a character recommendation centered on reuse of existing buildings: “Encourage redevelopment and reuse of existing sites and buildings that are complimentary to the surrounding area” (Creating Success and Implementation Section, p. 92). The Working Spaces section, page 71, carries a brief mention of private sector partnerships being helpful for reusing languishing retail spaces.
- **Freight Movement Areas:** Garner is within the area covered by the 2018 Triangle Regional Freight Plan, which provides a comprehensive look at freight conditions, trends, capacity, and future development for the greater Research Triangle region.
- **Adjust Parking Requirements:** One of the commercial-related recommendations in the Garner Forward plan was to “Revisit and Revise Parking...Comprehensively.” The UDO seemingly carries forward standard parking requirements (2 spaces/duplex unit, etc.) and does not appear to have undergone major changes. Garner can advance this planning strategy by modernizing their parking requirements, which is carried forward as a strategy for important consideration.

- **Connect Streets:** Garner Forward contains a goal to establish a street connectivity standard, citing poor east-west connectivity in the town today; the plan aims to “prioritize and defend connectivity” overall. The town carried out the above plan recommendation in its 2022 UDO. The UDO includes minimum street connectivity standards via a connectivity index score that developments in different types of districts are required to meet. Other plan recommendations pertaining to requiring direct pedestrian/bicycle connections between cul-de-sac neighborhoods and nearby key destinations were carried through in the UDO as well.
- **Bicycle and Pedestrian Requirements:** Garner Forward recommends supporting school zone bicycle and pedestrian safety and sponsoring a bike share station in the downtown area. The transportation section of the plan calls out 194 proposed miles of bike and pedestrian improvements, including 64 miles of sidewalks, 80 miles of bikeways, and 34 miles of trails. The plan recommended that the UDO should implement Garner’s envisioned new prioritization of bicycle and pedestrian needs, including subdivision standards. Garner can advance this strategy by including UDO guidelines for designated on-street bicycle facilities, which is carried forward to the 2023 recommendations.
- **Coordinate with Economic Development Plans:** The town of Garner benefits from the Garner Economic Development Corporation, which produces its own annual plan of work, an annual report and partnered with the Town and with the Historic Downtown Garner group to produce an **Economic Development Strategic Plan** that was published in 2019/2020.

Kenly

Report on Highest Priority Strategies

- **Encourage Mixed-Use:** The town’s updated UDO includes a PD-Mixed-Use District, which must be at least two acres in size. Kenly can advance this by including a points-based or other incentive system to allow for a reduction in performance standards seen in the updated UDO. This is carried forward in the 2023 recommendations as important for consideration.
- **Interlocal Agreements:** The code contains an old (1999) interlocal agreement with Johnson County for the County to “furnish building code administration and enforcement for the Town of Kenly.” Kenly can advance this by pursuing update interlocal agreements, carried forward as a 2023 recommendation important for consideration.
- **Coordinate with CIP:** Capital improvement planning and growth-guided infrastructure is carried forward as a 2023 recommendation under important consideration for Kenly.

Report on Strategies for Important Consideration

- **Comp Plan/Adjust LUP:** Developing and adopting an updated comprehensive plan is a high priority carried forward to the 2023 recommendations for Kenly.
- **Allow Higher Densities:** The 2022 FLUM includes at least one district that may allow for denser, multi-family development. This is carried forward as a strategy for important consideration.
- **Downtown Strategies:** Developing downtown strategies is carried forward as a 2023 recommendation under important consideration for Kenly.
- **Range of Housing:** Under the 2019 UDO, unit types permitted include duplexes and townhouses, along with upper-story residential. The latter three-unit types are allowed as special uses in three districts, while upper-story (over commercial) residential is allowed in 4 different business/downtown districts as a principal use.
- **Building Re-Use:** Allowing for building re-use in the code is carried forward as a 2023 recommendation under important consideration for Kenly.

- **Freight Movement Areas:** Kenly is within the area covered by the 2018 Triangle Regional Freight Plan, which provides a comprehensive look at freight conditions, trends, capacity, and future development for the greater Research Triangle region.
- **Adjust Parking Requirements:** Adjusting parking requirements is carried forward as a 2023 recommendation under important consideration for Kenly.
- **Connect Streets:** Promoting street connectivity is carried forward as a 2023 recommendation under important consideration for Kenly.
- **Bicycle and Pedestrian Requirements:** The code requires safe pedestrian connections between subdivisions and key destinations like schools, parks, greenways, etc. that are within one-quarter mile of a given subdivision. Breaks in walls and fences are allowed for pedestrian connections. Pedestrian connections through cul-de-sacs are required when “the cul-de-sac helps provide adequate access” to shopping centers, transportation corridors, schools, etc.
- **Coordinate with Economic Development Plans:** Coordination with economic development plans was not carried forward for the 2023 recommendations.

Micro

Report on Highest Priority Strategies

- **Encourage Mixed-Use:** A mixed-use district (MUD) is identified as “reserved for future amendment” in the new UDO. Encouraging mixed-use is carried forward as a high priority for Micro in the 2023 recommendations. Micro could consider a points-based or other incentive system to allow for a reduction in performance standards.
- **Coordinate with CIP:** Micro is exploring the renewal and expansion of water and sewer infrastructure. As such, capital improvement planning and growth-guided infrastructure will be important and is carried forward as an important consideration for Micro.
- **Coordinate with Economic Development Plans:** The town’s comprehensive plan encouraged economic growth, including light industrial uses in appropriate areas, downtown revitalization, and high-oriented retail near the I-95 interchange.

Report on Strategies for Important Consideration

- **Comp Plan/Adjust LUP:** Micro’s most recent Comprehensive Land Use Plan was adopted in February of 2019.
- **Adjust Zoning:** Micro adopted its new zoning ordinance in June 2021.
- **Allow Higher Densities:** Town representatives indicated that though Micro does not allow for dense development currently, there could be some room for density and/or more zoning districts in future updates. The updated zoning code includes the R-10 district, which allows for various types of denser, non-single family home-based residential development. This is the only district that allows true denser development under the new (2021) code. Duplexes are allowed with a Special Use Permit in the Residential Agricultural (RA) and Residential Single-Family (R-15) districts. The Downtown Commercial (CD) district is designated as a “Non-Residential” district, but the Table of Permitted Uses (p. 3-6) states that townhouses and attached houses may be allowed as special uses. This is carried forward as a high priority for Micro.

- **Downtown Strategies:** The 2019 plan includes a sub-goal that encourages revitalization and expansion of retail/commercial uses in the Town's historic downtown commercial area.
- **Range of Housing:** The RA and R-15 districts allow duplexes as special uses, in addition to allowing detached single-family homes; the CD district may allow for townhomes and other attached homes. The R-10 district is specifically meant to allow a mix of unit types, including single-family, duplex, and multi-family housing. The code also includes a PUD district, which may allow for greater flexibility in unit/housing types, such as townhomes and other attached homes.
- **Interlocal Agreements:** An interlocal agreement is carried forward as a 2023 recommendation under important consideration for Benson.
- **Freight Movement Areas:** Micro is within the area covered by the 2018 Triangle Regional Freight Plan, which provides goals and a comprehensive look at freight conditions, trends, capacity, and future development for the greater Research Triangle region.
- **Adjust Parking Requirements:** Micro's code includes standard parking requirements, such as requiring at least 2 spaces/unit for duplexes and 2.5 spaces/unit for multi-family and townhome development.
- **Connect Streets:** Encouraging street connectivity is carried forward as a 2023 recommendation under important consideration for Micro.
- **Bicycle and Pedestrian Requirements:** In the UDO, the CD district is guided as a pedestrian-oriented environment. Micro can advance this topic by considering bicycle infrastructure improvements.

Pine Level

Note: The Town of Pine Level was included in the 2023 Southeast Area Study; however, it was not part of the 2017 SEAS. Therefore, the analysis provided below reported on Pine Level's planning history (land use plans and regulatory code) for this SEAS update.

Report on Planning History

- **Comp Plan/Adjust LUP:** Pine Level adopted its land use plan in June 2022. The main focus of the LUP was the impending transportation changes (Highway 70/42 interstate coming through Pine Level) impact of shifting land uses, specifically for industrial or commercial uses.
- **Adjust Zoning:** Pine Level updated its UDO in December 2021, which focused on density. This update included support for mixed-use and residential downtown, as well as accommodating farmland that is converting to residential.
 - There was a moratorium in 2021 on the approval of subdivisions through Fall 2023 because of sewer capacity. Through this change, planned unit developments were removed from the code.
 - Currently, Pine Level receives wastewater services through Johnston County. The allocation of sewers by Johnston County will influence future development.

Raleigh

Report on Highest Priority Strategies

- **Coordinate with CIP:** Section 1-7 of Raleigh’s 2030 Comprehensive Plan covers the city’s relationship to the CIP and discusses recommendations to enhance the CIP planning and budgeting process.

Report on Strategies for Important Consideration

- **Allow Higher Densities:** Raleigh’s future land use map (FLUM) includes several higher density categories: moderate scale residential, medium scale residential, higher scale residential, office and residential mixed-use.
- **Range of Housing:** Raleigh’s 2030 Comprehensive Plan calls for mixed-income neighborhoods, geographic dispersal of affordable units, affordable housing design, zoning for housing, and housing diversity.
- **Small Area Plans:** Several small area plans for Raleigh neighborhoods have been adopted, both pre- and post-2017 SEAS. The Cameron Village & Hillsborough Street and Midtown-St Albans plans were adopted since 2017, while the Falls North plan was adopted in later 2017, likely after the 2017 SEAS was adopted.
- **Design Guidelines for Nodes:** Chapter 11.7 of the 2030 plan has thorough design guidelines, while the city’s UDO has design guideline principles for special districts (Section 4.7.5), solid waste, streets, historic districts, and planned developments.
- **Freight Movement Areas:** Raleigh is within the area covered by the 2018 Triangle Regional Freight Plan, which provides goals and a comprehensive look at freight conditions, trends, capacity, and future development for the greater Research Triangle region.
- **Adjust Parking Requirements:** The 2030 Raleigh Comprehensive Plan calls for changes in parking policies and argues that there is too much parking in the city, which leads to more single-occupancy vehicle trips. The plan recommends reduced parking requirements where appropriate to promote walkable communities and alternate modes of transportation. The city’s UDO includes a table of parking minimums and maximums (Article 7.1).
- **Connect Streets:** Raleigh has a certified recommendation to the Raleigh Planning Commission on Street Connectivity and Access, while the 2030 plan mentions street connectivity in several contexts, such as housing and traffic. Several proposed policies and actions relating to street connectivity are also present in the 2030 plan.
- **Coordinate with Economic Development Plans:** Raleigh has several economic development plans, including the Raleigh Strategic Plan and Downtown Plan. The 2030 plan references the Strategic Plan and the Downtown Plan.

Selma

Report on Highest Priority Strategies

- **Encourage Mixed-Use:** Both the town’s 2017 UDO and 2040 Comprehensive Land Use Plan include a Mixed-Use (MU) district. The MU district allows for higher residential densities in multi-family structures. Chapter 6’s recommendations include guidance for potentially expanding the amount of land zoned as mixed-use. Selma can advance this planning strategy by considering a points-based or other incentive system to allow for a reduction in performance standards.
- **Building Re-Use:** The plan includes Objective (10.1, p. 64) that “encourages historic buildings to be adapted as reused.” Selma can advance this by incorporating building re-use into future code updates, and this is carried forward as a strategy for important consideration in the 2023 recommendations.

- **Coordinate with CIP:** Capital improvement planning and growth-guided infrastructure is carried forward as a high priority recommendation for Selma.

Report on Strategies for Important Consideration

- **Comp Plan/Adjust LUP:** Selma adopted its 2040 Comprehensive Land Use Plan in May 2021.
- **Adjust Zoning:** Selma completed its UDO update in early 2017.
- **Allow Higher Densities:** The 2040 plan's future land use map (FLUM) allows for denser development in the Medium Density Residential (MDR) with duplexes and smaller lot sizes, while the High Density Residential (HDR) allows for multi-family housing like apartments and townhomes.
- **Downtown Strategies:** The town's 2019 Economic Development Strategic Plan includes strategies related to growing businesses in Selma's downtown, while the related 2019 Downtown Selma Property Conditions Assessment focuses on addressing business vacancies and improving facades and signs. Goal 2 of the 2040 plan is to create an "Active, vibrant, and revitalized Downtown area." There are 10 objectives under this goal; one is to encourage "multi-story mixed-use infill development" (2.5, p. 59), while another encourages better pedestrian and bicycle accessibility.
- **Range of Housing:** The 2040 plan and FLUM allow for a mix of unit types in the MDR, HDR, MU, and Transitional Residential (TR) districts. The HDR and MU districts allow for the highest number of unit types within a single land use category. There is a PUD process that may also allow for greater mixing of unit types, depending on circumstances.
- **Freight Movement Areas:** Selma is within the area covered by the 2018 Triangle Regional Freight Plan, which provides goals and a comprehensive look at freight conditions, trends, capacity, and future development for the greater Research Triangle region. Chapter 3 (Transportation, p. 31) of the 2040 plan mentions the town's existing freight rail and highway infrastructure, in addition to listing planned roadway improvements/capacity expansions in the Selma area out to 2035, as identified by NCDOT. Plan Objective 7.1 mentions constructing a transportation system that serves freight needs well.
- **Adjust Parking Requirements:** Objective 2.6 (Goal 2, p. 59) of the 2040 plan encourages allowing downtown development projects to have reduced on-site parking requirements.
- **Connect Streets:** The 2040 plan includes policy goals related to connectivity. Goal 7 (p. 63) under Transportation encourages maintaining "roadway network connectivity" and general capacity/flow, controlling driveway placement, access, and circulation and includes an Objective for "promoting walkable, connective development patterns." Goal 8 describes Objectives related to ensure pedestrian bike connectivity between key facilities, community resources, and residential neighborhoods.
- **Bicycle and Pedestrian Requirements:** The 2040 plan's Transportation section has a number of recommendations for improvements from the Johnston County Comprehensive Transportation Plan. The plan recommends updating these requirements to help accommodate non-motorized transportation and potentially develop a first-time bicycle and pedestrian plan. This is carried forward as an important consideration for Selma.
- **Coordinate with Economic Development Plans:** In 2019, the town completed its Economic Development Strategic Plan (EDSP). The town's EDSP is organized around a traditional SWOT analysis and features existing conditions-type information about the town's economic status, and demographics. The final section of the plan uses the SWOT analysis to suggest future direction for economic development and includes an implementation section.

Smithfield

Report on Highest Priority Strategies

- **Comp Plan/Adjust LUP:** The Smithfield Town Plan was adopted in February 2020. The Town Plan includes three volumes (Introduction, Growth Management Element, and Transportation Element).
- **Building Re-Use:** The Smithfield Town Plan mentions adaptive reuse, aiming to “activate downtown by encouraging a high-quality built environment through reuse, development and infill that builds on downtown’s existing strengths including its historic charm.” Smithfield can advance this by updating the UDO to allow for reuse or redevelopment, and this is carried forward as an important consideration.
- **Coordinate with CIP:** Smithfield’s Town Plan mentions including streetscape improvements in the town’s Capital Improvement Plan, as a part of the objective to enhance the physical and visual assets of downtown.

Report on Strategies for Important Consideration

- **Downtown Strategies:** Volume II of the Smithfield Town Plan includes a section about downtown with objectives and policy recommendations for a vibrant downtown. Volume I includes a downtown land use area plan.
- **Range of Housing:** The Smithfield Town Plan Volume II includes policy recommendations allowing for increased density, including considering updates to requirements for accessory dwelling units, allowing attached and multi-family residential, and encouraging new residential subdivisions and infill residential in certain areas.
- **Freight Movement Areas:** Smithfield is within the area covered by the 2018 Triangle Regional Freight Plan, which provides goals and a comprehensive look at freight conditions, trends, capacity, and future development for the greater Research Triangle region.
- **Adjust Parking Requirements:** The Smithfield Town Plan Volume I addresses parking concerns, including that much of the land in the downtown area is taken up by parking. The Smithfield UDO calls for parking maximums as 150 percent of parking minimums.
- **Connect Streets:** The Smithfield Town Plan discusses street connectivity in both volumes II and III. Volume II calls for creating a transportation system that connects people to destinations safely, equitably, and efficiently. Volume III includes recommendations for street improvements and a more connected street network, including street typology charts and maps. The Smithfield UDO includes a section on Street Connectivity Requirements.
- **Bicycle and Pedestrian Requirements:** Volume III of the Smithfield Town Plan Volume includes several recommendations for bicycle/ pedestrian improvements, as well as a timeline of execution and a map of downtown bicycle and pedestrian recommendations.

Wilson’s Mills

Report on Highest Priority Strategies

- **Comp Plan/Adjust LUP:** Wilson’s Mills adopted their new 2040 Comprehensive Land Use Plan in December 2019. Also available to the public on Wilson’s Mills website are stand-alone documents showing the Town Center concept expressed in the plan, a map of growth opportunity areas, and the future land use map (FLUM).

- **Encourage Mixed-Use:** The town's 2019 UDO has two mixed-use districts, Mixed-Use 1 and 2 (MU-1, MU-2). Additionally, a traditional Neighborhood Development Overlay District (TDNO) allows for a mix of uses on a smaller scale. This district allows a mix of housing types, "shop-front commercial" buildings only, and civic buildings. Wilson's Mills can advance this strategy by considering a points-based or other incentive system to allow for a reduction in performance standards.
- **Building Re-Use:** The 2040 Comprehensive Land Use Plan includes the Main Street District, which calls for new development, revitalization, reuse, and infill in the core downtown. Another strategy advises the adaptive reuse of historic structures for public uses.

Report on Strategies for Important Consideration

- **Adjust Zoning:** The new Wilson's Mills Unified Development Ordinance (UDO) was also adopted in December 2019. The town's new UDO updated and replaced their previous zoning, subdivision, and flood damage prevention ordinances.
- **Allow Higher Densities:** There are four zoning districts that allow for denser types of development; two of these include "Catalyst Areas," which further encourages development. The Residential Main Street Transition District (RMST), for example, allows for attached homes and multi-family apartment buildings. The Main Street (MS) and the two Mixed-Use districts mentioned above also allow more dense development.
- **Freight Movement Areas:** Wilson's Mills is within the area covered by the 2018 Triangle Regional Freight Plan, which provides goals and a comprehensive look at freight conditions, trends, capacity, and future development for the greater Research Triangle region. Truck traffic is called out as an issue to resolve in Objective 1 (5.2.6.1, p. 39) of the Town's plan. This objective states that Wilson should work to separate/move truck traffic from its downtown street system and into other avenues as is feasible, namely concerning US 70 (future I-42). There is a focus on traffic safety at intersections with US-70 as well.
- **Adjust Parking Requirements:** The 2040 plan includes one objective (5.2.4.5, p. 39) to identify potential shared parking opportunities for businesses in the MS (downtown) district. The UDO includes parking maximums for ADUs, multi-family dwellings, and certain single-family homes. For example, a multi-family unit with three bedrooms or more could have a maximum of three parking spaces provided. There are also parking maximums for many (but not all) commercial/retail, civic, industrial, office uses, etc.
- **Connect Streets:** Wilson's Mills UDO discourages the development of new cul-de-sacs and promotes connectivity and the ability to create future connections from stub-end streets wherever possible.
- **Coordinate with CIP:** The 2040 plan references the Town's 2009 CIP. Capital improvement planning and growth-guided infrastructure is carried forward as a high priority recommendation for Selma.
- **Bicycle and Pedestrian Requirements:** The 2040 plan has multiple objectives that are centered around bicycle/pedestrian issues, and recommendations in the plan were carried forward into the UDO update. For example, Objective 3 (5.2.6.3, p. 40) of the comp plan focuses on improving the Town's pedestrian environment, with one strategy of this objective being developing a bicycle and pedestrian and alternative transportation plan. Other plan objectives center around pedestrian and bicycle access in new developments. The UDO discourages cul-de-sac development, prioritizes pedestrian and bicycle infrastructure in new developments (as suggested in the plan), requires street trees in most cases, and doesn't allow design speeds for streets in the town to exceed 30 mph on neighborhood, mixed-use, and/or non-residential streets.
- **Coordinate with Economic Development Plans:** The 2040 plan includes Economic Development Opportunities and Actions sections (6.7 and 6.8; pp. 52 - 55).

Johnston County

Report on Highest Priority Strategies

- **Comp. Plan/ Adjust LUP:** Johnston County recently updated its Comprehensive Land Use Plan – Envision Johnston 2040 - with a draft available online. The final version is expected to be available later in 2023.
- **Corridors/Promote Corridor Nodes:** Johnston County's 2040 comprehensive plan focuses on concentrating more dense development at key nodes along transportation corridors. The Regional Mixed-Use, Neighborhood Center, and Rural Crossroads future land use categories all allow for more intensive and (for some categories) mixed-use development at and along principal transportation arteries.
- **Coordinate with Economic Development Plans:** Envision Johnston does include an Economic Development section. This section includes recommendations around supporting/ maintaining and growing employment and business development in the county.

Report on Strategies for Important Consideration

- **Adjust Zoning:** Johnston County updated its Land Development Code (LDC) in 2020 with minor changes. The draft of Johnston County's 2040 Comprehensive Plan suggests that the county further amend or fully re-write its LDC following adoption of the comprehensive plan.
- **Allow Higher Densities:** ADU legalization was considered during the Envision Johnston 2040 comprehensive plan development process. Johnston County's 2030 Comprehensive Plan place types include a category for "Medium Density Residential" that includes smaller lot sizes for single family homes and attached housing like townhomes and duplexes. The 2040 Plan also has a category for "Regional Mixed-Use Center," which may allow for higher densities. Envision Johnston encourages amending the Land Development Code to allow for ADUs in certain districts; this does not appear to have been done yet. Recommendations from the 2040 plan draft include promoting more compact development in mixed-use centers at higher densities; there is also a recommendation for a new residential zoning district that allows higher densities. Conservation subdivisions that are slightly denser and preserve open space are also discussed. Supporting and creating more walkable mixed-use districts is mentioned in the plan draft, with development concentrated in these areas.
- **Range of Housing:** The plan would allow for a mix of unit types in certain land use categories and seeks to foster a greater diversity of housing types within financial reach of more households. The current zoning code allows for a mix of housing types within certain districts.
- **Small Area Plans:** Envision Johnston includes recommendations to create small area plans for employment centers, key nodes, and areas that could be redeveloped.
- **Design Guidelines for Nodes:** Johnston County has design guidance and standards in its code, along with design guideline recommendations in its comprehensive plan. This guidance focuses on traditional requirements such as parking, site design/access, and stormwater access, and also includes specific design standards for subdivisions.
- **Freight Movement Areas:** The Johnston County 2014 Comprehensive Transportation plan briefly mentions freight but does not lay out priorities for freight movement. Envision Johnston mentions emphasizing freight access but does not include specific recommendations or design standards. The County is within the area covered by the 2018 Triangle Regional Freight Plan, which provides goals and a comprehensive look at freight conditions, trends, capacity, and future development for the greater Research Triangle region.

- **Coordinate with CIP:** Envision Johnston includes a subsection discussing linkages to capital investments and the CIP. Specifically, it mentions ensuring that public investments are in line with what is envisioned in the CIP and future development patterns. There is also discussion about directing development to parts of the county with existing and planned sewer capacity and good transportation access, and doing fiscal impact analysis to see what affects new development could have on the county's expenditures.
- **Bicycle and Pedestrian Requirements:** Envision Johnston includes bicycle and pedestrian specific policies in relation to creating complete streets and walkable communities. The plan encourages the development of mixed-use, walkable, compact communities. The plan also includes creating bicycle and pedestrian infrastructure in the context of developing higher development standards and helping communities maintain and improve their desired character. Additionally, a section of Envision Johnston covers the promotion of active transportation, including recommendations to update regulations to require sidewalks in certain places and to include bike lanes on important roads as they are improved. The county's subdivision ordinance also briefly mentions pedestrian access.

Wake County

Report on Highest Priority Strategies

- **Adjust Future Land Use Plans:** Wake County developed its new comprehensive plan, PlanWake, which was adopted in 2021.
- **Range of Housing:** PlanWake provides a range of housing types in its policies and Growth Framework.
- **Interlocal Agreements:** Wake County facilitated interlocal agreements regarding growth in municipal ETJs and areas of common interest as part of the Wake County Growth Management Plan developed in the early 2000s.

Report on Strategies for Important Consideration

- **Small Area Plans:** PlanWake calls for development of small area plans, the most recent update being for the Lower Swift Creek Area Plan adopted in 2022.
- **Design Guidelines for Nodes:** Wake County updated design guidance for new development through its Municipal Transition Standards that were added to the County's UDO as an implementation step of PlanWake.
- **Adjust Parking Requirements:** PlanWake includes an action to improve parking requirements, including recommendations to assess and revise the UDO to prioritize non-motorized transportation.
- **Connect Streets:** PlanWake calls for a multimodal future for residents. The plan details current transportation patterns along with future potential issues, including the fact that by 2040 most roads and highways in Wake County will exceed their capacity.
- **Coordinate with Economic Development Plans:** PlanWake includes coordination between economic development and land use planning and supports development of compact, walkable communities at strategic locations in the I-540 corridor.

APPENDIX C:

Equitable Planning Analysis



Equitable Planning Analysis

November 2022

Prepared for:

SEAS

SOUTHEAST AREA STUDY

UPDATE

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1. EQUITABLE PLANNING ANALYSIS

This analysis of transportation need and disadvantage informs the identification of priority areas for transportation investments within the Southeast Area. A Transportation Need Index identifies areas with a greater need for transportation infrastructure, while a Transportation Disadvantage Index identifies areas with more individuals with unique barriers to mobility, as well as those historically marginalized by transportation investments. Collectively, these indices represent a means for the identification of areas to target with transportation investments to enhance the quality and safety of residents' connections to jobs, schools, doctors, grocery stores, places of worship, and other destinations.

Based on an analysis of transportation disadvantage and need, the areas that lend themselves to the most impactful transportation investments benefitting those that need them most include:

- The Route 301 corridor through Four Oaks, Smithfield, Selma, and Kenly
- Garner, along the Route 70 corridor east of Interstate 40
- Clayton, northeast of Route 70
- Pine Level

Transportation Disadvantage

To highlight geographies that may require special consideration to ensure that everyone has a means of accessing jobs and services, the North Carolina Department of Transportation (NCDOT) [Transportation Disadvantage Index](#) identifies areas with higher proportions of disadvantaged populations. In other words, the index identifies, describes, and quantifies relative barriers that may limit access to transportation. To do this, the transportation disadvantage index scores Census block groups based on their relative proportion of:

- **Individuals living in low-income households**, who are more likely to rely on walking, bicycling, and transit to meet their transportation needs, because as income falls, the cost of owning and operating a private vehicle becomes more burdensome.
- **Individuals living with disabilities**, whose unique transportation needs demand deliberate planning.
- **Older adults**, aged 65 years and older, who may choose not to or be unable to drive, resulting in their reliance on other modes of transportation.
- **Minors**, aged 15 years and younger, who are more likely to rely on active transportation and/or transit because the vast majority cannot drive.
- **Non-white individuals**, whose transportation requirements deserve additional consideration, reflecting a legacy of racism and ongoing marginalization.
- **Carless households**, whose transportation needs, particularly in regions characterized by auto-oriented development such as the Southeast Area, are likely significant.

FIGURE 1: TRANSPORTATION DISADVANTAGE INDEX METHODOLOGY

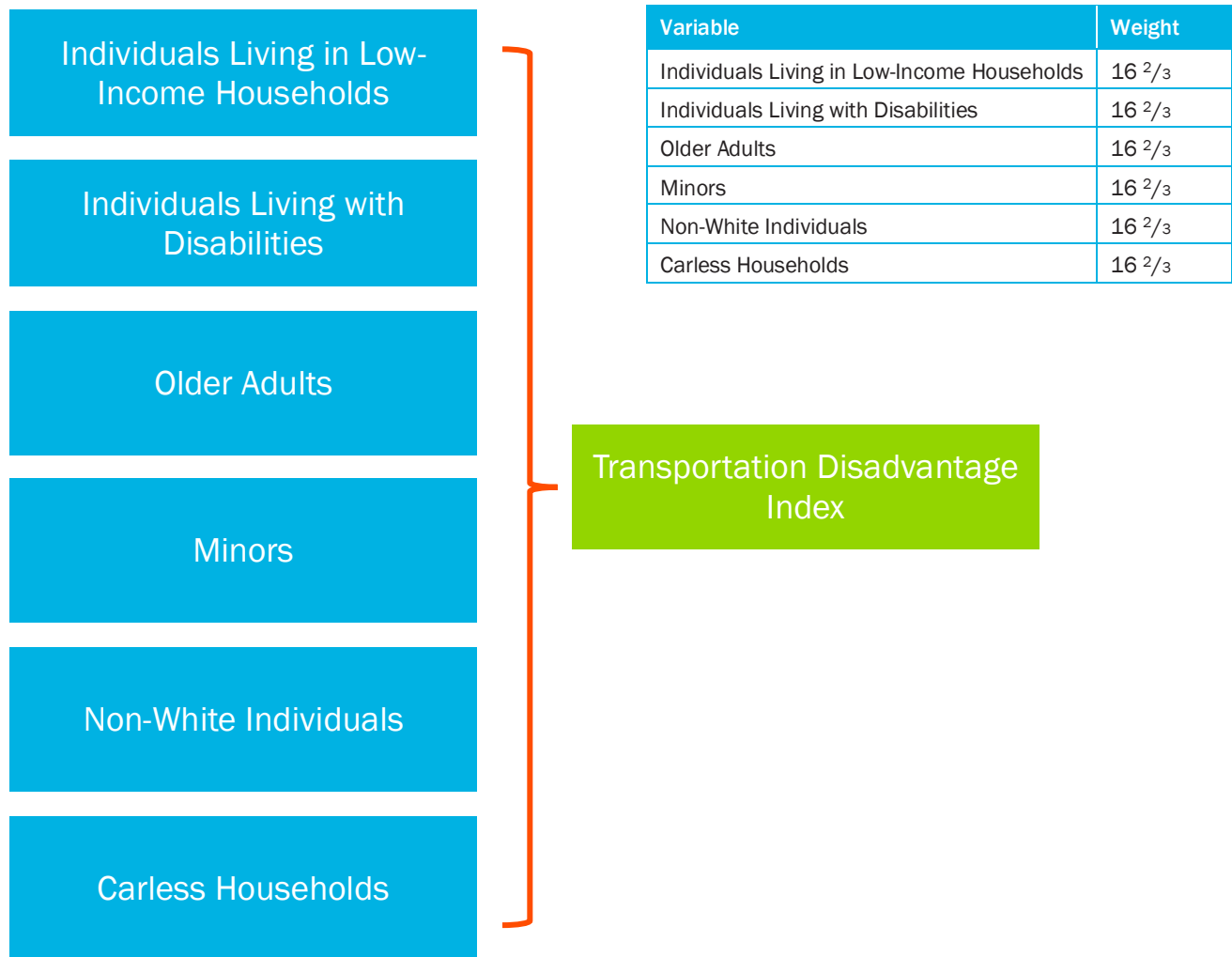
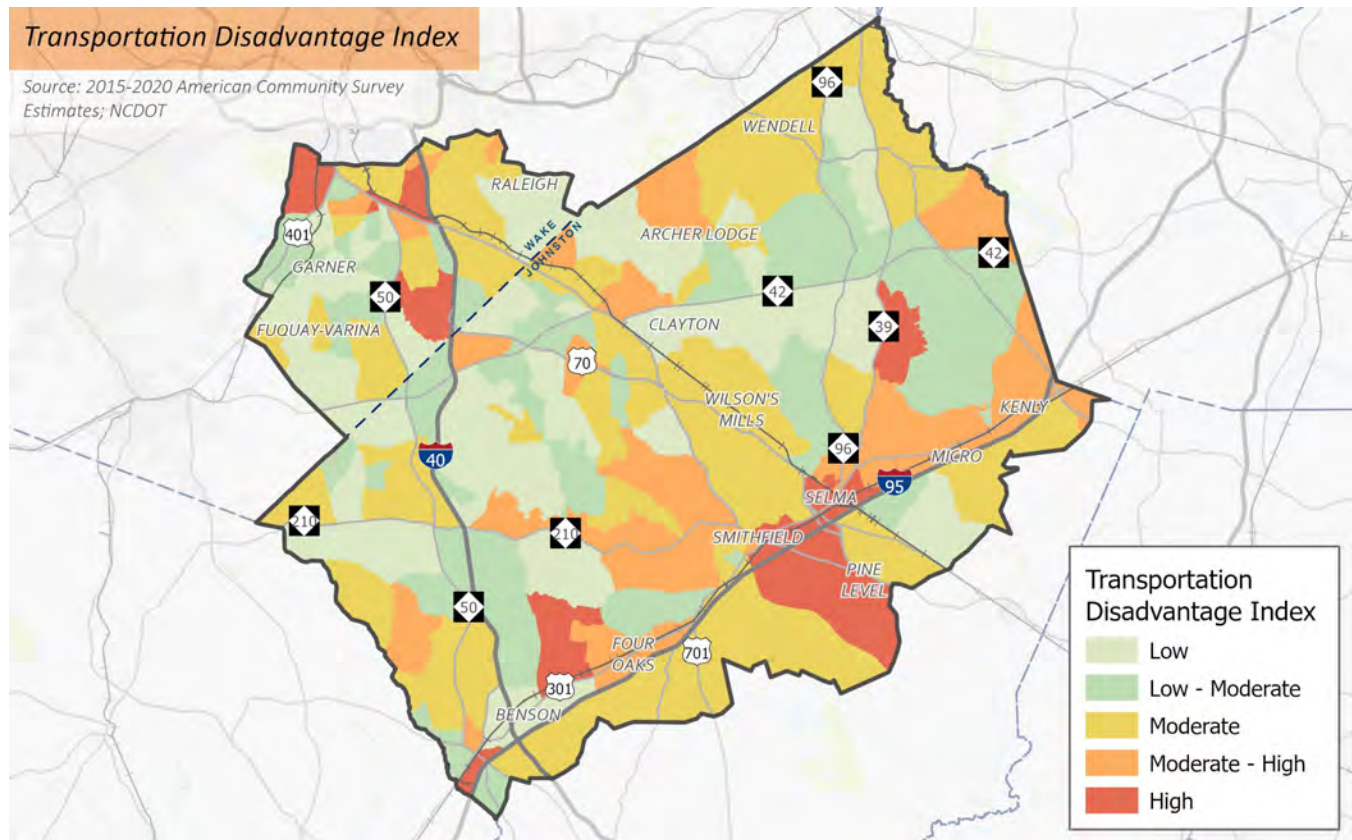


Figure 1 provides an overview of the methodology used to calculate the Transportation Disadvantage Index. Block groups receive a score of one, two, or three for each variable, with higher scores indicating a higher potential transportation disadvantage¹; summing these scores provides the relative Transportation Disadvantage Index figure for each block group.

¹ Scores are assigned using the Jenks optimization method, which classifies features based on naturally occurring breaks in the data.

Figure 2 depicts the relative Transportation Disadvantage Index scores for block groups in the Southeast Area. The largest swath of high Transportation Disadvantage Index scores is found in the Smithfield and Selma area. High scores are also found in and around Garner in Wake County, as well as in Benson, west of Four Oaks, and east of Route 39 in Johnston County. Because the index is based on the relative population sizes, some block groups receive high scores despite very low population densities and total number of disadvantaged individuals (e.g., north of Selma).

FIGURE 2: SOUTHEAST AREA TRANSPORTATION DISADVANTAGE INDEX SCORES



Transportation Need

A Transportation Need Index, developed for the SEAS Update, leverages job and population density, active transportation suitability, crashes involving bicyclists and pedestrians, and trip origins to identify areas of greater transportation need.

FIGURE 3: TRANSPORTATION NEED INDEX METHODOLOGY

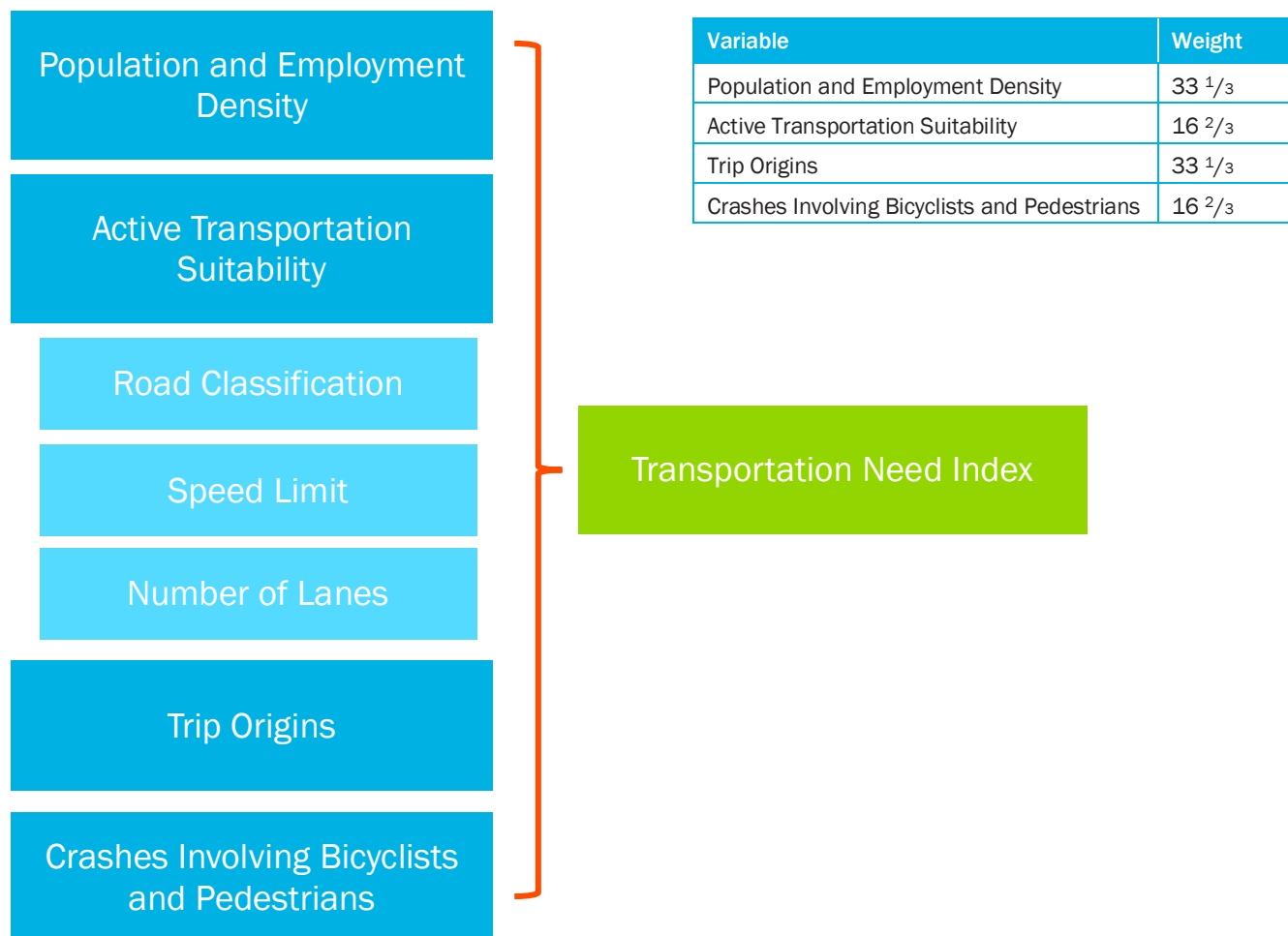
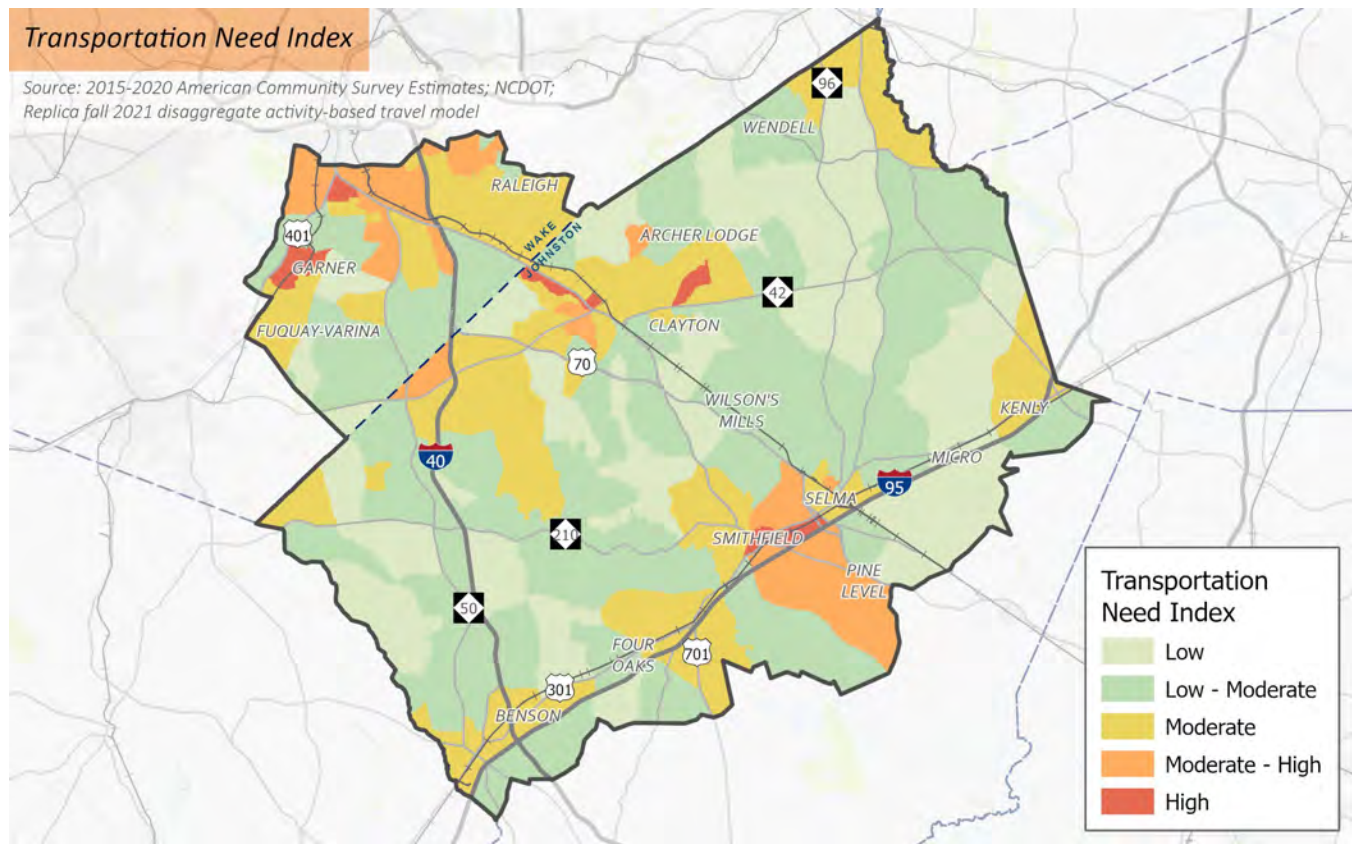


Figure 3 provides an overview of the methodology used to calculate this index. Block groups receive a score in the range of zero to one for each variable, with higher values indicating greater transportation need². Weighting and summing these scores provides the relative Transportation Need Index figure for each block group.

² Scores are assigned using feature scaling (i.e., min-max normalization) to normalize the range of each variable.

Figure 4 depicts the Transportation Need Index for the Southeast Area. Reflecting the location of people and jobs, prevailing roadway conditions, travel patterns, and crashes involving bicyclists and pedestrians (detailed throughout this chapter), areas of high transportation need are located in and around Selma and Smithfield, Clayton, and Garner.

FIGURE 4: TRANSPORTATION NEED INDEX SCORES



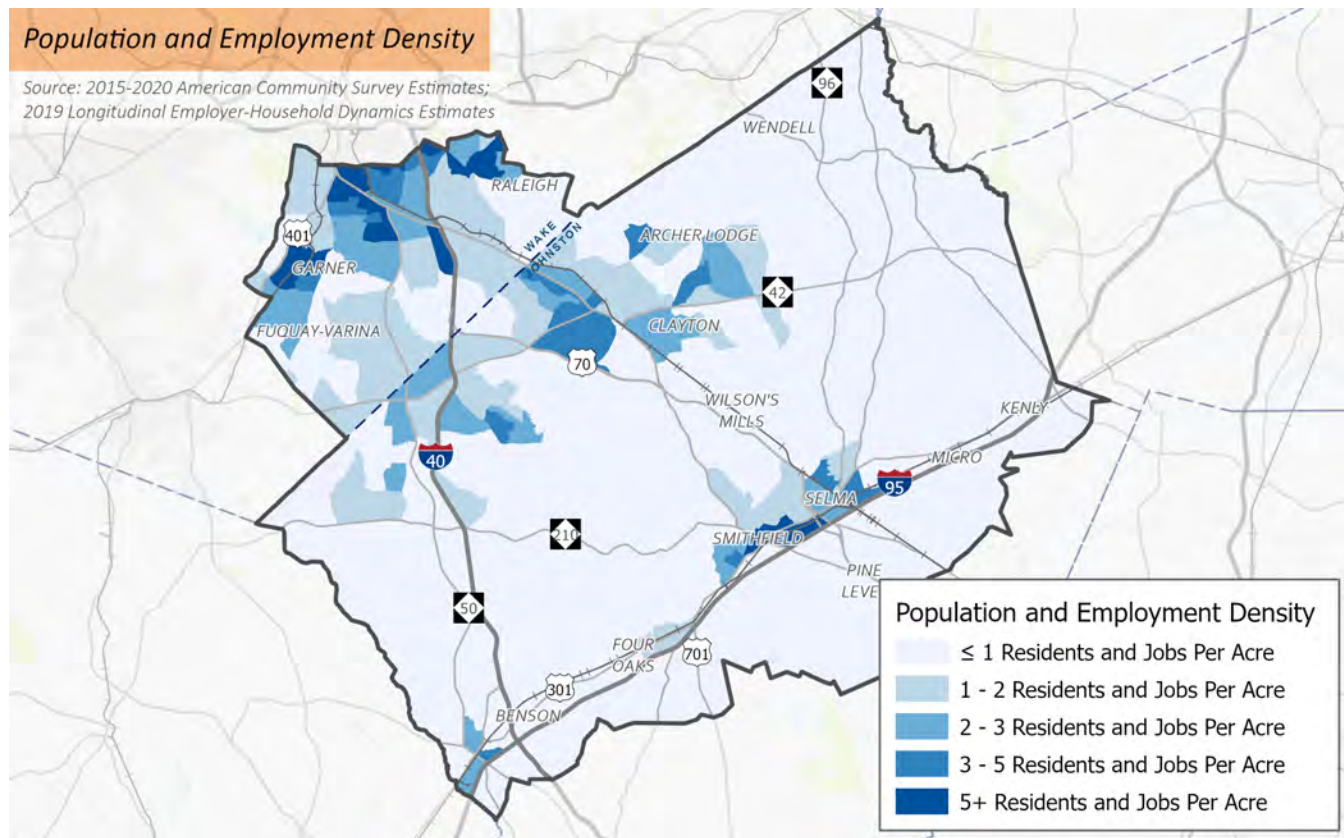
POPULATION AND EMPLOYMENT DENSITY

The presence of residents and jobs indicates demand for transportation infrastructure, as higher population and job densities result in more trips. At higher densities and with the right investments, transit services become viable, and residents may live close enough to jobs and services that active transportation (i.e., walking and biking) become capable of meeting transportation needs.

At higher densities and with the right investments, transit services become viable.

Figure 5 depicts the job and population density within the Southeast Area. Densities are generally highest in Wake County, though pockets of density are found along Interstate 40 and in and around Clayton, Selma, Smithfield, and Benson in Johnston County.

FIGURE 5: POPULATION AND EMPLOYMENT DENSITY



ACTIVE TRANSPORTATION SUITABILITY

Areas with a higher density of low-stress roads present the best opportunities to invest in active transportation infrastructure as a means of encouraging multi-modal travel. To identify these areas, each road segment in the Southeast Area was scored based on its suitability for bicyclists and pedestrians. A score of four represents a very high-stress environment, completely unsuited to bicycling and walking, while a score of one indicates a low-stress environment, suitable for bicyclists and pedestrians of all ages and abilities. Variables used in ranking road segments include its classification, the number of lanes, and speed limit. Lower speed local and collector roads with fewer lanes will be more suitable for active transportation and thus have a lower traffic stress score. **Table 1** summarizes the assignment of level of traffic stress scores.

Areas with a higher density of low-stress roads present the best opportunities to invest in active transportation infrastructure as a means of encouraging multi-modal travel.

TABLE 1: LEVEL OF TRAFFIC STRESS SCORING

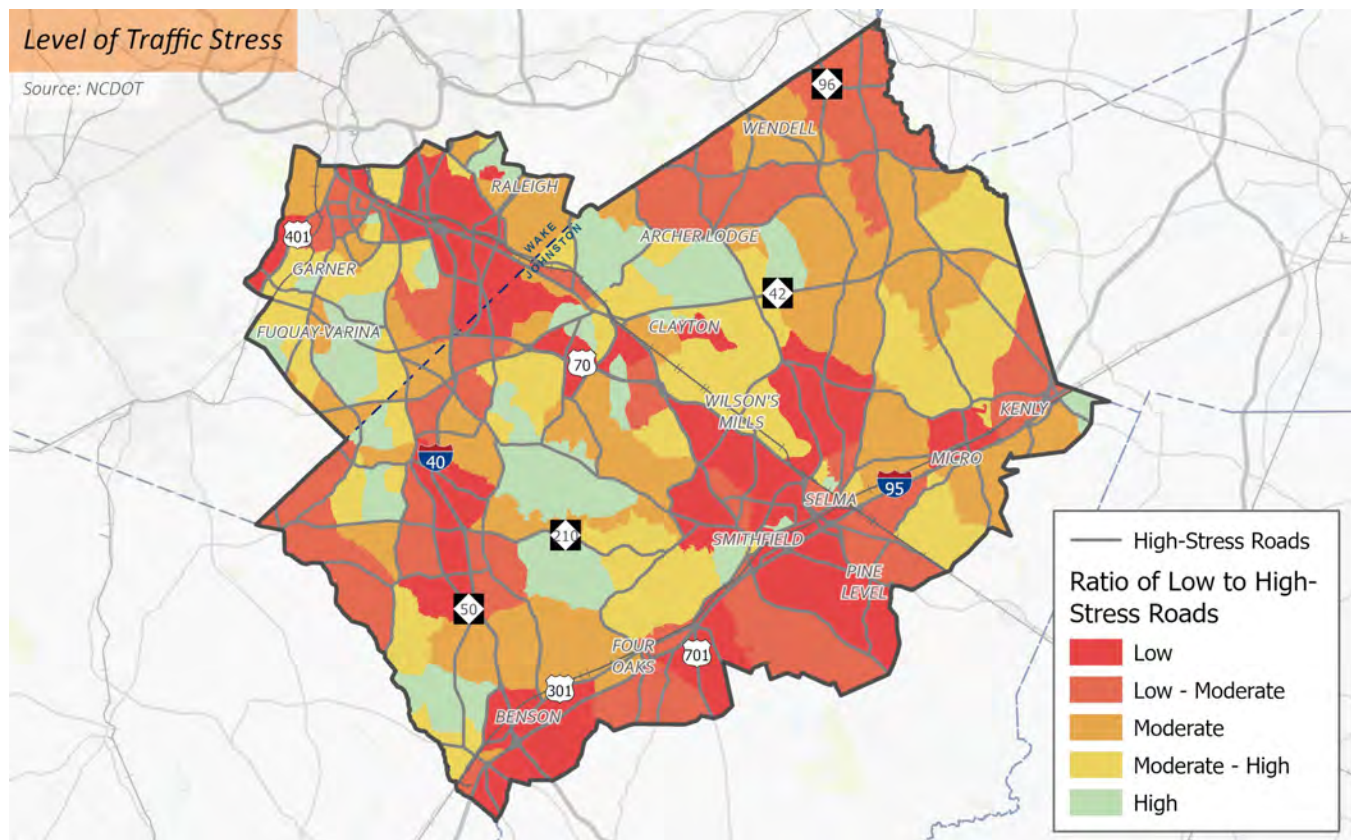
Speed Limit	Number of Lanes	Local Roads	Collector Roads	Arterial Roads
≤25	≤3	1	2	4
	4-5	2	3	4
	≥6	-	4	4
>25	≤3	2	3	4
	4-5	4	4	4
	≥6	-	4	4

To determine the relative active transportation suitability of each block group in the Southeast Area, the ratio of low- to high-stress linear miles was calculated. Segments with a traffic stress score of one or two were considered low-stress, while segments with a score of three or four were considered high-stress.

Figure 6 depicts the ratio of low- to high-stress roads within the Southeast Area by block group, overlaid with high-stress roads. Areas with the highest ratio of low to high-stress roads, indicating more roads appropriate for active transportation, are depicted in green; areas with the lowest ratio of low to high-stress roads, indicating fewer roads appropriate for active transportation, are depicted in red. The largest concentrations of low-stress roads are found in and around Clayton, Archer Lodge; smaller concentrations are also present in Selma, Smithfield, and Garner. Additionally, some low-density areas throughout the study area score favorably on this metric. While the Southeast Area contains many low-stress roads, except for the more developed areas of Johnston County (e.g., Clayton, Selma, and Smithfield), these primarily exist off of high-stress roads. Accordingly, while residents may find opportunities for recreation along their neighborhood roads, the lack of connectivity between low-stress roads limits the potential for active transportation.

While residents may find opportunities for recreation along their neighborhood roads, the lack of connectivity between low-stress roads limits the potential for active transportation

FIGURE 6: LEVEL OF TRAFFIC STRESS

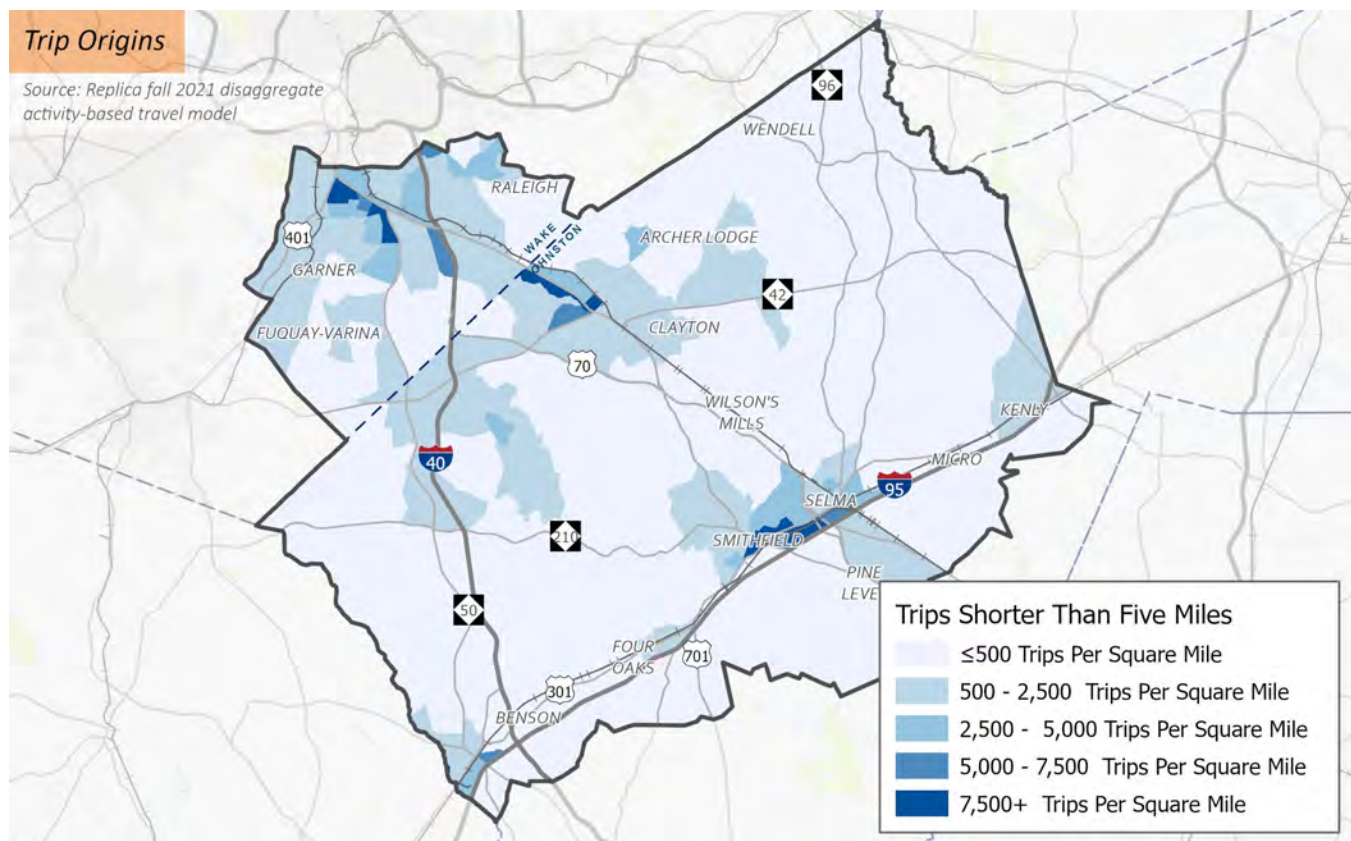


TRIP ORIGINS

More transportation infrastructure is required in areas where the greatest number of trips occur. Reflecting this need, short trip origins (i.e., the number of trips per square mile less than five miles in length) were summed by block group³. Eliminating trips longer than five miles from consideration not only balances the active transportation suitability variable, which inherently favors areas of low density due to the level of traffic stress scoring methodology, but also ensures the prioritization of local transportation investments most likely to reduce the Southeast Area's reliance on single occupancy vehicle travel. These shorter trips are also more easily served by microtransit, which is most efficient for short trips within small service areas.

Figure 7 depicts the number of trips less than five miles originating in each block group. Within the Southeast Area, these trips primarily occur in and around Garner, Clayton, and Smithfield.

FIGURE 7: TRIP ORIGINS PER SQUARE MILE (TRIPS SHORTER THAN FIVE MILES)



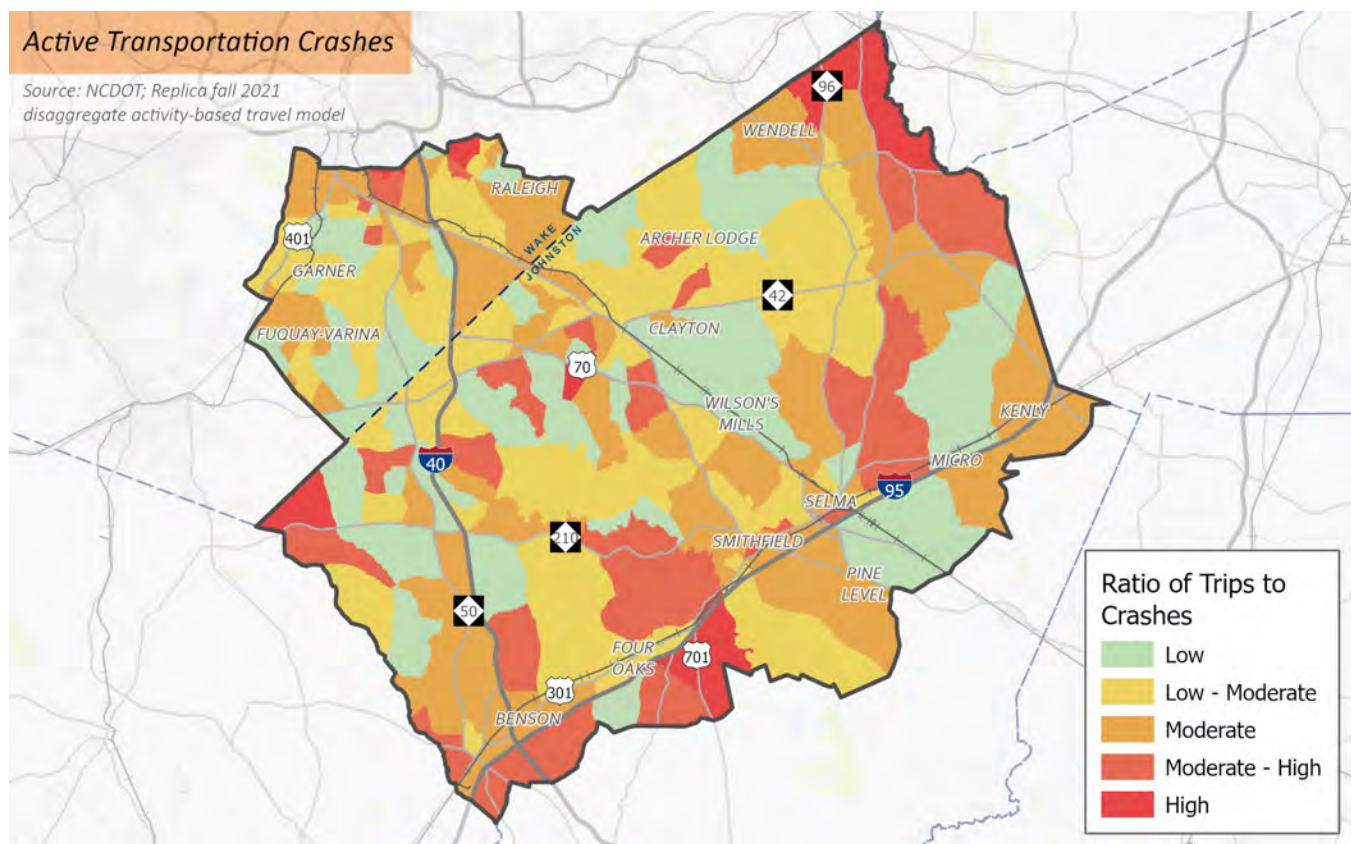
³ This figure comes from the [Replica](#) disaggregate activity-based travel model of travel during fall 2021.

CRASHES INVOLVING BICYCLISTS AND PEDESTRIANS

Despite the auto-oriented nature of development in the Southeast Area, a significant number of active transportation trips occur each day (modeling indicates the primary mode of more than 65,000 trips – roughly six percent of all trips in the Southeast Area⁴ – is bicycling or walking). Equitable transportation planning demands deliberate planning for the safety of these road users. Accordingly, crashes involving bicyclists and pedestrians were summed by block group and normalized by the number of active transportation trips originating in the same geography⁵.

Figure 8 depicts this ratio of active transportation crashes to trips. Trends are difficult to discern based on this analysis for two reasons. Notably, NCDOT records indicate that fewer than 200 crashes involving bicyclists and pedestrians occurred in the Southeast Area between 2007 and 2021 as few residents engage in active transportation; additionally, very few short trips occur in many low-density parts of the Southeast Area, so the presence of any crashes result in a high ratio of trips to crashes. Nevertheless, those figures indicate approximately 14 bicyclists and pedestrian crashes every year on average in the study area, making this variable a critical dimension of the transportation need index.

FIGURE 8: ACTIVE TRANSPORTATION CRASHES, NORMALIZED BY MODELED TRIPS



⁴ The active transportation mode share in the Southeast Area is comparable to the active transportation mode share in Johnston County.

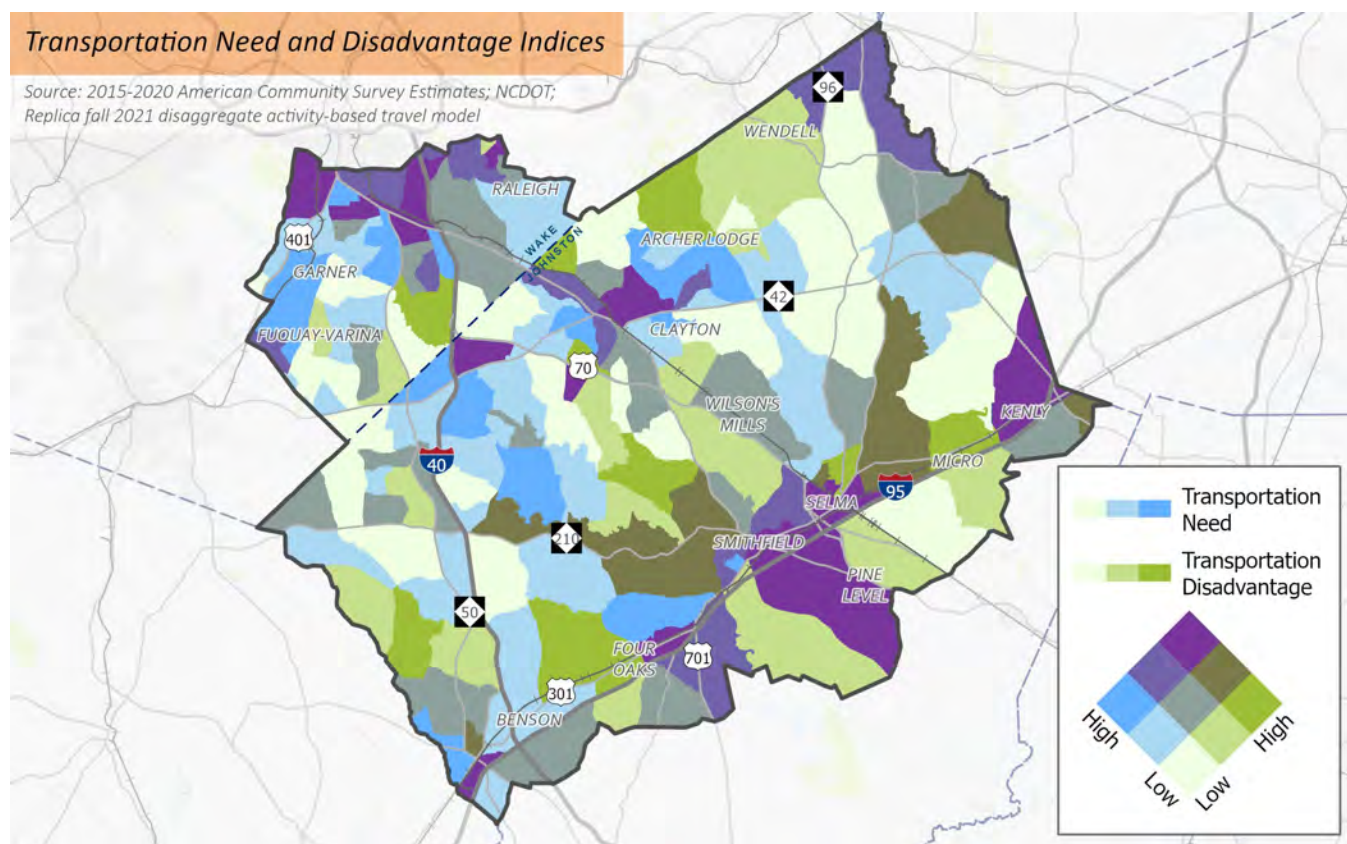
⁵ This figure comes from the [Replica](#) disaggregate activity-based travel model of travel during fall 2021.

Potential Priority Areas

A bivariate analysis, combining the transportation need and disadvantage indices, identifies areas where transportation investments will be most impactful for the people who need them most. **Figure 9** combines these indices, with dark purple depicting block groups scoring high on both the Transportation Need Index and Transportation Disadvantage Index⁶. Based on these results, general priority areas for investments include the following areas:

- The Route 301 corridor running through Four Oaks, Smithfield, Selma, and Kenly.
- Garner, particularly along the Route 70 corridor.
- Clayton, northeast of Route 70.
- Pine Level.

FIGURE 9: TRANSPORTATION NEED AND DEMAND INDICES



⁶ Light green depicts block groups scoring low on both the Transportation Need Index and Transportation Disadvantage Index; dark blue depicts block groups scoring high on the Transportation Need Index but low on the Transportation Disadvantage Index; conversely, dark green depicts block groups scoring low on the Transportation Need Index but high on the Transportation Disadvantage Index.

APPENDIX D:

Multimodal Intersection Control Evaluation (ICE)Toolkit

SEAS

S O U T H E A S T A R E A S T U D Y

U P D A T E

Archer Lodge | Benson | Clayton | Four Oaks | Garner | Kenly | Micro | Pine Level | Selma |
Smithfield | Wilson's Mills | Parts of Raleigh, Johnston County, and Wake County

MULTIMODAL INTERSECTION CONTROL EVALUATION (ICE) TOOLKIT

Photo: NCDOT

What is ICE?

Intersection Control Evaluation (ICE) is a performance-based process and framework used to consider alternatives and identify optimal solutions for intersection improvements. The central goals of ICE are to improve **transparency**, **flexibility**, and **adaptability** during the intersection improvement process.

An ICE is a two-step process of **screening** potential intersection design alternatives and **selecting** the ultimate preferred alternative.

What About Other Modes?

The term “multimodal” includes a variety of road users in addition to the driver, including **people walking and rolling, biking, and taking transit**. As the Southeast Area grows and builds out plans for sidewalks, greenways, transit service, new roadways, and mixed-use centers, it will become increasingly important for **access, mobility, and safety** to include accommodations for multimodal users in roadway design.

Intersection Control Evaluations typically focus on safety and delay reduction benefits; however, some ICEs focus more heavily on delay first and vehicle safety second, and have very limited focus on how alternative designs impact the safety and convenience of multimodal users. **The needs of multimodal users must be considered from the beginning to ensure that intersections are safe and efficient for everyone.**



Including multimodal accommodations in roadway and intersection projects at the outset of a project can avoid added costs from retrofitting infrastructure at a later date.

Why is it Important to Design Intersections for Multiple Modes?

Infrastructure makes a difference.

Between 2007 and 2021, roughly 98% of recorded pedestrian fatalities and serious injuries in the Southeast Area were in places without sidewalks and 100% of bicyclist fatalities and serious injuries were in places without bike facilities.

Multimodal design should serve all kinds of users.



People walking or rolling

Intersections are a critical part of the pedestrian network. Crossings need to be short, direct, and predictable with enough time for people of all ages and abilities to cross safely.

Crossings also need to be designed for accessibility, with design elements like accessible ramps and signals with audio cues to assist vision-impaired users.



People biking

To be bike-friendly, intersections need to be designed to get people biking safely through the intersection, with dedicated space, minimized conflicts with car lanes, and clear indications of how to navigate the space.



Transit riders

Transit stops are often located near major destinations but riders may have to cross busy intersections to get to their desired destination, making intersections designed for safety critical to ensuring transit is accessible.



Drivers

Intersections that take speed, signal-timing, sight-distance, user behavior, inclement weather conditions, and other safety factors into account can help prevent severe and fatal car crashes.

Intersection design is critical.

Intersections are major conflict points between people walking and biking and fast-moving multi-ton vehicles. Intersections designed only for traffic flow limit where people can comfortably walk and bike and jeopardize the safety of people who have to cross.

Multimodal design should provide access and mobility to more people.



People with no vehicle access

4.1% of Southeast Area households have no access to a vehicle.



People in one vehicle households

23.9% of Southeast Area households have access to one vehicle- but it may not always be available if there are conflicting travel needs or repairs.



Children too young to drive

20.8% of Johnston County's population and 19.6% of Wake County's population are under the age of 15 and too young to get a learner's permit in North Carolina.



Seniors no longer able to drive safely

2018 research by Hedges & Company found that across the US, around 6.5% of people ages 50-69, 15.1% of people ages 70-84, and 39.9% of people over 85 lacked a driver's licenses.



People with disabilities that prevent driving

Only 60.4% of people ages 16-64 with disabilities in the US have licenses compared to 91.7% of people without disabilities.

People outside cars are at the most risk.

In the US, pedestrian fatalities have risen 77% since 2010 and bicycle fatalities have risen 44% since 2011. More people walking were killed by vehicles in 2022 than in any year since 1981. In spite of these striking numbers, research shows pedestrian and bike crashes are still consistently underreported.

Multimodal design should provide alternatives to worsening congestion.

Each person driving is another car on the road adding to traffic. Multimodal design provides alternatives that can help mitigate congestion by getting more cars off the road.



People have options for getting around besides driving on congested roads



People who choose alternative modes take cars off the road

Designing for all modes early can even help minimize project costs and cost increases by:



Avoiding paying to redo work and retrofit infrastructure completed in earlier phases/projects



Avoiding cost inflation from delayed construction

How do I Include Multiple Travel Modes when Doing an ICE?

Prioritize safety first and traffic flow second.

To design for safe and efficient movement of all modes when screening alternatives, in order of importance, *prioritize...*

1



Safety of People Outside Vehicles

Safety for all people using the road should always be the goal. However, **keeping all users safe requires first designing for the safety of the most vulnerable road users.**

People outside of vehicles, whether walking, rolling, or biking, are the most at risk of getting seriously injured or killed if involved in a car crash.

2



Safety of People Inside Vehicles

Designing for the safety of all road users also means emphasizing safety for people driving or riding in vehicles. Designs should **prioritize preventing the types of crashes that cause the most serious and fatal injuries.**

3



Traffic Flow

Multimodal design should ensure that users of **all modes can move efficiently** through an intersection. Designing for the movement of all modes can help reduce conflicts between modes that hinder both efficiency and safety.

Think “Location, location, location”

Not all locations need to be inclusive of all modes, but intersections should safely incorporate all modes expected based on existing routes, destinations, and future plans. When screening alternatives, ask yourself, *is the intersection...*



On the pedestrian network?



On a bike route or shared use path?



On a transit route or near a transit stop?



Near destinations people would walk or bike to?



Where land use supports or is planned to support walking and biking?



Where it would be difficult and expensive to add multimodal provisions later?

Multimodal Design Principles

There are a variety of proven intersection solutions that keep people walking, biking, and taking transit safe.

Safety-focused principles



Deter high speeds

Speed is one of the largest threats to safety for all road users. The higher the speed a pedestrian or bicyclist is hit at, the more likely they are to die. Speed also impacts the severity of car crashes and can be the difference between a fender-bender and a catastrophic fatal collision.

- Traffic calming methods like **raised crossings** and **narrowed lanes** can help discourage deadly speeds through an intersection. Specific intersection designs like **roundabouts** and **protected intersections** can also encourage reduced speeds and increased caution.
- **Signal timing** can also be used to keep cars from gaining too much speed between signals.



Ensure visibility

Intersections need to be designed for **clear visibility and safe sight distances**. Drivers need to be able to see people crossing on foot or on bikes with enough time to stop, and other users such as transit riders, people walking, and people biking need to be able to see each other and drivers too.

- Removing parked cars, trees, and other visual obstacles closest to the corner (sometimes called “**daylighting an intersection**”) can help improve visibility.
- **Curb extensions** can also help in places with on-street parking by bringing the sidewalk as far out towards the intersection as possible and preventing illegal parking that would block sight lines.



Example of a raised crossing. Source: NACTO



Diagram of a corner of a protected intersection. Source: NACTO



Example diagram of intersection visibility. Source: NACTO

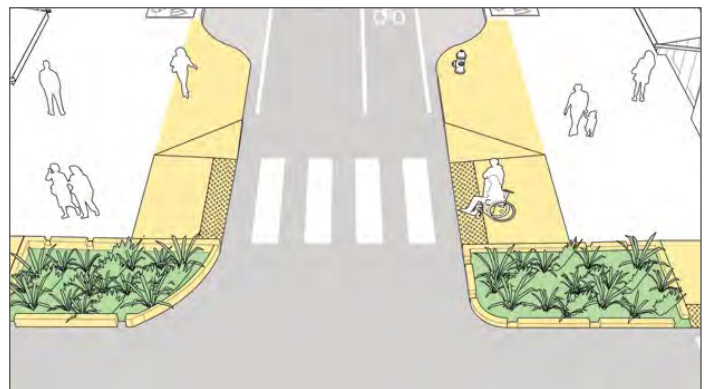


Illustration of a curb extension. Source: NACTO

Safety-focused principles (continued)



Prevent wide and fast turns

One in four vehicle-pedestrian crashes in the Triangle region occur when a car is turning at an intersection or driveway. Many intersections are designed with large radii, wide turning slip lanes, and medians that end far back from the intersection, allowing for and encouraging fast turns. However, **fast, sweeping turns can be deadly**, and make it harder for a turning driver to see or stop in time for a person crossing.

- **Avoid slip lanes**, as they encourage blind turns that put people crossing at risk. Where turn lanes exist, **require turning traffic to yield and avoid making turning vehicles merge through bike lanes**.
- **Minimize curb radii** to discourage wide and fast right turns by rebuilding the corner with a smaller radius, **curb extensions** on streets with parking, or by using **road markings** or **street art** to square off corners (preferably paired with bollards or planters for protection).
- **Centerline hardening**, typically extending the median or centerline out into an intersection with either concrete/planters or flex posts and modular curbs, can help discourage wide and fast left turns.



Minimize turn conflicts

Turn conflicts can be extremely dangerous, especially when signals can give both a turning driver and crossing pedestrians or bicyclists the go ahead. **This puts people crossing directly in danger — even when both drivers and pedestrians/bicyclists follow signals.**

- **Ensure signal phases don't put people crossing in harm's way.** Make sure that turning traffic isn't given a green light that would conflict with a walk signal or bike green light.
- **Leading Pedestrian Intervals (LPIs)** and **Leading Bicycle Intervals (LBIs)** can be implemented at signals to give people crossing time to get farther across the street and be visible before vehicles can proceed.
- **Dedicated left-turn phases** and **restricting right-turns-on-red** can help avoid blind turns where drivers are looking more at oncoming traffic than people crossing on foot or bike.

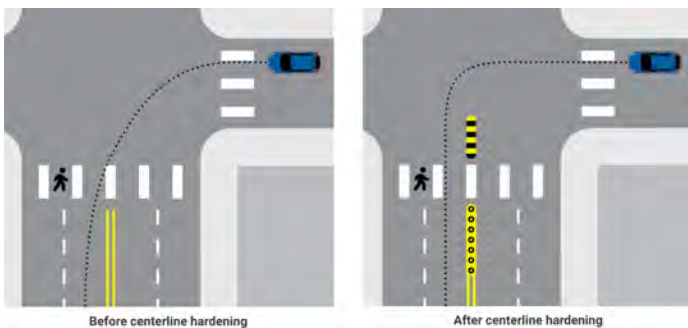
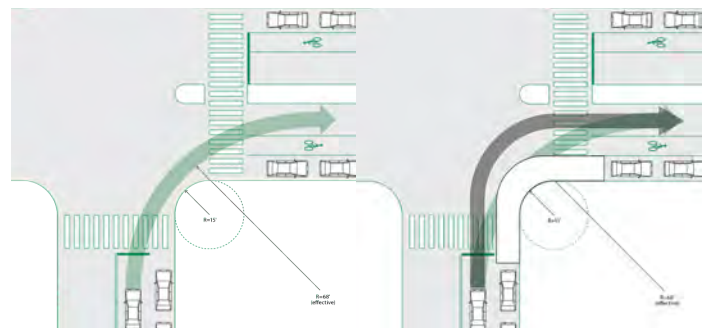


Diagram of centerline hardening. Source: IIHS



Example of using a curb extension to reduce turn radii. Source: NACTO

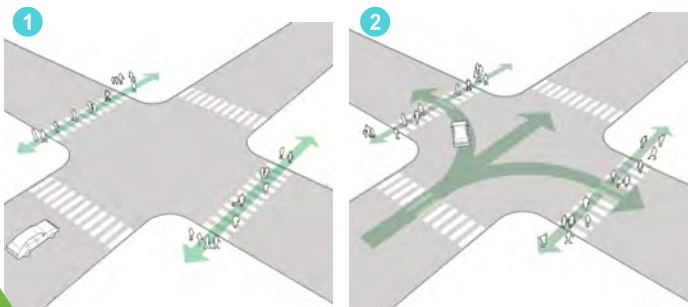


Diagram of a Leading Pedestrian Interval. Source: NACTO

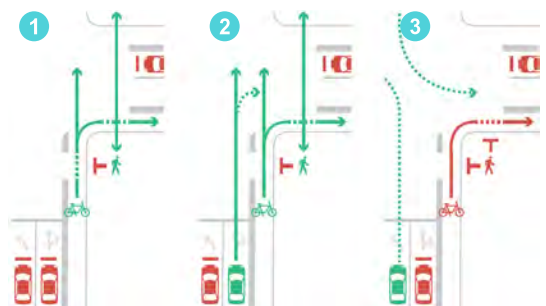


Diagram of a Leading Bicycle Interval. Source: NACTO

Flow-focused principles



Time signals for flow of all modes

Traffic flow is just as important for transit riders and people walking, rolling, and biking as it is for drivers. **Make sure all modes can move reasonably quickly and safely through the intersection.** This may mean prioritizing people walking/biking and transit vehicles over longer phases for drivers in locations with heavy pedestrian traffic or along major transit routes.

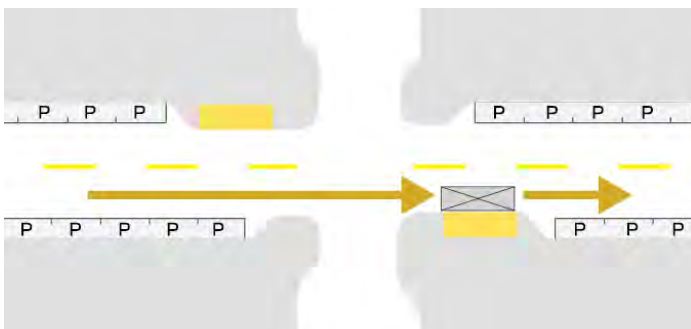
- **Keep signal phases reasonably short.** By cycling quickly through several shorter phases rather than longer ones, no one is left waiting too long for an opportunity to proceed. This also helps discourage jaywalking and crossing against the signal.
- **Give people walking enough time to cross.** While phases should be reasonably short, it's important to ensure people who may be slower or have a disability can still safely get across without rushing.
- Keep crossings for people walking and biking as **short and direct** as possible. Where roads are wide enough that it would be difficult for some to cross in one short signal phase, **provide pedestrian refuge islands** in the median that people can safely cross to and wait at for the next pedestrian signal.
- **Time signals as part of a corridor.** Timing consecutive signals to match an intended speed can help keep vehicles moving smoothly and reduce the number of red lights drivers hit if they're traveling at the designated speed.



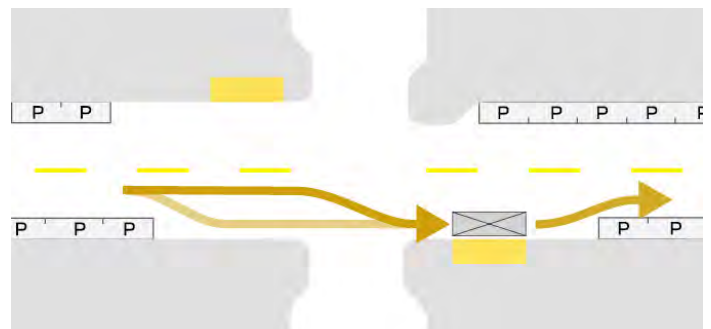
Include space for transit stops where applicable

Where transit routes are planned, transit stops should be placed in locations where buses can stop without substantially delaying buses and cars, causing traffic backups, or impeding the safety of transit users in the boarding process.

- **In-lane stops on the far side of an intersection** are best in most cases for keeping buses moving efficiently. These stops can often be placed on a curb extension and work especially well where bus lanes exist.
- In cases where an in-lane stop would cause traffic to back up into the intersection, consider a **pull-out stop**. Pull-out stops are sometimes paired with shared right-turn lanes that allow buses to proceed straight through the intersection to the stop; however, pull-out stops can add additional delay for buses as they re-enter the traffic lane.
- **Where bike lanes and in-lane bus stops overlap, divert bike lanes behind the stop.** This ensures people biking can proceed without the risk of hitting someone boarding or deboarding a bus.



Example of a far side, in-lane transit stop. Source: NACTO



Example of a far side, pull-out transit stop. Source: NACTO

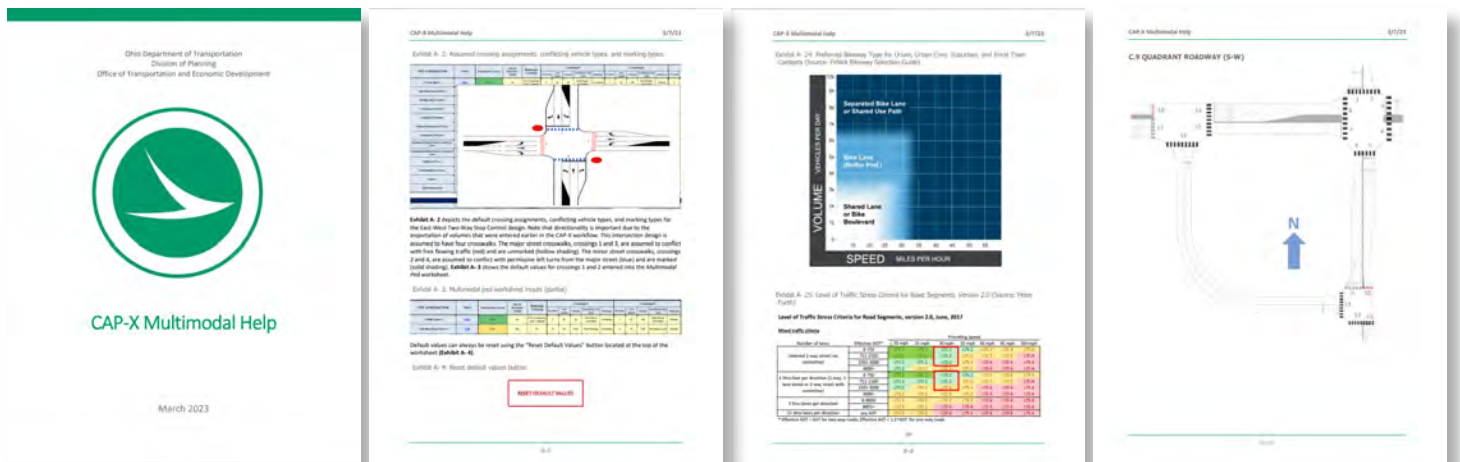
Case Studies and Resources

The following section provides a sample of resources that can help in choosing intersection design options that incorporate the needs of road users of all modes. Some are specific to Intersection Control Evaluations, while others provide general best practices for designing safe and convenient streets for people walking, rolling, biking, and taking transit.

ICE Examples

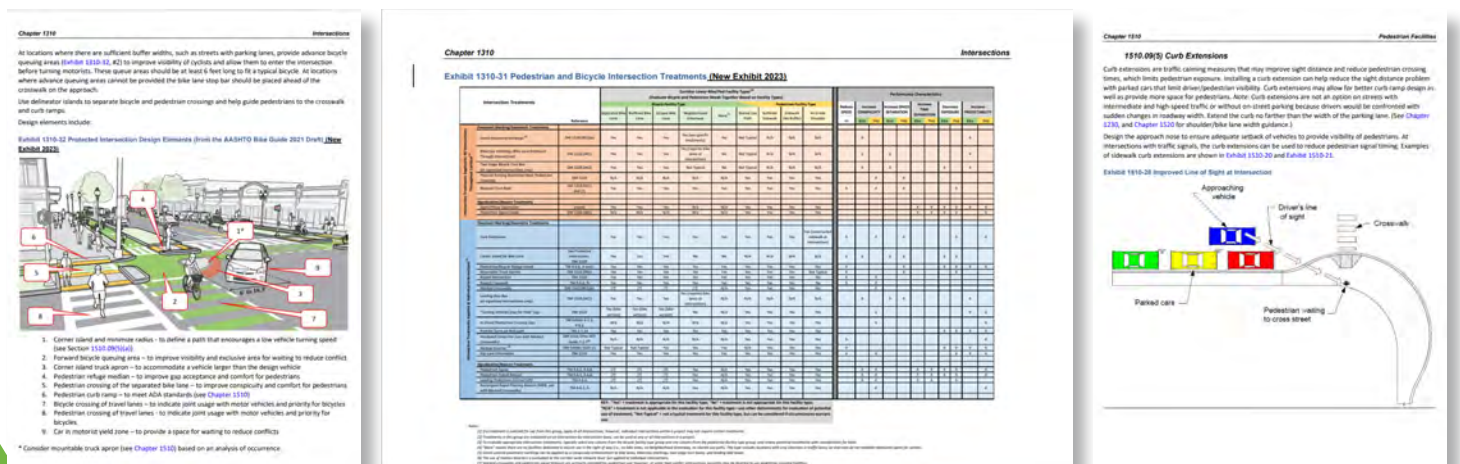
Ohio DOT (ODOT) CAP-X Multimodal Help Guide

As part of their ICE process, ODOT provides a guide that details how to use the spreadsheet-based CAP-X (Capacity Analysis for Planning of Junctions) tool for multimodal analysis. CAP-X scores performance for pedestrians and bicyclists based on design elements such as crossing length and directness. It also includes a variety of common intersection designs with their default pedestrian crossing locations, as well as specific considerations for bicycles.



Washington State DOT (WSDOT) Design Manual

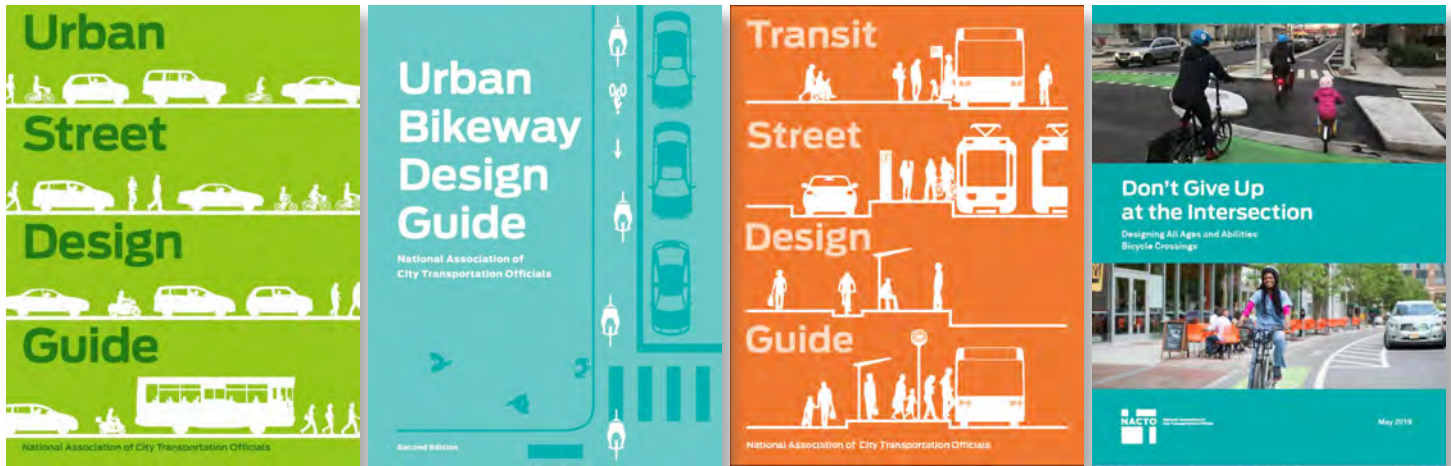
The WSDOT ICE design manual includes guidance on accommodating other transportation modes by detailing considerations for speeds, cycle lengths, turning movements, and ways to measure pedestrian demand. The ICE section has a matrix of potential intersection design interventions based on the characteristics of the specific location. Other sections of the manual provide more specific design guidance for intersections that include pedestrian crossings, shared use paths, or bike routes.



Other Resources

NACTO Design Guides

The National Association of City Transportation Officials (NACTO) provides a free series of design guides featuring options and best practices for urban streets, transit streets, urban bikeways, and more. Each guide includes intersection specific guidance.



North Carolina DOT (NCDOT) Complete Streets Project Evaluation Methodology

This methodology lists a series of steps for selecting a facility type and a matrix of potential facilities based on anticipated bike and pedestrian need, demand, and safety risk. The guide also directs readers to facility specifications in the NCDOT Roadway Design Manual for sidewalks, shared use paths, and bike lanes.

FHWA Separated Bike Lane Planning and Design Guide

The FHWA Separated Bike Lane Planning and Design Guide provides the tools to identify locations to include separated lanes, various intersection designs, midblock lane design considerations, and pavement markings.

Sources

FHWA; Separated Bike Lane Planning and Design Guide; https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/separated_bikelane_pdg/separatedbikelane_pdg.pdf

NACTO; Transit Street Design Guide; <https://nacto.org/publication/transit-street-design-guide/>

NACTO; Urban Street Design Guide; <https://nacto.org/publication/urban-street-design-guide/>

NACTO; Urban Bikeway Design Guide; <https://nacto.org/publication/urban-bikeway-design-guide/>

NACTO; Don't Give Up at the Intersection; <https://nacto.org/publication/urban-street-design-guide/>

NCDOT; Complete Streets Project Evaluation Methodology; <https://connect.ncdot.gov/projects/BikePed/Documents/Complete%20Streets%20Evaluation%20Methodology.pdf>

ODOT; CAP-X Multimodal Help; https://www.transportation.ohio.gov/wps/wcm/connect/gov/c03b7448-e2ee-4ba4-b2c0-5a7664221630/CAP-X+Multimodal+Help+File.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_K9I401S01H7F40QBNJU3SO1F56-c03b7448-e2ee-4ba4-b2c0-5a7664221630-orr52qR

WSDOT; Design Manual; see chapters 1300, 1510, 1515, and 1520; <https://www.wsdot.wa.gov/publications/manuals/fulltext/M22-01/design.pdf>

Watch For Me NC; Crash Facts; <https://www.watchformenc.org/crashfacts/#:~:text=One%20in%20four%20vehicle%2Dpedestrian,Triangle%20happen%20in%20parking%20lots.>

Hedges & Company; How Many Licensed Drivers Are There in the USA?; <https://hedgescompany.com/blog/2018/10/number-of-licensed-drivers-usa/>

Bureau of Transportation Statistics; Travel Patterns With Disabilities; <https://www.bts.gov/travel-patterns-with-disabilities>

Southeast Area Study Update

This booklet is a product of the Southeast Area Study (SEAS) Update and is intended to serve as a technical resource to help planners, engineers, and developers advance the *guiding principles of the study...*



LIVABILITY

Enhance and promote our region's quality of life through transportation and land use decisions that equitably support public health, education, parks and recreation, public art, and local character.



TRAFFIC FLOW

Make it easier to move within and through our region by reducing congestion and improving roadway operations.



SUSTAINABLE GROWTH

Blend development decisions and transportation strategies to promote and sustain employment and population growth by offering housing and neighborhood choices to meet diverse needs while preserving the area's natural features.



TRAVEL SAFETY

Promote a safer, more secure transportation system by reducing crashes, enhancing reliability and predictability, and improving emergency coordination.



ACTIVE TRANSPORTATION

Integrate our transportation network to provide travel choices, especially walking and cycling, for all users, regardless of age and ability.



NETWORK CONNECTIVITY

Link local and regional destinations through improved connections and enhanced integration among travel modes.



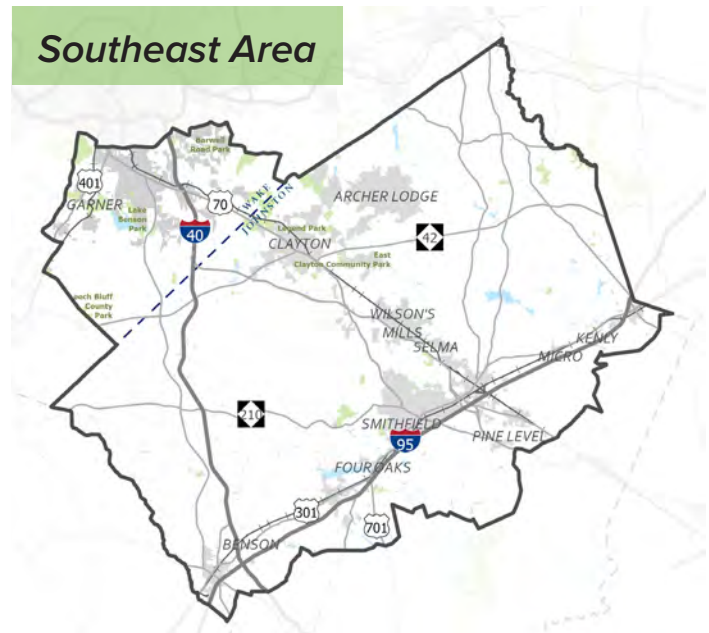
ECONOMIC VITALITY

Grow our economy through a transportation network that connects residents to jobs, goods, services, and opportunities within and beyond our region.



FREIGHT MOVEMENT

Support global competitiveness of our region through a transportation network that efficiently moves goods and services.



As the Southeast Area grows and changes, **multimodal design will be increasingly important to advancing these principles.** The SEAS Update includes recommendations for multimodal facilities and intersection improvements, and this toolkit provides guidance and resources for choosing alternatives that meet the needs of all users, whether driving, walking, rolling, biking, or taking transit.

Find out more about the SEAS Update at: www.campo-nc.us

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**TRAFFIC FLOW**

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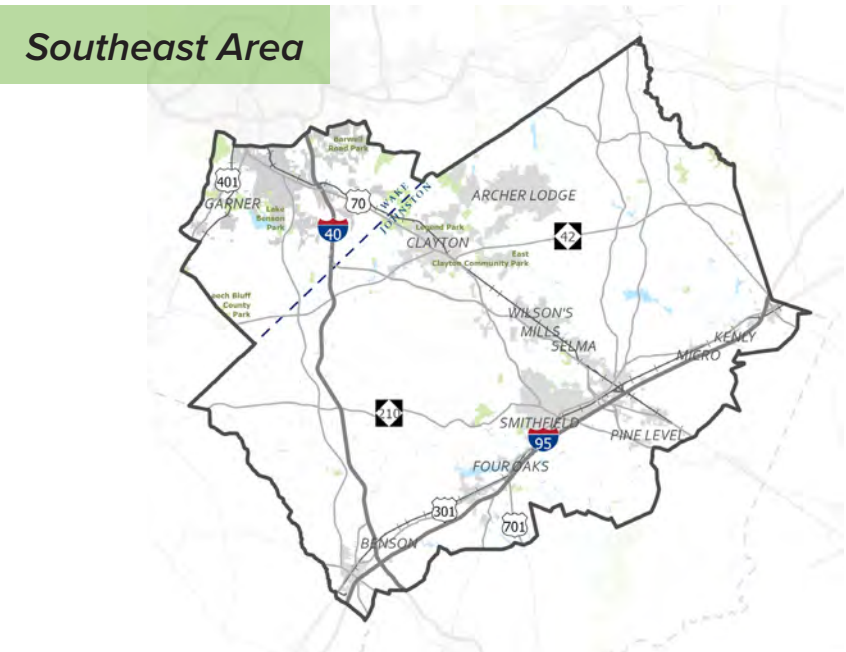
**ACTIVE TRANSPORTATION**

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ODOT; CAP-X Multimodal Help; https://www.transportation.ohio.gov/wps/wcm/connect/gov/c03b7448-e2ee-4ba4-b2c0-5a7664221630/CAP-X+Multimodal+Help+File.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_K9I40IS01H7F40QBNJU3SO1F56-c03b7448-e2ee-4ba4-b2c0-5a7664221630-orr52qR

WSDOT; Design Manual; see chapters 1300, 1510, 1515, and 1520; <https://www.wsdot.wa.gov/publications/manuals/fulltext/M22-01/design.pdf>

SEAS

S O U T H E A S T A R E A S T U D Y

UPDATE

Archer Lodge | Benson | Clayton | Four Oaks | Garner | Kenly | Micro | Pine Level | Selma | Smithfield | Wilson's Mills | Parts of Raleigh, Johnston County, and Wake County



Photo: NCDOT

What is ICE?


Intersection Control Evaluation (ICE) is a performance-based process and framework used to consider alternatives and identify optimal solutions for intersection improvements. The central goals of ICE are to improve **transparency**, **flexibility**, and **adaptability** during the intersection improvement process.

An ICE is a two-step process of **screening** potential intersection design alternatives and **selecting** the ultimate preferred alternative.

What About Other Modes?

The term “multimodal” includes a variety of road users in addition to the driver, including **people walking and rolling**, **biking**, and **taking transit**. As the Southeast Area grows and builds out plans for sidewalks, greenways, transit service, new roadways, and mixed-use centers, it will become increasingly important for **access**, **mobility**, and **safety** to include accommodations for multimodal users in roadway design.

Intersection Control Evaluations typically focus on safety and delay reduction benefits; however, some ICEs focus more heavily on delay first and vehicle safety second, and have very limited focus on how alternative designs impact the safety and convenience of multimodal users. **The needs of multimodal users must be considered from the beginning to ensure that intersections are safe and efficient for everyone.**

 Including multimodal accommodations in roadway and intersection projects at the outset of a project can also help avoid added costs from retrofitting infrastructure at a later date.

How do I Include Multiple Travel Modes when Doing an ICE?

Prioritize safety first and traffic flow second.

To design for safe and efficient movement of all modes when screening alternatives, in order of importance, **prioritize...**

Safety, first of the people outside of vehicles who are most at risk of injury, followed by the safe movement of vehicles through the intersection.

Efficient movement of all modes that must travel through the space.



Think “Location, location, location”

Not all locations need to be inclusive of all modes, but intersections should safely incorporate all modes expected based on existing routes, destinations, and future plans. When screening alternatives, ask yourself, *is the intersection...*

- | | |
|---|--|
|  On the pedestrian network? |  On a transit route or near a transit stop? |
|  On a bike route or shared use path? |  Near destinations people would walk or bike to? |
|  Where it would be difficult and expensive to add multimodal provisions later? |  Where land use supports or is planned to support walking and biking? |

Key multimodal principles for safety and efficiency

There are various proven solutions that keep people walking, biking, and taking transit safe. *Consider intersection solutions that...*

- | | |
|---|---|
|  Deter high speeds |  Minimize turn conflicts |
|  Ensure visibility |  Time signals for flow of all modes |
|  Prevent wide and fast turns |  Include space for and access to transit stops |

Why is it Important to Design Intersections for Multiple Modes?

Infrastructure makes a difference.

Between 2007 and 2021, roughly **98%** of pedestrian fatalities and serious injuries in the Southeast Area were in places **without sidewalks** and **100%** of bicyclist fatalities and serious injuries were in places **without bike facilities**.

Intersection design is critical.

Intersections are major conflict points between people walking and biking and fast-moving multi-ton vehicles. Intersections designed only for traffic flow limit where people can comfortably walk and bike and jeopardize the safety of people who have to cross the street.

Multimodal design should...serve all kinds of users...

- | | |
|---|--|
|  People walking or rolling |  Transit riders |
|  People biking |  Drivers |

...provide access and mobility to more people...



- | | |
|--|--|
|  People with no vehicle access |  Children too young to drive |
|  People in one vehicle households |  Seniors no longer able to drive safely |

 People with disabilities that prevent driving

...and provide alternatives to worsening congestion.

- | | |
|--|--|
|  People are given options for getting around besides driving on congested roads |  People who choose alternative modes free up space on the road for others |
|--|--|

Designing for all modes early can even help minimize project costs and cost increases by:

-  Avoiding paying to redo work and retrofit infrastructure completed in earlier phases/projects
-  Avoiding cost inflation from delayed construction

APPENDIX E:

US 70/NC 42/Ranch Road Hot Spot Memo

MEMORANDUM

To: Gaby Lontos-Lawlor, AICP
CAMPO

From: Samantha Borges, AICP
Kimley-Horn and Associates, Inc.

Date: December 1st, 2023

Subject: CAMPO SEAS Update – Hot Spot Study: US 70 Business at NC 42 East/Future Ranch Road (Rose Street)

Introduction

As part of the preparation of the Capital Area Metropolitan Transportation Organization (CAMPO) Southeast Area Study Update (SEAS), several Special Study intersections (also referred to as “Hot Spots”) were identified for preliminary analysis. Locations were initially identified based on crash rates and other safety considerations including railroad crossings, local transportation/land use plans, and transportation equity considerations. Additional locations were then considered based on feedback from the project’s Core Technical Team (CTT), development trends, planned transit, and existing/ongoing roadway projects.

Based on feedback from CAMPO, the following Hot Spot location was identified for evaluation as part of the SEAS update:

Location: US 70 Business at NC 42 East/Future Ranch Road (Rose Street)

Consistent with the goals for the SEAS Update, review of this Hot Spot location is intended to evaluate the feasibility of improvements and concepts to guide future improvements in the study area. It is anticipated that future development and projects around this intersection will require additional, specific evaluations, but this evaluation is expected to provide an appropriate framework for consideration.

Hot Spot Location: US 70 Business at NC 42 East/Future Ranch Road (Rose Street)

Objective: Develop potential interchange configurations that grade separate the railroad crossing and identify probable impacts to existing and future surrounding properties.

CURRENT CONFIGURATION

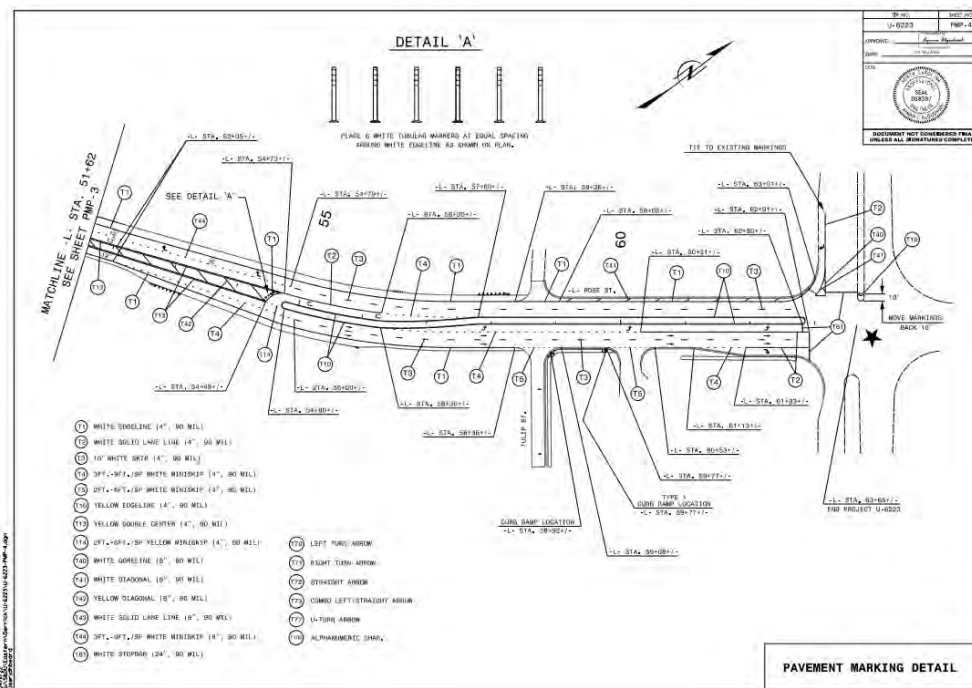


The intersection of US 70 Business at NC 42 East/Rose Street is a “traditional” signalized four-way intersection. At this location, the US 70 Business is a four-lane median-divided roadway with exclusive left- and right-turn lanes onto NC 42 East and Rose Street. Dual eastbound left-turn lanes are provided onto NC 42 East and a single westbound left-turn lane is provided onto Rose Street. Both westbound and eastbound US 70 Business have right turn lanes onto NC 42 East and Rose Street; however, the westbound right turn lane onto NC 42 East is a slip lane with a yield while the

eastbound right turn lane onto Rose Street requires a full stop at the intersection. The right turn lane onto Rose Street is expected to be upgraded to a slip lane with the construction of the Ranch Road extension project (U-6223).

NC 42 East is also a four-lane divided roadway at this location, with an exclusive left-turn lane onto US 70 Business eastbound towards Smithfield and Selma. However, only one lane continues straight onto Rose Street, while the rightmost lane turns into a free-flowing merge lane merging onto US 70 Business westbound towards Garner and Raleigh. About 60 feet east of the intersection along NC 42 East is an at-grade railroad crossing with the H-Line corridor, which currently operates both Norfolk Southern freight traffic and Amtrak passenger trains *Carolinian* and *Silver Star* daily. This portion of NC 42 East is expected to remain mostly unchanged with the construction of the Ranch Road extension project (U-6223).

Rose Street is a three-lane roadway approaching this location, with exclusive left and right turn lanes onto US 70 Business and one through-lane that continues onto NC 42 East. However, the Ranch Road extension project (U-6223) would widen what is now Rose Street (to become part of Ranch Road upon the completion of the extension) to a four-lane divided roadway with two lanes continuing straight onto NC 42 East towards Wilson and exclusive left and right turn lanes onto US 70 Business.



Pavement marking details from the under construction Ranch Road extension project (U-6223). The pictured roadway will replace the existing Rose Street

The area surrounding the US 70 Business/NC 42 East intersection is low-density. While the west and south quadrants are mostly single-family residential, there is currently a Sheetz gas station and convenience store in the south quadrant and a warehouse belonging to Guy C. Lee Building Materials in the north quadrant, north of the tracks.

SPECIAL STUDIES CONSIDERATIONS

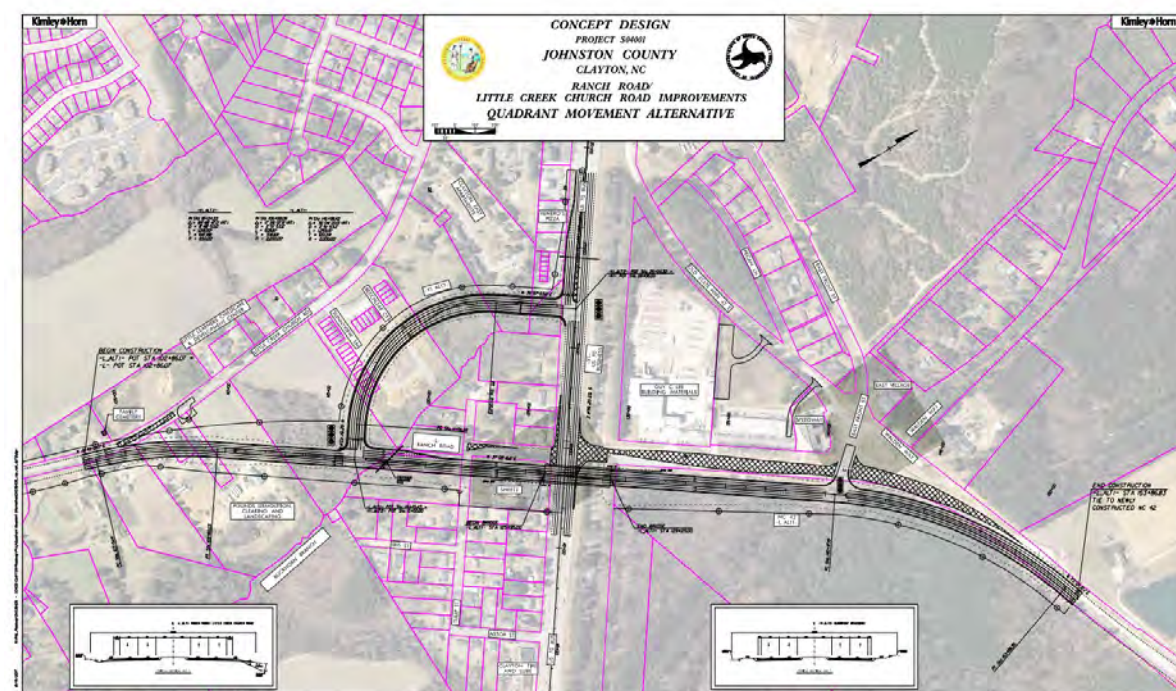
This intersection is planned to be developed through three phases. The first phase, currently under construction, is the aforementioned Ranch Road extension project (U-6223), which will extend/realign Ranch Road to connect to NC 42 East at US 70 Business to create a direct connection between NC 42 and the US 70 Clayton Bypass, along with the realignment of Boling Street/Little Creek Church Road. The second phase, planned to occur in the second decade of the 2050 Metropolitan Transportation Plan (MTP), would widen Ranch Road between the US 70 Clayton Bypass and US 70 Business to four lanes built to state highway standards and officially reroute NC 42 along Ranch Road. The third phase, the focus of this Hot Spot Study, would be in the third decade of the 2050 MTP and would place an interchange and rail grade separation at US 70 Business/NC 42 East once warranted.

As the area is rapidly changing and developing, this Hot Spot Study is intended to identify potential feasible interchange design alternatives and associated footprints for this location long-term. With the area's expected growth, it's critical to ensure that development does not impede the ability to construct the interchange in the future. This study is also considering impacts to existing and planned development including surrounding properties, a potential Aldi development in the northwest corner of the intersection, and planned transit expansion of the Southern Corridor Rapid Bus Extension and the Greater Triangle Commuter Rail.

Previous Study

NCDOT conducted a feasibility study for the US 70 Business/NC 42 East intersection in 2017. The study resulted in three alternative concepts (two grade separated and one at-grade intersection). The two grade separated alternatives, a half-clover interchange and a quadrant movement design, are pictured on the following page.

Both grade-separated designs would require significant impact to the Sheetz property to realign the roadway and construct the bridge over US 70 Business and the H-Line railroad tracks. The half-clover concept would heavily impact the neighborhood of homes to the bridge's east and west along Tulip Street. The quadrant movement alternative minimizes impacts to properties east of the bridge but would have greater impact on townhomes built off of Little Creek Church Road.



919-677-2000

OTHER ROADWAY PROJECT CONSIDERATIONS

Clayton Southern Connector

The longstanding Clayton Southern Connector project proposes a two-lane road connecting across southern Clayton between Guy Road/NC 42 and the Ranch Road extension using realigned portions of Dairy Road and a mostly new roadway between subdivisions and over Little Creek. The project is included in the CAMPO 2050 MTP with a horizon year of 2050.

The project was originally shown ending at the US 70 Business/NC 42 East intersection in the 2013 Johnston County CTP and 2017 SEAS but has since been adjusted in the 2050 MTP to reflect the Ranch Road extension connecting to NC 42 instead. However, the project as shown in the 2050 MTP still appears to conflict with the Little Creek Church Road/Boling Street realignment within the Ranch Road extension project. Within SEAS Update recommendation mapping, this was loosely adjusted to have the Southern Connector intersect with the Ranch Road extension further west from the Boling Street/Ranch Road intersection; however, further design/engineering would be needed to refine the alignment between Avondale Drive and the Ranch Road extension.



Diagram showing conflict between the Ranch Road Extension and the 2050 MTP version of the Clayton Southern Connector. Draft SEAS Update recommendations include a suggested modified alignment to address this, but further design/engineering is needed to refine alignment

Clayton Northern Connector

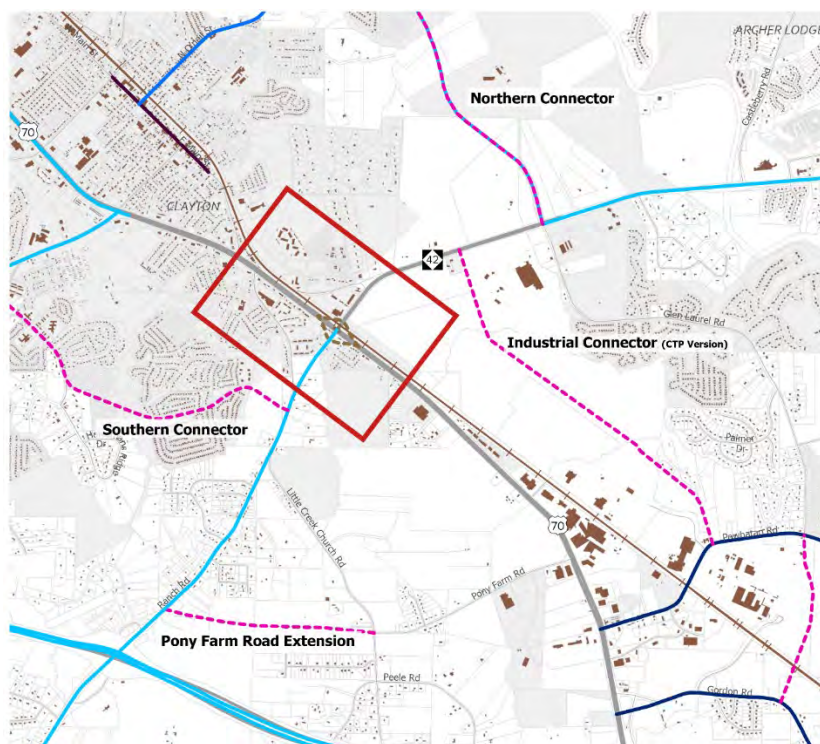
Another longstanding project, the Clayton Northern Connector project proposes a connection across northern Clayton using a realigned Covered Bridge Road and a new location roadway from O'Neil Street to the intersection of NC 42 East/Glen Laurel Road east of the US 70 Business at NC 42 hot spot. The 2050 MTP shows initial construction as a two-lane road with a horizon year of 2040, with a widening to four lanes in the horizon year of 2050.

Clayton Industrial Connector

A version of the Clayton Industrial Connector was brought forward from the 2013 Johnston County CTP as a draft SEAS Update recommendation. The roadway as proposed would connect NC 42 East and Powhatan Road and be roughly midway between US 70 and Glen Laurel Road, connecting and providing an alternate connection in an effort to reduce traffic on NC 42.

Extension of Pony Farm Road

An extension of Pony Farm Road is included in SEAS Update draft recommendations to provide additional east-west connectivity across the area southeast of Clayton and reduce congestion on NC 42. As proposed, Pony Farm Road would be extended from Little Creek Church Road to Ranch Road north of the Ranch Road interchange on US 70 Bypass.

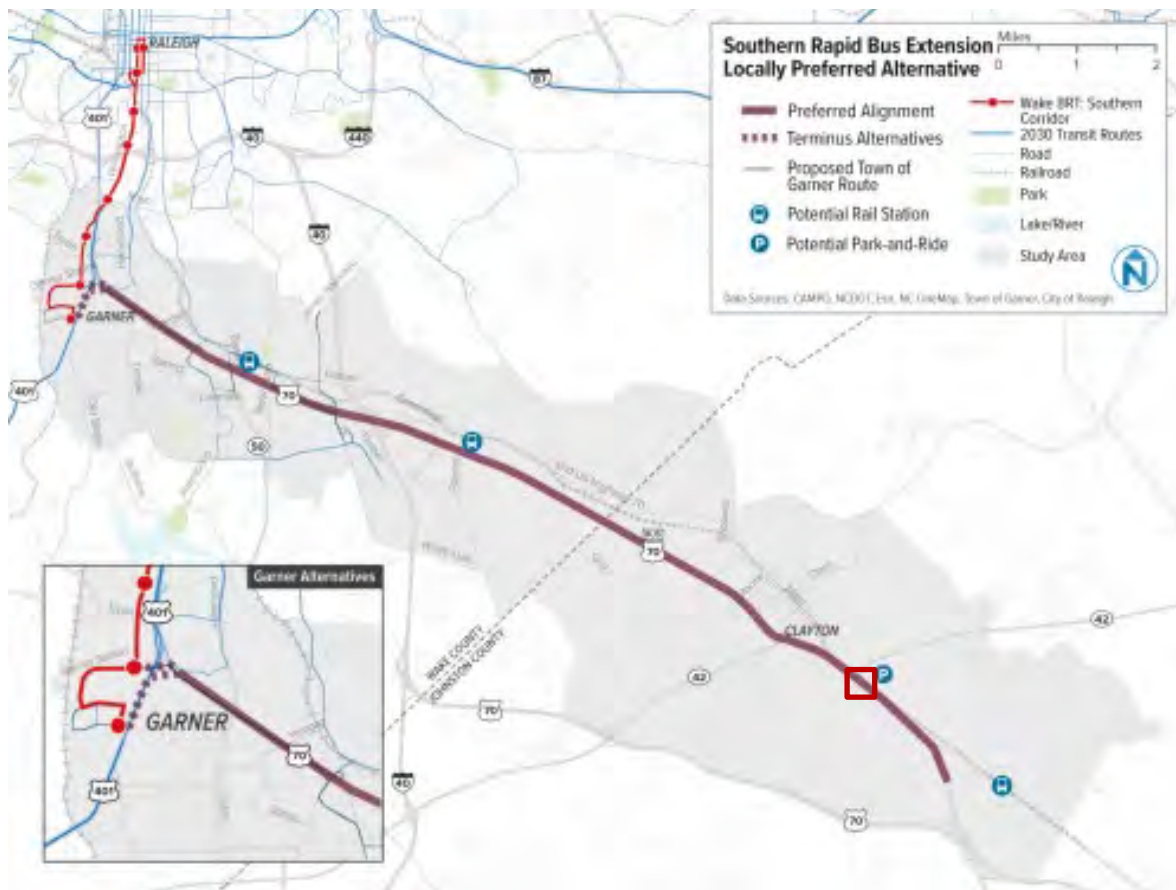


Map showing locations of listed surrounding roadway projects, with general hot spot area shown

TRANSIT AND DEVELOPMENT CONSIDERATIONS

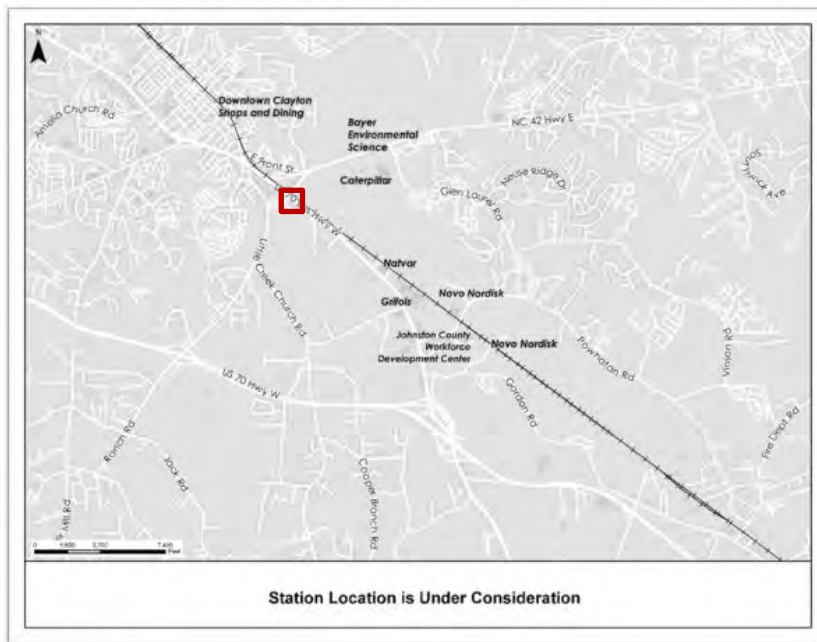
Bus Transit

Since the intersection feasibility study and the completion of the previous SEAS in 2017, the vision and expectations for the area have changed substantially. The area is now expected to become a major transit node for Johnston County. Both the Southern Corridor Rapid Bus Extension and the Greater Triangle Commuter Rail are now planned to pass through this intersection. The Rapid Bus Extension would run along US 70 Business, while the commuter rail would run along the NCRR H-Line railroad tracks. While exact station locations have not been decided for either planned transit line, stations and a park and ride for both services are planned to be located in the vicinity of this intersection. The station would serve the residents and development in the surrounding area as well as commuters from Johnston County.








The Locally Preferred Alternative for the Southern Rapid Bus Extension, which would go through the US 70 Business and NC 42 East intersection (noted with red square).

Clayton Station



As the proposed eastern terminus to this phase of the commuter rail corridor, a station in Clayton would be a transit gateway to the triangle for residents of Johnston County, in addition to serving major employers located close in proximity to this station.

Station Area Highlights

-  Major employers including Caterpillar, Grifols, Novo Nordisk, Natvar
-  Convenient park and ride access from NC 42, US 70 Business, future I-42
-  Johnson County Workforce Development Center
-  Potential connection to planned bus route between Garner and Clayton
-  Parking is planned at this station

Proposed Service

- 3 trains in each direction during am and pm peak times
- 1 mid-day train in each direction

The Greater Triangle Commuter Rail's station fact sheet for the proposed Clayton Station, with the US 70 Business at NC 42 East intersection noted with a red square. The rail line would run along the NCRR H-Line tracks through the intersection, as pictured above.

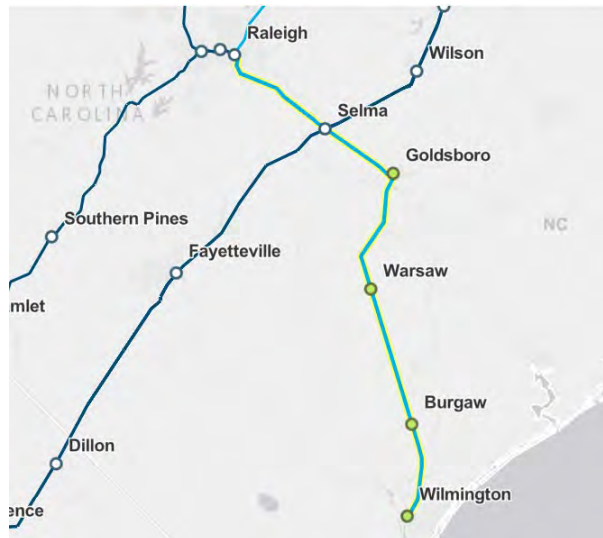
Rail Transit

With the railroad crossing at-grade along NC 42 East at this intersection, the potential for increased rail traffic within the upcoming decades is also a significant factor in planning for a grade separation. Currently, besides freight traffic, Amtrak's *Carolinian* and *Silver Star* each pass through the intersection once daily in each direction. The proposed Greater Triangle Commuter Rail is planned to initially begin with fourteen passenger trains, three in each direction during the morning and evening rush hours and one in each direction midday.

CAMPO and the Fayetteville Area MPO (FAMPO) completed a study in 2020 that considered passenger rail service between Raleigh and Fayetteville, with the Eastern Corridor alternative (pictured below) using the H-Line tracks through the US 70 Business/NC 42 East intersection and stopping in Clayton. Amtrak also has proposed a new Raleigh-Wilmington passenger rail line within its recent AmtrakConnectsUS plan that would use the H-Line corridor through Clayton as well.



A map from the Fayetteville-Raleigh Passenger Rail Feasibility Study. While an alternative has not been decided on, the Eastern Corridor alternative would use the H-Line tracks through Clayton, passing through the US 70 Business/NC 42 East intersection.



A map of Amtrak's proposed Wilmington-Raleigh passenger rail line. While it would not stop in Clayton, it would also use the H-Line tracks through the US 70 Business/NC 42 East intersection between Raleigh and Selma.

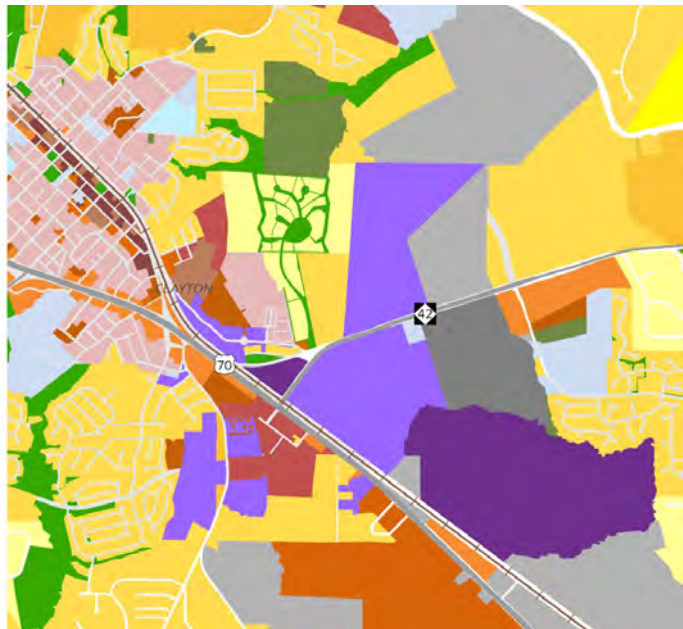
Land Use and Development

In recent years, the Town of Clayton and Johnston County have developed land use plans that identify transit-supportive land uses around the intersection.

In addition, some areas surrounding the site are already starting to see development. New apartments and townhomes are being built to the north, south, and west. Per Clayton planning staff, Aldi has also been pursuing construction of a grocery store in the northwest corner of the intersection, and as of April 28th, 2023, had not submitted a site plan but had attended a Pre-Application meeting and working with NCDOT and Clayton's Engineering Department on access concerns. This increasing development pressure further emphasizes the need for the intentional planning of this Hot Spot location.



New and recent residential development to the US 70 Business/NC 42 East intersection's north, south, and west



Future land uses surrounding the US 70 Business/NC 42 East intersection based on existing plans. The browns and purples indicate Mixed-Use and Transit-Oriented Development respectively.

ALTERNATIVE RECOMMENDATIONS

Based on the known needs and constraints, two draft interchanges alternatives were created, one using a quadrant loop in the south quadrant and one widening Little Creek Church Road/Boling Street to operate as the interchange access road.

As with the previous NCDOT study, both draft alternatives would offset NC 42 to the southeast for grade separation and require significant impact to the Sheetz property to realign the roadway and construct the bridge over US 70 Business and the H-Line railroad tracks. Properties such as Guy C. Lee Building Supply would retain access via stub access roads using the old Right of Way.

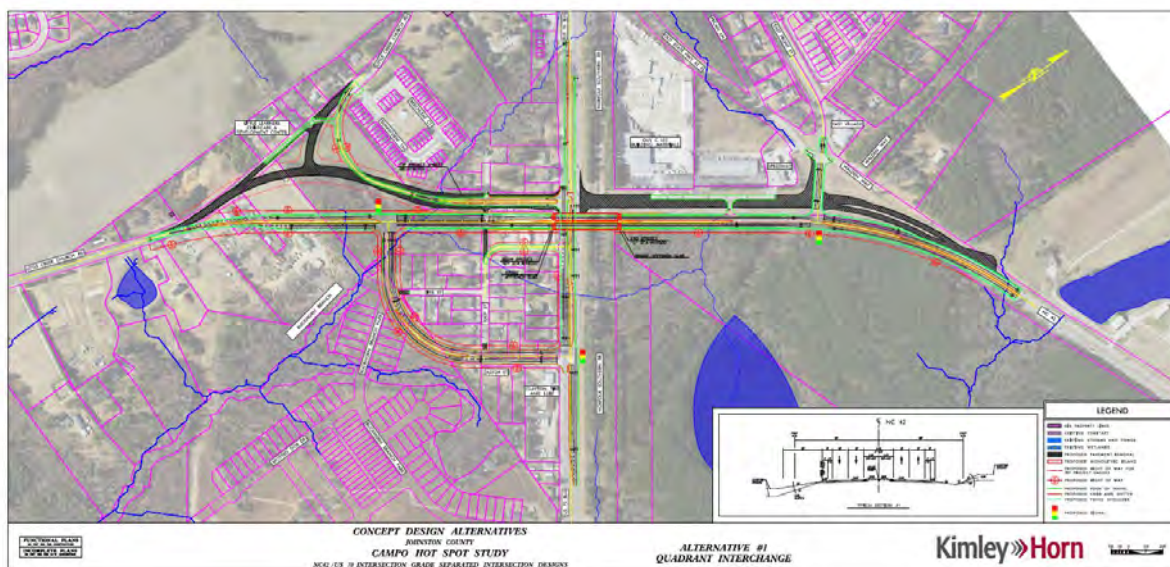
General Design Notes

- The streams, ponds and wetlands shown in the concepts were sourced from publicly available data and do not represent a field survey of the features indicated.
- Hydraulic Design and Environmental permitting were not evaluated as part of the concept designs. Both concepts will likely have significant impacts to the stream labeled “Buckhorn Branch” and will likely require culvert design and Environmental Permits and associated environmental mitigation fees.
- There are several cemeteries in the vicinity of the project. One cemetery adjoins the public Right of Way on Little Creek Church Rd/Boling St.
- No vertical alignments, cross sections, or limits of construction impacts were evaluated for these concept designs.
- There has been no traffic analysis performed for either of these two alternatives.

Alternative 1- Astor Street Quadrant Interchange

The first alternative would create a quadrant interchange in the south quadrant of the intersection. The quadrant roadway ties into existing roads, partially using Astor Street to connect to US 70 Business.

This alternative would heavily impact the neighborhood of homes to the bridge's east and west along Tulip Street and Astor Street, as well as a set of homes at the end of Buckhorn Bridge Park; however, a new connection to Tulip Street southeast of the bridge maintains right in/right out access to/from US 70 Business for remaining homes within the quadrant loop. The Rose Street connection would partially remain north of the bridge, allowing right turns from eastbound US 70 Business and left turns from westbound US 70 Business, but restricting exiting traffic to right turn onto eastbound US 70 Business. The quadrant movement in Alternative 1 would result in significant impacts to the streams shown.





Project: CAMPO Hot Spot Study - NC 42 / US 70 Interchange - Quadrant Interchange Alternative

Prepared for: CAMPO

By: Kimley-Horn and Associates, Inc.

Date: 9/6/2023

Opinion of Probable Construction Cost - Quadrant Interchange Alternative

Line Item Number	Pay Item Description	Units	Quantity	Unit Price	Item Cost
1	MOBILIZATION	LS	1	\$ 3,250,000.00	\$ 3,250,000
2	CONSTRUCTION SURVEYING	LS	1	\$ 437,400.00	\$ 437,400
3	CLEARING AND GRUBBING	LS	1	\$ 130,000.00	\$ 130,000
4	GRADING	LS	1	\$ 1,350,000.00	\$ 1,350,000
5	REMOVAL OF EXISTING ASPHALT PAVEMENT	SY	35,900	\$ 18.00	\$ 646,200
6	ASPHALT CONC. BASE COURSE, TYPE B25.0C	TON	14,410	\$ 82.00	\$ 1,181,620
7	ASPHALT CONC. INTERMEDIATE COURSE, TYPE I9.0C	TON	11,080	\$ 80.00	\$ 886,400
8	ASPHALT CONC. SURFACE COURSE, TYPE S9.5C	TON	10,140	\$ 80.00	\$ 811,200
9	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22	TON	1,780	\$ 700.00	\$ 1,246,000
10	1'-6" CONCRETE CURB & GUTTER	LF	12,885	\$ 38.00	\$ 489,630
11	2'-6" CONCRETE CURB & GUTTER	LF	3,680	\$ 40.00	\$ 147,200
12	5" MONOLITHIC CONCRETE ISLAND (KEYED IN)	SY	1,310	\$ 100.00	\$ 131,000
13	PROPOSED SIGNING	LS	1	\$ 20,000.00	\$ 20,000
14	THERMOPLASTIC PAVEMENT MARKINGS	LS	1	\$ 65,000.00	\$ 65,000
15	SIGNALS	LS	1	\$ 750,000.00	\$ 750,000
16	TRAFFIC CONTROL	LS	1	\$ 400,000.00	\$ 400,000
17	EROSION CONTROL	LS	1	\$ 1,390,000.00	\$ 1,390,000
18	DRAINAGE	LS	1	\$ 225,000.00	\$ 225,000
19	STRUCTURES	LS	1	\$ 12,000,000.00	\$ 12,000,000
20	RIGHT OF WAY (42 PARCELS)	ACR	15.33	\$ 300,000.00	\$ 4,599,000
21	CONTINGENCY (45%)	LS	1	\$ 10,038,000.00	\$ 10,038,000
CONSTRUCTION SUB TOTAL					\$ 40,194,000

Opinion of Additional Project Cost

Line Item Number	Pay Item Description	Units	Quantity	Unit Price	Item Cost
22	UTILITY RELOCATIONS	LS	1	\$ 12,060,000.00	\$ 12,060,000
23	DESIGN AND PERMITTING	LS	1	\$ 6,030,000.00	\$ 6,030,000
SUB TOTAL					\$ 18,090,000
TOTAL					\$ 58,284,000

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

The quantities and unit prices above only pertain to the proposed design shown on the figure dated May 19, 2023. This opinion of probable construction cost does not include preliminary cost assumptions for landscaping, easements, and associated widening of adjacent roadways.

Right-of-Way and Control-of-Access Unit Prices estimated using County GIS property data. Right-of-Way and Control-of-Access unit prices and quantities do not include easement costs.

Utility relocations cost based on a percentage of the project construction cost.

Design and permitting based on a percentage project construction.

Alternative 2- Little Creek Church Road/Boling Street Interchange Access Road

The second alternative would use an improved Little Creek Church Road/Boling Street as the interchange access road connecting US 70 Business to NC 42. Boling Street would be widened from two to three lanes. In addition, the intersection between Boling Street and US 70 Business would be realigned to intersect at a wider angle and slightly further from the Main Street/US 70 Business intersection, with significant impacts to the Clayton Village and the Wendy's properties.

While this alternative would cause additional impacts to properties along Boling Street, it would have significantly less impacts on the neighborhood of homes along Tulip Street, when compared to Alternative 1. The Rose Street connection would partially remain north of the bridge, allowing right turns from eastbound US 70 Business and left turns from westbound US 70 Business, but restricting exiting traffic to right turn onto eastbound US 70 Business.



Any improvements to Little Creek Church Road/Boling Street will likely result in impacts to the cemetery parcel adjoining the public Right of Way if the existing alignment of the road is maintained and widened symmetrically.

In addition, the realigned intersection of Boling Street/US 70 Business is approximately 700ft from the intersection of Main Street and US 70 Business. This proximity of the two intersections may cause issues with signal timing, queue clearing, and congestion. The signal at the Clayton Village driveway on US 70 Business would also need to be redesigned as part of Alternative 2 improvements.

Little Creek Church Road/Boling Street may require additional widening beyond what is shown in the concept designs to handle turning and through movement volumes if utilized as the connection between US 70 Business and NC 42. Additional traffic analysis is needed to determine final lane configurations.



Project: CAMPO Hot Spot Study - NC 42 / US 70 Interchange - Alternative 2

Prepared for: CAMPO

By: Kimley-Horn and Associates, Inc.

Date: 9/6/2023

Opinion of Probable Construction Cost - Alternative 2

Line Item Number	Pay Item Description	Units	Quantity	Unit Price	Item Cost
1	MOBILIZATION	LS	1	\$ 3,100,000.00	\$ 3,100,000
2	CONSTRUCTION SURVEYING	LS	1	\$ 415,600.00	\$ 415,600
3	CLEARING AND GRUBBING	LS	1	\$ 110,000.00	\$ 110,000
4	GRADING	LS	1	\$ 1,000,000.00	\$ 1,000,000
5	REMOVAL OF EXISTING ASPHALT PAVEMENT	SY	38,600	\$ 18.00	\$ 694,800
6	ASPHALT CONC. BASE COURSE, TYPE B25.0C	TON	11,510	\$ 82.00	\$ 943,820
7	ASPHALT CONC. INTERMEDIATE COURSE, TYPE I9.0C	TON	8,960	\$ 80.00	\$ 716,800
8	ASPHALT CONC. SURFACE COURSE, TYPE S9.5C	TON	6,880	\$ 80.00	\$ 550,400
9	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22	TON	1,420	\$ 700.00	\$ 994,000
10	1'-6" CONCRETE CURB & GUTTER	LF	10,972	\$ 38.00	\$ 416,936
11	2'-6" CONCRETE CURB & GUTTER	LF	956	\$ 40.00	\$ 38,240
12	5" MONOLITHIC CONCRETE ISLAND (KEYED IN)	SY	1,267	\$ 100.00	\$ 126,700
13	PROPOSED SIGNING	LS	1	\$ 20,000.00	\$ 20,000
14	THERMOPLASTIC PAVEMENT MARKINGS	LS	1	\$ 57,000.00	\$ 57,000
15	SIGNALS	LS	1	\$ 1,000,000.00	\$ 1,000,000
16	TRAFFIC CONTROL	LS	1	\$ 575,000.00	\$ 575,000
17	EROSION CONTROL	LS	1	\$ 1,350,000.00	\$ 1,350,000
18	DRAINAGE	LS	1	\$ 185,000.00	\$ 185,000
19	STRUCTURES	LS	1	\$ 12,000,000.00	\$ 12,000,000
20	RIGHT OF WAY (34 PARCELS)	ACR	13.18	\$ 275,000.00	\$ 3,624,500
21	CONTINGENCY (45%)	LS	1	\$ 9,537,000.00	\$ 9,537,000
CONSTRUCTION SUB TOTAL					\$ 37,456,000

Opinion of Additional Project Cost

Line Item Number	Pay Item Description	Units	Quantity	Unit Price	Item Cost
22	UTILITY RELOCATIONS	LS	1	\$ 11,245,000.00	\$ 11,245,000
23	DESIGN AND PERMITTING	LS	1	\$ 5,625,000.00	\$ 5,625,000
SUB TOTAL					\$ 16,870,000
TOTAL					\$ 54,326,000

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

The quantities and unit prices above only pertain to the proposed design shown on the figure dated May 19, 2023. This opinion of probable construction cost does not include preliminary cost assumptions for landscaping, easements, and associated widening of adjacent roadways.

Right-of-Way and Control-of-Access Unit Prices estimated using County GIS property data. Right-of-Way and Control-of-Access unit prices and quantities do not include easement costs.

Utility relocations cost based on a percentage of the project construction cost.

Design and permitting based on a percentage project construction.

TECHNICAL STAKEHOLDER JURISDICTIONAL MEETING

On June 29, 2023, the project team held a virtual meeting to present the two alternatives to technical stakeholders in the hot spot study area including the Town of Clayton, Johnston County, and NCDOT.

Attendees

- Ben Howell – Town of Clayton
- Braston Newton – Johnston County
- Addison Gainey - NCDOT
- Charles Sorrell – NCDOT
- Stephen Yeung - NCDOT
- James Salmons – NCDOT/UCPRPO
- Gaby Lawlor – CAMPO
- Chris Lukasina – CAMPO
- Alex Rickard – CAMPO
- Samantha Borges – Kimley-Horn
- Allison Fluitt – Kimley-Horn
- Evan Parrott – Kimley-Horn

Agenda

- Attendee Introductions
- Hot Spot Background
- Alternatives Discussion

Outcomes

- Ben Howell from the Town of Clayton expresses initial preference for Alternative 1

APPENDIX F:

Bicycle and Pedestrian Analysis and Facilities

Pedestrian Mobility

Background

Existing sidewalks are found mostly in the urban areas of the SEAS, and are nearly nonexistent in the rural portions of this region. While sidewalk networks are extensive in the urban areas, gaps in the sidewalk network are still frequent. Over the past 15 years, most pedestrian fatalities and serious injuries have occurred in areas where pedestrian infrastructure does not exist.

Sidewalk Gaps

Existing sidewalks were analyzed along arterial and collector roadways in the SEAS using CAMPO's sidewalk and NCDOT's roadway GIS data. Arterial and collector roadways that are missing sidewalks were selected and are displayed on the map on the following page.

While sidewalks are mostly found in the urban areas, there are still significant gaps in the urban sidewalk network, especially when considering higher traffic volume and higher speed roads such as the arterial and collector roadways that criss-cross each SEAS community:

- Urban Arterials: 75% are missing sidewalk
- Urban Collectors: 50% are missing sidewalk

As might be expected, arterial and collector roads in urban areas that are missing sidewalks tend to be found further away from a community's downtown core. Several of these 'sidewalk gap' corridors that could connect multiple neighborhoods or commercial areas of a SEAS municipality are listed below, and should be examined further in local planning as potential priority corridors for sidewalk construction:

- US 401, US 70, Garner Rd, Benson Rd, and Old Stage Rd through Garner
- Wilson's Mills Rd and Fire Dept Rd through Wilson's Mills
- US 301 through Selma, Smithfield, Four Oaks, Benson, Micro, and Kenly
- Covered Bridge Rd, Archer Lodge Rd, and Buffalo Rd through Archer Lodge
- US 70 and NC 42 through Clayton
- US 70 and Peedin Ave through Pine Level

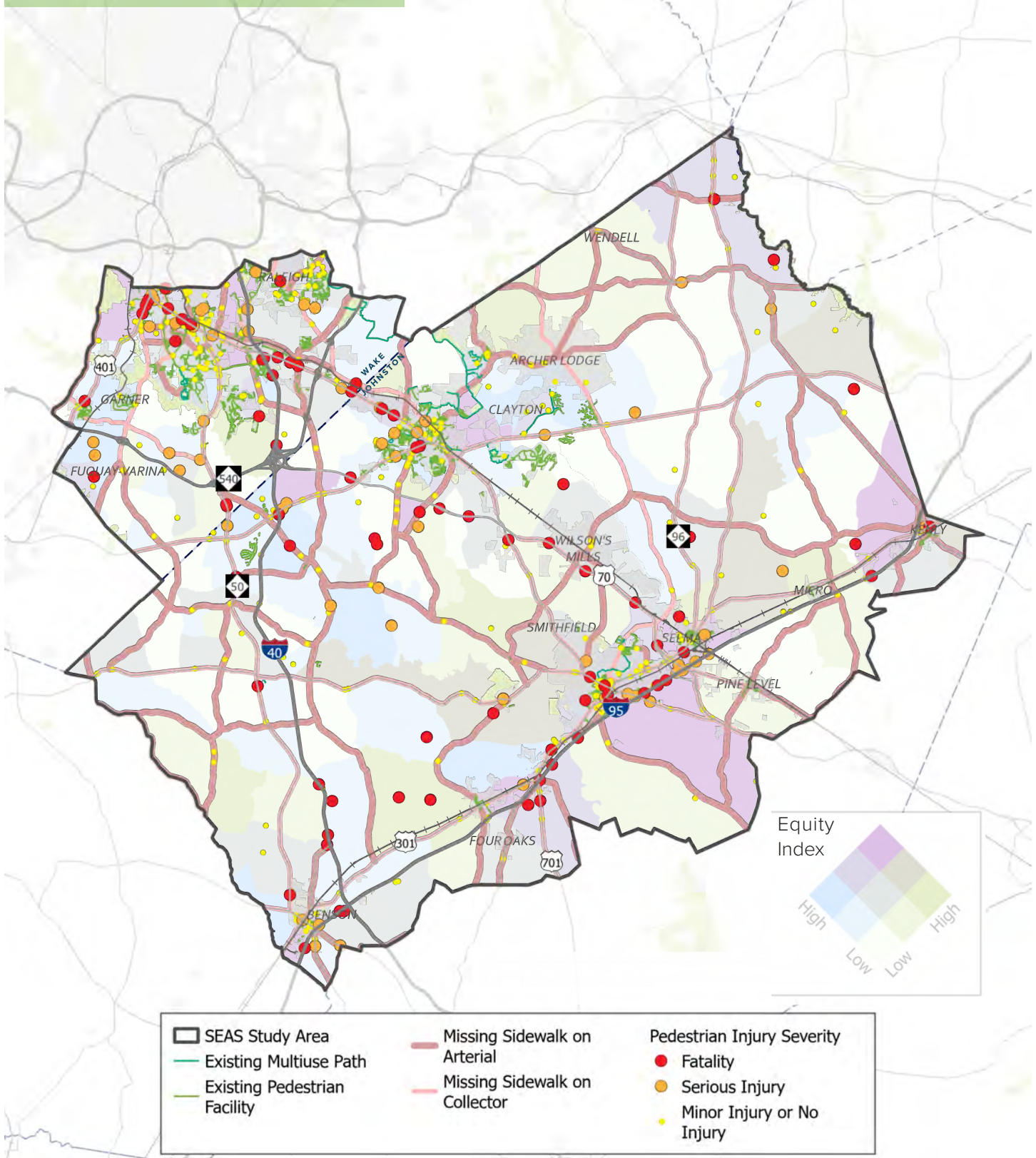
Crash Data

Pedestrian crashes were analyzed using NCDOT's pedestrian crash data that is available from 2007-2021. Crashes were analyzed in relation to pedestrian infrastructure as well as roadway type, and are also displayed on the map on the following page.

From 2007-2021, there were **547 crashes** involving pedestrians.

88% (122 of 139) of all pedestrian fatalities and serious injuries occurred in places without sidewalks.

Pedestrian Crashes (2007-2021)



Bicycle Mobility

Background

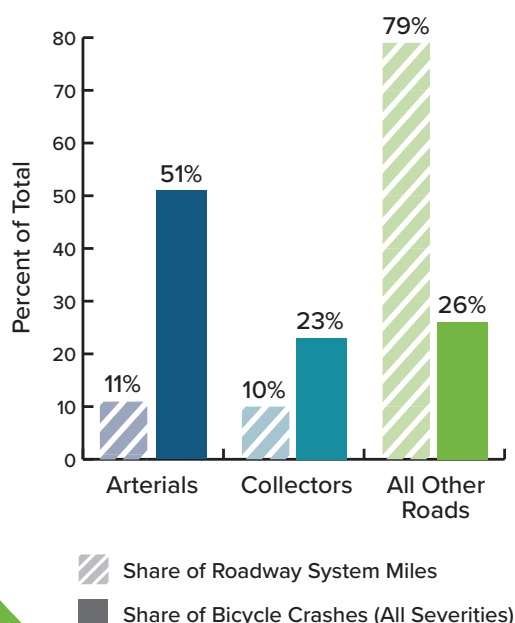
Existing bike facilities are found only in the shared use path network - most of which are part of the Neuse River Trail (which is part of both the East Coast Greenway and Mountains to Sea Trail). The Neuse River Trail connects the SEAS to the greater Raleigh and Wake County greenway network. No bike lanes are found in the SEAS bicycle data. All bicyclist fatalities and serious injuries have occurred in areas where bike facilities do not exist.

Crash Data

Arterials and collectors combined make up only 21% of the total roadway network in the SEAS area, but account for 74% of bicycle crashes. Arterials and collectors tend to have the highest traffic speeds and volumes, leading to uncomfortable conditions for bicyclists that have to use the roadway corridor where no separated bicycle facilities exist. Highest bicycle crash corridors include:

- Garner – US 70, Garner Rd, and Aversboro Rd
- Clayton – US 70
- Archer Lodge – Covered Bridge Rd
- Selma – Pollock St
- Smithfield – Brightleaf Blvd, Market St
- Benson – Main St
- Kenly – US 301

Bicycle Crashes and Roadway Type



Fatal and Serious Injury Bicycle Crashes and Speed Limit



93%

occurred on roads with speed limits **35 mph or greater**

From 2007-2021, there were **209 crashes** involving bicyclists.

100% of all bicyclist fatalities and serious injuries (30) occurred in places without bike facilities.

Bicycle Crashes (2007-2021)

SEAS Study Area

Existing Multiuse Path

Bicycle Injury Severity

- Fatality
- Serious Injury
- Minor Injury or No Injury

Equity Index

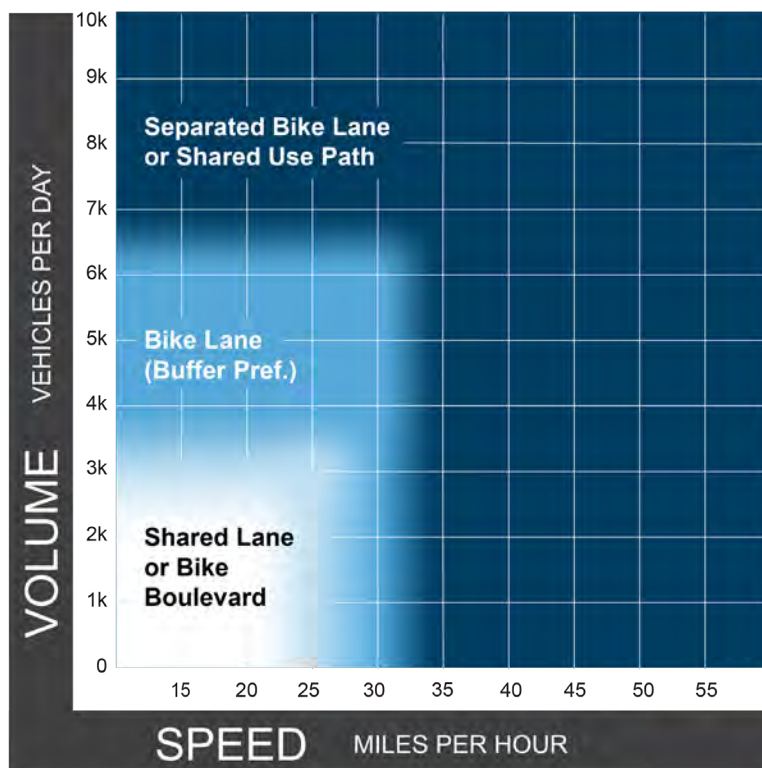
High Low Low High

Bicycle Facility Selection

As outlined in the Federal Highway Administration's *Bikeway Selection Guide*, different types of bikeways are better suited for different roadways based on considerations such as how fast and how frequently vehicles use the road and the roadway width.

The FHWA chart to the right and the table on the following page should be used by SEAS jurisdictions to guide recommendations for the preferred type of bikeway given roadway speeds and volumes. The chart is used by first identifying the daily traffic volume and travel speeds on the existing or proposed roadway, and then locating the facility types indicated by those key variables. Streets with higher speeds and volumes should have more separated or protected bikeway facilities.

The *FHWA Bikeway Selection Guide*, and the associated chart, are meant to be a starting point to select a bikeway facility type in conjunction with further contextual analysis and professional judgment.



The Preferred Bikeway Types chart shown above from the FHWA Bikeway Selection Guide provides a great resource when selecting the appropriate facility for varying roadway contexts.

Chart assumes operating speeds are similar to posted speeds. If they differ, use operating speeds rather than posted speed.

Choosing an All Ages and Abilities Bikeway Type

This chart provides guidance in choosing a bikeway design that can create an all ages and abilities bicycling environment based on a street's basic design and motor vehicle traffic conditions such as vehicle speed and volume. This chart should be applied as part of a flexible, results-oriented design process on each road, alongside robust analysis of local bicycling conditions.

Users of this guidance should recognize that, in some cases, a bicycle facility may fall short of the all ages and abilities criteria but still substantively reduce traffic stress. Jurisdictions should not use an inability to meet the all ages and abilities criteria as a reason to avoid implementing a bikeway, and should not prohibit the construction of facilities that do not meet the criteria.

<i>Contextual Guidance for Selecting All Ages and Abilities Bikeways</i>				
Roadway Context				All Ages and Abilities Bicycle Facility
Target Motor Vehicle Speed	Target Max. Motor Vehicle Volume (ADT)	Motor Vehicle Lanes	Key Operational Considerations	
Any	Any	Any	Any of the following: high curbside activity, frequent buses, motor vehicle congestion, or turning conflicts	Protected Bicycle Lane
< 10 mph	Less relevant	No centerline, or single lane one-way	Pedestrians share the roadway	Shared Street
≤ 20 mph	≤ 1,000 - 2,000	No centerline, or single lane one-way	<50 motor vehicles per hour in the peak direction at peak hour	Neighborhood Bike Routes
≤ 25 mph	≤ 500 - 1,500	No centerline, or single lane one-way	<50 motor vehicles per hour in the peak direction at peak hour	Neighborhood Bike Routes
	≤ 1,500 - 3,000	Single lane each direction, or single lane one-way	Low curbside activity, or low congestion pressure	Conventional or Buffered Bicycle Lane, or Protected Bicycle Lane
	≤ 3,000 - 6,000			Buffered or Protected Bicycle Lane
	> 6,000			Protected Bicycle Lane
	Any	Multiple lanes per direction		
> 26 mph	≤ 6,000	Single lane each direction	Low curbside activity, or low congestion pressure	Protected Bicycle Lane, or Reduce Speed
		Multiple lanes per direction		Protected Bicycle Lane, or Reduce to Single Lane & Reduce Speed
	> 6,000	Any	Any	Protected Bicycle Lane, or Bicycle Path
High-speed limited access roadways, natural corridors, or geographic edge conditions with limited conflicts		Any	High pedestrian volume	Bike Path with Separate Walkway or Protected Bicycle Lane
			Low Pedestrian volume	Shared-Use Path or Protected Bicycle Lane

Source: National Association of City Transportation Officials (NACTO) *Designing for All ages and Abilities*

CAMPO SEAS Update: Bicycle and Pedestrian Plan Review

Agency/Organization	Plan Name	Year	Bike/Ped Infrastructure Recommendations
Archer Lodge	Town of Archer Lodge Bicycle and Pedestrian Plan	2020	<ul style="list-style-type: none"> • Prioritized project recs (pg. 60) • Plan Priorities (from steering committee and public) (pg. 2): <ul style="list-style-type: none"> › Connecting neighborhoods, parks, and trails › Bicycling and walking safely around downtown and schools › Promoting bicycle and pedestrian safety education › Promoting expansion of bicycle and pedestrian amenities on existing roadways through local ordinances
Benson	Town of Benson Community Transportation Plan	2019* *not formally adopted	<ul style="list-style-type: none"> • Sidepaths or sidewalks + bike lanes included with several planned roadway projects (pg. 15-30) • Bicycle, pedestrian, and MUP facility recs (pg. 31-37) • Bike/ped facility maps (Appendix Figure A3 and A4)
CAMPO	Fayetteville-Raleigh Passenger Rail Feasibility Study	2020	None
Clayton	Clayton Pedestrian Plan	2022	Priority Projects (pg. 40-41)
Four Oaks	Report of Economic Development Assessment	2020	One of the main strategic goals is to create a more vibrant downtown (pg. 9) but no specific actions tied to bike/ped infrastructure, programs, or policy
Four Oaks	Downtown Streetscape Master Plan	2020	<ul style="list-style-type: none"> • Opportunities identified include: wayfinding, streetscape improvements (including street trees, seating/amenities, ped safety), public spaces (pg. 19) • Master Plan Program Elements (pg. 21) include recommendation for continuous sidewalks, safer crosswalks with bulbouts, street trees/landscaping, ADA and accessibility improvements, public spaces with amenities like art and seating • Design concept (pg. 36) and phasing (pg. 44)

Agency/Organization	Plan Name	Year	Bike/Ped Infrastructure Recommendations
Four Oaks	Land Use Plan Analysis and Update	2022	Analysis of previous land use plan includes recommendations to develop a sidewalk plan, implement policy including parkland dedication and connectivity requirements for subdivisions (pg. 32-39)
Garner	Garner Forward Comprehensive Plan	2018	<ul style="list-style-type: none"> • Transportation chapter of the plan covers policy and program elements (pg. 83-86). • Infrastructure recommendations are in the Garner Forward Transportation Plan
Garner	Garner Forward Transportation Plan	2018	<ul style="list-style-type: none"> • Pedestrian and Bicycle recommendations (pg. 44 & 50+) • Complete Streets cross section recommendations (pg. 42) • Other plan themes/key issues: improving trail/sidewalk system connections, transit, management of growth and development around I-540
Garner	Town of Garner Transit Study	2020	None
Garner	Pedestrian Plan	Ongoing	In 2022, Garner was awarded a Multimodal Planning Grant from NCDOT IMD to develop a Pedestrian Plan. This process will likely be completed in 2023.
Johnston County	Johnston County Parks and Recreation Master Plan	2021	<ul style="list-style-type: none"> • Greenways/walking trails were the highest priority from public engagement process (pg. 34) • Action Steps (pg. 56): Greenways/hiking/ biking trails: "After the MST connection the most requested connections were: (1) Connecting Benson to Four Oaks, Four Oaks to Smithfield; (2) Connecting Selma to Smithfield [note connections from Selma to MST should be sought]; (3) Connecting Pine Level to Selma; (4) Connection between Greater Cleveland area and Clayton."
Johnston County	Envision Johnston (Comprehensive Land Use Plan)	2021	Public input: "Preference for passive recreation, including greenways, trails, nature parks, game lands and fishing areas" (pg. 9)
Johnston County	Neuse River Trail Feasibility Study	2022	The recommended alignment to extend the Neuse River Trail from Clayton to Smithfield includes four segments/phases mostly along rural roadway corridors (sidepaths) and includes a Neuse River bike/ped bridge crossing near Selma.

Agency/Organization	Plan Name	Year	Bike/Ped Infrastructure Recommendations
NCDOT	Great Trails State Plan	2022	<ul style="list-style-type: none"> • East Coast Greenway and Mountains to Sea Trail alignments go through the study area • Several proposed alignments come from Wake County Greenway Plan (trails near Garner, Clayton)
NDCOT	WalkBikeNC 2013 (North Carolina Statewide Pedestrian and Bicycle Plan)	2013	State bike route NC 2B connects through the northern part of SEAS, and is currently unsigned.
Pine Level	Pine Level Comprehensive Land Use Plan	2022	<p>Several relevant goals contain objectives related to walking/biking/greenways (pg. 48-52)</p> <ul style="list-style-type: none"> • Vibrant commercial areas that provide a variety of goods, services, entertainment options, and amenities (parking reductions) • A well-connected multi-modal transportation system • High-quality parks and recreational facilities that are accessible to all • Cultural, educational, recreational, and other amenities that contribute to the quality of life of Pine Level's citizens (includes investment in walking/biking/trails, walkability of new developments)
Raleigh	Southeast Special Area Study Phase 2 Report	2020	Report describes public input related to decisions to extend the ETJ. This would have impacts on how/if/when greenways and walking and biking facilities in areas surrounding the Raleigh metro area could be developed (especially west of I-540); would affect Raleigh's ability to conserve land along the Neuse River.
Raleigh	Raleigh Community Climate Action Plan	2021	<p>Chapter 6 - Transportation and Land Use</p> <ul style="list-style-type: none"> • Describes Alternative Mobility as a strategy for VMT reduction. Equity considerations (pg. 66) • Relevant action steps (pg. 70-71, 74-75)
Raleigh	Raleigh Bike Plan (BikeRaleigh)	2016 (2020 update)	<ul style="list-style-type: none"> • 10-year Prioritization Map (updated the recommendations section in 2020 to reflect completed and funded projects) in Chapter 4.

Agency/Organization	Plan Name	Year	Bike/Ped Infrastructure Recommendations
Raleigh	Capital Area Greenway Master Plan Update	2022	<ul style="list-style-type: none"> • New trail classification system (pg. 63-64) Updated trail prioritization criteria and results; shift from viewing trails solely in terms of recreation, to a more holistic approach (pg. 73-76) • Emphasis on reinvestment in existing trails (pg. 83-89) • Recommendations and action items (near, mid, and long term) (pg. 97-117)
Selma	Eastfield Conceptual Master Plan	2017	Proposed greenways shown in red on map
Selma	Economic Development Strategic Plan	2019	<ul style="list-style-type: none"> • Strategies for promoting walking (esp. downtown) through programs, wayfinding (pg. 18) • Coordination with Eastfield development including greenways (pg. 22)
Selma	Town of Selma Land Use Plan 2040	2021	<ul style="list-style-type: none"> • Greenway and sidewalk recommendations, carried over from 2011 CTP (pg. 34) • Recommendation for the Town to develop a bike/ped plan (pg. 34) • Sidewalk recs map (pg. 35)
Smithfield	Smithfield Town Plan	2019	<p>Volume 3: Transportation Element</p> <ul style="list-style-type: none"> • Street typology (pg. 6) • Bicycle and Pedestrian Recommendations (pg. 18-21) • Policy recs and other studies (several relevant) (pg. 26)
Triangle J Council of Governments	Close to Home: An Affordable Housing Analysis of The Triangle's Passenger Rail Corridor	2021	None
Triangle J Council of Governments	Opportunity Analysis (of Greater Triangle Commuter Rail Corridor)	2022	<ul style="list-style-type: none"> • Does not make recommendations, but acknowledges key role that bike/ped facilities will play in passenger rail service. Opportunities inside station areas depend on safe, high quality sidewalks, intersections and bicycle/scooter facilities. Opportunities outside station areas but within the corridor depend on "first mile/last mile" bus service and safe bicycle/scooter facilities" (pg. 7) • The study names several "issues to consider" including equitable transit-oriented development and first mile/last mile investments (pg. 27)

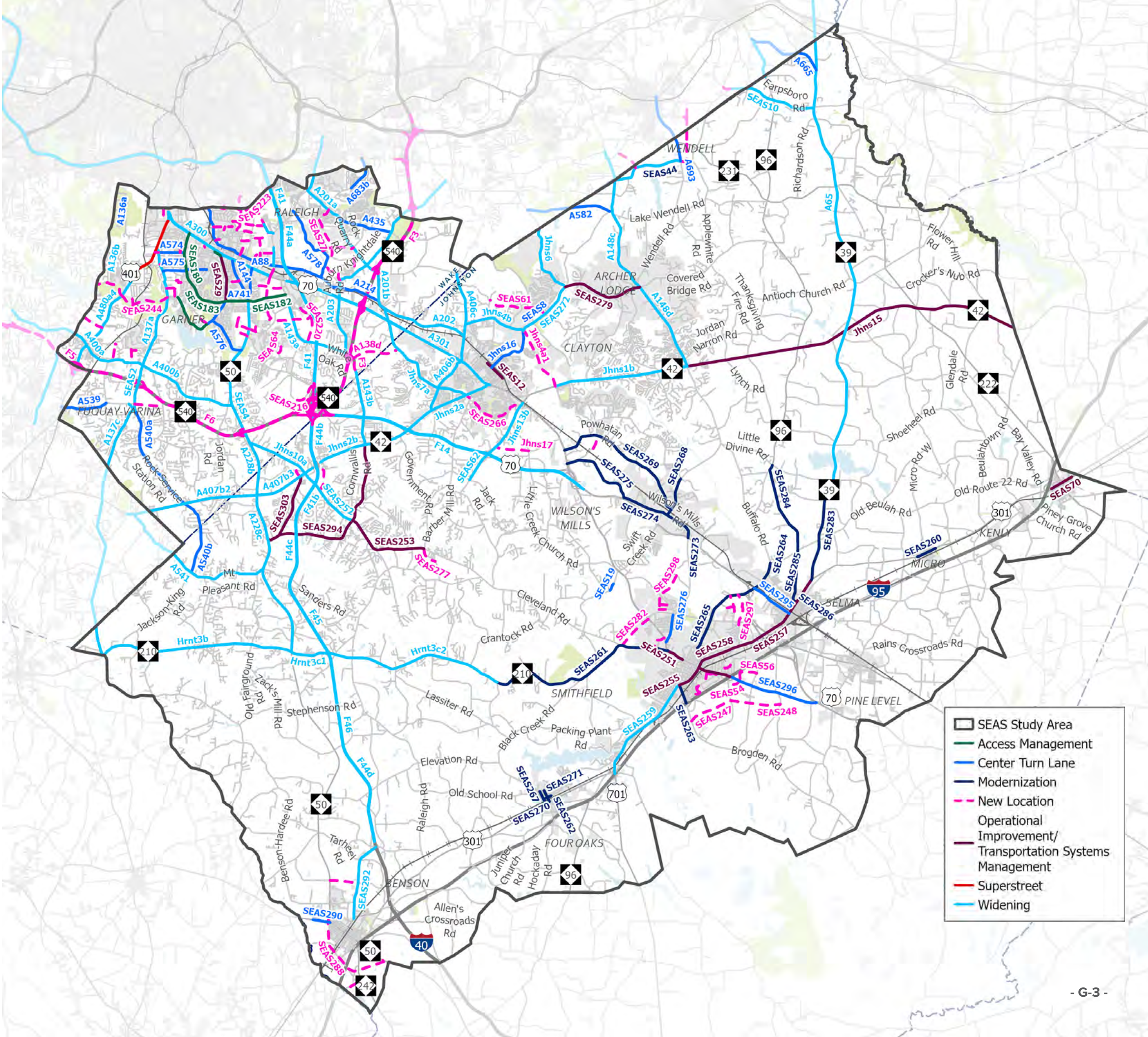
Agency/Organization	Plan Name	Year	Bike/Ped Infrastructure Recommendations
Wake County	2019 Community Health Needs Assessment	2019	None
Wake County	PLANWake Comprehensive Plan	2021	<ul style="list-style-type: none"> • Performance metrics include increasing non-automotive trips and protecting open space (pg. 34) • Identifies "activity centers" best for mixed-use/walkable and transit-oriented development to occur (pg. 45)
Wake County	Wake County Greenway System Plan	2018	<ul style="list-style-type: none"> • Countywide Greenway System Map with proposed facilities (pg. 54) • Recommendations by project category (gaps, connections, longer term proposed trails) (pg. 60)
Wake County	Wake County Transit Plan Update	2021	<ul style="list-style-type: none"> • "The Wake County Transit Plan includes approximately 47 miles of varying levels of BRT-related infrastructure improvements." (pg. 22) • Near and Long Term Transit Corridors map (pg. 29)
Wake County Public Schools	Capital Investment Plan Update	2022	None
Wilson's Mills	Town Plan 2040 Comprehensive Land Use and Master Plan	2019	<ul style="list-style-type: none"> • Description of several planned sidewalk projects (top of pg. 19) • Adoption of new UDO mentioned several times; desire to encourage walkable/bikable growth in a few targeted areas

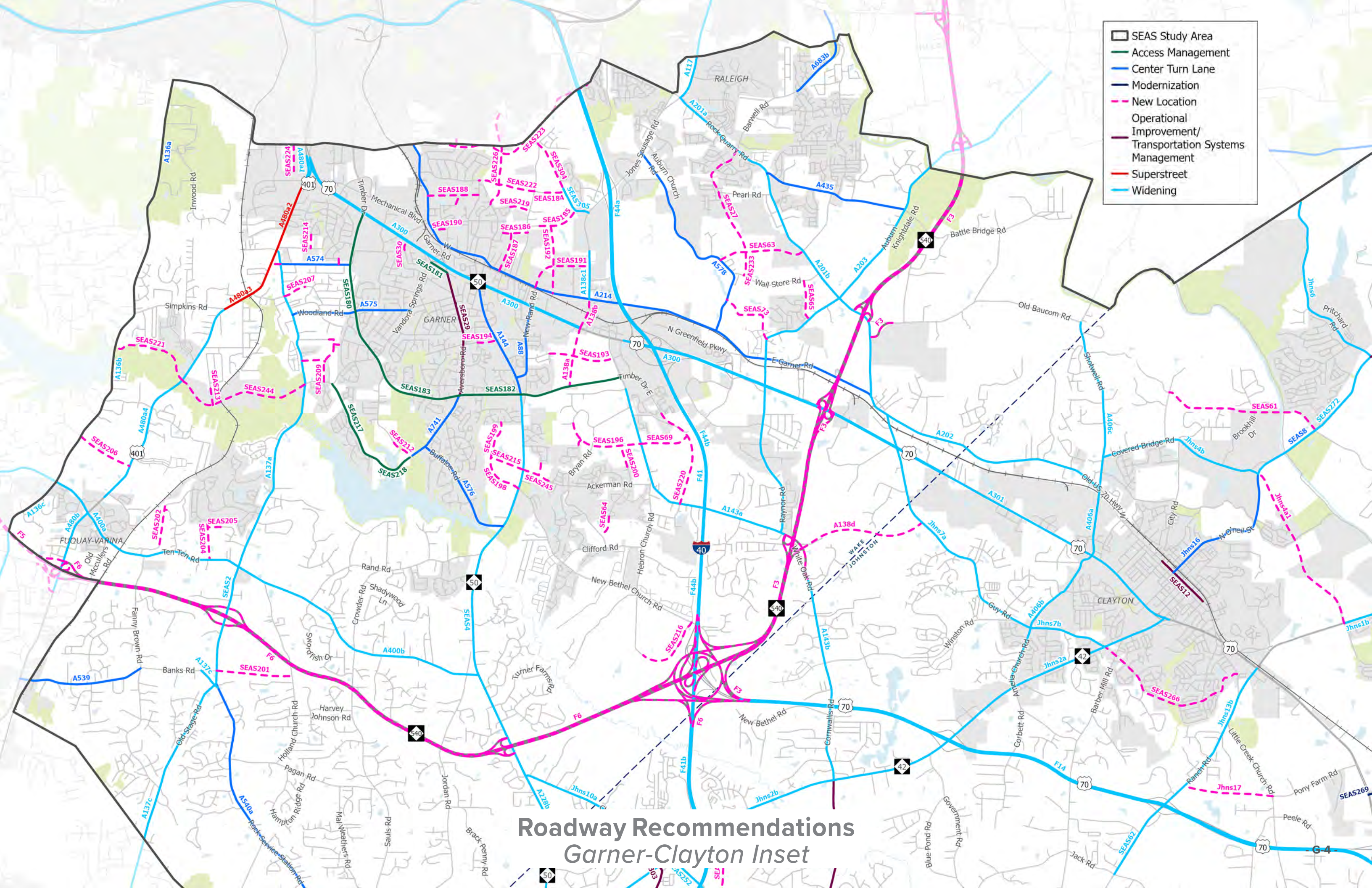
APPENDIX G:

Large Recommendations Maps

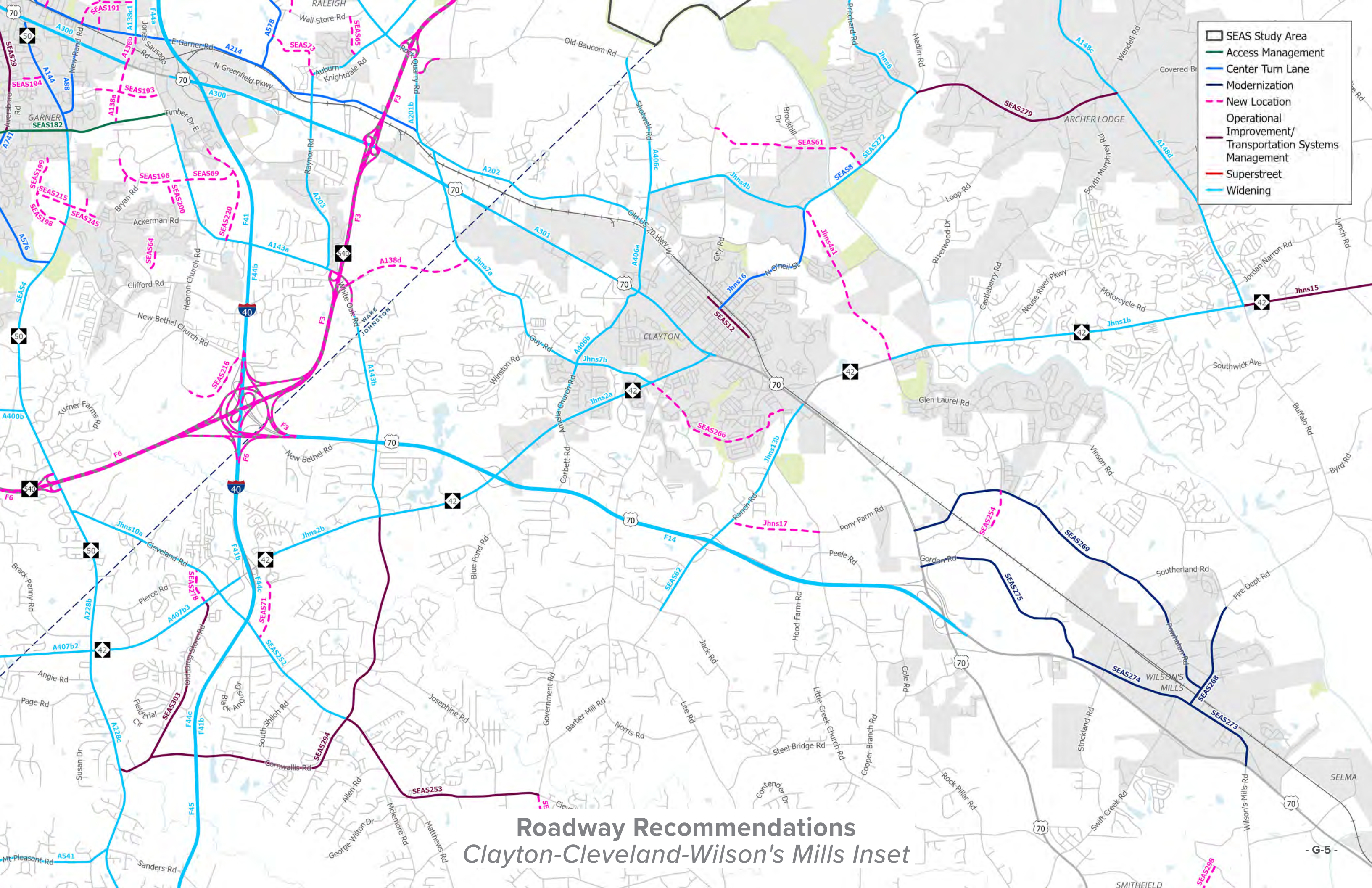
SEAS UPDATE

Roadway Recommendations

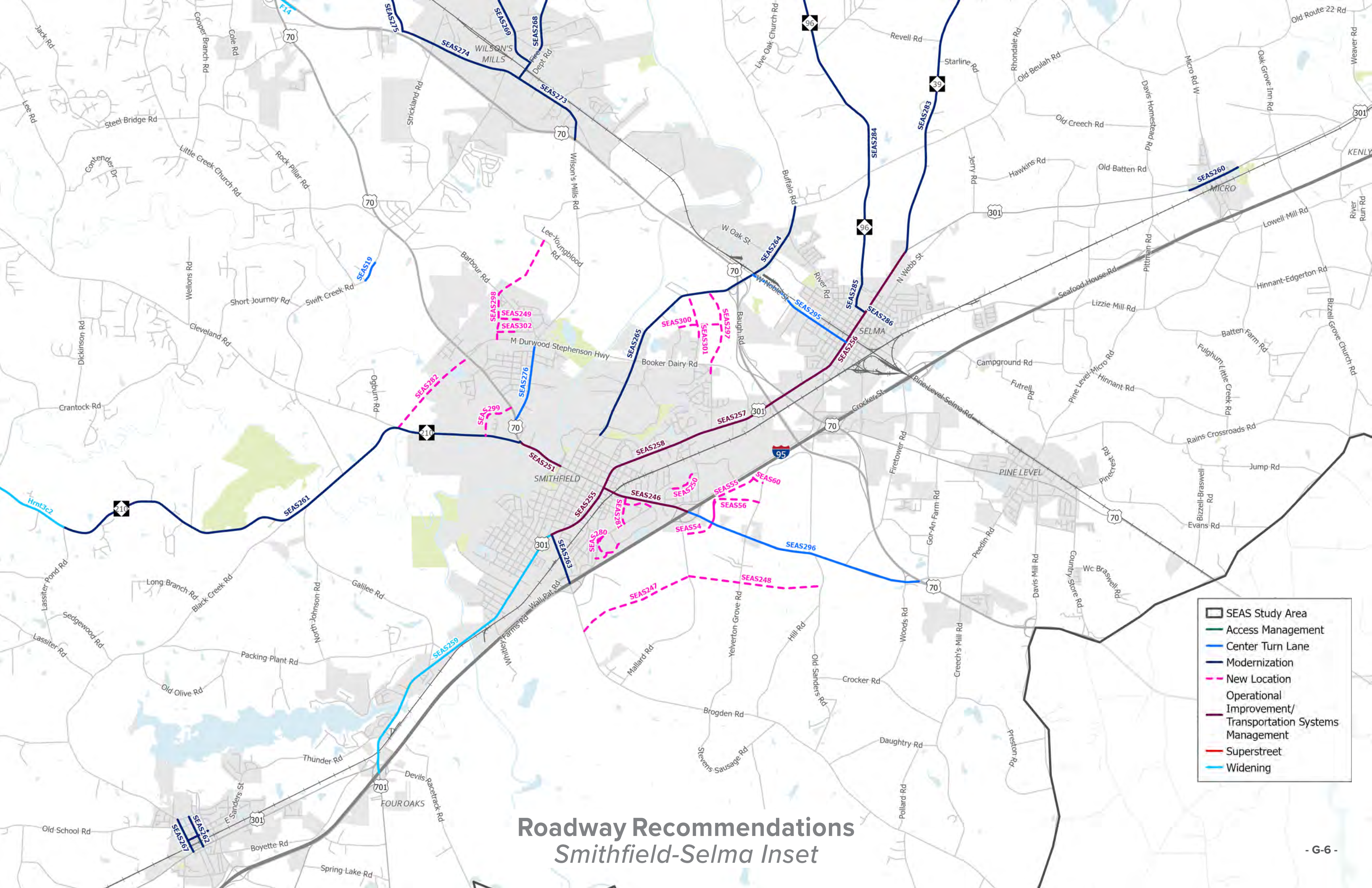




Roadway Recommendations
Garner-Clayton Inset



Roadway Recommendations
Clayton-Cleveland-Wilson's Mills Inset



Roadway Recommendations
Smithfield-Selma Inset

SEAS UPDATE

Roadway Recommendations

Project						Lanes		Multimodal					Other Information					
ID	Name	From	To	Improvement	Len. (Mi)	Exist	Prop	Side-walk	Wide Should.	Bicycle	Multi-use	Transit	Cost	Horizon	County	Municipality	MPO	TIP No.
A117	New Hope Rd	Old Poole Rd	Rock Quarry Rd	Widening	1.89	2	4	0	0	1	0	0	\$28,840,000	Mid-Term	Wake	Raleigh	CAMPO	
A136a	Lake Wheeler Rd	Tryon Rd	Penny Rd	Center Turn Lane	1.79	2	3	1	0	1	0	0	\$24,640,000	Near-Term	Wake	Wake County	CAMPO	
A136b	Lake Wheeler Rd	Penny Rd	Ten Ten Rd	Widening	3.54	2	4	1	0	1	0	0	\$51,070,000	Mid-Term	Wake	Wake County	CAMPO	
A136c	Lake Wheeler Rd	Ten Ten Rd	Hilltop-Needmore Rd	Widening	3.40	2	4	0	0	0	0	0	\$48,910,000	Mid-Term	Wake	Wake County	CAMPO	
A137a	Old Stage Rd	US 401	Ten Ten Rd	Widening	4.20	2	4	1	0	0	1	0	\$55,190,000	Near-Term	Wake	Garner; Wake County	CAMPO	
A137c	Old Stage Rd	Rock Service Station Rd	NC 42	Widening	3.55	2	4	0	0	0	1	0	\$42,970,000	Long-Term	Wake	Johnston County; Wake County	CAMPO	
A137d	Old Stage Rd	NC 42	NC 210	Widening	5.39	2	4	0	0	0	1	0	\$70,820,000	Long-Term	Wake	Wake County	CAMPO	
A138a	Jones Sausage Rd	US 70	Timber Dr Ext	New Location	0.74	0	4	0	0	0	0	0	\$15,160,000	Long-Term	Wake	Garner; Wake County	CAMPO	
A138b	Jones Sausage Rd	Garner Rd	US 70	New Location	0.38	0	4	1	0	1	0	1	\$31,960,000	Long-Term	Wake	Garner	CAMPO	
A138c1	Jones Sausage Rd	Amazon driveway	E Garner Rd	Widening	0.59	2	4	1	0	1	0	1	\$14,100,000	Near-Term	Wake	Garner; Wake County	CAMPO	
A138d	Escondido Farm Rd	White Oak Rd	Guy Rd	New Location	1.59	0	4	0	0	0	0	0	\$35,840,000	Long-Term	Johnston; Wake	Johnston County; Wake County	CAMPO	
A143a	White Oak Rd	US 70	NC 540	Widening	3.03	2	4	1	0	1	0	0	\$48,060,000	Mid-Term	Wake	Wake County	CAMPO	
A143b	Cornwallis Rd	NC 540	NC 42	Widening	2.54	2	4	0	0	0	1	0	\$40,530,000	Near-Term	Johnston	Johnston County	CAMPO	
A144	Garner Rd	US 70	Timber Dr	Center Turn Lane	1.44	3	3	1	0	1	0	1	\$21,900,000	Visionary	Wake	Garner	CAMPO	
A148c	Eagle Rock Rd; Buffalo Rd	Lake Myra Rd	Covered Bridge Rd	Widening	4.96	2	4	0	0	1	0	0	\$65,850,000	Long-Term	Johnston; Wake	Archer Lodge; Johnston County; Wake County	CAMPO	
A148d	Buffalo Rd	Covered Bridge Rd	NC 42	Widening	3.09	2	4	0	0	1	0	0	\$40,470,000	Visionary	Johnston	Archer Lodge; Johnston County	CAMPO	
A169d1	Eastern Wendell Bypass	Morphus Bridge Rd	NC 231	New Location	1.46	0	4	0	0	1	0	0	\$26,590,000	Visionary	Johnston	Johnston County; Wake County	CAMPO	
A169d2	Southern Wendell Bypass	NC 231	Wendell Rd	New Location	0.74	0	4	0	0	1	0	0	\$13,230,000	Mid-Term	Johnston	Johnston County	CAMPO	
A201a	Rock Quarry Rd	New Hope Rd	Battle Bridge Rd	Widening	1.44	2	4	1	0	0	1	1	\$23,560,000	Near-Term	Wake	Raleigh; Wake County	CAMPO	
A201b	Rock Quarry Rd	Battle Bridge Rd	E Garner Rd	Widening	3.22	2	4	1	0	0	1	1	\$52,860,000	Long-Term	Wake	Raleigh; Wake County	CAMPO	
A202	Garner Rd	Rock Quarry Rd	Shotwell Rd	Widening	3.20	2	4	1	0	0	1	0	\$42,310,000	Long-Term	Johnston; Wake	Clayton; Johnston County	CAMPO	
A203	Auburn-Knightdale Rd; Raynor Rd	Grasshopper Rd	White Oak Rd	Widening	7.51	2	4	1	0	0	0	0	\$99,600,000	Mid-Term	Wake	Wake County	CAMPO	
A214	Garner Rd	Tryon Rd	Rock Quarry Rd	Center Turn Lane	7.08	2	3	1	0	1	0	1	\$104,520,000	Long-Term	Wake	Garner	CAMPO	
A228b	NC 50	Cleveland Rd	NC 42	Widening	1.79	2	4	0	0	1	0	0	\$24,310,000	Mid-Term	Johnston; Wake	Johnston County; Wake County	CAMPO	
A228c	NC 50	NC 42	NC 210	Widening	5.61	2	4	0	0	1	0	1	\$74,520,000	Mid-Term	Johnston	Johnston County	CAMPO	
A300	US 70 Business	US 401	I-40	Widening	9.83	4	6	1	0	1	0	1	\$164,420,000	Long-Term	Wake	Garner; Wake County	CAMPO	
A301	US 70 Business	I-40	NC 42	Widening	10.09	4	6	0	0	0	1	1	\$64,840,000	Mid-Term	Johnston; Wake	Clayton; Garner	CAMPO	
A400a	Ten-Ten Rd	Bells Lake Rd	Old Stage Rd	Widening	5.06	2	4	1	0	1	0	0	\$67,010,000	Long-Term	Wake	Wake County	CAMPO	
A400b	Ten Ten Rd	Old Stage Rd	NC 50	Widening	3.41	2	4	1	0	1	0	0	\$45,070,000	Visionary	Wake	Wake County	CAMPO	
A406a	Shotwell Rd	Old US 70	US 70 Business	Widening	0.84	2	4	1	0	1	0	0	\$13,780,000	Near-Term	Johnston	Clayton; Johnston County	CAMPO	
A406b	Amelia Church Rd; Shotwell Rd	NC 42	US 70	Widening	2.00	2	4	1	0	0	1	0	\$26,280,000	Near-Term	Johnston	Clayton; Johnston County	CAMPO	
A406c	Shotwell Rd	Old Baucom Rd	Old US 70	Widening	2.12	2	4	1	0	1	0	0	\$27,860,000	Mid-Term	Johnston	Clayton; Johnston County	CAMPO	
A407b2	NC 42	Study Area Boundary	NC 50	Widening	8.01	2	4	1	0	1	0	0	\$57,680,000	Long-Term	Johnston; Wake	Johnston County; Wake County	CAMPO	
A407b3	NC 42	NC 50	Glen Rd	Widening	2.10	2	4	1	0	1	0	1	\$26,860,000	Mid-Term	Johnston	Johnston County	CAMPO	R-3410B
A435	Battle Bridge Rd	Rock Quarry Rd	Auburn-Knightdale Rd	Center Turn Lane	1.79	2	3	0	0	1	0	1	\$14,800,000	Long-Term	Wake	Raleigh; Wake County	CAMPO	
A480a1	US 401	US 70	Garner Station Rd	Widening	0.60	4	6	0	0	1	0	1	\$27,790,000	Near-Term	Wake	Garner; Raleigh; Wake County	CAMPO	
A480a2	US 401	Garner Station Rd	Old Stage Rd	Superstreet	1.40	4	6	1	0	1	0	1	\$24,900,000	Near-Term	Wake	Garner; Wake County	CAMPO	U-5302
A480a3	US 401	Old Stage Rd	Simpkins Rd	Superstreet	1.00	4	6	1	0	1	0	1	\$24,890,000	Near-Term	Wake	Garner; Wake County	CAMPO	U-6116
A480a4	US 401	Simpkins Rd	Ten Ten Rd	Widening	2.84	4	6	1	0	1	0	1	\$74,950,000	Mid-Term	Wake	Garner; Wake County	CAMPO	
A480b	US 401	Ten Ten Rd	Wake Tech Wy	Widening	1.09	4	6	1	0	1	0	1	\$51,930,000	Near-Term	Wake	Wake County	CAMPO	U-5746
A539	Banks Rd	US 401	Fanny Brown Rd	Center Turn Lane	1.42	2	3	0	0	0	0	0	\$22,630,000	Long-Term	Wake	Wake County	CAMPO	
A540a	Rock Service Station Rd	Old Stage Rd	NC 42	Center Turn Lane	3.74	2	3	0	0	0	0	0	\$48,780,000	Visionary	Wake	Johnston County	CAMPO	
A540b	Rock Service Station Rd	NC 42	Mt Pleasant Rd	Center Turn Lane	2.57	2	3	0	0	0	0	0	\$33,560,000	Long-Term	Johnston; Wake	Johnston County; Wake County	CAMPO	
A541	Mt Pleasant Rd	NC 42	NC 50	Widening	5.35	2	4	0	0	0	0	0	\$76,380,000	Visionary	Johnston; Wake	Johnston County; Wake County	CAMPO	
A574	Grovemont Rd	US 401	Timber Dr	Center Turn Lane	0.98	2	3	1	0	1	0	0	\$14,610,000	Visionary	Wake	Garner; Wake County	CAMPO	
A575	Woodland Rd	Old Stage Rd	Vandora Springs Rd	Center Turn Lane	1.47	2	3	1	0	1	0	0	\$21,460,000	Visionary	Wake	Garner; Wake County	CAMPO	
A576	Buffaloe Rd	Aversboro Rd	Benson Rd	Center Turn Lane	1.49	2	3	1	0	1	0	0	\$21,610,000	Mid-Term	Wake	Garner	CAMPO	
A578	Auburn Church Rd	Jones Sausage Rd	Garner Rd	Center Turn Lane	2.81	2	3	0	0	1	0	0	\$37,230,000	Long-Term	Wake	Raleigh; Wake County	CAMPO	
A582	Bissette Rd/Lake Wendell Rd	Smithfield Rd	Medlin Rd	Center Turn Lane	2.78	2	3	0	0	1	0	0	\$36,440,000	Visionary	Johnston; Wake	Johnston County; Wake County	CAMPO	
A65	NC 39	Debnam Rd	Hatcher Rd	Widening	17.95	2	4	0	0	0	0	0	\$167,390,000	Mid-Term	Johnston; Wake	Johnston County; Wake County	CAMPO	
A665	Perry Curtis Rd/Wake County Line Rd	S Arendale Av	NC 39	Center Turn Lane	2.61	2	3	0	0	0	0	0	\$23,160,000	Visionary	Johnston; Wake	Johnston County; Wake County	CAMPO	
A683b	Barwell Rd	Poole Rd	Berkely Lake Dr.	Center Turn Lane	1.22	2	3	0	0	1	0	1	\$17,520,000	Long-Term	Wake	Raleigh; Wake County	CAMPO	
A690	Stotts Mill Rd	Buffalo Rd	Wendell Road	Widening	2.43	2	4	0	0	1	0	0	\$35,960,000	Long-Term	Johnston	Johnston County	CAMPO	
A691		Lake Glad Rd	Stotts Mill Rd	New Location	0.81	0	3	0	0	0	0	0	\$10,060,000	Long-Term	Johnston; Wake	Johnston County; Wake County	CAMPO	

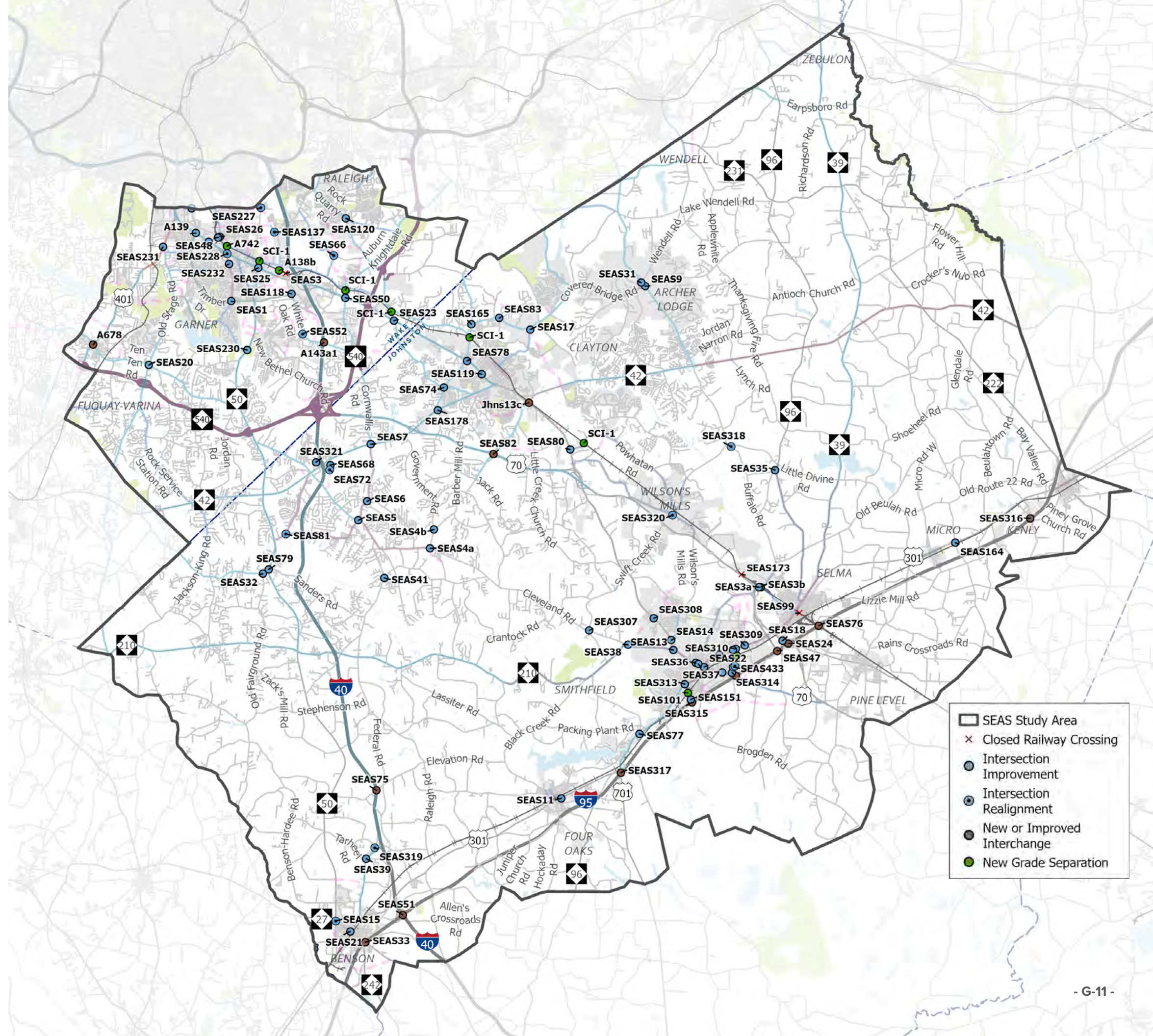
Project						Lanes			Multimodal					Other Information					
ID	Name	From	To	Improvement	Len. (Mi)	Exist	Prop	Side-walk	Wide Should.	Bicycle	Multi-use	Transit	Cost	Horizon	County	Municipality	MPO	TIP No.	
A693	S. Selma Rd	Old Wilson Rd	Stotts Mill Rd	Center Turn Lane	2.36	2	3	0	0	1	0	0	\$21,380,000	Long-Term	Johnston; Wake	Wendell; Johnston County; Wake County	CAMPO		
A741	Aversboro Rd	Timber Dr	Thompson Rd Ext (Proposed)	Center Turn Lane	0.96	2	3	1	0	1	0	0	\$14,600,000	Long-Term	Wake	Garner	CAMPO		
A798	NC 96	Green Grove Ln	Rice Rd	Widening	1.28	2	4	0	0	0	0	0	\$21,200,000	Visionary	Wake	Wake County	CAMPO		
A88	New Rand Rd	US 70 Business	Benson Rd	Center Turn Lane	0.97	2	3	1	0	0	0	0	\$16,060,000	Visionary	Wake	Garner	CAMPO	U-3607	
F14	US 70 Bypass	I-40	US 70 Business	Widening	18.20	4	6	0	0	0	0	0	\$180,660,000	Long-Term	Johnston	Johnston County	CAMPO		
F3	NC 540	I-40 (South)	I-87	New Location	33.85	0	6	0	0	0	0	0	\$427,870,000	Near-Term	Wake	Raleigh	CAMPO	R-2829	
F41	I-40	Wade Ave	NC 540	Widening	45.44	8	10	0	0	0	0	1	\$244,580,000	Near-Term	Wake	Garner; Raleigh; Wake County	CAMPO		
F41b	I-40	NC 540	Cornwallis Rd	Widening	7.52	8	10	0	0	0	0	0	\$23,690,000	Mid-Term	Johnston	Johnston County	CAMPO		
F44a	I-40	I-440	US 70 Business	Widening	8.06	6	8	0	0	0	0	1	\$225,890,000	Near-Term	Wake	Garner; Raleigh; Wake County	CAMPO	I-511A	
F44b	I-40	US 70	NC 42	Widening	11.61	4	8	0	0	0	0	0	\$323,440,000	Near-Term	Johnston; Wake	Garner; Johnston County; Wake County	CAMPO	I-511BA and BB	
F44c	I-40	NC 42	NC 210	Widening	14.61	4	6	0	0	0	0	0	\$163,850,000	Near-Term	Johnston	Johnston County	CAMPO		
F44d	I-40	NC 210	NC 242	Widening	12.74	4	6	0	0	0	0	1	\$172,790,000	Mid-Term	Johnston	Johnston County	CAMPO		
F45	I-40	Cornwallis Rd	NC 210	Widening	8.42	6	8	0	0	0	0	0	\$31,170,000	Mid-Term	Johnston	Johnston County	CAMPO		
F46	I-40	NC 210	NC 242	Widening	13.65	6	8	0	0	0	0	1	\$41,890,000	Mid-Term	Johnston	Johnston County	CAMPO		
F5	NC 540	NC 55	US 401	New Location	22.12	0	6	0	0	0	0	0	\$298,660,000	Near-Term	Wake	Wake County	CAMPO	R-2721	
F6	NC 540	US 401	I-40	New Location	30.09	0	6	0	0	0	0	0	\$446,500,000	Near-Term	Wake	Wake County	CAMPO	R-2828	
Hrnt3b	NC 210	Old Stage Rd	NC 50	Widening	6.41	2	4	0	0	0	1	0	\$85,420,000	Long-Term	Johnston	Johnston County	CAMPO		
Hrnt3c1	NC 210	NC 50	Raleigh Rd	Widening	2.07	2	4	0	0	0	1	1	\$90,910,000	Near-Term	Johnston	Johnston County	CAMPO	U-6203	
Hrnt3c2	NC 210	Raleigh Rd	Lassiter Pond Rd	Widening	5.19	2	4	0	0	0	0	0	\$67,010,000	Long-Term	Johnston	Johnston County	CAMPO		
Jhns10a	Cleveland Rd	NC 50	NC 42	Widening	2.11	2	4	0	0	0	0	1	\$33,800,000	Long-Term	Johnston; Wake	Johnston County; Wake County	CAMPO		
Jhns13a	NC 42	US 70 Business	Ranch Rd	New Location	0.44	0	2	0	0	0	1	0	\$2,960,000	Near-Term	Johnston	Clayton; Johnston County	CAMPO	U-6223	
Jhns13b	NC 42	US 70 Bypass	US 70 Business	Widening	2.00	2	4	1	0	0	1	0	\$28,680,000	Mid-Term	Johnston	Clayton; Johnston County	CAMPO	U-6223	
Jhns14	Clayton Northern Connector	N O'Neil St	Covered Bridge Rd	New Location	0.12	0	2	1	0	0	1	0	\$1,850,000	Long-Term	Johnston	Clayton; Johnston County	CAMPO		
Jhns15	NC 42	Buffalo Rd	CAMPO Boundary	TSM	11.43	2	2	0	0	0	0	0	\$24,550,000	Visionary	Johnston	Johnston County	CAMPO	U-5998	
Jhns16	N O'Neil St	W Main St	Clayton Northern Connector	Center Turn Lane	1.87	2	3	1	0	1	0	0	\$28,670,000	Near-Term	Johnston	Clayton; Johnston County	CAMPO		
Jhns17	Pony Farm Rd	Ranch Rd	Little Creek Church Rd	New Location	1.11	0	3	0	0	0	0	0	\$20,320,000	Visionary	Johnston	Johnston County	CAMPO		
Jhns1b	NC 42	Glen Laurel Rd	Buffalo Rd	Widening	4.44	2	4	0	0	1	0	0	\$104,440,000	Near-Term	Johnston	Clayton; Johnston County	CAMPO	R-3825B	
Jhns2a	NC 42	US 70 Bypass	US 70 Business	Widening	3.00	2	4	1	0	0	1	1	\$40,520,000	Long-Term	Johnston	Clayton	CAMPO	R-3410A	
Jhns2b	NC 42	I-40	US 70 Bypass	Widening	3.23	2	4	1	0	1	0	1	\$48,390,000	Mid-Term	Johnston	Johnston County	CAMPO	R-3410B	
Jhns4a1	Clayton Northern Connector	NC 42	N O'Neil St	New Location	2.19	0	2	1	0	0	1	0	\$20,060,000	Visionary	Johnston	Clayton; Johnston County	CAMPO		
Jhns4a2	Clayton Northern Connector	N O'Neil St	NC 42	Widening	2.19	2	4	1	0	0	1	0	\$29,040,000	Visionary	Johnston	Clayton; Johnston County	CAMPO		
Jhns4b	Covered Bridge Rd	Shotwell Rd	N O'Neil St	Widening	2.07	2	4	1	1	0	1	0	\$26,150,000	Long-Term	Johnston	Clayton; Johnston County	CAMPO		
Jhns6	Prichard Rd; Smithfield Rd	Wake County line	Covered Bridge Rd	Widening	2.37	2	4	1	0	0	1	0	\$34,530,000	Visionary	Johnston	Clayton; Johnston County	CAMPO		
Jhns7a	Guy Rd	Old US 70	Amelia Church Rd	Widening	3.42	2	4	1	0	1	0	0	\$49,900,000	Near-Term	Johnston; Wake	Johnston County; Wake County	CAMPO	R-3618	
Jhns7b	Guy Rd	Amelia Church Rd	NC 42	Widening	0.97	2	4	1	0	1	0	0	\$14,340,000	Long-Term	Johnston	Clayton; Johnston County	CAMPO	R-3618	
SEAS10	Earpsboro Chamblee Rd; Earpsboro Rd	Morphus Bridge Rd	NC 39	Widening	3.20	2	4	0	0	0	0	0	\$43,430,000	Long-Term	Johnston; Wake	Johnston County; Wake County	CAMPO		
SEAS12	Main St	Robertson Rd	Smith St	TSM	0.71	2	2	1	0	0	0	1	\$6,540,000	Mid-Term	Johnston	Clayton	CAMPO		
SEAS16	Moss Rd	Morphus Bridge Rd	Earpsboro Chamblee Rd	New Location	3.20	2	4	0	0	0	0	0	\$67,780,000	Visionary	Johnston; Wake	Johnston County; Wake County	CAMPO		
SEAS179	Grovemont Rd	Fayetteville Rd	Old Stage Rd	New Location	0.12	0	3	1	0	1	0	0	\$1,950,000	Visionary	Wake	Garner; Wake County	CAMPO		
SEAS180	Timber Dr	US 70	Vandora Springs Rd	Access Management	1.88	4	4	1	0	1	0	0	\$24,010,000	Long-Term	Wake	Garner	CAMPO		
SEAS181	Fifth Ave	Vandora Springs Rd	Aversboro Rd	Access Management	0.23	2	2	1	0	0	0	0	\$3,140,000	Visionary	Wake	Garner	CAMPO		
SEAS182	Timber Dr	Aversboro Rd	White Oak Road	Access Management	2.03	4	4	1	0	1	0	1	\$26,010,000	Visionary	Wake	Garner	CAMPO		
SEAS183	Timber Dr	Vandora Springs Rd	Aversboro Rd	Access Management	1.28	4	4	1	0	1	0	0	\$23,010,000	Long-Term	Wake	Garner	CAMPO		
SEAS184	Jewell St	Current End	Wilmington Rd	New Location	0.25	0	2	0	0	0	1	0	\$3,070,000	Long-Term	Wake	Garner	CAMPO		
SEAS185	Charles St	Current End	Wilmington Rd	New Location	0.53	0	2	0	0	0	1	0	\$6,490,000	Near-Term	Wake	Garner	CAMPO		
SEAS186		Longview St	Creech Rd	New Location	0.31	0	2	0	0	0	0	0	\$3,490,000	Long-Term	Wake	Garner	CAMPO		
SEAS187	Cofield Aly		W Garner Rd	New Location	0.49	0	2	0	0	0	0	0	\$5,500,000	Long-Term	Wake	Garner	CAMPO		
SEAS188		W Garner Rd	Weston Rd	New Location	0.63	0	2	0	0	0	0	0	\$7,090,000	Near-Term	Wake	Garner	CAMPO		
SEAS189	Quiet Refuge Ln	Current End		New Location	0.12	0	2	0	0	0	0	0	\$1,310,000	Long-Term	Wake	Garner	CAMPO		
SEAS19	Swift Creek Rd	0.5 mi N of Airport Industrial Dr	Airport Industrial Dr	Center Turn Lane	0.26	2	3	0	0	0	0	0	\$2,700,000	Long-Term	Johnston	Johnston County	UCPRPO		
SEAS190	Curtiss Dr	W Garner Rd	Current End	New Location	0.14	0	2	1	0	0	0	0	\$1,860,000	Mid-Term	Wake	Garner	CAMPO		
SEAS191	New Rand Rd	E Garner Rd	Jones Sausage Rd	New Location	0.82	0	2	1	0	1	0	0	\$11,040,000	Mid-Term	Wake	Garner	CAMPO		
SEAS192		Charles St Ext	E Garner Rd	New Location	0.87	0	2	0	0	0	1	0	\$10,650,000	Long-Term	Wake	Garner	CAMPO		
SEAS193	Wakeland Dr	Long Ave	White Oak Rd	New Location	0.80	0	2	1	0	0	0	0	\$9,720,000	Visionary	Wake	Garner	CAMPO		
SEAS194	Poole Dr	Lawndale St	NC 50	New Location	0.24	0	2	1	0	0	0	0	\$2,940,000	Visionary	Wake	Garner	CAMPO		
SEAS195	Coffeeberry Ct	Fox Walk Pth Ext	Twinberry Ln	New Location	0.07	0	2	1	0	0	0	0	\$980,000	Visionary	Wake	Garner	CAMPO		
SEAS196	Fox Walk Pth	Fox Trap Ct	White Oak Rd	New Location	1.00	0	2	0	0	1	0	0	\$11,260,000	Visionary	Wake	Garner	CAMPO		

Project						Lanes		Multimodal					Other Information					
ID	Name	From	To	Improvement	Len. (Mi)	Exist	Prop	Side-walk	Wide Should.	Bicycle	Multi-use	Transit	Cost	Horizon	County	Municipality	MPO	TIP No.
SEAS197	Skipping Rock Ln	Current End	Ackerman Rd Ext	New Location	0.18	0	2	1	0	0	0	0	\$2,400,000	Long-Term	Wake	Garner	CAMPO	
SEAS198	New Bethel Church Rd	Ackerman Rd Ext	NC 50	New Location	0.57	0	2	0	0	0	0	0	\$6,440,000	Near-Term	Wake	Garner	CAMPO	
SEAS199	New Bethel Church Rd	November Street	Ackerman Rd Ext	New Location	0.46	0	2	0	0	0	0	0	\$5,210,000	Near-Term	Wake	Garner	CAMPO	
SEAS2	Old Stage Rd	Ten Ten Road	Rock Service Station Rd	Widening	1.48	2	4	1	0	0	1	0	\$14,060,000	Near-Term	Wake	Wake County	CAMPO	
SEAS200	Bayberry Woods Dr	Fox Walk Path Ext	Current End	New Location	0.28	0	2	1	0	1	0	0	\$3,740,000	Visionary	Wake	Garner	CAMPO	
SEAS201	Banks Rd	Old Stage Rd	Holland Church Rd	New Location	0.94	0	2	0	0	0	0	0	\$10,560,000	Visionary	Wake	Garner	CAMPO	
SEAS202	Landsburg Dr	Okamoto Dr	Current End	New Location	0.47	0	2	0	0	0	0	0	\$5,340,000	Visionary	Wake	Garner	CAMPO	
SEAS203	South Mountain Dr	Landsburg Dr Ext	Current End	New Location	0.03	0	2	0	0	0	0	0	\$300,000	Visionary	Wake	Garner	CAMPO	
SEAS204	Kanaskis Rd	Current End	Ten Ten Rd	New Location	0.44	0	2	1	0	0	0	0	\$5,960,000	Visionary	Wake	Garner	CAMPO	
SEAS205	Hurst Dr	Kanaskis Rd Ext	Current End	New Location	0.16	0	2	1	0	0	0	0	\$2,190,000	Visionary	Wake	Garner	CAMPO	
SEAS206	Denlee Rd	Lake Wheeler Rd	US 401	New Location	0.71	0	2	0	0	0	0	0	\$7,980,000	Near-Term	Wake	Garner	CAMPO	
SEAS207	Legend Rd	Old Stage Rd	Lakeside Trail	New Location	0.29	0	2	0	0	0	0	0	\$3,230,000	Visionary	Wake	Garner	CAMPO	
SEAS208		Cindy Dr	Grovemont Rd	New Location	0.08	0	2	0	0	0	0	0	\$880,000	Near-Term	Wake	Garner	CAMPO	
SEAS209	Roan Dr	Poplar Springs Church Rd	Vandora Springs Rd	New Location	0.64	0	2	0	0	0	0	0	\$7,220,000	Long-Term	Wake	Garner	CAMPO	
SEAS210			Hall Blvd	New Location	0.10	0	2	0	0	0	0	0	\$1,100,000	Visionary	Wake	Garner	CAMPO	
SEAS211		Old Stage Rd		New Location	0.29	0	2	0	0	0	0	0	\$3,230,000	Visionary	Wake	Garner	CAMPO	
SEAS212	Thompson Rd	Current End	Aversboro Rd	New Location	0.28	0	2	1	0	0	0	0	\$3,360,000	Long-Term	Wake	Garner	CAMPO	
SEAS213	Malibu Drive	Current End	Vandora Springs Rd Ext	New Location	0.22	0	2	0	0	0	0	0	\$2,450,000	Visionary	Wake	Garner	CAMPO	
SEAS214	Crosspine Dr	Bentpine Dr	Maxwell Dr	New Location	0.17	0	2	1	0	0	0	0	\$2,340,000	Long-Term	Wake	Garner	CAMPO	
SEAS215	Ackerman Rd	New Bethel Church Rd Ext	NC 50	New Location	0.43	0	4	1	0	0	0	0	\$8,520,000	Long-Term	Wake	Garner	CAMPO	
SEAS216	Wrenn Rd	Current End	New Bethel Church Rd Ext	New Location	0.87	0	2	0	0	0	0	0	\$9,810,000	Long-Term	Wake	Garner	CAMPO	
SEAS217	Buffaloe Rd	Vandora Springs Rd	Garner Town Limits	Access Management	1.07	2	2	1	0	0	1	0	\$13,640,000	Visionary	Wake	Garner	CAMPO	
SEAS218	Buffaloe Rd	Garner Town Limits	Garner Town Limits	Access Management	0.57	2	2	1	0	0	1	0	\$5,630,000	Visionary	Wake	Garner	CAMPO	
SEAS219	Creek Commons Ave	Muirfield Ridge Dr	Creech Rd	New Location	0.25	0	2	1	0	0	0	0	\$3,370,000	Long-Term	Wake	Garner	CAMPO	
SEAS220	Timber Drive E	Adeline Wy	White Oak Rd	New Location	1.31	0	4	1	0	0	0	0	\$26,090,000	Long-Term	Wake	Garner	CAMPO	
SEAS221	Lake Wheeler Park	Lake Wheeler Park	US 401	New Location	1.10	0	3	0	0	0	1	0	\$16,140,000	Visionary	Wake	Garner	CAMPO	
SEAS222	Meadowbook Dr	Weston Rd	Creech Rd	New Location	0.71	0	2	0	0	0	1	0	\$8,730,000	Long-Term	Wake	Garner	CAMPO	
SEAS223	Tryon Rd	Cyrus St	Rivermist Dr	New Location	2.24	0	2	0	0	1	0	0	\$30,200,000	Long-Term	Wake	Raleigh	CAMPO	U-3111
SEAS224	Wilmington St	Tryon Rd	Rear of Belk/Carlie C's Shopping Center	New Location	0.33	0	3	0	0	0	0	1	\$4,540,000	Near-Term	Wake	Raleigh	CAMPO	
SEAS225	Idlewood Village Dr	Current End	Tryon Rd Ext	New Location	0.09	0	2	1	0	0	0	0	\$1,200,000	Visionary	Wake	Wake County	CAMPO	
SEAS226	Johnson St	Creech Rd	Avery St	New Location	1.17	0	2	0	0	0	1	0	\$14,420,000	Long-Term	Wake	Garner	CAMPO	
SEAS233		Whitfield Rd Ext	Wall Store Rd	New Location	1.83	0	2	0	0	0	0	0	\$20,580,000	Mid-Term	Wake	Raleigh; Wake County	CAMPO	
SEAS244	Vandora Springs Rd	US 401	Old Stage Rd	New Location	1.74	0	2	0	0	0	1	0	\$21,420,000	Long-Term	Wake	Wake County	CAMPO	
SEAS245	Ackerman Rd	NC 50	Anton Wy	New Location	0.39	0	3	1	0	1	0	0	\$6,490,000	Long-Term	Wake	Garner; Wake County	CAMPO	
SEAS246	Market St	Brightleaf Blvd	I-95	TSM	1.07	3	3	1	0	0	1	1	\$13,160,000	Long-Term	Johnston	Smithfield	UCPRPO	
SEAS247		Brogden Rd	Mallard Rd	New Location	1.49	0	2	0	0	0	0	0	\$16,770,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS248		Mallard Rd	Hill Rd	New Location	1.66	0	2	0	0	0	0	0	\$18,710,000	Long-Term	Johnston	Smithfield	UCPRPO	
SEAS249	Old Farm Rd		Current End	New Location	0.24	0	2	0	0	0	0	0	\$2,760,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS250	Peedin Rd	Outlet Center Dr	Venture Dr	New Location	0.33	0	4	1	0	0	0	0	\$6,360,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS251	Market St	N	Front St	TSM	0.59	5	4	0	0	0	1	1	\$3,650,000	Long-Term	Johnston	Smithfield	UCPRPO	
SEAS252	Cleveland Rd	NC 42	Cornwallis Rd	Widening	2.26	2	4	1	0	0	1	1	\$40,980,000	Mid-Term	Johnston	Johnston County	CAMPO	U-6216
SEAS253	Cleveland Rd	Cornwallis Rd	Barber Mill Rd	TSM	2.87	2	2	1	0	0	1	1	\$24,030,000	Mid-Term	Johnston	Johnston County	CAMPO	U-6216
SEAS254	Clayton Industrial Connector	NC 42	GLP One Wy	New Location	0.91	0	2	0	0	0	0	0	\$18,690,000	Visionary	Johnston	Johnston County	CAMPO	
SEAS255	Brightleaf Blvd	Brogden Rd	Market St	TSM	0.91	5	4	1	0	0	0	1	\$10,520,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS256	Pollock St	US 70 Bypass	NC 39	TSM	2.55	5	4	1	0	0	0	1	\$29,620,000	Visionary	Johnston	Selma	UCPRPO	
SEAS257	Brightleaf Blvd	Booker Dairy Rd	Ricks Rd	TSM	0.83	5	4	1	0	0	0	1	\$9,590,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS258	Brightleaf Blvd	Market St	Booker Dairy Rd	TSM	1.57	5	4	1	0	0	0	1	\$18,210,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS259	US 301	I-95	Brogden Rd	Widening	3.80	2	4	1	0	0	1	1	\$68,010,000	Long-Term	Johnston	Smithfield	UCPRPO	
SEAS260	US 301	Micro Town Limits	Micro Town Limits	Modernization	0.67	2	2	1	1	0	0	1	\$1,080,000	Visionary	Johnston	Micro	UCPRPO	
SEAS261	NC 210	Lassiter Pond Rd	Market St	Modernization	6.43	2	2	1	1	0	1	0	\$10,340,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS262	N Baker St	E Hatcher St	E Wellons St	Modernization	0.41	2	2	1	0	0	0	0	\$670,000	Visionary	Johnston	Four Oaks	UCPRPO	
SEAS263	Brogden Rd	S Brightleaf Blvd	I-95	Modernization	0.64	2	2	1	1	0	1	0	\$1,030,000	Long-Term	Johnston	Smithfield	UCPRPO	
SEAS264	Buffalo Rd	US 70	Old Beulah Rd	Modernization	1.25	2	2	0	1	0	1	0	\$2,600,000	Long-Term	Johnston	Selma	UCPRPO	
SEAS265	Buffalo Rd	US 70	Hospital Rd	Modernization	2.76	2	2	1	1	0	1	0	\$6,030,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS266	Clayton Southern Connector	Little Creek Church Rd	NC 42	New Location	2.12	0	2	1	0	0	1	0	\$34,460,000	Long-Term	Johnston	Clayton; Johnston County	CAMPO	R-3618
SEAS267	N Church St	W Hatcher St	W Wellons St	Modernization	0.45	2	2	1	0	0	0	0	\$890,000	Visionary	Johnston	Four Oaks	UCPRPO	
SEAS268	Fire Dept Rd	Southerland Rd	Wilson's Mills Rd	Modernization	1.32	2	2	1	1	0	1	0	\$3,100,000	Long-Term	Johnston	Wilson's Mills	UCPRPO	
SEAS269	Powhatan Rd	US 70 Business	Fire Dept Rd	Modernization	4.95	2	2	1	1	0	1	0	\$10,810,000	Visionary	Johnston	Wilson's Mills	UCPRPO	

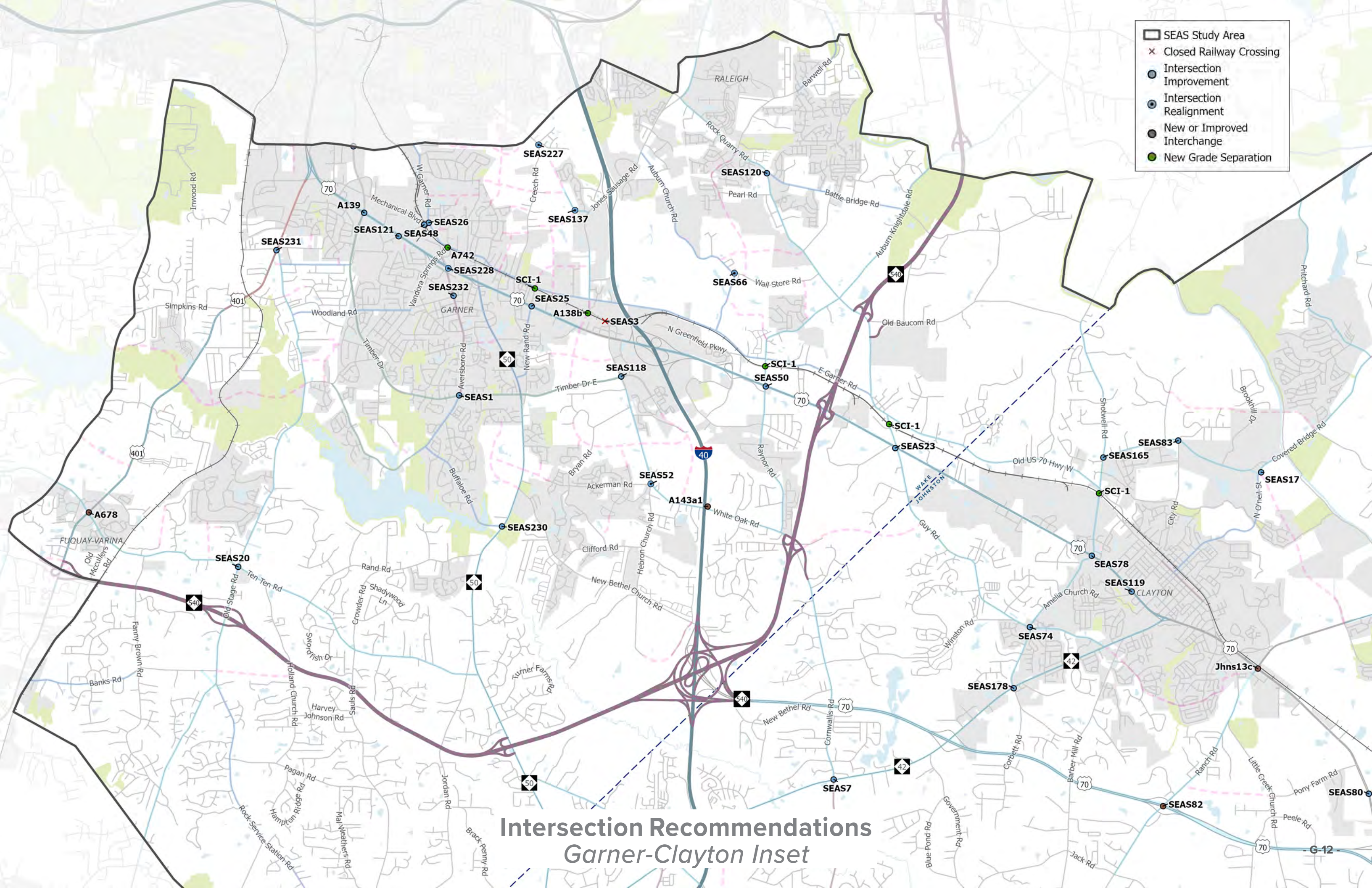
Project						Lanes		Multimodal					Other Information					
ID	Name	From	To	Improvement	Len. (Mi)	Exist	Prop	Side-walk	Wide Should.	Bicycle	Multi-use	Transit	Cost	Horizon	County	Municipality	MPO	TIP No.
SEAS27	New Pearl Rd	Barwell Rd	Auburn Church Rd	New Location	1.52	0	3	1	0	1	0	0	\$30,320,000	Long-Term	Wake	Raleigh; Wake County	CAMPO	
SEAS270	W Sanders St	N Church St	N Main St	Modernization	0.07	2	2	1	0	0	0	0	\$120,000	Visionary	Johnston	Four Oaks	UCPRPO	
SEAS271	E Sanders St	N Main St	Maple Ave	Modernization	0.21	2	2	1	0	0	0	0	\$340,000	Mid-Term	Johnston	Four Oaks	UCPRPO	
SEAS272	Covered Bridge Rd	Pritchard Rd	Clayton Northern Connector	Widening	2.06	2	4	1	0	1	0	0	\$37,230,000	Long-Term	Johnston	Archer Lodge; Clayton; Johnston County	CAMPO	
SEAS273	Wilson's Mills Rd	Swift Creek Rd	US 70	Modernization	1.33	2	2	1	1	0	0	1	\$2,140,000	Visionary	Johnston	Wilson's Mills	UCPRPO	
SEAS274	Wilson's Mills Rd	Gordon Rd	Swift Creek Rd	Modernization	1.37	2	2	1	1	0	0	0	\$2,220,000	Visionary	Johnston	Wilson's Mills	UCPRPO	
SEAS275	Gordon Rd	US 70 Business	Wilson's Mills Rd	Modernization	2.61	2	2	0	1	0	0	0	\$4,200,000	Visionary	Johnston	Johnston County	UCPRPO	
SEAS276	Wilson's Mills Rd	M Durwood Stephenson Hwy	Market St	Center Turn Lane	0.95	2	3	1	0	1	0	0	\$13,100,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS277	Barber Mill Rd	Cleveland Rd	Monroe Rd	New Location	0.61	0	2	0	0	0	1	0	\$7,560,000	Visionary	Johnston	Johnston County	CAMPO	
SEAS278	Glen Rd	Cleveland Rd	NC 42	New Location	0.44	0	2	1	0	0	0	0	\$5,340,000	Mid-Term	Johnston	Johnston County	CAMPO	
SEAS279	Covered Bridge Rd	Pritchard Rd	Buffalo Rd	TSM	4.93	2	2	1	0	1	0	0	\$53,000,000	Long-Term	Johnston	Archer Lodge; Clayton; Johnston County	CAMPO	
SEAS280	Jaguar Dr	Martin Luther King Jr Dr	Jaguar Dr	New Location	0.77	0	2	0	0	0	0	0	\$8,640,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS281		Market St	College Rd	New Location	0.67	0	2	0	0	0	0	0	\$7,530,000	Long-Term	Johnston	Smithfield	UCPRPO	
SEAS282	West Smithfield Connector	NC 210	Market St	New Location	1.25	0	2	0	0	0	1	0	\$15,310,000	Long-Term	Johnston	Smithfield	UCPRPO	
SEAS283	NC 39	Little Devine Rd	US 301	Modernization	3.43	2	2	0	1	0	0	0	\$7,650,000	Long-Term	Johnston	Johnston County	UCPRPO	
SEAS284	NC 96	Little Divine Rd	Poole Dr	Modernization	4.51	2	2	0	1	0	0	0	\$10,080,000	Long-Term	Johnston	Johnston County	UCPRPO	
SEAS285	N Sumner St	W Richardson St	Poole Dr	Modernization	0.26	2	2	0	0	0	0	0	\$430,000	Visionary	Johnston	Selma	UCPRPO	
SEAS286	W Richardson St	N Sumner St	Pollock St	Modernization	0.14	2	2	1	0	0	0	0	\$230,000	Visionary	Johnston	Selma	UCPRPO	
SEAS287	Banner Elk Rd	NC 50	NC 242	New Location	0.94	0	2	0	0	0	0	0	\$10,570,000	Near-Term	Johnston	Benson	UCPRPO	
SEAS288	Benson Western Bypass	NC 50	NC 50	New Location	3.31	0	2	0	0	0	0	0	\$37,330,000	Long-Term	Johnston	Benson	UCPRPO	
SEAS289	Benson Western Bypass	NC 50	NC 50	New Location	0.07	0	2	0	0	0	0	0	\$740,000	Long-Term	Johnston	Benson	UCPRPO	
SEAS29	Aversboro Rd	US 70	Timber Dr	TSM	1.55	4	4	1	0	1	0	1	\$27,580,000	Visionary	Wake	Garner	CAMPO	
SEAS290	NC 27	Mingo Rd	Main St	Center Turn Lane	0.58	2	3	0	0	0	0	0	\$6,160,000	Mid-Term	Johnston	Benson	UCPRPO	
SEAS291	NC 242	Tarheel Rd	I-40	Widening	0.68	2	4	0	0	0	0	0	\$9,820,000	Near-Term	Johnston	Benson	UCPRPO	
SEAS292	NC 242	Tarheel Rd	N Wall St	Widening	1.98	2	4	0	0	0	1	0	\$34,410,000	Long-Term	Johnston	Benson	UCPRPO	
SEAS293	Ashley Rd/Massengill Farm Rd	Massengill Farm Rd	NC 242	New Location	0.46	0	2	0	0	0	0	0	\$5,140,000	Visionary	Johnston	Benson	UCPRPO	
SEAS294	Cornwallis Rd	Old Drugstore Rd	NC 42	TSM	5.46	2	2	0	0	0	1	0	\$54,000,000	Long-Term	Johnston	Johnston County	CAMPO	
SEAS295	Noble St	Buffalo Rd	Pollock St	Center Turn Lane	1.43	2	3	1	0	0	0	0	\$17,870,000	Visionary	Johnston	Selma	UCPRPO	
SEAS296	US 70 Business	I-95	US 70	Center Turn Lane	3.06	2	3	1	0	0	1	0	\$41,250,000	Visionary	Johnston	Johnston County	UCPRPO	
SEAS297	Booker Dairy Rd	Buffalo Rd	M. Durwood Stephenson Pkwy	New Location	1.07	0	2	1	0	0	1	0	\$18,470,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS298		M. Durwood Stephenson Pkwy	Lee Youngblood Rd	New Location	1.14	0	2	0	0	0	0	0	\$12,800,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS299		NC 210	US 70 Business	New Location	0.57	0	2	1	0	0	0	0	\$6,910,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS30	Beichler Rd	US 70	Beichler Rd	New Location	0.13	0	2	0	0	0	1	1	\$1,570,000	Long-Term	Wake	Garner	CAMPO	
SEAS300		Kellie Dr	Booker Dairy Rd Ext	New Location	0.50	0	2	1	0	0	1	0	\$8,700,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS301	Bradford Rd	Buffalo Rd	Current End	New Location	0.54	0	2	1	0	0	0	0	\$6,550,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS302	Stephenson Dr		Current End	New Location	0.22	0	2	0	0	0	0	0	\$2,430,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS303	Old Drug Store Rd	NC 42	NC 50	TSM	2.54	2	2	1	0	0	1	0	\$33,310,000	Long-Term	Johnston	Johnston County	CAMPO	
SEAS304	Wilmington Rd	Creech Rd	Current End	New Location	1.15	0	3	0	0	0	1	0	\$16,910,000	Long-Term	Wake	Garner	CAMPO	
SEAS305	Wilmington Rd	Current End	Jones Sausage Rd	Widening	1.15	2	4	0	0	0	1	0	\$16,770,000	Long-Term	Wake	Garner	CAMPO	
SEAS4	NC 50	Timber Dr	Cleveland Rd	Widening	5.02	2	4	1	0	1	0	1	\$37,380,000	Mid-Term	Wake	Garner; Wake County	CAMPO	
SEAS44	Stotts Mill Rd	Buffalo Rd	Wendell Rd	Modernization	2.44	2	2	0	1	1	0	0	\$3,930,000	Long-Term	Johnston	Johnston County	CAMPO	
SEAS54		Mallard Rd	US 70 Business	New Location	0.41	0	2	0	0	0	0	0	\$4,620,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS55		US 70 Business		New Location	0.85	0	2	0	0	0	0	0	\$9,610,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS56		US 70 Business	Yelverton Grove Rd	New Location	0.86	0	2	0	0	0	0	0	\$9,700,000	Visionary	Johnston	Smithfield	UCPRPO	
SEAS60			Yelverton Grove Rd	New Location	0.14	0	2	0	0	0	0	0	\$1,570,000	Visionary	Johnston	Smithfield; Johnston County	UCPRPO	
SEAS61	Loop Rd	Bobbitt Rd	Covered Bridge Rd	New Location	1.99	0	2	0	0	0	0	0	\$22,410,000	Mid-Term	Johnston	Clayton; Johnston County	CAMPO	
SEAS62	Ranch Rd	US 70 Bypass	Jack Rd	Widening	1.13	2	4	1	0	0	1	0	\$20,520,000	Mid-Term	Johnston	Johnston County	CAMPO	
SEAS63	Whitfield Rd	Auburn Church Rd	Rock Quarry Rd	New Location	1.34	0	2	0	0	0	0	0	\$15,060,000	Near-Term	Wake	Raleigh; Wake County	CAMPO	
SEAS64	Majestic Peak Dr	Bryan Rd	Alderbranch Ct	New Location	0.27	0	2	1	0	0	0	0	\$3,630,000	Visionary	Wake	Garner; Wake County	CAMPO	
SEAS65		Wall Store Rd	Auburn-Knightdale Rd	New Location	0.49	0	2	1	0	0	0	0	\$6,680,000	Long-Term	Wake	Raleigh; Wake County	CAMPO	
SEAS69	Fox Walk Pth	White Oak Rd	Timber Dr E Ext	New Location	0.76	0	2	0	0	0	0	0	\$8,580,000	Long-Term	Wake	Wake County	CAMPO	
SEAS70	US 301	W Goldsboro St	W 7th St	TSM	0.79	5	4	1	0	0	0	1	\$9,160,000	Mid-Term	Johnston	Kenly	UCPRPO	
SEAS71	Cleveland Crossing Dr	Cleveland Crossing Dr	Cleveland Rd	New Location	0.74	0	2	0	0	0	0	0	\$8,310,000	Long-Term	Johnston	Johnston County	CAMPO	
SEAS73		Auburn Church Rd	Auburn Knightdale Rd	New Location	0.73	0	2	1	0	0	0	0	\$8,830,000	Mid-Term	Wake	Garner	CAMPO	
SEAS8	Covered Bridge Rd	O'Neil St	E of Club Connection Blvd	Center Turn Lane	0.99	2	3	1	0	1	0	0	\$13,620,000	Near-Term	Johnston	Clayton	CAMPO	

SEAS UPDATE

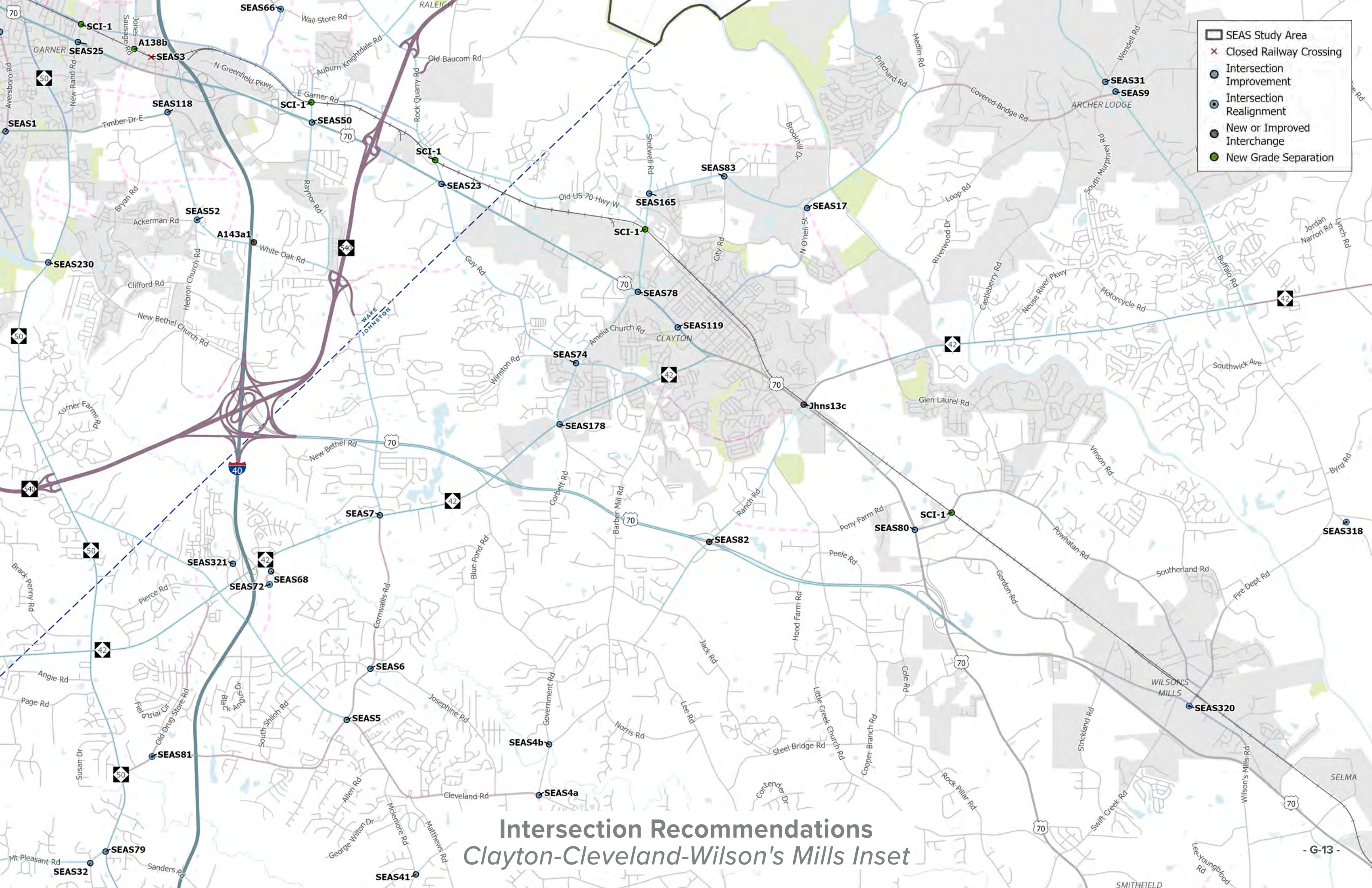
Intersection Recommendations



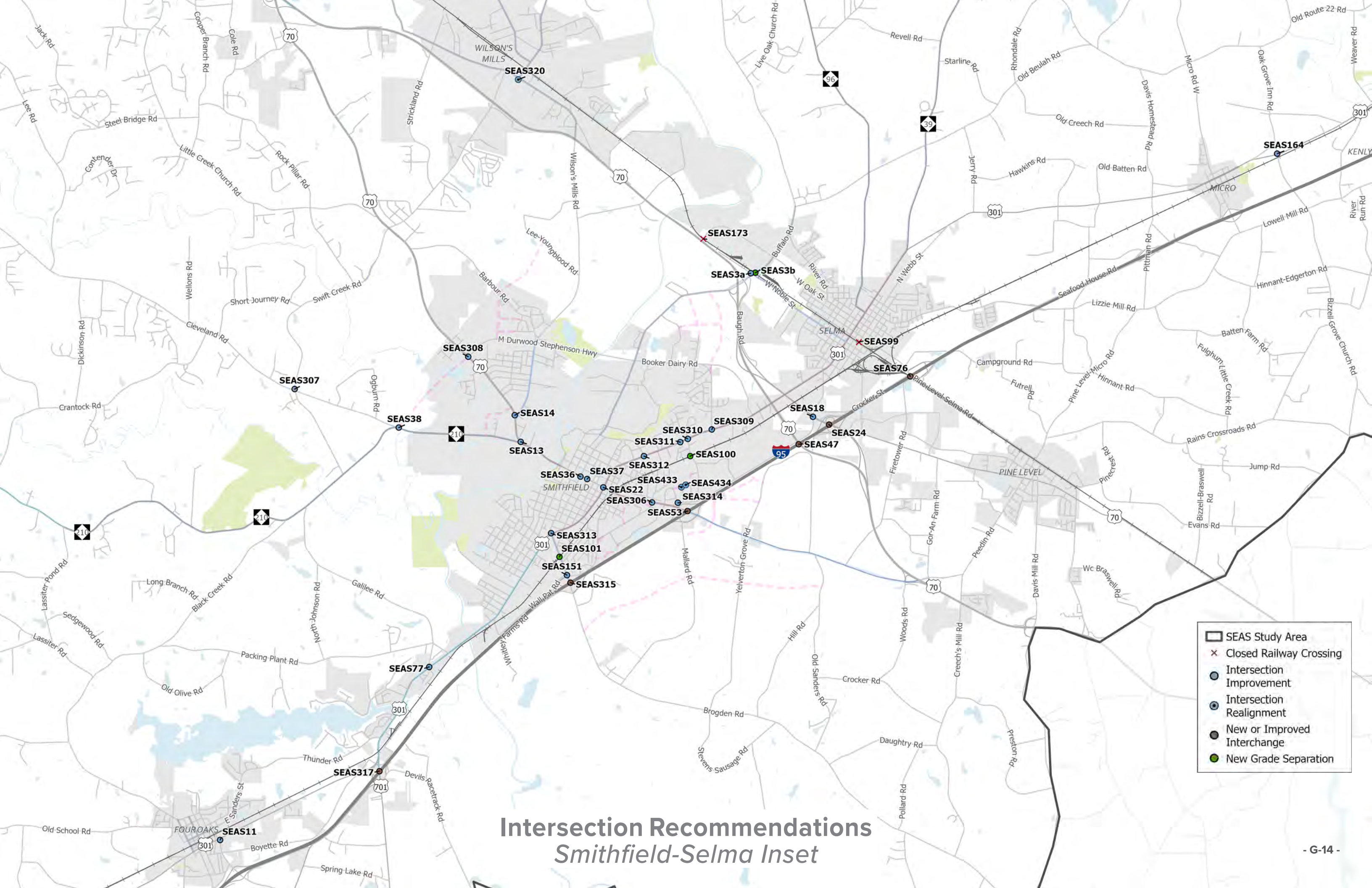
- SEAS Study Area
- Closed Railway Crossing
- Intersection Improvement
- Intersection Realignment
- New or Improved Interchange
- New Grade Separation



Intersection Recommendations
Garner-Clayton Inset



Intersection Recommendations
Clayton-Cleveland-Wilson's Mills Inset



Intersection Recommendations
Smithfield-Selma Inset

SEAS UPDATE

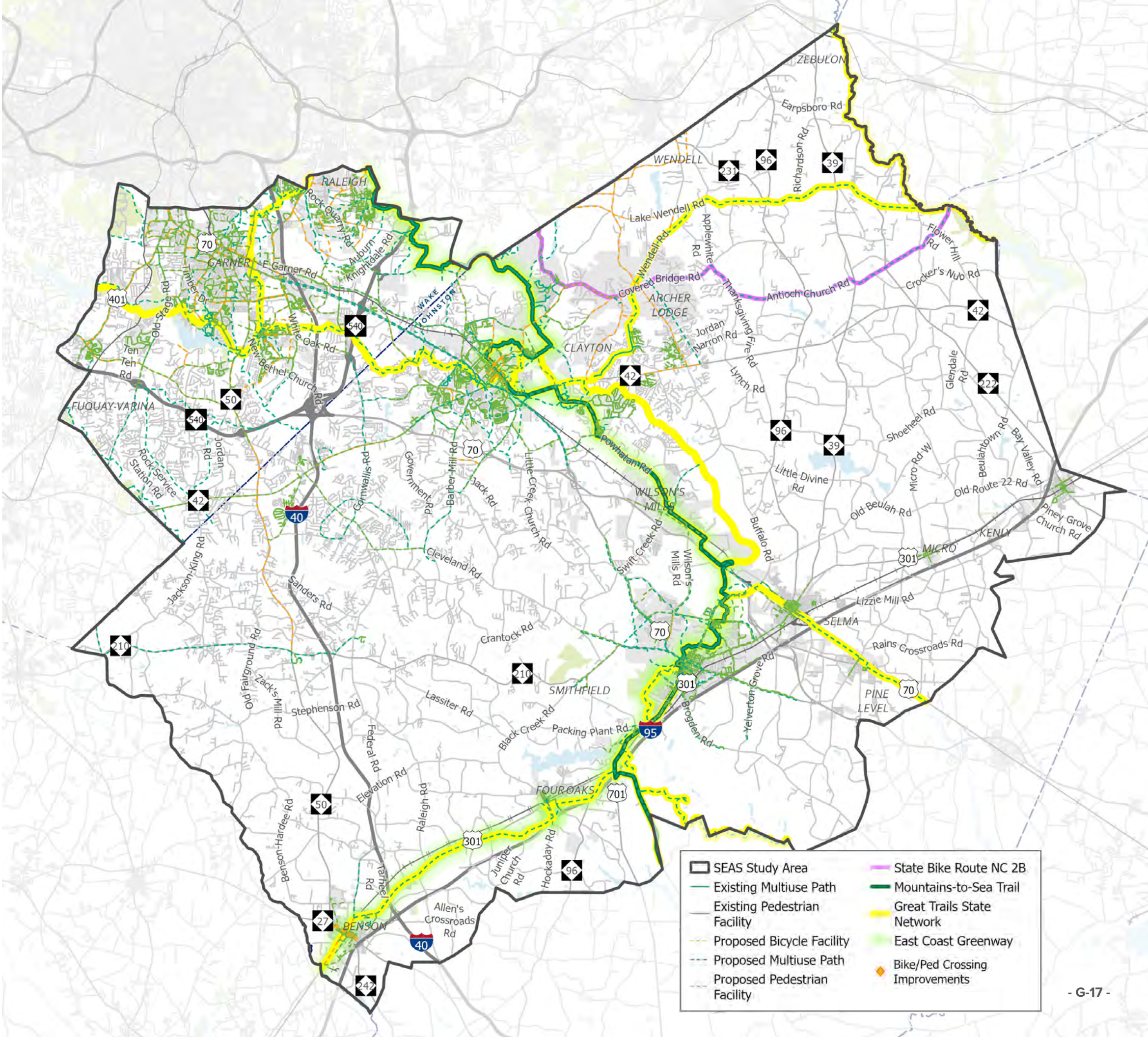
Intersection Recommendations

Project			Facility Type		Multimodal					Other Information					
ID	Location	Improvement	Existing	Proposed	Side-walk	Wide Should.	Bicycle	Multi-use	Transit	Cost	Horizon	County	Municipality	MPO	TIP No.
A138b	Jones Sausage Rd/RR	Grade Separation	NA	Grade Separation	1	0	0	0	1	\$27,604,000	Long-Term	Wake County	Garner	CAMPO	
A139	US 70/Timber Dr	CFI	NA	Interchange	1	0	1	0	1	\$17,830,000	Long-Term	Wake County	Garner	CAMPO	U-5744
A143a1	I-40/White Oak Rd	Interchange	NA	Interchange	1	0	1	0	0	\$20,455,050	Near-Term	Wake County	Wake County	CAMPO	
A678	US 401/Ten Ten Rd	Interchange	NA	Interchange	1	0	1	0	1	\$95,050,000	Mid-Term	Wake County	Fuquay-Varina	CAMPO	U-6112
A742	Vandora Hills Rd/RR	Grade Separation	NA	Grade Separation	1	0	1	0	1	\$5,644,918	Near-Term	Wake County	Garner	CAMPO	P-5738
Jhns13c	US 70 BUS/NC 42/Ranch Rd	Interchange	NA	Interchange	1	0	0	1	1	\$58,284,000	Near-Term	Johnston County	Clayton	CAMPO	
SCI-1	Auburn Knightdale Rd/RR	Grade Separation	NA	Grade Separation	1	0	0	0	1	\$7,510,000	Long-Term	Wake County	Wake County	CAMPO	
SCI-1	Guy Rd/RR	Grade Separation	NA	Grade Separation	1	0	0	1	0	\$6,320,000	Near-Term	Wake County	Wake County	CAMPO	
SCI-1	New Rand Rd/RR	Grade Separation	NA	Grade Separation	1	0	0	0	1	\$7,510,000	Mid-Term	Wake County	Garner	CAMPO	
SCI-1	Powhatan Rd/RR	Grade Separation	NA	Grade Separation	1	0	0	1	0	\$6,320,000	Visionary	Johnston County	Clayton	CAMPO	
SCI-1	Shotwell Rd/RR	Grade Separation	NA	Grade Separation	1	0	1	0	0	\$6,320,000	Near-Term	Johnston County	Clayton; Johnston County	CAMPO	
SCI-1	Yeargan Rd/RR	Grade Separation	NA	Grade Separation	1	0	1	0	0	\$7,510,000	Long-Term	Wake County	Garner	CAMPO	
SEAS1	Timber Dr/Aversboro Rd	Intersection Improvement	Intersection	Intersection	1	0	1	0	1	\$1,710,000	Long-Term	Wake County	Garner	CAMPO	
SEAS100	Peedin Rd/RR	Grade Separation	NA	Grade Separation	1	0	0	0	0	\$7,510,000	Long-Term	Johnston County	Smithfield	UCPRPO	
SEAS101	Brogden Rd/RR	Grade Separation	NA	Grade Separation	1	0	0	1	0	\$7,510,000	Long-Term	Johnston County	Smithfield	UCPRPO	
SEAS11	US 301/Keen Rd	Intersection Improvement	Intersection	Intersection	1	0	0	0	1	\$1,710,000	Long-Term	Johnston County	Four Oaks	UCPRPO	
SEAS118	Timber Dr E/White Oak Rd	Intersection Improvement	Intersection	Intersection	1	0	1	0	1	\$1,710,000	Visionary	Wake County	Garner	CAMPO	
SEAS119	US 70 BUS/Amelia Church Rd/Robertson St	Intersection Improvement	Intersection	Intersection	1	0	1	1	1	\$1,710,000	Mid-Term	Johnston County	Clayton	CAMPO	
SEAS120	Rock Quarry Rd/Battle Bridge Rd	Intersection Improvement	Intersection	Intersection	1	0	1	1	1	\$100,000	Near-Term	Wake County	Raleigh	CAMPO	
SEAS121	US 70/Yeargan Rd	Intersection Improvement	Intersection	Intersection	1	0	1	0	1	\$1,710,000	Long-Term	Wake County	Garner	CAMPO	
SEAS13	Market St/NC 210	Intersection Improvement	Intersection	Intersection	0	0	0	1	1	\$1,710,000	Long-Term	Johnston County	Smithfield	UCPRPO	
SEAS137	Wilmington Rd/Charles St Ext	Intersection Realignment	Intersection	Intersection	0	0	0	1	0	\$970,000	Near-Term	Wake County	Garner	CAMPO	
SEAS14	Market St/Wilson's Mills Rd	Intersection Improvement	Intersection	Intersection	1	0	1	1	1	\$3,072,532	Long-Term	Johnston County	Smithfield	UCPRPO	
SEAS15	NC 50/W Main Street/Benson Western Bypass	Intersection Realignment	Intersection	Intersection	0	0	1	0	0	\$1,580,000	Near-Term	Johnston County	Benson	UCPRPO	
SEAS151	I-95/Brogden Rd/Wal-Pat Rd/MLK Jr Dr	Intersection Improvement	Intersection	Intersection	1	0	0	1	0	\$1,403,719	Long-Term	Johnston County	Smithfield	UCPRPO	
SEAS164	US 301/Oak Grove Inn Rd	Intersection Improvement	Intersection	Intersection	0	0	0	0	1	\$1,710,000	Long-Term	Johnston County	Johnston County	UCPRPO	
SEAS165	Shotwell Rd/Covered Bridge Rd	Intersection Improvement	Intersection	Intersection	1	0	1	1	0	\$100,000	Mid-Term	Johnston County	Clayton	CAMPO	
SEAS17	Covered Bridge Rd/O'Neil St	Intersection Improvement	Intersection	Intersection	1	0	1	1	0	\$1,710,000	Long-Term	Johnston County	Johnston County	CAMPO	
SEAS173	US 70/Oak St/RR	Road Closure	Intersection	NA	0	0	0	0	0	\$115,000	Visionary	Johnston County	Selma	UCPRPO	
SEAS178	NC 42/Amelia Church Rd	Intersection Improvement	Intersection	Intersection	1	0	0	1	0	\$1,710,000	Near-Term	Johnston County	Clayton	CAMPO	
SEAS18	US 70/Ricks Rd/Outlet Center Drive	Intersection Improvement	Intersection	Intersection	1	0	0	0	0	\$1,710,000	Long-Term	Johnston County	Selma	UCPRPO	
SEAS20	Ten Ten Rd/Old Stage Rd	Intersection Improvement	Intersection	Intersection	1	1	1	1	0	\$1,710,000	Near-Term	Wake County	Wake County	CAMPO	
SEAS21	US 301/NC 50	Intersection Improvement	Intersection	Intersection	1	0	1	0	1	\$1,710,000	Near-Term	Johnston County	Benson	UCPRPO	
SEAS22	Market St/Brightleaf Blvd	Intersection Improvement	Intersection	Intersection	1	0	0	1	1	\$1,710,000	Long-Term	Johnston County	Smithfield	UCPRPO	
SEAS227	Creech Rd/Wilmington Rd	Intersection Realignment	Intersection	Intersection	1	0	1	1	0	\$1,180,000	Long-Term	Wake County	Wake County	CAMPO	
SEAS228	US 70/Aversboro Rd/5th Ave	Intersection Realignment	Intersection	Intersection	1	0	1	0	1	\$250,000	Long-Term	Wake County	Garner	CAMPO	
SEAS23	US 70/Guy Rd	Intersection Improvement	Intersection	Intersection	0	0	1	1	1	\$3,420,000	Mid-Term	Wake County	Wake County	CAMPO	
SEAS230	Benson Rd/Buffalo Rd	Intersection Improvement	Intersection	Intersection	1	0	1	1	1	\$1,710,000	Mid-Term	Wake County	Wake County	CAMPO	
SEAS231	Fayetteville Rd/Old Stage rd	Intersection Improvement	Intersection	Intersection	1	0	1	0	1	\$1,710,000	Near-Term	Wake County	Wake County	CAMPO	
SEAS232	Aversboro Rd/7th Ave/Vandora Av	Intersection Improvement	Intersection	Intersection	1	0	1	0	1	\$1,710,000	Visionary	Wake County	Garner	CAMPO	
SEAS24	I-95/US 70	Interchange	Interchange	Interchange	0	0	0	0	1	\$25,940,000	Long-Term	Johnston County	Selma	UCPRPO	
SEAS25	US 70/New Rand Rd	Intersection Improvement	Intersection	Intersection	1	0	1	0	1	\$1,710,000	Long-Term	Wake County	Garner	CAMPO	
SEAS26	Garner Rd/Yeargan Rd	Intersection Improvement	Intersection	Intersection	1	1	1	0	1	\$1,710,000	Near-Term	Wake County	Garner	CAMPO	
SEAS3	Jones Sausage Rd/RR	Road Closure	Intersection	NA	0	0	1	0	1	\$31,960,000	Long-Term	Wake County	Garner	CAMPO	
SEAS306	Market St/College Rd	Intersection Improvement	Intersection	Intersection	1	0	0	1	1	\$8,142,212	Visionary	Johnston County	Smithfield	UCPRPO	
SEAS307	Cleveland Rd/Swift Creek Rd	Intersection Improvement	Intersection	Intersection	1	0	0	1	0	\$2,097,595	Mid-Term	Johnston County	Johnston County	UCPRPO	
SEAS308	Market St/M Durwood Stephenson Hwy	Intersection Improvement	Intersection	Intersection	1	0	0	1	1	\$3,072,532	Long-Term	Johnston County	Smithfield	UCPRPO	
SEAS309	Brightleaf Blvd/Booker Dairy Rd	Intersection Improvement	Intersection	Intersection	1	0	0	0	1	\$3,072,532	Visionary	Johnston County	Smithfield	UCPRPO	
SEAS31	Buffalo Rd/Archer Lodge Rd	Intersection Improvement	Intersection	Intersection	0	0	1	1	0	\$1,710,000	Long-Term	Johnston County	Archer Lodge	CAMPO	

Project			Facility Type		Multimodal					Other Information					
ID	Location	Improvement	Existing	Proposed	Side-walk	Wide Should.	Bicycle	Multi-use	Transit	Cost	Horizon	County	Municipality	MPO	TIP No.
SEAS310	Brightleaf Blvd/Peedin Rd	Intersection Improvement	Intersection	Intersection	1	0	0	0	1	\$3,072,532	Visionary	Johnston County	Smithfield	UCPRPO	
SEAS311	Brightleaf Blvd/Dail St	Intersection Improvement	Intersection	Intersection	1	0	0	0	1	\$3,072,532	Visionary	Johnston County	Smithfield	UCPRPO	
SEAS312	Brightleaf Blvd/Hospital Rd	Intersection Improvement	Intersection	Intersection	1	0	0	0	1	\$3,072,532	Visionary	Johnston County	Smithfield	UCPRPO	
SEAS313	Brightleaf Blvd/Brogden Rd/Third St	Intersection Improvement	Intersection	Intersection	1	0	0	0	1	\$1,710,000	Long-Term	Johnston County	Smithfield	UCPRPO	
SEAS314	Outlet Center Dr	Intersection Improvement	Intersection	Intersection	1	0	0	0	1	\$354,523	Long-Term	Johnston County	Smithfield	UCPRPO	
SEAS315	I-95/Brogden Rd	Interchange	Interchange	Interchange	1	0	0	1	0	\$59,300,000	Long-Term	Johnston County	Smithfield	UCPRPO	
SEAS316	I-95/Truck Stop Rd	Interchange	Interchange	Interchange	0	0	0	0	0	\$20,480,000	Long-Term	Johnston County	Kenly	UCPRPO	
SEAS317	I-95/US 701/NC 96	Interchange	Interchange	Interchange	0	0	0	1	0	\$64,120,000	Long-Term	Johnston County	Four Oaks	UCPRPO	
SEAS318	Buffalo Rd/Fire Dept Rd/Little Divine Rd	Intersection Realignment	Intersection	Intersection	0	0	0	0	0	\$16,120,000	Long-Term	Johnston County	Johnston County	UCPRPO	
SEAS319	NC 242/Woodall Dairy Rd/Federal Road Ext	Intersection Realignment	Intersection	Intersection	0	0	0	0	0	\$3,830,000	Visionary	Johnston County	Benson	UCPRPO	
SEAS32	Mount Pleasant Rd/Old Fairground Rd/Edmonson Dr	Intersection Improvement	Intersection	Intersection	0	0	0	0	0	\$4,100,000	Mid-Term	Johnston County	Johnston County	CAMPO	
SEAS320	Wilson's Mills Rd/Fire Dept Rd	Intersection Realignment	Intersection	Intersection	1	0	0	0	1	\$4,610,000	Long-Term	Johnston County	Wilson's Mills	UCPRPO	
SEAS321	Glen Rd/Technology Dr	Intersection Improvement	Intersection	Intersection	1	0	0	0	0	\$3,080,000	Long-Term	Johnston County	Johnston County	CAMPO	
SEAS33	I-95/NC 50	Interchange	Interchange	Interchange	0	0	0	0	0	\$20,140,000	Mid-Term	Johnston County	Benson	UCPRPO	
SEAS35	NC 96/Live Oak Church Rd	Intersection Improvement	Intersection	Intersection	0	0	0	0	0	\$100,000	Long-Term	Johnston County	Johnston County	UCPRPO	
SEAS36	Market St/Fourth St	Intersection Improvement	Intersection	Intersection	1	0	0	1	1	\$2,363,487	Visionary	Johnston County	Smithfield	UCPRPO	
SEAS37	Market St/Fifth St	Intersection Improvement	Intersection	Intersection	1	0	0	1	1	\$1,710,000	Visionary	Johnston County	Smithfield	UCPRPO	
SEAS38	NC 210/Cleveland Rd	Intersection Improvement	Intersection	Intersection	1	0	0	1	0	\$1,710,000	Long-Term	Johnston County	Johnston County	UCPRPO	
SEAS39	NC 242/Tarheel Rd	Intersection Improvement	Intersection	Intersection	0	0	0	0	0	\$100,000	Near-Term	Johnston County	Benson	UCPRPO	
SEAS3a	Buffalo Rd/Noble St/Baugh Rd	Intersection Improvement	Intersection	Intersection	0	0	0	1	0	\$1,710,000	Long-Term	Johnston County	Johnston County	UCPRPO	
SEAS3b	Buffalo Rd/RR	Grade Separation	NA	Grade Separation	0	0	0	1	0	\$6,320,000	Long-Term	Johnston County	Selma	UCPRPO	
SEAS41	Polenta Rd/McLemore Rd	Intersection Improvement	Intersection	Intersection	0	0	0	0	0	\$1,710,000	Visionary	Johnston County	Johnston County	CAMPO	
SEAS433	Equity Dr/Peedin Rd Ext	Intersection Realignment	Intersection	Intersection	1	0	0	0	0	\$900,000	Visionary	Johnston County	Smithfield	UCPRPO	
SEAS434	Equity Dr/Peedin Rd Ext	Intersection Realignment	Intersection	Intersection	1	0	0	0	0	\$950,000	Visionary	Johnston County	Smithfield	UCPRPO	
SEAS45	Hammond Rd/Tryon Rd	Intersection Improvement	Intersection	Intersection	1	0	1	0	1	\$1,710,000	Long-Term	Wake County	Raleigh	CAMPO	
SEAS47	I-95/US 70 BYP	Interchange	Interchange	Interchange	0	0	0	0	1	\$35,000,000	Long-Term	Johnston County	Smithfield; Johnston County	UCPRPO	
SEAS48	Mechanical Blvd/Yeargan Rd	Intersection Improvement	Intersection	Intersection	1	1	1	0	0	\$100,000	Long-Term	Wake County	Garner	CAMPO	
SEAS4a	Cleveland Rd/Barber Mill Rd	Intersection Improvement	Intersection	Intersection	1	0	0	1	0	\$100,000	Mid-Term	Johnston County	Johnston County	CAMPO	
SEAS4b	Barber Mill Rd/Government Rd	Intersection Improvement	Intersection	Intersection	0	0	0	1	0	\$100,000	Mid-Term	Johnston County	Johnston County	CAMPO	
SEAS5	Cleveland Rd/Cornwallis Rd	Intersection Improvement	Intersection	Intersection	1	0	0	1	0	\$1,710,000	Mid-Term	Johnston County	Johnston County	CAMPO	
SEAS50	US 70/Raynor Rd	Intersection Improvement	Intersection	Intersection	1	0	0	1	1	\$1,710,000	Mid-Term	Wake County	Wake County	CAMPO	
SEAS51	I-40/I-95	Interchange	Interchange	Interchange	0	0	0	0	0	\$219,770,000	Long-Term	Johnston County	Johnston County	UCPRPO	
SEAS52	White Oak Rd/Hebron Church Rd/Ackerman Rd	Intersection Realignment	Intersection	Intersection	1	0	1	0	0	\$1,070,000	Mid-Term	Wake County	Garner	CAMPO	
SEAS53	I-95/Market St	Interchange	Interchange	Interchange	1	0	0	0	0	\$34,500,000	Long-Term	Johnston County	Smithfield	UCPRPO	
SEAS6	Cornwallis Rd/Josephine Rd	Intersection Improvement	Intersection	Intersection	0	0	0	1	0	\$100,000	Long-Term	Johnston County	Johnston County	CAMPO	
SEAS66	Auburn Church Rd/Wall Store Rd	Intersection Realignment	Intersection	Intersection	1	0	1	0	0	\$2,140,000	Long-Term	Wake County	Wake County	CAMPO	
SEAS68	Cleveland Crossing Dr/Walmart access	Intersection Improvement	Intersection	Intersection	0	0	0	1	0	\$3,080,000	Long-Term	Johnston County	Johnston County	CAMPO	
SEAS7	NC 42/Cornwallis Rd	Intersection Improvement	Intersection	Intersection	1	0	1	1	0	\$1,710,000	Near-Term	Johnston County	Johnston County	CAMPO	
SEAS72	Cleveland Crossing Dr/Cleveland Crossing Dr Ext	Intersection Realignment	Intersection	Intersection	0	0	0	0	0	\$490,000	Long-Term	Johnston County	Johnston County	CAMPO	
SEAS74	Guy Rd/Amelia Church Rd	Intersection Improvement	Intersection	Intersection	1	0	1	1	0	\$1,710,000	Near-Term	Johnston County	Clayton	CAMPO	
SEAS75	I-40/Elevation Rd	Interchange	NA	Interchange	0	0	0	0	1	\$41,980,000	Near-Term	Johnston County	Johnston County	CAMPO	
SEAS76	I-95/Selma-Pine Level Rd	Interchange	Interchange	Interchange	0	0	0	0	1	\$46,760,000	Visionary	Johnston County	Johnston County	UCPRPO	
SEAS77	Brightleaf Blvd/Galilee Rd	Intersection Improvement	Intersection	Intersection	1	0	0	1	1	\$1,710,000	Long-Term	Johnston County	Smithfield	UCPRPO	
SEAS78	US 70 BUS/Shotwell Rd	Intersection Improvement	Intersection	Intersection	1	0	1	1	1	\$1,710,000	Near-Term	Johnston County	Clayton	CAMPO	
SEAS79	NC 50/Mount Pleasant Rd/Sanders Rd	Intersection Improvement	Intersection	Intersection	0	0	1	0	0	\$1,710,000	Mid-Term	Johnston County	Johnston County	CAMPO	
SEAS80	US 70 BUS/Powhatan Rd	Intersection Improvement	Intersection	Intersection	1	0	0	1	1	\$1,710,000	Visionary	Johnston County	Clayton	CAMPO	
SEAS81	Cornwallis Rd/Old Drug Store Rd	Intersection Realignment	Intersection	Intersection	1	0	0	1	0	\$680,000	Long-Term	Johnston County	Johnston County	CAMPO	
SEAS82	US 70/Ranch Road	Interchange	Interchange	Interchange	1	0	0	1	0	\$10,240,000	Mid-Term	Johnston County	Johnston County	CAMPO	
SEAS83	Covered Bridge Rd/City Rd	Intersection Improvement	Intersection	Intersection	1	0	1	1	0	\$1,710,000	Long-Term	Johnston County	Clayton	CAMPO	
SEAS9	Buffalo Rd/Covered Bridge Rd/Wendell Rd	Intersection Improvement	Intersection	Intersection	1	0	1	1	0	\$1,710,000	Long-Term	Johnston County	Archer Lodge	CAMPO	
SEAS99	Webb St/RR	Road Closure	Intersection	NA	0	0	0	0	1	\$115,000	Long-Term	Johnston County	Selma	UCPRPO	

SEAS UPDATE

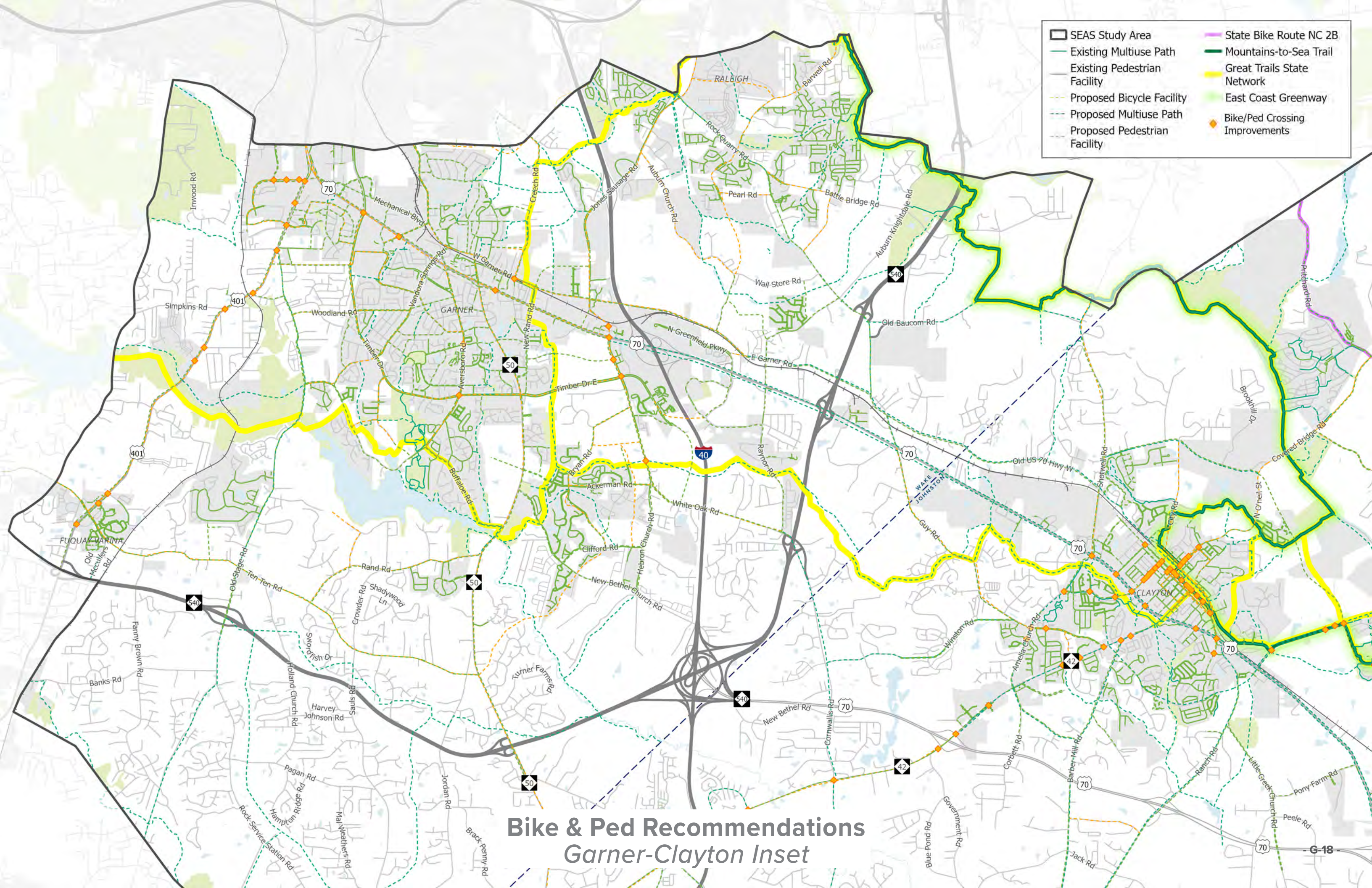
Bicycle & Pedestrian Recommendations



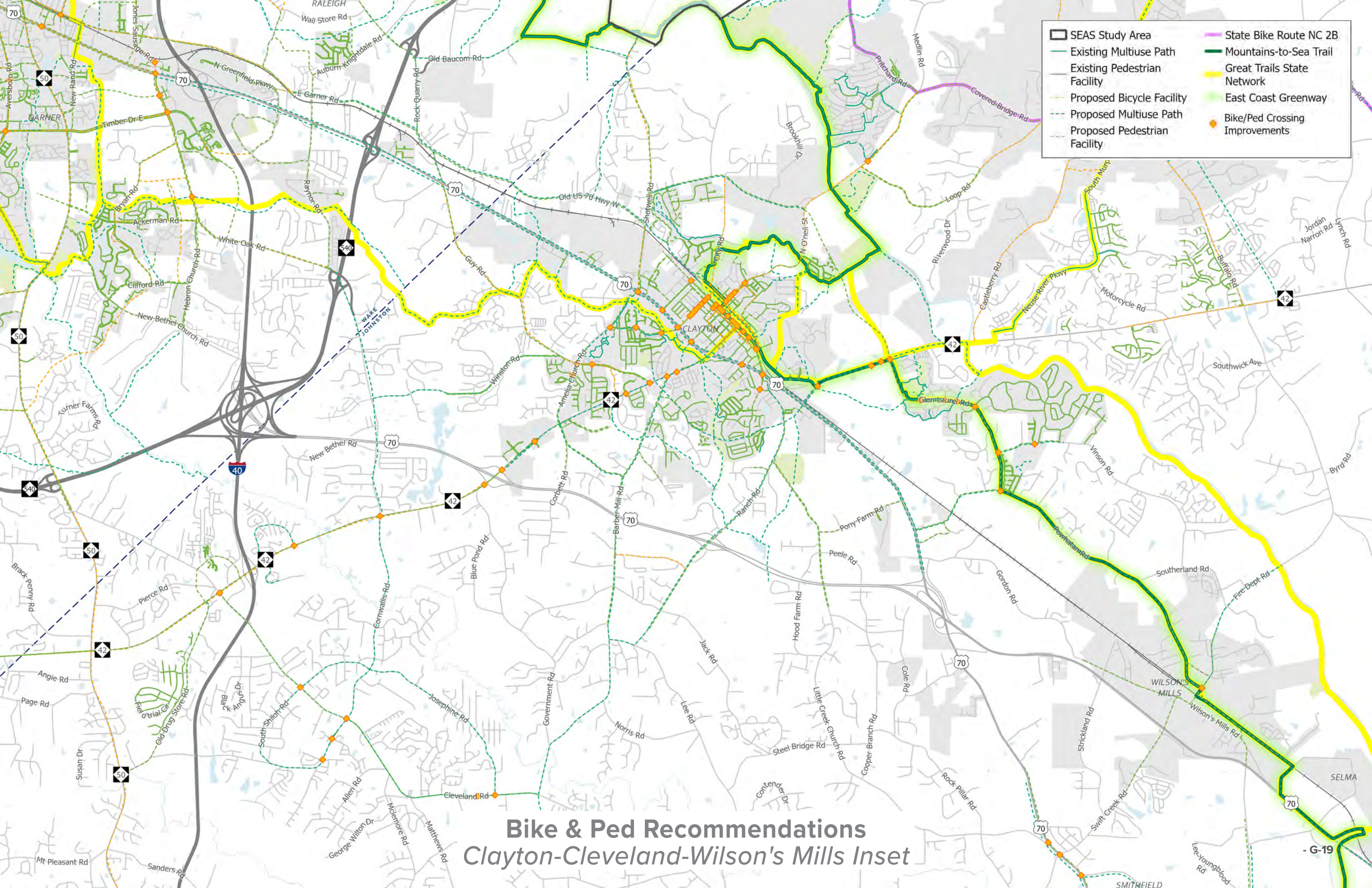
SEAS

SOUTHEAST AREA STUDY

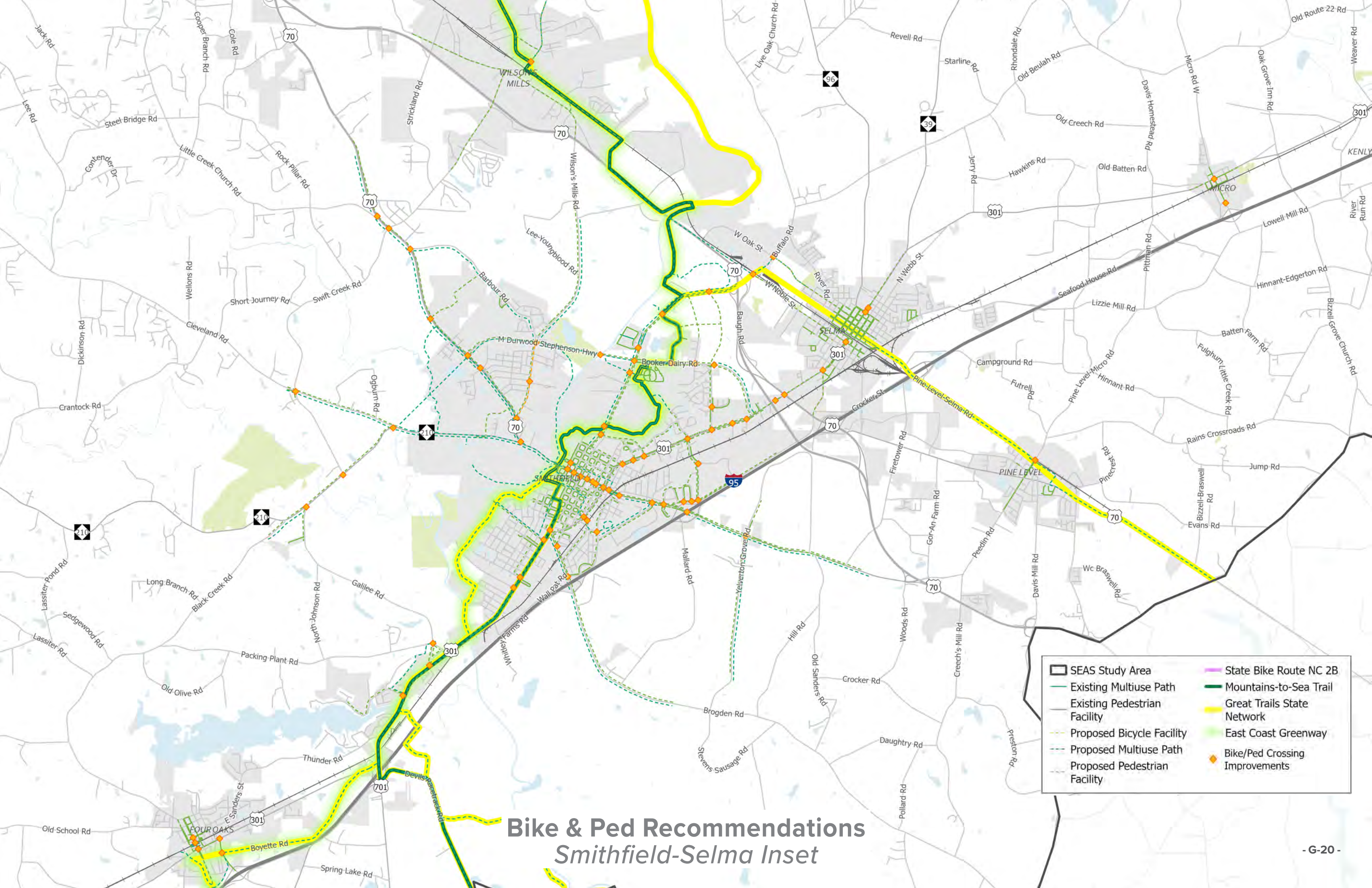
UPDATE



Bike & Ped Recommendations Garner-Clayton Inset



Bike & Ped Recommendations
Clayton-Cleveland-Wilson's Mills Inset

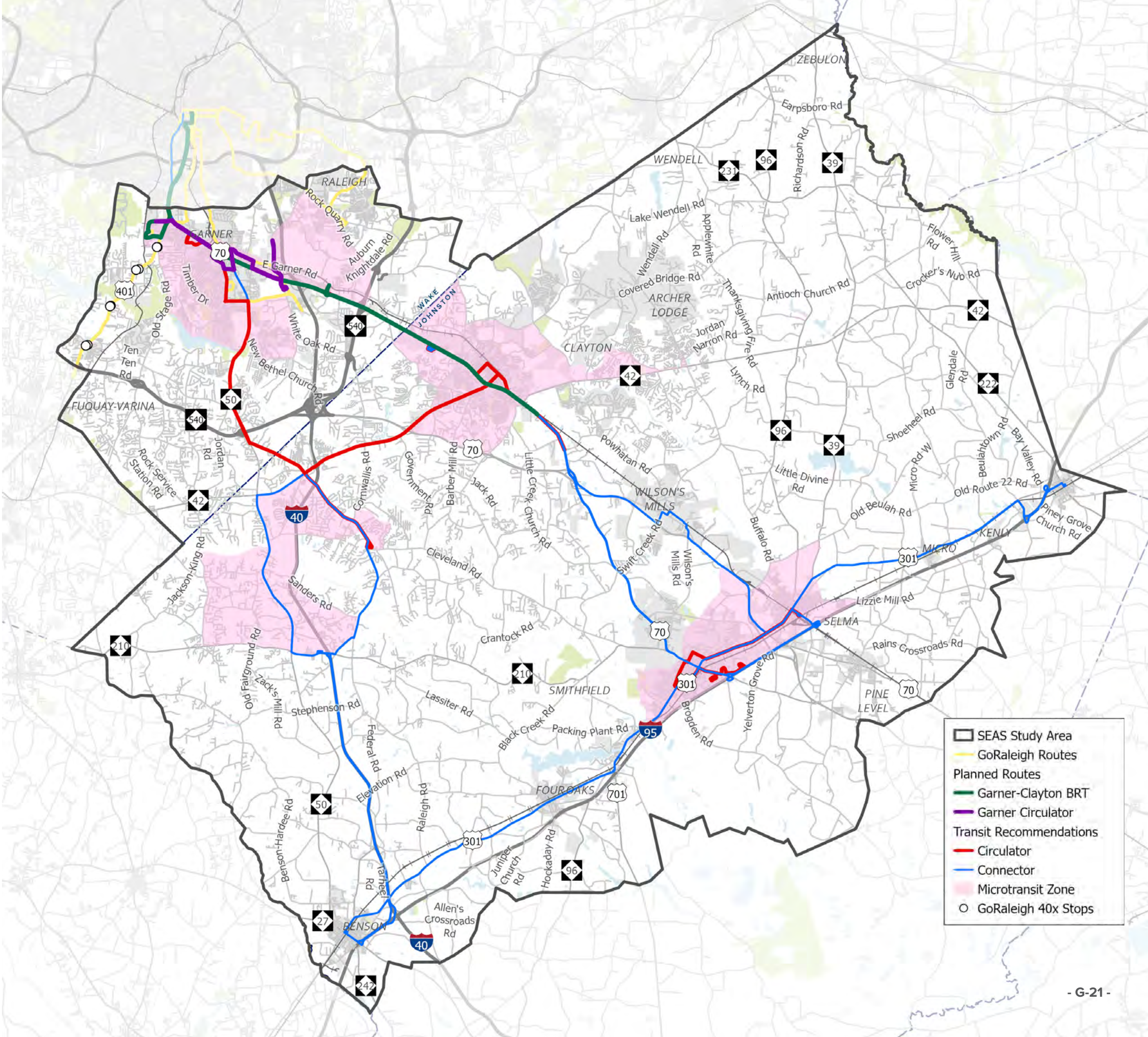


Bike & Ped Recommendations
Smithfield-Selma Inset

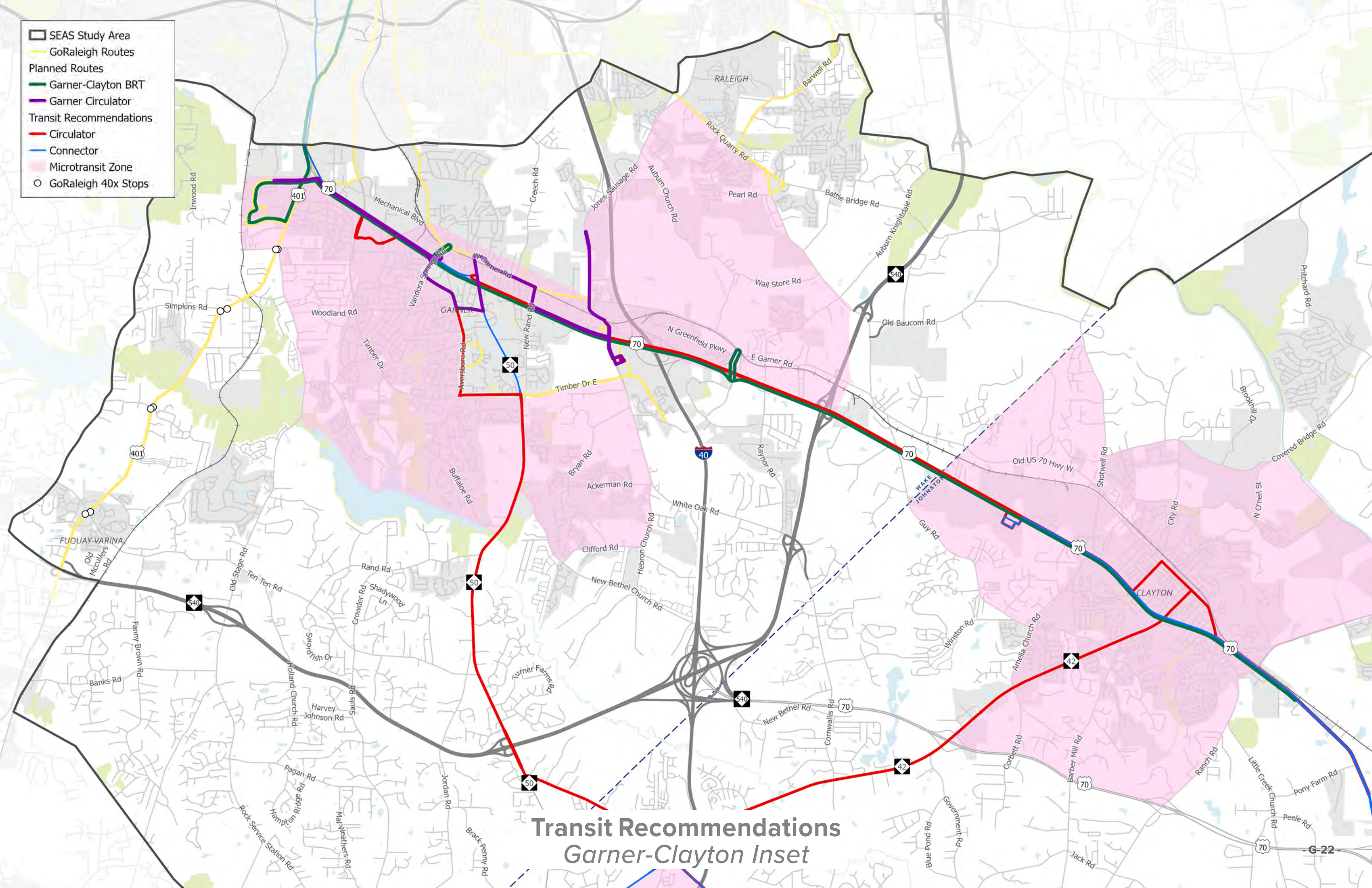
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|------------------------------|--------------------------------|
| SEAS Study Area | State Bike Route NC 2B |
| Existing Multiuse Path | Mountains-to-Sea Trail |
| Existing Pedestrian Facility | Great Trails State Network |
| Proposed Bicycle Facility | East Coast Greenway |
| Proposed Multiuse Path | Bike/Ped Crossing Improvements |
| Proposed Pedestrian Facility | |

SEAS UPDATE

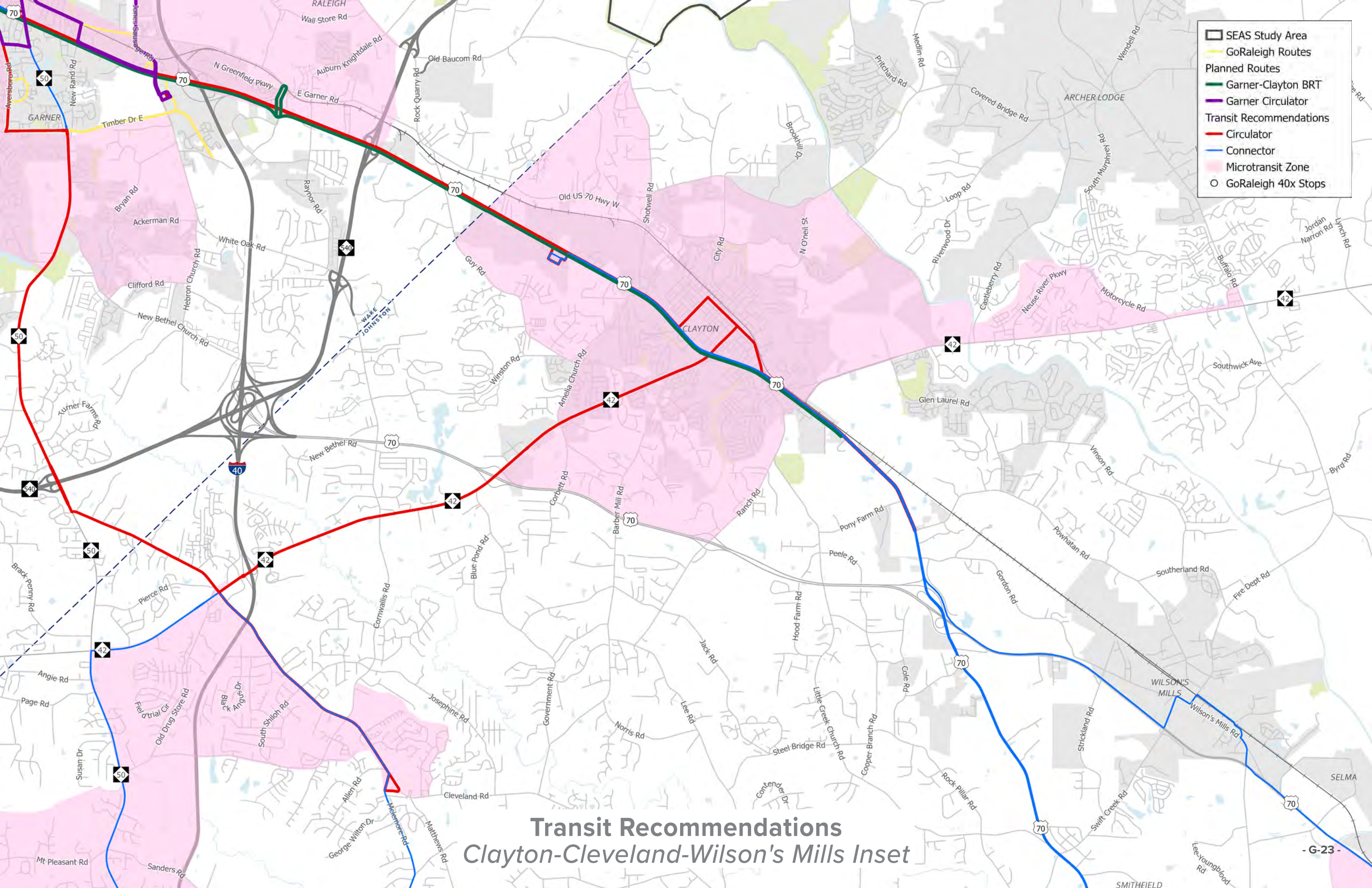
Transit Recommendations



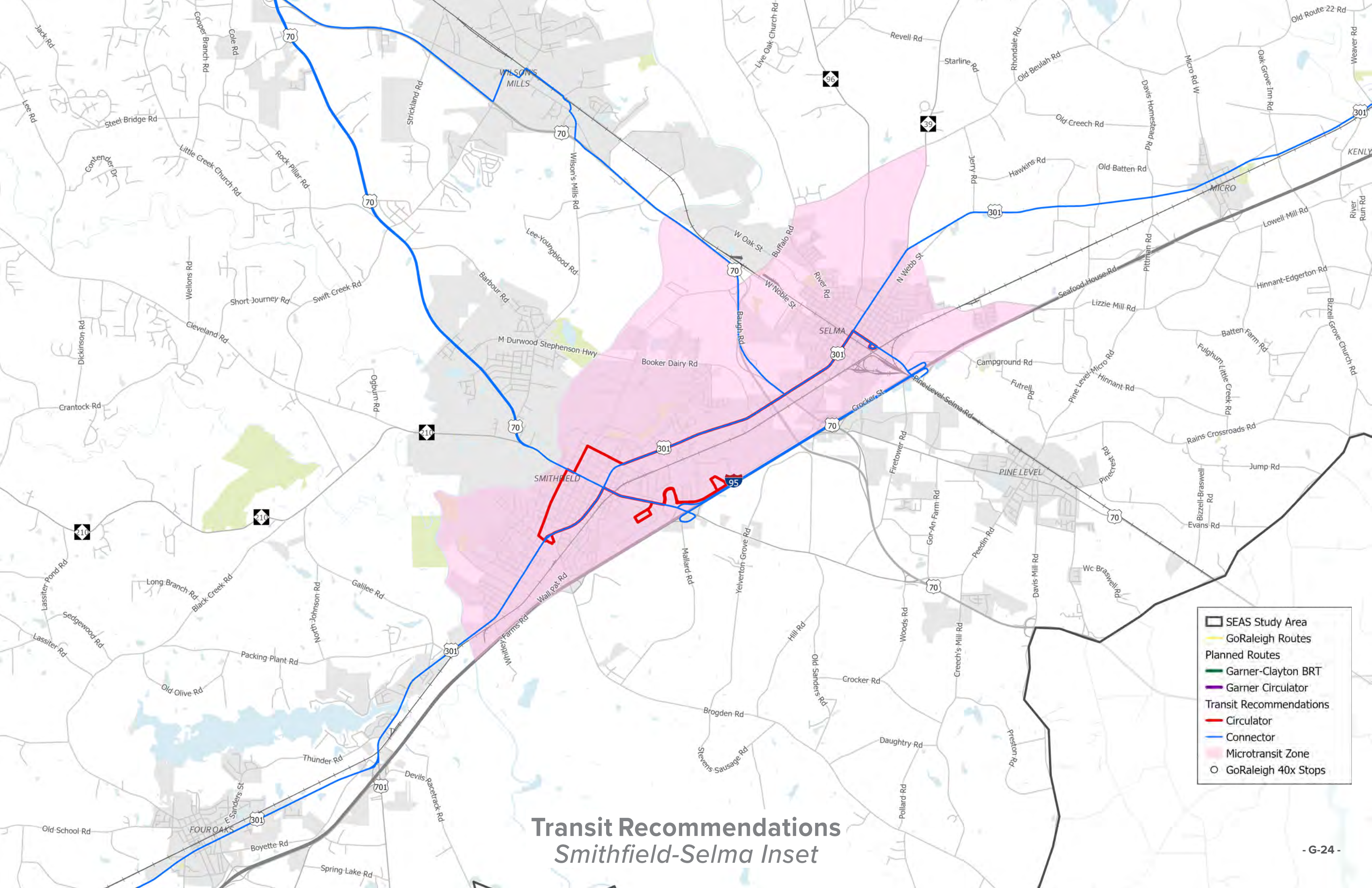
- SEAS Study Area
- GoRaleigh Routes
- Planned Routes
 - Garner-Clayton BRT
 - Garner Circulator
- Transit Recommendations
 - Circulator
 - Connector
- Microtransit Zone
- GoRaleigh 40x Stops



Transit Recommendations
Garner-Clayton Inset



Transit Recommendations
Clayton-Cleveland-Wilson's Mills Inset



Transit Recommendations
Smithfield-Selma Inset