Destination 2055 Metropolitan Transportation Plan Draft Report

January 8, 2026 Draft

Capital Area Metropolitan Planning Organization
Triangle West Transportation Planning Organization

with support from Central Pines Regional Council

CAMPO
NC Capital Area Metropolitan Planning Organization

TRIANGLE WEST
Transportation Planning Organization

CENTRAL PINES
REGIONAL COUNCIL

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A Note to Readers

Destination 2055 Metropolitan Transportation Plan adoption dates:

- Capital Area Metropolitan Planning Organization – *add date here once adopted*
- Triangle West Transportation Planning Organization – *add date here once adopted*

Date of this Document Version: *January 8, 2026 Public Comment Draft*

The heart of any transportation plan is the investments that will be made to serve the mobility needs of our rapidly-growing region's residents, businesses, and visitors. These investments take the form of road, transit, railroad, airport, cycling, and walking facilities and services, together with related technologies and strategies. Maps are created to help visualize the nature of both the facilities in which we plan to invest and the existing and future population and jobs that the facilities are designed to serve. But the **maps in this document are for illustrative purposes only**, and are subject to change and interpretation. The details of the investments are in the project lists that are included with this report.

Comments may be submitted to either planning organization through their websites:

- NC Capital Area MPO – www.campo-nc.us (attn: Chris Lukasina)
- Triangle West TPO – www.twtpo.org (attn: Doug Plachcinski)

Because this document addresses the official plans of both the Capital Area MPO and the Triangle West TPO, the document is color-coded. Text that only applies to the Capital Area MPO is highlighted in a yellow color. Text that only applies to the Triangle West TPO is highlighted in a green color.

Chapter 1: Executive Summary

Transportation investments link people to the places where they live, work, learn, shop, and play, and provide critical connections between businesses and their labor markets, suppliers, and customers.

This document contains the 2055 Metropolitan Transportation Plans (MTPs) for the two organizations charged with transportation decision-making in the Research Triangle Region: the Capital Area Metropolitan Planning Organization (CAMPO) and the Triangle West Transportation Planning Organization (TWTPO). These organizations, and the areas for which they are responsible, are commonly called "MPOs."

Responding to Regional Growth & Change

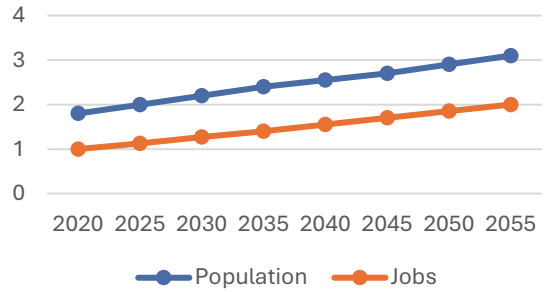
The areas covered by this plan are part of a larger economic region. Transportation investments should consider the mobility needs of this larger region and links to other large metro regions of North Carolina and throughout the Southeast. The Triangle Region is expected to accommodate substantial future growth – *we must plan not just for the region that we are today, but also for the region that we will become.*

Anticipated 2020-2055 Population/Employment Growth

Capital Area MPO Area	
Population Growth:	1,082,000
Total 2055 Population:	2,456,000
Employment Growth:	776,000
Total 2055 Employment:	1,448,000
Triangle West TPO Area	
Population Growth:	198,000
Total 2055 Population:	648,000
Employment Growth:	261,000
Total 2055 Employment:	572,000

Between the Capital Area MPO area and the Triangle West TPO area, the Triangle Area is anticipated to add approximately **1.3 million additional people and 1 million additional jobs** by the year 2055.

Figure 1.1: Forecast Population and Job Growth in the Triangle (in Millions)



The Triangle has historically been one of the nation's most sprawling regions, and current forecasts project *both* continued outward growth *and* infill development in selected locations, most notably in the central parts of Raleigh and Durham and the areas in between them – this includes a new mixed use center currently being developed within Research Triangle Park. A key challenge for our transportation plans is to match our vision for how our communities should grow with the transportation investments to support this growth.

Development underway at HUB RTP

No region has been able to "build its way out of congestion." An important challenge for our transportation plans is to provide travel choices that allow people to avoid congestion where it cannot be prevented.

Our region's population is changing. The population is aging, more households consist of single people and two-person households without children, the number of households without cars is increasing, and more people are interested in living in more compact neighborhoods with a mix of activities. Our plans are designed to provide mobility choices to address our region's changing needs.

Our region's two MPOs are tied together by very strong travel patterns between them – our largest commute pattern and heaviest travel volumes occur at the intersection of the MPO boundaries. Our transportation plans need to recognize the mobility needs of residents and businesses that transcend our administrative MPO and county borders.

Interstate 40 in Research Triangle Park

Regional Transportation Vision

The region has a common vision of what it wants its transportation system to be:

A seamlessly-integrated set of transportation services that provide travel choices to support economic development and that:

- ***are compatible with the character and development of our communities***
- ***are sensitive to the environment***
- ***improve quality of life, and***
- ***are safe and accessible for all.***

The MPOs have jointly adopted goals and objectives to accomplish this vision and selected performance measures to track progress over time. Each MPO has targets that reflect the unique characteristics and aspirations of the communities within the organization. *Destination 2055* commits our region to transportation services and development patterns that contribute to a more equitable and sustainable place where people can successfully pursue their daily activities.

Analysis of Investment Choices

To analyze our transportation investment choices, the Capital Area MPO and Triangle West TPO followed a systematic process involving significant public engagement, including targeted engagement with traditionally underrepresented voices. It began with understanding our communities' core values and priorities. Special emphasis was placed on identifying key activity centers in the region and investments and strategies that would connect these centers to neighborhoods with the most significant numbers of Title VI-protected population groups, providing these neighborhoods with a range of travel choices, especially transit.

Next, we used carefully-documented analysis tools to forecast the types, locations, and amounts of future homes and jobs based on market conditions and trends, factors that influence growth, and local plans. Based on these forecasts, we looked

at mobility needs and trends, and where our current transportation system may become deficient in meeting these needs.

Destination 2055 Public Engagement Event

Working with a variety of partners and based on public input, we created land use and transportation system scenarios and analyzed their impacts, comparing the performance of system alternatives against one another and to performance targets derived from our goals and objectives.

Alternatives Analysis Scenarios

Plans & Trends	Shared Leadership	All Together

Planned Transportation Investments

The result of this analysis and extensive public engagement was a set of planned investments, together with a pattern of land development aligned with these investments. Additional studies were identified to ensure that the investments are carefully designed and effectively implemented. The core of the plan is the set of transportation investments described in Chapter 7:

- New and expanded **roads** where needed, and redesigned roads for safer, better multi-modal travel;
- Local and regional **transit** facilities and services, including rapid bus and regional rail;
- **Aviation** and long-distance passenger and freight **rail** services;
- **Bicycle** and **pedestrian** facilities, both as independent projects and in conjunction with road projects;
- **Transportation Demand Management** (TDM) marketing and outreach efforts to increase the use of alternative modes and reduce peak-period solo driving;
- **Technology**-based transportation services, such as the use of advanced technology to make transit and road investments more effective, including the advent of connected and autonomous vehicles; and
- **Transportation Systems Management** (TSM) solutions that aim to improve the efficiency of the transportation network.

In addition to these investments, the plan includes a focus on issues where the ties between development and transportation investments are most critical:

- **Transit corridor development**, with an emphasis on equitable transit-oriented development and affordable housing strategies;
- **Safe and healthy streets** with designs that are sensitive to the neighborhoods of which they are a part and support the needs of a full range of users, including drivers, transit users, cyclists and pedestrians – these are sometimes referred to as "context-sensitive complete streets."

Example "Complete Street" improvement project on Hillsborough Street in Raleigh

The plan anticipates that the region will match its historic focus on roads with a sustained commitment to high-quality transit service as well, emphasizing five critical components:

- Connecting the region's main centers with fast, frequent, reliable transit services;
- Offering transit service to all communities that have implemented local transit revenue sources;
- Providing frequent transit service in urban travel markets;
- Providing on-demand "microtransit" services in locations where they can provide superior service; and
- Supplying better transit access, from first mile/last mile circulator services in key centers to safe and convenient cycling and walk access to transit routes.

Although the plan includes an emphasis on transit investment, it envisions significant additional roadway investment as well, focusing on "complete corridors" that incorporate provisions for transit and active transportation as part of the roadway improvements.

One clear message from both elected officials and public engagement during the development of *Destination 2055* is that roadways need to be designed and engineered with much greater care than has been typical in the past, using more flexible and context-sensitive standards. Especially in urban and urbanizing locations, designs should prioritize steady, safe, reliable, moderate-speed travel rather than high-speed travel.

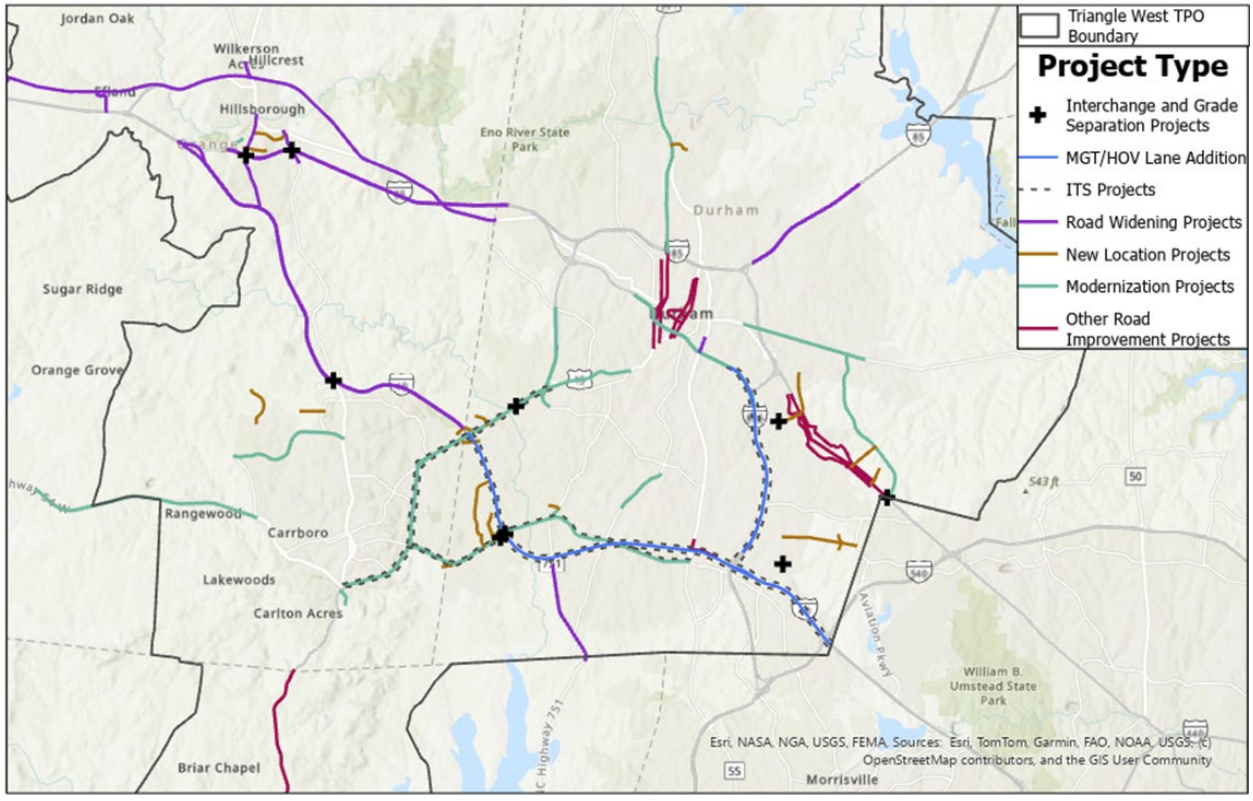
Destination 2055 includes a number of recommendations for shared regional projects that cross the boundary between the Capital Area MPO and Triangle West TPO, including:

- Investments in Regional Rail corridors across the region, including a connection between the two MPOs
- Relocation of the Regional Transit Center, serving regional buses, BRT and Regional Rail services
- Continuing progress on the Triangle Bikeway connecting Wake, Durham & Orange Counties along the I-40 corridor
- Bus Rapid Transit (BRT) corridors approaching from both MPOs and converging at the Regional Transit Center in Research Triangle Park
- Addition of managed lanes and technology improvements in the I-40 corridor across the region
- Upgrades on US 70 corridor between I-540 and I-885 (freeway in Wake County, improved boulevard in Durham County)
- Administration of a regional Travel Demand Management (TDM) program to encourage alternatives to driving alone

The figures on the next four pages highlight major planned projects within each MPO. More information about these can be found in Chapter 7 and in Appendices 2 (roadway projects) and 3 (transit projects).

Figure 1.2: Triangle West TPO Major Roadway Projects List & Roadway Project Map

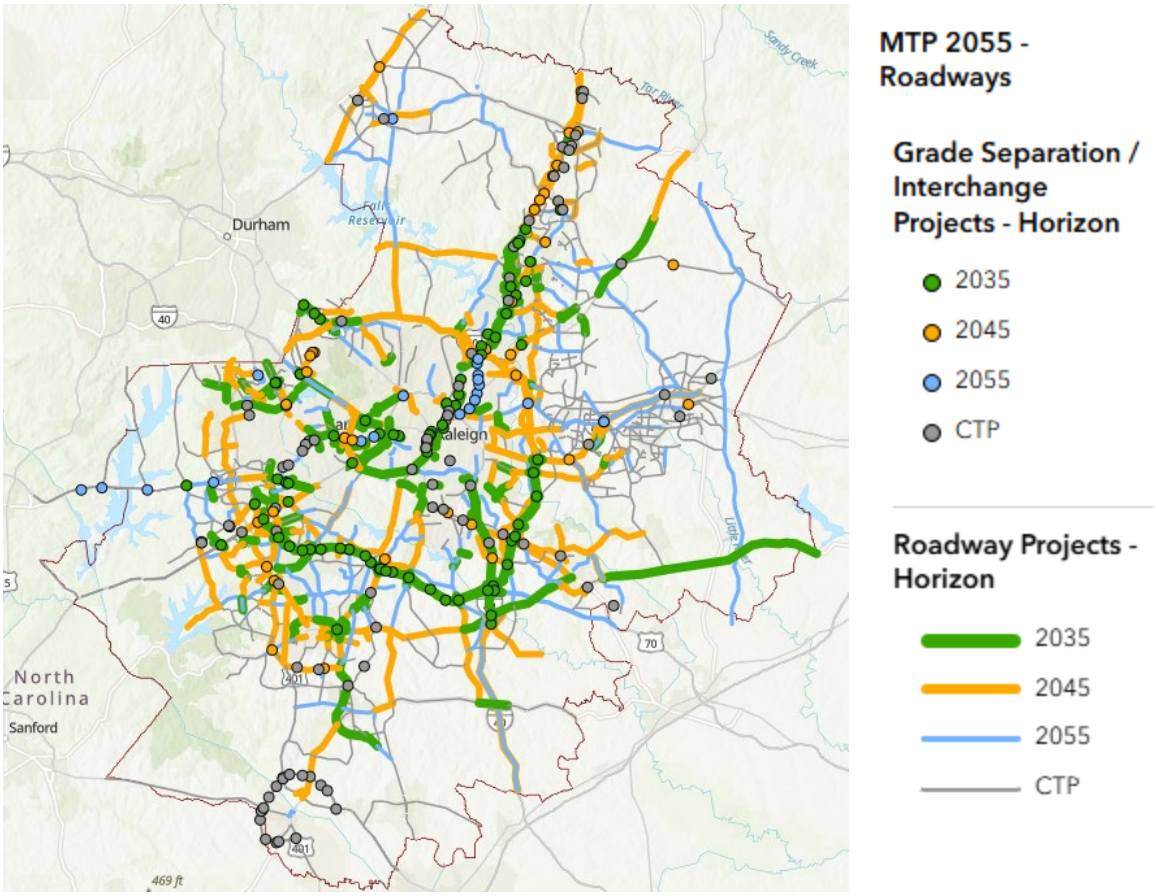
2026-2035	2036-2045	2046-2055
I-40/NC 54 interchange improvements	I-40 HOV/managed lanes from Wake/Durham line to I-885	I-40 HOV/managed lanes from I-885 to US 15-501
I-40 widening from Orange/Durham line to I-85	I-885 HOV/managed lanes from I-40 to NC 147	I-85 widening from east of Midland Terrace to Red Mill Rd
I-85 widening from Sparger Rd to Orange Grove Rd	NC 147 boulevard conversion from Swift Ave to Briggs Ave	US 70 widening from Orange/Durham line to TPO boundary west of Efland
I-85/S Churton St interchange upgrade	NC 54 modernization from US 15-501 to NC 55	NC 98 modernization from Lynn Rd to Nichols Farm Dr
I-40/NC 86 Interchange improvements	US 70 boulevard improvements from Pleasant Dr to Durham/Wake line	
NC 98 modernization from Junction Rd to Lynn Rd	US 15-501 intersection improvements from Smith Level Rd to US 64	
	US 15-501 modernization from I-40 to US 15-501 Bypass/MLK Pkwy and US 15-501 Bypass modernization from MLK Pkwy to Cameron Blvd	



Triangle West TPO Roadway Project Map Online here.

Figure 1.3: Capital Area MPO Major Roadway Projects List & Roadway Project Map

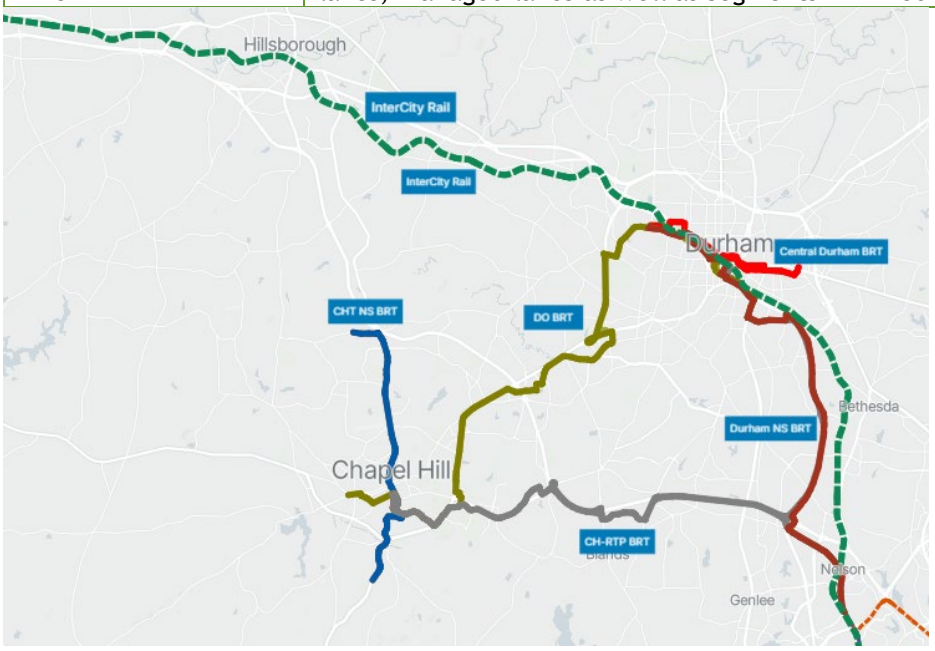
2026-2035	2036-2045	2046-2055
I-40 widening from US 1/64 to Lake Wheeler Rd and interchange improvements at I-40 and US 1/64	I-40 widening from NC 36/Cleveland Rd to MPO boundary near Benson	Capital Blvd corridor improvements from I-440 to I-540
Completion of NC 540 loop from I-40 to I-87	I-40 widening from Harrison Ave to US 1/64	I-42 widening from I-40 to US 70 Business
US 1 freeway improvements from I-540 to Harris Rd	I-85 widening in Granville County	I-40 managed lanes from Durham/Wake line to MPO boundary near Benson
US 70 freeway improvements from I-540 to Wake/Durham line	I-87/US 64 widening from I-440 to US 264 in Zebulon (8 lanes west of Wendell Blvd, 6 lanes east)	I-540 managed lanes from I-40 to I-87
US 64 corridor improvements from US 1 to west of Laura Duncan Rd	US 1 freeway improvements from Harris Rd to MPO boundary north of Franklinton	I-87/US 64 widening from Wendell Blvd to US 264 in Zebulon (8 lanes)
I-440 widening from I-40 to Wade Ave	US 1 widening from US 64 to NC 540 in Apex	US 64 freeway improvements from NC 540 to NC 751
I-40 widening from Harrison Ave to Aviation Pkwy	US 64 freeway improvements from west of Laura Duncan Rd to NC 540	



Capital Area MPO Roadway Project Map Online here.

Figure 1.4: Triangle West TPO Fixed Guideway Transit Projects List & Map

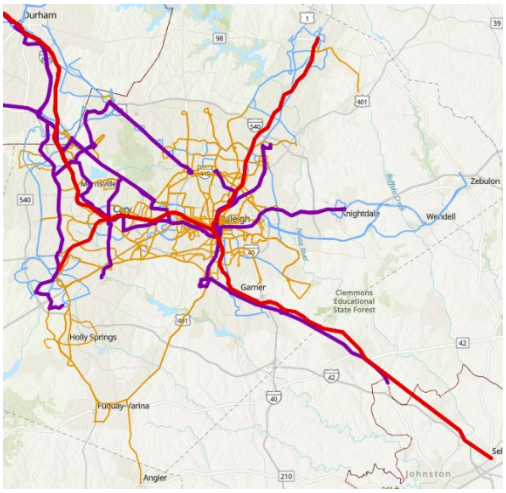
Project	Description	MTP Horizon Year
Intercity Passenger Rail (ICR) Stations	2035: Intercity Rail (ICR) service from Downtown Durham through the new RTP station and transit center to Cary and Raleigh; 2055: Expanded ICR service from the new Hillsborough station and transit center to Downtown Durham, the RTP station, Cary and Raleigh, connecting major regional transit hubs.	2035, 2055
Bus Rapid Transit (BRT) – Chapel Hill North-South Line	BRT service in Chapel Hill, running from Eubanks Road, through the UNC Healthcare complex, and to Southern Village, using a mix of dedicated lanes and mixed traffic.	2035
Bus Rapid Transit (BRT) – Central Durham Line	BRT service in Durham, running from the Duke University/ Medical Center area through the central bus station and Downtown Durham to the Village area, using a mix of dedicated lanes and mixed traffic.	2035
Bus Rapid Transit (BRT) – Durham-Orange Line	BRT service between Durham and Orange counties, operating from Carrboro, Chapel Hill, and the UNC Healthcare complex to the Duke University and Medical Center area via US 15-501, and continuing to Durham Station and NCCU. The BRT line includes segments operating in dedicated lanes as well as segments in mixed traffic.	2035
Bus Rapid Transit (BRT) – Durham NS BRT Line Combined with CAMPO's Western BRT Line	BRT service, running from Duke, Downtown Durham, and NCCU to the Research Triangle Park (RTP) via NC 147/I-885, continuing on to Cary, Raleigh, and Clayton. The route includes segments operating in dedicated lanes and managed lanes, as well as segments in mixed traffic.	2045
Bus Rapid Transit (BRT) – Chapel Hill-RTP Line Combined with CAMPO's I-40 BRT Line	BRT service from Chapel Hill to Downtown Raleigh via the Research Triangle Park (RTP) and I-40. This aligns the Chapel Hill-RTP BRT with the I-40 BRT at RTP to create a continuous regional route. This route includes segments in dedicated lanes, managed lanes as well as segments in mixed traffic.	2055



Triangle West TPO Major Transit Project Map Online here.

Figure 1.5: Capital Area MPO Fixed Guideway Transit Projects List & Map

Project	Description	MTP Horizon Year
Regional Rail	From Regional Transit Center (RTC) to Wake Forest	2035
Regional Rail	• From Regional Transit Center (RTC) to Wake Forest with stop added in Morrisville (McCrimmon); • From Downtown Apex to Auburn/Garner	2045
Regional Rail	• From Hillsborough to Selma; • From Franklinton to Downtown Apex; • From Downtown Apex to Veridea	2055
Bus Rapid Transit (BRT)	• SAS to Regency Center – between SAS Campus and Regency Center via mixed traffic along Harrison Avenue, Kildaire Farm Rd, Tryon Rd and Regency Pkwy; • Capital Blvd – between Downtown Raleigh and Triangle Town Center via dedicated guideway parallel to Capital Blvd; • Midtown – between Downtown Raleigh and North Hills via mixed traffic using Capital Blvd, Wake Forest Rd, Atlantic Avenue and Six Forks Rd; • New Bern – between Downtown Raleigh and Corporation Pkwy via dedicated guideway parallel to US 64; • Western – between Powhatan (Clayton) and Regional Transit Center (RTC) via US 70 (mixed traffic) to Garner Station, dedicated guideway from Garner Station to Downtown Raleigh to Downtown Cary to RTC parallel to NC 54.	2035
Bus Rapid Transit (BRT)	• Western Extended – between Powhatan (Clayton) and RTC via US 70 (mixed traffic) to Garner Station, dedicated guideway from Garner Station to Downtown Raleigh to Downtown Cary to RTC parallel to NC 54. Extended to West Durham via mixed traffic along I-885, NC 147 and Alston Avenue; • I-40 – between Downtown Raleigh and RTC via dedicated guideway parallel to Western Blvd, mixed traffic along Blue Ridge Rd to Trinity Rd to Edwards Mill Rd to Wade Avenue/I-40 to NC 540 west to NC 54 to RTC; • US 70 – between Crabtree Valley Mall and Davis Drive via US 70, Brier Creek Pkwy, Aviation Pkwy and McCrimmon; • Apex – between RTC and Downtown Apex via mixed traffic using Davis Drive; • Veridea – between Downtown Apex and Veridea via Salem St and Veridea Pkwy.	2045
Bus Rapid Transit (BRT)	• New Bern/Knightdale (New Bern Extended) – between Downtown Raleigh and Knightdale Station Pkwy via dedicated guideway parallel to US 64 to Corporation Pkwy, mixed traffic to Knightdale Station along US 64; • I-40/Chapel Hill (I-40 Extended) – between Downtown Raleigh and UNC via dedicated guideway parallel to Western Blvd, mixed traffic along Blue Ridge Rd to Trinity Rd to Edwards Mill Rd to Wade Avenue/I-40 to NC 540 west to NC 54 to RTC, continuing along NC 54 to Barbee/Herndon Rd to Renaissance Pkwy to I-40 to NC 54/US 15-501 along Manning Drive to Cameron Avenue.	2055



Capital Area MPO Major Transit Project Map Online here.

Chapter 2: What Is the Plan?

This document contains the 2055 Metropolitan Transportation Plans for the Capital Area MPO and the Triangle West TPO. These plans are the guiding documents for future investments in roads, transit services, bicycle and pedestrian facilities and related transportation activities and services to match the growth expected in the Research Triangle Region through the year 2055.

2.1 – Why Do We Need a Plan?

A transportation plan is essential for building an effective and efficient transportation system. The implementation of any transportation project, such as building a new road, adding lanes to a highway, purchasing transit buses, constructing a rail system, or building bicycle lanes with a road widening project, often requires several years to complete from concept to construction.

Once a community determines that a project is needed, there are many detailed steps to be completed:

- Funding must be identified
- Analysis must be completed to minimize environmental and social impacts
- Engineering designs must be developed, evaluated and selected
- The public must be involved in project decisions
- Right-of-way may need to be purchased
- Finally, the construction must be contracted and completed

No matter which step one might consider the most important in this long process, a project always begins with a regional transportation plan. In fact, this basic planning concept is so important that federal regulations require that a project must be identified in a Metropolitan Transportation Plan in order to receive federal funding and obtain federal approvals.

Federal regulations not only require a Metropolitan Transportation Plan, but the regulations also stipulate the contents of the plan and the process used in its development. The plan must include:

- A vision that meets community goals
- A multi-modal approach that includes not only highway projects, but provides for other modes such as public transportation, bicycling, and walking
- A minimum 20-year forecast planning horizon
- A financial plan that balances revenues and costs to demonstrate that the plan is financially responsible and constrained
- An air quality analysis to show that the plan will meet federal standards, when a region is subject to air quality conformity requirements
- A public involvement process that meets federal guidelines, and is sensitive especially to those groups traditionally under-represented in the planning process

Regions such as the Research Triangle must develop these plans at least every four years, and must act to amend these plans if regionally significant transportation investments are added, deleted, or modified in the plan.

2.2 - What Is In the Plan?

Metropolitan areas in North Carolina prepare two distinct but related types of transportation plans:

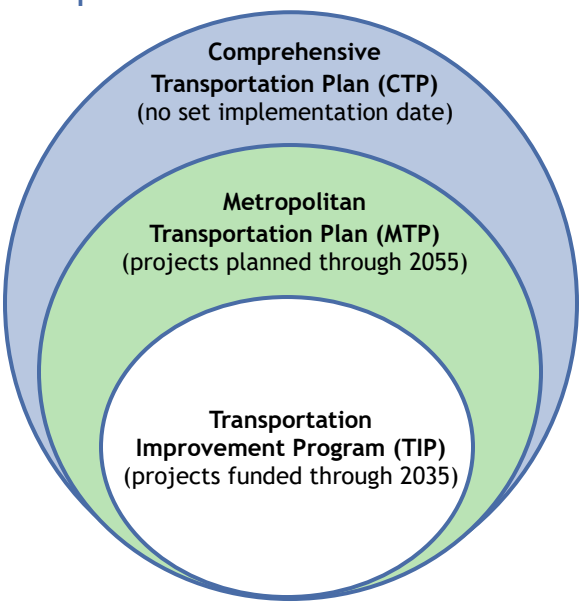
Comprehensive Transportation Plans (CTPs)

CTPs are "needs-based." They show all the existing, new, upgraded and expanded major roads, transit services, bicycle and pedestrian facilities and related transportation activities that are needed to meet the forecasted growth and mobility needs of the area over the long-term. The CTP does not have a fixed date by which the planned facilities and services would be built, nor is it constrained by the availability of funding to pay for the projects or the projects' impacts on the region's air quality.

Metropolitan Transportation Plans (MTPs)

MTPs are "revenue-based." They show the new, upgraded and expanded roads, transit services, bicycle and pedestrian facilities, and related transportation activities that we believe could be funded and built by the year 2055 based on current anticipated future revenue streams. These plans must also meet federal air quality standards. As shown in the figure below, MTP project lists are typically a subset of the larger, unconstrained project lists shown within CTPs. **The region's MTP is the focus of this document.**

Figure 2.2.1: Nested Nature of Transportation Plans



This document focuses on the second of these two types of plans: the **Metropolitan Transportation Plan (MTP)** that shows what can feasibly be accomplished by 2055 based on anticipated funding and air quality analyses. The project lists found in the appendices of this document include information about projects that are beyond the anticipated funding availability of this *Destination 2055* Metropolitan Transportation Plan and therefore represent Comprehensive Transportation Plan (CTP) projects.

The facilities and services in an MTP are generally designed to be a subset of the facilities and services in a CTP, although

there can be a lag in time between the revisions of these documents causing them to be temporarily out of sync. Figure 2.2.1 shows this relationship between the MTP and the CTP, and also the plans' relationship to the Transportation Improvement Program (TIP). The TIP is a ten-year program of project funding that is developed at both the state and metropolitan levels and serves as the main implementation document for MTPs for those projects and services that will use state and federal funds. The current MPO-adopted TIPs cover fiscal years 2026 through 2035.

This document compiles the MTPs for the two Metropolitan Planning Organizations with the main responsibility for transportation planning in the Research Triangle Region:

The **Capital Area Metropolitan Planning Organization** (Capital Area MPO or CAMPO) includes all of Wake County and portions of Chatham, Franklin, Granville, Harnett, and Johnston counties

The **Triangle West Transportation Planning Organization** (Triangle West TPO or TWTPO) includes all of Durham County and portions of Chatham and Orange counties

This *Destination 2055* report has been developed as a single document to make it easier for those interested in transportation planning in the Research Triangle region to have a single, consistent reference document on this topic. However, it is important to remember that this ***one document*** contains ***two plans*** since state and federal policies require each MPO to be individually responsible for the plans, projects, services, funding, and air quality requirements within its own jurisdiction.

This point merits emphasis: the selection of projects and allocation of funding to them is an ***independent decision*** by each MPO. This single document is a way to help these organizations make more consistent and complementary decisions within their spheres of authority, and to communicate those decisions to the citizens of the region.

To distinguish these lines of authority, this document will always be clear to separate and clearly indicate any text or other items that only apply to one MPO or the other.

Table 2.2.1 below summarizes key features of the two types of plans (MTPs and CTPs) and the different areas of authority for each MPO (CAMPO and TWTPO), and indicates which items are included (or not included) in this *Destination 2055* Metropolitan Transportation Plan report.

Table 2.2.1: Key Features of Transportation Plans in the Region

	Capital Area MPO 2055 MTP	Capital Area MPO CTP	Triangle West TPO 2055 MTP	Triangle West TPO CTP
Areas Covered	Wake County and parts of Chatham, Franklin, Granville, Harnett & Johnston Counties	Same as CAMPO Metropolitan Transportation Plan	Durham County and parts of Chatham & Orange Counties	Same as TWTPO Metropolitan Transportation Plan
Who Requires this plan?	Federal Government	State Government	Federal Government	State Government
Plan's horizon year	2055	No set year	2055	No set year
Is this plan fiscally constrained?	Yes	No	Yes	No

	Capital Area MPO 2055 MTP	Capital Area MPO CTP	Triangle West TPO 2055 MTP	Triangle West TPO CTP
Must this plan meet air quality standards?	Yes	No	Yes	No
What officially constitutes this plan?	All MTP maps, lists of projects, and the text of this document that applies either generally or specifically applies to the CAMPO area	Just the set of CTP maps that apply to the CAMPO area (no text, list of projects or written report)	All MTP maps, lists of projects, and the text of this document that applies generally or specifically applies to the TWTPO area	Just the set of CTP maps that apply to the TWTPO area (no text, list of projects or written report)
What projects are included in the plan?	New and expanded facilities and services	Existing, new and expanded facilities and services	New and expanded facilities and services	Existing, new and expanded facilities and services
Is the plan included as part of this *Destination 2055 MTP* document?	Yes	No, but additional CTP projects are listed in appendices	Yes	No

Figure 2.2.2: Map of Capital Area MPO & Triangle West TPO Planning Jurisdictions

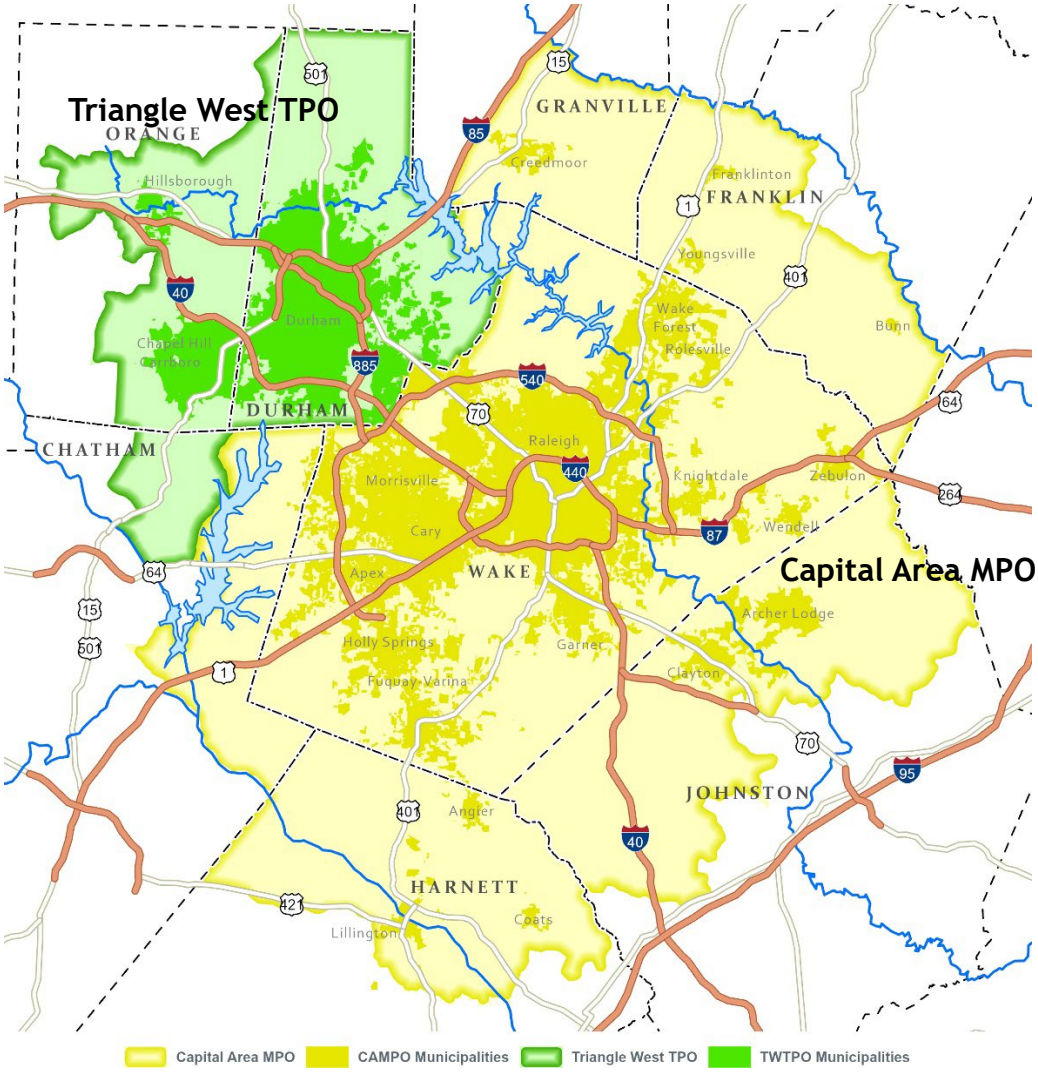


Figure 2.2.2 (previous page) shows a map of the two MPO areas. The two maps below show two other important geographic areas to consider in the consultation of this plan:

Figure 2.2.3 shows the boundary of the Triangle Air Quality region (outlined in red), which consists of all of Wake, Durham, Orange, Franklin, Granville and Johnston Counties, as well northeastern Chatham County – there are portions of this air quality region that extend beyond the MPO boundaries, and there are also some areas within the MPO boundaries that are *excluded* from the air quality area.

Figure 2.2.4 shows the boundary of the Triangle Regional Model (TRM) "modeled area" (outlined in red), which is the area covered by the travel forecasting model (the tool that estimates future travel on existing and planned roads and transit lines) – most of the data found in this document is for travel within the modeled area, which fully covers both MPOs plus some areas beyond the MPO boundaries.

Figure 2.2.3: Triangle Air Quality Region

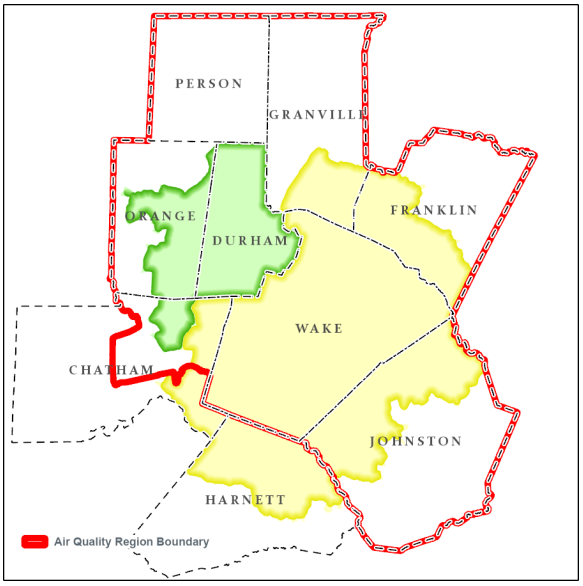
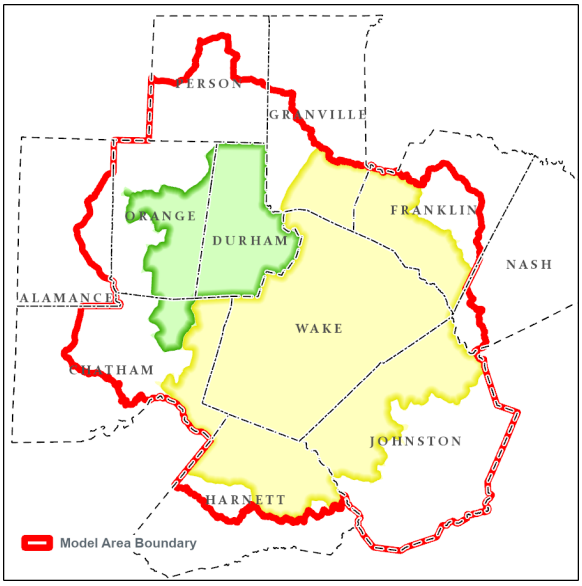


Figure 2.2.4: Triangle Regional Model Area



The core of the plan is the set of transportation investments described in Chapter 7 of this document, including:

- New, upgraded (or "modernized"), and expanded roads;
- Transit facilities and services, including bus and rail;
- Bicycle and pedestrian facilities, as independent projects and as part of road projects;
- Aviation facilities;
- Rail facilities for inter-city passenger services and freight;
- Transportation Demand Management (TDM) marketing and outreach efforts to encourage alternatives to driving alone;
- The use of advanced technology to make transit and road investments more effective, including planning related to connected and autonomous vehicles; and
- Transportation Systems Management (TSM) projects that improve safety and traffic flow through operational improvements that avoid adding new capacity.

2.3 - How Will the Plan be Used?

Metropolitan Transportation Plans (MTPs) are used for several important decisions, including:

Programming projects. Only projects that appear in an MTP may be included in the Transportation Improvement Program (TIP) for funding.

Preserving future rights-of-way for roads and transit facilities. The state and local governments use MTPs to identify land that may need to be acquired and to ensure that new development does not preclude the eventual construction of planned roads and transit facilities.

Designing local road networks. MTPs chiefly address larger transportation facilities that have a regional impact. Communities can then use these "backbone" regional-scale projects from the MTP to plan the finer grain of local streets and transit services that connect to these larger facilities.

Making land use decisions. Communities use MTPs to ensure that land use decisions will match the investments designed to support future growth and development.

Making private investment decisions. Businesses, homeowners, and developers use these plans to understand how their interests may be affected by future transportation investments.

Identifying key plans and studies. State, regional, and local agencies use this plan to outline more detailed plans and studies that will be undertaken in the future, leading to potential future projects and investments.

Key Takeaways from this Chapter

The Comprehensive Transportation Plan (CTP) shows every transportation project/service our region would eventually like to have. However, *this document – the Metropolitan Transportation Plan (MTP)* – shows everything we believe we can afford to construct/provide by the year 2055. The Transportation Improvement Program (TIP) shows everything that is programmed for state or federal funding within the initial decade of the MTP (through 2035).

This single document includes the 2055 Metropolitan Transportation Plan *(Destination 2055)* for two planning areas: the Capital Area MPO and the Triangle West TPO. Each of these organizations retains independent authority within its area of jurisdiction.

These plans will be used by local, state, and federal agencies to allocate resources for specific road, transit, and bicycle/pedestrian investments; to ensure that land is preserved for these investments; and to match land use and development decisions with planned infrastructure investments.

This document also includes lists of, and links to, projects beyond the timeframe of the 2055 MTP which are included in the two MPO CTPs.

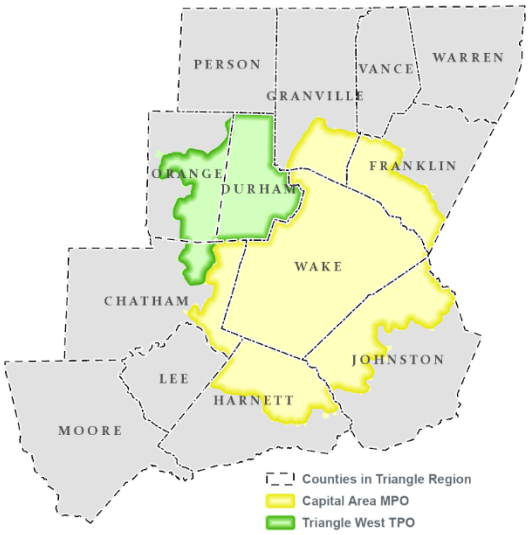
Chapter 3: About Our Home

Transportation investments link people to the places where they work, learn, shop, and play, and provide critical connections between businesses and their labor markets, suppliers, and customers. An important starting point for planning future investments is to understand the current state of our communities, how they relate to each other and to nearby regions, and how they might change over the next generation.

3.1 – Our Region

The Research Triangle is a burgeoning "Sunbelt" metropolitan region. The Triangle economic region generally covers 13 counties, as shown in Figure 3.1.1, stretching from the Virginia state line on the north and to Harnett, Lee and Moore Counties on the south. Within this region, the Census Bureau defines "Metropolitan" Statistical Areas (MSAs), "Micropolitan" Statistical Areas (MiSAs), and "Combined" Statistical Areas (CSAs). CSAs are made up of multiple MSAs and/or MiSAs. Table 3.1.1 shows the 2024 estimated populations for statistical areas that fall within the greater Triangle region.

Figure 3.1.1: Map of Triangle Region



This map shows the counties generally considered part of the greater Triangle economic region.

Table 3.1.1: 2024 Metropolitan Population

	Counties	2024 Population[1]
Durham-Chapel Hill MSA	Chatham, Durham, Orange & Person	620,522
Raleigh-Cary MSA	Franklin, Johnston & Wake	1,562,009
Anderson Creek MiSA	Harnett	146,096
Henderson MiSA	Vance	42,337
Sanford MiSA	Lee	68,537
Raleigh-Durham-Cary CSA	*All of the above*	2,439,501
Pinehurst-Southern Pines MSA[2]	Moore	108,417
Rural Counties	Granville & Warren	80,625
Total Triangle Economic Region	*All 13 Counties*	2,628,543

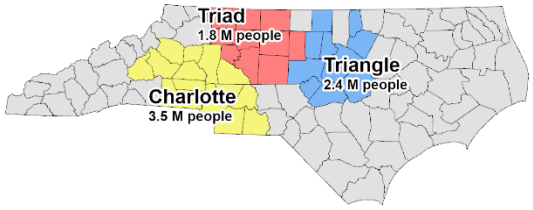
[1]Estimates from US Census Bureau.

[2]The Census Bureau considers the Pinehurst-Southern Pines MSA to be part of the Fayetteville CSA rather than the Raleigh-Durham-Cary CSA.

As the MPOs plan for transportation, it is important to consider not only mobility within their boundaries, but also the connections to the wider economic region and other regions of North Carolina. The Triangle is the eastern point of the North Carolina Piedmont Crescent, a swath of three large, multi-centered, complex metro regions that also includes the Piedmont Triad and the greater Charlotte area. The combined populations of these three regions, as defined using the Census Bureau's Combined Statistical Areas (CSAs)

is over 7.6 million residents in 2024. For comparison, the population of the entire State of North Carolina is approximately 11 million residents.

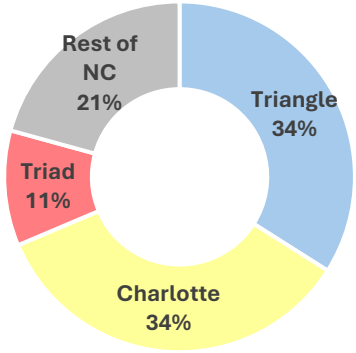
Figure 3.1.2: The Piedmont Crescent



Map showing the three primary Combined Statistical Areas in North Carolina and their 2024 estimated populations (estimates from US Census Bureau).

More importantly, as we consider future transportation investments, these three regions are expected to account for more than three-quarters of North Carolina's growth over the next generation, with the Triangle and Charlotte areas each absorbing about one-third of North Carolina's total future growth.

Figure 3.1.3: Forecast Population Growth in North Carolina by Region (2026-2055)



Based on North Carolina State Demographer forecasts published in 2024.

This rapid population growth is part of a larger national trend where over two-thirds of nationwide population growth is expected to occur in a series of "megaregions," with the fastest-growing of these regions located in the Sunbelt. The Triangle, along with the Triad and Charlotte areas, is part of the larger Piedmont Atlantic Megaregion stretching from Raleigh to Birmingham. The Piedmont Atlantic Megaregion is expected to have over 31 million residents by the year 2050.

Figure 3.1.4: Megaregions of the U.S.

Map of "Megaregions" across the United States, as defined by the Regional Plan Association. The "Piedmont Atlantic Megaregion" is shown in green, stretching from North Carolina to Alabama. Map created by Regional Plan Association, CC BY-SA 3.0.

3.2 - Our People

As our region continues to grow, with an expected one million new residents over the course of this plan, the composition of our population is changing in ways that can influence the types of transportation investments we may choose to make:

22% By 2055, 22% of Triangle residents are projected to be 65 or older, up from 13% in 2020[1].

14% We are a very mobile region: 14% of residents moved homes within the last year, and 8% of residents lived in a different county, state or country one year ago[2].

42k In 2023, 42,000 households in the Triangle region did not have access to an automobile, up from 37,000 in 2010 and 40,000 in 2019[3].

63% Almost 600,000 households (roughly 63% of the total) are households with only one or two people, and an additional 54,000 people live in group quarters such as university dormitories and nursing homes[3].

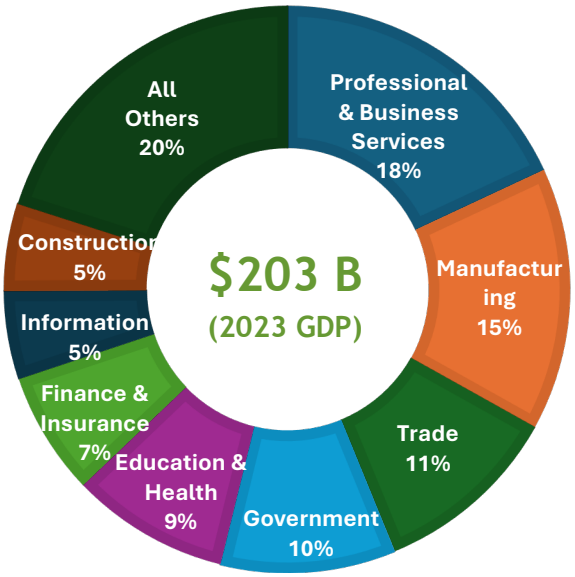
79% A 2023 survey found that 79% of homebuyers consider being within an easy walk of other places and things in a community to be important in their home-buying decisions[4].

[1]Based on 2024 NC OSBM county population projections by age for counties in the Raleigh-Durham-Cary CSA.
[2]Based on 2023 Census ACS 1-year data for the Raleigh-Cary MSA, Durham-Chapel Hill MSA & Anderson Creek MiSA; and ACS 5-year average data for the Henderson MiSA & Sanford MiSA.
[3]Based on 2023 Census ACS 1-year data for the Raleigh-Cary MSA, Durham-Chapel Hill MSA, Anderson Creek MiSA & Sanford MiSA; and ACS 5-year average data for the Henderson MiSA.
[4]2023 National Association of Realtors National Smart Growth Survey.

3.3 - Our Economy

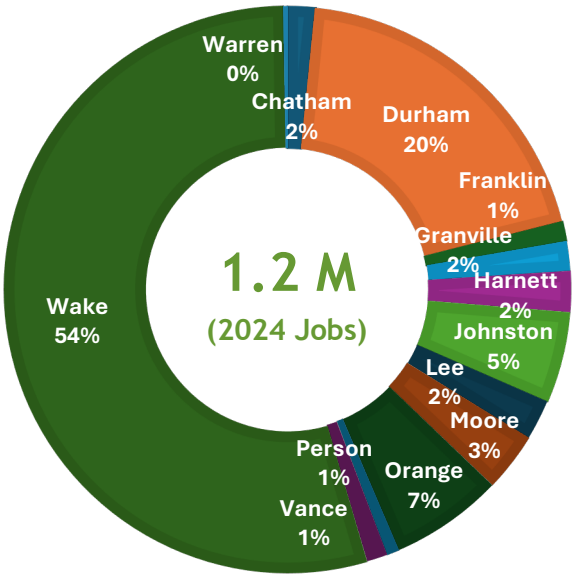
The cornerstones of the region's economy are the major universities and their associated medical centers, the technology firms exemplified by the companies in the Research Triangle Park, and state government. Employment is concentrated in the three core Triangle counties: Wake, Durham, and Orange Counties have close to 1 million jobs of all types; the ten counties in the Raleigh-Durham-Cary CSA have around 1.1 million jobs, and the 13-county economic region has about 1.2 million jobs. Figure 3.3.1 shows the distribution of economic value by industry for the combined Durham-Chapel Hill MSA and Raleigh-Cary MSA which was valued at $203 billion in 2023, while Figure 3.3.2 shows the geographic distribution of jobs by county throughout the region.

Figure 3.3.1: 2023 Gross Product by Industry in the Triangle Region



US Bureau of Economic Analysis 2023 Gross Domestic Product data for the Durham-Chapel Hill MSA and the Raleigh-Cary MSA

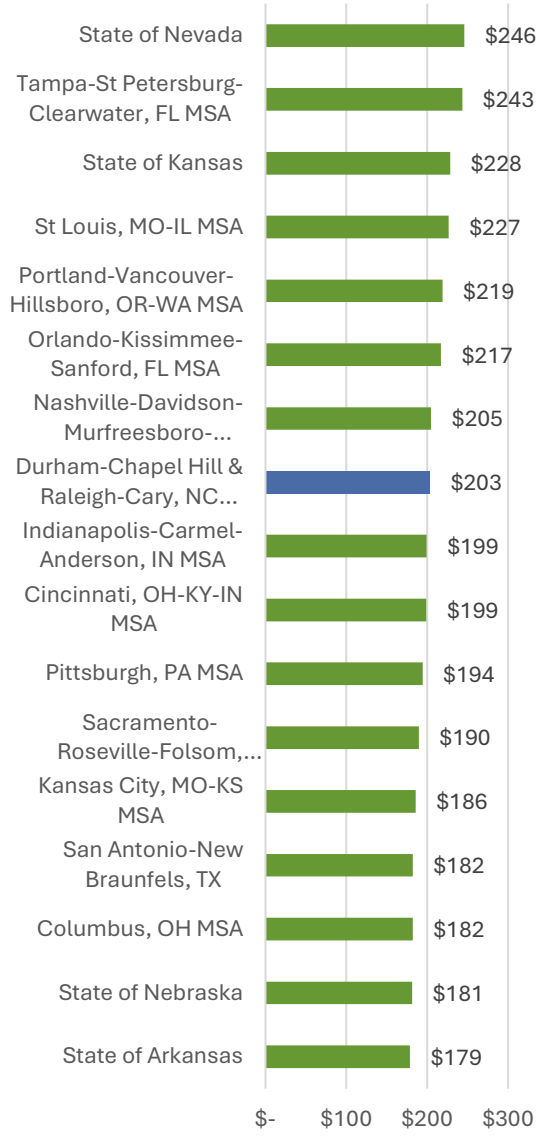
Figure 3.3.2: 2024 Employment by County in the Triangle Region



US Bureau of Labor Statistics 2024 Q4 Quarterly Census of Employment and Wages by County

The Triangle's economy has proven resilient in the past, and the size of the region's economy is substantial: the two Triangle MSAs accounted for 26% of the value of goods and services produced in North Carolina in 2023, and at $203 billion surpassed the economic value produced by 17 states.

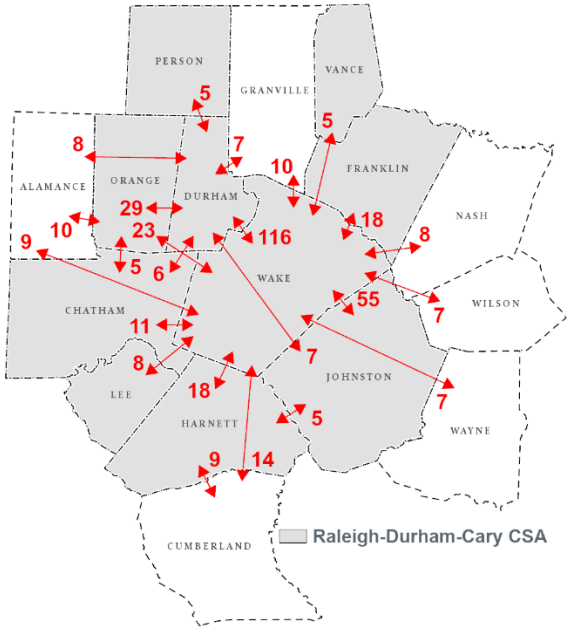
Figure 3.3.3: 2023 Gross Product Comparison of Triangle Region to Other Areas (Billions of Dollars)



US Bureau of Economic Analysis 2023 Gross Domestic Product data (in billions of dollars)

The concentration of jobs in several areas – most notably the downtowns of Raleigh and Durham, the Research Triangle Park area, and the university/medical center areas associated with Duke University, UNC-Chapel Hill, NC State University, and NC Central University – results in a significant amount of commuting that crosses county lines, and even into counties that are neighboring regions (such as Alamance and Cumberland). The largest flow is 116,000 daily commuters between Durham and Wake Counties, followed by 55,000 between Johnston and Wake Counties and 29,000 between Durham and Orange Counties.

Figure 3.3.4: Daily Inter-county Commute Flows (shown in thousands of commuters)



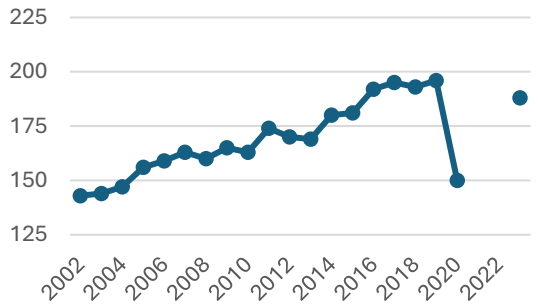
342k

There were 342,000 total daily inter-county commuters between all counties in the Raleigh-Durham-Cary CSA in 2022. This is up from 244,000 in 2010 and 202,000 in 2000.

Based on US Census Bureau LEHD-LODES On the Map data from 2022. Daily flows below 5,000 have been omitted to aid in clarity of the map.

In fact, the region's most heavily-traveled road segment is the section of I-40 just west of I-540, right on the Wake/Durham County boundary that also serves as the boundary between the Capital Area MPO and the Triangle West TPO. Auto and truck traffic continues to generally grow at this location (although volumes have not yet quite returned to the levels they were at right before the COVID-19 Pandemic in 2020), and forecasts are for that growth trend to continue.

Figure 3.3.5: Daily Traffic Volume Counts on I-40 near the Wake/Durham County Line (2002-2023) (in thousands)



Data from NCDOT counts of Annual Average Daily Traffic. Counts not available for 2021 or 2022.

3.4 - Our Environment

Among the many environmental concerns in our region, land use, air quality, and greenhouse gas emissions are three that have critical connections to transportation investments. Land use is a particularly critical issue in a fast-growing region such as the Triangle since the pattern of future land development can have significant influence on the efficiency and effectiveness of different transportation investments, especially transit services. Much of the Triangle region is characterized by low-density development with different types of land uses (such as homes, offices, and stores) separated from each other in space – a pattern commonly referred to as "sprawl." Studies have examined the social and environmental impacts of sprawl, showing that residents in the most sprawling areas travel more miles each day, suffer more traffic deaths, and tend to endure worse air quality than residents of less-sprawling areas.

Air quality remains an important concern and is directly linked with the transportation system. Ozone is an irritant that has been shown to decrease lung function and trigger asthma attacks among the young, elderly, and adults who work or exercise outdoors. Emissions from cars and trucks account for over one half of the emissions of nitrogen oxides (NO_x) in the Triangle region – NO_x is the controlling pollutant in the formation of ground-level ozone. Given the serious health effects of ozone, controlling ozone emissions is an important goal of the transportation investment decisions of the region's MPOs.

The Environmental Protection Agency (EPA) has established standards for common air pollutants. A geographic area that meets (or is better than) the standard for a pollutant is called an "attainment area" since it has attained the standards. An area that does not meet the standard is called a "non-attainment area." Standards are set for a number of pollutants, including ozone, particulate matter, and carbon monoxide. The Triangle area is currently classified as "attainment" but has been classified as "non-attainment" in previous decades.

Attainment status can affect a community's economic development efforts, and federal funding for transportation projects can be restricted in non-attainment areas. New or expanded industries that emit air pollution must also meet stricter and more costly

technology standards in non-attainment areas. For these reasons, the region's two MPOs continue to examine air quality impacts closely, and are required to demonstrate that their transportation plans and programs comply with federal air quality conformity processes.

In addition to conventional air pollutants, greenhouse gas emissions from vehicles and their contribution to climate change are a growing concern. Although climate change is a global issue, its impacts and activities that cause climate change happen at the local level. These activities are influenced by the decisions of local and state officials:

- Land use development and pricing decisions that affect ***how*** and ***how much*** we travel;
- Roadway, transit, and active transportation investments that set our travel ***options***; and
- Vehicle and fueling infrastructure decisions that affect ***how much*** pollution our travel will create.

Although the focus of a Metropolitan Transportation Plan is on the specific transportation facilities and services that are fiscally reasonable and can best serve changing travel markets, the *Destination 2055* plan links these investments to broader energy use and greenhouse gas issues in three principal ways:

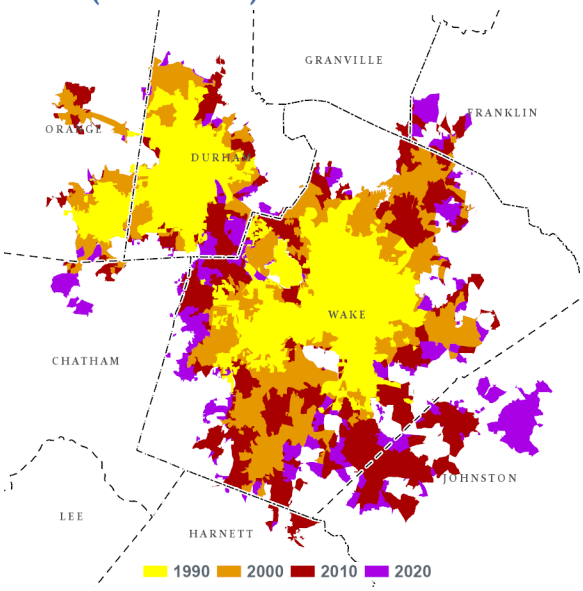
- Ongoing efforts to designate and implement alternative fueling infrastructure along key corridors;
- Support for continued conversion of transit vehicle fleets to the use of alternative fuels; and
- Closer alignment of work among MPOs and NCDOT and regional efforts such as the Triangle Clean Cities Coalition.

3.5 - Our Future

The part of the Research Triangle Region covered by the region's travel forecasting model (including parts of ten counties) is anticipated to add around **1.4 million** residents between 2020 and 2055, growing from a 2020 population of 2 million to a 2055 population of 3.4 million. To put this amount of growth in perspective, it is more than the current population of our largest county, Wake, which has a 2024 population of 1.2 million. *Imagine adding more than another Wake County's population amount to our region!*

Forecasts suggest that much of this future growth will continue to extend outward from the existing urbanized area. Figure 3.5.1 shows how the urbanized areas for Raleigh and Durham, as defined by the US Census Bureau, have expanded in this region over time. The census defines urbanized areas as densely-settled cores of census blocks that meet minimum housing and population density thresholds.

Figure 3.5.1: Expansion of Urbanized Areas (1990-2020)



U.S. Census-defined Urbanized Areas, 1990-2020

Our future involves more than just growth – we also face a rapidly-evolving technology landscape that could significantly shape the future nature of travel. The advent of connected and autonomous vehicles could influence the designs of our streets, our need for parking, the relationships between our built environment and the transportation network, and car ownership, all in ways that remain unclear as of yet.

3.6 - Our Challenge

These characteristics of our region -- a rapidly-growing population and economy, continuing risks to air and water quality, a propensity for growth to disperse outward from the urban core, and potentially-disruptive technologies -- all create transportation challenges for our region to address. More commuters are traveling longer distances, and the single-occupant automobile continues to be the dominant way in which we travel. And while we have traditionally focused on commuter travel as a primary focus of our transportation analysis, travel for other purposes (such as school, business, shopping, and social engagements) is growing as a share of overall trips. These conditions have produced increasing demands on our transportation network, which we can see in performance measures such as rising "vehicle miles traveled" and other measures of transportation demand. The consequences of this have been rising traffic congestion, increasing transportation infrastructure costs, and further pressure on our region's environmental assets. The region's quality of life, a key attraction for professional and skilled workers and new business investment in our region, may ultimately become threatened by the consequences of our patterns of growth and inadequate transportation infrastructure.

Key Challenges We Face

Finding and securing the necessary resources to invest in our transportation infrastructure, and balancing these needs with other funding needs such as schools, water infrastructure, affordable housing, environmental protection, and social services.

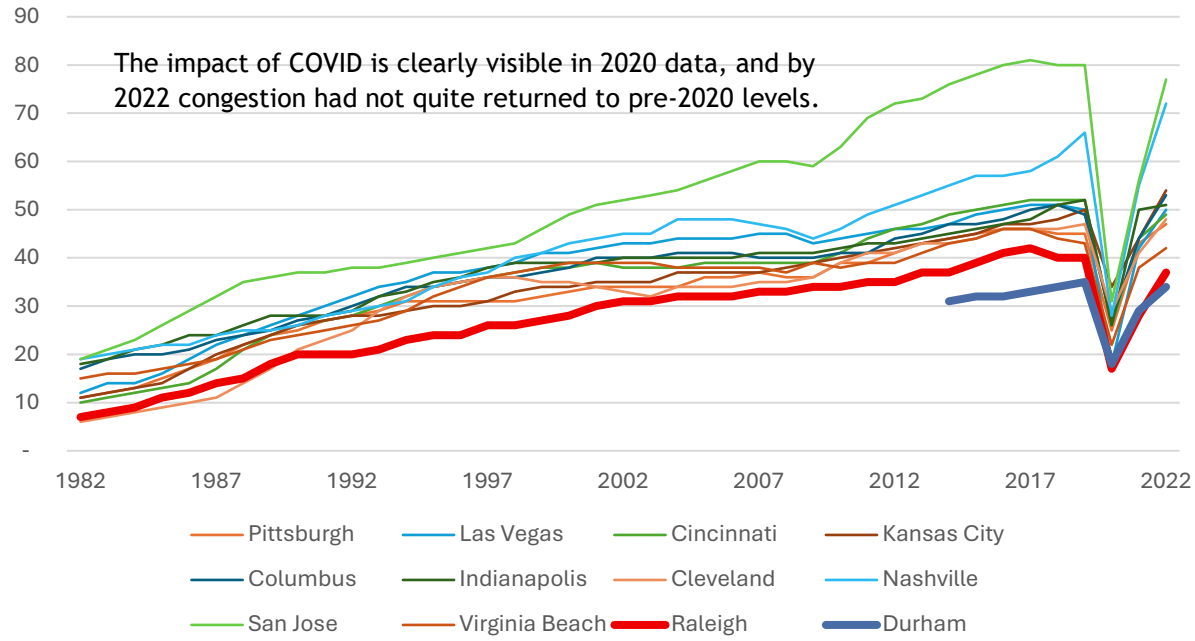
Minimizing the negative effects that our planned and needed transportation projects will have on quality of life and the environment.

Designing a transportation network that is able to serve the needs of a variety of communities across the region and a range of people across the region, all with different needs and values.

Understanding and addressing the fact that, despite major planned investments in transportation projects, congestion in the region is likely to increase due to the extensive projected population growth and travel growth within the region as well as increasing "pass-through" traffic on our Interstate highways.

Figure 3.6.1 shows how auto commuters have experienced delay in the Triangle, as compared with other regions around the U.S. Although the Triangle has comparatively less delay than many of its peer regions, delay has still risen consistently over time and the region has not been able to "build its way out of congestion." In 1982 an average Raleigh commuter spent 7 hours per year in congestion – by 2022 this was 37 hours.

Figure 3.6.1: Annual Per Capita Auto Hours of Delay for Selected Regions (1982-2022)

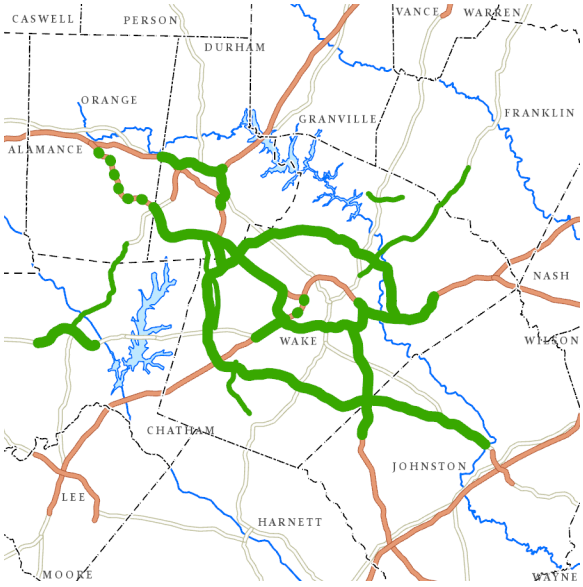


Data from Texas Transportation Institute 2023 Urban Mobility Report. Data is reported by Metropolitan Statistical Area (MSA) and is not available for the Durham-Chapel Hill MSA prior to 2014. Peer regions were selected based on MSA population comparable to the combined populations of the Raleigh-Cary MSA and Durham-Chapel Hill MSA.

We are undertaking the update of our long-range transportation plan to help ensure that we can meet the significant challenges that we face. We must plan now for the roadways, transit services, and bicycle and pedestrian facilities that will be needed by 2055 if we expect to meet the travel demands of the region that we will become. Our communities have the opportunity to create and maintain a strong economy, high quality of life, affordable housing market, culturally-diverse populace, and sustainable environment. Our ability to anticipate and meet the challenges in planning, designing, and building an efficient and effective transportation network is essential to ensure that we make the most of these opportunities.

Our predecessors made significant investments in transportation facilities and services in this region, and it is our responsibility to now plan for the necessary investments that will take our region into the future. The map below shows some of the major highway projects that have been built in the Triangle region since 1990, or are currently under construction.

Figure 3.6.2: Major Highway Projects Built Since 1990



Key Takeaways from this Chapter

- The MPO areas covered by this plan are part of a larger economic region. Transportation investments should consider the mobility needs of this larger region and links to the other large metro regions of North Carolina and throughout the Southeast.
- The Triangle Region is expected to accommodate a phenomenal amount of future growth, part of a larger national trend of growth in Sunbelt "megaregions" – we need to plan for the region we will become, not just the region we are today.
- Like many regions that had the majority of their growth occur after World War II, the Triangle is a sprawling region and projections are for continued outward growth to occur in addition to infill development in more central portions of the region (including Raleigh and Durham as well as the areas between them). A key challenge for our transportation plan is to match our vision of how our communities *should* grow with the transportation investments that will support those growth patterns.
- No region has been able to "build its way out of congestion" – an important challenge for our transportation plan is to provide travel choices that allow people to avoid congestion or minimize the time they spend stuck in it. Emerging, potentially disruptive technologies associated with connected and autonomous vehicles as well as the rise of "working from home" may significantly affect travel; however, the nature, timing and scale of these impacts remains uncertain, and may ultimately only have an impact in the longer-term stages of this plan.
- Our population is changing. The population is aging, more households will consist of only one or two people, more households are living without cars, and more people are showing interest in living in more-compact, walkable, active communities. Our plans must provide mobility choices to address the changing needs of the people in the region.
- Our MPOs are connected together by very strong travel patterns between them – our largest commute pattern and heaviest traffic volumes occur at the intersection of the two MPOs' boundaries, and the inter-county commuting between Durham and Wake Counties is by far the largest between any county pair in North Carolina. Our MPO plans should recognize the mobility needs of residents and businesses that transcend our MPO and county boundaries.

Chapter 4: Our Vision and How We Will Achieve It

4.1 - The Values Underlying Our Vision: Equitable Engagement and Investment

Instead of relying on a conventional approach to transportation planning that focuses primarily on lowering travel times and congestion levels, the *Destination 2055* plan takes a different approach – while still considering traditional factors, this plan also focuses on the mobility and accessibility needs of people who are less likely to own cars and have a higher propensity to use transit, walk, or bicycle to meet their travel needs.

Traditional road congestion and vehicle speed concerns are still addressed, but they are balanced by concerns for safer streets, user-focused transit services, more connected bicycle and pedestrian networks, and greater access to job hubs for all people and areas. Low-income families, seniors, persons with disabilities and other Title VI-protected communities served as important determinants for the investments included in this plan.

The planning process used a non-traditional approach as well. Although traditional public comment periods and public hearings were still held, newer methods designed for more effective engagement were also used – these included collaborations with trusted community-based partners, attending community events, scheduling pop-up engagement activities where people congregate, and extracting engagement results from other related planning efforts in order to minimize "engagement fatigue." The result of this approach is that a broad range of community perspectives were more prominent in the development of *Destination 2055* than in the traditional engagement approach of the past.

4.2 - Our Vision

The region has developed a shared vision of what our transportation system should be:

A seamlessly-integrated set of transportation services that provide travel choices to support economic development and that:

- ***are compatible with the character and development of our communities;***
- ***are sensitive to the environment;***
- ***improve quality of life; and***
- ***are safe and accessible for all.***

The *Destination 2055 Metropolitan Transportation Plan* commits our region to transportation services and patterns of development that contribute to a distinctive place where people can successfully pursue their daily activities.

4.3 - Goals and Objectives

The Capital Area MPO and Triangle West TPO worked together to develop a consistent set of goals designed to achieve the region's vision. Goals are short statements of intent, while objectives state the priorities within each goal on which the MPO intends to focus. The plan is based on eight goals and their supporting objectives. Overall, the goals language is largely consistent between the two MPOs (with two minor exceptions noted below) but there are larger differences in the language used by the two MPOs to define the objectives under each goal, so these are listed separately for each MPO.

Goal 1: Connect People and Places

Capital Area MPO Objectives	Triangle West TPO Objectives
• Connect people to jobs, education and other important destinations using all modes. • Ensure transportation needs are met for all populations, especially the aging and youth, economically disadvantaged, mobility impaired, and minorities.	• Increase mobility options for all communities – particularly underrepresented communities. • Achieve zero disparity of access to jobs, education, and other important destinations by race, income or other marginalized groups.

Goal 2: Promote and Expand Multimodal and Affordable Transportation Choices (CAMPO) | Ensure that All People have Access to Multimodal and Affordable Transportation Choices (TWTPO)

Capital Area MPO Objectives	Triangle West TPO Objectives
• Enhance transit services, amenities and facilities. • Improve bicycle and pedestrian facilities. • Increase utilization of affordable non-auto travel modes.	• Enhance transit services, amenities and facilities. • Improve bicycle and pedestrian facilities. • Increase utilization of affordable non-auto travel modes.

Goal 3: Manage Congestion and System Reliability

Capital Area MPO Objectives	Triangle West TPO Objectives
• Allow people and goods to move with minimal congestion, time delay, and greater reliability. • Promote Travel Demand Management (TDM), such as carpooling, vanpooling and park-and-ride. • Enhance Intelligent Transportation Systems (ITS), such as ramp metering, dynamic signal phasing and vehicle detection systems.	• Allow people and goods to move with greater reliability. • Increase efficiency of the existing transportation system through strategies such as Transportation Demand Management (TDM) and Intelligent Transportation Systems (ITS). • Increase travel choices and travel reliability while prioritizing multi-modal improvements.

Goal 4: Promote Safety, Health and Well-being

Capital Area MPO Objectives	Triangle West TPO Objectives
• Increase the safety of travelers and residents. • Promote public health through transport choices.	• Achieve zero deaths and serious injuries on our transportation system. • Provide all residents with active transport choices. • Improve project design and traffic operations to minimize human error. • Increase accessibility via universal design.

Goal 5: Stimulate Economic Vitality and Opportunity (CAMPO) | Stimulate Inclusive Economic Vitality (TWTPO)

Capital Area MPO Objectives	Triangle West TPO Objectives
• Improve freight movement. • Coordinate land use and transportation. • Improve project delivery for all modes. • Target funding to the most cost-effective solutions.	• Improve freight movement. • Coordinate land use and transportation. • Improve project delivery for all modes. • Invest in cost-effective solutions to improve travel reliability and safety. • Ensure equitable distribution of transportation investments especially for underrepresented communities.

Goal 6: Ensure Equity and Participation

Capital Area MPO Objectives	Triangle West TPO Objectives
• Ensure that transportation investments do not create disproportionate negative impacts for any community, especially communities of concern. • Promote equitable public participation among all communities, especially communities of concern.	• Ensure that transportation investments do not create disproportionate negative impacts for underrepresented communities. • Ensure equitable public participation among underrepresented communities.

Goal 7: Improve Infrastructure Condition and Resilience	
Capital Area MPO Objectives	Triangle West TPO Objectives
• Increase the proportion of highways and highway assets rated in 'good' condition. • Maintain transit vehicles, facilities and amenities in the best operating condition. • Improve the condition of bicycle and pedestrian facilities and amenities. • Promote resilience planning and practices. • Support autonomous, connected and electric vehicles.	• Increase the proportion of highways and highway assets rated in 'good' condition. • Maintain transit vehicles, facilities and amenities in the best operating condition. • Improve the condition of bicycle and pedestrian facilities and amenities. • Promote resilience planning and practices. • Support autonomous, connected and electric vehicles. • Create an accessible EV infrastructure network and prioritize alternative fuel sources.

Goal 8: Protect the Human and Natural Environment and Minimize Climate Change	
Capital Area MPO Objectives	Triangle West TPO Objectives
• Reduce negative impacts on the natural and cultural environments. • Reduce mobile source emissions, greenhouse gas emissions and energy consumption. • Connect transportation and land use.	• Reduce negative impacts on the natural and cultural environments. • Reduce transportation sector emissions. • Achieve net zero carbon emissions.

4.4 - Performance Measures

As part of the Goals and Objectives process, the region's two MPOs also developed a set of common performance measures related to those objectives, to enable tracking the effectiveness of decisions in reaching those objectives and the progress made toward reaching those objectives over time. Measures fall into one of two categories: (1) those that can be forecasted into the future using models; and (2) those that can be measured based on existing conditions.

Forecastable performance measures were determined for three primary conditions:

2020 – This is the base condition, using the 2020 population and employment data and the 2020 existing transportation network. 2020 is the base year of the modeling tool used in the plan analysis.

2055 Existing Plus Committed (2055 E+C) – This network includes the projected 2055 population and employment data and a transportation network that is based on projects that currently exist or are under construction as 2025. This is used as a baseline scenario for future conditions if future projects are not constructed or instituted.

2055 Metropolitan Transportation Plan (2055 MTP) – This uses the transportation network for the 2055 MTP, including all planned future projects and services identified in the plan, and 2055 population and employment data.

Additionally, performance measures were also used to compare the alternatives that were studied as part of the *Destination 2055* MTP Alternatives Analysis (see Chapter 6 for more information).

The performance measures have been crafted to also align with the performance measures required by the Infrastructure Investment and Jobs Act (IIJA), the nation's federal transportation funding and policy law. Both MPOs have approved IIJA-compliant performance measures and targets for transit asset state-of-good-repair, transit safety, roadway safety, bicycle and pedestrian safety, infrastructure condition, and travel reliability. Appendix 13 includes the values of these federally-required performance measures and targets at the time of this plan's initial adoption – as these values are updated over time, or new measures are added, these will be updated on each MPO's website and these future updates are incorporated by reference into the 2055 MTP.

The following two tables show the measures that have been used in the development of this plan:

Table 4.4.1: Federally-required Performance Measures used in *Destination 2055*[1]

Performance Measures	Targets
Interstate Level of Travel Time Reliability (LOTTR)	2-year & 4-year
Non-Interstate National Highway System (NHS) Level of Travel Time Reliability (LOTTR)	2-year & 4-year
Interstate Truck Travel Time Reliability	2-year & 4-year
Percent of Interstate Pavement in both 'Good' and 'Poor' Condition	2-year & 4-year
Percent of Pavement on the Non-Interstate National Highway System (NHS) in both 'Good' and 'Poor' Condition	2-year & 4-year
Percent of Bridges on the National Highway System (NHS) Classified as both 'Good' and 'Poor' Condition	2-year & 4-year
Percent of Transit Equipment Meeting or Exceeding Useful Life Benchmark	Annual
Percent of Transit Vehicles by Asset Class Meeting or Exceeding Useful Life Benchmark	Annual
Percent of Transit Facilities with Condition Rating Below 3.0 on FTA Economic Requirements Scale	Annual
Number of Non-motorized Fatalities and Serious Injuries	Annual
Number of Total Roadway Fatalities	Annual
Total Roadway Fatalities Rate per 100 Million Miles Traveled	Annual
Number of Total Roadway Serious Injuries	Annual
Total Roadway Serious Injuries Rate per 100 Million Miles Traveled	Annual
Fixed-route and Non-fixed-route Transit Fatality Total and Rate	Annual
Fixed-route and Non-fixed-route Transit Injury Total and Rate	Annual
Fixed-route and Non-fixed-route Transit Safety Events Total and Rate	Annual
Fixed-route and Non-fixed-route Transit Distance Between Mechanical Failures	Annual

[1]*See Appendix 13 for more detailed information on the IIJA-required performance measures and targets.*

Table 4.4.2: Other Regional Performance Measures used in *Destination 2055* Analysis

Performance Measures
Goal 1: Connect People and Places
Average Number of Jobs Within 30 Minutes by Transit for Title VI Communities
Average Number of Jobs Within 30 Minutes by Automobile for Title VI Communities
Average Number of Jobs Within 30 Minutes by Walking for Title VI Communities
Percent of Jobs in Travel Choice Neighborhoods[1]
Percent of Population in Travel Choice Neighborhoods
Percent of Title VI Communities in Travel Choice Neighborhoods
Percent of Title VI Communities with 'Good' or 'Excellent' Transit Access
Percent of Title VI Communities with 'Good' or 'Excellent' Walk Access
Percent of Title VI Communities with Less-than-average Work-trip Travel Times
Goal 2: Promote and Expand Multimodal and Affordable Transportation Choices / Ensure that All People have Access to Multimodal and Affordable Transportation Choices
Transit Service Miles - Total and High Frequency Routes
Transit Ridership Total and Per Capita
Transit Mode Share in Travel Choice Neighborhoods
Non-motorized Mode Share in Travel Choice Neighborhoods
Percent Of Bus Stops That Meet ADA Requirements
Bus Average On-Time Performance
MPO Total Programming Per Capita on Bicycle and Pedestrian Facilities
Proportion Of Jurisdictions That Have an Ordinance Requiring Developers to Build or Pay In-Lieu for Sidewalks
Bike/Ped Level of Traffic Stress (Triangle West TPO only)
Goal 3: Manage Congestion and System Reliability
Total and Per Capita Minutes of Delay for All Trips
Average Travel Time by Automobile (PM peak period)
Average Travel Time by Transit (PM peak period)
Number of Alternative Transportation Users Supported and Vehicle Miles Traveled Reduced by the Triangle Transportation Choices Transportation Demand Management (TDM) Program
ITS Investments ($) Per Capita or ITS Treatment Miles by Freeway and Arterial
Goal 4: Promote Safety, Health and Well-being
Bicycle and Pedestrian Facility Density (Triangle West TPO only)
See *Appendix 13* for Federally Required Performance Measures Related to Highway and Transit Safety
Goal 5: Stimulate Economic Vitality and Opportunity / Stimulate Inclusive Economic Vitality
Total and Per Capita Vehicle Miles Traveled (VMT)
Average Travel Time for Work Trips (AM peak period)
Average Travel Distance for Work Trips (AM peak period)

[1] **Travel Choice Neighborhoods** are neighborhoods located within ¼ mile of existing or planned high-frequency bus *routes* (headways of 15 minutes or less during peak period) or within ½ mile of planned premium transit *stations* (bus rapid transit or passenger rail).

Performance Measures
Percent of TIP Projects Completed on Time
See *Appendix 13* for Federally Required Performance Measures Related to Interstate Truck Travel Time Reliability
Goal 6: Ensure Equity and Participation
Impact of Planned Highway Improvements on Title VI Communities
Percent of Title VI Communities with Less-than-average Minutes of Delay Per Capita
Percent of Public Engagement Plan Requirements Met
Goal 7: Improve Infrastructure Condition and Resilience
See *Appendix 13* for Federally Required Performance Measures Related to Pavement and Bridge Conditions, as well as Transit Asset Management
Goal 8: Protect the Human and Natural Environment and Minimize Climate Change
Percent of Planned Investment in Existing Roadways
Total and Per Capita Transportation Greenhouse Gas Emissions
Total and Per Capita Energy Consumption from Transportation Sources

This report also includes an analysis of Title VI issues in Section 9.3 and Appendix 12.

Key Takeaways from this Chapter

The *Destination 2055* plan was built on a foundation of both traditional engagement and investment, and one focused on underserved communities.

Our MPOs have a common vision for what our region's transportation system should achieve.

Both MPOs adopted consistent goals and objectives to accomplish this vision, and a common set of performance measures to track progress toward the goals and objectives.

Each MPO may choose different target values they wish to achieve based on their individual conditions and priorities.

Performance measures are designed to align with federal requirements under the Infrastructure Investment and Jobs Act (IIJA).

Chapter 5: How We Developed Our Plan

This section describes the organizations responsible for developing *Destination 2055* and the technical tools they used in its creation. Additionally, it discusses the ways in which the public was engaged in the plan's development and review, as well as other recent and ongoing studies and plans that relate to *Destination 2055*.

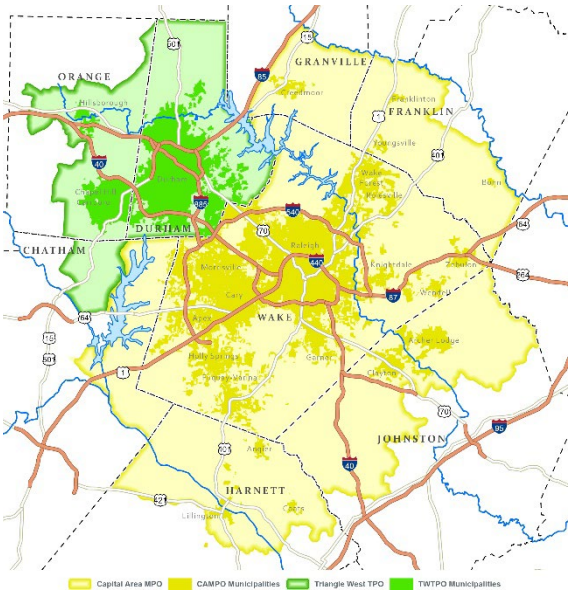
5.1 – Who Is Responsible for the Plan?

Metropolitan Planning Organizations (MPOs) are the regional organizations responsible for transportation planning for urban areas, and are charged with developing their individual Metropolitan Transportation Plans (MTPs). The Research Triangle Region has two MPOs: the Capital Area Metropolitan Planning Organization (Capital Area MPO or CAMPO) and the Triangle West Transportation Planning Organization (Triangle West TPO).

The Capital Area MPO planning area covers all of Wake County and portions of Chatham, Franklin, Granville, Harnett, and Johnston Counties, along with 21 municipalities within these six counties. The Triangle West TPO planning area covers all of Durham County (including the City of Durham), a portion of Orange County (including the Towns of Carrboro, Chapel Hill, and Hillsborough), and part of Chatham County. Figure 5.1.1 shows a map of the MPO boundaries.

Both of these MPOs have also been designated as **Transportation Management Areas (TMAs)** under the principal federal transportation legislation called the Infrastructure Investment and Jobs Act (IIJA). TMAs are urbanized areas with a population over 200,000 and have additional responsibilities such as the development of a Congestion Management Process (CMP) and direct allocation of certain federal revenues. The organizational structure and processes of both MPOs are designed to address state and federal legislation and regulations related to transportation.

Figure 5.1.1: MPO Boundary Map



This map shows the planning areas of the Capital Area MPO in yellow and the Triangle West TPO in green.

Each MPO is comprised of two committees, in addition to the professional MPO staff:

Policy Board – this board, termed the "Executive Board" by CAMPO and the "Triangle West TPO Board" by Triangle West TPO, coordinates and makes decisions on transportation planning issues. It is the governing body of an MPO. The board is composed of elected and appointed officials from each county, municipality and major transit provider within each MPO, as well as from the North Carolina Department of Transportation (NCDOT).

For the Capital Area MPO, the policy board consists of officials from: the counties of Chatham, Franklin, Granville, Harnett, Johnston and Wake; the municipalities of Angier, Apex, Archer Lodge, Bunn, Cary, Clayton, Coats, Creedmoor, Franklinton, Fuquay-Varina, Garner, Holly Springs, Knightdale, Lillington, Morrisville, Raleigh, Rolesville, Wake Forest, Wendell, Youngsville and Zebulon; Go Triangle; and the North Carolina Department of Transportation. The board also has advisory (non-voting) members from the North Carolina Turnpike Authority and the Federal Highway Administration.

For the Triangle West TPO, the policy board consists of officials from the City of Durham, Town of Chapel Hill, Town of Carrboro, Town of Hillsborough, Durham County, Orange County, Chatham County, GoTriangle, and the North Carolina Department of Transportation. The board also has advisory (non-voting) members from the Federal Highway Administration and Federal Transit Administration.

Technical Committee (TC or TCC) – This committee, termed the Technical Committee (TC) in Triangle West TPO and the Technical Coordinating Committee (TCC) in CAMPO, is composed of staff members from each MPO's local governments, NCDOT, GoTriangle, Research Triangle Park, Central Pines Regional Council, Raleigh-Durham Airport Authority, North Carolina Turnpike Authority (CAMPO only), N. C. Department of Environmental Quality (Triangle West TPO only), and the largest universities in each MPO (including North Carolina Central University, University of North Carolina, and Duke University in Triangle West TPO and North Carolina State University in CAMPO). The technical committees are responsible for making recommendations to the MPO policy boards, and are commonly made up of professional transportation, land use, community or facility planners and engineers representing their organizations or jurisdictions on the committee.

Lead Planning Agency (LPA) – This final key element of the MPO is responsible for providing hosting and administrative services such as grant funding, financial oversight, and other administrative activities for the MPO. The Central Pines Regional Council serves as the host agency for the Triangle West TPO, and the Town of Cary serves as the host agency for the Capital Area MPO.

5.2 - Regional Coordination

Several regional coordination activities were undertaken to ensure that the two MPO plans would be integrated and mutually-supportive. The key coordination activities are described throughout the various sections of this report in detail. The following list provides a summary of key coordinated activities used to develop the plan:

County Transit Plans – The updated transit plans of Durham County and Orange County were adopted in June 2023 and December 2022 respectively. The Wake County Transit Plan was updated and adopted in November 2025. These plans designate the general design for improved bus, rail, and bus rapid transit facilities and services in their respective counties, and the funding sources to finance these improvements. This MTP reflects the latest information available from these county transit plans at the time of MTP development.

CommunityViz Land Use Model – the MPOs fund, guide and use the same Socioeconomic Data forecast process and model. This process convened local planners, developers and other professionals who impact the development process to create the Community Visualization (CommunityViz) land use model and produce population and employment projections.

Goals, Objectives and Performance Measures – The two MPOs developed and used a similar set of goals, objectives, and performance measures to guide the selection of a land use scenario and of projects in the 2055 MTP process.

Pre-MTP Learning Scenarios – The MPOs developed six (6) scenarios to test how land use/development assumptions and transportation network assumptions would perform in relation to the approved goals and objectives.

Alternatives – The MPOs jointly defined and evaluated the various land use and highway, bus transit, and rail transit alternatives, and selected a single land use alternative for use in the final plan development.

Joint Policy Board Meetings – The MPOs conducted joint MPO Policy Board meetings on January 31, 2024, May 31, 2024, January 29, 2025, and October 29, 2025, to advance 2055 MTP coordination at the policy board level.

Financial Plan – The MPOs used the same financial methodologies and cost and revenue basis for all aspects of the plan.

Triangle Regional Model (TRM) – The MPOs used the same principal analysis tool for developing the 2055 MTP – the Triangle Regional Model Generation 2 Version 2 (TRMG2v2), which serves as the region's travel demand model.

5.3 – Stakeholder & Public Involvement Process

The development of *Destination 2055* included extensive community engagement efforts across multiple phases to ensure that the public had meaningful opportunities to contribute to the plan.

MPO Public Involvement Policies

Meaningful, broad engagement is central to both MPOs. Both MPOs have a formal Public Participation Plan that governs the public input process for the MTP development process as well as other major MPO activities. The policies prescribe:

- The methods used by the MPOs for notifying the public of engagement opportunities;
- The types of techniques the MPOs will use to reach out to the public, such as meetings and hearings;
- The minimum public comment periods for various plans and documents;
- The use of visualization techniques for displaying information; and
- Outreach activities to key groups such as low-income, minority and limited English proficiency households, and people with disabilities.

The Public Participation Plans for each MPO are accessible using the links below:

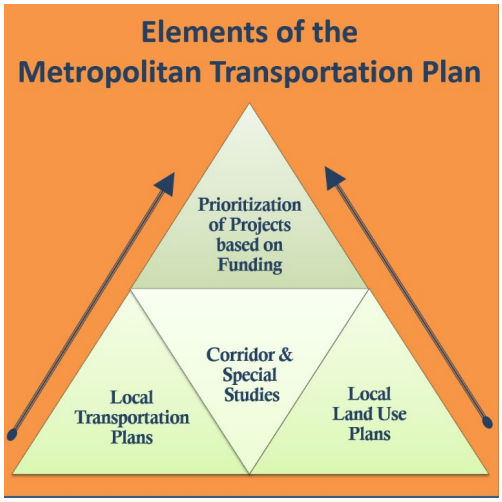
Capital Area MPO Public Participation Plan

Triangle West TPO Public Participation Plan

Public involvement for the development of *Destination 2055* exceeded the MPOs' Public

Participation Plan requirements for the development of a transportation plan. *Destination 2055* included a comprehensive process to use community and stakeholder input for providing a critical evaluation of the outcomes for each stage of developing the plan. Residents, workers, public officials and board and commission members took advantage of a variety of planning and input activities to share their perspectives and concerns.

Building from the Local to the Regional

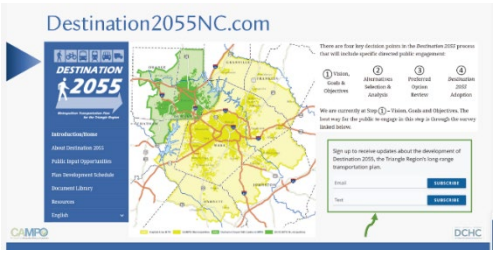


The MTP development process is unique because, as a starting point to the overall update effort, it is built up from the endorsed recommendations and adopted plans of the MPOs' partner municipalities, counties, and agencies. From local comprehensive plans to county transit plans to special area studies conducted by the MPOs, each of these previous planning processes typically has a public engagement component that helps shape its end result. Public engagement on this more localized scale is often seen as more effective, relevant, timely and appealing to members of the public when compared against a more complex topic such as the regional long-range transportation plan. Ultimately, engagement that occurs at the local or subregional level on other planning activities *does* impact the recommendations that appear at the regional level in the MTP. See Section 5.5 for a list of recent plans and studies that involved significant public engagement and influenced decisions made in the *Destination 2055* plan.

MTP Public Engagement Process

Building on the foundation of data and interpretation of goals and objectives by the MPO's staff and policy boards, public engagement adds a critical piece to the MTP development process. It builds the trust and credibility of the MTP by engaging a variety of stakeholders and community members who provide important information and input. The *Destination 2055* development process included a comprehensive public engagement strategy utilizing input from residents, workers, municipal and agency partners, key community stakeholders and interest groups to provide critical evaluation of the products at each stage in the plan's development.

The *Destination 2055* MTP engagement activities included a variety of methods from written materials to in-person engagement, digital engagement through websites, videos, virtual public information sessions, and paid advertisements in digital, social, and print media. A website for the Metropolitan Transportation Plan was created at www.destination2055nc.com.



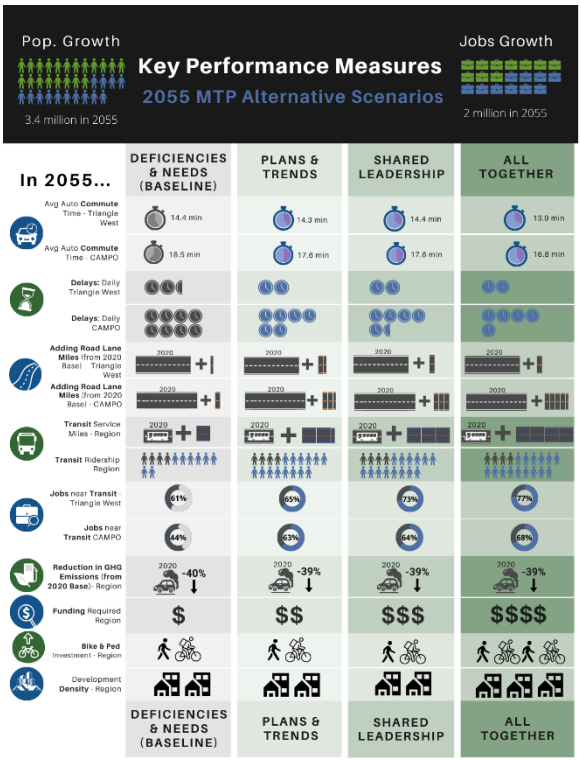
Vision, Goals and Objectives

Public engagement began in late 2023 for the development of the *Destination2055* vision, goals and objectives. Key activities included an online and print survey requesting feedback on the *2050* MTP's goals to help identify desired updates and to reflect any shifts in community priorities. Based on the survey feedback, including hundreds of qualitative comments, the goals and objectives were reviewed, updated, and approved for use by both MPO Boards in the development of Destination 2055.

More detailed information on this phase of engagement can be found in Appendix 1.

Alternatives Analysis

Working with a variety of partners and based on the first phase of engagement, as well as incorporating engagement results from other prior MPO studies, three (3) different transportation system alternative future scenarios were developed and analyzed, allowing comparison of the performance measure outcomes generated by each alternative. During Alternatives Analysis community engagement, in the spring of 2025, the goal was for the community to help identify the most important elements of the modeled improvements that should be emphasized in the Preferred Alternative, and ultimately, the final plan.

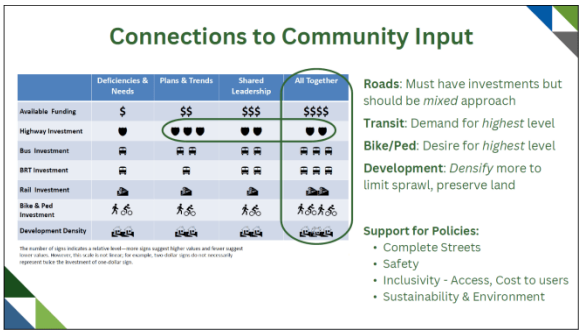


DESTINATION 2055
Metropolitan Transportation Plan for the Triangle Region

CAMPO
TRIANGLE WEST

Concluding in late May 2025, public feedback heavily asserted the need to focus on providing improved transportation choices, increasing access to transit and accessibility (especially for people with disabilities), improving existing infrastructure in areas of high growth, increasing facilities for bicycles and pedestrians, and the need for roadway improvements to address congestion and safety across the network.

More detailed information on this phase of engagement can be found in Appendix 1.



Preferred Alternative – the Draft *Destination 2055* MTP

Following review of the public feedback from the Alternatives Analysis, and additional discussions with the technical committees and policy boards of each MPO, CAMPO solicited feedback for 30 days regarding the selection of the Preferred Alternative, concluding on August 10, 2025. The feedback received affirmed the desire to select the "All Together" Scenario/Alternative.

A Draft 2055 MTP, which focused on the projects and programs that would make up future transportation investments for the region, was available for public review for Triangle West TPO from August 27 to October 11, 2025, with a public hearing on September 23rd; and for CAMPO, the public comment period was from October 8 to November 18, 2025 with a public hearing on November 19th.

More detailed information on this phase of engagement, including a list of the comments received, can be found in Appendix 1.

Adopted *Destination 2055* MTP

One of the commitments in a consultative process is to circle-back with public participants and inform them of any final decisions or outcomes, and how their input helped shape those outcomes. Upon adoption of the 2055 MTP document, according to the Public Engagement Strategy, both MPOs will send an email update, provide website updates, and post on social media announcing the adoption and thanking participants for engaging.

Table 5.3.1 shows the breadth and depth of this public engagement effort by listing the many activities that occurred during each stage of the MTP's development for both CAMPO and Triangle West TPO.

Some of the more notable details related to the public involvement process for *Destination 2055* included:

- Draft documents, detailed supporting data, interactive and static maps, along with a variety of visualizations available through the MPOs' websites and the *Destination 2055* website;
- Notices on websites, newsletters and social media for online information sessions, hearings, and other public engagement activities;
- Email lists to notify members of the community who have participated or indicated an interest in related planning activities – this included information about online surveys, public meetings, and input events, as well as public hearings;
- Information was shared using local media print and digital advertising, as well as social media platforms such as Facebook, Instagram, LinkedIn, Nextdoor, Reddit and X, which covered the entire Triangle region;

Table 5.3.1: Summary of Public Involvement Activities for 2055 MTP Initial Adoption

Activities	MTP Development Milestones				
	Goals & Objectives	Growth Guide Totals & Analysis Methods	Alternatives Analysis	Preferred Alternative (Draft Plan)	Adopted Plan
Written Materials					
Reports	✓	✓	✓	✓	✓
Maps		✓	✓	✓	✓
Infographics/ Visuals	✓		✓	✓	✓
In-person & Virtual Engagement					
Events	✓		✓	✓	
Public Hearing	✓	✓	✓	✓	✓
Public Comment Period	✓	✓	✓	✓	✓
Presentations	✓	✓	✓	✓	✓
Online Tools					
Websites	✓	✓	✓	✓	✓
Social Media	✓		✓	✓	✓
Videos	✓		✓	✓	✓
Online Surveys or Feedback Forms	✓		✓	✓	✓
Interactive Maps			✓	✓	✓
Mailing List	✓		✓	✓	✓
E-newsletters & Brochures	✓		✓	✓	✓
Media and Advertisements					
Press Releases	✓		✓		✓
Ads – Social & Print	✓		✓	✓	✓
Other Engagement Activities					
Multi-lingual Outreach Materials & Community Engagement	✓		✓	✓	✓
Respond to Comments	✓	✓	✓	✓	✓

- Various formats for members of the community to provide public comments, including email, paper feedback forms, online information sessions, attendance at community events, hearings and presentations at elected officials' meetings; and
- Together, the two MPOs deployed two unique online surveys – one during the Goals and Objectives phase and one during the Alternatives Analysis.

Public Engagement for Amendments to the Initially-adopted Plan

When the plan is amended, each MPO uses the process outlined in its Public Participation Plan to notify stakeholders of potential changes and engage them in consideration of these changes. The MPOs typically undertake the same activities as were used to initially adopt *Destination 2055*.

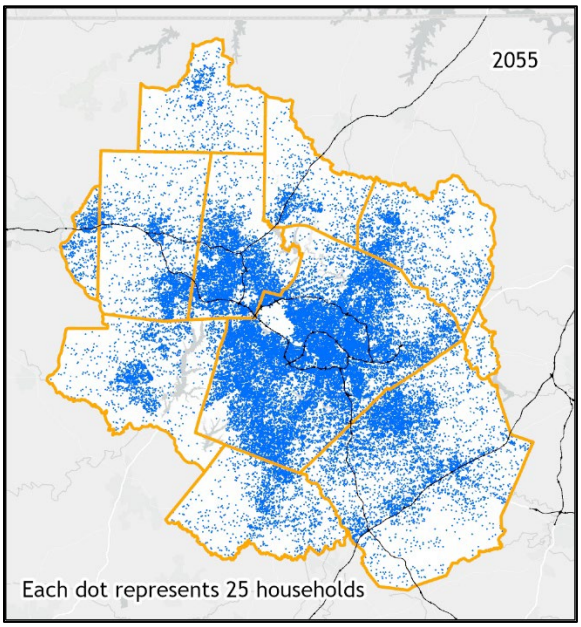
Meaningful Engagement Efforts

Both MPOs made strides to increase participation and meaningful engagement throughout the development of *Destination 2055*. These efforts were achieved via concerted efforts to partner with community organizations to provide educational opportunities relating to the MTP and gather feedback. This included using targeted advertising on social media, translating public input documents into Spanish, attending community events or hosting pop-up events located outside traditional meeting places at various times of day/days of the week and in transit-accessible locations, as well as holding multiple meetings.

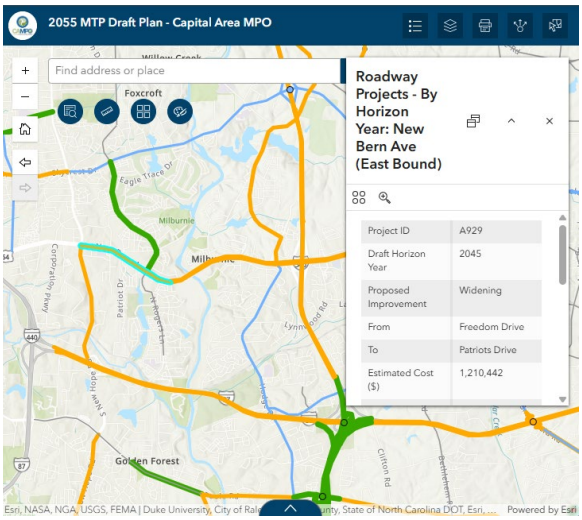
Visualization Techniques

The use of visuals in reviewing a plan not only makes good sense but is a federal transportation policy requirement. The goal is to help the public and decision makers visualize and interact with transportation plans and projects, alternatives, large data sets and land use information more effectively. The MPOs used extensive visual techniques throughout the *Destination 2055* planning process to present data to the public, elected officials and staff. A number of visualization highlights are summarized below, showing some examples of visualizations used for various purposes throughout the plan; however, many more interactive maps, tables and graphics could be found through the MPOs' websites or the *Destination 2055* website.

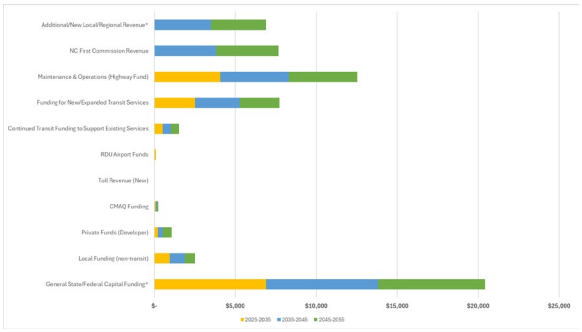
Socioeconomic Data – examples include "dot-density" maps and "heat" maps of population and job growth projected to the year 2055 (see Chapter 6 for more examples).

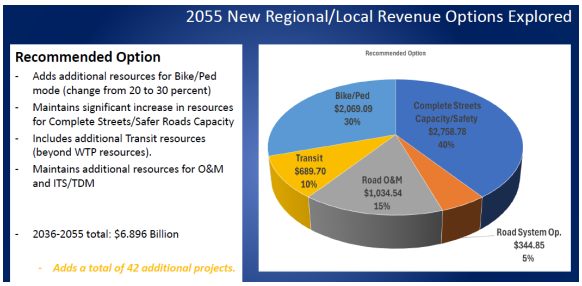


Projects – all the highway, bus transit, rail transit, and major bicycle and pedestrian projects have been depicted on maps and listed in tables that included project attribute data (see Chapter 7 for more examples).

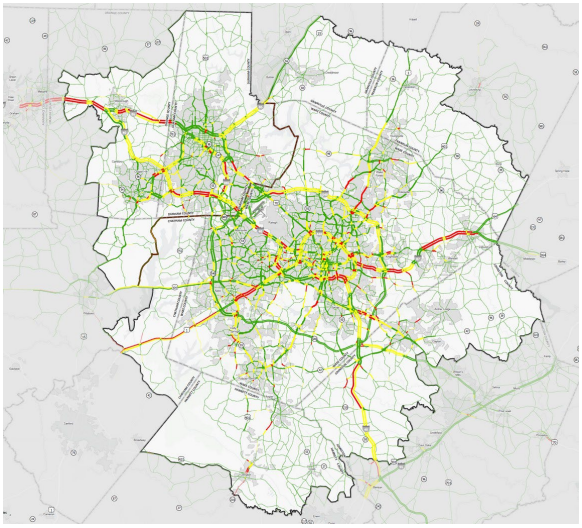


Financial Plan – examples include pie and bar charts to present the data (see Chapter 8 for more examples).





Deficiency Analysis – examples include interactive and static maps of roadway congestion levels, travel time between key points and travel time isochrones (see Chapter 6 for more examples).



Others – the presentations throughout the *Destination 2055* planning process and this final report have dozens of maps and graphics to depict everything from the status of the planning process to the relationship between the MTP and other plans (see example below from the Alternatives Analysis section of the *Destination 2055* website).

	Deficiencies & Needs	Plans & Trends	Shared Leadership	All Together
Available Funding	$	$$	$$$	$$$$
Highway Investment	●	● ● ●	● ●	● ●
Bus Investment	🚌	🚌 🚌	🚌 🚌	🚌 🚌 🚌
BRT Investment	🚌	🚌	🚌 🚌	🚌 🚌 🚌
Rail Investment	🚆	🚆	🚆	🚆 🚆
Bike & Ped Investment	🚶 🚲	🚶 🚲	🚶 🚲	🚶 🚶 🚲 🚲
Development Density	🏘	🏘	🏘	🏘 🏘

The number of signs indicates a relative level—more signs suggest higher values and fewer suggest lower values. However, this scale is not linear; for example, two-dollar signs do not necessarily represent twice the investment of one-dollar sign.

5.4 - Supportive Analysis Tools: CommunityViz and the Triangle Regional Travel Demand Model

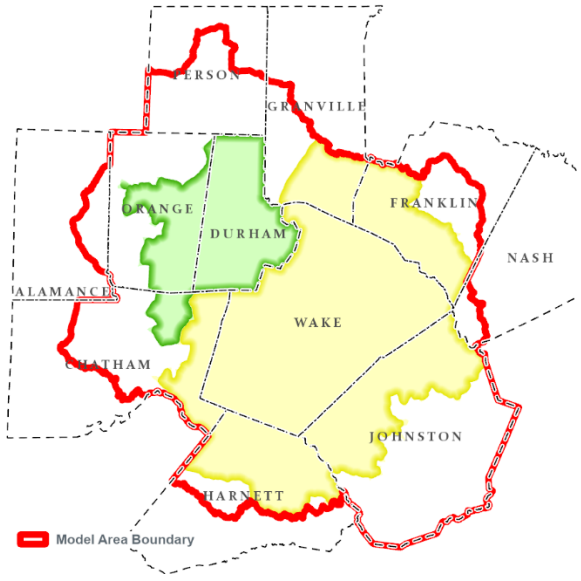
Two tools are the basis for the quantitative analysis in the MTP, the CommunityViz growth allocation model and the Triangle Regional Travel Demand Model (or Triangle Regional Model). The two are inter-related: CommunityViz growth allocations are influenced by major transportation assets like highway interchanges and bus rapid transit and rail stations, and the use of transportation facilities and services are influenced by the allocation of future growth.

A Central Pines Regional Council website provides information on how CommunityViz functions and details of the inputs and outputs. The region's CommunityViz model is maintained by the Central Pines Regional Council. See Section 6.2 later in this report for a synopsis of the CommunityViz results.

The **Triangle Regional Model (TRM)** is a tool that was developed for understanding how future growth in the region impacts transportation facilities and services. The TRM can help identify the location and scale of future transportation problems. Proposed solutions to those problems can be tested using the TRM. The TRM is developed and maintained by the TRM Service Bureau housed at the Institute for Transportation Research and Education on behalf of the four organizations that fund the modeling effort and guide its development and use: the Capital Area MPO, Triangle West TPO, North Carolina Department of Transportation (NCDOT), and GoTriangle.

The modeled area of the TRM covers about 3,900 square miles and includes all of Durham, Johnston, Orange, and Wake Counties and parts of Alamance, Chatham, Franklin, Granville, Harnett, Nash, and Person Counties. The area is divided into over 3,100 smaller geographic areas called traffic analysis zones, for which detailed population and employment data are maintained. The highway system in the model is represented by roadway links consisting of over 16,000 miles. The roadway links include detailed characteristic data such as length, number of lanes by direction, speed, and traffic-carrying capacity. Transit services operated by GoRaleigh, GoDurham, Chapel Hill Transit, GoTriangle, GoCary, Wolfline, and Duke Transit on over 120 routes are represented as well. Transit services are described by detailed characteristics such as length, stop locations, speed, frequency of service, and average rider-perceived fare.

Figure 5.4.1: TRM Modeled Area

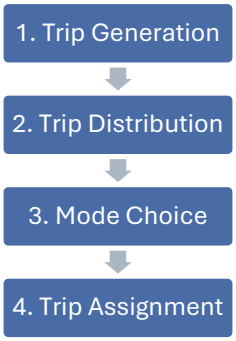


The Capital Area MPO planning area is shown in yellow, the Triangle West TPO planning area is shown in green, and the Triangle Regional Model boundary is outlined in red.

The model produces summary statistics that include: vehicle miles traveled, vehicle hours traveled, degree of traffic congestion, number of trips taken by travel mode, and transit ridership. The model also computes trip statistics for each of the approximately 3,100 traffic analysis zones, categorized by mode, trip purpose, and origin or destination zone. These statistics are shown elsewhere in the report in tables and maps. Statistics on speed and vehicle miles of travel by type of roadway are used to calculate the air quality impacts of the plan.

The TRM is an advanced four-step travel demand forecasting tool. Models such as this forecast travel using four separate sub-models (or steps):

Figure 5.4.2: Four-step Modeling Process



1. Trip Generation – based on population and employment data for each traffic analysis zone, calculate the number of trips people will take for various trip purposes, and the number of trips likely to go to destinations throughout the region.

2. Trip Distribution – based on the number of trips generated for each purpose, the cost to travel from zone to zone, and the characteristics of the zones, calculate the trips from each zone to the other zones.

3. Mode Choice – based on the trips calculated in trip distribution, characteristics of the traveler, transit service characteristics, highway congestion, and other service characteristics, calculate for each trip purpose the number of trips made by automobile, carpooling, and transit.

4. Trip Assignment – based on highway speeds and transit speed, find a route that takes the shortest time to get from one zone to another zone and sum the trips on that roadway or transit route. The model includes feedback to allow the travel times to include the effects of traffic congestion on the calculation of the shortest time on roadway links or transit services.

Model relationships were developed using ongoing household survey data that is collected every two years, 2020 census data, transit survey data, traffic counts taken throughout the region, and a survey of travelers entering or leaving the modeled area. The model inputs were updated to 2020 and validated to traffic counts and transit ridership counts (pre-pandemic). The model version used for this analysis was adopted by the MPOs, NCDOT, and GoTriangle in 2024 for use in planning activities and is referred to as TRM Generation 2 Version 2 (TRMG2v2).

5.5 – Related Plans and Studies

Although the Metropolitan Transportation Plan (MTP) serves as the main guiding document for regional transportation investments, many related transportation plans and studies feed into the development of the MTP and provide a more detailed look at project designs, priorities, and project selection issues. This section highlights past and current plans and studies that have

been used to inform the development of the 2055 MTP. Section 7.12, later in this document, identifies future plans and studies that are recommended to clarify issues and provide details for project prioritization and selection.

Examples of studies undertaken in the region to better inform the development of the 2055 MTP include:

- **Corridor Plans** that address roadway design and operations on specific roadways;
- **Small Area Plans** that identify multimodal transportation investments and related development issues in a particular part of the region;
- **Functional Plans** that focus on a particular mode or strategic issue; and
- **Transit Plans** that range from broad regional visions to short-range investment plans for specific transit providers.

Some projects in the list below will only apply to a single MPO rather than both – these have been noted as appropriate.

Table 5.5.1: Listing of Related Plans and Studies

Plan or Study	Type	Area Covered
Plans/Studies Involving both the Capital Area MPO and the Triangle West TPO		
Triangle Region Long Range Transportation Demand Management Plan – recommended investment strategy to provide regional TDM services, local TDM services in specified hubs, and an administrative structure to fund, manage, monitor and evaluate TDM services across both MPOs.	Functional Plan	Both MPOs
Congestion Management Processes (CMPs) – collected travel and safety data for vehicles, pedestrians, bicycles and transit services to identify current and short-term trends, define congestion, identify specific mitigation measures for congestion, and provide a state of the system report to meet federal requirements. Capital Area MPO CMP | Triangle West TPO CMP	Functional Plan	Both MPOs
Triangle Regional Freight Plan – evaluated current freight system needs and identified policy and project recommendations for future improvements to the freight network. The study included truck, rail, and air components and initiated the creation of the Regional Freight Stakeholder Advisory Committee.	Functional Plan	Both MPOs
RDU Vision 2040 – a master plan of short, medium, and long-term development plans needed to meet future aviation demand, while considering potential environmental and socioeconomic issues.	Functional Plan	Both MPOs
ITS Strategic Deployment Plan – included a snapshot of best practices, list of projects, regional ITS architecture, and guidelines for maintaining the plan.	Functional Plan	Both MPOs
ITS Deployment Roadmap – a strategic document meant to guide the work of the Triangle Region ITS Work Group in implementing the ITS Strategic Deployment Plan.	Functional Plan	Both MPOs
NC 98 Corridor Study – recommended a multimodal transportation plan that includes roadway improvements and bicycle and pedestrian facilities to address the variety of transportation demand and match the different land use characteristics of this corridor, which traverses both the CAMPO and TWTPO planning areas.	Corridor Study	Both MPOs
Triangle Strategic Tolling Study – analyzed toll and express lanes for the region, identified potential toll projects for inclusion in the long-range plans, and created a framework for the MPO to discuss and evaluate toll projects.	Functional Plan	Both MPOs

Plan or Study	Type	Area Covered
Bus on Shoulder Study – evaluated the need and feasibility for expanding BOSS operations to major travel corridors in the Triangle and identified BOSS project opportunities on appropriate roadways.	Functional Plan	Both MPOs
Freeway and Street-Based Transit (FAST) - proposed opportunities and networks for multimodal freeways and streets that can provide rapid, frequent, and reliable transit service across the Triangle.	Functional Plan	Both MPOs
Triangle Bikeway Feasibility & Implementation Study – created a plan for a 23-mile shared-use path that connects jobs, popular destinations, and trail networks along the I-40 and NC 54 corridor, linking Raleigh, Cary, Morrisville RTP, Durham and Chapel Hill.	Corridor Study	Both MPOs
Strategic Regional Rail Infrastructure Investment Study – The MPOs MPO are conducting a joint study to strategically coordinate current and future rail projects in the Triangle region, identify potential funding sources, and develop a critical path for expanding regional passenger and freight rail. CAMPO link | Triangle West TPO link	Functional Plan	Both MPOs
Plans/Studies in the Capital Area MPO Region		
Wake County Transit Plan – operating plan and capital program for transit services in the Wake County portion of the Capital Area MPO. This plan was developed to guide the public transportation improvements paid for by the local option sales and vehicle taxes.	Transit Plan	CAMPO
US 1 Phase I & US 1 Phase II Corridor Studies – recommended a comprehensive multimodal transportation and growth plan that will preserve the functional characteristic of this corridor, manage the overall growth within the area, enhance the quality of life of its surrounding communities, and provide for the local and regional transportation needs along US 1 between I-540 and the northern MPO boundary.	Corridor Study	CAMPO
NC 50 Corridor Study – a comprehensive corridor study that recommended implementation actions designed to improve transportation mobility and traffic safety along the corridor, preserve the residential and rural nature of the corridor while supporting regional economic development, and support activities to protect recreation, water quality, and the environment in the Falls Lake watershed.	Corridor Study	CAMPO
NC 54 and More Study – a feasibility study that investigated the costs and impacts of proposed facility upgrades to the NC 54 corridor from NC 540 to Northwest Maynard Road, within the municipalities of Morrisville and Cary, and recommended roadway widening, intersection improvements, improvements for pedestrians, bicyclists and public transit services, potential railroad grade separations, crossing consolidation, proposed rail transit, and proposed railroad expansion plans for freight, intercity passenger rail and commuter rail.	Corridor Study	CAMPO
Southwest Area Study Update – evaluated the dependence of local commuters on regional routes such as NC 55, US 401, NC 42, NC 540, and NC 210, coupled with potential demand for increased development in the southwest area of the MPO jurisdiction. Recommended initiatives addressed strategic improvements to regionally significant corridors, provision of increased transit/fixed guideway services, and sustainable development patterns.	Small Area Study	CAMPO

Plan or Study	Type	Area Covered
Northeast Area Study Update – identified a sustainable transportation strategy for the growing communities of Wake Forest, Knightdale, Raleigh, Wendell, Zebulon, Rolesville, Bunn, Franklinton and Youngsville. This subregion encompasses a unique mix of large metropolitan area, small towns, suburbs and farming communities painted across a broad expanse of rural tapestry in both eastern Wake and southern Franklin Counties. The study evaluated the dependence of local commuters on regional routes. Recommendations addressed improvements to regionally significant corridors, increased transit/fixed guideway services, and more sustainable land use patterns.	Small Area Study	CAMPO
Southeast Area Study Update – evaluated the dependence of local commuters on regional routes such as I-40, I-95, US 70, NC 42, NC 540, and NC 50, coupled with increasing development pressures in southeast Wake and northwest Johnston Counties. Recommendations addressed improvements to regionally significant corridors, increased transit/fixed guideway services, and more sustainable land use patterns.	Small Area Study	CAMPO
Raleigh-Cary Rail Crossing Study – evaluated potential improvements to the at-grade roadway/rail crossings from NE Maynard Road in Cary to Gorman Street in Raleigh, with a focus on how changes at the crossings will affect future land uses and connectivity within the community. In addition to looking at existing crossings, this study also considered possible new roadway extensions across the railroad within the corridor.	Corridor Study	CAMPO
NC 56 Corridor Study – a joint effort among the Town of Butner, City of Creedmoor, Granville County, CAMPO, Kerr-Tar RPO, and the North Carolina Department of Transportation to evaluate improvements for a 4.5-mile segment of NC 56 from 33rd Street in Butner to Darden Drive in Creedmoor. The goal of the study was to clarify the long-term vision for the corridor, while also identifying opportunities to address existing needs over a shorter timeframe.	Corridor Study	CAMPO
Fayetteville-Raleigh Passenger Rail Study – a joint effort among the Fayetteville Area MPO (FAMPO) and CAMPO to evaluate potential passenger rail connections between the two MPOs. The goal of the study was to analyze the CSX and Norfolk Southern rail corridors to identify challenges and opportunities for future passenger rail service connections.	Corridor Study	CAMPO
Triangle Bikeway East Design Project – study building on preliminary work and delivering a functional design and recommendation for phased implementation approach for the entire length of the corridor between Raleigh, Cary, Morrisville, and the Research Triangle Park.	Corridor Study	CAMPO
US 401 Corridor Study – resulted in a functional design of the future US 401 corridor in southern Wake County and northern Harnett County, and an implementation strategy with short and long term recommendations for the future of the corridor.	Corridor Study	CAMPO
RED Lanes Study – as transit services in the region continue to expand, the MPO analyzed the applicability and necessity for transit-dedicated lanes on congested roadways. These lanes would also be used for right-turn lanes, emergency vehicle access, and driveway access, hence the name “RED” lanes.	Transit Study	CAMPO

Plan or Study	Type	Area Covered
Commuting Corridors Study – strategic analysis and evaluation of major commuting corridors across the MPO region to identify how to better manage the forecasted growth in trips and identify mitigation options to deal with the anticipated growth. This was accomplished through technical analysis of the region's major commuter corridors and helped identify reasonable projects that could be advanced for funding through available funding sources.	Corridor Study	CAMPO
Western Wake Signal Integration Study – this study defines implementation steps for the successful integration of all traffic signals in the western portion of Wake County.	Functional Plan	CAMPO
Morrisville Parkway Access Management Study – strategic improvements along the Morrisville Parkway corridor to enhance mobility and safety for vehicles, bicycles, and pedestrians along this corridor.	Corridor Study	CAMPO
Blueprint for Safety Study – Blueprint for Safety identified strategies and actions to improve roadway transportation safety in the CAMPO region. The Plan identified areas of high risk for serious injury and fatal crashes and recommends safety enhancements and countermeasures that can be implemented.	Functional Plan	CAMPO
US 64 Corridor Study – master plan to preserve and enhance mobility and safety along U.S. 64, while balancing community access and interests.	Corridor Study	CAMPO
Western Boulevard Crossing Study – study focused on safety and mobility recommendations from Varsity Drive to Pullen Road with an emphasis on a definitive solution for a grade crossing for cyclists and pedestrians	Corridor Study	CAMPO
US 1/Capital Boulevard Tolling Study – investigation of alternative and innovative methods to accelerate this project.	Corridor Study	CAMPO
North Harnett Transit Feasibility Study – analyzed and recommended transit options for the portion of Harnett County within the CAMPO boundary	Transit Plan	CAMPO
Western and Southern Rapid Bus Extensions Study – CAMPO completed major investment study (MIS) in 2023 that identified and evaluated BRT routing options and select preferred solutions for BRT extensions to both of the planned Wake Bus Rapid Transit (BRT): Western and Southern Corridors to continue service to RTP and Clayton.	Transit Plan	CAMPO
Mobility Management Implementation Study – study aims to guide the creation of a regional mobility management structure developing a mobility management program.	Transit Plan	CAMPO
Plans/Studies in the Triangle West TPO Region		
DCHC MPO Comprehensive Transportation Plan (CTP) – maps and project lists of highway, public transportation, bicycle, pedestrian and multiuse path facilities and improvements need in the long-range.	Long-range Plan	Triangle West
Durham County Transit Plan – identified transit projects, services, facilities and vehicles funded from Tax District revenues.	Transit Plan	Triangle West
Orange County Transit Plan – identified transit projects, services, facilities and vehicles funded from Tax District revenues.	Transit Plan	Triangle West
North-South Bus Rapid Transit - adopted locally preferred alternative for Chapel Hill transit project that was accepted into the FTA Small Starts program.	Corridor Study	Triangle West
Durham Bus Rapid Transit Vision Plan – In progress at the time of this MTP report, Durham County is developing a plan to make corridor improvements and service investments to create a network of high-capacity transit services across Durham County.	Transit Plan	Triangle West

Plan or Study	Type	Area Covered
Chapel Hill High-Capacity Transit Corridor Feasibility Study – In progress at the tie of this MTP report, this study will identify potential high-capacity transit options within the Chapel Hill-Carrboro are to connect key destinations and transit services, and will include an implementation plan.	Corridor Study	Triangle West
US 15-501 Corridor Study – traffic analysis that identified policies and facilities to meet future travel demand and safety objectives, from Chapel Hill to Pittsboro. No web link is available.	Corridor Study	Triangle West
NC 54/I-40 Corridor Study – study and recommendations to guide land use and transportation decisions and investments in the NC 54 corridor from US 15-501 in Chapel Hill to I-40 in Durham.	Corridor Study	Triangle West
Southwest Durham/Southeast Chapel Hill Collector Street Plan – recommended location of future collector streets and street designs to ensure future connectivity and multimodal street functioning.	Small Area Study	Triangle West
NC 54 West Corridor Study – provided a long-term transportation, economic, environmental and preservation vision of NC 54 from Carrboro to I-40/I-85 in Graham.	Corridor Study	Triangle West
US 70 East Corridor Study – studied and proposed boulevard alternatives to meet the multimodal travel demands of US 70 from Durham to Raleigh. A subsequent phase of this study will begin in 2026.	Corridor Study	Triangle West
US 70 West Corridor Study – recommended multimodal transportation improvements from NC 751 in Orange County to NC119 in Mebane.	Corridor Study	Triangle West
Vision Zero Safety Action Plan – used safety data and stakeholder input to identify programs, projects and policies to improve the safety of all transportation modes.	Functional Plan	Triangle West
Wildlife Crossings Study – provided recommendations to implement wildlife crossing countermeasures to reduce vehicle/wildlife conflicts and thus eliminate fatalities and serious injuries.	Functional Plan	Triangle West
Reimagine Durham Freeway Study – This study aims to develop a community-led vision for the Durham Freeway corridor (also known as NC 147) through central Durham.	Corridor Study	Triangle West
Durham-to-Roxboro Rail Trail Plan – Completed October 2025, this plan used a robust public engagement process to assess the transformation of an existing 18-mile inactive rail corridor in City of Durham and Durham County into a multiuse trail.	Corridor Study	Triangle West
Central Durham Bus Rapid Transit Study – The Central Durham Bus Rapid Transit (BRT) project is designed to create a fast, reliable, and accessible transit link between Duke University, downtown Durham, and the Wellons Village area, enhancing mobility and connectivity across key community destinations.	Transit Plan	Triangle West
Local Bicycle Plans in Triangle West TPO area: • Carrboro Comprehensive Bicycle Transportation Plan (2021) • Chapel Hill Mobility and Connectivity Plan (2020) • Chatham County Bicycle Plan (2011) • Durham Bike+Walk Implementation Plan (2017) • Durham City and County Comprehensive Bicycle Plan (2006) • Hillsborough Comprehensive Sustainability Plan (2023) • Orange County Comprehensive Plan Transportation Element (2008) • Orange County Bicycle and Pedestrian Plan (in progress) • Research Triangle Park Bike/Ped Plan (2017)	Functional Plans	Triangle West

Plan or Study	Type	Area Covered
Local Pedestrian Plans in Triangle West TPO area: • Chapel Hill Mobility and Connectivity Plan (2020) • DurhamWalks! Pedestrian Plan (2006) • Durham Bike+Walk Implementation Plan (2017) • Hillsborough Comprehensive Sustainability Plan (2023) • Orange County Bicycle and Pedestrian Plan (in progress)	Functional Plans	Triangle West
Local and Regional Multiuse Path Plans in Triangle West TPO area: • Chapel Hill Mobility and Connectivity Plan (2020) • Durham Trails and Greenways Master Plan (2011) • Research Triangle Park Trails Study (2020)	Functional Plans	Triangle West
Older plans that informed previous MTPs and continue to be referenced in 2055 MTP development by the Triangle West TPO, including: • US 15-501 Major Investment Study, Phase II Report (2001) • I-40 Express Lanes Feasibility Study (2016) • NC 147 Feasibility Study (2017) • NC 54 Widening Study (2012) • Northern Durham Parkway Feasibility Study (2014)	Corridor Plans	Triangle West

Key Takeaways from this Chapter

Metropolitan Planning Organizations (MPOs), also known as Transportation Planning Organizations (TPOs), are responsible for creating and adopting Metropolitan Transportation Plans (MTPs). MPOs are made up of all the local governments in the area, the NC Department of Transportation (NCDOT), plus other organizations with transportation responsibilities. This document includes the MTPs for the two MPOs in the Triangle Region – the Capital Area MPO (CAMPO) and the Triangle West TPO.

MPOs have three main organizational components: a policy board made up of local elected officials and NCDOT board members; a technical committee made up of technical staff from the local, state and regional organizations, which provides technical recommendations to the policy board; and a Lead Planning Agency (LPA) that provides the staff to carry out the MPO's responsibilities.

Each MPO has an explicit, written Public Participation Policy that is used to guide public engagement in the MTP process and prescribes opportunities for public review and comment on the plan. Using maps, graphs, charts and other visual tools is an important part of conveying transportation-related information to a variety of stakeholders.

Two related tools are used to understand the region's transportation challenges and the impacts of investments to address these challenges: the CommunityViz growth allocation model that forecasts the locations of future growth, and the Triangle Regional Travel Demand Model (TRM) that uses these growth forecasts and transportation network data to estimate impacts of future transportation investments. An updated version of the model was used in the development of *Destination 2055*.

Many related transportation plans and studies are undertaken both to feed into the development of MTPs and to provide a more detailed look at issues identified in or related to MTPs. These plans and studies are available on each MPO's website.

Chapter 6: Analyzing Our Choices

This chapter explains the methods and tools used to better understand the choices facing the Triangle region, develop population and employment growth forecasts that reflect market trends and community plans, create and test alternative transportation scenarios, and compare these alternatives to each other and to performance measures that reflect the MPOs' adopted plan goals and objectives. Special emphasis was placed on identifying ways that transportation investments would better and more equitably serve the needs of identified Title VI Communities.

6.1 – Land Use Plans and Policies

Each community in the Triangle develops a comprehensive plan or land use plan to outline its vision for the future of that community and set policies for how to guide future development in support of that community vision. An important starting point for transportation plans is to understand these local comprehensive plans and reflect them in the future growth forecasts that are used to analyze future transportation investment choices.

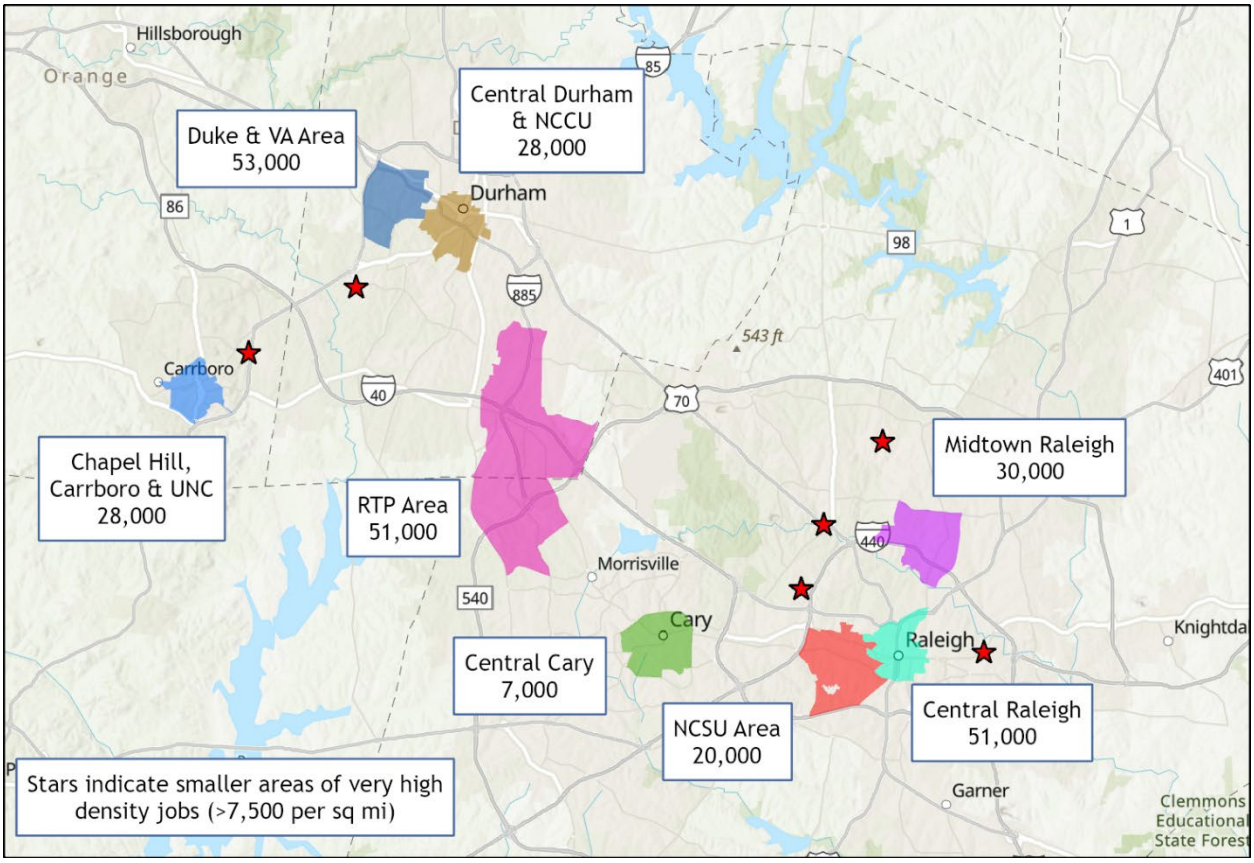
Local planners from communities across the region, along with experts in fields such as real estate development and utility provision, contributed insights to translate community plans and market trends into the parameters used by the region's transportation model to generate travel forecasts: population and jobs by industry (see Chapter 5 for a more detailed explanation of the transportation model). To ensure that the forecasts were consistent, transparent, and based on the best available evidence, the region used sophisticated growth allocation software (called CommunityViz) to assist in the forecasting effort.

The land use plans and a quantitative analysis of base year (2020) job locations revealed that a set of regional-scale centers, depicted in Figure 6.1.1, contain large concentrations of employment and are planned for intense mixes of homes, workplaces, shops, medical centers, higher education institutions, visitor destinations, and entertainment venues. These areas include: Central Raleigh (including NC State University), Central Durham (including Duke University, NC Central University, and the Duke and Veterans Administration medical complexes), Central Chapel Hill/Carrboro (including UNC Chapel Hill and UNC Hospitals), the Research Triangle Park area, Midtown Raleigh, and Central Cary.

Together, these locations account for about 270,000 jobs, of which 100,000 are low/moderate-earning jobs – this represents 29% of all jobs in the region and 22% of low/moderate-earning jobs in the region, all located on less than 2% of the region's land area. Linking these centers to each other and connecting them to communities throughout the region with a variety of travel choices is critical for ensuring the region's residents have access to both job opportunities and other types of services, businesses, and institutions.

In some of these areas, such as activity centers, existing local plans and ordinances promote increased future development. Additionally, the Research Triangle Park has a master plan that is resulting in additional compact, mixed-use development in locations such as the new "HUB RTP."

Figure 6.1.1: Key Regional Job Hubs



Based on 2020 base year employment data.

The review of community plans also resulted in an identification of places that are environmentally sensitive (such as water supply watersheds) and locations where current established neighborhoods warrant protection from new or increased development. In order to establish the framework for forecasting the region's growth it is critical to understand the unique roles that different areas within each community will play in the region as it grows, and how these impact our transportation investment choices.

6.2 - Socioeconomic Forecasts

One of the initial critical steps in developing a Metropolitan Transportation Plan is to forecast the amount, type, and location of population and jobs during the timeframe of the plan. Based on community plans and data from local planning departments, the NC Office of State Budget and Management (NC OSBM), the US Census Bureau, and independent forecasters, estimates of "base year" (2020) and "plan year" (2055) population and jobs were developed for each of the 3,100 small zones known as Traffic Analysis Zones (TAZs) that make up the area covered by the region's transportation model.

Both to track and document the socioeconomic forecasts, and to permit analysis of different development scenarios, a robust land use mapping and analysis tool was used to account for the approximately 850,000 individual parcels of land in the region. Using software called CommunityViz, each parcel was assigned

one of 40 "place types" by local planners, reflecting the type of development anticipated on those parcels by community plans – place types include categories such as larger-lot residential neighborhood, community commercial center, university campus, and mixed-use center. In addition, each parcel was also assigned a "development status" to indicate whether the parcel was vacant/developable, already fully-developed, or partially-developed/ redevelopable.

Depending on the place type, the development status, and the jurisdiction where the parcel is located, average residential and employment densities were applied to determine the potential capacity/supply of potential locations for future residential or commercial development. Any constraints that would prevent or limit development, such as water bodies, floodplains, stream buffers, and conservation easements were also assigned to applicable parcels. This combination of place type, development status, and development constraints determined the potential "supply" of land for future population and employment to be located on in the CommunityViz model.

Special attention was given to anchor institutions, such as the major universities. Future growth in these areas was asserted based on information from the institutions.

Panels of experts were convened to help determine the principal influences on where future development would occur, and to develop quantitative measures called "suitability factors" to apply to locations based on those influences. Examples of factors that influence development include availability of sewer service, proximity to highway interchanges or transit stations, and distances to major economic centers such as the region's universities.

Finally, population and job growth totals, known as control totals or guide totals, were developed from state and national demographic sources to establish the "demand side" of the CommunityViz model. These growth totals are available from the Central Pines Regional Council (CPRC). CommunityViz allocated single-family housing units, multi-family housing units, and jobs (by job category) based on the available supply of land for that use and the attractiveness of a location based on the suitability factors.

Table 6.2.1 summarizes the major elements of the socioeconomic forecasts for different portions of the forecast area covered by the region's transportation model – this includes areas within the Capital Area MPO and Triangle West TPO boundaries as well as some areas outside of the MPO boundaries (see Chapter 2 for a map of the modeled area). More detailed information on a range of socioeconomic data for each TAZ and how these were developed is available from the two MPOs or from the Central Pines Regional Council.

Table 6.2.1: Estimated 2020 and Forecast 2055 Jobs, Population & Households[1]

	2020 Population	2020 Households	2020 Jobs	2055 Population	2055 Households	2055 Jobs
Capital Area Metropolitan Planning Organization						
Chatham County[2]	9,453	4,216	2,358	11,531	5,115	5,593
Franklin County[3]	46,276	17,550	8,605	106,308	40,843	17,275
Granville County[3]	22,718	8,698	4,768	36,658	14,158	6,156
Harnett County[3]	45,633	17,831	12,669	100,653	37,929	19,044
Johnston County[4]	140,989	50,763	28,255	257,024	94,756	60,016
Wake County	1,108,687	437,215	615,295	1,943,830	783,457	1,340,082
Capital Area MPO Total	*1,373,756*	*536,273*	*671,950*	*2,456,004*	*976,258*	*1,448,166*
Triangle West Transportation Planning Organization						
Chatham County[2]	23,678	10,121	4,298	25,027	10,760	6,723
Durham County	310,609	134,777	235,002	461,614	204,446	446,874
Orange County[5]	115,504	48,191	71,191	161,327	68,946	118,237
Triangle West TPO Total	*449,791*	*193,089*	*310,491*	*647,968*	*284,152*	*571,834*
Areas Within Travel Model but Outside MPO Boundaries						
Alamance County[6]	30,563	12,393	12,870	38,748	16,170	13,699
Chatham County[2]	18,485	7,659	5,616	62,904	26,492	13,737
Franklin County[3]	12,425	5,230	6,477	16,439	6,753	6,867
Granville County[3]	10,975	4,283	8,435	19,666	7,705	10,398
Harnett County[3]	5,372	2,056	1,143	6,334	2,400	1,143
Johnston County[4]	72,805	28,133	31,247	159,554	59,325	45,974
Nash County[6]	4,147	1,620	842	4,814	1,882	961
Orange County[5]	21,844	8,903	3,530	25,327	10,246	5,312
Person County[6]	31,368	13,108	10,361	36,729	15,358	11,765
Outside of MPO Total	*207,984*	*83,385*	*80,521*	*370,515*	*146,331*	*109,856*
Total Modeled Area						
Modeled Area Total	***2,031,531***	***812,747***	***1,062,962***	***3,474,487***	***1,406,741***	***2,129,856***

[1]These totals represent the values within the regional travel model's traffic analysis zones, and may differ from values derived using other sources and methods; note that population includes people who are not in households, such as university dormitory residents.

[2]Chatham County is partially in the Capital Area MPO, partially in the Triangle West TPO, and a portion (but not all) of Chatham County outside CAMPO and TWTPO is also included in the modeled area.

[3]Franklin County, Granville County, and Harnett County are partially in the Capital Area MPO, and a portion (but not all) of these counties outside of CAMPO is also included in the modeled area.

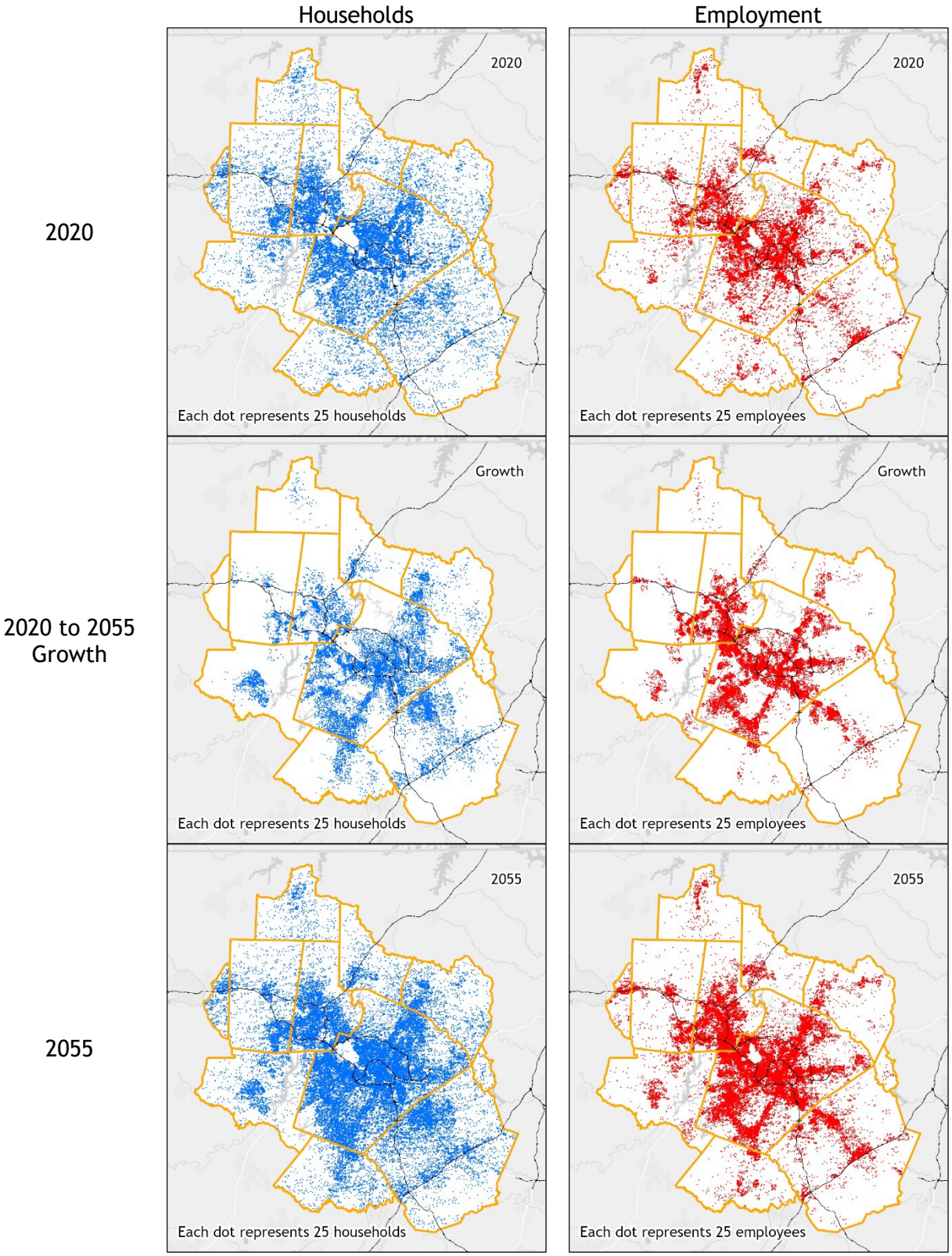
[4]Johnston County is partially in the Capital Area MPO, and the remainder of Johnston County outside of CAMPO is also included in the modeled area.

[5]Orange County is partially in the Triangle West TPO, and the remainder of Orange County outside of TWTPO is also included in the modeled area.

[6]Alamance County, Nash County, and Person County are entirely outside of CAMPO and TWTPO, but portions (not all) of these counties are also included in the modeled area.

The maps on the next page show the distribution of households and jobs within the forecast area for the 2020 "base year" and 2055 "plan horizon year," as well as the locations of anticipated growth between 2020 and 2055. These are dot-density maps and do not show the specific location of growth, but rather the density of dots in a particular location indicates the general intensity of households and employment in that general area. Larger versions of these maps are available from the Capital Area MPO and Triangle West TPO websites.

Figure 6.2.2: Household and Employment Locations in 2020 and 2055



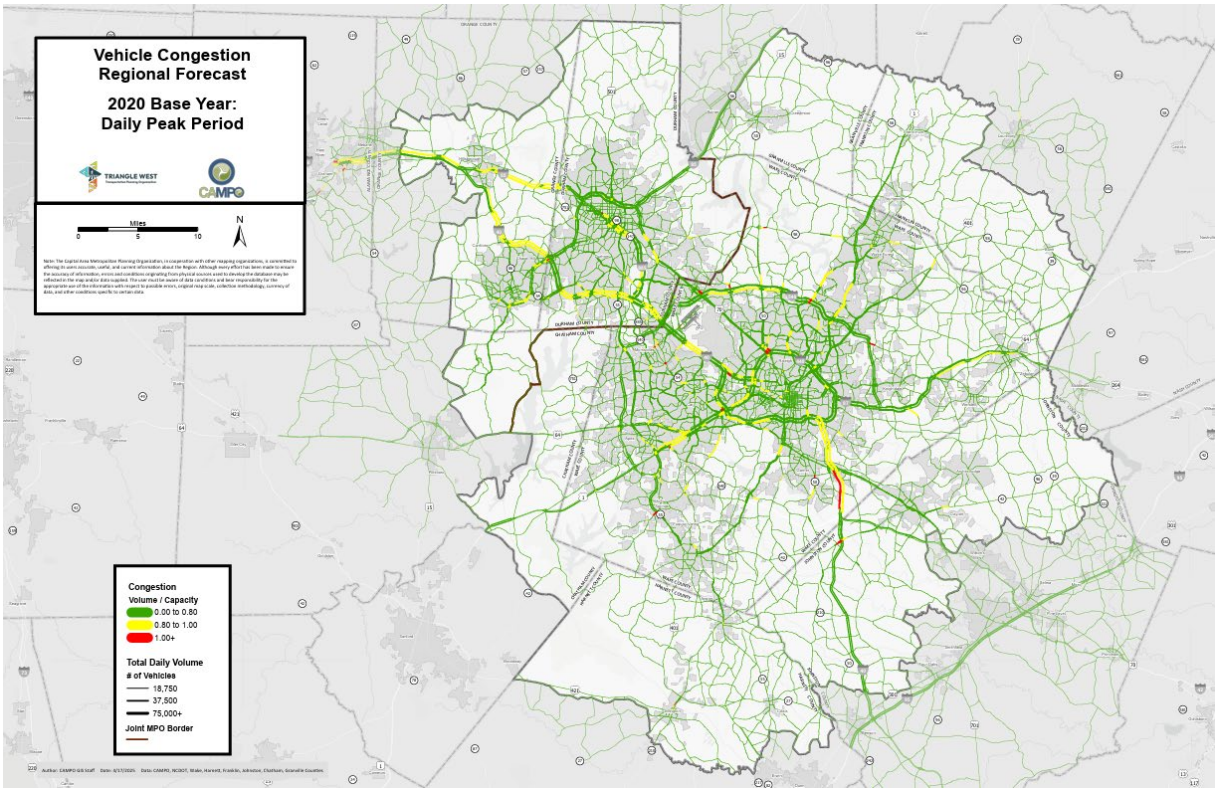
6.3 - Trends, Deficiencies, and Needs

With the large increases in people and jobs expected in the region by the year 2055, the amount of travel (often measured in Vehicle Miles Traveled, or VMT) in the Triangle is expected to similarly grow by approximately 75%. Future stress on the regional transportation network is exemplified by the levels of congestion predicted in 2055.

The congestion maps below show the average volumes during the afternoon peak hour as predicted by the Triangle Regional Model. The roadway networks in the maps below are simplified representations taken from the region's travel demand model. Thicker lines depict roadways with higher traffic volumes and thinner lines are segments carrying lower volumes. The colors correspond to volume/capacity ratios (the number of vehicles divided by the theoretical capacity of the road) – greater volume/capacity ratios correspond with more congestion. A volume/capacity ratio below 0.8 (shown in green) is indicative of a relatively free flowing roadway with little or no congestion. Once the volume/capacity ratio rises above 0.8 toward 1.0 (shown in yellow), motorists will experience more periods of congestion. Volume/capacity ratios higher than 1.0 (shown in red) represent roadways which are consistently congested in the afternoon peak period.

The 2020 "base year" congestion map shown in Figure 6.3.1 is indicative of general present-day baseline conditions as they existed in 2020, and serves as a point of comparison.

Figure 6.3.1: Roadway Congestion in 2020

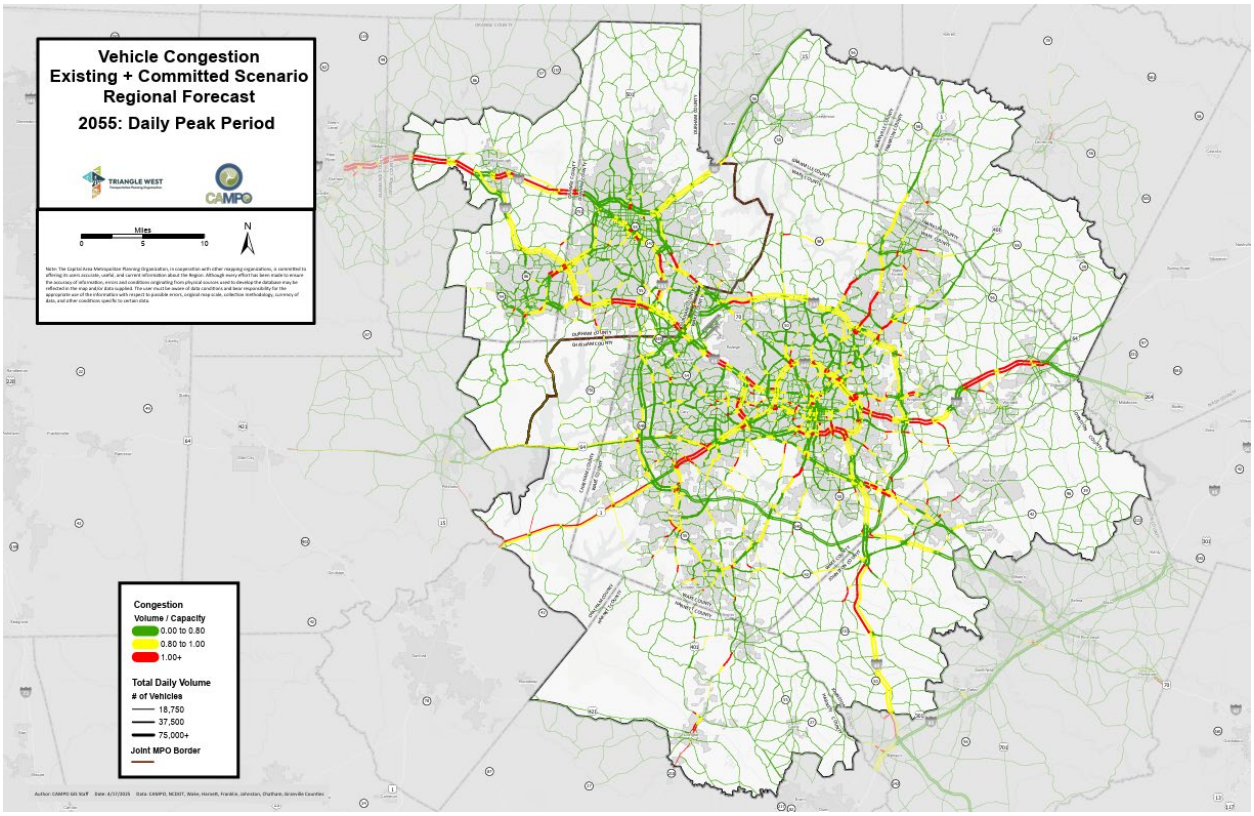


The 2055 "deficiencies" map (Figure 6.3.2), also known as "Existing plus Committed" or E+C, forecasts travel conditions in the year 2055 if no future changes are made to the transportation network beyond what already exists or is currently in the process of being built, but growth in population and employment still occurs as anticipated. This "deficiencies" network is also sometimes called the "no-build" condition since it typically is the result of past decisions, not ones that still need to be made.

This worst-case scenario is not intended to represent a likely outcome. Rather, comparing the 2055 E+C to the 2055 adopted MTP network illustrates the inability of our currently-committed transportation improvements to meet the growth in anticipated travel demand that is forecasted. In reality, as congestion and travel delay begin to reach unacceptable levels other contributing factors would almost certainly shift in response and commute patterns would change as people began to make different travel decisions.

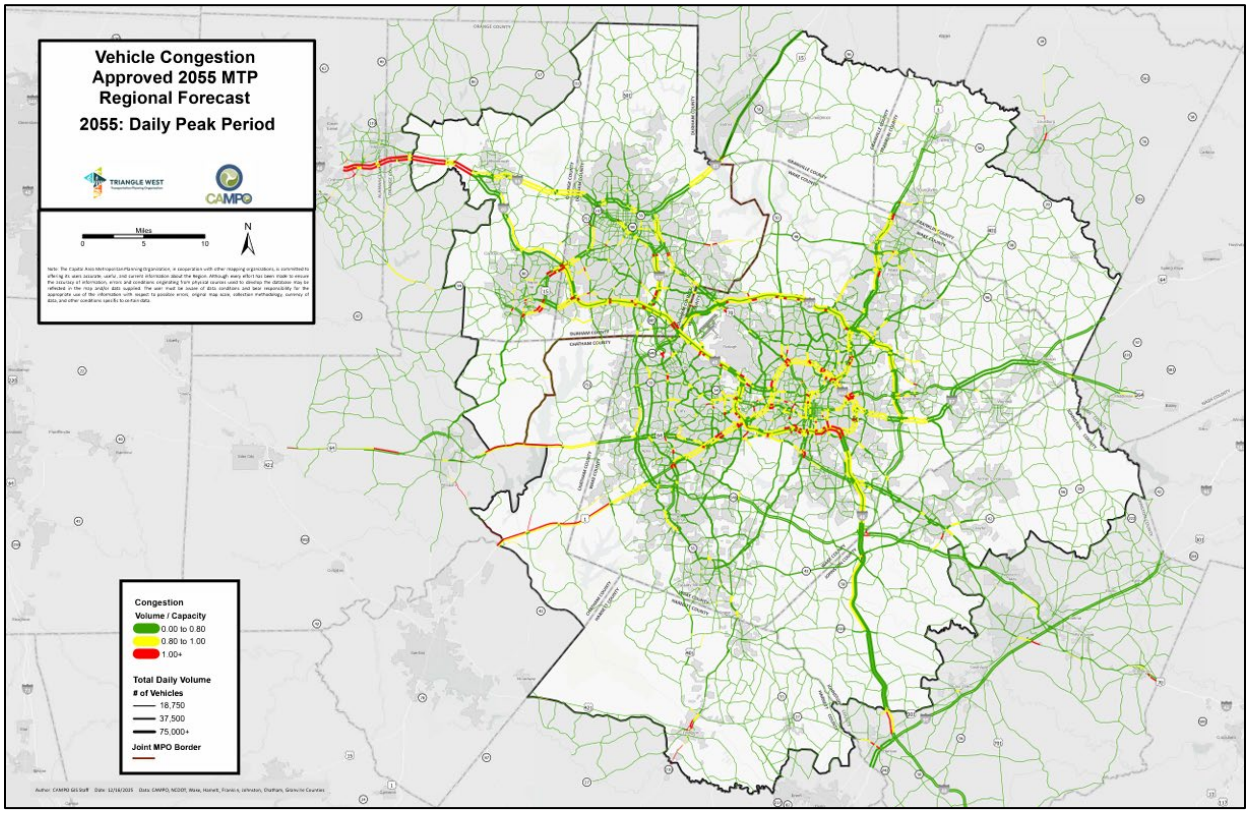
The map shows that without significant new investments, chronic congestion will occur on major arterials and freeways across the Triangle Region.

Figure 6.3.2: Roadway Congestion in 2055 with Only Existing & Committed Projects in Place



The third congestion map, in Figure 6.3.3, shows levels of congestion that are forecast based on the adopted 2055 Metropolitan Transportation Plan, including all the planned transportation facilities and services identified in the plan. This represents a point of comparison against the results from the 2020 baseline and the 2055 deficiencies/E+C maps.

Figure 6.3.3: Roadway Congestion in 2055 with Planned MTP Projects in Place



These maps provide a picture of the challenge we face in developing realistic transportation investments that meet the diverse needs of our communities. Larger versions of these maps are available on the MPOs' websites, in addition to other maps and tables that present more detailed information on the MTP deficiency analysis.

6.4 - Pre-MTP "Learning Scenario" Analysis

Due to time and resource constraints and other practical limitations, there is often not an opportunity during the official MTP development process to test and answer many of the "what if…" questions that may be of interest to answer. In an attempt to address this limitation, the Capital Area MPO and Triangle West TPO engaged in a pre-MTP "learning scenario" exercise in 2024. This exercise was created to allow the Triangle Region to explore some previously-unanswered questions and use the knowledge learned through the exercise to inform the alternatives that were ultimately analyzed as part of the official 2055 MTP process. The analyzed scenarios were intentionally created to be "extreme" and not necessarily realistic in order to

better understand the level of impact the various decision making levers might have.

Six scenarios were analyzed as part of this "learning scenario" exercise:

A **Baseline Scenario** that represented the adopted previous (2050) MTP and served as a baseline for comparison with other scenarios.

A **Transit-focused Scenario** that aimed to maximize transit usage by focusing future growth in transit-served areas and doubling the amount of transit service.

An **Equity-focused Scenario** that aimed to improve transportation outcomes for low-income and zero-car households, particularly focusing on job access.

A **VMT Growth Reduction Scenario** that identified different factors that could reduce the growth of vehicle miles traveled (VMT) in the region.

A **Flexible Funding Scenario** that examined different assumptions regarding funding constraints and restrictions, and available funding amounts.

A **Highway-focused Scenario** that tested the results of less-dense future development focused around highways and a doubling of the region's freeway lane miles.

Some key attributes of these scenarios were then incorporated into the MTP Alternatives Analysis discussed in the next section of this report. These attributes included:

- Increasing household density and employment density in areas served by transit;
- Increasing transit frequencies where possible, and adding additional high-frequency corridors;
- Focusing on affordable housing growth in transit-served areas;
- Assuming a potential increase in the level of working-from-home compared to the historical past;
- Increasing the share of funding going toward maintenance and operations;
- Having a flexible modal investment strategy for additional revenue assumptions; and
- Considering additional local or regional funding sources.

Additional information about the "learning scenario" exercise, including a summary of results from each scenario, can be found in Appendix 14.

6.5 - MTP Alternatives Analysis

This section describes what was done to create and test alternative land use and transportation scenarios as part of the MTP development process and compare these alternatives to one another in order to select a final preferred future scenario that is both feasible and reflects the MPOs' goals. Special emphasis was placed on defining and identifying places with the greatest amounts of equity-centered households, and looking at how transportation investments and related strategies serve their travel needs and link them to job hubs.

The scenarios used in this Alternatives Analysis are based on two primary foundations: a ***development foundation*** that describes a regional pattern of land use and development and a ***mobility investment foundation*** that defines the

road, transit, cycling and walking networks and transportation services in the region. Different versions of these two foundations can be created based on a variety of factors, and then these foundations can be combined in various ways to create alternative scenarios for testing. For the purposes of *Destination 2055*, we have defined three potential development foundations and five potential mobility investment foundations, and have created three *new* scenarios for testing in addition to the "Deficiency & Needs" scenario that was described in Section 6.3. These three alternative scenarios are called:

- **Plans & Trends Scenario**
- **Shared Leadership Scenario**
- **All Together Scenario**

Figure 6.5.1 shows the different development foundations and mobility investment foundations that were used to create the alternatives. More information about the creation of the alternatives and the process of defining these foundations can be found in Appendix 15. The "build out" development foundation and the "unconstrained" mobility investment foundation were screened out from use in the MTP alternatives analysis because they were not realistic assumptions to make within the timeframe of the plan.

Since the transportation facilities and services the region chooses to invest in are not just functions of the region's values, but also of the resources that are available to commit, each scenario was given a name that reflected the level of collaborative effort and resources that would be needed to achieve it. The scenarios are as follows.

Figure 6.5.1: *Destination 2055* Scenario Framework

		Mobility Investment Foundation				
		E Existing & Committed	T Trend	M Mobility Corridors	C Complete Communities	U Unconstrained
Development Foundation	P Community Plans	Deficiency & Needs Scenario	Plans & Trends Scenario	Shared Leadership Scenario		
	O Opportunity Places				All Together Scenario	
	B Build Out					

Matrix showing the development foundation and mobility investment foundation combinations that were utilized in the Destination 2055 alternatives analysis. Moving from left to right, and from top to bottom, each scenario builds on the elements of the preceding scenarios.

Deficiency & Needs Scenario

The Deficiency & Needs Scenario can be thought of as a worst-case scenario – it represents what would happen if the region absorbed all the expected population and employment growth that is reflected in our plans, but only has a transportation system composed of existing current facilities and services, and those that are currently in development/under construction.

Plans & Trends Scenario

The Plans & Trends Scenario can be thought of as the region's "lightest lift" to achieve – it would not be *easy*, but would not require any changes to existing plans and would rely on tried-and-true revenue streams and current project prioritization processes.

Shared Leadership Scenario

The Shared Leadership Scenario can be thought of as a stronger partnership between local governments and state and federal governments, emphasizing multi-modal investments in key corridors. State and federal funding sources would provide additional funding, as well as additional flexibility in the use of funding to match what the local communities say they want. The additional funding available in this scenario could come from a variety of state and federal sources, but was estimated based on the work of the NC First Commission's identification of potential state funding sources and assumptions of continued future growth of federal funding in line with past trends in the growth of these funds.

All Together Scenario

Our final scenario, All Together, is the most ambitious, but would require local officials to make some fundamentally different (and difficult) decisions and perhaps to collaborate in new ways. This scenario would involve both changes to current land use plans and the infusion of additional local or regional revenues into transportation projects and services. This scenario uses the concept of "opportunity places" to identify locations where strategic choices could be made to change land use plans by increasing the density and use mixture of future development in areas such as transit corridors, universities, and potential affordable housing sites. It builds upon the

Opportunity Places

The "Opportunity Places" development foundation used in the All Together Scenario is based on making four specific land use changes to community plans, in order to better align land use and mobility investment goals:

- The four major universities in the region were allocated 20% higher job growth than otherwise anticipated.
- "Mobility Hubs" were identified around the region, along major corridors at designated activity centers – increased transit-supportive land use densities were assumed on undeveloped or redevelopable parcels in these areas.
- Increased transit-supportive land use densities were assumed on undeveloped or redevelopable parcels in areas along high-frequency bus lines and areas near proposed BRT or rail stations.
- 10,000 multi-family housing units were assigned in locations where large publicly-owned parcels could accommodate them.

increased funding assumptions of the Shared Leadership Scenario by adding increased locally-derived revenues that could aid in achieving regional goals related to further investment in transit, active transportation, and complete streets.

The MPO staffs, in conjunction with staff from the Triangle Regional Model Service Bureau, worked together to create and run the model scenarios for each of these alternatives in the spring and summer of 2025. Figure 6.5.3 shows some of the performance measure results that came out of this analysis and were used to compare the scenarios in the alternatives analysis public engagement process.

To help understand, analyze and engage with a range of participants on the scenarios, *Destination 2055* defined three types of places for special attention:

Key Job Hubs

These are the places with the most significant concentrations of jobs, including locations with large amounts of low- and moderate-earning jobs. The map in Section 6.1 shows the largest clusters of job hubs in the region.

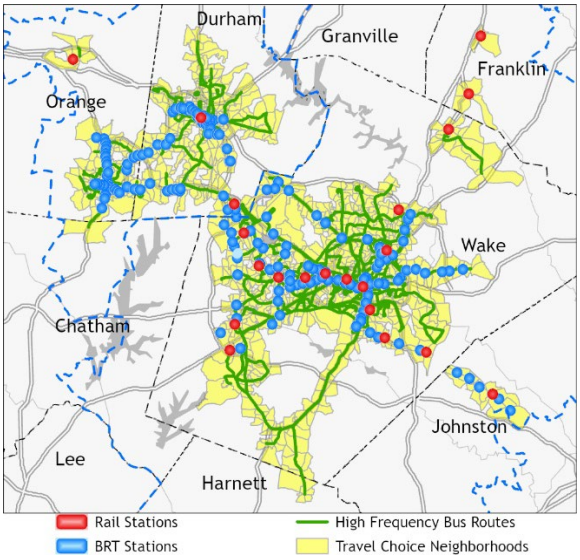
Title VI Communities

To aid in the comparison of alternatives, the MPOs identified a subset of census block groups with higher concentrations of various population groups covered by the MPOs' Title VI non-discrimination plans/policies. These areas are determined based on factors including race & ethnicity, income, zero-car households, age, and Limited English Proficiency. These groups are highly-correlated with populations that are most likely to rely on and use transit services. More information can be found in Chapter 9.

Travel Choice Neighborhoods

These are the places in a scenario where high-quality transit service is provided, making these locations where there are more choices available to travelers regarding the mode of transportation. Figure 6.5.2 shows these travel choice neighborhoods, which are defined as traffic analysis zones (TAZs) that are served by high-frequency bus routes, bus rapid transit stations, and/or regional rail stations.

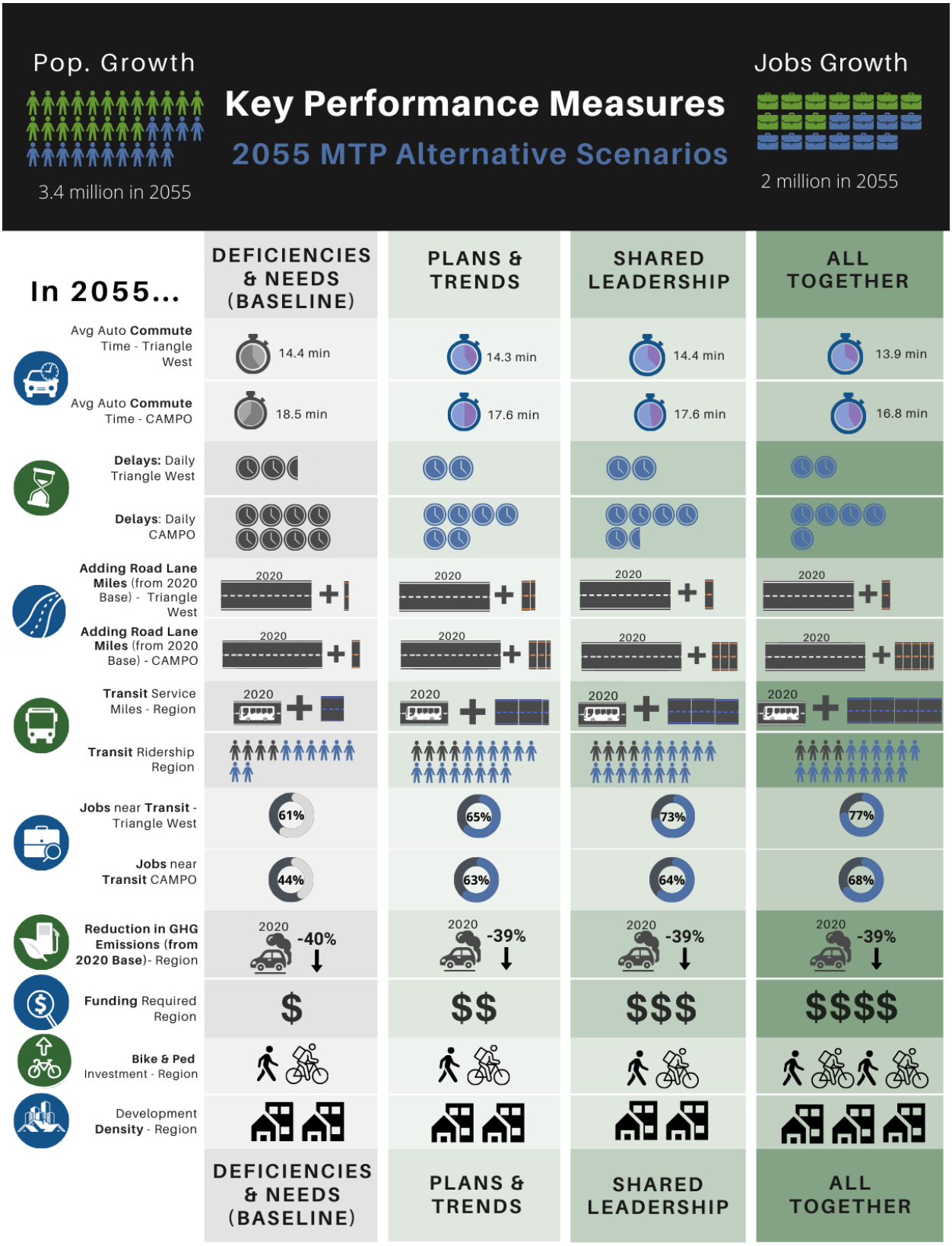
Figure 6.5.2 Travel Choice Neighborhoods



As a final step in the alternatives analysis, the Key Jobs Hubs, Title VI Communities, and Travel Choice Neighborhoods were analyzed against certain measures to see how well the alternatives connected people to jobs and offered people with transportation choices:

- Between 2020 and 2055, about **360,000 dwelling units and 930,000 jobs** are expected to be added within Travel Choice Neighborhoods – this represents 61% of anticipated housing growth and 87% of employment growth happening in Travel Choice Neighborhoods.

Figure 6.5.3: Key Performance Measures Alternative Scenario Comparison



Graphic taken from Destination2055NC.com website.

- **63%** of traffic analysis zones that fall within Title VI Communities are also Travel Choice Neighborhoods.
- **All** of the identified Key Job Hubs overlap with Travel Choice Neighborhoods, although in some larger hubs (such as Research Triangle Park) not all sections of the job hub have good transit access

6.6 – Performance Evaluation Measures

Evaluation measures provide a set of metrics for quantitative comparison of transportation investments and land use scenarios. Detailed comparison tables addressing a range of roadway use, transit use, congestion and delay are included in Appendix 10.

The appendix tables compare the transportation network performance for the Capital Area MPO and Triangle West TPO planning areas for the year 2020, year 2055 deficiency network, and the 2055 MTP network. The year 2020 represents the state of the system at the time transportation data such as traffic counts, transit ridership, and household travel surveys were collected for the region's transportation modeling tool, and represents conditions in the Triangle region immediately preceding the COVID-19 pandemic. The year 2055 E+C (existing plus committed, or "deficiency") network includes only those projects that will be operational in the next few years, but with the anticipated 2055 population and employment forecasts. The 2055 MTP system represents the highway and transit networks included in the *Destination 2055* Metropolitan Transportation Plan and the anticipated 2055 population and employment forecasts.

The performance evaluation measures in Appendix 10 are system-wide metrics and therefore do not provide performance information on specific roadways or travel corridors, or at the scale of a municipality or county. The congestion maps (volume/capacity ratio maps), which are presented in Section 6.3 and also available online, provide a more localized picture of transportation performance for individual roadways or roadway segments.

The conclusions drawn from the performance evaluation measures (system-wide) and congestion maps (roadway-specific) tend to be similar. For example, the 2055 deficiency (E+C) congestion map illustrates a higher degree of regional congestion as compared to the 2020 baseline. This is validated by comparing performance measure values for the 2055 E+C and 2055 MTP networks for measures such as vehicle hours traveled (VHT). VHT is highest for the 2055 E+C/Deficiency roadway network as compared to both the 2020 base year and the 2055 MTP networks.

6.7 – Preferred Scenario

Scenarios are simply intended to help understand the range and relative impacts of different choices and do not serve as a constrained menu from which a single choice must be selected. Public engagement on these options and considerations of fiscal constraint resulted in a "preferred" scenario that drew on elements from the studied alternatives and also included additional elements that were not included in the previous analyses. The "preferred" scenario was most closely aligned with the All Together Scenario.

Key Takeaways from this Chapter

The starting point for analyzing our region's choices as part of *Destination 2055* was understanding how our communities' comprehensive land use plans envision guiding future growth. The next step was to make estimates of the types, locations, and amounts of future population and job growth based on market conditions/trends and community plans.

Based on these forecasts, the analysis looked at future mobility trends and needs, and where our current transportation system may become deficient in accommodating these trends and meeting these needs.

Working with a variety of partners and based on public input, different land use and transportation system alternatives were developed and their performance was analyzed.

The performance of system alternatives were compared against one another using measures based on the *Destination 2055* goals and objectives. The results were also examined through the lens of Key Job Hubs (where large concentrations of jobs are located), Title VI Communities (key areas with demographic-related factors), and Travel Choice Neighborhoods (where high-quality transit services are available as an option).

Chapter 7: Our Metropolitan Transportation Plan (What We Intend to Do)

Chapter 7 is the heart of our region's Metropolitan Transportation Plan – it describes the investments that we plan to make, when we intend to make them, and the associated land use development strategies we aim to pursue in order to achieve an effective and efficient transportation system.

The transportation investments are summarized in the following categories:

- Roadways (accompanying project list is found in Appendix 2)
- Public Transportation
- Active Transportation Projects serving bicyclists and pedestrians
- Freight Movement
- Aviation and Intercity Rail
- System Optimization Strategies such as Travel Demand Management (TDM), Intelligent Transportation Systems (ITS), Technology Investments, and Transportation Systems Management & Operations (TSMO)

7.1 – Land Use & Development Strategies

Land use in the Triangle is the responsibility of each local government, not the MPOs. But few things influence the functionality and effectiveness of our transportation system as much as the locations, types, intensities and designs of existing and new developments in our region. If we are to successfully provide for the mobility needs of the two million people living in the region today and the additional one million to be added over the time period of the *Destination 2055 MTP*, we will need to do a top-notch job of matching our land use decisions with our transportation investments.

The ties between regional transportation actions and local land use decisions are significant in three cases:

- Transit Corridor Development
- Major Roadway Access Management
- Complete Streets & Context-sensitive Design

For these three issues, the Triangle West TPO and Capital Area MPO are committed to working with their member communities and with regional organizations such as the Central Pines Regional Council and GoTriangle to coordinate land use decisions and transportation investments.

Transit Corridor Development

Destination 2055 includes billions of dollars of transit capital investments to connect our region's largest activity centers and link these centers to neighborhoods across the region. Ensuring that affordable, well-designed, compact, mixed-use development occurs within a half-mile of frequent transit corridors is a key element in determining how cost-effective major transit investments will be.

Working with a range of local and regional partners, the Central Pines Regional Council and GoTriangle have done significant work in recent years to develop and share key land use and affordable housing practices that can be used by local governments and other organizations to support fixed guideway and frequent bus service investments. Continuing to build on this collaborative approach is an important and cost-effective way to match local land use

and affordable housing decisions with regional transportation investments.

Strategies will be based on a firm analysis foundation that focuses on travel markets, land use patterns and policies, and affordable housing inventories, programs, and opportunity sites. Where applicable, leveraging joint development for affordable housing as part of major transit capital projects will be pursued.

Major Roadway Access Management

Roads serve two main purposes: mobility and access. Mobility is the efficient movement of people and goods. Access is getting those people and goods to specific locations.

A road designed to maximize mobility typically does so in part by managing access to adjacent properties – an example of this is an Interstate Highway, which does not allow any driveway or minor cross-street access to neighboring areas. While long-distance travel on an Interstate highway is efficient, the number of access points is restricted to a limited number of interchanges. This type of road primarily serves a mobility function.

At the other end of the spectrum, local streets provide easy and plentiful access to adjacent properties, but long-distance travel on these types of roads would be very time consuming. This type of road primarily serves an access function.

Many roadway investments involve widening roads to provide more capacity. Where these types of investments are made, the MPOs will work with NCDOT and local communities to ensure that the added capacity for mobility these investments will provide does not get inappropriately degraded by a pattern of strip development with frequent driveways and median cuts.

Complete Streets & Context-sensitive Design

Street rights-of-way are the largest share of public space within our communities – the spaces we share with our neighbors and which provide access to our homes and businesses. Where roads traverse town centers, walkable neighborhoods, and important activity centers such as university campuses, the MPOs will work with the NCDOT and local communities to ensure that roads are appropriately designed to accommodate the full range of travel choices and that adjoining development is sited and designed to promote alternatives to auto travel. As the benefits of walking and cycling are better understood, creating safe and healthy streets is becoming a higher priority for the MPOs to support.

7.2 – Shared Regional Investments

Shared regional investments are programs, projects, or groups of related projects that transcend the boundary between the Triangle West TPO and the Capital Area MPO. Both MPOs include shared regional investments in their project lists and financial plans. For shared roadway projects especially, facility types and design details may differ between the MPOs, but each MPO's component is intended to complement the investments made by the other MPO. The *Destination 2055* shared regional investments are:

Investments in Regional Rail corridors across the region, including a connection between the two MPOs

Relocation of the Regional Transit Center, serving regional buses, BRT and Regional Rail services

Continuing progress on the Triangle Bikeway connecting Wake, Durham & Orange Counties along the I-40 corridor

Bus Rapid Transit (BRT) corridors approaching from both MPOs and converging at the Regional Transit Center in Research Triangle Park

Addition of managed lanes and technology improvements in the I-40 corridor across the region

Upgrades on US 70 corridor between I-540 and I-885 (freeway in Wake County, improved boulevard in Durham County)

Administration of a regional Travel Demand Management (TDM) program to encourage alternatives to driving alone

7.3 – Roadways

This section contains a list of major road investments in the *Destination 2055* Metropolitan Transportation Plans for the Capital Area MPO and Triangle West TPO. A full listing of all roadway projects (by time period) is located in Appendix 2, and detailed interactive maps of the projects are available on each MPO's website.

Projects are separated into four categories based on their anticipated date of completion:

- **2035** projects are those that are already underway or have full funding and an expected completion date by 2035, based on the adopted 2026-2035 Transportation Improvement Plan (TIP).
- The **2045** and **2055** project lists represent projects selected through the MTP alternatives analysis process described in Chapter 6 that can be funded with existing revenue streams or reasonably-foreseeable future revenue streams.
- Due to funding constraints, the fourth category includes projects that have merit but cannot be completed by 2055 using anticipated revenue sources. These projects that are not part of the fiscally-constrained transportation plan are included in the **Comprehensive Transportation Plan (CTP)** for each MPO.

Each project in the fiscally-constrained plan has a project identifier that is sown on the 2055 MTP road project map. The project listing in Appendix 2 includes information on each project's limits, length, present and future lanes, funded completion year, cost estimate, and whether the project meets federal definitions for regionally-significant or exempt projects.

Projects that are noted as "modernizations" do not add new general purpose travel lanes, although they could result in increased capacity and reliability of roadways through improved intersection designs and access management—this could include "boulevard" designs, addition of medians, reduced-conflict intersections (RCIs, formerly known as "superstreets"), and "parkways" designed for lower-speed travel. In urban areas, modernizations generally add bicycle, pedestrian and transit facilities, add turn lanes at intersections, sometimes widen the pavement on a road with narrow lanes or narrow/no shoulders, and sometimes improve curves or sight-lines. In rural areas, modernization projects typically widen the pavement on roads with narrow lanes and shoulders, add turn lanes at

intersections, and sometimes improve curves and sight-lines.

Where new interchanges are indicated in the plan, they are often grouped together with a larger linear highway project. When interchange projects are conducted independently, they will often involve roadway changes for some distance on each side of the interchange.

One clear message from both elected official discussion and public engagement during the development of the plan is that roadways need to be designed and engineered with greater care than has been typical in the past, using more flexible and context-sensitive standards that have now been successfully implemented in many places. Especially in urban and urbanizing locations, roadway designs should prioritize steady, safe, reliable, moderate-speed travel rather than emphasizing high-speed throughput.

Figures 7.3.1 and 7.3.2 show *major* highway projects by time period for each MPO. Larger, navigable versions of the roadway maps are available on each MPO's website.

7.4 - Transit and Rail Facilities & Services

Extensive transit planning efforts have recently been completed or are underway, resulting in updated transit plans in Durham, Orange and Wake Counties. The county plans provide dedicated revenues to finance transit improvements, including enhanced regular bus service, high-quality fixed-guideway projects, improved transit centers and stops, and services to connect job centers and neighborhoods.

Among the projects identified in the county transit plans and included in this 2055 MTP are a variety of premium transit investments designed to provide faster, more frequent, more reliable service in major corridors. Two types of fixed guideway investments are included in this 2055 MTP:

- **Bus Rapid Transit (BRT)** encompasses a variety of enhancements to regular bus service, such as large stations with off-board ticketing, dedicated lanes that allow buses to bypass congested automobile traffic and improve system reliability, priority treatment at traffic signals, and other improvements.
- **Regional Rail** service operates in existing rail corridors, serving stations that are spaced relatively farther apart than on a light rail or bus rapid transit facility, and with service that runs at lower frequencies.

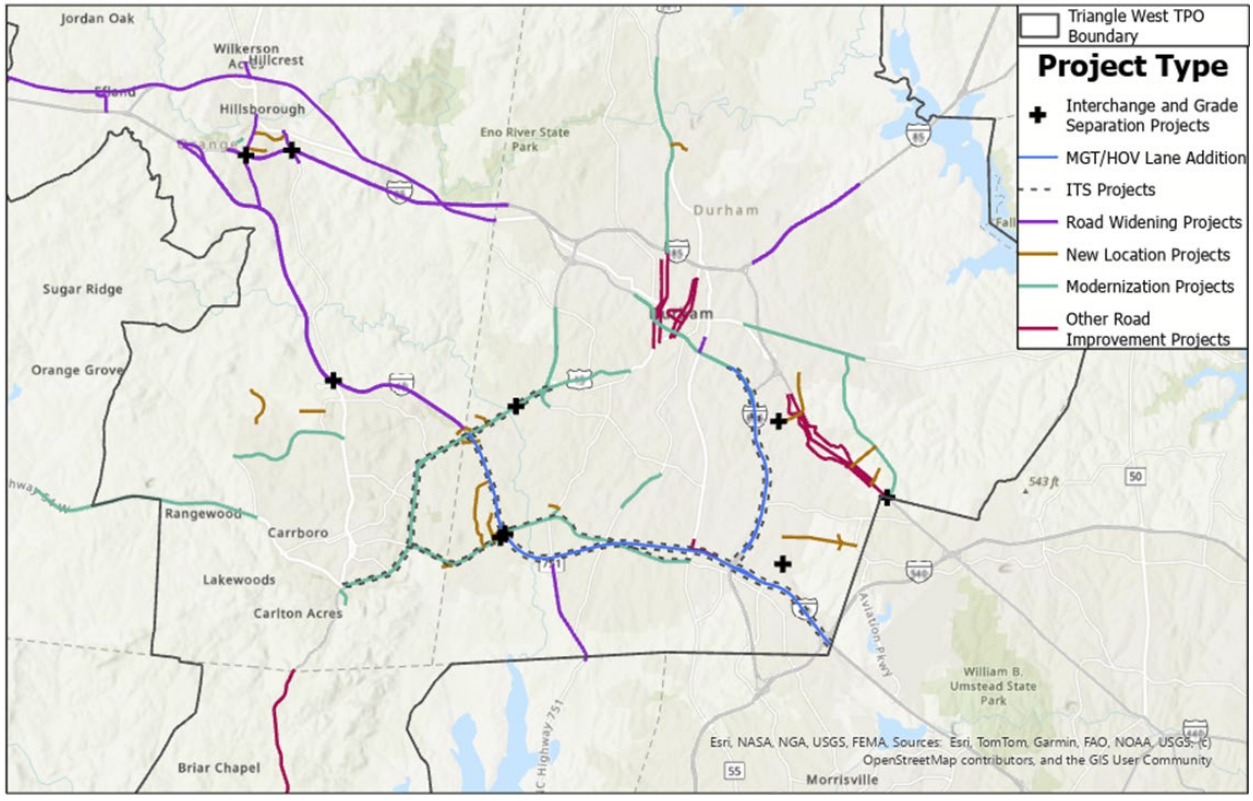
Figures 7.4.1 and 7.4.2 list the fixed guideway transit projects and show maps depicting the proposed transit services. Interactive maps may be found on each MPO's website.

Another type of fixed transit investment is a transit center – a place where multiple modes and routes come together to provide easy transfers between services. The *Destination 2055* MTP includes ongoing and planned transit center development, including the relocation of the Regional Transit Center (a shared regional investment of both MPOs) and proposed improvements at existing transit centers and construction of new transit centers around the region as proposed in local and county transit plans.

Additional information related to transit capital projects can be found in Appendix 3.

Figure 7.3.1: Triangle West TPO Major Roadway Projects List & Roadway Project Map

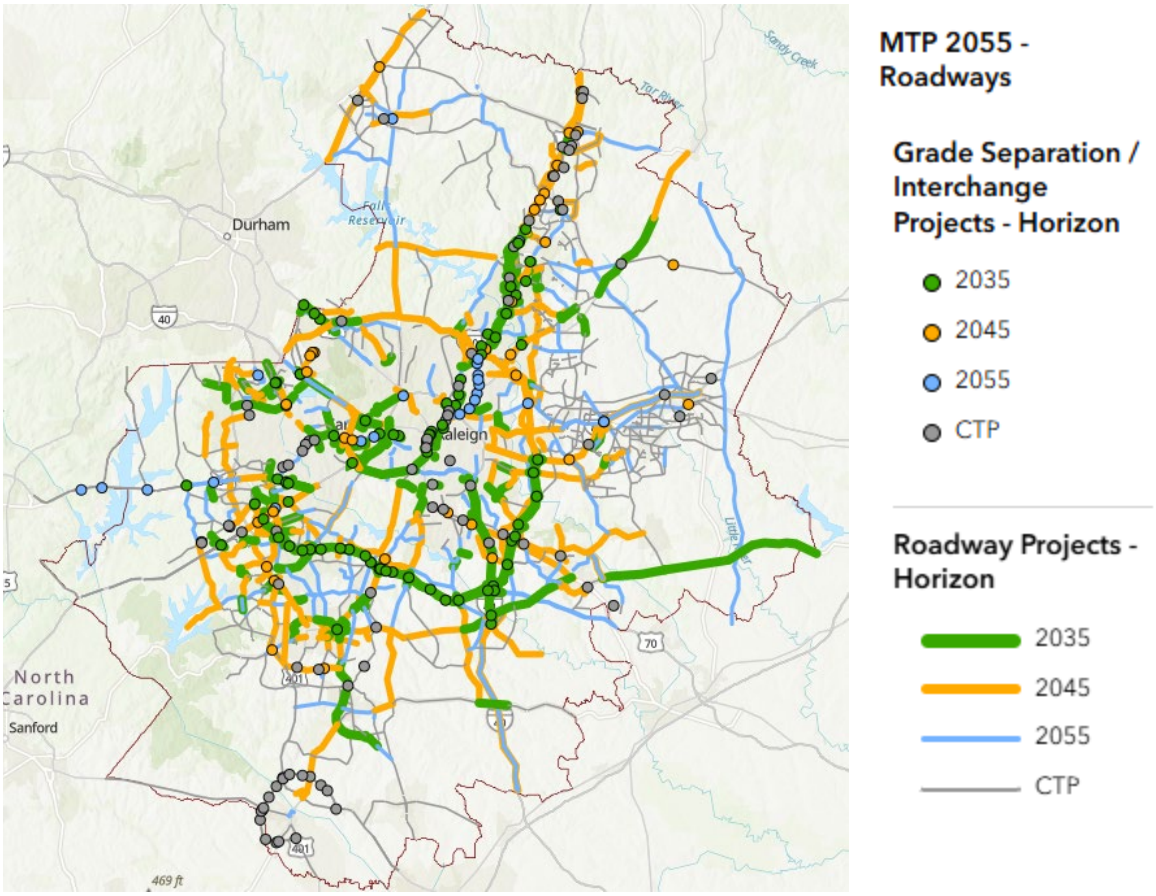
2026-2035	2036-2045	2046-2055
I-40/NC 54 interchange improvements	I-40 HOV/managed lanes from Wake/Durham line to I-885	I-40 HOV/managed lanes from I-885 to US 15-501
I-40 widening from Orange/Durham line to I-85	I-885 HOV/managed lanes from I-40 to NC 147	I-85 widening from east of Midland Terrace to Red Mill Rd
I-85 widening from Sparger Rd to Orange Grove Rd	NC 147 boulevard conversion from Swift Ave to Briggs Ave	US 70 widening from Orange/Durham line to TPO boundary west of Efland
I-85/S Churton St interchange upgrade	NC 54 modernization from US 15-501 to NC 55	NC 98 modernization from Lynn Rd to Nichols Farm Dr
I-40/NC 86 Interchange improvements	US 70 boulevard improvements from Pleasant Dr to Durham/Wake line	
NC 98 modernization from Junction Rd to Lynn Rd	US 15-501 intersection improvements from Smith Level Rd to US 64	
	US 15-501 modernization from I-40 to US 15-501 Bypass/MLK Pkwy and US 15-501 Bypass modernization from MLK Pkwy to Cameron Blvd	



Triangle West TPO Roadway Project Map Online here.

Figure 7.3.2: Capital Area MPO Major Roadway Projects List & Roadway Project Map

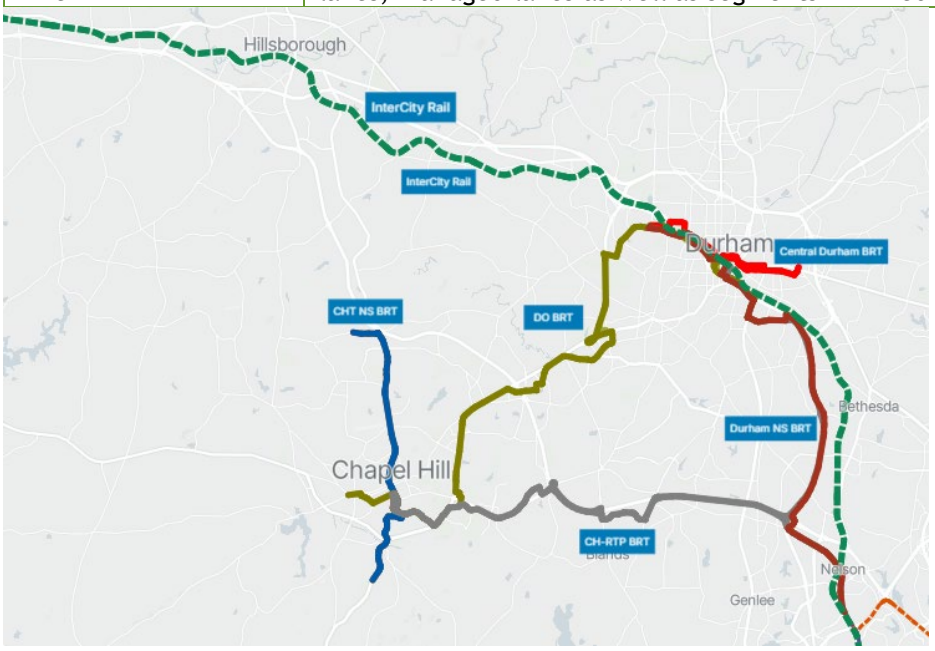
2026-2035	2036-2045	2046-2055
I-40 widening from US 1/64 to Lake Wheeler Rd and interchange improvements at I-40 and US 1/64	I-40 widening from NC 36/Cleveland Rd to MPO boundary near Benson	Capital Blvd corridor improvements from I-440 to I-540
Completion of NC 540 loop from I-40 to I-87	I-40 widening from Harrison Ave to US 1/64	I-42 widening from I-40 to US 70 Business
US 1 freeway improvements from I-540 to Harris Rd	I-85 widening in Granville County	I-40 managed lanes from Durham/Wake line to MPO boundary near Benson
US 70 freeway improvements from I-540 to Wake/Durham line	I-87/US 64 widening from I-440 to US 264 in Zebulon (8 lanes west of Wendell Blvd, 6 lanes east)	I-540 managed lanes from I-40 to I-87
US 64 corridor improvements from US 1 to west of Laura Duncan Rd	US 1 freeway improvements from Harris Rd to MPO boundary north of Franklinton	I-87/US 64 widening from Wendell Blvd to US 264 in Zebulon (8 lanes)
I-440 widening from I-40 to Wade Ave	US 1 widening from US 64 to NC 540 in Apex	US 64 freeway improvements from NC 540 to NC 751
I-40 widening from Harrison Ave to Aviation Pkwy	US 64 freeway improvements from west of Laura Duncan Rd to NC 540	



Capital Area MPO Roadway Project Map Online here.

Figure 7.4.1: Triangle West TPO Fixed Guideway Transit Projects List & Map

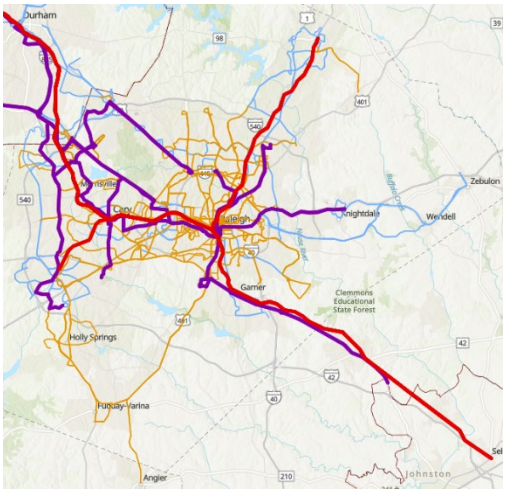
Project	Description	MTP Horizon Year
Intercity Passenger Rail (ICR) Stations	2035: Intercity Rail (ICR) service from Downtown Durham through the new RTP station and transit center to Cary and Raleigh; 2055: Expanded ICR service from the new Hillsborough station and transit center to Downtown Durham, the RTP station, Cary and Raleigh, connecting major regional transit hubs.	2035, 2055
Bus Rapid Transit (BRT) – Chapel Hill North-South Line	BRT service in Chapel Hill, running from Eubanks Road, through the UNC Healthcare complex, and to Southern Village, using a mix of dedicated lanes and mixed traffic.	2035
Bus Rapid Transit (BRT) – Central Durham Line	BRT service in Durham, running from the Duke University/ Medical Center area through the central bus station and Downtown Durham to the Village area, using a mix of dedicated lanes and mixed traffic.	2035
Bus Rapid Transit (BRT) – Durham-Orange Line	BRT service between Durham and Orange counties, operating from Carrboro, Chapel Hill, and the UNC Healthcare complex to the Duke University and Medical Center area via US 15-501, and continuing to Durham Station and NCCU. The BRT line includes segments operating in dedicated lanes as well as segments in mixed traffic.	2035
Bus Rapid Transit (BRT) – Durham NS BRT Line Combined with CAMPO's Western BRT Line	BRT service, running from Duke, Downtown Durham, and NCCU to the Research Triangle Park (RTP) via NC 147/I-885, continuing on to Cary, Raleigh, and Clayton. The route includes segments operating in dedicated lanes and managed lanes, as well as segments in mixed traffic.	2045
Bus Rapid Transit (BRT) – Chapel Hill-RTP Line Combined with CAMPO's I-40 BRT Line	BRT service from Chapel Hill to Downtown Raleigh via the Research Triangle Park (RTP) and I-40. This aligns the Chapel Hill-RTP BRT with the I-40 BRT at RTP to create a continuous regional route. This route includes segments in dedicated lanes, managed lanes as well as segments in mixed traffic.	2055



Triangle West TPO Major Transit Project Map Online here.

Figure 7.4.2: Capital Area MPO Fixed Guideway Transit Projects List & Map

Project	Description	MTP Horizon Year
Regional Rail	From Regional Transit Center (RTC) to Wake Forest	2035
Regional Rail	• From Regional Transit Center (RTC) to Wake Forest with stop added in Morrisville (McCrimmon); • From Downtown Apex to Auburn/Garner	2045
Regional Rail	• From Hillsborough to Selma; • From Franklinton to Downtown Apex; • From Downtown Apex to Veridea	2055
Bus Rapid Transit (BRT)	• SAS to Regency Center – between SAS Campus and Regency Center via mixed traffic along Harrison Avenue, Kildaire Farm Rd, Tryon Rd and Regency Pkwy; • Capital Blvd – between Downtown Raleigh and Triangle Town Center via dedicated guideway parallel to Capital Blvd; • Midtown – between Downtown Raleigh and North Hills via mixed traffic using Capital Blvd, Wake Forest Rd, Atlantic Avenue and Six Forks Rd; • New Bern – between Downtown Raleigh and Corporation Pkwy via dedicated guideway parallel to US 64; • Western – between Powhatan (Clayton) and Regional Transit Center (RTC) via US 70 (mixed traffic) to Garner Station, dedicated guideway from Garner Station to Downtown Raleigh to Downtown Cary to RTC parallel to NC 54.	2035
Bus Rapid Transit (BRT)	• Western Extended – between Powhatan (Clayton) and RTC via US 70 (mixed traffic) to Garner Station, dedicated guideway from Garner Station to Downtown Raleigh to Downtown Cary to RTC parallel to NC 54. Extended to West Durham via mixed traffic along I-885, NC 147 and Alston Avenue; • I-40 – between Downtown Raleigh and RTC via dedicated guideway parallel to Western Blvd, mixed traffic along Blue Ridge Rd to Trinity Rd to Edwards Mill Rd to Wade Avenue/I-40 to NC 540 west to NC 54 to RTC; • US 70 – between Crabtree Valley Mall and Davis Drive via US 70, Brier Creek Pkwy, Aviation Pkwy and McCrimmon; • Apex – between RTC and Downtown Apex via mixed traffic using Davis Drive; • Veridea – between Downtown Apex and Veridea via Salem St and Veridea Pkwy.	2045
Bus Rapid Transit (BRT)	• New Bern/Knightdale (New Bern Extended) – between Downtown Raleigh and Knightdale Station Pkwy via dedicated guideway parallel to US 64 to Corporation Pkwy, mixed traffic to Knightdale Station along US 64; • I-40/Chapel Hill (I-40 Extended) – between Downtown Raleigh and UNC via dedicated guideway parallel to Western Blvd, mixed traffic along Blue Ridge Rd to Trinity Rd to Edwards Mill Rd to Wade Avenue/I-40 to NC 540 west to NC 54 to RTC, continuing along NC 54 to Barbee/Herndon Rd to Renaissance Pkwy to I-40 to NC 54/US 15-501 along Manning Drive to Cameron Avenue.	2055



Capital Area MPO Major Transit Project Map Online here.

Although fixed guideway projects and transit centers may be some of the more visible transit investments in the region, most transit use occurs in vehicles operating in "mixed traffic," meaning travel in general purpose roadway lanes that are shared with cars and trucks.

These services range from frequent scheduled transit services in high-density, high-ridership corridors to on-demand microtransit services. By their very nature, these services often adapt to changing conditions. Table 7.4.3 depicts general "rules of thumb" for the types of transit services that may be most appropriate in a corridor based on surrounding land uses.

This section discusses the two "bookends" of mixed-traffic transit services:

- Frequent scheduled transit services
- On-demand microtransit services

Where mixed-traffic transit services are deployed is determined primarily by the County Transit Plans, which are incorporated into this MTP by reference and available at the websites below:

- 2035 Wake Transit Plan Update (adopted in 2025)
- 2023 Durham County Transit Plan Update
- 2022 Orange County Transit Plan Update

The transit plans cover both local and regional transit operators; additional transit services are provided by the university-based Duke Transit and NC State University Wolfline systems. Based on these county transit plans, annual transit work programs are adopted each year detailing specific capital and operating funding. As part of the county plans, transit operators are placing an emphasis on alternatively-fueled vehicles such as electric, diesel/electric hybrid, and compressed natural gas vehicles.

Transit investment is more than new buses; ensuring sound maintenance of transit assets and safe, inviting connections to transit facilities and services matter as well.

Table 7.4.3: Land Use & Supported Types of Transit

Land Use Type	Residents per Acre	Jobs per Acre	Appropriate Types of Transit	Frequency of Service
Downtowns & High-density Corridors	>45	>25	Light Rail BRT Rapid Bus Local Bus	10 minutes or better
Urban Mixed Use	30-45	15-25	BRT Rapid Bus Local Bus	10-15 minutes
Neighborhood & Suburban Mixed Use	15-30	10-15	Local Bus	15-30 minutes
Mixed Neighborhoods	10-15	5-10	Local Bus Microtransit	30-60 minutes
Low Density	2-10	2-5	Microtransit Rideshare Volunteer Driver Program	60 minutes or less; On-demand
Rural	<2	<2	Rideshare Volunteer Driver Program	On-demand

Credit: NelsonNygaard

Both MPOs have transit asset performance targets, including targets for state-of-good-repair. First-mile/last-mile connections to transit services (such as sidewalks, bike lanes, and street crossings) are funded from both county transit tax revenues and from other sources.

Frequent Scheduled Transit Service

A transit axiom is that "frequency is freedom." As service improves from two buses every hour (30 minute frequency) to three buses per hour (20 minute frequency) to four buses per hour (15 minute frequency), transit begins to serve people's lives rather than the riders needing to plan their lives around the transit schedule. Frequent service is usually only cost-effective where densities are high and activity centers are aligned along a route – complementary land use policies are critical to the success of transit. The MTP online maps and the County Transit Plans provide information about the frequency of planned transit services.

On-demand Microtransit Service

On the other end of the spectrum, where both land use density and conventional bus ridership are low, new app- and phone-based on-demand microtransit services can give users both more timely service and a wider range of destinations than is possible with fixed-route buses. Several communities in the region have implemented microtransit services in recent years to serve parts of the region that cannot easily be served by fixed routes.

7.5 – Active Transportation and Micro-mobility Investments

Active transportation by walking and bicycling are becoming integral forms of travel in the Triangle Region. The land use characteristics of local universities, business districts, and major activity centers encourage short trips that can be easily served by biking, walking, scootering or other active and micro-mobility modes. Urban centers retain attractive grid street patterns with retail and residential developments that lend themselves well to active forms of transportation, and the region's rural landscapes provide opportunities for tourism and recreational cycling. Additionally, the area's geography and mild-year-round climate make these modes viable travel options.

In recent years, several important initiatives have been undertaken, including the following:

- In 2022, a feasibility study was completed for the proposed Triangle Bikeway connecting from Chapel Hill to Raleigh – work is now underway on designing the eastern half of the project, from West Raleigh to Research Triangle Park;
- In 2021, the MPOs jointly adopted a policy priority entitled "Make North Carolina a Leader in Active Transportation," with a goal of surpassing peer states in funding economically-beneficial and safety-focused bicycle and pedestrian projects;
- In 2020, NCDOT released the *Great Trails State Plan* that focused on a network of shared-use paths in all 100 counties that can serve transportation purposes, providing connections between where people live, work and play;

- In 2019 the NC Board of Transportation adopted a revised Complete Streets Policy, which requires NCDOT planners and designers to consider and incorporate multimodal facilities in the design and improvement of all appropriate transportation projects in North Carolina – the policy is supported by a Complete Streets Implementation Guide and other guidance and training;
- Driven in part by high rates of fatal and serious injury motor vehicle crashes involving bicyclists and pedestrians, both MPOs adopted safety action plans in 2025, and a number of local governments in the region have developed similar plans – these safety plans identify strategies and actions the region can pursue to reduce (and ultimately eliminate) fatal and serious injury crashes, including strategies related to vulnerable road users such as bicyclists and pedestrians;
- Communities in both MPOs have developed Safe Routes to School programs that aim to educate students about walking and bicycling safely and encourage programs for students to walk and bike to school.

In response to the increased demand for bicycle and pedestrian travel in the region, CAMPO and Triangle West are promoting the creation of a pedestrian and bicycle system that provides greater access to schools, parks, transit stops, job hubs, grocery stores, and other destinations. Regional and statewide facilities such as the East Coast Greenway, Neuse River Greenway, and American Tobacco Trail are heavily used. Many communities have prepared their own city or county bicycle and pedestrian plans and are working toward the development of a safe, accessible, and convenient network of regional bicycle and pedestrian routes.

Pedestrian Facilities

Pedestrian facilities in the region vary in type, condition and level of service. Urban areas in the MPOs often have suitable sidewalk facilities; however, many thoroughfares lack any pedestrian accommodations or relegate pedestrians to one side of the roadway. Historically, suburban development has been inattentive to pedestrian needs, leading to incomplete pedestrian networks within highly-populated commercial and residential areas. Also, many areas once classified as rural are seeing increases in development, and citizens are demanding pedestrian access from their neighborhoods to nearby destinations. Local governments recognize these pedestrian needs, and are working toward filling missing links in local sidewalk networks.

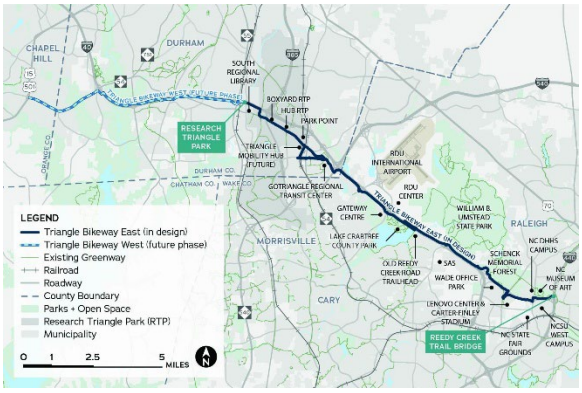
On a regional level, the MPOs encourage pedestrian projects. Most town and city governments have instituted sidewalk requirements for new development, and sidewalk upgrades are generally included in roadway construction projects. Most roadway projects in the "Roadway Element" of the *Destination 2055 MTP* are expected to provide appropriate accommodations for pedestrians, concurrent with roadway improvements. Missing links and gaps in the pedestrian network will be constructed as well – priority is generally given to areas with heavy pedestrian traffic generators such as schools, parks, transit stops, and business districts, and to address historic inequities in the provision of sidewalks.

Bicycle Facilities

The *Destination 2055* MTP recommends extensive integration of bicycle needs into the design and construction specifications of new highways and other future or ongoing transportation projects. Bicycle projects include off-road shared-use bicycle paths, on-road bicycle lanes (including protected bicycle lanes), and bicycle boulevards in urban areas, as well as paved four-foot shoulders on rural roads. Highway and transit project designs assume the provision of bicycle racks and other bicycle and pedestrian amenities at key locations such as park-and-ride lots, transit hubs, and major activity centers.

The 2055 MTP identifies statewide and regional bicycle routes in the Triangle region. Statewide routes include NCDOT-designated Bicycling Highways as well as the East Coast Greenway. Regional bicycle routes provide links between major destinations and between urban centers, facilitate primarily-utilitarian bicycle trips (though the routes can also serve recreational cyclists), and serve as a backbone to a finer-grained system of local bicycle routes in each jurisdiction.

Figure 7.5.1: Triangle Bikeway



The Triangle Bikeway is a proposed regional bicycle facility that would span 23 miles, connecting Chapel Hill to Raleigh

Education and Encouragement

In addition to facility improvement projects included in the MTP, the Triangle West TPO and Capital Area MPO devised a series of local education and encouragement programs. Outreach programs are essential elements of any bicycle and pedestrian-friendly community, and complement the engineered components of a bicycle and/or pedestrian route network. The following recommendations are intended to increase bicycle and pedestrian safety and provide the incentive to get more people biking and walking in the region.

Education efforts include bicycle skills instruction for youth and adults, educational messages about laws and best practices and on cyclists' rights to use the road. Encouragement efforts include incentives for employee bicycle commuting, annual "Bike to Work" activities, and Safe Routes to School events. The MPOs and local jurisdictions also provide resources such as bicycle maps, safety and education materials, bicycle racks, and bicycle repair stations. The jurisdictions of Carrboro, Cary, Chapel Hill, Durham, Raleigh, and Wake Forest have been recognized as "Bicycle Friendly Communities" by the League of American Bicyclists.

Overall Active Transportation Summary

Table 7.5.2 provides a list of local plans that were consulted in the development of this MTP. The *Destination 2055 MTP* does not specifically list all planned bicycle and pedestrian project in the region. Local municipalities and counties have identified and prioritized these projects through local plans, and have coordinated their interactions at jurisdictional boundaries. As a result, the MTP defers to local government

plans for specific bicycle and pedestrian project recommendations.

Table 7.5.2: Bicycle & Pedestrian Plans

Capital Area MPO
Angier Pedestrian Plan (2014)
Apex Bicycle Plan (2019)
Apex Pedestrian Plan (2019)
Archer Lodge Bicycle/Pedestrian Plan (2020)
Cary "Imagine Cary" Plan (2017)
Center of the Region Bicycle & Pedestrian Plan (2016)
Creedmoor Bicycle Plan (2011)
Creedmoor Pedestrian Plan (2011)
Fuquay-Varina Community Transportation Plan (2017)
Fuquay-Varina Pedestrian Plan (2013)
Garner Forward Transportation Plan (2019)
Harnett County Bicycle, Pedestrian & Greenway Plan (2021)
Holly Springs Comprehensive Transportation Plan (2013)
Knightdale Comprehensive Pedestrian Plan (2013)
Morrisville Transportation Plan (2008)
NCSU Transportation Master Plan (2017)
Raleigh Bicycle Transportation Plan (2016)
Raleigh Comprehensive Pedestrian Plan (2013)
Rollin' in Rolesville Bicycle Plan (2011)
Wake County Greenways Master Plan (2017)
Wendell Pedestrian Plan (2017)
Youngsville Bicycle/Pedestrian Plan (2015)
Zebulon Multimodal Transportation Plan (2014)
Triangle West TPO
Carrboro Comprehensive Bicycle Transportation Plan (2020)
Chapel Hill Mobility & Connectivity Plan (2020)
Chapel Hill Everywhere to Everywhere Greenways Feasibility Study (in development)
Chatham County Bicycle Plan (2011)
CoGen Rail Corridor Feasibility Study (in development)
Durham Bike+Walk Implementation Plan (2017)
Durham City and County Bike+Walk Plan Update (in development)
Durham City and County Comprehensive Bicycle Plan (2006)
Durham Trails & Greenways Master Plan (2011)
Durham Walks! Pedestrian Plan (2006)
Durham-to-Roxboro Rail Trail Plan (2025)
Hillsborough Community Connectivity Plan (2009, rev. 2014 & 2017)
Orange County Comprehensive Plan Transportation Element (2008)
Research Triangle Park Bike/Ped Plan (2017)
Research Triangle Park Trails Study (2020)
Triangle Bikeway Study (2022)

Triangle West TPO Active Transportation Summary

The Triangle West TPO bicycle and pedestrian policy basically expects any roadway or other transportation project, whether it is a new or improved facility, to include appropriate pedestrian and bicycle accommodations. That policy provides extensive integration of bicycle and pedestrian needs into the design and construction of all transportation projects. In addition, the "NCDOT Complete Streets Implementation Guide" and other guidance from the American Association of State Highway Transportation Officials (AASHTO), the National Association of City Transportation Officials (NACTO), and the Federal Highway Administration (FHWA) provide planning and design guidance for use when building new projects or making changes to existing infrastructure. For bicycle facilities, the Triangle West TPO adopted a Comprehensive Transportation Plan (CTP) that lists local bicycle projects from the jurisdiction and county plans in the TPO area as shown on the Bike-Ped-Multiuse map and tables in the CTP.

Although the 2055 MTP does not reflect the individual bicycle, pedestrian, and multi-use projects, the MTP process requires an estimate of the level of investment in these projects for the purposes of the financial plan. The Triangle West TPO is setting aside **$2.8 billion** for these active transportation projects.

Capital Area MPO Active Transportation Summary

The Capital Area MPO has identified an extensive regional layout of off-road bicycle and pedestrian facilities in conjunction with on-road facilities that will receive bicycle-pedestrian accommodations only (see Appendix 4). This on-road/off-road network is congruent in scope, and communicates opportunities for multiple forms of access throughout the region. Note that many roadway projects will incorporate bicycle and pedestrian accommodations in conjunction with capacity improvements, which is consistent with the principle of "universal access" as addressed in the Capital Area MPO Bicycle and Pedestrian Plan adopted in 2003. Roads that will receive bicycle and pedestrian accommodations only are those roads that did not meet strict criteria for capacity improvements, but in practicing good transportation system management would qualify as candidates for bicycle and pedestrian accommodations.

Statewide bicycle and pedestrian corridors are those designated at the national or state level. These corridors are the highest functional classification level and serve as the backbone and trunk lines for the bicycle and pedestrian network. These corridors typically serve an inter-regional purpose and span multiple regions and/or states. Regional bicycle and pedestrian corridors are those that serve an intra-regional purpose. These corridors are the mid-level functional classification and may have several characteristics:

- Provide links between jurisdictions
- Facilitate primarily utilitarian trips, though the corridors can also serve a recreational purpose
- Serve as the main branches of the bicycle/pedestrian network that provide connectivity for the finer-grained system of local jurisdiction corridors
- Provide connectivity between other regional corridors and connect between local and intra-regional corridors

The Capital Area MPO's 2055 MTP financial plan sets aside **$7 billion** for active transportation projects along with travel demand management (TDM)/transportation systems management and operations (TSMO).

7.6 – Strategies to Manage Transportation Demand

Each year, hundreds of millions of dollars are spent in the region on the ***supply side*** of mobility: building and maintaining roads, buying and operating buses, and building sidewalks and bicycle facilities. Some of the most cost-effective mobility investments the region can make are on the ***demand side***: spurring travelers to use our transportation facilities more efficiently by ridesharing, taking transit, telecommuting, walking, or bicycling.

Marketing and outreach efforts targeted to commuters and the employers they work for are called Transportation Demand Management (TDM). The Triangle Region's TDM program, called "Triangle Transportation Choices," works with a number of local governments, universities/colleges, transit agencies, and community-based organizations in the region to provide TDM services. Because of its cost-effectiveness, strengthening support for TDM is one of the joint transportation policy priorities that has been adopted by each MPO (see Appendix 6 for more information).

Destination 2055 calls for continuation and expansion of the TDM approach that combines funding from the two MPOs and NCDOT with significant matching funds from the local and regional service providers and community-based partners. This TDM approach has been shown to be very effective. The following travel, air quality, and energy-saving impacts were calculated due to the collective efforts of TDM service providers in the Triangle Transportation Choices program in FY24:

- **4.9 million** vehicle trips avoided
- **2.8 million** gallons of gas saved
- **70 million** commute miles reduced
- **24,000** alternative transportation users supported
- **53 million** pounds of carbon dioxide release prevented

Figure 7.6.1: TDM Tabling Event

The region's TDM program is based on the *Triangle Region Transportation Demand Management Plan*, first adopted in 2007 and revised in 2014. A major update of this plan is anticipated in 2027. The Triangle Transportation Choices program provides a systematic framework for TDM coordination and a mechanism for more state and federal funding for TDM.

In recent years, the program has expanded beyond its traditional base of local government, university, and transit agency partners to also include community-based organization partners. This has allowed the program to reach additional people who may have been difficult to reach through traditional TDM channels. Additionally, in 2025 the Triangle Transportation Choices program became an Accredited TDM Organization through the Association for Commuter Transportation (ACT).

The TDM approach recognizes that the most effective TDM strategies are targeted to job hubs: places where employment is concentrated, especially sites where transit service is available and/or parking is costly or inconvenient such as downtowns and university campuses. These areas are identified as employer outreach priority zones, and the program partners aim to target their employer-based activities in these areas. Similarly, residential outreach priority zones have been identified in areas with high concentrations of low-income and/or zero-car households, where program participant agencies can target residence-based activities and programs.

Continuing to implement and extend the region's TDM plan is included as an element of the *Destination 2055* MTP. Implementation includes recommendations for stable multi-year funding for the TDM program and:

- Aggregation of state funding from NCDOT and federal funding allocated by the Capital Area MPO and Triangle West TPO;
- Issuance of a competitive call for projects from providers of TDM services;
- Guidance from an Oversight Committee composed of state and MPO/TPO staff that works with applicants to refine

their proposals and makes recommendations for funding; and
- Provision of a significant cost share by program participant agencies and organizations as a match of state and federal funds.

The key TDM strategies in the *Destination 2055* MTP are:

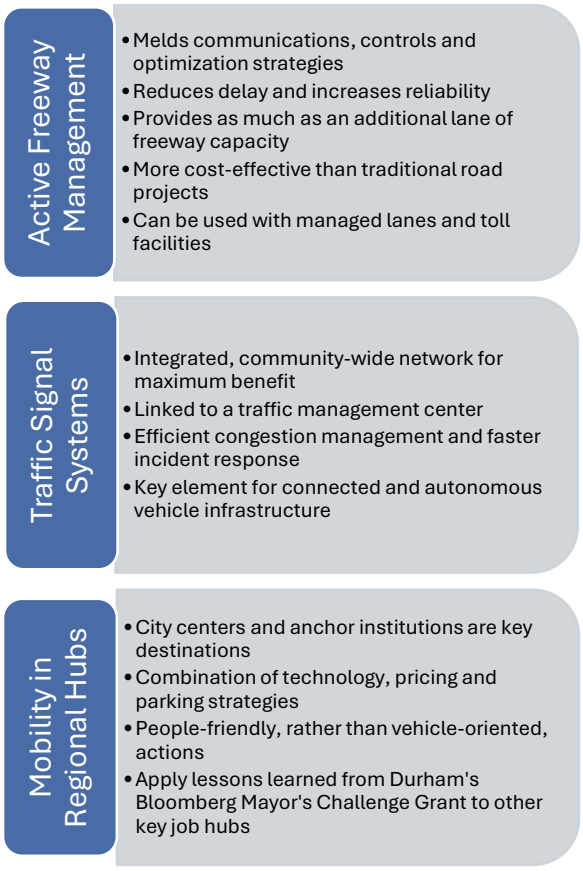
- Continue to invest in a collaborative regional program between the two MPOs and NCDOT through a single coordinating agency providing administrative, fiscal and performance measurement services;
- Periodically review and update the regional TDM plan to serve as the guidance document for regional TDM collaboration roles and responsibilities;
- Continue and strengthen the regional collaboration's array of services provided by traditional and community-based service providers through a competitive selection process with provider funding matches, as well as support and recognition programs for measurable "best practice" employers;
- Regularly review and modify outreach priority zones where TDM efforts can be most effective;
- Continue to examine the use of new technologies and innovative TDM techniques such as parking cash-out programs or TDM-based land use criteria; and
- Refine the measurement of TDM program impacts based on new and emerging evidence-based techniques.

The TDM program can be a crucial component of the overall transportation system, spurring employers to encourage the use of alternatives to driving alone and helping commuters understand and use transportation alternatives.

7.7 – Transportation Technologies

Technology has long been an important part of the transportation system, from safety features on private vehicles to traffic information and traffic control signals and devices in public investments. This section of the plan addresses both vehicle technologies and public facility and service investments. Strengthening support for transportation technologies was chosen by the MPOs as one of their top transportation priorities, with an emphasis on the activities shown in Figure 7.7.1.

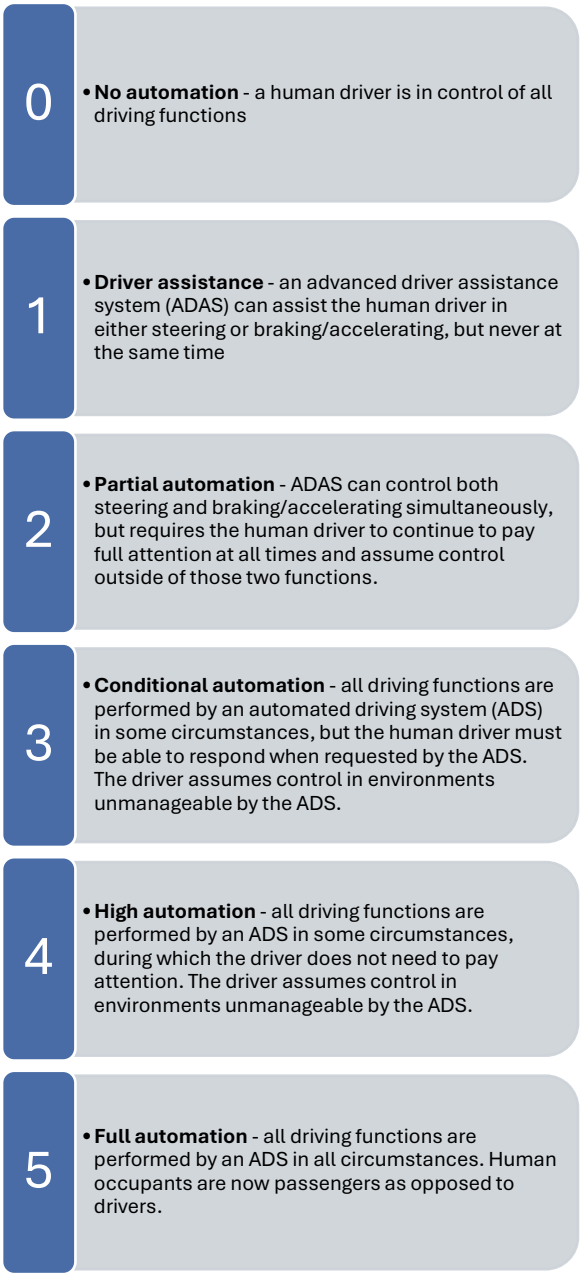
Figure 7.7.1: Technology Policy Priorities



Technological advancement is anticipated to significantly affect mobility over the span of this plan. Much of this advancement is

expected to be vehicle-oriented, with the continued introduction of connected and autonomous vehicles. Levels of vehicle automation lie along a spectrum that is depicted below.

Figure 7.7.2: Spectrum of Vehicle Automation



Although autonomous vehicle technology continues to make inroads, its market penetration may not result in substantial changes in public infrastructure investment decisions until the long-term period of this plan (post-2045). Forecasts of market penetration vary widely, but Level 4 and Level 5 vehicles may only become a large enough share of the market to affect infrastructure design and capacity in the long-term future. Nevertheless, it may be worthwhile to explicitly consider impacts of faster or slower market penetration in decisions about fixed, costly and long-lived assets, such as parking garages or freeway widenings, especially if assets would be difficult to repurpose for a society with extensive automated and connected vehicles.

Significant market penetration may occur soonest for fleet vehicles such as trucks, buses, and other vehicles where vehicle operators are a significant part of the cost of a service and where operator rest time (thus, vehicle downtime) is important for safe operation. The MPOs and their regional partners will continue to track and report on information and sources on autonomous and connected vehicles. Appendix 5 lists resources on autonomous and connected vehicles, among other technology-related resources.

In this MTP, public investments in technology are grouped under the term "Intelligent Transportation Systems" (ITS), a set of diverse technologies designed to make existing transportation infrastructure, facilities and services more efficient and safer. The MPOs and NCDOT jointly completed the most recent Triangle Regional ITS Strategic Deployment Plan (SDP) update in 2020. The SDP covers both MPOs and provides recommendations for near-term, mid-term, and long-term deployment of ITS technologies to enhance

efficiency and sustainability by pursuing 42 action items and 30 projects.

Table 7.7.3: Triangle ITS Projects

Projects from ITS Strategic Deployment Plan
Unified transit farebox system
Complete regional fiber network
New/updated traffic signal systems (10 communities)
Expanded travel information coverage
Emergency pre-emption
Subregion transportation management center
Consolidated municipal signal systems management
AVL technology for transit
Corridor traffic signal timing
Regional standards for software, hardware & communications
Current deployments inventory
Managed motorways
Incident response training
Centralized data warehousing & distribution
Transit signal priority/Bus rapid transit
Adaptive traffic signal system
Software/hardware platforms for connected and autonomous vehicles
Integrated corridor management
Parking deck occupancy detection
ITS equipment operation and maintenance training
System consolidation and management agreements

To accomplish this work, the two MPOs have created a regional ITS working group that is being facilitated by the Central Pines Regional Council. This working group recently developed an ITS Deployment Roadmap document in 2025, to serve as a strategic framework for actions the workgroup and transportation agencies in the region can pursue in the short term to implement the ITS Strategic Deployment Plan and expand ITS infrastructure in the region. Additionally, considerable planning work has been conducted around traffic signal system coordination/consolidation (completed Western Wake Traffic Signal System Study and upcoming Eastern Wake Traffic Signal System Study) and around transit signal priority (particularly with regard to ongoing Bus Rapid Transit projects).

ITS project implementation can be accomplished in a number of ways, including through the locally-administered projects programs coordinated by each MPO, through the state's Strategic Transportation Investments process, or as a component of a larger roadway or transit project.

7.8 - Investments for Safe, Effective Transportation System Management (TSM)

Transportation System Management (TSM) solutions increase efficiency and safety by allowing the current transportation network to operate with fewer travel delays. TSM projects are less costly than building or widening roadways and making new public transit capital investments. They can provide cost-effective solutions that are implemented quickly or in phases, and with comparatively fewer environmental impacts. TSM improvements often go hand-in-hand with ITS/technology improvements as discussed in the previous section, and are sometimes grouped together under the larger umbrella term of "Transportation System Management & Operations" (TSMO).

Similarly to Travel Demand Management (TDM) investments, TSM projects are treated as "programmatic" within this MTP: funding sources and amounts are designated in the plan, but individual projects are not listed. Projects will be selected as needs arise – the nature of the projects will depend on project-specific design characteristics. All TSM projects will meet the MPOs' Complete Streets policies,

ensuring safe transit and active transportation elements are integral parts of TSM.

The following list provides examples of the types of TSM projects that are expected to be implemented through the 2055 MTP period. This list is not exhaustive because solutions will be designed for the unique challenges of a particular intersection or corridor, and the types of TSM solutions available will continue to evolve.

Table 7.8.1: Example TSM Projects

Widening of approach widths for key intersections
Installation and/or adjustment of traffic signals, including dynamic signal timing coordination and signal pre-emption
Provision and lengthening of turn lanes
Limitation or prohibition of driveways, turning movements, trucks, and on-street parking
Construction of median U-turn, quadrant, continuous flow, and other unique intersection and interchange designs
Fixing horizontal/vertical curves, insufficient ramp lengths, weaving sections, and other geometric deficiencies
Implementing Bus on Shoulder System (BOSS) for transit buses and express shoulder lanes for all vehicles
Installation of traffic calming devices for residential neighborhoods
Traffic circles and roundabouts at appropriate intersections

Note: the examples in this table are not an exhaustive or authoritative list

7.9 - Railroads

The region is traversed by several key rail corridors, most notably the state-owned North Carolina Railroad Company (NCRR) right-of-way that stretches from Morehead City to Charlotte. Other major lines are owned by the region's two Class-I railroads: Norfolk Southern and CSX. The NCRR corridor carries both freight and intercity passenger rail traffic, as does the CSX "S Line" heading south from Cary; other rail lines in the region currently carry freight only. The CSX "S Line" heading north from central Raleigh and south from central Cary intersects the NCRR corridor along a section carrying both freight and passenger traffic. The CSX "S Line" from Richmond to Raleigh and the NCRR from Raleigh to Charlotte constitute a section of the federally-designated Southeast High Speed Rail (SEHSR) corridor. NCDOT is in the process of negotiating the purchase of the "S Line" from Raleigh north to Virginia from CSX. Existing passenger rail stations within the MPO boundaries include Raleigh, Cary, and Durham.

This *rail investments* section of the MTP focuses on freight rail and intercity passenger rail that links the Triangle to other regions. Rail services within the region, including proposed "Regional Rail" services, are discussed in Section 7.4 (Transit Facilities and Services). General freight issues, including freight carried by rail, are addressed in Section 7.11 (Freight Movement and Logistics). The regional freight plan notes that the volume of rail freight carried in and through the Triangle is expected to decrease slightly during the time frame of this MTP, due in part to declines in coal shipments as the region's energy mix changes.

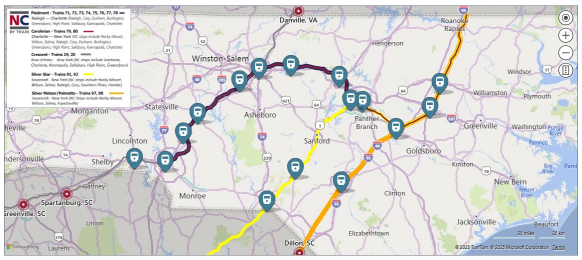
Rail planning and investments are frequently a cooperative effort between owners and operators of rail assets and partner agencies. For example, a project to straighten curves and replace an at-grade crossing with a bridge may involve funding and other contributions from the North Carolina Railroad, Norfolk Southern, and NCDOT's Rail Division. Funding from NCDOT

is from state and federal sources, including Federal Railroad Administration (FRA) competitive grants. Rail-related investments that involve roadway improvements and are included in the Transportation Improvement Program are included in the fiscal constraint analysis and transportation modeling that are part of this 2055 MTP. Investments that do not affect track capacity or cross streets are not specified in the 2055 MTP project lists. Examples include safety improvements at highway-rail crossings or short sidings that serve adjacent properties.

Recent, ongoing, and planned rail projects in the Triangle region include:

- Raleigh Union Station (completed 2018)
- Hillsborough Passenger Station (planned)
- Research Triangle Park Passenger Station (planned)
- Wake Forest Passenger Station (planned)
- Raleigh West Street grade separation (planned)
- Hopson Road grade separation and Nelson-to-Clegg passing siding (completed 2015)
- Morrisville Parkway grade separation (completed 2016)
- McCrimmon Parkway grade separation (planned)
- Durant Road grade separation (under construction)
- Blue Ridge Road grade separation (under construction)
- East Durham rail improvements, including Glover Rd and Ellis Rd grade separations (planned)
- Cornwallis Road grade separation (planned)
- New Hope Church Road grade separation (planned)
- Northeast Maynard Road grade separation (planned)
- Rogers Road Extension grade separation (planned)
- Millbrook Road grade separation (planned)
- Trinity Road grade separation (planned)
- Beryl Road extension and crossing closure (planned)
- "S Line" acquisition and upgrades from Raleigh to Virginia state line, including multiple grade separations, track and station improvements (planned)

Figure 7.9.1: Intercity Rail Services in North Carolina



Map courtesy NC By Train

Current North Carolina intercity passenger rail service consists of five trains in each direction each day operated by Amtrak and serving the Durham, Cary, and Raleigh stations. Four of the trains (Piedmont Service) travel between Charlotte and Raleigh, while the fifth (Carolinian) continues north from Raleigh to Washington and New York via a route that travels east from Raleigh to Selma, then turns north along the CSX "A Line" that parallels I-95. A sixth daily train (Floridian) serves the Raleigh and Cary stations on its route between Chicago, Washington, and Miami – the Floridian follows a similar route to the Carolinian north of Raleigh and uses the CSX "S Line" south of Cary. North Carolina's

combined Amtrak services ("NC By Train") served 720,000 passengers in 2024.

Planning for Southeast High Speed Rail envisions high-performing rail operating within the region along the NCRR corridor west of Raleigh at speeds up to 90 miles per hour and along the "S Line" north of Raleigh at speeds up to 110 miles per hour. The NCDOT Rail Division is leading efforts to provide a "sealed corridor" for higher speeds and additional trains, closing or bridging existing at-grade crossings where feasible to improve both safety and operations. The NCRR has led capacity studies to better understand the interplay of freight and passenger rail operations within the region and the range of track investments that might be needed to accommodate increased shared use.

Additionally, NCDOT has received funding from the FRA's "Corridor ID" program to examine other potential corridors that could support passenger rail service in the future. Among the awarded study corridors were three in the Triangle region: Fayetteville to Raleigh, Wilmington to Raleigh, and Winston-Salem to Raleigh. Work on these studies is currently underway.

Ensuring that any investments affecting our rail corridors are done with detailed attention to longer-term impacts on forecast freight movement, intercity passenger rail, regional rail connections envisioned in this MTP, and opportunities for high speed rail is a key strategy for the two MPOs in this plan. Ensuring that near-term decisions do not constrain choices or drive up costs for mid-term and long-term services is an important consideration for the MPOs. As both in-region rail connections are implemented, and intercity rail services connecting the Triangle to other regions are expanded, taking steps to make sure that service is fast and reliable will be important to attract and retain ridership.

7.10 - Airports

Raleigh-Durham International Airport (RDU) serves both MPOs with passenger and air cargo services. The airport is located on 5,000 acres near the boundary between the two MPOs in Wake County, and is governed by an authority with board members appointed by the largest jurisdictions in the two MPOs: Wake County, Durham County, the City of Raleigh, and the City of Durham.

The most recent year with statistics, 2024, was RDU's busiest year on record with 15.5 million total passengers, over 100,000 tons of enplaned and deplaned cargo, and 214,000 aircraft operations.

RDU constructed two major terminal projects over a decade ago, with Terminal 2 opening in 2011 and the reconstructed Terminal 1 opening in 2014. The airport is now embarking on several projects as part of RDU's "Transform RDU" program, which will spend $2.5 billion on improvements over the next 10 years:

- Runway 5L-23R replacement
- Terminal 2 expansion
- Parking expansion
- John Brantley Boulevard extension

RDU's master plan, Vision2040, was completed in 2017. Vision2040's baseline forecast envisioned growth in enplaned passengers (those boarding at RDU) from 5.5 million in 2016 to 8.5 million by 2040 – the actual number of enplanements in 2024 was 7.7 million, which appears to be outpacing the growth anticipated in the Vision2040 plan on an annual basis.

Two other publicly-owned general aviation airports are located within the boundaries of the Capital Area MPO: Triangle North Executive Airport in Franklin County and Harnett Regional Jetport in Harnett County. Triangle North Executive Airport (LHZ) has a 5,500-foot asphalt runway and approximately 110 aircraft are based at the airport. The Harnett Regional Jetport (HRJ) has a 5,000-foot asphalt runway and approximately 50 based aircraft. Both airports are planning improvement projects in accordance with their individual airport plans.

7.11 – Freight Movement and Logistics

Successful economic development depends on the fast and reliable movement of people, goods, and information. The Capital Area MPO and Triangle West TPO engaged in an extensive and systematic examination of freight trends and opportunities through a Triangle Regional Freight Plan to ensure that goods movement is a key component of long-term transportation investment decisions. The MPOs formally adopted recommendations in 2018, including some key freight movement forecasts and principles to guide MPO transportation investment decisions.

Additionally, NCDOT has identified a network of Strategic Transportation Corridors across that move high volumes of people and freight and are critical to the economic well-being of the state. Within the Capital Area MPO/Triangle West TPO area, there are seven identified highway and rail strategic transportation corridors:

I: I-85 corridor from South Carolina to Virginia, including NCRR Line from Hillsborough to Charlotte

L: US 1 corridor and CSX S Line from South Carolina to Virginia

M: US 64 east corridor from Raleigh to Nags Head

P: US 70 east corridor and NCRR Line from Garner to Morehead City

Q: I-40 corridor from Tennessee to Wilmington, including NCRR Line from Garner to Greensboro

R: US 64 west/NC 49 corridor from Raleigh to Charlotte, including ACWR rail line from Sanford/Aberdeen to Charlotte

V: US 264 corridor from Zebulon to Washington

The growing regional attention to freight movement has been matched at the state and federal levels. The federal Infrastructure Investment and Jobs Act (IIJA) and North Carolina's Strategic Transportation Investments (STI) law both place increased emphasis on freight planning and investment. Leveraging state and federal interest is a driving force in the region's approach to freight movement.

An examination of trends and forecasts for the regional freight plan found that:

- The highway system is and will remain the principal freight mode in the region – 80% of both freight tonnage and freight value in the region moves by truck. By 2050, the amount of freight moved by truck is expected to grow by a third. Because of its advantage in

moving heavy commodities, rail carries 16% of the region's freight tonnage but only 2% of its freight value, and is not forecast to grow significantly.

- Truck tonnages are expected to increase considerably out to 2050, especially for shipments to and from the Triangle region.
- Projects are needed to ensure that the roadway network keeps up with the rapid increase expected of inbound and outbound shipments, improving the routes that are already congested that provide regional connection to Interstates and the rest of the state.
- Total freight rail volumes are forecasted to have minimal growth in the Triangle region over the coming decades, primarily due to the decline in coal, which offsets growth in other areas – total tonnage is expected to remain roughly constant out to 2050.

Key freight movement principles that the MPOs will use to inform investment decisions include:

- As with the movement of passengers, paying close attention to the location of major freight facilities and destinations relative to the transportation network is important; linking industrial land use decisions to the careful design of road and rail access can yield cost-effective solutions. Just as transit-oriented development (TOD) has become a principal tool in regional land use planning to support transit corridor investments, freight-oriented development can help inform industrial land use planning and supply chain logistics along strategic freight corridors and in freight industry clusters.
- Logistics and supply chain performance expectations change rapidly. In particular, supply chains designed for home deliveries continue to grow in importance with the acceleration of e-commerce.
- On the road system, freight bottlenecks with significant truck volumes are key priorities, with a tiered approach to address (i) routes that connect the Triangle to other regions, (ii) distribution routes that link freight industry clusters with activity centers, and (iii) critical access routes serving industrial sites.
- On the rail system, network reliability and speed will be important considerations for goods movement as bulk commodities such as coal become less important, with the added benefit that reliability and speed are also important to passenger rail that shares tracks with freight trains.

7.12 – Policy Priorities and Special Plans & Studies

Both the Triangle West TPO and the Capital Area MPO have adopted a joint set of policy priorities to make clear their common interests and focus their joint efforts. The priorities are:

Invest for Success

- Create dedicated, recurring state funding as a match for competitive federal funds
- Create state economic development funding for multi-modal investments serving job hubs in small towns, rural areas and along major metro mobility corridors

Make Investments Reliable and Predictable

- Remove constraints and account for multimodal benefits for rail transit funding

Enable more Cost-effective Critical Corridor Investments

- Relax the cap on statewide tier funding within a corridor

Remove Funding Barriers for Small Towns and Rural Areas in Divisions with Large MPOs

- Exempt Surface Transportation Block Grant-Direct Allocation funding from the STI allocation

Make NC a Leader in Active Transportation Investments

- Surpass peer states in funding economically-beneficial and safety-focused bicycle & pedestrian projects

Strengthen Support for Demand Management & Technology

- Stabilize and grow NCDOT's investment in Transportation Demand Management (TDM) to match local and regional commitments
- Implement the Regional Technology (ITS) plan for roadways and transit

Recognize Statewide Projects in All Modes, Not Solely Roadways and Freight Rail

- Establish standards and scoring criteria for designated statewide passenger rail and trail investments

These priorities have been used in selecting investments and strategies included in this plan, and will be used for collaborating with federal, state and regional partners in pursuing funding, regulatory and programmatic changes that can be effective in implementing this plan.

Section 5.4 identified corridors studies, small area plans, feasibility studies, functional plans, and other similar efforts that have been completed or provided input into the development of the *Destination 2055* Metropolitan Transportation Plan.

This section, on the other hand, outlines recommended future plans and studies using a same table format as in Section 5.4. Although Table 7.12.1 is not designed to list *every* plan or study that may be undertaken, it indicates some of the major efforts that the two MPOs and their partners anticipate pursuing through their annual Unified Planning Work Programs (UPWPs), which are the planning budgets that guide MPO activities each fiscal year. Also included here are major efforts designed to improve the input data, accuracy, and functionality of the region's principal analysis tool, the Triangle Regional Travel Demand Model (TRM), and increased efforts to better track and report progress toward the achievement of this plan's vision, goals, and objectives.

Table 7.12.1: Recommended Plans and Studies

Plans/Studies/Activities involving both MPOs	Type
CommunityViz Land Use Model Updates. The 2055 MTP and its predecessors developed future growth scenarios based on a land use forecasting model called CommunityViz. The model provides population and job growth allocations in a format that can ben imported into the Triangle Regional Model (TRM). In preparation for the next MTP, the CommunityViz model will be updated to develop socioeconomic data for the year 2060, and to make other technical changes that streamline the process or improve the accuracy of the forecasts.	Transportation Model Improvement
Triangle Regional Model Service Bureau Activities. The Triangle Regional Model (TRM) Service Bureau oversees major model updates as well as shorter-term model improvements. Future work will include updates to the current Generation 2 (G2) model in preparation for the next MTP, including updated base and future year socioeconomic data and road/transit network data and technical changes to improve the functionality of the TRM.	Transportation Model Improvement
MPO Metrics Tracking. The MPOs and partners such as transit agencies will implement methods to support MTP performance measures, targets, and project tracking.	Performance Measurement
Intelligent Transportation System (ITS) Planning. The recent ITS Deployment Roadmap identifies a number of recommended planning activities related to ITS over the next few years, including a Fiber and Technology Deployment Plan, workshops on technology standardization and pilot projects, and an update to the region's ITS Strategic Deployment Plan every 5-10 years.	Regional Plan
Travel Demand Management Plan Update. The region's Travel Demand Management (TDM) plan, which guides the work of the Triangle Transportation Choices program, was originally developed in 2007 and most recently updated in 2014. An update to this plan is recommended in order to review and update the program's goals and objectives, and provide guidance on funding and the structure of the program.	Regional Plan
Connected Region. The Central Pines Regional Council is leading an effort to develop a regional-scale guide to align land use, transportation, housing, and other key regional infrastructure planning topics. Participation by the two MPOs will be critical to the success of this project.	Regional Plan
Plans/Studies in the Capital Area MPO	**Type**
North Falls Lake (Northwest) Area Study. Study in northwest Wake County and southern Granville County to evaluate conditions and develop recommendations for roadway and other modal improvements, utilizing a scenario planning process.	Small Area Plan
Eastern Wake Traffic Signal System Integration Study. Study examining expansion of City of Raleigh ATMS standards, enhancing relationships with NCDOT counterparts, and exploring partnerships between Raleigh and neighboring communities.	Technology Plan
Wake Bus Plan Update. Following adoption of the Wake Transit Plan update, the Wake Bus Plan will also be updated, including development of short-range transit plans for each operating agency in Wake County.	Transit Plan
Triangle Bikeway East NEPA/Design Project. Study to develop early-phase design plans and environmental analysis on the section of the proposed Triangle Bikeway between Research Triangle Park and West Raleigh.	Corridor Plan
Johnston County Transit Study. Study of transit propensity in urbanized portions of Johnston County.	Transit Plan
Apex Pleasant Plains Park Access Study. Study to evaluate new access and multi-modal connectivity to Pleasant Park.	Small Area Plan
Apex Rail Yard Relocation Study. Study to examine alternative locations and requirements for moving the CSX switching and yard operations out of downtown Apex.	Small Area Plan

Eastern Chatham Wildlife Crossing Study. Study of potential wildlife crossing improvements in eastern Chatham County.	Small Area Plan
Regional Advanced Air Mobility Study. Study of ways to incorporate advanced air mobility into future CAMPO planning efforts such as the MTP and Congestion Management Plan.	Technology Plan
Plans/Studies in the Triangle West TPO	**Type**
NC 54 Study. Corridor study for the segment of NC 54 in Research Triangle Park, creating a long-range vision for the corridor that incorporates plans for the RTP mobility hub, passenger rail, and future bus rapid transit lines in the corridor.	Corridor Plan
RTP Rail Platform Feasibility Study. Study to advance station work at the future RTP intercity rail station.	Project Plan
US 15-501 Corridor Study. Study of the US 15-501 corridor from Ephesus Church Rd in Chapel Hill to University Dr in Durham, to create a multimodal corridor that supports the TPO's adopted MTP goals.	Corridor Plan
UNC CoGen Rail Corridor Feasibility Study. Study evaluating the feasibility of transforming the active J-branch rail line into a repurposed transportation corridor.	Corridor Plan
US 70 East Study Phase II. Study includes additional traffic evaluation, analysis, and public engagement to advance a feasible and community-drive, safe and equitable multimodal transportation corridor concept on US 70 East.	Corridor Plan

Chapter 8: Our Financial Plan

There is an axiom that "if you don't have a plan to pay for it, you don't have a plan." Federal law requires that Metropolitan Transportation Plans include a financial plan; this means that the cost of the transportation facilities and services in the plan must be covered by state, federal, local, private and other transportation revenues that can be reasonably expected to be available. The financial plan provides a comparison of expected revenues and project costs from 2026 through 2055 – the 30-year period of this Metropolitan Transportation Plan.

All financial data in this section is presented in year 2026 "constant dollars", meaning the values indicate what it would cost to build the system if we paid for and built all the projects *today*. In reality, projects will be built over a 30-year timeframe and inflation will affect costs. The example below shows how dollar figures would change over time between Year 2026 constant dollars and the "current" dollars of future years, often called "Year of Expenditure" (YOE) dollars, based on a long-term annual discount rate (or inflation rate) of 2.5% used under this MTP. The example illustrates that it would take $108 in 2029 to pay for a project that would cost $100 if built in 2026. During the life of the plan, inflation will be higher in some years and lower in other years, but 2.5% annual inflation is a reasonable approximation of the historic long-term inflation pattern.

Appendix 11 provides additional information on both revenue and cost assumptions and translations between constant dollar values and year-of-expenditure values that take inflationary effects into account. Aggregate categories of costs and revenues are rounded, but individual project costs are reported precisely in the appendix to aid in the review and subsequent update of estimates.

The *Destination 2055 MTP* assigns projects to one of three time periods based on when a project would first be open to use (projects may be under construction in the prior time period):

- Near-term: 2026 to 2035
- Mid-term: 2036 to 2045
- Long-term: 2046 to 2055

These periods are used not only to distribute the total costs and revenues over the 30-year planning period, but also so the impacts of investment decisions can be measured against 10-year air quality benchmarks.

Although this financial plan addresses revenues and costs as if they were independent of one another, in North Carolina's transportation prioritization process they are tightly linked – many revenues are *only* available if corresponding costs are associated with narrowly-defined project types. The revenues section below discusses how this inflexibility affects the financial plan.

Table 8.1: Comparison between Constant Dollars and Year of Expenditure Dollars

Time Value of Money @ 2.5% annual inflation rate	2026	2027	2028	2029
Constant 2026 Dollars	$100	$100	$100	$100
Current Dollars (Year of Expenditure) for Year Shown	$100	$103	$105	$108

8.1 - Revenues

Revenues fall into one of two broad categories: "traditional" revenues from long-standing state and federal sources, and "special" revenues from locally-controlled sources or projected new state or local revenue streams. This section also highlights where "discretionary" or grant revenue sources are assumed, typically as federal shares of rail or bus rapid transit infrastructure projects.

For the near-term period of the plan, covering the 2026-2035 ten-year period, costs and revenues are based on the current 2026-2035 Transportation Improvement Program, on county-based transit tax revenue spreadsheets maintained by GoTriangle, and on local Capital Improvement Plans. Where projects from these sources begin in this first decade but continue to rely on additional revenues beyond 2035, the amount of revenues needed to complete the projects are deducted from the amount of funding available for additional projects in the second decade of the MTP (2036-2045).

Traditional State and Federal Transportation Revenues

To calculate a reasonable share of traditional state and federal revenues for complete corridors and roadways, which largely flow through NCDOT's Strategic Transportation Investments (STI) process, this MTP uses several primary sources:

Table 8.2: Traditional State and Federal Transportation Revenue Sources

Years	Revenue Projection Source
2026-2035	Actual 2026-2035 State Transportation Improvement Program (STIP) estimates for the 2026-2035 near-term period.
2036-2055	*NC Moves 2050* revenue projections of state funding for the 2036-2055 mid-term and long-term periods. *NC Moves 2050* is the NCDOT's current long-range statewide transportation plan, and includes a financial plan for estimating future available revenues through the state's Highway Fund and Highway Trust Fund through 2050. For the purposes of this MTP, these 2050 NCDOT forecasts were extrapolated out to 2055 using a linear trendline.
2036-2055	Based on NC Session Law 2022-74, 1.5% of future state sales tax revenue is directed toward the Highway Fund and 4.5% is directed toward the Highway Trust Fund (6% total). This amount was not included in the *NC Moves 2050* forecast since that plan predates the law change, and therefore this must be added into the projections discussed above. For the purposes of this MTP, future statewide sales tax revenues were estimated based on a linear trend of historic taxable sales data, and these amounts are incorporated into the projections of state funding available in the 2036-2055 mid-term and long-term periods.
2036-2055	Future federal funding in years 2036-2055 was estimated using current Infrastructure Investment and Jobs Act (IIJA) levels as the starting point and growing these funding levels into the future based on a linear trendline of federal program funding from 2013 through 2026 (the period of time covered by MAP-21, the FAST Act, and IIJA as the applicable federal transportation laws).

The majority of state and federal funding available for capital projects is incorporated into the STI process. STI revenues are divided into three categories of funding: Statewide Mobility, Regional Impact, and Division Needs. The forecasting method used in this MTP document assumed that CAMPO and TWTPO would each receive a portion of the Regional Impact and Division Needs revenues commensurate with each MPO's portion of the population within their respective regions and divisions (with the population shares changing over time based on the NC State Demographer's county population forecasts through 2055), and that CAMPO and TWTPO could assume up to a portion of Statewide Mobility revenues commensurate with the average proportion of this funding that has gone to each MPO in previous cycles under the STI policy (29% for CAMPO and 10% for TWTPO). Since statewide-tier revenues can only be expended on statewide-tier projects, the actual amounts of statewide-tier revenues were then adjusted downward as needed to match the statewide-tier project costs in the adopted plan.

Most maintenance and operations activities in North Carolina are funded through the state's Highway Fund. As described above, forecasts of this funding were developed based on *NC Moves 2050* and Session Law 2022-74. For the MTP, each MPO was then assumed to receive an amount of funding proportional to its population within the state (with the population shares changing over time based on the NC State Demographer's county population forecasts through 2055).

Congestion Mitigation and Air Quality (CMAQ) funds are exempt from STI, so they were calculated separately based on the method described above for federal funds.

Funding versus Financing
An Important Distinction

Funding is the actual revenue source used to pay for transportation facilities or services. **Financing** is a way to move future revenues through time to pay for facilities or services sooner. But financing does not "fund" these facilities or services – it is the underlying revenue source that does.

As an example from this plan, toll roads such as the NC 540 loop in Wake County, are built using bond financing. The bonds are issued to allow construction, and then are paid off over time using revenue sources such as toll income from road users and future traditional state revenue sources.

The financial model assumes a long-term 2.5% annual discount rate (or inflation rate) to translate between 2026 constant dollars and future year of expenditure dollars, since different data sources use different reporting methods. All revenues in this document are reported in year 2026 constant dollars. Although revenues are generally considered either "roadway" or "transit" revenues, some funds (such as in the federal Surface Transportation Block Grant (STBG) program) are not restricted to highways and can be "flexed" (transferred) to programs for other transportation modes such as transit, pedestrians, and bicycles.

The method used the fiscal year 2026-2035 State Transportation Improvement Program (STIP) for the years 2026 through 2035. The STIP identifies the budgeted state and federal funding source for transportation

projects and therefore is the best available source for near-term revenue forecasts.

The NCDOT financial model and STIP do not represent all of the available complete corridor and roadway revenues. The MPOs expect to have additional funding available from the following sources:

- Toll Revenues – a portion of revenues for managed lane and toll road projects are assumed to come from toll revenue bonds, which are paid back over time by users.
- Local Funding – local governments often issue bonds to finance specific projects such as roadways, intersection improvements, street paving, bicycle facilities, and sidewalks; the revenue to repay these bonds is typically the property or sales tax revenues received by the local government over time. These amounts are often shown in a local government's Capital Improvement Plan (CIP).
- Private Funding – sections of some roads in the 2055 MTP, or widenings of existing roads, will be paid for by private developers as they develop adjacent property. Additionally, some of the rail crossing-related projects include private funding from railroad partners.

Appendix 11 provides additional detail on the revenue source assumptions and calculations. The table below summarizes the complete corridor/roadway revenue sources and calculation assumptions.

Table 8.3: Complete Corridor & Roadway Revenue Assumptions

	Assumptions
Capital – Federal/State (STI)	2026-35 STIP for near-term period. *NC Moves 2050* state revenue forecast for 2036-50, extended to 2055 by linear trendline, with added funding from SL 2022-74 sales tax transfer. Federal revenue forecast based on linear trendline of historic funding levels. Division Needs and Regional Impact category amounts based on MPO population within Division or Region. Statewide Mobility category amount based on average performance from previous STI cycles.
Maintenance – Federal/State/ Other	Portion of anticipated NCDOT Highway Fund revenues relative to MPO population. Future revenue based on *NC Moves 2050* forecast for 2026-2050, extended to 2055 by linear trendline, with added funding from SL 2022-74 sales tax transfer.
Congestion Mitigation & Air Quality (CMAQ)	Based on MPO suballocation rules defined in Infrastructure Investment & Jobs Act (IIJA). Federal revenue forecast based on linear trendline of historic funding levels.
Toll Revenue	MPO staff forecasts
Local (Capital Improvement Programs)	MPO staff forecasts
Private Funds	MPO staff forecasts
Translation between 2026 constant dollars and YOE dollars	2.5% annual discount (inflation) rate

Existing Transit Revenues

The transit financial models discussed in an earlier section of this chapter are used to forecast transit costs and revenues. In April 2009, the North Carolina General Assembly passed the Congestion Relief and Intermodal 21st Century Transportation Fund (House Bill 148). This legislation permitted a local voter referendum to increase the sales tax to raise revenues for transit systems. The half-cent sales tax increase has been approved in Durham, Wake, and Orange Counties. There are several major transit revenue assumptions in Table 8.4 related to these sales tax revenue sources, as well as other sources such as municipal funding and/or set-asides of local funding for "non-supplementation" as required by House Bill 148. Additional detail can be found in Appendix 11.

Table 8.4: Major Transit Revenue Assumptions

	Assumptions
Year ½ cent sales tax began	Durham County: 2013 Orange County: 2013 Wake County: 2016
Sales tax growth rates[1]	Durham County: varies by year, between 2.6% and 5% growth Orange County: varies by year, between 2.3% and 4.5% growth Wake County: 3% first year, 4% annual growth thereafter
Vehicle registration fee growth rates[1]	Durham County: 1.5% annual growth Orange County: 1.5 % annual growth Wake County: 2.65% first year, 2% annual growth thereafter
Local property taxes for transit	Continued "non-supplementation" as required by HB148, estimated based on current budgeted levels
University-based systems	Continued Wolfline, Duke Transit, and NCCU Eagle Shuttle services paid from university sources; continued UNC-CH contribution to Chapel Hill Transit system
Projects that include federal Capital Investment Grant funding	Regional Rail, Bus Rapid Transit (BRT), and Rail/Multimodal Station projects (50% federal funding assumed)

[1]Taken from official forecasts as maintained by GoTriangle for use in the Durham, Orange, and Wake County Transit plans.

Additional/New Revenue Sources

The current "traditional" transportation revenue sources will not produce enough revenue to finance the multimodal transportation projects that are considered essential in the Triangle, and that are included in this plan.

Therefore, the MPOs have assumed additional/new revenue sources to address this funding gap. The MPOs have a reasonable expectation to realize these new revenue sources based on the many local and statewide commissions that have studied transportation financing and recommended new funding sources.

It is important to note the following background information on the additional/new revenue sources proposed in the *Destination 2055* MTP:

- These new revenue options would require legislation from the North Carolina General Assembly. The MPOs are not currently authorized to make these tax and revenue program changes.

- The plan assumes these new or additional revenue sources would only become available in the mid-term and long-term time periods, so would not start yielding revenue until 2036.
- The exact type and mechanism for increasing these revenues (e.g. sales tax, property tax, VMT fee, etc.) is not specified. Appendix 11 contains information about additional potential funding sources that could be used to generate these revenues.
- New or additional revenues are assumed to be put in place without the same constraints of existing revenues – the MPOs can assume more flexibility in the programming of these funds. CAMPO uses an investment mix approach to determine how this funding would be utilized in the future. Triangle West TPO assumes STI guidelines for the NC FIRST revenues and applies the sales tax equivalent revenues to active transportation and transit projects.

The figures at right describe the assumptions used to develop these new/additional revenue estimates.

The result of adding the NC FIRST Commission proportionate-share revenues and additional county-based sales tax-equivalent revenues would be an increase of **$20 billion** in revenues to the region over the 30-year plan horizon. This is an increase of 30% over the revenues that would be available without these sources.

Added Sales Tax (or equivalent) in MPO Counties

Level of funding equivalent to an additional one cent sales tax increase beginning in 2036 for transportation improvements. Future projections based on linear extrapolation of historic growth in taxable sales data and State Demographer future county population growth projections. Would require NC General Assembly action to implement. Similar funding levels may also be achieved through alternative sources/means.

Estimated Revenue Generated:

Capital Area MPO: $6.9 billion
Triangle West TPO: $3.0 billion

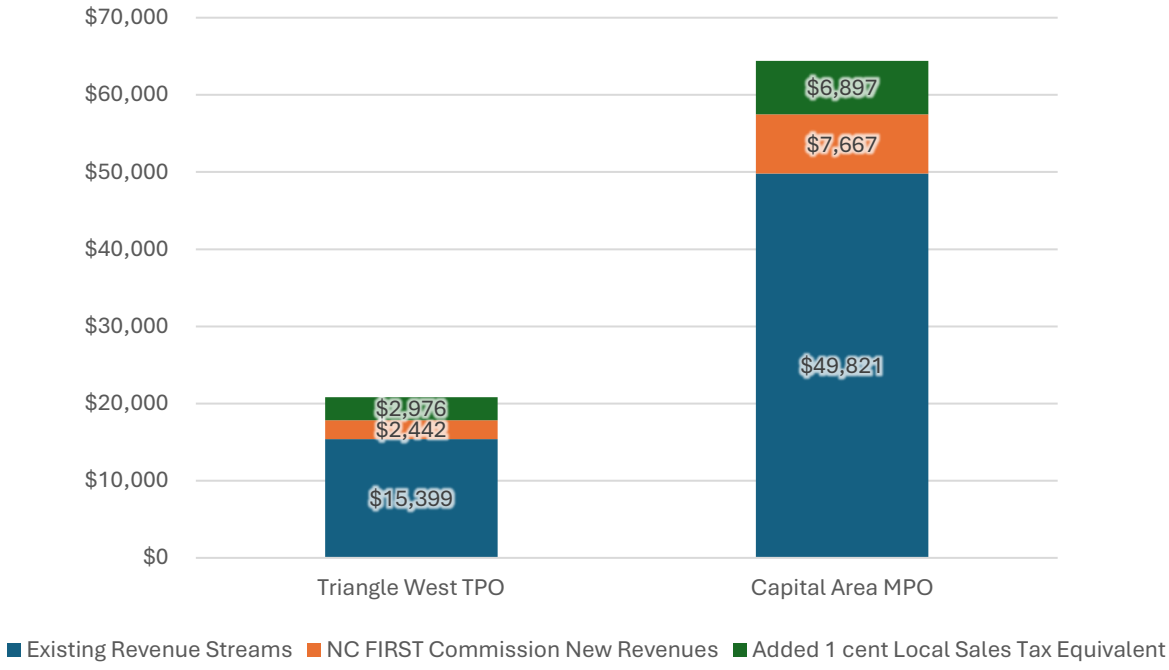
NC FIRST Commission Additional Revenues

Level of funding for transportation investments based on each MPO's population-based share of NC FIRST Commission's recommendation for an additional $20 billion in state transportation funding per ten-year period, beginning in 2036. NC FIRST report documents a number of potential sources for this funding. Would require NC General Assembly action.

Estimated Revenue Generated:

Capital Area MPO: $7.7 billion
Triangle West TPO: $2.4 billion

Figure 8.1: Revenues by Category by MPO (in Millions of Dollars)



Airport Revenues and Costs

The *Vision 2040* Master Plan for Raleigh-Durham International Airport (RDU), adopted in 2017, projected revenues to 2040 and defined a list of projects to be constructed using those revenues. Through 2040, the Airport forecast $2.7 billion in revenue (in year-of-expenditure dollars), from the following sources:

- $1.57 billion from RDU funds
- $659 million from RDU debt
- $182 million from federal funds
- $281 million from customer facility charges
- $10 million from NCDOT

The *Vision 2040* Master Plan showed the following expenditures through the year 2040, using the revenues identified above:

- $905 million in critical infrastructure preservation projects
- $1.8 billion in discretionary infrastructure projects

$1.37 billion of the plan's identified capital expenses were expected occur between 2026 and 2040 (within the timeframe of this Metropolitan Transportation Plan).

The Master Plan also identifies additional projects that could be constructed if demand warrants and additional funding can be secured:

- $677 million in private equity projects
- $2.04 billion in deferred projects

More recently, RDU has embarked on its "Transform RDU" program which will spend $2.5 billion over the next ten years on a number of improvement projects.

Infrastructure Investment and Jobs Act (IIJA)

The Infrastructure Investment and Jobs Act (IIJA), also called the Bipartisan Infrastructure Law (BIL), was signed on November 15, 2021, and serves as the current law governing federal transportation funding. IIJA is set to expire on September 30, 2026. IIJA provides funding both through traditional "formula" programs that flow automatically to recipients such as state DOTs and MPOs based on certain criteria and through "competitive" or "discretionary" grant programs wherein applicants apply for grant funding of specific projects and programs.

For the purposes of this MTP, these funding sources are included among the "traditional" sources discussed above.

Revenue Summary

In summary, the *Destination 2055 MTP* revenues:

- Include existing revenue sources, rates and proportionate shares as reflected in the current Transportation Improvement Program (TIP) for 2026-2035 and estimated future state and federal funding amounts for 2036-2055;
- Reflect current local transit tax revenue calculations from county-based fiscal spreadsheets, plus additional local/municipal transit revenues as available – university-operated services are assumed to be continued using university funding, but their revenues and equivalent costs are not included in the summary tables;
- Include toll funding directly tied to toll road projects;
- Include municipal and private roadway funding based on local Capital Improvement Plans and past trends;
- Include airport-based revenues in RDU's *Vision 2040* plan, plus NCDOT STI programming for airports and specific state funding budgeted for RDU, directly tied to airport costs;
- Add a new NC FIRST Commission-based revenue source for 2036-2055 based on population shares; and
- Add a new county-based sales tax equivalent revenue source for 2036-2055.

8.2 – Costs

The two MPOs used the same cost assumptions for the major parts of the plan, including:

Complete Corridor and Roadway: The plan used the following hierarchy for highway costs, in order based on their availability (the first item in this list for which a project cost estimate was available was the one used):

1. FY2026-2035 Transportation Improvement Program (TIP);
2. Available feasibility studies or express designs;
3. Strategic Planning Office of Transportation (SPOT) data available through the NCDOT Prioritization process; and
4. Highway cost estimate spreadsheet from NCDOT.

Bus and Rail: The MTP uses the GoTriangle-maintained financial models used for the Durham County, Orange County and Wake County transit plans and annual work plans,

and cost estimates from other available planning documents.

Travel Demand Management (TDM): Uses cost estimates based on the regional program administered by the Central Pines Regional Council.

Intelligent Transportation Systems (ITS): This MTP uses cost categories from the project list in the Triangle Region ITS Strategic Deployment Plan Update (2020). For projects with a TIP number or where a feasibility study has been prepared, the most recent TIP or feasibility study costs were used. For other projects, the mid-point of the cost range was used as a first-pass estimate. Time periods used in the MTP may differ from the time periods in the ITS plan update.

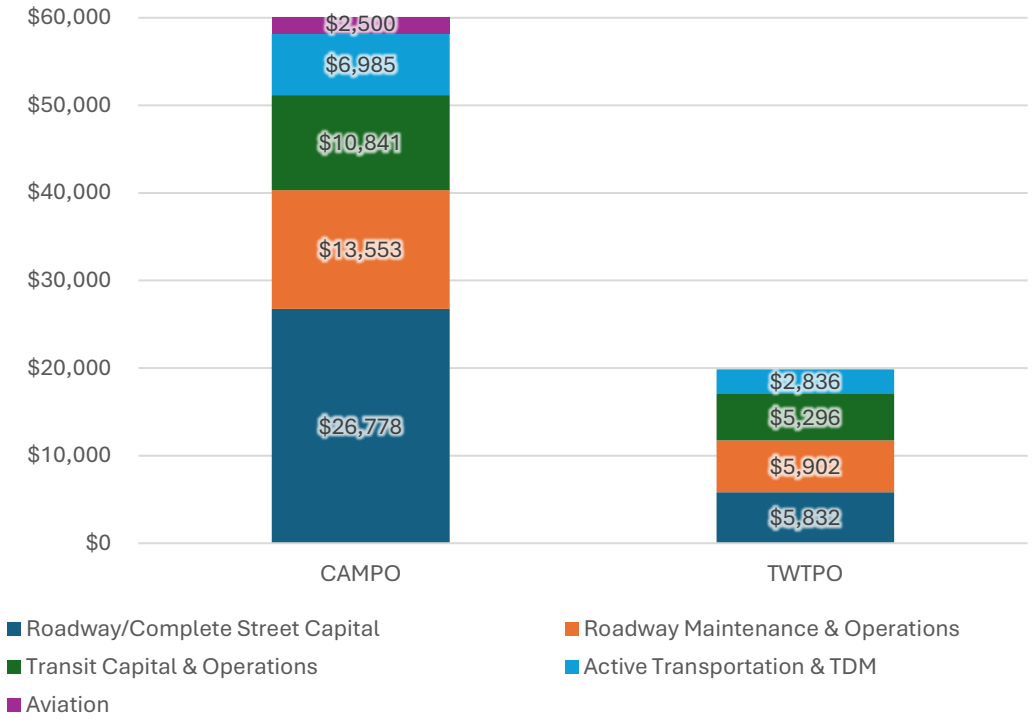
Airports: Costs match revenues from the RDU *Vision 2040* plan and STI airport projects.

Lists of projects and associated costs are shown in Appendices 2, 3, and 4, categorized by mode.

8.3 - Balancing Costs and Revenues

The figure below summarizes the sources and uses of revenues for each MPO, demonstrating that projects can be delivered based on revenues that can be reasonably expected during the time frame of this plan.

Figure 8.2: Transportation Investment by Category, by MPO (in Millions of Dollars)



Chapter 9: Critical Factors & Emphasis Areas in the Planning Process

Our transportation investments influence more than just our ability to get from one place to another. How and where we develop roads, transit lines and other transportation services has impacts on other things we value. The health and well-being of the natural environment, our neighborhoods, and those who live in them are vital to maintaining the quality of life our region is known for. Federal law recognizes these important considerations by requiring that MTPs specifically address ten planning factors:

1. **Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.**
2. **Increase the safety of the transportation system for motorized and nonmotorized users.**
3. **Increase the security of the transportation system for motorized and nonmotorized users.**
4. **Increase the accessibility and mobility of people and for freight.**
5. **Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth, housing, and economic development patterns.**
6. **Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.**
7. **Promote efficient system management and operation.**
8. **Emphasize the preservation of the existing transportation system.**
9. **Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.**
10. **Enhance travel and tourism.**

The matrix in Table 9.0.1 summarizes the extent to which the particular MTP goals in *Destination 2055* support these critical factors. The MTP goals are presented in Chapter 4 of this report, along with the objectives and performance measures that correspond to the goals. An examination of the objectives under a particular goal helps to further define that goal and explain how it supports a critical factor. In the matrix, if a goal directly supports a critical factor it is marked with a filled-in circle. If the goal supports a critical factor in a less-direct manner, then a half-filled circle is shown. When there is little relationship between a goal and a critical factor, no circle is shown.

In addition to a review of the link between the MTP goals and critical factors, this chapter highlights three topics in greater detail:

Air Quality and Climate Change: demonstrating that transportation plans will further clean air goals, meet air pollutant standards, and minimize climate change emissions;

Title VI Analysis: showing how transportation plans relate to communities that have been historically underserved or disproportionately impacted by transportation investments; and

Safety and Security: addressing how the transportation plans and the organizations that implement them promote safer and more secure travel choices.

Table 9.0.1: Crosswalk of MTP Goals and Federal Planning Factors

Connect People and Places	Promote and Expand Multimodal and Affordable Transportation Choices (CAMPO); Ensure that All People have Access to Multimodal and Affordable Transportation Choices (TWTPO)	Manage Congestion and System Reliability	Stimulate Economic Vitality and Opportunity (CAMPO); Stimulate Inclusive Economic Vitality (TWTPO)	Ensure Equity and Participation	Improve Infrastructure Condition and Resilience	Protect the Human and Natural Environment and Minimize Climate Change	Promote Safety, Health and Well-being
Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.							
●	◑	●	●		●		
Increase the safety of the transportation system for motorized and nonmotorized users.							
◑		◑			◑		●
Increase the security of the transportation system for motorized and nonmotorized users.							
						◑	●
Increase the accessibility and mobility of people and for freight.							
●	●	●	●		◑		
Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth, housing, and economic development patterns.							
●	●	●	●	●	◑	●	●
Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.							
●	●	●	●	◑			
Promote efficient system management and operation.							
●	●	●	◑		●		◑
Emphasize the preservation of the existing transportation system.							
		◑	◑		●	●	
Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.							
		●			●	◑	
Enhance travel and tourism.							
◑	◑	◑	●				◑

9.1 – Sustainability and Resiliency: Critical Environmental Resources

The Capital Area MPO and Triangle West TPO evaluated the 2055 MTP's impact on the sustainability and resiliency of critical environmental factors. The MPOs recognize that the MTP is one of the first steps in developing viable transportation projects that meet state and federal laws and regulations designed to protect public health and safeguard natural resources. In addition, the MPOs recognize the impact that transportation projects have on land development patterns. The transportation network and land use regulations must be complementary and work together to protect critical environmental resources.

This environmental evaluation at the long-range planning phase is the beginning of more extensive review. The NCDOT uses the Merger process to more effectively implement Section 404 of the Clean Water Act during the NEPA/SEPA decision-making phase of transportation projects. The Merger process is supported by the US Army Corps of Engineers, NC Department of Environmental Quality, Federal Highway Administration, stakeholder agencies, and local units of government to more effectively mitigate environmental impacts such as those from stormwater runoff.

The MPOs' environmental analysis was a voluntary effort coordinated with representatives from environmental and cultural resource agencies. At the Metropolitan Transportation Plan phase, a comprehensive analysis of the impacts each project may have on the environment is not possible, and this initial examination does not substitute for the more thorough project-level analysis that is required as part of the National Environmental Policy Act (NEPA). The analysis in this MTP was intended to identify and flag projects early in the process that might have significant impacts on the environment and that might require costly and disruptive mitigation measures.

For this analysis, CAMPO and Triangle West looked at all of the projects in their Comprehensive Transportation Plan (CTP) project lists to ensure that a comprehensive record of all the potential future projects was being evaluated. Many of the CTP projects are not in the final adopted 2055 Metropolitan Transportation Plan (MTP), and are considered to be beyond the 2055 horizon year of the MTP. The MPOs created maps of the CTP projects overlaid on several environmental and cultural GIS files. The maps are grouped in the following themes with the following datasets:

Biodiversity and Wildlife Habitat

- NC Conservation Planning Tool – Biodiversity and Wildlife Habitat Assessment (classifies and scores areas based on several metrics)
- Managed Areas
- Conservation Tax Credit Properties

Development

- Hospitals
- Schools (public and private), including Colleges and Universities
- Airports
- Water and Sewer Service Boundaries

Farmland

- NC Conservation Planning Tool – Farmland Assessment (classifies and scores areas based on several metrics)

- Voluntary Agricultural Districts

Forest

- NC Conservation Planning Tool – Forestry Lands Assessment (classifies and scores areas based on several metrics)

Gamelands, Hunting Buffers, and Smoke

- Gamelands
- Gameland Hunting Buffers
- Smoke Awareness Areas

Hazards

- Hazardous Waste Sites
- Animal Operation Facilities
- Active Permitted Landfills
- Hazardous Substance Disposal Sites

Historic Sites

- Local Landmarks
- Local Historic Districts
- National Register Historic Sites
- National Register Historic Districts

Parks and Recreation

- Open Space and Conservation Lands
- Boat Access Ramps
- Trails
- Greenways
- Local and State Parks

Water Resources

- Impaired Streams
- Outstanding Resource Management Zones
- Ecosystem Enhancement Program
- Targeted Local Watersheds

Water Supply

- Public Water Supply Sources
- National Pollutant Discharge Elimination System (NPDES) Permitted Sites
- Surface Water Intakes
- Water Supply Watersheds
- Nutrient Sensitive Waters

Wetlands and Floodplains

- Floodplain Mapping Information System (FMIS)
- Wetlands

The maps are shown in Appendix 12.

9.2 – Transportation, Air Quality and Climate Change

Transportation-air quality conformity ("conformity") is a way to ensure that Federal funding and approval goes to transportation activities that are consistent with air quality goals. Conformity applies to Metropolitan Transportation Plans such as this plan, as well as Transportation Improvement Programs (TIPs) and projects funded or approved by the Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) in areas that do not currently meet (or did not meet in the recent past) air quality standards for ozone, carbon monoxide, particulate matter, or nitrogen dioxide. These areas are known as "non-attainment areas" or "maintenance areas" respectively.

A conformity determination demonstrates that the total emissions projected for a plan or program are within the emissions limits ("budgets") established by the State Implementation Plan (SIP) for air quality, and that Transportation Control Measures (TCMs)—specific projects or programs enumerated in the SIP that are designated to improve air quality—are implemented in

a timely fashion. The MPOs are no longer required to conduct a regional emissions analysis to demonstrate air quality conformity, but are still required to prepare a Conformity Determination Report to demonstrate continued adherence to federal standards and processes.

Although the region is no longer required to calculate emissions for air quality conformity, both MPOs are committed to protecting air quality and health through transportation investments, for example, by continuing to operate a robust regional Transportation Demand Management program to encourage travelers to use lower-polluting forms of transportation such as transit, ridesharing, cycling and walking. The MPOs recognize that good air quality is a key component of the region's quality of life and that continued effort is needed to accommodate rapid growth in ways that will not harm air quality. Appendix 7 contains results from the air quality evaluation conducted on the land use pattern and transportation projects from the *Destination 2055* MTP.

Air Quality Analysis

Although not required, the two MPOs calculate the regional emissions that would be produced by the highway and transit usage predicted in this transportation plan, using the latest EPA air quality model, MOVES. The projected emissions for the plan are compared to the emissions limits (or "budgets") that were last established by the air quality State Implementation Plan (SIP). Appendix 7 reports those emissions so that the region can continue to understand and respond to air quality conditions. The Capital Area MPO and Triangle West TPO undertake this voluntary analysis to recognize the importance of clean air to our region.

Climate Change Emissions

Reducing greenhouse gas emissions and transitioning the region's transportation sector to a clean energy, resilient future are important considerations of the *Destination 2055* plan. From electrification of transit vehicle fleets to implementing alternative fuel corridors along the region's Interstates to pursuing land use and pricing strategies that influence travel behavior, the Capital Area MPO and Triangle West TPO are committed to projects and strategies that will reduce the region's climate impact and increase the region's resilience to climate change.

9.3 - Title VI Analysis

An important focus of the 2055 MTP analysis is to avoid, minimize, or mitigate disproportionately high and adverse effects on minority and low-income populations, and to ensure the full and fair participation by all potentially-affected communities in the transportation decision making process.

This Title VI analysis addresses fairness toward disadvantaged population groups and the possible exclusion of racial and ethnic minorities, low-income people, the elderly, and persons with disabilities or communication barriers from participation in decision making. The Capital Area MPO and Triangle West TPO have multiple goals that directly support this endeavor, including:

Protect the Human and Natural Environment and Minimize Climate Change

Ensure Equity and Participation

Promote and Expand Multimodal and Affordable Transportation Choices (CAMPO) | Ensure that All People have Access to Multimodal and Affordable Transportation Choices (TWTPO)

Stimulate Economic Vitality and Opportunity (CAMPO) | Stimulate Inclusive Economic Vitality (TWTPO)

Title VI of the Civil Rights Act of 1964 provides protection from discriminatory actions or outcomes from federal (or federally assisted or approved) actions. In terms of transportation planning, this means seeking to ensure that the disadvantaged:

- *Have access to the decision-making process*
- *Realize benefits from investments that are commensurate with the population as a whole*
- *Do not shoulder a disproportionate share of the negative effects and burden resulting from the implementation of transportation projects*
- *Do not incur a disproportionate share of the financial cost*

The Capital Area MPO and Triangle West TPO have carried out a comprehensive and thorough set of activities to ensure that disadvantaged persons, as characterized in the federal regulations, do not suffer discrimination in the transportation planning and implementation process. These activities have been in the area of both public participation and plan analysis. The following sections describe the activities that occurred as part of the 2055 MTP.

Access to Decision Making

The Capital Area MPO and Triangle West TPO ensured that all individuals, regardless of race, ethnicity, income, age, or disability, had access to the planning process. The MPOs began conducting public outreach for the 2055 MTP in late 2023 with the development of the MTP goals and continued through early 2026 with the review of alternatives, the preferred plan, and the adopted plan.

The public engagement activities of the two MPOs were guided by a joint *2055 MTP Development Public Engagement Plan*. The key features of the Engagement Plan include:

- Public engagement goals that include access for low-income, minority and other communities that have often not been involved, and an active effort to engage these communities.
- Multiple ways to review materials and provide feedback, including workshops, surveys, and virtual open houses.
- Accessible documents including infographics, short videos, interactive maps, and e-newsletters.

Chapter 5 of this report presents a summary of the MPOs' public engagement activities and demonstrates the activities and efforts to engage people from Title VI Communities. Key elements of the engagement with these communities include:

- Social media advertising that was focused on Title VI communities.
- Public engagement notices in Spanish-language and African-American oriented newspapers.
- Documents in Spanish.

- Community events or pop-up events located outside traditional meeting places, in transit-accessible locations, and at various times of day and days of the week.

Plan Benefits

Transportation infrastructure investments in the *Destination 2055* MTP will benefit the region's population in many ways, including increased mobility, safety, time savings, economic development, and leisure opportunities. The investments in transit and bicycle and pedestrian infrastructure in particular will benefit low-income populations that do not have access to personal vehicles and persons with disabilities who may not be able to operate vehicles. Currently, tens of thousands of households in the Triangle do not have access to personal vehicles.

The 2055 MTP is noteworthy for the high level of investment in modes that are important to Title VI communities: transit, bicycle, and pedestrian.

Table 9.3.1: Investments in Transit and Active Transportation Projects (as Percentage of Total Funding)

	Transit	Active Transport
Capital Area MPO	18%	12%
Triangle West TPO	27%	14%

The transit, bicycle and pedestrian network assumed in the 2055 MTP is a compilation of the local government and transit system plans. These plans typically included intensive public engagement practices, such as focus groups and targeted in-person workshops, to engage people from Title VI communities.

The 2055 MTP process has been concerned with measuring plan benefits in relation to Title VI communities. The MPOs developed a set of performance measures (see Chapter 4 and Appendix 13) that align with the MTP goals and objectives. A significant number of the performance measures are related to equitable benefit of the transportation investments, including:

- Average number of jobs within 30 minutes by mode (transit, auto, and walking) for Title VI communities
- Percent of Title VI communities located in "travel choice neighborhoods"
- Percent of Title VI communities with good or excellent access by mode (transit and walking)
- Percent of Title VI communities with less-than-average work trip travel times
- Percent of Title VI communities with less-than-average minutes of delay per capita
- Number of non-motorized fatalities and serious injuries in Title VI communities

Negative Project Impacts

The investments in transportation infrastructure included in the 2055 MTP will also have some negative impacts to some of the region's population. While road widening projects may increase overall mobility, the residents near the project may be affected negatively. Some of the negative impacts to nearby residents could include increased traffic through their neighborhoods, increased vehicle speeds, land acquisition for necessary right-of-way, relocation of homes and businesses, and a change in neighborhood character and land uses. A project's net impact is not always clear and may be perceived differently by different residents. A project that increases

property values, mobility, and economic development may also increase traffic, relocate homes and businesses, and change neighborhood character. Although it is difficult at this stage of project development to conclusively assess the overall impact of the highway projects included in the 2055 MTP, the two MPOs did complete several analyses of the potential negative impacts the projects could have on Title VI communities.

During the development of the 2055 MTP, MPO staff often qualitatively evaluated individual projects for potential negative impacts and often eliminated projects that had significant potential negative impacts. Staff eliminated some projects based on factors such as limited right-of-way, neighborhood and community characteristics, and the historical impact of urban renewal.

The Capital Area MPO and Triangle West TPO analyzed the potential impacts of the 2055 MTP highway projects and transit corridors to ascertain whether the potential negative project impacts might be disproportionately impacting Title VI communities and whether benefits appeared to be equitably distributed. This analysis was completed for the plan as a whole. Individual projects in the 2055 MTP will be studied in more depth during the project development and design stage to better understand the negative impacts and positive benefits of that particular project. The negative impacts can often be mitigated by using context sensitive design.

Determination of Title VI Communities

The Capital Area MPO and Triangle West TPO explored different methods to get at the fundamental question of how to define Title VI communities. Three principles guided the analysis:

- If everybody is special, then nobody is special – if the threshold is set too low then it could mask real and important differences between locations;
- Be as inclusive as possible in light of the above – do not leave out areas that could sustain meaningful negative impacts from the decisions of this plan; and
- The final analysis should yield a pattern that allows for targeted outreach and a meaningful analysis of overall transportation investments.

Based on these guiding principles, the MPOs gave careful consideration to the data values and sources available for various protected classes and determined to use the following:

- Use of census block groups as the geographic unit of measure – block group data is updated annually and some datasets are not available at a smaller geographic scale than the block group, and this also helps compare urban, suburban and rural areas in an "apples-to-apples" way;
- Use of "median" data, which reduces the effect that extreme outlier data can have on the available datasets;
- Measuring each item as a percentage rather than a raw number, which also helps to ensure an "apples-to-apples" comparison between different block groups.

The MPOs also tried to match the data that are available for the protected classes covered under the umbrella of the Title VI program. In 2017, the MPOs worked closely with the Central Pines Regional Council, the

NCDOT Community Studies Unit and Office of Civil Rights, and the Federal Highway Administration to review methodologies and determine data thresholds. Given the relatively even distribution of men and women and people with disabilities in the region, gender and disability were excluded from the spatial analysis. Zero-car households were added as a group (in addition to the other Title VI protected classes) because this is a spatially-recognizable group that is greatly affected by transportation investments.

The Capital Area MPO and Triangle West TPO use similar but slightly different methods of calculation for this analysis, as described below. In both methods, block groups are flagged for meeting/not meeting the threshold value on each factor and a composite map is developed showing the number of factors that were flagged for each block group.

Table 9.3.2: Title VI Community Factors

Capital Area MPO (six factors)
Elderly
Hispanic/Latino
Limited English Proficiency
Low-income Household
Non-white Race
Zero-car Household
Triangle West TPO (five factors)
Racial or Ethnic Minority
Elderly
Limited English Proficiency
Low-income Household
Zero-car Household

It is important to understand that these are regional-scale, planning-level proxies for actual Title VI communities. When working with individual projects or specific outreach efforts, this analysis is just a guidance or screening tool to begin the identification of the actual communities.

The results of this selection process are depicted in Figure 9.3.1. Additional maps that display the communities of concern and the highway and transit projects are shown in Appendix 12.

The two MPOs determined the percent of total 2055 MTP highway project length and the percent of total 2055 MTP cost by project type that were in any block group with the presence of any protected class in the top quartile (top 25% of block groups). The results of this analysis are shown in Table 9.3.3. Transit investment corridors were also analyzed for length, but not cost since they are not project-specific.

Project Portfolio

This section of the document is still being finalized at this time and will be updated once available. Information in Table 9.3.3 will be updated once available as well.

Figure 9.3.1: Title VI Communities

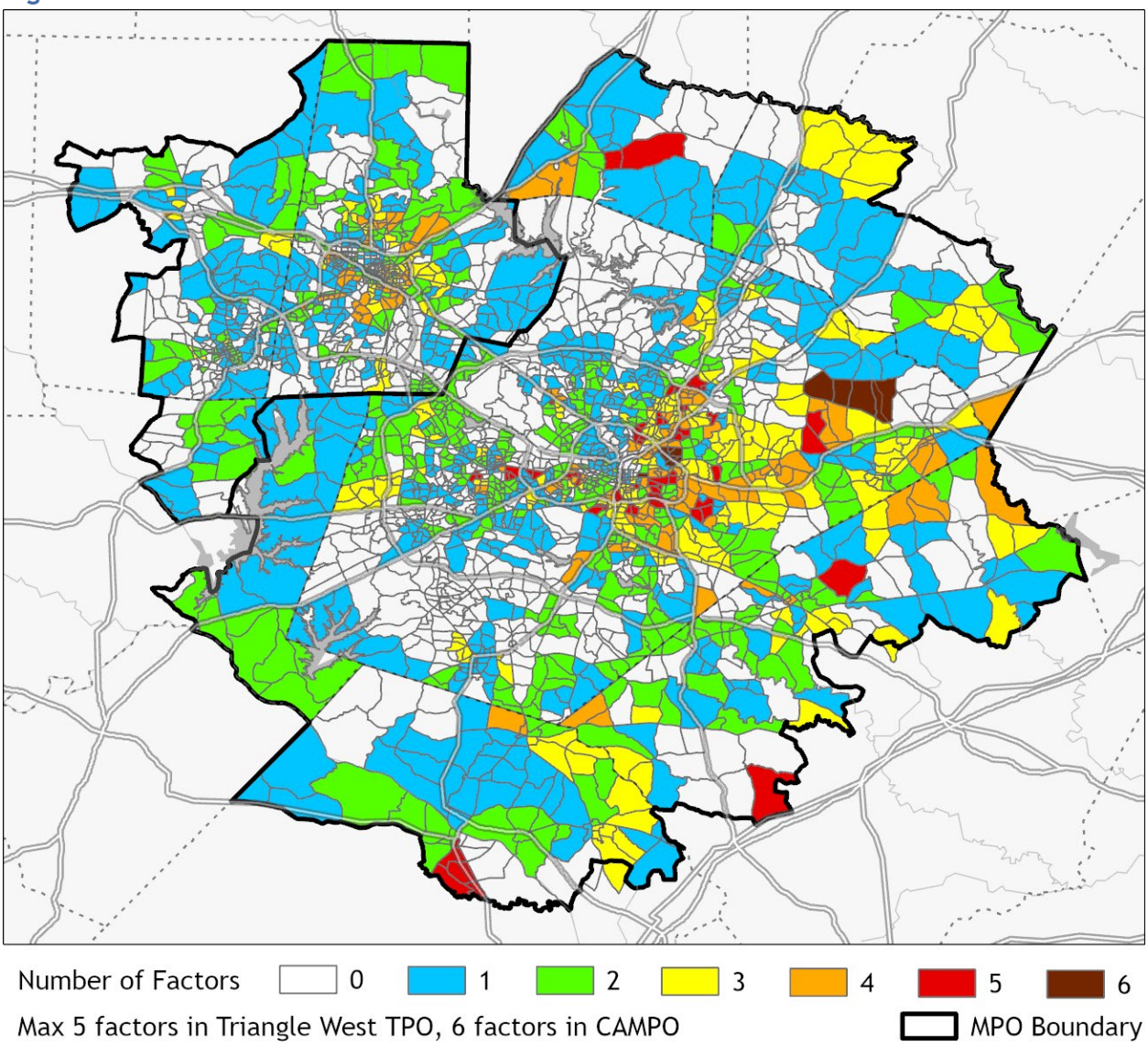


Table 9.3.3: Project Portfolio Impact on Title VI Communities

Regionwide	Total Miles	Miles in Title VI Community	% in Title VI Community	Total Investment	Investment in Title VI Community	% in Title VI Community
New Location Highway	X	x	x	x	x	X
All Other Highway	X	X	X	x	x	x
Existing Highway Widening	X	X	x	x	x	X
Transit Corridors	x	X	x	*Cost information not available at project level*		

CAMPO	Total Miles	Miles in Title VI Community	% in Title VI Community	Total Investment	Investment in Title VI Community	% in Title VI Community
New Location Highway	X	x	x	x	x	X
All Other Highway	X	X	X	x	x	x
Existing Highway Widening	X	X	x	x	x	X
Transit Corridors	x	X	x	*Cost information not available at project level*		
TWTPO	Total Miles	Miles in Title VI Community	% in Title VI Community	Total Investment	Investment in Title VI Community	% in Title VI Community
New Location Highway	X	x	x	x	x	X
All Other Highway	X	X	X	x	x	x
Existing Highway Widening	X	X	x	x	x	X
Transit Corridors	x	X	x	*Cost information not available at project level*		

Potential Benefits, Burdens, and Mitigation Strategies

It is difficult to assess overall benefits and burdens at a regional scale. As each transportation project moves into the development and design stage, the benefits and burdens can be more accurately assessed and identified. Nonetheless, at the regional planning stage we can generally identify potential benefits and burdens for different types of projects to provide a template for planners, engineers, residents and elected officials to evaluate projects. The series of tables below provides a template listing the generalized benefits, burdens, and mitigation strategies (to address the indicated burdens) for different types of transportation projects.

Table 9.3.4: Potential Benefits, Burdens, and Mitigation Strategies

	Potential Benefits	Potential Burdens	Mitigation Strategy Examples
Bicycle & Pedestrian	Reduced emissions	Impact to motor vehicle capacity	Use ITS to make timing of ped crossing and roadway signals as efficient as possible for all users
	Reduced parking need	Impact to motor vehicle travel times	Grade separate bike and pedestrian crossings where feasible
	Community health improvements	Additional conflicts at intersections	Add pedestrian crossing time to signal; add safety features in design (e.g. bike boxes and shorter vehicle turning radii)
	Increased cyclist and pedestrian safety	Need for additional right-of-way	Reduce vehicular lane width, which has added benefit of slowing motor vehicle speeds around bicyclists and pedestrians
	Access for households without vehicles	Need for additional structures/ other construction concerns	Fund and build roadway and bike/ped facilities through single integrated project (Complete Streets)

	Potential Benefits	Potential Burdens	Mitigation Strategy Examples
Roadway Operational Improvements	Reduced crashes and/or serious crashes	Increased congestion and reduced access to adjacent land during construction	Re-route traffic to major roads where possible; limit construction closures to nights and weekends
	Better bicycle, pedestrian & transit travel	Additional shoulder or other changes can increase corridor width	Use curb and gutter instead of open swale to reduce footprint
	Reduced travel time	Adjustment period for user behavior (new designs can be confusing at first)	Education and outreach campaign prior to opening of new traffic pattern

	Potential Benefits	Potential Burdens	Mitigation Strategy Examples
New Location Roadway	Increased connectivity and mobility	Induced demand (added vehicle miles traveled)	Construct new facilities as variable rate tolled facilities that can have dynamic pricing based on peak hour demand. Include bike and ped facilities to encourage short trips not to use motor vehicles.
	Increased operational efficiency and network redundancy	Noise and emissions impacts to existing land uses & neighborhoods	Construct noise walls where warranted, reduce speeds, and minimize signalized intersections for idle reduction
	Economic impacts: freight efficiency and catalyst for land use changes	New traffic patterns can push congestion to new locations	Find those locations in the model and plan for them accordingly in the MTP
	Reduced travel time	For freeways, benefits are only to motor vehicle users; for transit, benefits are only to express bus service	Include bike and ped provisions as part of roadway project; provide for BRT stops along limited access corridors

	Potential Benefits	Potential Burdens	Mitigation Strategy Examples
Transit Corridors	Improves mobility for people without access to vehicles	Diesel buses are noisy and emit noxious fumes	Convert bus fleets to electric, hybrid, or natural gas propulsion
	Increased travel capacity by adding service instead of increasing the physical footprint of the facility	Bus stops in the travel lanes reduce overall roadway capacity and create a negative image of bus transit	Get enabling legislation to require motorists to yield to left-signaling buses; work with transit agencies to incorporate bus lane pullouts into roadway projects
	Reduction in vehicle miles traveled (VMT)	Transit trips are not time-competitive	Add bus-only lanes, signal queue-jump, etc.; increase headways and service hours; add cross-town routes
	Net reduction in traffic congestion	Fixed route transit does not serve the entire region	Work with on-demand service providers and human service agencies to fill service gaps where fixed routes are not feasible financially or operationally

Title VI Community and Project Maps

Readers can view an interactive, online map of the Title VI Communities with the 2055 MTP highway and transit projects overlaid in order to view the distribution of MTP investments. The online map is available from the 2055 MTP webpages of both the Capital Area MPO and the Triangle West TPO. Readers can also view regional-scale copies of these maps in Appendix 12 of this report.

Financial Impact

Finally, we should consider whether the disadvantaged population might bear a disproportionate share of the financial cost of the plan. The 2055 MTP is financed by both traditional and new revenue sources. The MTP does not include changes to traditional funding sources, which are mostly from state and federal gas taxes, vehicle registration fees, highway use taxes, and some general funding (e.g. individual and business taxes). Given the ongoing status of these revenue sources, this discussion does not address the traditional funding sources.

The MTP also accounts for sales tax and registration fee increases that were approved in recent years for use on new or expanded transit projects and services. These tax and fee increases are likewise already in place at the time of this plan's adoption.

The *Destination 2055* MTP envisions two additional potential new sources of revenue:

- Toll roads and managed lanes
- Sales tax equivalent increase in funding at local level

Toll roads, including managed lane projects, would require the payment of tolls to use the roadway (or the express lanes in the case of managed lanes). Low-income populations will still have the option to use the existing free general purpose lanes on a managed lane project, or to use free parallel facilities on a traditional toll road project. High-occupancy vehicles may also be able to use the new managed lanes free of charge but that determination would not be made until a project financial plan is completed for an individual project. Toll roads and managed lane projects will require more detailed reviews during project development. The MPOs will advocate for mitigation measures if there are significant negative impacts for Title VI communities. The *Triangle Strategic Tolling Study* (2019) identified some potential mitigation measures and further discusses this issue.

The *Destination 2055* MTP financial plan also identifies a new revenue stream as a sales tax equivalent. Given that there is already a ½ cent sales tax for transit in Wake, Durham, and Orange Counties, this language is used to provide readers with a sense of scale that the new revenue stream might have in terms of revenue and economic impact. This report cannot assess the financial impacts to the Title VI communities because the new revenue vehicle has not yet been defined at this point in time. The revenue vehicle could be an increase in property, sales, or gas taxes, or implementation of a local income tax. Additionally, the property and/or income taxes could have progressive provisions that exclude or advantage lower-income households, and sales taxes could be defined to exclude certain necessities such

as food, medicine, and utilities to mitigate the impact on lower-income households.

9.4 – Safety and Security

Metropolitan Planning Organizations are being encouraged to effectively address safety and security issues in accordance with policies originally outlined in the Fixing America's Surface Transportation (FAST) Act and continued in the Infrastructure Investment and Jobs Act (IIJA).

Federal requirements maintain the existing core program called the "Highway Safety Improvement Program" (HSIP). This program is structured and funded to make significant progress in reducing fatalities on highways as well as other modes that use highways, railroads, and other conduits within the transportation network. The HSIP increases the funds for infrastructure safety and requires strategic highway safety planning focused on measurable results. Other programs target specific areas of concern such as work zones and older drivers. Pedestrians, including children walking to school, are also a focus area for the program.

Both the Capital Area MPO and the Triangle West TPO have been proactive in addressing safety and security as a component of our overall transportation planning processes by pursuing the following actions:

Safety Action Planning

Both the Capital Area MPO and Triangle West TPO have recently developed regional safety action plans to identify ways to reduce fatal and serious injury crashes.

The CAMPO *Blueprint for Safety* was developed in partnership with NCDOT and identifies strategies and actions to improve roadway safety in the CAMPO region. The plan identifies areas of high risk for serious injury and fatal crashes and recommends safety enhancements and countermeasures that can be implemented. The overarching goal of the *Blueprint for Safety* is to assist CAMPO, NCDOT, and municipalities with taking a more proactive approach to decreasing serious injury and fatal crashes.

The Triangle West TPO *Safe Streets for All Regional Safety Action Plan* provides a snapshot of the types of crashes, their severity, and the locations of these crashes throughout the region and within the municipalities of the Triangle West planning area. The plan guides the development of new transportation projects, programs, and policies for improving the overall safety of transportation in the region.

Both of these plans are based on the "Safe System Approach" advocated by the Federal Highway Administration. This approach acknowledges that death and serious injuries are unacceptable, humans make mistakes, humans are vulnerable, responsibility is shared, safety is proactive, and redundancy is critical; strategies pursued under the Safe System Approach focus on safer people, safer vehicles, safer speeds, safer roads, and improved post-crash care.

In addition to the MPO-wide regional safety action plans discussed above, several municipalities within the region have also developed or are in the process of developing safety action plans, including Raleigh, Apex, Knightdale, and Morrisville.

Vision Zero

This new approach to traffic safety maintains that the loss of even one life or serious injury on our roads is not an

acceptable price to pay for mobility. Designers and users of the roads share responsibility for the safety of all road users under the Vision Zero approach. Vision Zero views human error on roadways as inevitable, and advocates for roadway and vehicle design that accounts for human mistakes. Vision Zero uses the "5 Es" strategy – education, encouragement, enforcement, engineering, and evaluation – to achieve zero fatalities and severe injuries on roadways. First implemented in Sweden in the 1990s, Vision Zero has achieved great success in Europe and continues to gain momentum internationally and throughout the United States.

The NCDOT adopted a Vision Zero program, "NC Vision Zero," in 2016. NC Vision Zero serves as an umbrella organization for Vision Zero programs throughout the state. NC Vision Zero provides data, research, and other resources to support Vision Zero programs across North Carolina. NC Vision Zero has also assembled a statewide Vision Zero stakeholder group in order to facilitate communication between traffic safety stakeholders.

The Triangle West TPO adopted a Vision Zero resolution of support in 2017. Additionally, a number of local jurisdictions in the Triangle region have adopted Vision Zero resolutions, including:

- Apex (2020)
- Carrboro (2022)
- Cary (2025)
- Chapel Hill (2021)
- Durham (2017)
- Knightdale (2022)
- Raleigh (2022)

Video Surveillance

The transit agencies in both MPOs (GoRaleigh, GoDurham, Chapel Hill Transit, GoCary, GoTriangle, and are human service providers) have or are in the process of providing on-board video surveillance cameras and transit station camera detection as a deterrent to crime, as well as providing Mobile Data Computers/ Automatic Vehicle Locators on their vehicles.

Safe Routes to School

The Capital Area MPO has created a regional Safe Routes to School (SRTS) program that is designed to coordinate SRTS activities throughout the MPO as well as provide policy leadership and technical assistance to local agencies and schools. Agencies within the Capital Area MPO are continuing to develop and implement SRTS activities that will benefit elementary schools and their adjacent neighborhoods throughout the community. Many local communities also have Safe Routes to School initiatives.

Safety Metrics

Both MPOs include crash safety metrics when determining the technical scoring and prioritization of roadway projects for their Transportation Improvement Programs.

"Four Es" for Biking and Walking

Both MPOs have adopted bicycle and pedestrian plans that include four significant pillars to strengthen the role of bicycle and pedestrian facilities in overall transportation planning. The "four Es" (education, engineering, enforcement, and encouragement) bring attention to the importance of safety through various public service announcements in the local media focused attention to these key areas of

transportation network development. Furthermore, both MPOs continue to remain active in promoting bicycle and pedestrian activities through events such as Bike to Work Week. These programs impact the region's overall transportation culture by promoting safe bicycle and pedestrian travel as a valuable mode of movement through the region.

Watch for Me NC Campaign

Both MPOs have incorporated expansion of bicycle and pedestrian accommodations and walkway infrastructure through both on-road and off-road facilities as part of their bicycle and pedestrian planning. The presence of walkway infrastructure will have a significant impact in the reduction of pedestrian crashes (particularly "walking along road" pedestrian crashes, which research suggests can be reduced by 88% by adding walkways). The concern about pedestrian safety in the state of North Carolina has encouraged NCDOT to host pedestrian safety classes – these classes have been taken by staff from both MPOs. Both MPOs, in cooperation with the UNC Highway Safety Research Center and NCDOT, have participated in the state's "Watch for Me NC" campaign. This campaign is intended to improve pedestrian safety through educational messages directed at both pedestrians and drivers, as well as encouraging police enforcement of current pedestrian laws.

Incident Management

Both MPOs have funded an Incident Management Plan, which included strategies for improving responder safety, safe and quick clearance activities, and prompt, reliable, and interoperable communications.

The program directly addresses eight of the twelve strategies aimed at improving responder safety and the safe, quick clearance of incidents – particularly along Interstate 40 and other Interstate/freeway candidate facilities in the region. Both MPOs have been active with incident management planning – some accomplishments include the following:

Incident Management Activities

Starting in 2013, various service agencies have been involved in creating a coordinated traffic incident management program. Studies indicate that 70 percent of all drivers do not know the state has fender bender and "move over" laws, therefore an effort is being made to make the public aware of those laws.

Incident Management Subcommittee

An incident management subcommittee was created to develop an MOU for CAMPO and to develop a public education campaign for motorists. The MOU has been endorsed by the emergency response agencies throughout the region. It is a non-binding statement of principles, but all parties agree that the MOU is important. Roles at incident scenes have been agreed-upon by various responder agencies. This was taken to local police and fire associations with agreement from both groups.

Media Buys

NCDOT worked in cooperation with the MPOs to purchase billboards to advertise a "Move Over and Fender Bender Laws Ad Campaign." NCDOT staff also worked to host a news conference that included the Secretary of NCDOT as well as leaders of the Incident Management Subcommittee to address the Move Over and Fender Bender public service announcements (PSAs). Furthermore, NCDOT's Dynamic Message

Signs (DMS) have been used to display the Move Over and Fender Bender PSAs, along with radio ads for a brief period of time. The NCDOT has also used social media to broadcast information concerning the laws.

Traffic Incident Management Memorandum of Understanding (MOU)

The final draft of the MOU was presented and endorsed by both the Incident Management Subcommittee and the Congestion Management Process Stakeholders Group. The MOU was circulated throughout the region for review and adoption by local government boards.

Safety Audits

Both MPOs receive traffic crash data from NCDOT's Transportation Mobility and Safety Division. The aforementioned division uses this data for Road Safety Audits of state-maintained roads. Both MPOs will continue to work with NCDOT's Transportation Mobility and Safety Division to utilize data from future road safety audits to prioritize and fund future road projects.

Safety Countermeasures

Additional safety countermeasures that are utilized by both state and local agencies within both MPOs include:

- Buffers or planting strips
- Marked crosswalks
- Road diets (narrowing or eliminating travel lanes on roadways)
- Traffic calming/traffic control devices
- Roundabouts and four-way-stop intersections

Both MPOs will support safety countermeasures on roads, and at signalized and unsignalized intersections where needed to ensure safety for the traveling public.

Intelligent Transportation Systems (ITS)

Both MPOs participated in the most recent Triangle Regional ITS Strategic Deployment Plan update, which was finalized in 2020. The MPOs have created a joint ITS working group to prioritize and implement recommendations from the plan. One of the goals of the ITS Strategic Deployment Plan is to "advance safe and efficient movement of people and goods throughout the region", with three objectives under this goal specifically related to safety:

- Clear 90% of incidents in 60 minutes or less on the principal arterial network
- Reduce the number of crashes per 100 million vehicle miles by 10% over a three-year floating average on the principal arterial network
- Decrease secondary incidents by 10% on the principal arterial network

9.5 - The Infrastructure Investment and Jobs Act (IIJA)

The Infrastructure Investment and Jobs Act (IIJA) instituted new planning requirements in 23 CFR 134 that are relevant to the MPOs' transportation plans. The new requirements (paraphrased in italics) and a discussion of how the MPOs have responded to these are presented below.

MPO Consultation in Plan and TIP Coordination (23 CFR 134(g))

- *Clarification that for air quality non-attainment purposes, each MPO has authority over its census-designated urbanized area and coordination is required between MPOs that cross urbanized area boundaries (134(g)(1))* –

The Capital Area MPO and Triangle West TPO conduct both their MTP and their air quality conformity processes in coordination with each other, producing joint documents.

- *Addition of a requirement that when more than one MPO is designated within an urbanized area, the MPOs must ensure the consistency of any data used in the planning process, including information used in forecasting travel demand (134(g)(4))* – The Capital Area MPO and Triangle West TPO perform a joint process for the development of their Metropolitan Transportation Plans, and have a jointly-developed and adopted travel demand model for forecasting purposes.

- *Clarification that multiple MPOs within a single urbanized area are not required to jointly develop a unified long-range transportation plan or unified TIP (134(g)(5))* – The Triangle West TPO and Capital Area MPO work collaboratively to develop their Metropolitan Transportation Plans, but the plans are adopted by each MPO separately for the elements relevant to its own planning area. The two MPOs coordinate on the development of many planning products and processes, but continue to adopt MTPs and TIPs separately.

Development of Transportation Plan (23 CFR 134(i))

- *Addition of language that MPOs may use social media and other web-based tools to encourage public participation and solicit feedback during the planning process (134(i)(6)(D))* – Both the Capital Area MPO and the Triangle West TPO use social media, websites, and other internet-based means to engage with the public during planning processes, including the development of this 2055 MTP.

Housing Coordination (23 CFR 134(a), (g), (h), (i), and (k))

- *Addition of language that it is in the national interest to better connect housing and employment (134(a)(1)), that MPOs should consult with officials engaged in housing planning as part of MTP and TIP development (134(g)(3)(A)), and that ensuring consistency between transportation plans and housing plans is within the scope of the MPO's transportation planning role (134(h)(1)(E))* – both MPOs coordinate closely with local planning staff who are engaged in housing-related planning as part of the development of the land use and socioeconomic forecasts for the MTP. Additionally, the 2055 MTP includes analysis of the potential for affordable housing opportunity sites in proximity to proposed transit projects and services.

- *Addition of language recommending that MPOs consider the distribution of population and housing as a component of scenario planning (134(i)(4)(B))* – the two MPOs considered an "opportunity place" development pattern that included additional housing in transit-served locations, mobility hubs, and affordable housing opportunity sites as part of the 2055 MTP alternatives analysis.

- *Addition of language that affordable housing organizations, among a list of other stakeholders, shall be provided with a reasonable opportunity to*

comment on the transportation plan (134(i)(6)(A)) – both MPOs reach out broadly to a wide range of stakeholders during the MTP development process. All persons and organizations have an opportunity to comment on and provide input to the plan.

- *Addition of language permitting coordinated/integrated planning of housing, transportation, and economic development strategies eligible for funding through Title 23 and Title 49, including development by MPOs that are designated as Transportation Management Areas (TMAs) of a Housing Coordination Plan (134(k)(4))* – Neither the Capital Area MPO nor the Triangle West TPO has developed a Housing Coordination Plan at this time.

Chapter 10: Post-2055 Vision (Comprehensive Transportation Plan Projects)

Many worthy projects that would help ease congestion, improve access, and provide travel choices are not able to be funded within the constraints of existing and reasonably-anticipated revenue sources, and therefore are not included in the fiscally-constrained 2055 Metropolitan Transportation Plan. These projects are typically included in each MPO's Comprehensive Transportation Plan (CTP) instead.

The Comprehensive Transportation Plan for the **Triangle West TPO** area (known as the Durham-Chapel Hill-Carrboro MPO at the time) was adopted in 2017, and is available on the Triangle West TPO website. Since adoption, there have been several minor amendments, the most recent occurring in 2025.

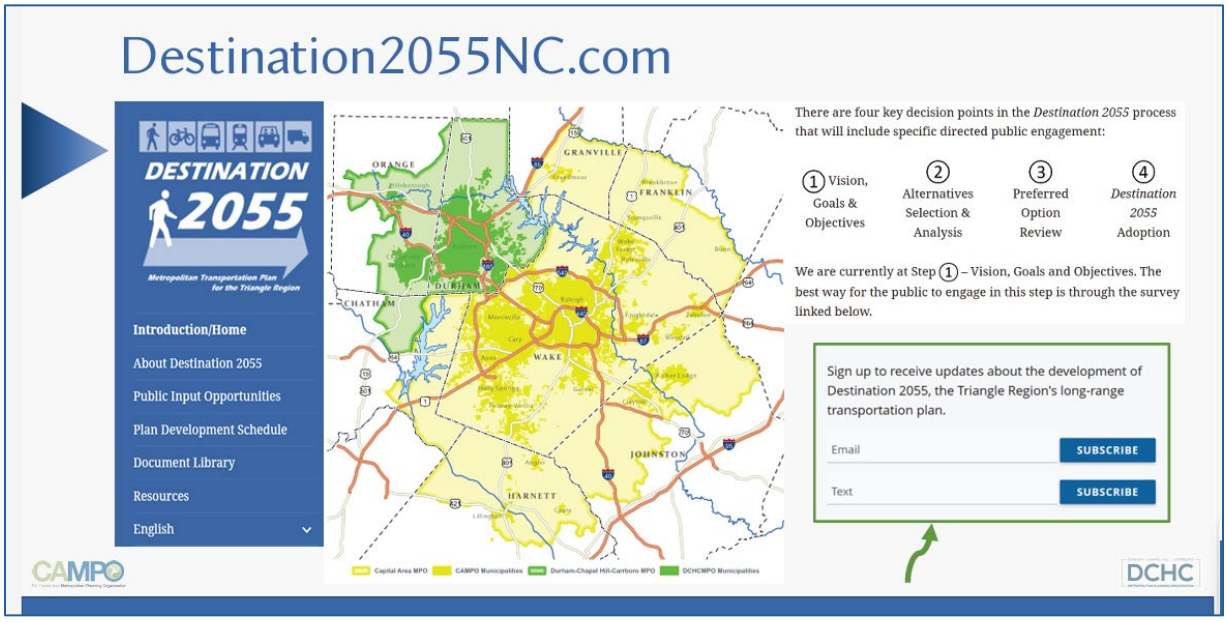
The Comprehensive Transportation Plan for the **Capital Area MPO** planning area is a combination of the set of proposed projects within Wake County that were not included as fiscally-constrained projects in the MTP, and adoption of the CAMPO portion of countywide CTPs developed in CAMPO's other counties. The unfunded projects are listed in this document's appendices as CTP projects. The CTPs for each county are an important input during the development of each MTP. CAMPO works to ensure that the projects identified in the MTP and local CTPs match. The current status of Capital Area MPO CTP components can be viewed here.

Appendix 1: Community Engagement

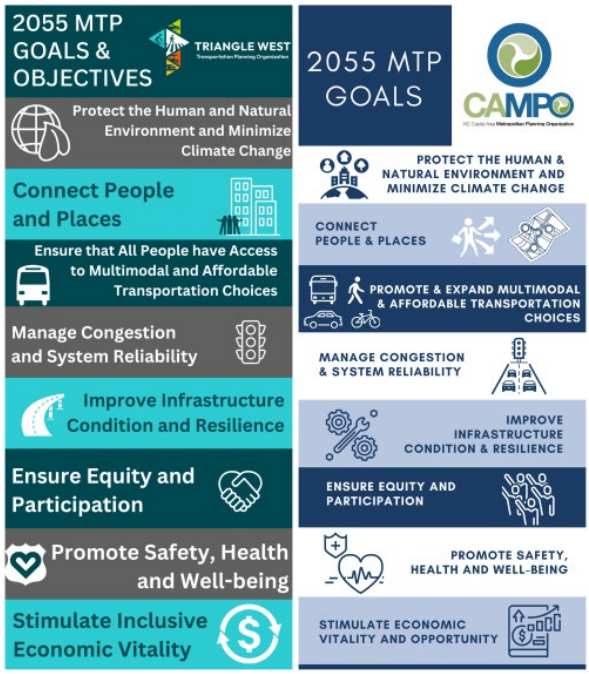
Background

Chapter 5.3, *Stakeholder and Public Engagement*, presents the activities carried out for the major milestones in the *Destination 2055* MTP development process to educate the public and get their feedback. Public notices, hearings, surveys, social media and other activities produced many detailed responses from members of the community. Although these responses are too numerous to compile and summarize in the *Destination 2055* MTP report, the MPOs provided comprehensive copies of this information on their independent websites as the 2055 MTP completed the various stages of development from late 2023 to early 2026. This appendix identifies and provides links to the many comment compilations and summaries that were produced for the four principal milestones where community engagement occurred for the MTP: 1- Goals and Objectives; 2- Alternatives Analysis; 3 – Preferred Alternative/Draft Plan, and 4- Final Plan Adoption (including the report).

- Destination 2055 Development Process: Public Engagement Strategy (approved for use in November of 2023 by both MPO Boards)
- The Destination2055NC.org website was maintained throughout the MTP development. This site was intended to provide information created for the broad community – across education, literacy, language differences – as a resource to access clear, plain language about the Plan's development and engagement opportunities. This website was simultaneously translated in Spanish, as were all surveys conducted.
- A brand and logo were produced by a team from both MPOs and Central Pines, "Destination 2055".



Goals and Objectives



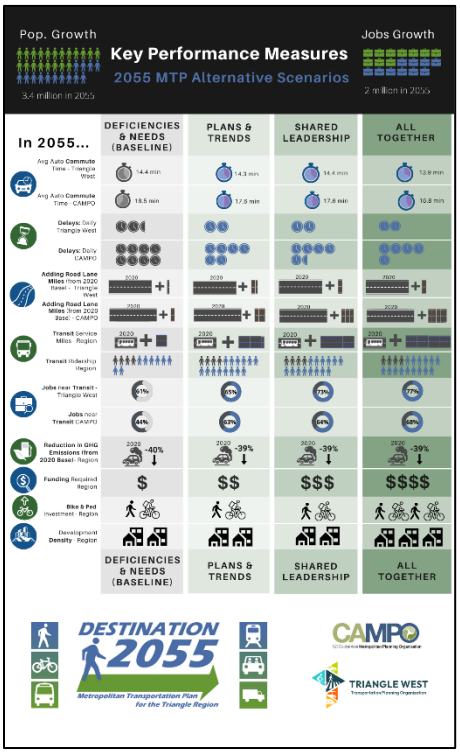
The MPOs developed a set of Goals and Objectives to guide the financial, criteria for alternatives, project selection, and other key decisions in the *Destination 2055* MTP development process. These Goals and Objectives, which were approved by the boards of each MPO in 2024, will continue to drive the MPOs' policies and decision-making over the next several years. During this visioning and goals phase, community influence on the Plan was at its greatest. The engagement team utilized the 2050 approved goals to serve as a baseline for the community in an online survey tool to solicit a broad range of community perspectives on goals that needed to be updated and any new goals to consider. Outreach to promote the online survey and collect comments was conducted through email newsletters, media releases, short video ("reel"), paid advertisements on digital and social media, tabling at community events and gathering locations ("popups"), presentations to community organizations, and through flyers and other print materials. The available public feedback from the Goals and Objectives engagement is identified below. Community input was relied upon heavily in making and approving language changes to the Goals by both MPO Boards. The image above shows the Goals approved for 2055 by each MPO.

- Survey - The MPOs conducted a joint survey on the Goals and Objectives during the winter spanning 2023-2024. The links below include a summary of the survey and full text of comments received for each of the individual Goals. The survey was available in multiple languages.
  - Survey Summary
  - Summary of Written Comments Provided by Survey Respondents
  - Summary of Written Comments Provided by Survey Respondents from Environmental Justice Communities of Concern/Underrepresented Communities
  - Survey Tool – English; Spanish
  - Media Release
  - Promotional Video – 1 minute
  - Information Flyer

Table Appendix 8.1: Vision & Goals Public Engagement Results

Activity	Number
Survey Participants	550
Survey & Email Comments	445
Destination 2055 Website Visitors	2,300
Communications Toolkit for Partners	yes
Paid Digital and Print Media Ads	yes

Alternatives Analysis



In March of 2025, the MPOs released three Alternatives to address the expected future travel demand and asked members of the community to provide feedback using several different tactics to encourage and gather feedback. Again, an online survey was deployed which was available in multiple languages. Outreach tactics included digital and in-person activities ranging from an updated video describing the alternatives, social media reels and paid advertisements, tabling at more than (22) community events or gathering spots, presentations for targeted community organizations, and more. An emphasis was placed on infographics and visualizations to increase understanding of the differences between the alternatives.

- Between February and May of 2025, CAMPO staff and TCC/Exec. Board members hosted an information table at 22 community events or gathering places. The MPOs attended these events to educate community members about MTP Destination 2055, the Alternatives Analysis and to solicit feedback.
- From March to May 2025, the MPOs utilized an online survey for the Alternatives Analysis that received approximately 630 responses. The links below include a summary of the survey results.
    - Survey Summary Presentation
    - Survey Tool
- In May of 2025, the Executive Directors of both CAMPO and Triangle West TPO hosted a virtual public meeting to share details about each alternative and answer questions from community members. The meeting recording and slides were posted to the Destination2055NC.org website.
    - Virtual Public Meeting recording
    - Virtual Public Meeting presentation slides

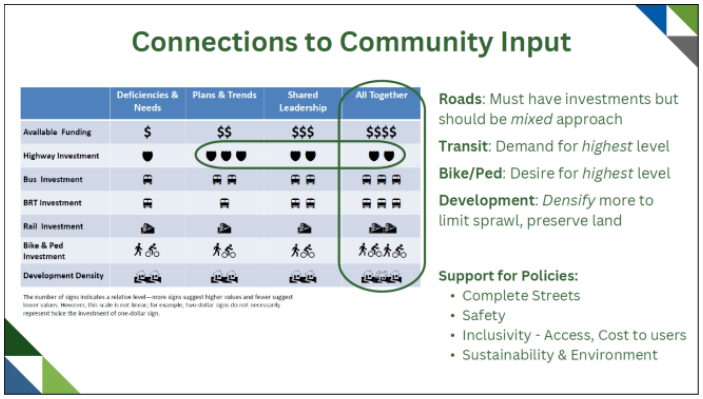
- Information on websites – General information in plain language and utilizing infographics/visualizations to share information on the various alternatives was hosted on the Destination2055NC.org website. In addition, each MPO hosted more detailed data and analysis of each alternative on their unique MPO websites.
    - Destination2055NC.org Alternatives Analysis
    - CAMPO webpage
    - Triangle West webpage
    - Alternatives Engagement Promo video – 1 minute

Table Appendix 8.2: Alternatives Analysis Public Engagement Results

Activity	Number
Survey Participants	630
Survey & Email Comments	345
Online Public Information Session Participants	38
In-person/Pop-up Events	22
Destination 2055 Website Visitors	1,200
Communications Toolkit for Partners	yes
Paid Digital and Print Media Ads	yes

Preferred Option

Part One - Community Check-in



Following review of the public feedback from the Alternatives Analysis, and additional discussions with the technical committees and policy boards of each MPO, CAMPO solicited feedback for 30 days regarding the *selection* of the Preferred Alternative, starting in early July and concluding on August 10, 2025. The specific goals were to use clear, plain language to inform the public of the Executive Board's selection of the Preferred Alternative (previously known as the "All-Together Scenario/Alternative") and the financial constraint process and the future of transportation funding in the region. Comments were generally positive regarding the selection of the more ambitious All-Together Scenario. There were also several comments sharing ideas for alternative funding sources for transportation from tolls to a range of taxes. The feedback received essentially affirmed moving forward with the fiscal constraint process for the "All Together Scenario/Alternative."

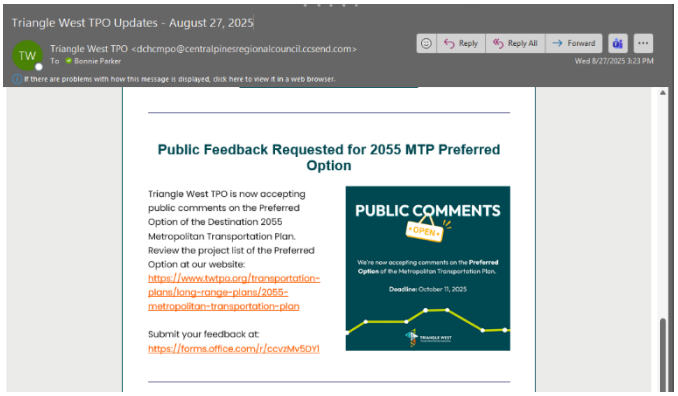
- Comments received in July/August 2025 - CAMPO

Part Two - Draft Projects & Programs

Following the application of fiscal constraint to all projects from the Preferred Alternative, in August and October of 2025 Triangle West TPO and CAMPO, respectively, released draft Preferred Options, essentially the Draft 2055 MTP, to gather feedback from community members. Each Preferred Option included transportation projects, land use assumptions, and a financial analysis. During this phase of the MTP development process each MPO used social media advertisements, email newsletters, public notices, and hosted info tables or provided presentations at more than 10 community events to encourage community reviews of the draft Plan. Additionally, each MPO hosted a Public Hearing to gather feedback from members of the public. More details regarding these efforts follow:

Triangle West TPO:

- Public Comment Period: August 27 to October 11, 2025
- Public Hearing Date: September 23, 2025
- Public Notice
- Public Comments Received



Capital Area Metropolitan Planning Organization:

- Public Comment Period: October 8 to November 18, 2025
- Public Hearing Date: November 19, 2025
- Public Notice
- Community Presentation
- Preferred – Draft Projects & Programs Public Engagement Summary
- Preferred Feedback – online feedback form (print version)

Videos/Reels for both MPOs

- Preferred Alternative & Funding
- Preferred Alternative Engagement – 1 minute video

Draft Plan - Adoption

The MPOs released the full draft report in January of 2026. The MPOs used several different methods to encourage and gather feedback, including Public Hearings. Below is a list of documents containing the public comments received by both MPOs of the full report.

Triangle West TPO Full Report – Public Comments Received

CAMPO Full Report – Public Comments Received

THESE LINKS WILL BE ADDED TO THE REPORT FOLLOWING THE END OF THE PUBLIC COMMENT PERIODS

For additional information:

For additional details, to view other materials such as paid advertisements, email blasts, survey questions or response data, etc., contact staff from either CAMPO (campocomments@publicinput.com) or Triangle West TPO (Public.Comments@twtpo.org).

Appendix 2: Complete Corridor & Roadway Project List

Appendix 2 provides a complete list of all roadway and "complete corridor" projects included in the *Destination 2055* Metropolitan Transportation Plan. In addition to the lists below, mapping of these projects can be found on the Capital Area MPO and Triangle West TPO websites.

For the Capital Area MPO, these project lists include both the fiscally-constrained MTP projects (marked with an MTP horizon year) and unfunded Comprehensive Transportation Plan (CTP) projects (marked with "CTP").

Additional information about Comprehensive Transportation Plan (CTP) projects for the Triangle West TPO can be found on the Triangle West TPO website.

2055 MTP Roadway Project List – Triangle West Transportation Planning Organization

MTP ID	Roadway or Technology Project	From	To	Existing Lanes	Proposed Lanes	Improvement Type	Length (Miles)	Transit Advantage	Estimated Cost	STI Tier	Reg. Sig. (a)	Exempt (b)	CMP Corridor Priority	TIP#
Completed Projects														
23	Fayetteville Rd	Barbee Rd	Cornwallis Rd	2	4	Widening	1	No	$0	Div	Yes	No	N/A	N/A
202	Hopson Rd	Davis Dr	S Miami Blvd (NC 54)	2	4	Widening	0.7	No	$4,286,000	Div	No	No	N/A	N/A
15	I-885 (East End Connector - EEC)	NC 147	NC 98 in Durham	0	4	New Location	3.2	No	$0	St	Yes	No	N/A	U-0071
407	Lynn Rd/Pleasant Dr Connector	Lynn Rd	Pleasant Dr	0	2	New Location	0.6	No	$11,300,184	Div	No	No	N/A	N/A
75.2	NC 55 (Alston Av)	Main St	NC 98	2	2	Modernization	0.5	No	$0	Reg	No	No	N/A	U-3308
221	S Elliot Rd Ext	Fordham Blvd	Ephesus Church Rd	0	2	New Location	0.3	No	$12,436,200	Div	No	No	N/A	N/A
2035 Horizon Year														
700	Cornwallis Rd/Miami Blvd/NCRR bridge	Miami Blvd	Cornwallis Rd	N/A	N/A	Grade separation	N/A	No	$41,156,000	Reg	No	Yes 93.126	High-Medium	P-5717
124	Duke St	I-85	W Lakewood Av	2	2	Safety Improvement & two-way conversion	2.4	No	$9,313,500	Reg	No	No	High-Medium	N/A
373	Falconbridge Rd Connector	Falconbridge Rd	Farrington Rd	0	2	New Location	0.2	No	$3,607,380	Div	No	No	N/A	N/A
201	Falconbridge Rd Ext	Farrington Rd	NC 54	0	4	New Location	0.9	No	$49,053,900	Div	No	No	N/A	N/A
111	Fordham Blvd (US 15-501)	I-40	Ephesus Ch Rd	4	4	Modernization Plus Intersection Improvement	1.6	No	$83,600,000	St	Yes	No	High	U-5304F
379	Freeland Memorial Ext	S Churton St	New Collector Rd	0	2	New Location	0.5	No	$9,416,820	Div	No	No	N/A	N/A
701	Glover Rd/ Rail bridge	Glover Rd	NCRR rail line	N/A	N/A	Grade separation	N/A	No	$75,327,000	Div	No	Yes 93.126	N/A	P-5706
43	I-40	Durham County line	NC 86	4	6	Widening	3.9	No	$14,585,667	St	Yes	No	Low-Medium	I-3306A
MTP ID	**Roadway or Technology Project**	**From**	**To**	**Existing Lanes**	**Proposed Lanes**	**Improvement Type**	**Length (Miles)**	**Transit Advantage**	**Estimated Cost**	**STI Tier**	**Reg. Sig. (a)**	**Exempt (b)**	**CMP Corridor Priority**	**TIP#**
44	I-40	NC 86	I-85	4	6	Widening	7.8	No	$29,171,333	St	Yes	No	Low-Medium	I-3306A

MTP ID	Roadway or Technology Project	From	To	Existing Lanes	Proposed Lanes	Improvement Type	Length (Miles)	Transit Advantage	Estimated Cost	STI Tier	Reg. Sig. (a)	Exempt (b)	CMP Corridor Priority	TIP#
638	I-40 and NC-86 Interchange Improvements	I-40	NC 86	N/A	N/A	Interchange improvements	N/A	No	$10,970,000	St	Yes	No	Low-Medium	I-3306AC
401	I-40 ITS Implementation	I-540	US 15-501	N/A	N/A	ITS - Multimodal Integrated Corridor Management (ICM) (d)	10.9	No	$64,443,889	St	Yes	Yes 93.126	High-Medium	N/A
45.3	I-40 Westbound Auxiliary Lane	NC 147	NC 55	3	4	Add Auxiliary Lane	0.5	No	$10,289,000	St	No	No	High-Medium	I-5707
636	I-40/NC 54 Interchange	I-40	NC 54	N/A	N/A	Interchange Upgrade	N/A	No	$279,400,000	St	Yes	No	High-Medium	U-5774F
48	I-85	Orange Grove Rd	Sparger Rd	4	6	Widening	7.8	No	$139,998,000	St	Yes	No	Low-Medium	I-0305
650	I-85/S Churton St	I-85	S Churton St	N/A	N/A	Interchange Upgrade	N/A	No	$164,500,000	St	No	No	Low-Medium	I-5967
123	N Gregson St & Vickers Av	W Club Blvd	University Dr (US 15-501 Bus)	2	2	Safety Improvement & two-way conversion	2.6	No	$9,313,500	Reg	No	No	High-Medium	N/A
75.1	NC 55 (Alston Av)	NC 147	Main St	2	4	Widening	0.4	No	$62,000	Reg	No	No	N/A	U-3308
704	NC 55 Southbound	Meridian Parkway	I-40 interchange	4	5	Add Auxiliary Lane	0.25	No	$7,550,000	Reg	No	No	High-Medium	U-6118
434.2	NC 98 (Wake Forest Hwy)	Junction Rd	Lynn Rd	4	4	Modernization	0.9	No	$28,951,000	Reg	No	No	High-Medium	U-6120A
364.1	Orange Grove Rd	Mayor St	Eno Mountain Rd	2	2	Safety/Intersection improvement	0.1	No	$6,000,000	Div	No	Yes 93.126	N/A	H192437
220	Purefoy Rd Ext	Sandberg Ln	Weaver Dairy Rd	0	2	New Location	0.6	No	$11,104,380	Div	No	No	N/A	N/A
87	S Churton St	Eno River in Hillsborough	I-40	2	4	Widening	2.2	No	$77,400,000	Div	No	No	N/A	U-5845
114.2	US 15-501 Bypass/Cornwallis Rd	US 15-501 Bypass	Cornwallis Rd	4	4	Bridge replacement	0	No	$45,200,000	St	Yes	Yes 93.126	High-Medium	B-5674
113	US 15-501/Garrett Rd Interchange	US 15-501	Garrett Rd	N/A	N/A	New Interchange	N/A	No	$53,300,000	St	Yes	No	High	U-5717
690	US 70/Northern Durham Parkway	US 70	Northern Durham Parkway	N/A	N/A	New Interchange	N/A	No	0	St	Yes	No	Low-Medium	U-5518
123.11	Woodcroft Pkwy Ext	Garrett Rd	Hope Valley Rd	0	2	New Location	0.3	No	$9,200,000	Div	No	No	N/A	U-5823

2045 Horizon Year														
346	Danziger Dr Ext	Mt Moriah Rd	E Lakewood Dr	0	2	New Location	0.4	No	$86,900,000	Div	No	No	N/A	N/A
23.2	Fayetteville Rd	Woodcroft Pkwy	Barbee Rd	2	2	Modernization	1.4	No	$23,380,000	Div	Yes	No	N/A	U-6021
240	Fordham Blvd (US 15-501)	NC 54	Ephesus Ch Rd	4	4	Modernization Plus Intersection Improvement	1.9	No	$35,345,000	St	Yes	No	High	U-5304D
73	Fordham Blvd (US 15-501)	NC 54	NC 86 (S Columbia St)	4	4	Modernization Plus Intersection Improvement	2.1	No	$28,286,000	St	Yes	No	High	U-5304B
36	Homestead Rd	Old NC 86	Rogers Rd	2	2	Modernization	2.1	No	$30,087,960	Div	No	No	N/A	N/A
35	Homestead Rd	Rogers Rd	NC 86	2	2	Modernization	1.3	No	$20,153,700	Div	No	No	N/A	N/A
46.1	I-40 HOV/MGT Lanes	Wake County Line	NC 147	0	2	Add HOV/Managed Lane	3.4	Yes	$937,574,400	St	Yes	No	High-Medium	I-5702B
646	I-85/NC 86	I-85	NC 86	N/A	N/A	Interchange improvements	N/A	No	$71,400,000	St	No	No	Low-Medium	I-5984
65.1	I-885 HOV/MGT Lane	I-40	EEC	0	2	Add HOV/Managed Lane	4.1	Yes	$142,610,000	St	Yes	No	Low-Medium	U-5934
121	Mangum St	W Lakewood Av	N Roxboro St	2	2	Two-way conversion	1.8	No	$6,027,000	Reg	Yes	No	High-Medium	N/A
410	Marriott Way	Friday Center Dr	Barbree Chapel Rd	0	2	New Location	0.2	No	$2,005,080	Div	No	No	N/A	N/A
14.1	N Duke St (501 N)	W Club Blvd	N Roxboro split	5	4	Modernization	2.5	No	$39,040,260	Reg	Yes	No	High-Medium	N/A
403	NC 147 & I-885 ICM	Briggs Av	I-40	N/A	N/A	ITS - Multimodal Integrated Corridor Management (ICM) (d)	5.2	No	$40,000,000	Reg	Yes	Yes 93.126	Low-Medium	N/A
MTP ID	**Roadway or Technology Project**	**From**	**To**	**Existing Lanes**	**Proposed Lanes**	**Improvement Type**	**Length (Miles)**	**Transit Advantage**	**Estimated Cost**	**STI Tier**	**Reg. Sig. (a)**	**Exempt (b)**	**CMP Corridor Priority**	**TIP#**
64.13	NC 147 (Durham Fwy - possible boulevard conversion)	Swift Av	Briggs Av	4	4	Modernization	4.3	No	$146,782,774	St	No	No	Low-Medium	N/A
64.2	NC 147 HOV/MGT lane	EEC	Briggs Av	0	2	Add HOV/Managed Lane	1.1	Yes	$30,000,000	St	Yes	No	Low-Medium	N/A

69.41	NC 54	Barbee Rd	NC 55	2	2	Modernization	1.3	No	$20,720,000	Reg	No	No	High-Medium	U-5774J
69.31	NC 54	Fayetteville Rd	Barbee Rd	2	2	Modernization	1	No	$15,417,000	Reg	No	No	High-Medium	U-5774I
70.3	NC 54	Fordham Blvd (US 15-501)	Barbee Chapel Rd	6	6	Modernization Plus Intersection Improvement	1.2	No	$93,000,000	Reg	Yes	No	High-Medium	U-5774B
69.21	NC 54	Highgate Dr	Fayetteville Rd	2, 4	2, 4	Modernization	0.4	No	$38,868,472	Reg	No	No	High-Medium	U-5774H
69.11	NC 54	I-40 Interchange	NC 751	2	2	Modernization	1.2	No	$19,501,000	Reg	No	No	High-Medium	U-5774G
69.22	NC 54	NC 751	Highgate Dr	2	2	Modernization	1.5	No	$38,868,472	Reg	No	No	High-Medium	U-5774H
428	NC 54	Old Fayetteville Rd	Orange Grove Rd	2, 4	2, 4	Modernization	6.1	No	$21,650,000	Reg	Yes	No	Low-Medium	R-5821A
70	NC 54	I-40	Barbee Chapel Rd	4	4	Modernization Plus Intersection Improvement	1.6	No	$28,011,000	Reg	Yes	No	High-Medium	U-5774C
70.2	NC 54/Farrington Rd	NC 54	Farrington Rd	N/A	N/A	Grade Separation	N/A	No	$0	Reg	Yes	No	High-Medium	U-5774E
77.3	NC 751	Renaissance Pkwy	O'Kelly Chapel Rd	2	4	Widening	2.7	No	$49,500,000	Reg	No	No	Low	N/A
434.1	NC 98 (Holloway St)	Miami Blvd	Junction Rd	4	4	Modernization	0.7	No	$14,612,500	Reg	No	No	High-Medium	N/A
83.11	Northern Durham Pkwy	US 70 E	Sherron Rd	2	2	Modernization	2.7	No	$69,090,000	Div	No	No	N/A	N/A
89.3	Orange Grove Connector	Orange Grove Rd	NC 86	0	2	New Location	0.9	No	$22,500,000	Div	No	No	N/A	H230685

MTP ID	Roadway or Technology Project	From	To	Existing Lanes	Proposed Lanes	Improvement Type	Length (Miles)	Transit Advantage	Estimated Cost	STI Tier	Reg. Sig. (a)	Exempt (b)	CMP Corridor Priority	TIP#
92	Roxboro Rd (501 N)	Duke St	Goodwin Rd	4	4	Modernization	2.7	No	$42,847,560	Reg	Yes	No	High-Medium	N/A
122	Roxboro St	W Lakewood Av	W Markham Av	2	2	Two-way conversion	1.7	No	$6,027,000	Reg	Yes	No	High-Medium	N/A
479	US 15-501	Smith Level Rd	US 64	4	4	Intersection Improvement - RCIs (c)	10.4	No	$94,160,000	Reg	No	No	Low-Medium	U-6192
113.1	US 15-501 (possible boulevard conversion)	US 15-501 Bypass	I-40	6	6	Modernization	2	No	$97,855,183	St	Yes	No	High	U-6067

130	US 15-501 Business (modernization)	US 15-501 Bypass	Chapel Hill Rd	4	4	Modernization	1.6	No	$25,188,454	Reg	No	No	High-Medium	N/A
131	US 15-501 Business (modernization)	Chapel Hill Rd	University Dr	2	2	Modernization	0.8	No	$12,594,227	Reg	No	No	High-Medium	N/A
114.1	US 15-501 Bypass (modernization)	MLK Parkway	Cameron Blvd	4	4	Modernization	2.7	No	$85,011,035	St	Yes	No	High-Medium	N/A
402	US 15-501 ICM	South Square/US 15 Business	S Columbia	N/A	N/A	ITS - Multimodal Integrated Corridor Management (ICM) (d)	7.4	No	$50,000,000	Reg	Yes	Yes 93.126	High	N/A
485.61	US 70 Boulevard Conversion	Lynn Rd	S Miami Blvd	4	4	Boulevard Conversion & Parallel Road	1.6	No	$80,297,838	Div	No	No	Low-Medium	N/A
116.61	US 70 Boulevard Conversion	S Miami Blvd	MPO Boundary	4	4	Boulevard Conversion & Parallel Road	2.5	No	$167,287,162	Div	No	No	Low-Medium	N/A
120	US 70 Bus (W Morgan/Ramseur/N Great Jones)	N Roxboro St	W Main St	4	4	Two-way conversation	1.1	No	$10,500,000	Div	No	No	N/A	H231718
2055 Horizon Year														
304.1	Angier Av Ext	US 70	Northern Durham Pkwy	0	2	New Location	0.8	No	$14,805,210	Div	No	No	N/A	N/A
343	Crown Pkwy/Roche Dr	Page Rd	T.W. Alexander Dr	0	2	New Location	0.4	No	$7,400,890	Div	No	No	N/A	N/A
28.11	Glover Rd	Angier Av	US 70	0	2	New Location	0.6	No	$10,919,160	Div	No	No	N/A	N/A
MTP ID	**Roadway or Technology Project**	**From**	**To**	**Existing Lanes**	**Proposed Lanes**	**Improvement Type**	**Length (Miles)**	**Transit Advantage**	**Estimated Cost**	**STI Tier**	**Reg. Sig. (a)**	**Exempt (b)**	**CMP Corridor Priority**	**TIP#**
382	Hebron Rd Ext	Hebron Rd	Roxboro Rd (501 N)	0	2	New Location	0.5	No	$10,619,280	Div	No	No	N/A	N/A
77.11	Hope Valley Rd (NC 751)	NC 54	Woodcroft Pkwy	4	4	Modernization	0.4	No	$7,883,835	Reg	No	No	N/A	N/A
46.21	I-40 HOV/MGT Lanes	NC 54	US 15-501	0	2	Add HOV/Managed Lane	2.9	Yes	$179,804,100	St	Yes	No	High-Medium	I-5702A
46.22	I-40 HOV/MGT Lanes	NC 147	NC 54	0	2	Add HOV/Managed Lane	6.4	Yes	$525,609,000	St	Yes	No	High-Medium	I-5702A
49	I-85	East of Midland Terrace	Red Mill Rd	4	6	Widening	3.4	No	$135,400,000	St	Yes	No	Low-Medium	I-6010

MTP ID	Roadway or Technology Project	From	To	Existing Lanes	Proposed Lanes	Improvement Type	Length (Miles)	Transit Advantage	Estimated Cost	STI Tier	Reg. Sig. (a)	Exempt (b)	CMP Corridor Priority	TIP#
51	Lake Hogan Farms Rd	Eubanks Rd	Legends Way	0	2	New Location	1.1	No	$12,956,580	Div	No	No	N/A	N/A
53	Leesville Rd Ext	US 70/Page Rd Ext	Leesville Rd	0	2	New Location	0.4	No	$7,773,360	Div	No	No	N/A	N/A
57	Lynn Rd Ext	US 70	Existing Lynn Rd	0	2	New Location	1.1	No	$20,174,280	Div	No	No	N/A	N/A
242	Mt. Carmel Ch Rd	US 15-501	Bennett Rd	2	2	Modernization	0.4	No	$10,242,415	Div	No	No	N/A	N/A
71	Mt. Willing Rd	I-40/I85	US-70	2	4	Widening	0.7	No	$25,977,778	Div	No	No	N/A	N/A
404	NC 54 ICM	US 15-501	NC 55	N/A	N/A	ITS - Multimodal Integrated Corridor Management (ICM) (d)	7.4	No	$50,000,000	Reg	Yes	Yes 93.126	High-Medium	N/A
80	NC 86	Old NC 10	US 70 Business	2	4	Widening	0.9	No	$21,341,460	Reg	No	No	Low-Medium	N/A
81	NC 86 (and US 70 intersection)	US 70 Bypass	North of NC 57	2	4	Widening	0.3	No	$30,800,000	Reg	No	No	Low-Medium	H111036
434.3	NC 98 (Wake Forest Hwy)	Lynn Rd	Nichols Farm Dr	4	4	Modernization	1.8	No	$37,575,000	Reg	No	No	High-Medium	N/A
440	New Hope Commons Dr Extension	Eastowne Dr	New Hope Commons Dr	0	2	New Location	0.4	No	$86,900,000	Div	No	No	N/A	N/A
83.12	Northern Durham Pkwy	Sherron Rd	NC 98	2	2	Modernization	1.6	No	$39,984,000	Div	No	No	N/A	N/A
502	Patriot Dr Ext	S Miami Blvd	Page Rd	0	2	New Location	1.9	No	$38,472,840	Div	No	No	N/A	N/A
230	Southwest Durham Dr	NC 54	I-40	0	2	New Location	2	No	$36,461,880	Div	No	No	N/A	N/A
106.1	Southwest Durham Dr	US 15-501 Business	Mt Moriah Rd	0	4	New Location	0.4	No	$10,780,980	Div	No	No	N/A	N/A
72	US 70 West	Durham/Orange Co Line	West TPO Border line	2	4	Widening	14.4	No	$534,400,000	Reg	Yes	No	Low-Medium	H230794

These footnotes clarify the data in the table:

(f) Reg. Sig.: Regionally Significant

(f) Projects that are exempt may continue to move forward in the case of a plan lapse whereas non-exempt projects will not receive federal action until there is an approved MTP. In this column, exempt projects are indicated by the regulation section that provides the exemption, e.g., 93.126.

(f) RCI: Reduced Conflict Intersection

(f) ITS: Intelligent Transportation Systems

(f) HOV lane: High Occupancy Vehicle Lane

(f) N/A indicates Not Applicable

2055 Metropolitan Transportation Plan - Roadway Projects

Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
2035 MTP											
A941	Third Street Extension	North Main Street	Holly Springs	0	2	0.26	$5,085,362	☐	☐	☐	2035
A577	Ackerman Road	NC 50	Bryan Rd	0	3	0.64	$26,321,780	☐	☐	☐	2035
A165a2a	Airport Blvd Ext	Garden Square Ln	Church Street	0	4	0.44	$15,398,213	☐	☐	☐	2035
A187b1	Apex Peakway (East)	Center St / Ten Ten Rd	NC 55	0	4	0.8	$8,800,000	☐	☐	☐	2035
A187b3	Apex Peakway (East)	Old Raleigh Rd	Center Street	2	4	0.75	$21,867,211	☐	☐	☐	2035
A686	Atlantic Avenue	Highwoods Blvd	New Hope Church Rd	4	4	1	$11,600,000	☐	☐	☑	2035
A427a	Avent Ferry Rd	Piney Grove Wilbon	Pine Ave	2	4	0.6	$9,362,308	☐	☐	☐	2035
A427b	Avent Ferry Rd	Cass Holt	Piney Grove Wilbon	2	4	0.7	$10,922,692	☐	☐	☐	2035
A544c1	Avent Ferry Road Connector	Avent Ferry Road	Rex Road	0	2	1.15	$33,900,086	☐	☐	☐	2035
F17b	Aviation Extension	TW Alexander Drive	US 70	0	6	0.7	$91,752,060	☐	☑	☐	2035
A64a	Aviation Parkway	Gateway Centre Blvd	Dominion Dr	2	4	0.6	$26,912,000	☐	☐	☐	2035
A64b	Aviation Parkway	Evans Rd	NC 54	2	4	0.9	$40,368,000	☐	☐	☐	2035
A683a	Barwell Rd	Weddington Rd	Berkley Lake Drive	2	3	1.15	$10,800,000	☐	☐	☑	2035
A684	Blount/Person Streets	Sasser St	Hoke St	3	2	4.1	$6,100,000	☐	☐	☑	2035
A682	Blue Ridge Rd	Duraleigh	Crabtree Valley Avenue	2	3	2	$10,500,000	☐	☐	☑	2035
A697	Blue Ridge Road Ext	Duraleigh Rd	Edwards Mill Road	0	2	0.3	$5,548,393	☐	☐	☐	2035
A755a	Buffaloe Rd	I-540	Forestville Rd	4	6	1.74	$15,083,976	☐	☐	☐	2035
A930	Burlington Mills Rd Realignment	Burlington Mills Rd	S Main St	0	2	0.24	$3,024,000	☐	☐	☐	2035
A737	Carolina Springs Blvd	Woodfield (Dead End) Road	Old Holly Springs Apex Road	0	3	0.9	$28,081,113	☐	☐	☐	2035
A440b	Carpenter Fire Station Ext	NC 55	Morrisville Carpenter Rd	0	4	0.3	$10,498,782	☐	☐	☐	2035
A440a1	Carpenter Fire Station Rd	Cameron Pond Drive	NC-55	2	4	0.94	$25,035,154	☐	☐	☐	2035
A236a	Chapel Hill Rd	NW Maynard Rd	Academy St	2	4	1	$11,310,000	☐	☑	☐	2035
A236b	Chapel Hill Rd	Academy St	NE Maynard Rd	2	4	1	$11,500,000	☐	☑	☐	2035
A940	Colby Chase Dr	E Williams St	Merion Station Dr	0	2	1.5	$29,338,628	☐	☐	☐	2035
A834	Collector Street - Wake Forest	Connector Dr	Ligon Mill Rd	0	2	0.42	$7,742,918	☐	☐	☐	2035
A835	Collector Street - Wake Forest	Unicon Dr	Collector Street	0	2	0.4	$7,374,208	☐	☐	☐	2035
A28b	Davis Dr	Farm Pond Rd	US 64	2	4	1.1	$32,071,910	☐	☐	☐	2035
A681	Dixie Forest Road	Spring Forest Road	Atlantic Ave / Litchford Road	2	3	0.25	$1,950,000	☐	☐	☑	2035
A744	East Academy Street Extension	Purfoy Road	Lakestone Commons Avenue	0	2	0.2	$3,438,159	☐	☐	☐	2035
A13c	Falls of Neuse Blvd	I-540	Durant Rd	4	6	0.9	$9,935,000	☐	☐	☐	2035
A164a2	Green Level Church Rd	O'Kelly Chapel Rd	McCrimmon Parkway	2	4	0.91	$26,532,217	☐	☐	☐	2035
A948	Hasse Ave	Richardson Rd	Olive Chapel Rd	0	2	0.75	$39,118,170	☐	☐	☐	2035
A605a	High Speed Rail - Rogers Rd Intersection (RR)	Rogers Rd	Rogers Rd	2	4		$26,390,000	☐	☐	☑	2035

12/19/2025

Note: Total Cost is less than the actual capital cost for toll, managed lane and railroad projects.

Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A20b2	Hillsborough St	Shepherd St	Gorman St	2	3	0.47	$2,394,000	☐	☐	☑	2035
A623d2	Hilltop Needmore Extension	Herbert Atkins Road	Basal Creek (East Fork)	0	2	0.3	$5,867,726	☐	☐	☐	2035
A623d3	Hilltop Needmore Extension	Basal Creek (East Fork)	Hilltop Needmore Road	0	2	0.2	$13,730,241	☐	☐	☐	2035
A163a2	Holly Springs Rd	NC-55 / Main St.	Flint Point Lane	2	4	0.8	$3,540,000	☐	☐	☐	2035
A163a3	Holly Springs Rd	Flint Point Lane	Sunset Lake Road	2	4	1.8	$52,481,308	☐	☐	☐	2035
A218e	Jessie Dr	NC 55	Ten Ten Rd	0	2	1.58	$28,593,424	☐	☐	☐	2035
A138c1	Jones Sausage Rd	Garner Road	Amazon driveway	2	4	0.88	$25,657,528	☐	☐	☐	2035
A630	Judd Parkway NW	NC 55	Judd Pkwy (NL)	2	4	0.74	$8,079,513	☐	☐	☐	2035
A207c	Judd Parkway W	Wilbon Rd	NC 42	0	4	1.56	$17,032,487	☐	☐	☐	2035
A414a	Kildaire Farm Connector	Kildaire Farm Road	Holly Springs Rd	0	4	0.3	$10,498,782	☐	☐	☐	2035
A21	Lake Boone Trail	Blue Ridge Rd	Edwards Mill Ext	0	4	0.28	$9,798,863	☐	☐	☐	2035
A927	Lake Boone Trl	I-440 WB Ramps	Ridge Rd	4	3	0.56	$1,300,000	☐	☐	☑	2035
A410a	Lake Pine Dr	Versailles Drive	North of US 64	2	4	0.38	$2,133,827	☐	☐	☐	2035
A136e	Lake Wheeler Rd	Centennial Pkwy	S. Saunders St	2	3	0.94	$26,313,436	☐	☐	☐	2035
A127a	Ligon Mill Rd	US 1A	NC 98 Bypass	2	4	0.61	$18,382,808	☐	☐	☐	2035
A127b1	Ligon Mill Rd Connector	NC 98 Bypass	Richland Creek	0	4	0.25	$24,949,385	☐	☐	☐	2035
A127b2	Ligon Mill Rd Connector	Richland Creek	NC 98	0	2	0.75	$17,712,947	☐	☐	☐	2035
A27c1a	Louis Stephens Dr	Little Drive	Poplar Pike Lane	0	2	0.5	$10,243,000	☐	☐	☐	2035
A615	Marsh Creek/ Trawick Rd	Capital Blvd	New Hope Rd	2	2	1.41	$10,700,000	☐	☐	☑	2035
A174c	Martin Pond Road	Wendell Falls Parkway	Poole Road	2	3	0.5	$12,568,293	☐	☐	☐	2035
A119	McCrimmon Parkway	Airport Blvd	NC 54	2	4	0.86	$46,147,000	☐	☐	☑	2035
A219a1	McCrimmon Parkway	NC 54	Davis Dr	2	4	1.14	$44,100,000	☐	☐	☐	2035
A220a	Morrisville Carpenter Rd	Page St	Davis Dr	2	4	1.3	$8,159,000	☐	☐	☐	2035
A220b	Morrisville Carpenter Rd	Davis Dr	Louis Stephens Dr	2	4	0.7	$20,409,397	☐	☐	☐	2035
A220c	Morrisville Carpenter Rd	Louis Stephens Dr	Good Hope Ch Rd	2	4	0.28	$8,163,759	☐	☐	☐	2035
Jhns13a	NC 36 Extension	US 70 BUS	Ranch Road	0	2	0.4	$2,556,411	☐	☐	☐	2035
A934	Oberlin Rd	Clark Ave	Bedford Ave	4	3	0.23	$3,600,000	☐	☐	☐	2035
A66b	O'Kelley Chapel Rd	Green Level Church Rd	American Tobacco Trail	2	4	1.76	$42,091,235	☐	☐	☐	2035
A137b1	Old Stage Rd	Rolling Meadows Dr	Rock Service Station	2	4	0.62	$14,827,594	☐	☐	☐	2035
A10	Old Wake Forest Rd	Litchford Rd / Atlantic Blvd	Capital Blvd	2	4	1.2	$11,050,000	☐	☐	☐	2035
A876	Penfold Ln Extension	Penfold Ln	Jenkins Rd	0	2	0.8	$14,748,416	☐	☐	☐	2035
A449	Perry Rd Ext	Apex Peakway	Technology Drive Ext	0	4	1.29	$80,941,274	☐	☐	☐	2035
A922	Pleasant Valley Rd	US 70	W Millbrook Rd	4	3	0.56	$15,676,090	☐	☐	☑	2035
A49a	Poole Rd	Maybrook Dr	Barwell Rd	2	4	1	$9,800,000	☐	☐	☐	2035
A526	Quinard Rd Ext	Maynard Rd	Trinity Rd	0	2	0.4	$9,446,905	☐	☐	☐	2035
A160a	Ralph Stephens Rd	Piney Grove-Wilbon Rd	NC 55	2	4	0.59	$15,446,879	☐	☐	☐	2035
A160e	Ralph Stephens Rd	Avent Ferry	S. Main St	0	4	0.48	$14,454,711	☐	☐	☐	2035

12/19/2025

Note: Total Cost is less than the actual capital cost for toll, managed lane and railroad projects.

Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A14a	Ray Rd	Leesville Rd	Lynn Rd	2	3	0.6	$15,996,010	☐	☐	☑	2035
A111	Reedy Creek Road	N.E. Maynard Rd	Harrison Avenue	2	3	1.2	$9,561,000	☐	☐	☑	2035
A16	Rock Quarry Rd	Old Birch Dr	Sunnybrook Rd	2	5	0.8	$14,183,000	☐	☐	☐	2035
A201a	Rock Quarry Rd	New Hope Rd	Battle Bridge Rd	2	4	1.4	$20,350,000	☐	☐	☐	2035
A921	Rogers Branch Rd	Penfield St	Forestville Rd	0	2	0.13	$2,542,681	☐	☐	☐	2035
A769	Rolesville Rd	US 401	Fowler Rd	2	3	1.09	$29,059,418	☐	☐	☐	2035
A746	Rush Street	Hammond Rd	Garner Rd	3	2	0.58	$4,926,602	☐	☐	☑	2035
A404	S. Franklin St	NC 98 (Wake Forest Bypass)	Rogers Rd	2	4	1.1	$32,071,910	☐	☐	☐	2035
A240c	South Harrison Avenue	Dry Rd	Kildaire Farm Rd	0	2	0.23	$5,431,970	☐	☐	☐	2035
A2b1	Southall Rd	Hedingham Blvd	Skycrest Dr	2	3	0.65	$18,195,461	☐	☐	☐	2035
A2b2	Southall Rd	Hedingham Blvd	New Bern Ave	0	3	0.47	$12,825,224	☐	☐	☐	2035
A193a2	Sunset Lake Rd	US 401	Product Road	2	4	0.45	$11,984,914	☐	☐	☐	2035
A217a1	Sunset Lake Rd	Lockley Road	Holly Springs Road	2	4	0.3	$2,350,000	☐	☐	☐	2035
A544b1	Trinity Creek Drive	Holly Springs New Hill Road	Current Terminus	2	2	0.9	$21,255,536	☐	☐	☐	2035
A231a	Trinity Rd	Edwards Mill Rd Ext	Wade Park Blvd	2	4	0.75	$21,867,211	☐	☐	☐	2035
A82a	Trinity Rd Ext	Walnut Creek	Cary Towne Blvd	2	4	0.34	$26,113,535	☐	☐	☐	2035
A82b	Trinity Rd Ext	Walnut Creek	Chatham St	0	2	0.44	$8,137,644	☐	☐	☐	2035
A46a	Tryon Rd	Lake Wheeler Rd	Par Drive	2	4	1.3	$14,900,000	☐	☐	☐	2035
Frnk18	US 1 Frontage Rd	S Cheatham St	Franklinton South Bypass	0	2	0.66	$12,206,466	☐	☐	☐	2035
A685	Wake Forest Rd (Roundabout)	Brookside Dr	Automotive Way	2	2		$9,400,000	☐	☐	☑	2035
A707	Wake Forest Road	Sasser Street	Brookside Drive	4	3	0.71	$1,970,000	☐	☐	☑	2035
A745	Wallace Adcock Blvd	US 401	NC 42	0	4	0.69	$23,789,462	☐	☐	☐	2035
A695a1	Wendell Valley Blvd	Wendell Falls Parkway	Knightdale Eagle Rock Road	0	3	1.04	$29,138,135	☐	☐	☐	2035
A81a	Western Blvd Ext	Western Blvd	Saddle Seat Dr	0	2	1.62	$29,099,128	☐	☐	☐	2035
A923	Whitaker Mill Rd	Reaves Dr	Wake Forest Rd	4	2	0.74	$14,041,846	☐	☐	☑	2035
A736	Woodfield Road	Proposed Pleasant Plains Rd extension	Woods Creek Road	0	2	0.78	$25,855,521	☐	☐	☐	2035
A705a	Angier Western Bypass	NC-55 (Wake County)	NC-210 (Harnett County)	0	4	3	$71,781,027	☐	☑	☐	2035
A705b	Angier Western Bypass	NC-210	NC-55 (Harnett County)	0	4	2.73	$65,926,680	☐	☑	☐	2035
A664	Hilltop Road Relocation	Hilltop Road	Lake Wheeler Road	0	2	0.53	$2,350,000	☐	☐	☐	2035
Hrnt3c1	NC 210	NC 50	Raleigh Road	2	4	2.1	$88,401,000	☐	☑	☐	2035
A407b3	NC 36	NC 50	I-40	2	4	2	$54,709,200	☐	☐	☐	2035
Jhns2b	NC 36 West (Veterans Pkwy)	US 70 Bypass	I-40	2	4	3.6	$97,728,400	☐	☐	☐	2035
Jhns15	NC 42	Buffalo Rd	CAMPO Boundary	2	2	11.4	$37,555,000	☐	☐	☑	2035
Jhns1b	NC 42 East Widening	Glen Laurel Rd	Buffaloe Rd	2	4	4.35	$90,219,000	☐	☐	☐	2035
A228a1	NC 50	Buffalo Rd	Rand Rd	2	4	0.45	$10,761,964	☐	☑	☐	2035
A222c1	NC 54	Carrington Mill Blvd	Northern Twn Limits	2	6	0.3	$9,573,333	☐	☑	☐	2035
A222c2	NC 54	Perimeter Park Dr	Carrington Mill Blvd	2	4	1	$31,869,667	☐	☑	☐	2035

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A486	NC 54 - Blue Ridge (RR)	Blue Ridge Rd	Beryl Rd	4	4	3	$69,748,000	☐	☐	☑	2035
A118b	NC 55	Jicarilla Rd	Kennebec Church Rd	2	4	1.48	$35,411,973	☐	☑	☐	2035
A622	NC 55	S Hughes Street	Salem St	2	4	1.12	$39,776,200	☐	☑	☐	2035
A96b	NC 55	Salem St	Olive Chapel Road	2	4	1.04	$46,693,800	☐	☑	☐	2035
A426a	NC 55 (Main St)	Technology Drive	Sunset Lake Road	2	4	0.75	$21,867,211	☐	☑	☐	2035
Hrnt4b2	NC-55	NC 55 Bypass	Oak Grove Church Rd	2	4	1.26	$27,146,280	☐	☑	☐	2035
A708	New Hill Olive Chapel Rd	US 64	US 64				$67,010,000	☐	☐	☐	2035
A679b	Northern Judd Parkway	NC 55 / Broad St	Old Honeycutt Road	0	4	3	$176,500,000	☐	☑	☐	2035
A130c	US 401	Mitchell Mill Rd	Ventura Cir	6	8	0.5	$55,780,000	☐	☑	☐	2035
A480a2	US 401	Garner Station Road	Old Stage Road	4	6	1.4	$36,432,000	☐	☑	☑	2035
A480b	US 401	Ten Ten Rd	NC 540	4	6	1.2	$7,485,100	☐	☑	☐	2035
A90c	US 401	US 401 Rolesville Bypass	Flat Rock Church Rd	2	4	5.98	$27,950,000	☐	☑	☐	2035
A903	US 401 Bus/Main Street	Burlington Mills Rd	Young St	2	3	1.24	$3,024,000	☐	☐	☐	2035
A664a	US 401 Superstreet	Lake Wheeler Road	Hilltop Needmore Road	4	4	1.33	$1,850,000	☐	☐	☑	2035
F90	US 70 Freeway Conversion	US 70 BUS	Neuse River Bridge	4	4	0	$76,986,000	☐	☐	☐	2035
Jhns2a	Veterans Parkway	US 70 Business	Clayton Bypass (I-42)	2	4	3	$81,362,400	☐	☐	☐	2035
A954	Wade Ave @ Edwards Mill Rd Interchange Upgrade	n/a	n/a				$56,065,433	☐	☑	☑	2035
A754	Wilmington Street Realignment	US 401	Garner Station	0	2	1.2	$21,554,910	☐	☐	☐	2035
A641	Airport Blvd Interchange (Impr)					0.82	$51,733,000	☐	☑	☑	2035
A651	Apex Peakway / Salem St Interchange (RR)	James St	Towhee Dr			0.3	$12,500,000	☐	☐	☑	2035
A689	Beryl Road Realignment	Beryl Road	Royal St	2	2	0.24	$3,500,000	☐	☐	☑	2035
A791	Capital Blvd/West/Old Williamson GS (RR)	Capital Blvd	West St	2	2		$0	☐	☐	☐	2035
A644	Chatham St/Maynard Rd Rail Grade Separation (RR)			4	4	0	$38,000,000	☐	☐	☑	2035
A659	Durant Rd Grade Separation (RR)						$14,595,000	☐	☐	☑	2035
A657	E Millbrook Rd Grade Separation (RR)						$13,390,000	☐	☐	☑	2035
A933	Fayetteville Street Closure	Fayetteville St	N. First Ave				$1,600,000	☐	☐	☐	2035
A787	Friendship Chapel Rd	Friendship Chapel Rd	S. Main St	2	0		$0	☐	☐	☐	2035
A648	Friendship Road Interchange	US 1	Friendship Road			1.25	$77,061,176	☐	☑	☐	2035
A658	Gresham Lake Road Grade Separation (RR)						$0	☐	☐	☑	2035
A793	Hargett St Closure (RR)	Hargett St	Hargett St	2	0		$0	☐	☐	☐	2035
A661	Holding Ave Grade Separation (RR)	S. Main Street	S. White Street	2	2	0.2	$0	☐	☐	☑	2035
F43	I-40	US 1/64	Lake Wheeler Rd	6	10	4.4	$164,400,000	☐	☑	☐	2035
F44a	I-40 (East)	I-440	US 70 Business (Garner)	6	10	4.4	$195,131,775	☐	☑	☐	2035
F44b	I-40 (East)	US 70 Business (Garner)	NC 36	4	8	6.3	$279,393,224	☐	☑	☐	2035
F43b	I-40 / US 1 / US 64 Interchange	I-40 / US 1 / US 64	I-40 / US 1 / US 64			4	$364,896,000	☐	☐	☑	2035
F112a	I-40 Corridor Improvements	Aviation Parkway	Harrison Avenue	8	10	2.3	$74,330,000	☐	☑	☐	2035
A640	I-40/Aviation	National Guard Dr	I-40			0.42	$25,333,000	☐	☑	☑	2035

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
F44b1	I-40/Cleveland	Cleveland Rd	Cleveland Rd			1	$56,532,500	☐	☐	☐	2035
F44b2	I-40/NC 36	NC 36	NC 36			1	$56,532,500	☐	☐	☑	2035
F10	I-440	US 1/64	Wade Avenue	4	6	3.5	$408,157,000	☐	☑	☐	2035
F83	I-440 Interchange Improvements	Wake Forest Road (SR 2000)	Wake Forest Road (SR 2000)			2	$24,316,000	☐	☐	☑	2035
F87	I-540 EB Aux Lane	East of US 70	Leesville Road	6	7	1.365	$39,520,000	☐	☑	☐	2035
F89	I-95	I-40	Johnston/Harnett County Line	4	8	3.3	$87,764,747	☐	☑	☐	2035
A792	Jones St Closure (RR)	Jones St	Jones St	2	0		$0	☐	☐	☐	2035
A660	Ligon Mill Road Grade Separation (RR)						$0	☐	☐	☑	2035
A663	Main St Grade Separation (RR)						$0	☐	☐	☑	2035
F5	NC 540	NC 55	US 401	0	6	7.8	$257,989,000	☑	☑	☐	2035
F6	NC 540	US 401	I-40	0	6	8.7	$385,697,000	☑	☑	☐	2035
F3	NC 540 Tri-Ex (Phase VI)	I-40 (South)	I-87	0	6	10.8	$369,608,000	☑	☑	☐	2035
A656	New Hope Road Grade Separation (RR)						$17,545,000	☐	☐	☑	2035
A114a	Ten Ten Rd	US 1	US 1			0.37	$45,200,000	☐	☐	☑	2035
F11-1a	US 1	I-540	Thornton Road	4	8	1.74	$516,250,000	☐	☑	☐	2035
F11-1b	US 1	Thornton Rd	Burlington Mills Rd	4	8	1.66	$292,045,000	☐	☑	☐	2035
F11-1c	US 1	Burlington Mills Rd	Falls of Neuse Rd	4	6	2.3	$131,772,500	☐	☑	☐	2035
F11-1d	US 1	Falls of Neuse Rd	NC 98 (Durham Rd)	4	6	2.3	$131,772,500	☐	☑	☐	2035
F11-1e1	US 1	NC 98 (Durham Road)	Harris Road	4	6	2	$268,845,000	☐	☑	☐	2035
F15a3	US 64 (superstreet)	US 1	RR Grade Separation over SDS Branc	4	6	3.12	$202,132,734	☐	☑	☐	2035
F15a2	US 64 / Lake Pine Interchange (New)	Lake Pine Drive	Lake Pine Drive			0.75	$77,743,359	☐	☑	☐	2035
F15a1	US 64 / Laura Duncan Interchange (New)	US 64	Laura Duncan Rd			0.5	$51,828,906	☐	☑	☐	2035
A412	US 70	Durham / Wake County Line	Lumley/Westgate Rd	4	8	2	$211,428,660	☐	☑	☐	2035
A634	US 70 / Brier Creek Interchange						$47,870,640	☐	☑	☐	2035
A645	US 70 / TW Alexander Interchange					0	$47,870,640	☐	☐	☐	2035
A647	West St Extension (RR)	Martin St	Cabarrus St	0	2	0.2	$10,000,000	☐	☐	☐	2035
A655	Wolfpack Lane Grade Separation (RR)	Tarheel Dr	Atlantic Ave	0	2	0.26	$0	☐	☐	☑	2035
2045 MTP											
A165b	Airport Blvd Ext	Davis Dr	Louis Stephens Rd	0	2	0.36	$9,422,692	☐	☐	☐	2045
A187b2	Apex Peakway (East)	N Salem St	Old Raleigh Road	2	4	0.81	$23,616,588	☐	☐	☐	2045
A187c2	Apex Peakway Widening (South)	Broadstone Way	Old US 1	2	4	1.25	$36,445,352	☐	☐	☐	2045
A545	Arthur Pierce Rd	Kildaire Farm	Holly Springs Rd	2	3	1.03	$24,657,795	☐	☐	☑	2045
A203a	Auburn-Knightdale Rd	NC 540 (Future)	White Oak Rd	2	4	6	$159,798,853	☐	☐	☐	2045
A784	Avent Ferry-Stinson Ave Realignment	Avent Ferry Road	Stinson Avenue	0	3	0.389	$12,137,281	☐	☐	☐	2045
A953	Aviation Parkway/National Guard Interchange	N/A	N/A				$54,000,000	☐	☑	☐	2045
A947	Bartley Holleman Road	Chatham County line	New Hill Holleman Road	2	3	2.69	$39,282,500	☐	☐	☐	2045

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A683b	Barwell Rd	Berkley Lake Drive	Poole Rd	2	3	1.2	$31,992,020	☐	☐	☑	2045
A890	Beckom St Extension	Spring Forest Road Ext	End of Road	0	2	0.54	$9,955,181	☐	☐	☐	2045
Hrnt8	Brightwater Drive (SR2288) Extension	Existing Brightwater Drive terminus	NC 210 North	0	4	0.5	$17,238,741	☐	☐	☐	2045
A402a1	Buffaloe Rd	Spring Forest Rd Extension	I-540	2	4	0.4	$12,335,350	☐	☐	☐	2045
A402a2	Buffaloe Rd	Forestville Road	Old Milburnie Rd	2	4	0.8	$24,670,700	☐	☐	☐	2045
A133	Burlington Mills Rd	US 1	US 401	2	4	4.77	$115,073,822	☐	☐	☐	2045
A166	Center St/1010	US 1	Apex Peakway	2	4	0.97	$17,421,537	☐	☐	☐	2045
Jhns10b	Cleveland Rd	NC 36	Barber Mill Rd	2	4	5.1	$143,800,000	☐	☐	☐	2045
A703	Cleveland Road Connector	Cleveland Road	NC 36	0	2	0.8	$56,500,000	☐	☐	☐	2045
A885	Collector Street - Knightdale	Old Faison Rd	Widewaters Pkwy	0	2	0.85	$15,670,192	☐	☐	☐	2045
A843	Collector Street - Wake Forest	Averette Rd	NC 96	0	2	0.92	$16,960,678	☐	☐	☐	2045
Jhns4b	Covered Bridge Rd	North Connector	Shotwell Rd	2	4	1.99	$47,591,794	☐	☐	☐	2045
Jhns5	Covered Bridge Rd	Northern Connector	Buffalo Rd	2	4	4.93	$117,903,290	☐	☐	☐	2045
A148a1	Eagle Rock Rd	Kioti Dr	Leith Driveway	4	4	0.3	$7,989,943	☐	☐	☐	2045
A750	East Academy Street	N. Judd Parkway NE	Purfoy Road	0	2	0.57	$13,461,840	☐	☐	☐	2045
A944	Evergreen View Drive Extension	Southern Access Road	Current Evergreen View Drive Termi	0	2	0.6	$390,000	☐	☐	☐	2045
A125a1	Forestville Rd	Old Milburnie Rd	Buffaloe Rd	2	4	1.29	$37,611,604	☐	☐	☐	2045
A125a2	Forestville Rd	Buffaloe Rd	Rogers Rd	2	4	7.5	$218,672,115	☐	☐	☐	2045
A774	Friendship Chapel Rd	Holding Village Way	Heritage Hills Way	0	2	0.7	$13,691,360	☐	☐	☐	2045
A729	Fuquay-Varina Parkway (West)	Wade Nash Rd	Piney Grove Wilbon Road at Piney G	0	4	4.27	$147,218,845	☐	☐	☐	2045
A749	Granite Falls Blvd	Burlington Mills Rd	Grand Rock Way	0	3	0.41	$13,432,133	☐	☐	☐	2045
A164c2	Green Level Church Rd	Kit Creek Road	Folklore Way	2	4	0.95	$27,698,468	☐	☐	☐	2045
A168a	Green Level Church Rd	Green Level Rd West	Jenks Rd	2	4	1.76	$42,091,235	☐	☐	☐	2045
A168b	Green Level Church Rd	Green Level Rd West	Morrisville Parkway	2	4	1.86	$44,482,783	☐	☐	☐	2045
A39	Green Level Church Road	Kit Creek Rd	NC 55	2	4	2.12	$50,700,806	☐	☐	☐	2045
A557	Green Lvl W Rd	NC 540	Green Level Ch Rd	2	4	0.95	$12,923,000	☐	☐	☐	2045
A613	Harris Rd	US 1	N. Main Street	2	4	1.42	$58,974,907	☐	☐	☐	2045
A564	Hillsborough St Widening	Western Blvd	Bashford Rd	2	4	1.09	$31,780,347	☐	☐	☐	2045
A403b	Hodge Rd Ext	US 64	Old Milburnie Rd	0	4	1	$31,036,963	☐	☐	☐	2045
A163c	Holly Springs New Hill Rd	Friendship Rd	Old Holly Springs Apex Rd	2	4	3.58	$99,135,936	☐	☐	☐	2045
A69	Holly Springs Rd	Cary Parkway	Penny Rd	2	4	2.22	$58,122,156	☐	☐	☐	2045
A70	Holly Springs Rd	Penny Rd	Ten Ten Rd	2	4	1.22	$31,941,004	☐	☐	☐	2045
A942	Irving Parkway Extension	Green Oaks Parkway	Southern Access Road	0	2	0.23	$2,550,000	☐	☐	☐	2045
A218b	Jessie Dr (part NL)	Veridea Parkway	NC 55	0	4	1.64	$57,393,341	☐	☐	☐	2045
A952	John Brantley Blvd Extension	Airport Blvd	Terminal 2	2	4	1	$175,000,000	☐	☐	☐	2045
A560a	Jones Franklin	Western Blvd	Fort Sumter Rd	2	3	0.87	$22,695,382	☐	☐	☑	2045
A207a2	Judd Parkway NE	NC 55	Products Road (future ext)	2	4	1.5	$35,873,212	☐	☐	☐	2045

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A172	Kelly Rd	Jenks Rd	Old US 1	2	4	5.23	$145,781,410	☐	☐	☐	2045
A414b	Kildaire Farm Connector	Sunset Lake Rd	Kildaire Farm Road	0	4	0.6	$20,997,564	☐	☐	☐	2045
A568	Kit Creek Turn Lane	Davis Dr	Green Level Ch Rd	2	3	1.81	$49,253,698	☐	☐	☑	2045
A136a	Lake Wheeler Rd	Tryon Rd	Penny Rd	2	3	1.79	$44,994,491	☐	☐	☐	2045
A136b	Lake Wheeler Rd	Penny Rd	Ten Ten Rd	2	4	3.55	$92,943,087	☐	☐	☐	2045
A136d	Lake Wheeler Rd	Hilltop-Needmore Rd	US 401	2	4	0.57	$14,923,256	☐	☐	☐	2045
A85b1	Leesville Rd	Westgate Rd	O'Neal Rd	2	4	1	$11,600,000	☐	☐	☐	2045
A85b2	Leesville Rd	O'Neal Road (A Leesville Road Campus	Lynn Rd	2	4	1.75	$51,023,493	☐	☐	☐	2045
A86b	Leesville Rd	New Leesville Blvd	TW Alexander Dr Ext	2	4	0.97	$28,281,593	☐	☐	☐	2045
A127b3	Ligon Mill Rd Connector	Richland Creek	NC 98	2	4	0.75	$21,867,211	☐	☐	☐	2045
A134	Litchford Rd	Old Wake Forest Rd	Falls of Neuse Rd	2	4	2.99	$87,177,283	☐	☐	☐	2045
A27d	Louis Stephens Dr Ext (part existing)	Poplar Pike Lane	Airport Blvd	2	4	1.22	$35,570,664	☐	☐	☐	2045
A219a2	McCrimmon Parkway Ext	Davis Dr	Louis Stephens Rd	2	4	0.82	$4,727,273	☐	☐	☐	2045
A951	Midtown Bridge over I-440	Wake Town Drive	Quail Hollow Drive	0	2	0.5	$24,000,000	☐	☑	☐	2045
A415	Milburnie Rd	Hodge Rd Ext	Forestville Rd	2	4	1.5	$44,654,900	☐	☐	☐	2045
A104b	Morrisville Parkway	Green Level Ch Rd	NC 55	2	4	1.83	$15,000,000	☐	☑	☐	2045
A59a	N.E. Regional Center	Gresham Lake Rd	I 540	0	4	0.8	$39,516,664	☐	☐	☐	2045
A117	New Hope Rd	Old Poole Rd	North of Anamosa St	2	4	1.65	$52,481,308	☐	☐	☐	2045
A80b	New Hope Rd	US 64 Bypass	New Bern Ave	2	4	1.19	$19,210,479	☐	☐	☐	2045
Jhns4a1	Northern Connector	NC 42 East	N. Oneil St	0	2	2.21	$36,702,434	☐	☐	☐	2045
Jhns14	Northern Connector Ext	N Oneil St	Covered Bridge Rd	0	2	0.12	$3,368,953	☐	☐	☐	2045
A124a	Northside Loop (Harris Rd)	N. Main Street	N. White St	0	3	0.44	$24,327,979	☐	☐	☐	2045
Frnk11	Oak Park Blvd	Hicks Rd	Cedar Creek Rd	0	2	1.39	$24,412,931	☐	☐	☐	2045
A218a	Old Holly Springs Apex Rd	Holly Springs Rd	Jessie Dr	2	4	2.52	$75,576,107	☐	☐	☐	2045
A533	Old Honeycutt Turn Lane	Judd Pkwy	Kennebec Rd	2	3	2.74	$40,012,658	☐	☐	☑	2045
A137a	Old Stage Rd	US 401	Ten Ten Rd	2	4	4.2	$100,444,993	☐	☐	☐	2045
A137b2	Old Stage Rd	Ten Ten Rd	Rolling Farm Rd	2	4	0.45	$10,761,964	☐	☐	☐	2045
A137d	Old Stage Rd	NC 42	NC 210	2	4	5.39	$128,904,408	☐	☐	☐	2045
A181b	Old US 1	Humie Olive Rd	Apex Peakway	2	4	2.53	$60,506,151	☐	☐	☐	2045
A202	Old US 70	Rock Quarry Rd	Shotwell Rd	2	4	3.22	$77,007,828	☐	☐	☐	2045
A1	Perry Creek Rd	US 401	Fox Road	2	4	0.53	$14,676,549	☐	☐	☑	2045
A2	Perry Creek Rd	Wallace Martin Way	Buffaloe Road	0	4	0.96	$45,854,604	☐	☐	☐	2045
A511	Piney Grove Wilbon Rd	Ralph Stephens Rd	Southern FV Bypass	2	4	6.5	$155,450,585	☐	☐	☐	2045
A149a	Poole Rd	I-540	Martin Pond Rd	2	4	5.6	$163,275,179	☐	☐	☐	2045
A49b1	Poole Rd	Barwell Rd	Misty River Dr	2	4	0.44	$12,828,764	☐	☐	☐	2045
A49b2	Poole Rd	Misty River Dr	Hodge Rd	2	4	1.13	$32,946,599	☐	☐	☐	2045
A531a	Purfoy Rd Widening	US 401	Holland Rd	2	4	1.41	$39,045,159	☐	☐	☐	2045

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A606	Raven Ridge Rd	Falls of Neuse Blvd	Shadow Lawn Dr	2	3	0.63	$16,795,810	☐	☐	☑	2045
A949	Rhythm Dr Extension	Rhythm Dr current terminus	Smith Rd	0	2	0.4	$7,823,634	☐	☐	☐	2045
A201b	Rock Quarry Rd	Battle Bridge Rd	East Garner Rd	2	4	3.3	$96,215,730	☐	☐	☐	2045
A406c	Shotwell Rd	Covered Bridge Rd	Old Baucom Rd	2	4	1.75	$41,852,081	☐	☐	☐	2045
A205	Six Forks Rd	Atlantic Avenue	Capital Blvd	0	4	0.56	$25,981,124	☐	☐	☐	2045
A432	Skycrest Dr	Brentwood Rd	New Hope Rd	2	4	1.6	$46,650,051	☐	☐	☐	2045
A112a	Smithfield Rd	US 64 Bypass	Major Slade Rd	2	4	2.6	$75,806,333	☐	☐	☐	2045
Jhns3	South Connector	Little Creek Church Rd	NC 42	0	2	2	$33,214,873	☐	☐	☐	2045
A3	Spring Forest Rd	US 401	Buffaloe Rd	0	4	1.52	$31,389,472	☐	☐	☐	2045
A417	Spring Forest Rd	Fox Rd	US 401	2	4	0.67	$8,125,290	☐	☐	☐	2045
Jhns20	Stallings Street Extension	W Stallings Street	Old US Highway 70 W	0	2	0.22	$4,068,822	☐	☐	☐	2045
A819	Strickland Rd Realignment	NC 98 - Arnold Rd		2	2	0.08	$722,326	☐	☐	☑	2045
A155c	T.W. Alexander Dr	Sunfield Cir	Leesville Rd	0	4	1.06	$32,899,181	☐	☐	☐	2045
A218g	Technology Drive Extension	Old Holly Springs Apex Road	Williams Street	0	2	1.72	$40,621,691	☐	☐	☐	2045
A114b	Ten Ten Rd	Kildaire Farm Road	US 1	2	4	1.96	$27,970,100	☐	☐	☐	2045
A400a	Ten-Ten Rd	Bells Lake Rd	Old Stage Rd	2	4	5.1	$121,968,920	☐	☐	☐	2045
A218d	Tingen Rd	Apex Peakway	Old Holly Springs Apex Rd	2	3	0.55	$14,174,639	☐	☐	☑	2045
A544b2	Trinity Creek Drive Extension	Trinity Creek Drive	Avent Ferry Road	0	2	1.5	$29,338,628	☐	☐	☐	2045
A82c	Trinity Rd Ext	Walnut Creek	Chatam St	2	4	0.44	$12,828,764	☐	☐	☐	2045
A672	Unicon Drive Ext	Height Lane	Unicon Drive	0	2	0.15	$14,223,574	☐	☐	☐	2045
A218c1	Veridea Parkway	Tingen Rd	Future Major Collector (South of US	2	3	0.55	$23,342,983	☐	☐	☑	2045
A218c2	Veridea Parkway	Future Major Collector (South of US 1)	Jessie Dr	2	4	0.48	$13,776,343	☐	☐	☑	2045
A624b	Wade Nash Road	Sand Dune Way	Piney Grove Wilbon	2	4	0.87	$20,806,463	☐	☐	☐	2045
A731	Walter Myatt Road	Panther Lake Road	Eddie Howard Road	2	3	0.77	$1,107,000	☐	☐	☑	2045
A149b2	Wendell Falls Pkwy	Richardson Road	Jake May Drive	2	4	1	$23,915,475	☐	☐	☐	2045
A786	Wendell Falls Pkwy	Martin Pond Rd	Poole Rd	2	4	0.54	$15,498,386	☐	☐	☐	2045
A695b	Wendell Valley Blvd	Knightdale Eagle Rock Road	US 64	0	4	1.06	$33,310,421	☐	☐	☐	2045
A77b2	West Lake Rd	Ten Ten Rd	Middle Creek Park Avenue	2	4	1.23	$35,862,227	☐	☐	☐	2045
A143a	White Oak Rd	Hillandale Ln	NC-540	2	4	3	$87,468,846	☐	☑	☐	2045
A75c	Wimberley Rd	Morrisville Parkway	Green Level West Rd	0	4	1.46	$45,880,391	☐	☐	☐	2045
A935	Woodfield Dead End Road Ext	Holly Springs New Hill Road	Woods Creek Road	0	4	1.78	$27,290,000	☐	☐	☐	2045
A75b1	Yates Store Rd	New Hope Church Road	Elan Hall Road	2	4	0.75	$19,635,863	☐	☐	☐	2045
A75b2	Yates Store Rd	Elan Hall Road	Morrisville Parkway	0	4	0.9	$28,282,433	☐	☐	☐	2045
Grnv48	Creedmoor Loop B	US-15	Relocated US 15	2	4	0.66	$15,784,213	☐	☐	☐	2045
A726	East Broad Street	Wake Chapel Road	Bengal Boulevard	4	4	0.22	$6,314,157	☐	☐	☑	2045
A712	East Williams Street (NC 55)	Lufkin Road	Technology Drive	4	6	1.38	$46,257,525	☐	☑	☐	2045
A157a	Eastern Parkway	Piney Grove Wilbon	NC 55	0	4	4.2	$140,699,657	☐	☐	☐	2045

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A98a	Holly Springs Road Interchange	Holly Springs Road	NC-55 Bypass				$27,000,000	☐	☑	☐	2045
A758	Knightdale Blvd	Neuse River	N. First Ave.	4	6	3.72	$124,694,198	☐	☑	☐	2045
A811	N Arendell Ave	US 64 Highway	E Gannon Ave	3	4	0.72	$9,158,400	☐	☐	☐	2045
Hrnt2b	NC 210	Angier Western Bypass	US 421	2	4	6.22	$148,754,252	☐	☑	☐	2045
Hrnt3a2	NC 210	Lipscomb Rd	Old Stage Rd	2	4	1.32	$35,155,748	☐	☑	☐	2045
A407a	NC 42	NC 55	Old Stage Rd	2	4	4.1	$98,053,446	☐	☑	☐	2045
A407b1	NC 42	Old Stage Rd	John Adams Rd	2	4	0.95	$22,719,701	☐	☐	☐	2045
A407b2	NC 42	John Adams Rd	NC 50	2	4	4.39	$104,988,933	☐	☐	☐	2045
A535b	NC 42 Turn Lane	Coley Farm Rd	NC 55	2	3	0.47	$12,530,208	☐	☑	☑	2045
A228b	NC 50	I-540	NC 42	2	4	1.85	$44,243,628	☐	☑	☐	2045
A228c	NC 50	NC 42	NC 210	2	4	5.63	$135,470,673	☐	☐	☐	2045
A444	NC 50	I 540	NC 98	2	4	5.5	$249,600,000	☐	☐	☐	2045
A221	NC 54	N.W. Maynard Rd	Wilson Rd	2	4	0.93	$8,502,268	☐	☑	☐	2045
A222b	NC 54	Weston Parkway	McCrimmon Pkwy Grade Sep	2	4	2.4	$74,000,000	☐	☑	☐	2045
A118a	NC 55	Old Honeycutt Road	Jicarilla Rd	2	4	2.49	$26,086,000	☐	☑	☐	2045
A716	NC 55	Lufkin Road	S. Hughes Street	4	6	0.28	$9,385,585	☐	☐	☐	2045
A94	NC 55	NC 540	Kit Creek Rd	4	6	1.58	$11,907,535	☐	☑	☐	2045
A98	NC 55 Bypass	North Main St	Honeycutt Connector	4	6	5.95	$146,500,000	☐	☑	☐	2045
Grnv20a	NC 56	At-Grade Rail Crossing (West of W Lyo	South of Holly Drive (Creedmoor Lo	2	4	1.12	$29,829,119	☐	☐	☐	2045
Grnv21	NC 56	NC 50	Hayes Rd	2	4	2.6	$75,806,333	☐	☑	☐	2045
Frnk9a2	NC 56 Bypass	US 1	NC 56 East	0	2	1.75	$34,228,399	☐	☑	☐	2045
A816	NC 96 Arendell Rd	NC 97 Gannon Ave		2	2	0.06	$763,200	☐	☐	☐	2045
A418b1	NC 96 Bypass	NC 96 / Cedar Creek Rd	East Main Street / NC 96	0	2	2.5	$68,221,290	☐	☐	☐	2045
A150	NC 98	Durham County Line	Thompson Mill Rd	2	4	8.86	$258,324,658	☐	☐	☐	2045
A929	New Bern Ave (East Bound)	Freedom Drive	Patriots Drive	5	6	0.15	$1,210,442	☐	☐	☐	2045
A190	New Hill Holleman Rd	Old US 1	Avent Ferry Rd	2	4	4.85	$124,931,109	☐	☐	☐	2045
A725	North Broad Street	Judd Parkway Northwest/Northeast	Wake Chapel Road	5	4	0.28	$2,346,000	☐	☐	☑	2045
A732	North Broad Street widening	Wade Nash Rd / Fuquay-Varina Pkwy	Judd Pkwy NW / NE	4	6	1.07	$34,073,025	☐	☑	☐	2045
A480a3	US 401	Old Stage Road	Simpkins Road	4	6	1	$21,500,000	☐	☑	☐	2045
A799	US 401	Ligon Mill Rd	Louisburg Rd	4	6	2.17	$69,101,368	☐	☑	☐	2045
A90d	US 401	Flat Rock Church Rd	Fox Park Rd	2	4	5.29	$80,400,000	☐	☑	☐	2045
A619c	US 401 Improvements	NC 55/42	Judd Parkway	4	4	1.2	$9,120,000	☐	☐	☑	2045
A619a	US 401 Widening	NC 540	US 401 Bypass	4	6	1.58	$44,858,736	☐	☑	☐	2045
A619b	US 401 Widening	US 401 Bypass	NC 55/42 (FV)	4	6	3.32	$94,281,264	☐	☑	☐	2045
A678	US 401/Ten Ten	Ten Ten Rd	Ten Ten Rd				$82,100,000	☐	☑	☐	2045
A301	US 70 Business	I-40	NC 42	4	6	7.1	$56,010,000	☐	☑	☐	2045
F84	I540 Managed Shoulder	US 1	I-495 (Knightdale Bypass)	0	2	8.2	$35,930,466	☑	☑	☐	2045

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
F85	I540 Managed Shoulder	I-40	US 1	0	2	17.2	$74,467,458	☑	☑	☐	2045
Grnv94	Brogden Interchange						$42,583,695	☐	☑	☐	2045
A687	Corporate Center Extension (RR)	Corporate Center Dr	Bashford Rd	0	2	0.5	$22,000,000	☐	☐	☑	2045
A79b	Crabtree Valley Ave	Blue Ridge Rd	Creedmoor Rd	2	4	0.61	$18,096,806	☐	☐	☐	2045
A446	Glenwood Avenue	Womans Club Dr	Oberlin Rd	4	6	1.07	$35,866,342	☐	☑	☐	2045
F44c	I-40 (East)	NC 42	NC 210	4	6	6.78	$293,593,496	☐	☑	☐	2045
F44d	I-40 (East)	NC 210	CAMPO MAB	4	6	6.78	$307,195,219	☐	☑	☐	2045
F112b	I-40 Corridor Improvements	Harrison Avenue	Wade Avenue	8	10	2	$160,405,910	☐	☑	☐	2045
F81a	I-40 Widening	Wade Avenue	US 1/64	6	8	4.18	$440,936,496	☐	☑	☐	2045
Grnv1	I-85	Durham co. line	Vance Co. Line	4	6	24	$1,105,877,908	☐	☑	☐	2045
A639a	I-87 / I-495 / Smithfield Road Interchange Improvement						$22,100,000	☐	☐	☑	2045
A639b	I-87 / I-495 Bypass	I-440	US-64	6	8	9.73	$97,300,000	☐	☑	☐	2045
A800	Perry Creek Rd Grade Separation	Perry Creek Rd	US 401	6	6		$10,599,435	☐	☐	☐	2045
Frnk26	Tanyard St Ext	Mason St	N Main St	0	2	0.18	$13,514,147	☐	☐	☑	2045
A138b	Timber Dr/Jones Sausage Connector	Garner Road	US 70	0	4	0.28	$27,604,000	☐	☐	☑	2045
A643	Trinity Rd Realignment	NC - 54	Soccer Street / Chatham St	2	2	0	$40,700,000	☐	☐	☑	2045
F110b	US 1	US 64	NC 55	4	6	3.1	$74,800,000	☐	☑	☐	2045
F110c	US 1	NC 55	NC 540	4	6	2.2	$108,300,192	☐	☑	☐	2045
Frnk1	US 1	Extend frwy project from US-1A	CAMPO MAB	4	6	8.28	$476,627,864	☐	☑	☐	2045
F110a	US 1 / NC 55 Diverging Diamond Interchange						$22,300,000	☐	☐	☑	2045
Frnk25	US 1 Access Rd	NC-56	Swen St	0	2	3	$52,689,780	☐	☐	☐	2045
A817	US 1 Alt / S Main St	US 1 / Capital Blvd	NC 98 / Dr Calvin Jones Hwy	2	3	1.07	$13,610,400	☐	☐	☐	2045
Frnk27	US 1 Freeway Access Roads	Purnell Rd	Park Ave	0	2	5.61	$132,492,843	☐	☐	☐	2045
F11-1e2	US 1 North - Upgrade to Freeway	Harris Road	US 1A (Youngsville)	4	6	3.91	$253,200,427	☐	☑	☐	2045
A814	US 401 / Louisburg Rd Access Management	I-540 Interchange	Neuse River	6	6	4	$50,880,000	☐	☐	☐	2045
F15a	US 64 West Conversion to Expressway	RR Grade Separation at SDS Branch	I-540	4	6	2.1	$137,584,615	☐	☑	☐	2045
F7a	US 64/US 264	US 64 Business (Wendell Blvd)	US 264	4	6	6.8	$136,700,000	☐	☑	☐	2045
A742	Vandora Springs Grade Separation (RR)	Vandora Springs Rd	Vandora Hills Pl	2	2	0.056	$11,922,002	☐	☐	☑	2045
A562	Wade Ave	I-40	I-440	4	6	3.1	$76,611,000	☐	☑	☐	2045
Frnk13	Western Service Rd	Bert Winston Rd	Pocomoke Rd	0	2	2.7	$44,840,078	☐	☐	☐	2045
A143a1	White Oak Interchange	I-40	I-40				$42,583,695	☐	☑	☐	2045
2055 MTP											
A165a2b	Airport Blvd Ext	Church Street	NC 54	0	4	0.4	$36,127,021	☐	☐	☑	2055
A406b	Amelia Ch Rd	US 70	East of NC 42	2	4	2	$47,830,949	☐	☐	☐	2055
A633	Angier Rd Widening	Purfoy Rd	Rogers Rd	2	4	0.56	$16,327,518	☐	☐	☐	2055
A578	Auburn Ch Rd Turn Lane	Jones Sausage Rd	Garner Rd	2	3	2.84	$67,988,483	☐	☐	☑	2055

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A427c	Avent Ferry Rd	New Hill Holleman	Cass Holt	2	4	3.69	$88,248,101	☐	☐	☐	2055
A544c2	Avent Ferry Road Connector	Avent Ferry Road	Rex Road	2	4	1.15	$25,225,878	☐	☐	☐	2055
A768	Averette Rd	NC 98	Oak Grove Church Rd	2	3	1.71	$47,868,059	☐	☐	☑	2055
A539	Banks Rd Turn Lane	US 401	Fanny Brown Rd	2	3	1.55	$41,323,025	☐	☐	☑	2055
A538	Bass Lake Rd Widening	Holly Springs Rd	Hilltop-Needmore Rd	2	4	2.77	$67,072,416	☐	☐	☐	2055
Frnk8	Bert Winston Realign	US 1	Fleming Rd	0	2	0.76	$12,621,652	☐	☐	☐	2055
A204	Bethlehem Rd	Railroad St	Old Faison Rd	2	4	0.69	$17,344,245	☐	☐	☐	2055
A162	Buffaloe Rd	Southall Rd	Stone Station Drive	2	4	1.5	$43,734,423	☐	☐	☐	2055
A576	Buffaloe Rd	NC 50	Aversboro Rd	2	3	1.48	$39,456,824	☐	☐	☑	2055
A755b	Buffaloe Rd	Forestville Rd	Old Milburnie Rd	4	6	0.78	$26,815,957	☐	☐	☐	2055
A34	Cary Parkway	Evans Rd	Harrison Avenue	2	4	1.74	$50,731,931	☐	☐	☐	2055
Hrnt1	Chalybeate Springs Turn Lane	Future Western Bypass	NC 55	2	3	0.73	$19,461,812	☐	☐	☑	2055
A631	Chalybeate Springs Widening	Future US 401 Bypass	Future Western Angier Bypass	2	4	3.51	$110,301,488	☐	☐	☐	2055
A36c	Chatham St	N.E. Maynard Rd	I-40 bridge	2	4	0.93	$27,115,342	☐	☐	☐	2055
Jhns10a	Cleveland Rd	NC 50	NC 36	2	4	2.11	$61,519,755	☐	☐	☐	2055
A200	Creech/Jones Sausage Connector	Creech Rd	Jones Sausage Rd	0	3	1.09	$30,539,007	☐	☐	☐	2055
A748	Dunn Road	Neland St	Durant Rd	0	2	1	$23,617,262	☐	☐	☐	2055
A759	E Green St	US 1	Whitaker St	2	2	1.35	$17,172,000	☐	☐	☑	2055
A148a2	Eagle Rock Rd	US 64	Martin Pond Rd	2	4	0.86	$23,776,885	☐	☐	☐	2055
A676	East Wake Drive	Old Milburnie Rd	Forestville Road	0	3	0.44	$13,270,584	☐	☐	☑	2055
A302b	Eastern Angier Bypass	Benson Rd	NC 210	0	4	0.5	$13,090,576	☐	☐	☐	2055
A169d1	Eastern Wendell Bypass	NC 231	Morphus Bridge Rd	0	4	1.36	$44,209,982	☐	☐	☐	2055
A102	Edwards Mill Rd Ext - part III	Chapel Hill Rd	Western Blvd Ext	0	4	0.7	$46,425,000	☐	☐	☑	2055
A530	Evans Rd	Aviation Parkway	Weston Parkway	4	6	0.5	$16,759,973	☐	☐	☐	2055
A13d	Falls of Neuse Blvd	Durant Rd	Old Falls of Neuse Blvd	4	6	2.06	$101,408,362	☐	☐	☐	2055
A607	Falls of Neuse Widening	New Falls of Neuse Blvd	NC 98 Bypass	2	4	3.14	$84,101,229	☐	☐	☐	2055
A125a4	Forestville Rd	East Wake Dr	Old Knight Rd	2	3	2.27	$63,544,149	☐	☐	☐	2055
A589a	Forestville Rd Ext	US 64	Old Knight Rd	0	2	0.29	$6,849,006	☐	☐	☐	2055
A163b	Friendship Rd Widening	Old Holly Springs Apex	New Hill Holleman	2	4	1.93	$54,660,382	☐	☐	☐	2055
A722	Fuqua-Varina Parkway East	NC 55	NC 42	0	4	2.55	$89,239,646	☐	☐	☐	2055
A723	Fuquay-Varina Parkway East	NC 42	US 401	0	4	1.44	$50,394,153	☐	☐	☐	2055
Jhns18	Glen Laurel Road	NC42 East	Powhatan Road	2	4	3.1	$82,646,051	☐	☐	☐	2055
A698	Gorman St Widening	Kaplan Drive	Western Blvd	2	3	0.95	$15,449,480	☐	☐	☑	2055
A192	Graham Newton Rd	Penny Rd	Optimist Farm Rd	2	2	2.83	$41,655,045	☐	☐	☑	2055
Jhns7a	Guy Rd	Garner Rd	Amelia Church Rd	2	4	3.41	$90,819,015	☐	☐	☐	2055
Jhns7b	Guy Rd	Amelia Church Rd	NC 42	2	4	0.98	$26,100,479	☐	☐	☐	2055
Grnv132	Hillsboro Street	West Hillsboro Street	West Lyon Street	2	2	0.13	$3,070,244	☐	☐	☐	2055

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A623d1	Hilltop Needmore Extension	Bass Lake Road	Hilltop Needmore Road	2	4	0.75	$19,974,857	☐	☐	☐	2055
A623a	Hilltop Needmore Widening	US 401	Johnson Pond Rd	2	4	1.3	$31,090,117	☐	☐	☐	2055
A623b	Hilltop Needmore Widening	Johnson Pond Rd	Sunset Lake Rd	2	4	2.09	$49,983,342	☐	☐	☐	2055
A623c	Hilltop Needmore Widening	Sunset Lake Rd	Keith Hills St	2	4	0.68	$16,262,523	☐	☐	☐	2055
A730	Hilltop Road	Middle Creek/Hilltop Road realignmen	Panther Lake Road	2	4	2.14	$61,419,530	☐	☐	☐	2055
A403a1	Hodge Rd	US 64	Mingo Bluff Blvd	2	4	1.57	$43,949,037	☐	☐	☐	2055
A403a2	Hodge Rd	Poole Rd	Mingo Bluff Blvd	2	4	1.53	$40,748,708	☐	☐	☐	2055
A403c	Hodge Rd	Auburn-Knightdale Rd	Poole Rd	2	4	1.9	$45,439,402	☐	☐	☐	2055
A756	Holden Rd	US 1	N. College St.	2	3	1.81	$50,667,361	☐	☐	☐	2055
A186c	Holland Rd Turn Lane	Old US 1	Kelly Rd	2	3	1.49	$21,758,708	☐	☐	☑	2055
A163a1	Holly Springs Rd	Old Holly Springs Rd	NC-55 / Main St	2	4	1.2	$34,987,538	☐	☐	☐	2055
A699	Holly Springs Rd	Cary Parkway	Penny Rd	4	6	2.22	$70,693,566	☐	☐	☐	2055
A700	Holly Springs Rd	Penny Rd	Ten Ten Rd	4	6	1.22	$38,849,617	☐	☐	☐	2055
A702	Holly Springs Rd	Tryon Rd	SE Cary Parkway	4	6	0.5	$15,921,974	☐	☐	☐	2055
A71	Holly Springs Rd	Ten Ten Rd	Kildaire Farm Rd Connector	2	4	0.84	$24,491,277	☐	☐	☐	2055
A624c	Honeycutt Road	Piney Grove Wilbon	Roanhigh Lane	2	4	0.95	$25,301,485	☐	☐	☐	2055
A625	James Slaughter Rd Widening	Stewart Rd	Bass Lake Rd	2	3	0.55	$13,166,784	☐	☐	☑	2055
A443b	Jenks Rd	Wimberly Rd	US 64	2	4	0.51	$12,196,892	☐	☐	☐	2055
Grnv113	Joe Peed Rd Turn Lane	US 15	WB Clark Rd	2	3	1.34	$32,079,073	☐	☐	☑	2055
A224a	Johnson Pond Rd / Bells Lake Road	Optimist Farm Rd	Hilltop-Needmore Rd	2	4	2.05	$59,770,378	☐	☐	☐	2055
A215b	Jones Dairy Rd	Chalk Road	Averette Rd	2	4	2.1	$61,228,192	☐	☐	☐	2055
A560b	Jones Franklin	Capital Center Drive	Dillard Dr	2	4	0.9	$27,754,538	☐	☑	☐	2055
A772	Jonesville Rd	US 401 Bypass	Mitchell Mill Rd	2	3	2	$53,320,033	☐	☐	☑	2055
A41	Kildaire Farm Rd	Ten Ten Rd	Kildaire Farm Connector	2	4	2.03	$34,200,000	☐	☐	☐	2055
A136c	Lake Wheeler Rd	Ten Ten Rd	Hilltop-Needmore Rd	2	4	3.4	$89,015,914	☐	☐	☐	2055
A554	Laura Duncan Widening	US 64	Old Apex Rd	2	3	1.04	$24,897,191	☐	☐	☐	2055
A126a	Ligon Mill Rd	Burlington Mills Rd	US 1A	2	3	2.32	$37,729,255	☐	☐	☑	2055
A126b	Ligon Mill Rd	US 401	Burlington Mills Rd	2	3	2.57	$68,516,242	☐	☐	☑	2055
A219b	McCrimmon Parkway Ext	Louis Stephens Rd	NC 55	0	4	0.94	$29,174,746	☐	☐	☐	2055
A130b	Mitchell Mill Rd	Forestville Road	Rolesville Rd	2	4	3.47	$107,009,162	☐	☐	☐	2055
Jhns4a2	North Connector	NC 42 East	N. Oneil St	2	4	2.21	$52,853,199	☐	☐	☐	2055
Grnv81	Northside Rd Ext	Northside Rd	Old Weaver Rd	0	4	0.92	$28,554,006	☐	☐	☐	2055
A66a	O'Kelley Chapel Rd	Green Level Church Road	NC 55	2	4	0.35	$8,370,416	☐	☐	☐	2055
A237a	Old Apex Rd	West Chatham St	Cary Parkway	2	4	1.1	$45,192,237	☐	☐	☐	2055
A237b	Old Apex Rd	Cary Parkway	Laura Duncan Rd	2	4	0.39	$11,370,950	☐	☐	☐	2055
A174b1	Old Battle Bridge Rd	Old Tarboro Rd	Wendell Blvd	2	3	0.32	$8,957,766	☐	☐	☐	2055
Jhns9	Old Drug Store Rd Wdng	NC 36	NC 50	2	4	2.57	$61,462,770	☐	☐	☐	2055

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A579	Old Faison Rd Widening	Hodge Rd	Bethlehem Rd	2	4	2.06	$58,586,093	☐	☐	☐	2055
A410b	Old Raleigh Rd	South of US 64	Apex Peakway	2	4	1.28	$37,320,041	☐	☐	☐	2055
A137c	Old Stage Rd	Rock Service Station	NC 42	2	4	3.27	$78,203,602	☐	☐	☐	2055
A601	Old Wake Forest Rd	Falls of Neuse Rd	Atlantic Ave	2	3	1.43	$38,123,823	☐	☐	☑	2055
Grnv81a	Old Weaver Trail	From NC 50 (Wake Co)	Northside Rd Ext	2	4	1.65	$39,460,533	☐	☐	☐	2055
Jhns16	Oneil St	W Main St	North Connector	2	3	1.87	$52,346,942	☐	☐	☑	2055
A42a	Penny Rd	Ten Ten Rd	Kildaire Farm Rd	2	4	1.25	$36,445,352	☐	☐	☐	2055
A149b1	Poole Rd	Martin Pond Rd	Richardson Road	2	3	1	$14,603,160	☐	☐	☑	2055
Jhns6	Pritchard Rd/Smithfield Rd Widening	Covered Bridge Rd	Wake County line	2	4	2.4	$62,834,763	☐	☐	☐	2055
A543b	Rex Rd Realignment	Avent Ferry Connector	Cass Holt Rd	0	4	0.31	$10,222,800	☐	☐	☐	2055
A179a2	Richardson Rd	US 64 (West)	Olive Chapel Rd	2	4	1.38	$26,752,720	☐	☐	☐	2055
A179b	Richardson Rd	Olive Chapel Rd	Humie Olive Rd	2	4	1.86	$44,482,783	☐	☐	☐	2055
A402d	Riley Hill Rd	Chad Rd	NC 96	2	4	2.17	$51,896,580	☐	☐	☐	2055
A605	Rogers Rd	Heritage Center Dr	Heritage Branch Rd	2	5	0.35	$8,922,459	☐	☐	☐	2055
A765	Rogers Rd	Rogers Branch Rd	S. Main St	2	4	2.93	$88,297,750	☐	☐	☐	2055
A594	Rolesville Rd	Kioti Dr	Mark's Creek Rd	2	4	2.54	$67,357,713	☐	☐	☐	2055
A612	S Cross St/N White St	NC 98	Main St	2	3	3.85	$92,167,485	☐	☐	☑	2055
A406a	Shotwell Rd	Covered Bridge Rd	US 70 Bus	2	4	1.23	$35,862,227	☐	☐	☐	2055
A448	Six Forks Rd	Ramblewood Road	Lynn Road	4	6	2.4	$45,000,000	☐	☐	☐	2055
A161	Skycrest Dr	New Hope Rd	Forestville Rd	0	4	3.4	$163,410,844	☐	☐	☐	2055
A112b	Smithfield Rd	Major Slade Rd	Johnston Co. line	2	4	1.4	$40,818,795	☐	☐	☐	2055
A52	Smithfield Rd	Bethlehem Rd	US 64 Bypass	2	3	1.8	$50,387,431	☐	☐	☐	2055
A752	Smithfield Rd	Sandy Trail Dr	Grasshopper Rd	4	6	2.65	$88,827,856	☐	☐	☐	2055
A629	Stewart Rd	James Slaughter Pkwy	Judd Pkwy	2	3	1.3	$31,121,489	☐	☐	☑	2055
A9	Strickland Rd	Leesville Rd	Creedmoor Rd	2	4	2.73	$30,958,272	☐	☐	☐	2055
A59c	Sumner Blvd	Ruritania St	Gresham Lake Rd	0	3	0.99	$33,354,163	☐	☐	☐	2055
A434	Sunnybrook Rd	Rock Quarry Rd	Poole Rd	2	4	1.81	$52,772,870	☐	☐	☐	2055
A193a1	Sunset Lake Rd	Product Road	Hilltop-Needmore Rd	2	4	2.2	$76,040,560	☐	☐	☐	2055
A193b	Sunset Lake Rd	Hilltop-Needmore Rd	Lassiter Rd	2	4	2.7	$78,721,961	☐	☐	☐	2055
A217a2	Sunset Lake Rd	Main St	Edwards Dr / Bellagio Dr	2	4	1.85	$57,050,994	☐	☐	☐	2055
A217b	Sunset Lake Rd Ext	Old Holly Springs Apex	Main St	0	2	1.7	$50,113,170	☐	☐	☐	2055
A155b	T.W. Alexander Dr	Aviation Parkway	US 70	4	6	1.02	$73,344,709	☐	☑	☐	2055
A113	Ten Ten Rd	Holly Springs Rd	Bells Lake Rd	2	4	1.95	$56,854,750	☐	☐	☐	2055
A114c	Ten Ten Rd	Holly Springs Rd	Kildaire Farm Road	2	4	1.3	$22,900,000	☐	☐	☐	2055
A400b	Ten Ten Rd	Old Stage Rd	NC 50	2	4	3.43	$82,030,078	☐	☐	☐	2055
A779	Thornton Rd Ext	Thornton Rd	Ligon Mill Rd	0	2	1.28	$37,732,760	☐	☐	☐	2055
A138a	Timber Dr/Jones Sausage Connector	US 70	Timber Dr Ext	0	4	0.72	$25,197,077	☐	☐	☐	2055

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A572	Trailwood Dr Turn Lane	Avent Ferry Rd	Tryon Rd	2	3	1.62	$44,733,330	☐	☐	☑	2055
A433	Trawick Rd	Marsh Creek Rd	New Bern Avenue	2	3	1.44	$23,418,158	☐	☐	☑	2055
A231b	Trinity Rd	Wade Park Blvd	Trenton Rd /Arrington Rd	2	4	0.4	$11,662,513	☐	☐	☐	2055
A563	Trinity Rd	NC 54	Chatham St	2	4	1	$9,359,167	☐	☐	☐	2055
A780	US 1 at Stadium	Stadium Dr	Jenkins Rd			0.5	$5,750,000	☐	☐	☐	2055
A140b	Vandora Springs Rd & Ext	Old Stage Rd	US 401	0	2	1.62	$26,554,590	☐	☐	☐	2055
A167a	Wendell Northern Bypass	US 64 BUS (Wendell Blvd)	Old Zebulon Road	0	2	2.4	$46,941,804	☐	☐	☐	2055
A695a2	Wendell Valley Blvd	Wendell Falls Parkway	Knightdale Eagle Rock Road	3	4	1.04	$27,228,397	☐	☐	☐	2055
A77a	West Lake Rd	Larboard Rd	Bells Lake Rd	0	2	1.25	$22,453,031	☐	☐	☐	2055
A234	Western Blvd	Gorman St	Pullen Rd	4	6	1.21	$59,565,106	☐	☑	☐	2055
A670	Western Wendell Ext	Poole Road	Lake Glad Road	0	4	1.4	$43,451,749	☐	☐	☐	2055
A457	Westgate Rd	Leesville Rd	US 70	2	4	1.4	$40,818,795	☐	☐	☐	2055
A143b	White Oak Rd	I-540	NC 36	2	4	2.53	$73,765,393	☐	☐	☐	2055
Hrnt9	10th St. Bypass	West Front Street	South Main St./US 401South	2	2	0.55	$3,861,820	☐	☑	☐	2055
A782	Knightdale Blvd	N. First Ave.	I-87	4	4	2.86	$36,379,200	☐	☐	☑	2055
A807	N Main Street	Future NC 96 Bypass	Knollwood Lane	2	3	1.84	$51,507,152	☐	☐	☑	2055
Hrnt3a1	NC 210	NC 55	Lipscomb Rd	2	3	1.69	$45,055,428	☐	☑	☐	2055
A65	NC 39	Debnam Rd (Wake Co.)	Hatcher Rd (Johnston Co.)	2	4	12.74	$304,683,146	☐	☑	☐	2055
Frnk6	NC 39	From N. metro boundary southward	Wake County boundary	2	4	17.69	$462,129,717	☐	☑	☐	2055
A535a	NC 42 Widening	Christian Light Rd	Coley Farm Rd	2	4	2.98	$71,268,114	☐	☑	☐	2055
A228a2	NC 50	Timber Dr / Buffalo Rd	Rand Rd / NC 540	2	4	2.15	$57,261,256	☐	☑	☐	2055
A445a	NC 50	NC 98	Beaver Creek Rec	2	4	3.9	$102,106,489	☐	☐	☐	2055
Grnv18	NC 50	Old Weaver Trail	Dove Rd	2	4	2.67	$63,854,317	☐	☐	☐	2055
A229	NC 54	Chapel Hill Rd	Harrison Avenue	4	6	0.8	$26,815,957	☐	☑	☐	2055
A413	NC 54 (Chapel Hill Rd)	Corporate Center Dr	Hillsborough St	2	4	1.33	$38,777,855	☐	☑	☐	2055
A426b	NC 55 (Main St)	Sunset Lake Road	Holly Springs Road	2	4	2	$58,312,564	☐	☑	☐	2055
Frnk4b	NC 56	US 1	Peach Orchard Rd	2	4	6.76	$161,668,608	☐	☑	☐	2055
Grnv20b	NC 56	965 feet south of Holly Drive (Creedm	Brogden Road	2	2	1.14	$20,601,936	☐	☐	☐	2055
Grnv20c	NC 56	Brogden Road	US 15	2	5	0.34	$8,667,532	☐	☐	☐	2055
Grnv22a	NC 56	Hayes Rd	Hester Rd	2	4	3.23	$77,246,983	☐	☑	☐	2055
A131b	NC 96	Ferrell Rd	US 401	2	3	8.47	$189,019,516	☐	☑	☑	2055
Grnv23	NC 96	Franklin CO.	NC 56	2	4	8.97	$214,521,807	☐	☑	☐	2055
A596	NC 96 Widening	US 64/264	Ferrel Road	2	4	2.88	$76,150,216	☐	☑	☐	2055
A401a	NC 97	Wendell Blvd	Rotary Dr	2	4	4.96	$144,615,158	☐	☐	☐	2055
A56c	NC 98	NC 98 Bypass	US 401	2	4	5.29	$154,236,731	☐	☐	☐	2055
Hrnt4b3	NC-55	Oak Grove Church Rd	Old Stage Rd	2	4	1.37	$36,487,405	☐	☑	☐	2055
A173b	New Hill Olive Chapel Rd	Old US 1	Olive Chapel Road	2	3	3.83	$55,930,103	☐	☐	☑	2055

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A717	Schieffelin Road-Lufkin Road Connector with grade sepa	Schieffelin Road	Lufkin Road	0	2	0.11	$12,400,000	☐	☐	☐	2055
Grnv2	US 15	I-85	Gate #2 Rd	2	4	2.42	$77,821,210	☐	☑	☐	2055
A480a4	US 401	Simpkins Road	Ten Ten Road	4	6	3.1	$133,220,444	☐	☑	☐	2055
Grnv4a	US-15	NC 50	Hester Rd	2	4	2.95	$71,377,201	☐	☑	☐	2055
F86	Capital Blvd - Corridor Upgrades	I-440	I-540	0	0	5.25	$1,025,262,893	☐	☑	☐	2055
F14	Clayton Bypass (I-42)	I-40	US 70 Business	4	6	8.69	$324,113,189	☐	☑	☐	2055
A79a	Crabtree Valley Ave / I-440 Connector	I-440	Blue Ridge Rd	0	3	0.15	$72,568,194	☐	☐	☐	2055
F40	I-40 Managed Lanes	Durham County Line	Wade Avenue	8	10	9.2	$579,090,000	☑	☑	☐	2055
F41	I-40 Managed Lanes	Wade Avenue	Johnston County	8	10	21.29	$211,274,569	☑	☑	☐	2055
F41b	I-40 Managed Lanes	Johnston County	Cornwallis Rd	8	10	2.88	$20,462,870	☑	☑	☐	2055
F45	I-40 Managed Lanes	Cornwallis Rd	NC 210	6	8	4.47	$26,920,480	☑	☑	☐	2055
F46	I-40 Managed Lanes	NC 210	CAMPO MAB	6	8	6.75	$36,179,936	☑	☑	☐	2055
F86a	I-440 / Capital Blvd Interchange						$127,000,000	☐	☑	☑	2055
F42b	I-540 Managed Lanes	I-40	US-64 Bypass	6	8	25.82	$538,539,038	☑	☑	☐	2055
F13	NC 147 Toll Extension (CAMPO Portion)	NC 540	McCrimmon Pkwy / Little Drive	0	4	1.5	$62,522,726	☑	☑	☐	2055
A688	Powell Drive Realignment (RR)	Powell Dr	Youth Center Dr	2	2	0.35	$44,000,000	☐	☐	☑	2055
F7b	US 64 East	US 64 Bypass (Wendell)	US 64/US 264 (Zebulon)	6	8	7.35	$454,051,395	☐	☑	☐	2055
Chtm2	US 64 Interchanges	Various crossings starting at Farringto	Mt Gilead Church Rd				$114,715,260	☐	☑	☐	2055
F15b	US 64 West Conversion to Freeway	NC-540 Tri-Ex Turnpike	NC 751	4	6	3.2	$175,497,567	☐	☑	☐	2055
A101	US 70	Lumley/Westgate Rd	Hilburn Road	4	6	4.1	$132,600,000	☐	☑	☐	2055
Post-2055 CTP											
SCI-5	Raleigh Improve/Expand Existing Grade Separations (RR	Raleigh	Raleigh				$0	☐	☐	☑	CTP
Grnv951	26th Street Extension	26th Street	East Lyon Station Rd	0	2	0.72	$8,219,000	☐	☐	☐	CTP
Grnv951a	26th Street Extension	East Lyon Station Rd	NC-56	0	2	0.75	$13,471,819	☐	☐	☐	CTP
A184a	Apex Barbecue Rd	Old US 1 (S Salem St)	Kelly Rd	2	2	1.13	$17,445,304	☐	☐	☑	CTP
A184b	Apex Barbecue Rd	Kelly Rd	Olive Chapel Rd	2	3	1.41	$34,063,090	☐	☐	☑	CTP
A187d	Apex Peakway (West)	Old US 1	Olive Chapel Rd	2	4	1.09	$31,780,347	☐	☐	☐	CTP
A187a	Apex Peakway Widening (North)	Olive Chapel Rd	Laura Duncan Rd	2	4	1.6	$46,650,051	☐	☐	☐	CTP
A203b	Auburn-Knightdale Rd	Grasshopper Rd	NC 540 (Future)	2	4	1.58	$42,080,365	☐	☐	☐	CTP
A767	Averette Rd	Jones Dairy Rd	NC 98	2	4	1.38	$41,587,336	☐	☐	☐	CTP
A741	Aversboro Rd	Timber Dr	Thompson Rd Ext	2	3	1	$26,660,016	☐	☐	☑	CTP
A64c	Aviation Parkway	I-40	Airport Blvd	4	6	1.6	$98,740,587	☐	☑	☐	CTP
A706	Aviation Parkway	Gateway Centre Blvd	RDU Center Drive	4	6	0.6	$20,111,967	☐	☐	☐	CTP
F18	Aviation Parkway	Airport Blvd	I-540 Interchange	4	6	1.88	$148,248,791	☐	☑	☐	CTP
F17a	Aviation Parkway Ext	Brier Creek Parkway	TW Alexander	0	4	1.2	$41,476,669	☐	☑	☐	CTP
A435	Battle Bridge Rd	Rock Quarry Rd	Auburn-Knightdale Rd	2	3	1.85	$27,015,846	☐	☐	☑	CTP

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A581	Bethlehem Rd Turn Lane	Old Faison Rd	Grasshopper Rd	2	3	2.47	$65,574,453	☐	☐	☑	CTP
Chtm7	Big Woods Road	US 64	Gallup Road	2	2	4.19	$28,092,385	☐	☐	☐	CTP
A582	Bissette Rd Turn Lane	Smithfield Rd	Eagle Rock Rd	2	3	2.78	$66,552,106	☐	☐	☑	CTP
Grnv32	Brassfield Rd	Creedmoor Loop	Three Bridges Lane (East of)	2	4	2.1	$50,222,497	☐	☐	☐	CTP
Grnv33	Brassfield Rd	Three Bridges Ln (East of)	NC 96	2	4	3.74	$89,443,875	☐	☐	☐	CTP
Grnv110	Brogden Rd Turn Lane	NC 56	Belltown Rd	2	3	5.59	$137,701,680	☐	☐	☑	CTP
Grnv107	Bruce Garner Rd	Wake Co. line	Brassfield Rd	2	3	5.92	$86,450,707	☐	☐	☑	CTP
A733	Buckhorn Duncan Road	Cass Holt Road	Burt Road	2	4	2.04	$46,427,000	☐	☐	☐	CTP
A402b	Buffaloe Rd-Riley Hill Connector	Old Milburnie Rd	Rolesville Rd	2	4	3.44	$93,088,719	☐	☐	☐	CTP
A402c	Buffaloe Rd-Riley Hill Connector (part NL)	Horton Road	Riley Hill Rd	0	3	5.09	$116,517,430	☐	☐	☐	CTP
Grnv93	Cash Rd / Gate 2 Rd	Old Weaver Trail	West B St	2	4	4.93	$117,903,290	☐	☐	☐	CTP
A510a	Cass Holt Rd Widening	Avent Ferry	Sweet Springs	2	4	4.31	$112,840,761	☐	☐	☐	CTP
A510b	Cass Holt Rd Widening	Sweet Springs Road	NC 42	2	3	1.96	$28,622,194	☐	☐	☐	CTP
Frnk19	Cedar Creek Rd	S. Main St	Yearling Dr	0	2	0.34	$17,563,255	☐	☐	☐	CTP
Frnk7	Cedar Creek Rd	NC 96 Bypass	Lane Store Rd	2	4	3.77	$105,228,088	☐	☐	☐	CTP
A916	Chamblee Rd	Lazy J Ranch Ln	Perry Curtiis Rd	2	4	0.65	$19,588,238	☐	☐	☐	CTP
Hrnt6	Christian Light Rd Widening	NC 42	Rawls Church Rd	2	4	2.27	$54,288,127	☐	☐	☐	CTP
A566	Church St Turn Lane	Morrisville Carpenter Rd	Wake County line	2	3	3.4	$90,644,056	☐	☐	☑	CTP
Jhns12	Clayton Industrial Cnctr	NC 42	Powhatan Rd	0	2	2.06	$34,211,319	☐	☐	☐	CTP
A751	Cleveland Road Connector	Cleveland Rd	NC 36	2	4	0.8	$23,325,026	☐	☐	☐	CTP
A721	Cokesbury Road	Wade Stephenson Road	NC 42	2	3	1.99	$42,330,000	☐	☐	☐	CTP
A886	Collector Street - Knightdale	Forestville Rd	Old Crews Rd	0	2	0.6	$11,061,312	☐	☐	☐	CTP
A827	Collector Street - Wake Forest	Collector Street	NC 96	0	2	1.24	$22,860,045	☐	☐	☐	CTP
A828	Collector Street - Wake Forest	Gilcrest Farm Rd	Collector Street	0	2	0.38	$7,005,498	☐	☐	☐	CTP
A829	Collector Street - Wake Forest	Gilcrest Farm Rd	Oak Grove Church Rd	0	2	0.89	$16,407,613	☐	☐	☐	CTP
A830	Collector Street - Wake Forest	Wall Rd	US 1 Alt / N Main St	0	2	1.22	$22,491,334	☐	☐	☐	CTP
A831	Collector Street - Wake Forest	Wingate St	Harris Rd	0	2	0.25	$4,608,880	☐	☐	☐	CTP
A832	Collector Street - Wake Forest	Park Vista Dr	Harris Rd	0	2	0.16	$2,949,683	☐	☐	☐	CTP
A836	Collector Street - Wake Forest	US 1 Frontage Road	Ligon Mill Rd	0	2	0.24	$4,424,525	☐	☐	☐	CTP
A837	Collector Street - Wake Forest	Via Fortunata Plaza	Height Ln Extension	0	2	0.16	$2,949,683	☐	☐	☐	CTP
A838	Collector Street - Wake Forest	Ligon Mill Rd	Capcom Ave	0	2	0.21	$3,871,459	☐	☐	☐	CTP
A839	Collector Street - Wake Forest	Crimson Clover Ave	Simwood Ave	0	2	0.13	$2,396,618	☐	☐	☐	CTP
A840	Collector Street - Wake Forest	Chalk Rd	Turning Point Dr	0	2	0.36	$6,636,787	☐	☐	☐	CTP
A841	Collector Street - Wake Forest	Collector Street	Jones Farm Rd	0	2	0.3	$5,530,656	☐	☐	☐	CTP
A842	Collector Street - Wake Forest	NC 98 / Wait Ave	Endgame Ct	0	2	0.29	$5,346,301	☐	☐	☐	CTP
A844	Collector Street - Wake Forest	Chalk Rd	Tortuga St	0	2	0.17	$3,134,038	☐	☐	☐	CTP
A845	Collector Street - Wake Forest	Shearon Farms	Burlington Mills Rd	0	2	0.37	$6,821,142	☐	☐	☐	CTP

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A846	Collector Street - Wake Forest	Waterford Ridge Ln	Reindeer Moss Dr	0	2	0.21	$3,871,459	☐	☐	☐	CTP
A847	Collector Street - Wake Forest	Linslade Way	Forestville Rd	0	2	0.39	$7,189,853	☐	☐	☐	CTP
A848	Collector Street - Wake Forest	Cornwell Dr	Pine Valley Dr	0	2	0.43	$7,927,274	☐	☐	☐	CTP
A849	Collector Street - Wake Forest	US 401 Bus	Burlington Mills Rd	0	2	2.38	$43,876,538	☐	☐	☐	CTP
A850	Collector Street - Wake Forest	Ten Point Trail	Burlington Mills Rd	0	2	0.44	$8,111,629	☐	☐	☐	CTP
A851	Collector Street - Wake Forest	Forestville Rd	Burlington Mills Rd	0	2	0.75	$13,826,640	☐	☐	☐	CTP
A852	Collector Street - Wake Forest	Stone Fly Dr	Pristine Ln	0	2	0.75	$13,826,640	☐	☐	☐	CTP
A853	Collector Street - Wake Forest	Greenville Loop Rd	Forestville Rd	0	2	0.1	$1,843,552	☐	☐	☐	CTP
A821	Collector Street - Wendell	Smithfield Rd	Poole Rd	2	3	0.77	$5,205,724	☐	☐	☑	CTP
A856	Collector Street - Wendell	Liles Dean Extension	US 64 Bus Wendell Blvd	0	2	0.46	$8,480,339	☐	☐	☐	CTP
A857	Collector Street - Wendell	Fribourg Ct	Marshburn Rd	0	2	0.81	$14,932,771	☐	☐	☐	CTP
A858	Collector Street - Wendell	North Wendell Thoroughfare	Raybon Dr	0	2	0.44	$8,111,629	☐	☐	☐	CTP
A859	Collector Street - Wendell	Collector Street	Old Zebulon Rd	0	2	0.41	$7,558,563	☐	☐	☐	CTP
A860	Collector Street - Wendell	Todd Lane Extension	Peach Grove Ln	0	3	1.66	$30,602,963	☐	☐	☐	CTP
A861	Collector Street - Wendell	Peach Grove Ln	US 74 Bus / Mack-Todd Rd	0	3	1.36	$25,072,307	☐	☐	☐	CTP
A862	Collector Street - Wendell	Heritage Dr	Peach Grove Ln Extension	0	2	1.66	$30,602,963	☐	☐	☐	CTP
A863	Collector Street - Wendell	Martin Pond Rd	Horseman Park Pl	0	2	1.18	$21,753,914	☐	☐	☐	CTP
A864	Collector Street - Wendell	Wiley Oaks Dr	Eagles Crossing Dr	0	2	0.29	$5,346,301	☐	☐	☐	CTP
A865	Collector Street - Wendell	Jordan Cabin Rd	Wendell Falls Pkwy	0	2	0.2	$3,687,104	☐	☐	☐	CTP
A866	Collector Street - Wendell	Lake Myra Rd	Poole Rd	0	2	0.62	$11,430,022	☐	☐	☐	CTP
A867	Collector Street - Wendell	Bissette Rd	Turnipseed Rd	0	2	0.59	$10,876,957	☐	☐	☐	CTP
A868	Collector Street - Wendell	Turnipseed Rd	Poole Rd	0	2	0.56	$10,323,891	☐	☐	☐	CTP
A869	Collector Street - Wendell	Wendell Falls Pkwy	Taylor Rd	0	2	0.53	$9,770,826	☐	☐	☐	CTP
A870	Collector Street - Wendell	Western Wendell Ext	Wythe Ln	0	2	0.76	$14,010,995	☐	☐	☐	CTP
A871	Collector Street - Wendell	Darecrest Ln	Morphus Bridge Rd	0	3	1.66	$30,602,963	☐	☐	☐	CTP
A872	Collector Street - Wendell	Wendell Northern Bypass	US 64 Bus / Mack-Todd Rd	2	3	0.49	$3,312,733	☐	☐	☑	CTP
A873	Collector Street - Wendell	Haywood St	Fowlkes St	0	2	0.23	$4,240,170	☐	☐	☐	CTP
A874	Collector Street - Wendell	US 64 Bus / Knightdale Blvd	Puryear Rd	2	3	1.15	$7,774,782	☐	☐	☑	CTP
A875	Collector Street - Wendell	Kioti Rd	Robertson Pond Rd	0	2	0.47	$8,664,694	☐	☐	☐	CTP
A781	Common Oaks Dr	US 1	Ligon Mill Rd	0	2	0.41	$22,685,552	☐	☐	☐	CTP
Jhns8	Cornwallis Rd Widening	NC 36	Old Drugstore Rd	2	4	5.46	$132,231,593	☐	☐	☐	CTP
Grnv47a	Creedmoor Loop A	NC 56	US 15	0	2	1.59	$31,098,945	☐	☐	☐	CTP
Grnv47b	Creedmoor Loop A	NC 56	US 15	2	4	1.59	$42,346,696	☐	☐	☐	CTP
Grnv49a	Creedmoor Loop C	Relocated US 15	Brassfield Rd	0	2	2.23	$43,616,760	☐	☐	☐	CTP
Grnv49b	Creedmoor Loop C	Relocated US 15	Brassfield Rd	2	4	2.23	$59,391,907	☐	☐	☐	CTP
Grnv83	Culbreth Rd	Old Route 75	Person County line	2	4	11.27	$269,527,399	☐	☐	☐	CTP
Grnv92	Culbreth Rd	Old Route 75	Enon Rd	2	4	3.61	$86,334,863	☐	☐	☐	CTP

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A804	Cunningham Rd	New Jack Mitchell Rd	NC 96	2	3	0.65	$18,195,461	☐	☐	☐	CTP
A788	Cynrow Blvd	Roundrock Dr	Ruritania St	0	2	0.81	$30,659,193	☐	☐	☐	CTP
A893	Deer Crossing Dr Extension	Old Crews Rd	Old Milburnie Rd	0	2	0.3	$5,530,656	☐	☐	☐	CTP
Frnk29	E Main St - Youngsville	N Cross St		2	2	0.08	$722,326	☐	☐	☑	CTP
Grnv114	E Tally Ho Rd Turn Lane	Old Route 75	MPO Boundary	2	3	4.97	$118,979,845	☐	☐	☑	CTP
A148b	Eagle Rock Rd	Martin Pond Rd	Lake Myra Rd	2	4	2.47	$59,071,222	☐	☐	☐	CTP
A148c	Eagle Rock Rd	Lake Myra Rd	Covered Bridge Rd	2	4	4.97	$119,686,460	☐	☐	☐	CTP
A148d	Eagle Rock Rd	Covered Bridge Road	NC 42	2	4	3.08	$73,659,662	☐	☐	☐	CTP
A302a	Eastern Angier Bypass	Gardner Road Connector	NC 55	2	4	2.1	$54,980,417	☐	☐	☐	CTP
A302e	Eastern Angier Bypass	E Wimberly St	Kennebec Rd	2	4	1.32	$34,559,119	☐	☐	☐	CTP
A302f	Eastern Angier Bypass	Kennebec Rd	NC 55	0	4	0.35	$10,998,724	☐	☐	☐	CTP
A888	EBC Road Connector - Knightdale	Marks Creek Rd	EBC Village Way	0	2	0.97	$17,882,454	☐	☐	☐	CTP
A570	Ebenezer Ch Rd Turn Lane	Ebenezer Ch Rd	Westgate Rd	2	3	1.96	$52,253,632	☐	☐	☑	CTP
A925	Falls of Neuse Blvd	I-540	Millbrook	4	6	0.9	$201,832,176	☐	☐	☐	CTP
A67a	Ferrell Rd	NC 96	Williams White Rd	0	3	2.82	$64,553,861	☐	☐	☐	CTP
A67b	Ferrell-Dukes Lake Connector	Williams White Rd	NC 39	0	3	2.45	$56,084,028	☐	☐	☐	CTP
A125a3	Forestville Rd	Old Milburnie	East Wake Drive	2	3	0.59	$16,515,880	☐	☐	☐	CTP
A589b	Forestville Rd Ext	Marks Creek Rd	Massey Farm Rd	0	2	0.49	$11,572,459	☐	☐	☐	CTP
A589c	Forestville Rd Ext	Mailman Rd	Marks Creek Rd	0	2	2.29	$54,083,531	☐	☐	☐	CTP
A766	Fowler Rd Ext	US 401 Bypass	Rolesville Rd	0	4	2.58	$94,748,266	☐	☐	☐	CTP
A416	Fox Rd	Old Wake Forest Rd	US 401	2	4	2.06	$60,061,941	☐	☐	☐	CTP
Frnk15	Franklinton Northern Rd	W River Rd	North Main St	0	2	1.8	$57,139,407	☐	☐	☐	CTP
Frnk23	Franklinton Northern Rd	W River Road	US 1 Frontage Rd	2	4	1.8	$51,661,287	☐	☐	☐	CTP
A186b	Friendship Rd Widening	Winding Rd	Old US 1	2	2	0.5	$3,134,746	☐	☐	☑	CTP
A618e	Gardner Rd	NC 55	Old Stage Rd	2	3	1.27	$35,582,145	☐	☐	☑	CTP
A214	Garner Rd	Tryon Rd	Rock Quarry Rd	2	3	7.16	$190,885,717	☐	☐	☑	CTP
A926	Globe Rd	Alm St	Brier Creek Pkwy	4	2	0.5	$9,487,734	☐	☐	☑	CTP
A715	Green Level West Road	Chatham County line	Green Level Church Road	2	4	1.97	$57,437,875	☐	☐	☐	CTP
A68a	Green Pace Rd	NC 96	Water Plant Rd	2	4	0.82	$19,610,689	☐	☐	☐	CTP
A909	Green Pace Rd	Water Plant Rd	NC 97	2	4	1.78	$53,641,636	☐	☐	☐	CTP
A574	Grovemont Rd Turn Lane	US 401	Timber Dr	2	3	0.98	$26,671,763	☐	☐	☑	CTP
Hrnt7	Harnett Central Rd	US 401	Montague Rd	2	4	4.17	$115,473,981	☐	☐	☐	CTP
A565	Harrison Turn Lane	Chatham St	Dry Ave	2	3	0.28	$7,464,805	☐	☐	☑	CTP
A900	Hartham Park Ave Extension	Forestville Rd	Lillie Liles Rd	0	2	0.65	$11,983,088	☐	☐	☐	CTP
Frnk33	Hawkins Street Extension	Cedar Creek Rd	Hawkins St	0	2	0.35	$6,452,432	☐	☐	☐	CTP
Grnv109	Hayes Rd Widneing	Brassfield Rd	NC 56	2	4	1.47	$35,155,748	☐	☐	☐	CTP
A882	Height Ln Extension	US 1 Overpass Bridge	Forest Rd	0	2	1.2	$22,122,624	☐	☐	☐	CTP

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A125b	Heritage Lake Rd	Rogers Rd	NC 98	2	4	1.73	$28,134,315	☐	☐	☐	CTP
Grnv65	Hester Rd	NC-56	Sanders Rd	2	4	4.18	$99,966,684	☐	☐	☐	CTP
Grnv66	Hester Rd	Sanders Rd	New Ext Hester Rd	2	4	2.8	$66,963,329	☐	☐	☐	CTP
Frnk20a	Hicks Road Widening	Future Frankilinton South Bypass	Bert Winston Rd	2	4	1.1	$30,094,203	☐	☐	☐	CTP
Frnk20b	Hicks Road Widening	Bert Winston Rd	Cedar Creek Rd	2	4	2.4	$64,886,507	☐	☐	☐	CTP
Frnk8a	High Speed Rail - Bert Winston Road Intersection (RR)	Bert Winston Road	Bert Winston Road	0	2		$0	☐	☐	☐	CTP
A623d4	Hilltop Needmore Extension	Hilltop Needmore Road	Wade Nash Rd	0	4	0.5	$22,191,158	☐	☐	☐	CTP
A757	Holden Rd	US 1	College St	3	4	1.81	$50,121,800	☐	☐	☐	CTP
A532b	Holland Rd Turn Lane	NC 55	Kennebec Rd	2	3	1.08	$15,771,413	☐	☐	☑	CTP
A532a	Holland Widening	Purfoy Rd	NC 55	2	3	2.28	$45,427,969	☐	☐	☐	CTP
A701	Holly Springs Rd	Ten Ten Rd	Kildaire Farm Rd Connector	4	6	1.59	$50,631,878	☐	☐	☐	CTP
A714	Holt Road	Old Jenks Road East	Old Jenks Road West	2	3	2.04	$33,175,724	☐	☐	☑	CTP
A624a	Honeycutt Connector	Avent Ferry Rd	Cass Holt Rd	0	4	0.82	$25,450,310	☐	☐	☐	CTP
A593	Horton Rd	Forestville Rd	Buffalo Rd	2	3	2.09	$50,033,778	☐	☐	☑	CTP
A894	Horton Rd Realignment	Buffaloe Rd	Old Miburnie Rd	0	2	2.69	$49,591,549	☐	☐	☐	CTP
A915	Horton St	Whitley St	Lazy J Ranch Ln	2	2	2.56	$48,577,196	☐	☐	☐	CTP
A401b	Hospital Rd	NC 97	Mack Todd Rd	2	4	0.18	$5,248,131	☐	☐	☐	CTP
A401c	Hospital Rd	Mack Todd Rd	Barbee St Ext	0	4	0.42	$14,698,295	☐	☐	☐	CTP
A552	Howell Rd Turn Lane	Davis Dr	Holt Rd	2	3	0.57	$13,645,576	☐	☐	☐	CTP
A188	Humie Olive Rd	Old US 1	New Hill Olive Chapel Rd	2	3	2.23	$53,385,323	☐	☐	☑	CTP
Grnv112	I-85 Service Rd	W Lyon Station Rd	Gate #2 Rd	0	2	2.2	$35,484,954	☐	☐	☐	CTP
A585	Industrial Drive	Wendell Blvd	Western Wendell Loop	2	3	0.79	$19,320,072	☐	☐	☑	CTP
A443a	Jenks Rd	NC55	Wimberly Rd	2	3	2.17	$31,688,857	☐	☐	☑	CTP
A218f	Jessie Dr	NC 55	Ten Ten Rd	2	4	1.58	$37,903,167	☐	☐	☐	CTP
A808	John Winstead Rd	John Winstead Rd	NC-98	0	2	0.05	$9,290,000	☐	☐	☐	CTP
A224b	Johnson Pond Rd	Hilltop-Needmore Rd	US 401 North	2	3	2.56	$68,249,642	☐	☐	☑	CTP
A727	Johnson Pond Road	Optimist Farm Road	Bells Lake Road at West Lake Road E	2	4	1.26	$33,591,621	☐	☐	☐	CTP
A215a	Jones Dairy Rd	NC 98 (Wake Forest Bypass)	Chalk Rd	2	4	0.8	$23,325,026	☐	☐	☐	CTP
A216a	Jones Dairy Rd Ext	Averette Rd	US 401	0	2	1.3	$25,426,811	☐	☐	☐	CTP
A560c	Jones Franklin Rd	Fort Sumter Rd	Dillard Dr	4	6	1.44	$48,268,722	☐	☐	☐	CTP
A73a	Jones Franklin Rd	Tryon Rd	Dillard Dr	2	4	0.67	$19,534,709	☐	☐	☐	CTP
A207d	Judd Parkway SE	US 401	US 401	2	3	1.76	$42,133,708	☐	☐	☑	CTP
A724	Judd Parkway Southwest	NC 42	Hunters Ridge Drive	2	4	0.45	$11,997,007	☐	☐	☐	CTP
A302g	Kennebec Ch Realign	Rawls Ch Rd	NC 55	0	4	0.7	$21,997,448	☐	☐	☐	CTP
A223a	Kit Creek Rd	Wake Rd	Green Level Ch Rd	0	4	0.42	$13,035,525	☐	☐	☐	CTP
A419	Knightdale Eagle Rock Rd	First Avenue	US 64/Knightdale Bypass	2	4	2.7	$67,868,785	☐	☐	☐	CTP
A589d	Knightdale Station Run Ext	US 64	Carolina Ave	0	2	0.35	$8,266,042	☐	☐	☐	CTP

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A694	Lake Glad Road	Eagle Rock Road	S. Cypress Street	2	3	2.1	$34,151,481	☐	☐	☑	CTP
A825	Lake Myra Rd	Poole Rd	Eagle Rock Rd	2	3	2.14	$14,467,855	☐	☐	☑	CTP
A43	Lake Wheeler Rd	Tryon Rd	I-40	2	3	1.3	$17,884,891	☐	☐	☐	CTP
A586	Landing View Drive Ext	Western Wendell Loop	Hollybrook Rd	0	2	1.64	$38,196,927	☐	☐	☐	CTP
Frnk16	Lane Store Rd	NC 56	Cedar Creek Rd	2	4	1.62	$42,010,277	☐	☐	☐	CTP
A553	Laura Duncan Turn Lane	Apex Peakway	Indian Trail	2	3	0.33	$7,900,070	☐	☐	☑	CTP
Grnv96	Lawrence Road	Horseshoe Road	Bruce Garner Road	2	2	1.88	$0	☐	☐	☑	CTP
A135a	Lead Mine Rd	Town & Country Rd	Millbrook Rd	2	4	0.54	$15,744,392	☐	☐	☐	CTP
A135b	Lead Mine Rd	Millbrook Rd	Lynn Rd	2	4	1.12	$32,655,036	☐	☐	☐	CTP
A135c	Lead Mine Rd	Lynn Rd	Sawmill Rd	2	4	0.99	$28,864,719	☐	☐	☐	CTP
A928	Lead Mine Rd	Six Forks Rd	Strickland Rd	4	2	0.68	$12,903,318	☐	☐	☑	CTP
A429a	Leesville-Westgate Connector	Westgate Rd	Leesville Rd	0	4	1.18	$84,799,381	☐	☐	☐	CTP
A429b	Leesville-Westgate Connector	Leesville Rd	Carpenter Pond Rd	2	4	1.35	$82,865,153	☐	☐	☐	CTP
A127c	Ligon Mill Rd Connector	NC 98	Stadium Dr	0	4	0.78	$27,296,833	☐	☐	☐	CTP
A668	Liles Dean Ext	Liles Dean Road	Knightdale-Eagle Rock Road	0	3	1.07	$27,277,232	☐	☐	☐	CTP
A824	Liles Dean Rd Widening	Liles Dean Rd	US 64 Bus / Wendel Blvd	2	3	0.83	$5,611,364	☐	☐	☑	CTP
A583	Lions Club Rd Turn Lane	NC 231	Skipwith Dr	2	3	0.84	$20,109,270	☐	☐	☑	CTP
A936	Logging Road Extension	Southern Access Road	Avent Ferry Road	0	2	0.9	$17,603,177	☐	☐	☐	CTP
A877	Lola Ln Extension	US 1 Frontage Rd	Wake Union Church Rd	0	2	0.22	$4,055,814	☐	☐	☐	CTP
A27c1b	Louis Stephens Dr	Little Drive	Poplar Pike Lane	2	4	0.5	$13,316,571	☐	☐	☐	CTP
A27a	Louis Stephens Dr Ext (part NL)	Wake County Line	Kit Creek Rd	2	4	1.23	$29,416,034	☐	☐	☐	CTP
A27b	Louis Stephens Dr Ext (part NL)	Kit Creek Rd	O'Kelly Chapel Rd	2	4	1.13	$27,024,486	☐	☐	☐	CTP
A899	Louisbury Rd Realignment	Mitchell Mill Rd	Louisbury Rd	0	2	0.26	$4,793,235	☐	☐	☐	CTP
A878	Lowes Ave Extension	End of Road	Siena Dr	0	2	0.81	$14,932,771	☐	☐	☐	CTP
A809	Lucas Road	Buffaloe Road	Horton Road	2	2	0.88	$11,193,600	☐	☐	☑	CTP
Grnv111	Lyon Station Rd Widng	NC 56	Gate #2 Rd	2	4	2.66	$63,615,162	☐	☐	☐	CTP
A591	Mailman Rd Widening	Smithfield Rd	Knightdale-Eagle Rock Rd	2	4	1.45	$38,460,460	☐	☐	☐	CTP
A677	Marcom Dr Ext	Watkins Road	Sorrell Grove Church Road	0	2	1.13	$20,898,949	☐	☐	☐	CTP
A590	Mark's Creek Widening	Knightdale-Eagle Rock Rd	Rolesville Rd	2	4	3.54	$88,983,518	☐	☐	☐	CTP
A805	Marshburn Rd	Wendell Blvd	Wendell Northern Bypass	2	3	1.06	$29,672,598	☐	☐	☑	CTP
A776	Marshburn Rd/Lizard Lick Rd	Northern Wendell Bypass	US 64/264	2	4	1.63	$49,121,274	☐	☐	☐	CTP
A174a	Martin Pond Rd	Poole Road	Wendell Falls Parkway	2	3	1.71	$42,983,564	☐	☐	☐	CTP
A626	Matthew Mill Pond Rd Widening	Harnett Central Rd	Old Buies Creek Rd	2	4	0.76	$19,897,675	☐	☐	☐	CTP
Hrnt13	McKinley St & Railroad St	Crawford Rd	Lisa St	2	2	1.37	$14,355,893	☐	☐	☐	CTP
A889	Mingo Bluff Blvd Extension	Old Faison Rd	Plexor Ln	0	2	0.29	$5,346,301	☐	☐	☐	CTP
A763	Mitchell Mill Rd	Rolesville Rd	Fowler Rd	2	4	1.42	$41,401,920	☐	☐	☐	CTP
Chtm6	Moncure Pittsboro Road	US 1	Ruby Red	2	4	4.09	$97,814,291	☐	☐	☐	CTP

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A675a	Morrisville East Connector	Airport Boulevard	McCrimmon Parkway	0	2	0.48	$26,584,389	☐	☐	☐	CTP
A401d	Moss Rd	Barbee St Ext	Morphus Bridge Rd	2	4	1.86	$44,482,783	☐	☐	☐	CTP
A401e	Moss Rd Ext	Morphus Bridge Rd	NC 39	2	4	3.2	$78,309,891	☐	☐	☐	CTP
A541	Mt Pleasant Rd	NC 42	Old Fairground Rd	2	4	5.31	$139,021,913	☐	☐	☐	CTP
A931	N. Cross St Ext	E Winston St	NC 96 Bypass	0	2	0.4	$9,446,905	☐	☐	☐	CTP
A693	NC 231 (N. Selma Road)	Old Wilson Road	Stotts Mill Road	2	3	2.4	$39,030,264	☐	☐	☑	CTP
A169d2	NC 231 (Southern Wendell) Bypass (pc)	Wendell Road at Stott's Mill Road	NC 231	0	4	0.7	$21,997,448	☐	☐	☐	CTP
A690	NC 231 (Southern Wendell) Bypass (pc) / Stott's Mill Ro	Eagle Rock Road	Wendell Road	2	4	2.5	$65,452,878	☐	☑	☐	CTP
Jhns19	NC 42 East	US70 Business	Glen Laurel Road	4	6	1.54	$63,964,801	☐	☐	☐	CTP
Frnk14	NE Franklinton Connector	NC 56	US 1	0	2	2.04	$35,829,050	☐	☐	☐	CTP
A883	Nello Cir Extension	Common Oaks Dr	US 1 Overpass Bridge	0	2	1.07	$19,726,006	☐	☐	☐	CTP
A709	New Hill Historic District Bypass (aka NC 751)	New Hill Olive Chapel Road	New Hill Holleman Road	0	4	1.6	$80,050,814	☐	☐	☐	CTP
A616b2	New Hill Place	NC 55 Bypass	Old Holly Springs Apex	2	4	0.71	$19,407,150	☐	☐	☐	CTP
A801	New Jack Mitchell Rd	Riley Hill Rd	Water Plant Rd	0	3	0.97	$31,778,460	☐	☐	☐	CTP
A597	New Jack Mitchell Road	NC 96	Riley Hill Rd	0	2	1.96	$31,613,868	☐	☐	☐	CTP
A87	New Leesville Blvd Ext	Terminus	Carpenter Pond Rd	0	4	0.47	$9,500,000	☐	☐	☐	CTP
Frnk31	New Local Road	Holden Rd	Jeffrey Way	0	2	0.72	$13,273,574	☐	☐	☐	CTP
Frnk36	New Local Road	Long Mill Rd	End of Rd	0	2	0.42	$7,742,918	☐	☐	☐	CTP
Frnk37	New Local Road	Future Development		0	2	0.26	$4,793,235	☐	☐	☐	CTP
A88	New Rand Rd	New Rand Ext	Old Garner Rd	2	3	1.1	$29,326,018	☐	☐	☑	CTP
Jhns21	New Road	Old Us Hwy 70 W	City Road	0	3	1	$19,967,409	☐	☐	☐	CTP
A240a	North Harrison Avenue	Reedy Creek Rd	Weston Parkway	4	6	0.81	$27,151,156	☐	☐	☐	CTP
A240b	North Harrison Avenue	Weston Parkway	I-40	6	8	0.48	$44,220,386	☐	☐	☐	CTP
Frnk32	Northbrook Dr	current alignment	Bert Winston Rd	0	2	0.36	$6,636,787	☐	☐	☐	CTP
A66c	O'Kelley Chapel Rd	American Tobacco Trail	NC 751	2	3	1.82	$43,570,084	☐	☐	☐	CTP
A775	Old Battle Bridge Rd	Eagle Rock Rd	Old Tarboro Rd	2	3	0.58	$16,235,950	☐	☐	☑	CTP
A627	Old Buies Creek Rd Widening	NC 55	Matthew Mill Pond Rd	2	4	3.12	$86,397,799	☐	☐	☐	CTP
A402f	Old Bunn Rd	Shepard School Rd	NC 97	2	4	1.95	$46,635,175	☐	☐	☐	CTP
A887	Old Crews Rd Extension	US 64 Bus - Knightdale Blvd	Forestville Rd	0	2	1.19	$21,938,269	☐	☐	☐	CTP
A826	Old Crews Rd Realignment	Creek Crossing	Peebles Rd	2	4	1.27	$14,475,689	☐	☐	☐	CTP
A580	Old Faison Rd Ext	Bethlehem Rd	Smithfield Rd	0	4	0.76	$22,357,915	☐	☐	☐	CTP
A603	Old Halifax Rd Turn Lane	NC 96	Wake County line	2	3	2.14	$51,230,758	☐	☐	☑	CTP
A443c	Old Jenks Rd Turn Lane	NC 55	Davis Dr	2	3	1.66	$24,241,246	☐	☐	☑	CTP
A592a	Old Knight Rd	US 64	Horton	2	2	1.8	$34,155,841	☐	☐	☑	CTP
A820	Old Milburnie Rd Realignment	Forestville Rd		0	4	0.33	$6,083,722	☐	☐	☐	CTP
Grnv85b	Old Route 75 Bypass (Little Mountain Rd)	Little Mountain Rd	Culberth Rd	2	4	0.8	$19,132,380	☐	☐	☐	CTP
Grnv85c	Old Route 75 Bypass (Range Rd)	Julian Daniel Rd	Range Rd	2	4	1.23	$29,416,034	☐	☐	☐	CTP

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A137e	Old Stage Rd	NC 210	NC 55	2	4	3.57	$85,378,244	☐	☐	☐	CTP
A174b2	Old Tarboro Rd	Wendell Valley Blvd (new location)	Old Battle Bridge Rd	0	3	0.8	$26,209,039	☐	☐	☐	CTP
A181a	Old US 1	New Hill Holleman Rd	Humie Olive Rd	2	3	2.38	$34,755,521	☐	☐	☑	CTP
A181c	Old US 1	New Hill Holleman	Beaver Creek Rd	2	3	2.62	$38,260,279	☐	☐	☑	CTP
A914	Old US Hwy 264	Gannon Ave	NC 39	2	4	1.64	$49,422,631	☐	☐	☐	CTP
A692	Old Wilson Rd / Morphus Bridge	N. Selma Road	Earpsboro Chamblee Road	2	3	2.25	$36,590,873	☐	☐	☑	CTP
A753	Old Zebulon Rd Ext	US 64 Bus	Perry Curtis Rd	0	4	3.11	$113,648,717	☐	☐	☐	CTP
A178a1	Olive Chapel Rd	Kelly Rd	Apex Peakway	2	4	1.6	$46,650,051	☐	☐	☐	CTP
A178a2	Olive Chapel Rd	Apex Peakway	NC 55	2	6	0.33	$8,412,604	☐	☐	☐	CTP
A178b	Olive Chapel Rd	Richardson Rd	Kelly Rd	2	4	1.81	$49,474,566	☐	☐	☑	CTP
A178c	Olive Chapel Rd	New Hill Olive Chapel Rd	Richardson Rd	2	3	1.31	$34,924,621	☐	☐	☑	CTP
A76	Optimist Farm Rd	Lake Wheeler Rd	Sunset Lake Rd	2	4	4.49	$130,911,706	☐	☐	☐	CTP
A789	Pacific Dr	Old Wake Forest Rd	Atlantic Ave	0	2	0.49	$23,101,669	☐	☐	☐	CTP
A823	Peach Grove Ln	NC 97	End of Road	2	3	0.53	$3,583,160	☐	☐	☑	CTP
A795	Pearces Rd	NC 96	Pippin Rd	2	3	1.3	$36,390,922	☐	☐	☐	CTP
A796	Pearces Rd	Pippin Rd	Ferrell Rd	2	4	1.4	$42,190,051	☐	☐	☐	CTP
A42b	Penny Rd	Kildaire Farm	Holly Springs Rd	2	4	1.62	$47,233,177	☐	☐	☐	CTP
A917	Perry Curtis Rd Ext	Perry Curtis Rd	Temple Johnson Rd	0	2	0.41	$11,965,256	☐	☐	☐	CTP
A665	Perry Curtis Rd/Wake County Line Rd Access Managem	S. Arendell Ave	NC-39	2	3	2.6	$42,282,786	☐	☐	☑	CTP
A740	Pierce Olive Road	Holly Springs Road	Optimist Farm Road	2	4	1.72	$41,868,000	☐	☐	☐	CTP
A614	Pinecrest Dr Turn Lane	Fairbanks Dr	Tanglewild Dr	2	3	1.2	$31,992,020	☐	☐	☑	CTP
A628	Piney Grove Rawls Rd Widening	Piney Grove Wilbon	US 401	2	4	1.16	$32,122,259	☐	☐	☐	CTP
A74c	Piney Plains Rd	Dillard Dr	Walnut St	2	4	0.43	$12,537,201	☐	☐	☐	CTP
A588b	Pippin Rd/Debnam Rd	NC 96	NC 39	2	4	3.98	$97,754,052	☐	☐	☐	CTP
A520a	Pleasant Grove Church Rd	Nelson Rd	Airport Blvd	2	4	2.4	$69,975,077	☐	☐	☑	CTP
A520b	Pleasant Grove Church Rd	Airport Blvd	Aviation Parkway	0	2	1.11	$38,845,493	☐	☐	☐	CTP
A738	Pleasant Plains Rd Extension	Pleasant Plains Road	Woodfield (Dead End) Road	0	2	0.93	$12,164,000	☐	☐	☐	CTP
Jhns17	Pony Farm Rd Ext	Little Creek Church Rd	Ranch Rd	0	3	1.13	$37,020,268	☐	☐	☐	CTP
A747	Poole Rd	Sunnybrook Rd	Barwell Rd	4	6	3	$100,559,837	☐	☐	☐	CTP
Jhns22	Powhatan Road	US 70 Business	Fire Department Road	2	4	4.9	$131,967,081	☐	☐	☐	CTP
A402e	Proctor St	NC 96	Shepard School Rd	2	3	0.85	$21,366,099	☐	☐	☑	CTP
A216b	Pulley Town Rd	US 401/Rolesville Bypass	NC 96	2	3	2.46	$63,634,327	☐	☐	☐	CTP
A531b	Purfoy Rd Widening	Holland Rd	Chalybeate Springs Rd	2	4	4.12	$114,089,401	☐	☐	☐	CTP
A669a	Puryear Rd Ext	Forestville Rd	Mamas Way	0	2	1.98	$36,619,397	☐	☐	☐	CTP
A669b	Puryear Rd Ext	Horton Rd	Marks Creek Road	0	2	1.15	$21,268,842	☐	☐	☐	CTP
A595	Puryear Rd Turn Lane	Mark's Creek Rd	Rolesville Rd	2	3	1.42	$36,685,610	☐	☐	☑	CTP
A302c	Rawls Ch Rd Widening	US 401	Rawls Ch Rd Extension	2	4	3.32	$86,921,422	☐	☐	☐	CTP

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A558a	Rawls Church Turn Lane	NC 55	US 401	2	3	5.33	$127,598,103	☐	☐	☑	CTP
A558b	Rawls Church Widening	US 401	Christian Light Rd	2	4	2.54	$60,745,305	☐	☐	☐	CTP
A14b	Ray Rd	Lynn Rd	Strickland Rd	2	3	2.61	$69,582,643	☐	☐	☑	CTP
A891	RC Watson Rd Extension	Buffaloe Rd	Watkins Rd	0	2	1.14	$21,016,493	☐	☐	☐	CTP
A898	RC Watson Rd Extension North	Old Milburnie Rd	Mitchell Mill Rd	0	2	1.18	$21,753,914	☐	☐	☐	CTP
A543a	Rex Rd Widening	New Hill Holleman	Avent Ferry Connector (NL)	2	4	2.15	$59,536,945	☐	☐	☐	CTP
A169c	Richardson Rd	Poole Rd	Eagle Rock Rd	0	2	0.83	$17,602,090	☐	☐	☐	CTP
A179c1	Richardson Rd	Humie Olive Rd	Foster Woods Drive	2	4	0.51	$12,196,892	☐	☐	☐	CTP
A179c2	Richardson Rd	Foster Woods Drive	Old US 1 Highway	0	4	0.57	$19,701,418	☐	☐	☐	CTP
A884	Richland Dr Extension	Ligon Mill Rd Connector	End of Road	0	2	0.36	$6,636,787	☐	☐	☐	CTP
A713	Roberts Road	Brincefield Place	Jenks Road	2	4	1.46	$20,794,813	☐	☐	☐	CTP
A806	Robertson Pond Rd	Rolesville Rd	Edgemont Rd	2	3	1.68	$47,028,269	☐	☐	☑	CTP
A924	Rock Quarry Rd	Raleigh Blvd	MLK Jr Pkwy	4	2	0.35	$6,641,413	☐	☐	☑	CTP
A540a	Rock Service Station Turn Lane	Old Stage Rd	NC 42	2	3	3.68	$88,924,303	☐	☐	☑	CTP
A540b	Rock Service Station Turn Lane	NC 42	Mt Pleasant Rd	2	3	2.56	$61,285,393	☐	☐	☑	CTP
A897	Rocky Top / Curvature Ln Extension	Silver Water Ln Extension	Fixit Shop Rd	0	2	1.67	$30,787,318	☐	☐	☐	CTP
A4c	Rogers Lane	Daleview Dr	Southall Rd	2	4	1.06	$31,826,136	☐	☐	☐	CTP
A813	Rogers Rd Access Management	US 1 Alt / S Main St	Marshall Farm St	2	3	2.09	$26,584,800	☐	☐	☐	CTP
A420	Rolesville Rd	Mitchell Mill Rd	Riley Hill Rd	2	4	2	$60,356,444	☐	☐	☑	CTP
A771	Rolesville Rd	Fowler Rd	Mitchell Mill Rd	2	3	1.44	$40,309,945	☐	☐	☑	CTP
Frnk34	Rolling Acres Extension	Rolling Acres	Southern Bypass Alignment	0	2	0.27	$4,977,590	☐	☐	☐	CTP
A734	Rouse Road	Cass Holt Road	Piney Grove Wilbon Road	2	3	1.58	$42,122,826	☐	☐	☑	CTP
A450	RTP Access Routes	Internal RTP access points	External access points	2	4	0.84	$20,088,999	☐	☐	☐	CTP
A551	Salem St Widening	US 64	Apex Peakway	2	3	0.64	$16,087,416	☐	☐	☑	CTP
Grnv84a	Sanders Rd	US 15	Belltown Rd	2	3	3.08	$44,977,733	☐	☐	☑	CTP
Grnv84b	Sanders Rd Ext (North)	Belltown Rd	Sr-1004	0	2	1.21	$21,251,545	☐	☐	☐	CTP
Grnv84c	Sanders Rd Ext (South)	US 15	Hester Rd	0	2	1.28	$22,480,973	☐	☐	☐	CTP
A950	Sawdust Lane Extension	Mailman Road	Knightdale-Eagle Rock Road	0	2	0.74	$2,684,681	☐	☐	☐	CTP
A797	Shepard School Rd	Proctor St/Old Bunn Rd	Oakley Rd	2	4	3	$90,407,252	☐	☐	☐	CTP
Frnk21	Sid Mitchell Rd Ext	Holden Rd	US 1/Wall Rd	0	2	1.1	$49,493,039	☐	☐	☐	CTP
A895	Siver Water Ln Extension	Old Milburnie Rd	Mitchell Mill Rd	0	2	1.16	$21,385,203	☐	☐	☐	CTP
A680a	Six Forks Road	I-540	Durant Road	2	4	0.9	$26,240,654	☐	☐	☐	CTP
A680b	Six Forks Road	Durant Road	Norwood Road	2	4	1.4	$40,818,795	☐	☐	☐	CTP
A680c	Six Forks Road	Norwood Road	NC-98	2	4	3.2	$83,779,684	☐	☐	☐	CTP
Grnv115	Smith Rd Turn Lane	US 15	Belltown Rd	2	3	2.37	$57,563,419	☐	☐	☑	CTP
A51	Smithfield Rd	Forestville Rd	Bethlehem Rd	2	4	1.57	$45,775,363	☐	☐	☐	CTP
A818	Smithfield Rd / Major Slade Rd	Grasshopper Rd	Poole Rd	2	2	2.32	$20,947,466	☐	☐	☐	CTP

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A2a	Southall Rd	Skycrest Dr	Buffaloe Rd	2	3	1.54	$15,000,000	☐	☐	☑	CTP
A943	Southern Access Road	Trinity Creek Drive	Irving Parkway Extension	0	2	1.04	$10,000,000	☐	☐	☐	CTP
A911	Southern Connector	NC 97	Moss Rd	0	2	0.96	$31,199,870	☐	☐	☐	CTP
A913	Southern Connector	Old Zebulon Rd Ext/Mack Todd Rd	NC 96	0	2	1.77	$51,654,887	☐	☐	☐	CTP
A920	Southern Connector	W Gannon Ave	Peach Grove Ln Connector	0	2	0.86	$0	☐	☐	☐	CTP
A547	Stephenson Rd	Ten Ten Rd	Sunset Lake Rd	2	3	2.03	$48,597,401	☐	☐	☑	CTP
A59b	Sumner Blvd Ext	Old Wake Forest Rd	Capital Blvd	0	3	0.38	$14,058,620	☐	☐	☐	CTP
A217c	Sunset Lake Rd Ext	Woodfield Deadend Rd	Main St	2	4	0.99	$23,676,320	☐	☐	☐	CTP
A912	Temple Johnson Rd Ext	Moss Rd	Temple Johnson Rd	0	2	0.98	$31,849,867	☐	☐	☐	CTP
A142a3	Timber Dr Ext	Timber Dr East	S Greenfield Pkwy	0	4	0.71	$35,446,552	☐	☐	☐	CTP
A142a2	Timber Drive East	Element Cir	White Oak Rd	0	4	1.12	$39,195,452	☐	☐	☐	CTP
A907	Tippett Road Connector	Tippett Rd	Hunters Run Ln	0	2	1.78	$51,946,722	☐	☐	☐	CTP
A667	Todd Lane Extension	Marshburn Road	Wendell Blvd / US-64 BUS	0	3	1.27	$32,375,780	☐	☐	☐	CTP
A120a	Tryon Rd	Garner Rd	Creech Rd	0	4	1.33	$46,544,600	☐	☐	☐	CTP
A120b	Tryon Rd	Creech Rd	Quarry Ridge Ln	0	4	1.07	$47,402,728	☐	☐	☐	CTP
A38	Tryon Rd	US 64	Kildaire Farm Rd	4	6	0.8	$26,815,957	☐	☐	☐	CTP
A777	Turnipseed Rd	Smithfield Rd	Buffalo Rd	2	3	3.28	$91,817,096	☐	☐	☑	CTP
Grnv131	Unamed Connector	East Lyon Station Road	Creedmoor Loop A	0	2	0.78	$14,010,691	☐	☐	☐	CTP
Frnk24	US 1 Access Rd	Franklinton S Bypass	NC 56	0	2	1.25	$20,161,906	☐	☐	☐	CTP
Grnv133	US 15/W Hillsboro St/Joe Peed Rd Intersection			2	2	0	$0	☐	☐	☐	CTP
Frnk12	US 1A Ext	US 1A	Main St	0	2	2.53	$42,016,814	☐	☐	☐	CTP
A908	W Barbee/Moss Roundabout	W Barbee St	Moss Rd	2	2		$0	☐	☐	☑	CTP
A879	W Holding Ave Extension	Ligon Mill Rd Connector	Richland Ridge Dr	0	2	0.37	$6,821,142	☐	☐	☐	CTP
A773	Wake Forest Northern Bypass	Oak Grove Church Rd	Gilcrest Farm Rd	0	2	1.57	$44,077,130	☐	☐	☐	CTP
A932	Wake Forest Rd/Falls of Neuse Rd	St. Albans Dr	Millbrook Rd	7	6	1.55	$12,531,740	☐	☐	☑	CTP
A918	Wakefield St	Sir David Dr	Perry Curtis Rd	2	3	0.52	$13,863,209	☐	☐	☐	CTP
A919	Wakefield St/Morphus Bridge Rd	Southern Connector	Old Zebulon Rd Ext	2	4	0.42	$11,365,483	☐	☐	☐	CTP
A37	Walnut St	Maynard Rd	Macedonia Rd	4	6	1.29	$43,240,730	☐	☐	☐	CTP
A68b	Water Plant Rd - Part new location	Green Pace Rd	W Gannon Avenue	2	4	0.93	$22,241,391	☐	☐	☐	CTP
A910	Water Plant Rd Connector	Water Plant Rd	D	0	2	0.78	$20,081,991	☐	☐	☐	CTP
A896	Watkins Rd Realignment	Turning Brook Ln	Peebles Rd	0	2	0.5	$9,217,760	☐	☐	☐	CTP
A892	Watkins Town Rd	Old Milburnie Rd	Old Crews Rd	0	2	0.52	$9,586,470	☐	☐	☐	CTP
A815	Wendell Falls Pkwy	I-87 Interchange Ramps	Daniel Ridge Rd	4	4	1.06	$13,483,200	☐	☐	☐	CTP
A167b	Wendell Northern Bypass	US 64 BUS (Wendell Blvd)	Old Zebulon Road	2	4	2.4	$74,012,100	☐	☐	☐	CTP
Jhns23	West Gateway North	Old US 70	US 70 Business	0	2	1.42	$24,660,408	☐	☐	☐	CTP
Jhns24	West Gateway South Connector	US 70 Business	Guy Road	0	2	1.4	$37,421,713	☐	☐	☐	CTP
A778	West Street Ext	South St	Western Blvd	0	3	0.17	$5,304,210	☐	☐	☐	CTP

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Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A691	Western Wendell Ext	Lake Glad Road	Stotts Mill Road	0	3	0.8	$18,313,152	☐	☐	☐	CTP
A584	Western Wendell Loop	US 64 Bus (Wendell Blvd)	Wendell Falls Pkwy	0	4	1.69	$42,480,832	☐	☐	☐	CTP
A790	Whitaker Mill Rd (RR)	Wake Forest Rd	Atlantic Ave	0	3	0.22	$0	☐	☐	☑	CTP
A138d1	White Oak-Guy Rd Connector	White Oak Rd	Guy Rd	0	2	1.92	$48,402,911	☐	☐	☐	CTP
A138d2	White Oak-Guy Rd Connector	White Oak Rd	Guy Rd	2	4	1.92	$51,135,633	☐	☐	☐	CTP
A536	Wilbon Rd Widening	Judd Pkwy	Piney Grove Wilbon	2	4	1.45	$34,677,438	☐	☐	☐	CTP
A549	Wimberley Rd	Jenks Rd	Green Level West Rd	2	3	1.97	$28,768,225	☐	☐	☐	CTP
Grnv35	Woodland Church Rd	Wake Co. line	Bruce Garner Rd	2	3	4.41	$64,399,936	☐	☐	☑	CTP
A575	Woodland Rd Turn Lane	Old Stage Rd	Vandora Springs Rd	2	3	1.47	$39,190,224	☐	☐	☑	CTP
A423	Woods Creek Rd	Friendship Rd	Old Holly Springs Apex Rd	2	4	1.46	$45,880,391	☐	☐	☐	CTP
Chtm3	Yates Store Rd Ext	Yates Store Rd	Wake Rd	0	2	1.4	$27,382,719	☐	☐	☐	CTP
A770	Young St	US 401 Bypass	Jones Dairy Rd	2	3	2.02	$53,853,233	☐	☐	☐	CTP
A761	Youngsville Southern Bypass	Holden Rd	NC 96	0	2	2.97	$82,196,057	☐	☐	☐	CTP
Hrnt12	Lillington Bypass	US 401 North	US 421 East	0	4	4.82	$331,161,415	☐	☑	☐	CTP
A955	Auxiliary Lanes on US1	NC 540	Frienship Road Interchange	4	6	2.32	$96,047,503	☐	☑	☐	CTP
A956	Auxiliary Lanes on US1	Frienship Road Interchange	New Hill Holleman Rd	4	6	1.5	$55,945,890	☐	☑	☐	CTP
A957	Auxiliary Lanes on US1	New Hill Holleman Rd	Old US1	4	6	4.72	$195,913,687	☐	☑	☐	CTP
Chtm8	Auxiliary Lanes on US1	Old US1	Pea Ridge Road	4	6	2.68	$109,474,517	☐	☑	☐	CTP
Chtm9	Auxiliary Lanes on US1	Pea Ridge Road	Moncure Pittsboro Road	4	6	2.13	$89,089,097	☐	☑	☐	CTP
Frnk10	Bunn Bypass	NC 39 (north)	NC 39 (south)	0	4	1.3	$40,348,052	☐	☑	☐	CTP
A195	Creedmoor Rd	Glenwood Ave	Strickland Rd	4	6	4.11	$202,324,450	☐	☑	☐	CTP
A810	E. Gannon Ave.	Stratford Drive	US 264 Highway	3	4	1.95	$21,878,400	☐	☐	☐	CTP
A157a2	Eastern Parkway / Angier Road Interchange						$38,238,420	☐	☑	☐	CTP
A157a1	Eastern Parkway / US 401 Interchange						$38,238,420	☐	☑	☐	CTP
Chtm5a	Farrington Road	US 64	Marthas Chapel Road	2	4	3.98	$95,279,634	☐	☐	☐	CTP
Chtm5b	Farrington Road	Marthas Chapel Road	Chatham County Line	2	4	5.79	$138,470,598	☐	☐	☐	CTP
Frnk9b	Franklinton S Bypass	NC 56 (west)	NC 56 (east)	2	4	4.13	$121,524,087	☐	☑	☐	CTP
Frnk4b1	High Speed Rail - NC 56 Intersection (RR)	NC 56	NC 56	2	4	0.056	$0	☐	☐	☐	CTP
Frnk14a	High Speed Rail - NE Franklin Connector Intersection (R	NE Franklin Connector	NE Franklin Connector	0	2	0.56	$0	☐	☐	☐	CTP
Hrnt10	Lillington Bypass	US 401 South	US 421 West	0	4	4.33	$353,673,659	☐	☑	☐	CTP
Hrnt11	Lillington Bypass	US 421 West	US 401 North	0	4	2.85	$143,887,107	☐	☑	☐	CTP
Hrnt16	NC 210	US 401 (South of Lillington Downtown	Lillington Bypass (Future)	2	4	1.6	$38,264,759	☐	☐	☐	CTP
Hrnt2a	NC 210	NC 55	Angier Western Bypass	2	3	1.46	$40,869,805	☐	☑	☑	CTP
Hrnt3b	NC 210	Old Stage Rd	NC 50	2	4	6.46	$155,320,517	☐	☑	☐	CTP
Hrnt3c2	NC 210	Raleigh Road	Lassiter Pond Rd	2	4	5.1	$121,968,920	☐	☑	☐	CTP
Hrnt19	NC 27	US 421	Johnston County Line	2	4	10.1	$241,546,293	☐	☑	☐	CTP
Jhns13c	NC 42 (East) / US 70 BUS Interchange						$42,583,695	☐	☑	☑	CTP

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Note: Total Cost is less than the actual capital cost for toll, managed lane and railroad projects.

Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A535c	NC 42 Widening	Christian Light Rd	Cass Holt Rd	2	4	2.94	$70,311,495	☐	☑	☐	CTP
A144	NC 50	Timber Dr	US 70	2	3	1.5	$39,990,025	☐	☐	☑	CTP
A445b	NC 50	Beaver Creek Rec	Old Weaver Trail	2	4	2	$52,362,302	☐	☐	☐	CTP
A233a	NC 54	Reedy Creek Rd	Chapel Hill Rd	4	6	0.4	$13,407,978	☐	☑	☐	CTP
A233b	NC 54	Reedy Creek Rd	Harrison Avenue	4	6	0.99	$33,184,746	☐	☑	☐	CTP
A118c	NC 55	Kennebec Church Road	North Broad St	2	2	0.87	$9,706,000	☐	☑	☐	CTP
A652	NC 55	Morrisville Carpenter Rd	NC 540	4	6	1.55	$57,810,753	☐	☑	☐	CTP
Hrnt20	NC 55	Old Stage Rd	Lisa St	2	4	3.4	$81,312,614	☐	☑	☐	CTP
Hrnt21	NC 55	Crawford Rd	CAMPO Boundary	2	4	2	$47,830,949	☐	☑	☐	CTP
Hrnt4a	NC 55 Business (North Raleigh Street)	North Broad Street	Depot Street	2	3	1.65	$12,400,000	☐	☐	☑	CTP
Frnk4a	NC 56	W. of West Sandling Rd	US 1	2	4	3.63	$86,813,173	☐	☑	☐	CTP
Grnv22b	NC 56	Hester Rd	W of Wes Sandling Rd	2	4	4.18	$99,966,684	☐	☑	☐	CTP
Grnv97	NC 56	33rd St	At-Grade Rail Crossing (West of W L	2	3	0.3	$7,181,882	☐	☐	☐	CTP
Frnk9a1	NC 56 Bypass	NC 56 West	US 1	0	2	2.38	$163,330,362	☐	☑	☐	CTP
A728	NC 751	Avent Ferry Road	US 401	0	4	6.5	$98,486,000	☐	☐	☐	CTP
Chtm4	NC 751	US 64	O'Kelly Chapel Rd	2	4	9.2	$254,762,740	☐	☑	☐	CTP
A131c	NC 96	US 401	SE of Youngsville	2	3	4.14	$110,372,468	☐	☐	☑	CTP
A418c	NC 96	NC 96 Bypass	US 1	2	4	1	$29,156,282	☐	☐	☐	CTP
A798	NC 96	Green Grove Rd	Rice Rd	2	4	1.28	$38,573,761	☐	☐	☐	CTP
Frnk3	NC 96	From Granville County	US 1	2	4	4.84	$153,989,317	☐	☑	☐	CTP
A418b2	NC 96 Bypass	NC 96 / Cedar Creek Rd	East Main St / NC 96	2	4	2.5	$61,228,192	☐	☐	☐	CTP
A402g	NC 97	US 264	NC 39	2	4	1.21	$28,937,724	☐	☑	☐	CTP
A794	NC 97/Gannon Ave	Rotary Dr	Old US 264	2	3	1.72	$48,147,990	☐	☐	☐	CTP
A608a	NC 98	Debarmore St	Ligon Mill Rd (future connector)	2	4	1.07	$28,497,462	☐	☑	☐	CTP
A608b	NC 98	Ligon Mill Rd (future connector)	Tyler Run Dr	2	3	0.7	$2,547,625	☐	☑	☑	CTP
A762	NC 98	Old Falls of Neuse Rd	Jones Dairy Rd	4	6	3.82	$128,046,193	☐	☑	☐	CTP
A611	NC 98 Turn Lane	NC 98 Bypass	Allen St.	2	3	0.71	$18,928,612	☐	☐	☑	CTP
A56d	NC 98 Widening	US 401	NC 39	2	4	8.52	$203,759,844	☐	☑	☐	CTP
A56e	NC 98 Widening	NC 39	Wake County line	2	4	3.72	$88,965,565	☐	☑	☐	CTP
Jhns13b	NC36 (Ranch Road & Partial New Location)	Boling Street	US 70 Bypass	2	4	1.75	$52,200,959	☐	☐	☐	CTP
Hrnt4b1	NC-55	Depot Street	NC 55 Bypass	2	3	2.29	$57,562,784	☐	☑	☑	CTP
A440c	NC-55/Carpenter Fire Station Road DDI	NC-55	Carpenter Fire Station Road				$56,065,433	☐	☑	☐	CTP
A173a	New Hill Olive Chapel Rd	Olive Chapel Road	US 64	2	4	0.63	$15,066,749	☐	☐	☐	CTP
A783	Old Milburnie Road	Buffaloe Road	Rolesville Road	2	2	4.11	$0	☐	☐	☑	CTP
Frnk30	S Main St / NC 39	Main St / NC 39	Jewett Ave / NC 98	2	2	0.72	$9,158,400	☐	☐	☐	CTP
A98b	South Main Street Interchange	South Main Street	NC-55 Bypass			0	$55,200,000	☐	☑	☐	CTP
A98c	Technology Drive Interchange	Technology Drive	NC-55 Bypass			0	$28,300,000	☐	☑	☐	CTP

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Note: Total Cost is less than the actual capital cost for toll, managed lane and railroad projects.

Project ID	Road Name	From	To	Existing Lanes	Proposed Lanes	Distance (Miles)	Total Cost	Toll	Regionally Significant	AQ Exempt	Horizon Year
A760	US 1 Alt	Harris Rd	Youngsville Southern Bypass	2	4	1.56	$48,107,865	☐	☑	☐	CTP
Grnv3	US 15	Gate #2	WB Clark	2	4	1.94	$46,396,021	☐	☑	☐	CTP
Hrnt17	US 401	NC 210 (South of Lillington Downtown	CAMPO Boundary	2	4	4.5	$107,619,636	☐	☐	☐	CTP
Hrnt18	US 401	Matthews Rd	CAMPO Boundary	4	4	9.75	$227,039,670	☐	☑	☐	CTP
Hrnt5	US 401	Fuquay-Varina	Lillington UPD	2	4	7.5	$179,366,059	☐	☑	☐	CTP
A90c1	US 401 & NC 98 Interchange						$38,238,420	☐	☑	☐	CTP
A480a1	US 401 / US 70 BUS	US 401 / US 70 BUS Flyover	Garner Station Road / Mechanical Bl	4	6	1.2	$49,842,702	☐	☑	☐	CTP
A902	US 401 Bus/Main Street	US 401 Bypass South	Burlington Mills	2	3	1.02	$0	☐	☐	☐	CTP
A904	US 401 Bus/Main Street	Young St	US 401 Bypass N	2	3	1.98	$0	☐	☐	☐	CTP
A617a	US 401 Bypass	US 401 (E of FV)	NC 55	0	6	6.41	$458,987,945	☐	☑	☐	CTP
A534b	US 401 Widening	Judd Pkwy	Eastern Parkway	2	4	1.53	$36,590,676	☐	☑	☐	CTP
Hrnt14	US 421	10th St	Lillington Bypass (Future	2	4	1.9	$46,635,175	☐	☐	☐	CTP
Hrnt15	US 421	Lillington Bypass (Future)	Lee Coutnty Line	2	4	11.6	$277,419,505	☐	☑	☐	CTP
A300	US 70	US 401	I-40	4	6	4.3	$296,845,038	☐	☑	☐	CTP
A139	US 70 / Timber Drive	Hammond Road	Timber Drive			0	$15,400,000	☐	☑	☐	CTP
Grnv4b	US-15	Hester Rd	MPO Boundary	2	4	4.38	$104,749,779	☐	☑	☐	CTP
A587a1	Wendell Blvd	Old Oak Tree Road	Liles Dean Rd	2	4	0.53	$15,971,948	☐	☐	☐	CTP
A587a2	Wendell Blvd	Liles Dean Rd	Hanor Lane	2	3	0.78	$21,834,553	☐	☐	☐	CTP
A587b	Wendell Blvd Widening	Hanor Lane	NE Old Zebulon Rd	2	3	2.9	$47,161,569	☐	☐	☑	CTP
F88	Centennial Pkwy/Lake Wheeler Intersection Realignme	I-40	Centennial	4	4	0.4	$14,689,654	☐	☑	☐	CTP
A803	Debnam Rd Interchange	Debnam Rd	US 64				$42,583,695	☐	☐	☐	CTP
A418a	Future NC 96 Grade Separation (RR)	NC 96	NC 96	0	4	0.042	$0	☐	☐	☑	CTP
A906	I-87/Wendell Falls Blvd Interchange Redesign	Wendell Falls Blvd					$21,727,000	☐	☐	☑	CTP
A802	New Jack Mitchell Rd Interchange	New Jack Mitchell Rd	US 264				$42,583,695	☐	☐	☐	CTP
SCI-1	Sealed Corridor #1 - Grade Separations (RR)	Raleigh	Clayton				$0	☐	☐	☑	CTP
SCI-2	Sealed Corridor #2 - Grade Separations (RR)	Franklinton South	Franklinton North				$0	☐	☐	☐	CTP
SCI-3	Sealed Corridor #3 - Grade Separations (RR)	Cary	Apex				$0	☐	☐	☑	CTP
SCI-4	Sealed Corridor #4 - Grade Separations (RR)	Morrisville	Morrisville				$0	☐	☐	☐	CTP
A812	US 1 Alt / S Main St	US 1 / Capital Blvd	NC 98 / Dr Calvin Jones Hwy	4	5	0.78	$9,921,600	☐	☐	☐	CTP
A905	US 1 Intersection Improvement	Wake Union Church Rd		0	0		$9,029,000	☐	☐	☐	CTP
Chtm1	US 64 Superstreet	NC 751	Chatham Parkway	4	4	11.6	$358,053,696	☐	☑	☐	CTP

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Note: Total Cost is less than the actual capital cost for toll, managed lane and railroad projects.

Appendix 3 - Transit Fixed Guideway & Shared Regional Investments

Appendix 3 lists major capital investments, including shared regional investments outlined in Chapter 7 of this document. In addition to the listed projects, transit networks used in the analysis are available online at the following sites:

- CAMPO transit investments (mapping also includes roadway and active transportation layers, all of which can be turned on or off by accessing the "layers list" icon at the top right of the map)
- DCHC MPO transit investments (in addition to the capital investments listed in this appendix, the mapping includes regional express bus services between Chapel Hill and Hillsborough, Chapel Hill and Chatham County, and Durham and Granville County; and frequent bus service along four transit emphasis corridors with improved sidewalks, bus stops, intersection crossings and signals, and other transit-supportive investments—Chapel Hill Road, Holloway Street, Roxboro Road, and Fayetteville Street)

Table A3.1: Triangle West TPO Fixed Guideway Transit Projects List

Project	Description	MTP Horizon Year
Intercity Passenger Rail (ICR) Stations	2035: Intercity Rail (ICR) service from Downtown Durham through the new RTP station and transit center to Cary and Raleigh; 2055: Expanded ICR service from the new Hillsborough station and transit center to Downtown Durham, the RTP station, Cary and Raleigh, connecting major regional transit hubs.	2035, 2055
Bus Rapid Transit (BRT) – Chapel Hill North-South Line	BRT service in Chapel Hill, running from Eubanks Road, through the UNC Healthcare complex, and to Southern Village, using a mix of dedicated lanes and mixed traffic.	2035
Bus Rapid Transit (BRT) – Central Durham Line	BRT service in Durham, running from the Duke University/ Medical Center area through the central bus station and Downtown Durham to the Village area, using a mix of dedicated lanes and mixed traffic.	2035
Bus Rapid Transit (BRT) – Durham-Orange Line	BRT service between Durham and Orange counties, operating from Carrboro, Chapel Hill, and the UNC Healthcare complex to the Duke University and Medical Center area via US 15-501, and continuing to Durham Station and NCCU. The BRT line includes segments operating in dedicated lanes as well as segments in mixed traffic.	2035
Bus Rapid Transit (BRT) – Durham NS BRT Line Combined with CAMPO's Western BRT Line	BRT service, running from Duke, Downtown Durham, and NCCU to the Research Triangle Park (RTP) via NC 147/I-885, continuing on to Cary, Raleigh, and Clayton. The route includes segments operating in dedicated lanes and managed lanes, as well as segments in mixed traffic.	2045
Bus Rapid Transit (BRT) – Chapel Hill-RTP Line Combined with CAMPO's I-40 BRT Line	BRT service from Chapel Hill to Downtown Raleigh via the Research Triangle Park (RTP) and I-40. This aligns the Chapel Hill-RTP BRT with the I-40 BRT at RTP to create a continuous regional route. This route includes segments in dedicated lanes, managed lanes as well as segments in mixed traffic.	2055

Table A3.2: Capital Area MPO Fixed Guideway Transit Projects List

Project	Description	MTP Horizon Year
Regional Rail	From Regional Transit Center (RTC) to Wake Forest	2035
Regional Rail	• From Regional Transit Center (RTC) to Wake Forest with stop added in Morrisville (McCrimmon); • From Downtown Apex to Auburn/Garner	2045
Regional Rail	• From Hillsborough to Selma; • From Franklinton to Downtown Apex; • From Downtown Apex to Veridea	2055
Bus Rapid Transit (BRT)	• SAS to Regency Center – between SAS Campus and Regency Center via mixed traffic along Harrison Avenue, Kildaire Farm Rd, Tryon Rd and Regency Pkwy; • Capital Blvd – between Downtown Raleigh and Triangle Town Center via dedicated guideway parallel to Capital Blvd; • Midtown – between Downtown Raleigh and North Hills via mixed traffic using Capital Blvd, Wake Forest Rd, Atlantic Avenue and Six Forks Rd; • New Bern – between Downtown Raleigh and Corporation Pkwy via dedicated guideway parallel to US 64; • Western – between Powhatan (Clayton) and Regional Transit Center (RTC) via US 70 (mixed traffic) to Garner Station, dedicated guideway from Garner Station to Downtown Raleigh to Downtown Cary to RTC parallel to NC 54.	2035
Bus Rapid Transit (BRT)	• Western Extended – between Powhatan (Clayton) and RTC via US 70 (mixed traffic) to Garner Station, dedicated guideway from Garner Station to Downtown Raleigh to Downtown Cary to RTC parallel to NC 54. Extended to West Durham via mixed traffic along I-885, NC 147 and Alston Avenue; • I-40 – between Downtown Raleigh and RTC via dedicated guideway parallel to Western Blvd, mixed traffic along Blue Ridge Rd to Trinity Rd to Edwards Mill Rd to Wade Avenue/I-40 to NC 540 west to NC 54 to RTC; • US 70 – between Crabtree Valley Mall and Davis Drive via US 70, Brier Creek Pkwy, Aviation Pkwy and McCrimmon; • Apex – between RTC and Downtown Apex via mixed traffic using Davis Drive; • Veridea – between Downtown Apex and Veridea via Salem St and Veridea Pkwy.	2045
Bus Rapid Transit (BRT)	• New Bern/Knightdale (New Bern Extended) – between Downtown Raleigh and Knightdale Station Pkwy via dedicated guideway parallel to US 64 to Corporation Pkwy, mixed traffic to Knightdale Station along US 64; • I-40/Chapel Hill (I-40 Extended) – between Downtown Raleigh and UNC via dedicated guideway parallel to Western Blvd, mixed traffic along Blue Ridge Rd to Trinity Rd to Edwards Mill Rd to Wade Avenue/I-40 to NC 540 west to NC 54 to RTC, continuing along NC 54 to Barbee/Herndon Rd to Renaissance Pkwy to I-40 to NC 54/US 15-501 along Manning Drive to Cameron Avenue.	2055

Appendix 4 - Active Transportation Projects

2055 MTP Defers to Local Plans

Most active transportation investment in the 2055 MTP is "programmatic," meaning the Plan allocates funding for active transportation projects but does not list specific projects. The 2055 MTP defers to the active transportation plans of the local jurisdictions and counties to identify these bicycle and pedestrian projects. Chapter 7.5 provides links to these local plans. It should be noted that the local plans and the projects designated by the map below usually have yet to determine the exact location and detailed designs of the projects.

Complete Streets

Not all active transportation projects would be part of a local plan, included in the map below, or explicitly listed in the State Transportation Improvement Program (STIP). Bicycle and pedestrian improvements that are "complete streets" investments are often part of a larger roadway or transit project, and therefore not explicitly listed as an active transportation plan.

Exempt Projects

All the bicycle and pedestrian projects are deemed exempt from the air quality conformity determination according to Title 40, Code of Federal Regulations (CFR), PART 93.126. The most important implication of this exemption is that the projects may proceed toward implementation in the absence of a conforming transportation plan or Transportation Improvement Program (TIP).

CAMPO Connected Network

As presented in C*hapter 7.5 Active Transportation*, CAMPO has developed a functional hierarchy of national, statewide, regional, and local bicycle projects that provide connectivity among destinations from residential neighborhoods to state and national destinations. The maps linked below demonstrate the interconnected network of these proposed active transportation projects. Statewide-tier corridors in the CAMPO functional hierarchy include major spine routes such as the Neuse River Trail, American Tobacco Trail, Crabtree Creek Greenway, and East Coast Greenway. Regional-tier facilities are those that connect these spine routes to individual neighborhoods and communities, where the regional facilities connect with local-tier facilities.

- Map of CAMPO regional network bicycle & pedestrian facilities by tier
- Map of CAMPO regional network bicycle & pedestrian facilities by facility type
- Map of CAMPO regional network bicycle & pedestrian facilities by mode

Triangle West TPO Network

The Triangle West TPO incorporates local bicycle and pedestrian plans by reference as its bicycle and pedestrian project list. See Chapter 7.5 for links to these local plans.

Appendix 5: Resources on Technology

This appendix contains links to resources on emerging technological changes that are influencing patterns and modes of travel, and the environmental impacts of travel: connected and autonomous vehicles, electrification and telepresence. As MPOs and NCDOT implement the region's Intelligent Transportation Systems (ITS) Strategic Deployment Plan, understanding the potential roles, market penetration rates and impacts of connected and autonomous vehicles and other emerging technologies will be important considerations.

Because knowledge about connected and autonomous vehicles, electrification and telepresence is evolving rapidly, this appendix highlights web sites and points of contact that can be expected to update information as it becomes available.

Connected and Autonomous Vehicles

Resources from the American Planning Association

Resources from the Victoria Transport Policy Institute

Resources from the National Highway Transportation Safety Administration

Resources from the US Department of Transportation

Vehicle Electrification

Resources from the American Council for an Energy Efficient Economy

Resources from the NC Clean Energy Technology Center

NCDOT's North Carolina Clean Transportation Plan

The Triangle Clean Cities Coalition maintains information on alternative fuel resources, including information on EV infrastructure programs.

Emerging Modes

Micromobility and E-bike resources from the Active Transportation Resource Center and the Pedestrian and Bicycle Information Center

Microtransit resources from the North Carolina Department of Transportation, the NC State Institute for Transportation Research and Education, and the American Public Transportation Association

Advanced Air Mobility resources from the US Department of Transportation and Federal Aviation Administration

Mobility-as-a-Service (MaaS) resources from the American Public Transportation Association

Intelligent Transportation Systems

Resources from the US Department of Transportation

Resources from ITS America

Triangle Region ITS Strategic Deployment Plan (2020)

Triangle Region ITS Deployment Roadmap (2025)

Telepresence

Telepresence refers to connections based on virtual and remote technology that can replace in-person travel. Originally focused on tele-work, the COVID pandemic resulted in extensive adoption for other purposes, including remote meetings, remote schooling and tele-medicine.

Triangle Transportation Choices, the Triangle region's transportation demand management program developed a toolkit for telework programs and can be contacted for telepresence resources.

Appendix 6: Transportation Policy Priorities for the Triangle Metro Region

The Capital Area MPO Executive Board and the Triangle West TPO Board have jointly developed the regional transportation policy priorities that are reflected on the following pages.

Transportation Policy Priorities
FOR THE TRIANGLE METRO REGION

KEYS TO A MOBILE FUTURE

Transportation is big, but it is always part of something bigger: economic development opportunities, healthy, active neighborhoods, greater access to jobs and education. The Triangle Metro Region – urban, suburban and rural -- was home to 35% of the state's growth from 2010-2020, and is expected to add another million people over the next generation. A transportation policy that enables North Carolina to continue to compete effectively must focus on 3 key areas:

- Economic Development & the Attraction of Diverse Talent
- Healthy, Complete Communities Equitable for All Residents
- Safety for All Travelers, From Youth to Seniors

REGIONAL POLICY PRIORITIES

Seven key priorities can result in fast-growing regions staying ahead of the growth curve, rural areas and small towns taking advantage of economic opportunities and every community providing complete streets and safe solutions tailored to local conditions.

INVEST FOR SUCCESS

- Create dedicated, recurring state funding as a match for competitive federal funds, such as the BUILD, passenger rail, and Capital Investment Grant (CIG) programs.
- Create state economic development funding for multi-modal investments serving job hubs in small towns, rural areas, and along major metro mobility corridors.

The BuildNC bond was a good start, but fast, flexible funding is needed for multimodal projects not well suited to the long and constrained STI process. Regions will do their part - they need a handshake, not a handout from the state - a committed partner to match regional action with state action.

- Minnesota's Transportation Economic Development Program could be a model for a nimble, economic-based effort -

MAKE INVESTMENTS RELIABLE AND PREDICTABLE

- Remove constraints and account for multimodal benefits for rail transit funding.

The STI program allocates funding in a reasonable way, with one exception: rail transit. Rail transit should be held to the same standards as other investments, and its measurable multi-modal benefits should be included. Constraints on state funding should be removed so that projects can compete on a level playing field and funded on their merits. Businesses tell us that risks, uncertainties, and changing rules stifle success - transportation investment is a key business for the state and its communities.

- $1 million invested in transit generates 4,200 job-hours; $1 million in roadway investment generates 2,400 job-hours -

TRIANGLE METRO REGION Chatham, Durham, Franklin, Granville, Harnett, Johnston, Lee, Moore, Orange, Wake

ENABLE MORE COST-EFFECTIVE CRITICAL CORRIDOR INVESTMENTS

➡ Relax the cap on statewide tier funding within a corridor.

While the reasoning behind a cap is sound, its application leads to piece-meal spending which costs more in the long run and affects travelers throughout the state. The cap can also prevent investments on parallel reliever roadways that could be cost-effective and complimentary investments.

- 30% of vehicles on the Triangle's busiest stretch of I-40 - which is hampered by the corridor cap - is from areas outside Wake and Durham counties -

REMOVE FUNDING BARRIERS FOR SMALL TOWNS AND RURAL AREAS IN DIVISIONS WITH LARGE MPOS

➡ Exempt Surface Transportation Block Grant-Direct Allocation Funding from the STI Allocation.

These funds are allocated from the federal government to MPOs to address mobility challenges in urban areas. Exempting these funds from the STI formula at the Division Tier would allow funding to be more evenly distributed and let small towns and rural counties better compete for funds.

- NC's STI program already exempts 8 other categories of transportation revenues -

MAKE NC A LEADER IN ACTIVE TRANSPORTATION INVESTMENTS

➡ Surpass peer states in funding economically beneficial and safety-focused bicycle & pedestrian projects.

Whether its a critical link in NCDOT's Great Trails State Plan, an important sidewalk connection to make travel to school safer, or a Main Street bike and pedestrian project to serve businesses, state funding provides crucial leverage for federal funds and local contributions.

- 16% of crash fatalities are pedestrian or cyclists; the state is a necessary partner in solutions -

STRENGTHEN SUPPORT FOR DEMAND-MANAGEMENT & TECHNOLOGY

➡ Stabilize and grow NCDOT's investment in Transportation Demand Management (TDM) to match local and regional commitments. Implement the Regional Technology (ITS) plan for roadways and transit.

The most cost-effective dollar spent efficiently manages the demand for the supply of roads we already have. Working with employers on ways to offer workers alternatives to peak-hour, drive-alone commuting and deploying technologies to maximize the roadway supply are key elements of smart cities.

- The Triangle TDM program has reduced vehicle miles traveled by over 300 million miles over the past 5 years -

RECOGNIZE STATEWIDE PROJECTS IN OTHER MODES, NOT SOLELY ROADWAYS AND FREIGHT RAIL

➡ Establish standards and scoring criteria for designated statewide passenger rail and trail investments.

Just as highways serve statewide interests, so do other modes. Charlotte to Raleigh passenger rail serves 5 NCDOT divisions and 3 NCDOT regions. Great trails traverse the state - the East Coast Greenway stretches from VA to SC and the Mountains-to-Sea Trail runs 1,175 miles from the Great Smoky Mountains to the Outer Banks.

-Raleigh to Charlotte passenger rail contributes $60 million to business output and $30 million to GSP annually-

This policy document was produced by Central Pines Regional Council.
Visit centralpinesnc.gov/mobility-transportation/urban-mobility for additional information.

TRIANGLE WEST Transportation Planning Organization

CAMPO NC Capital Area Metropolitan Planning Organization

Invest for Success

A Triangle Metro Region Transportation Priority

Create dedicated, recurrent state transportation funding as a match for competitive federal funds, together with state economic development funding for key multi-modal investments serving job hubs.

The BuildNC bond was a good start, but fast, flexible funding is needed for multi-modal projects not well suited to the long and constrained STI process.
Regions will do their part -- they need a handshake, not a handout from the state -- a committed state partner to match regional action with state action.

- State funding for shovel-ready and shovel-worthy projects may drive any federal stimulus funding decisions -

Opportunity comes to those who are prepared for it. North Carolina needs special transportation funds that move at the speed of business and are fast and flexible enough to dovetail with changing federal transportation funding opportunities and business expansion decisions:

- NC has a history as a "donor" state when it comes to competitive grants, especially for major transit capital investments
- Recent major economic development location decisions, such as for the Amazon HQ2, have emphasized the importance of investing in quality transit to attract jobs

Dedicated State Funding to Match Competitive Federal Funds

What success looks like: A ready-to-go pool of state matching funds that local and state applicants for competitive federal grants can count on to increase their chances for success.

Recent Success

North Carolina awarded $47.5 million CRISI grant to purchase freight line for future passenger service

The 10-mile line is called the "missing link" for future high-performance passenger rail service between Raleigh, N.C., and Richmond, Va.

Key Policy Considerations

- Understanding federal scoring systems and tailoring projects for maximum success
- Ensuring sufficient levels of funding to provide matches, while being able to pivot funding if applicants are not successful
- Nurturing relationships with federal agencies and local partners to ensure our ability to deliver projects on time & on budget

Project Types that Might Benefit

- BRT and passenger rail projects through the Federal Capital Investment Grants (CIG) program
- Roadway, transit and bike-ped projects seeking BUILD funding
- Projects eligible for any infrastructure stimulus legislation that may occur

TRIANGLE METRO REGION Chatham, Durham, Franklin, Granville, Harnett, Johnston, Lee, Moore, Orange, Wake

Economic Development Funding for Mobility Investments in Key Hubs

What success looks like: A state economic development fund that can quickly respond to mobility needs of major economic development projects

Examples from Successful Regions


Bloomberg CityLab

CITYLAB

Amazon's HQ2 Hunt Is a Transit Reckoning

There are smart ways to overhaul trains and buses, and not-so-smart.

By Laura Bliss
September 28, 2017, 9:20 AM EDT

Key Policy Considerations

- Understanding how federal programs like Opportunity Zones and FTA Joint Development could leverage economic development and serve key travel markets
- Determining the best source(s) for revenues and the best way to allocate funds to worthy projects
- Building partnerships between transportation staffs and economic development staffs

Types of Projects that Might Benefit

- Major expansions or relocations that prioritize fast and reliable transit
- Mega-site industrial employers that expect good freight rail and highway access
- Projects eligible for any infrastructure stimulus legislation that may occur

Next Steps for the Metropolitan Planning Organizations

- Work with NCDOT, NC Department of Commerce, Economic Development Partnership of NC and State legislators on legislative proposals
- Work with NCDOT and regional partners to build expertise in federal grant opportunities and scoring mechanisms, and identify eligible projects
- Work with partners to conduct feasibility studies to move top projects into shovel-ready or shovel-worthy status
- Build and nurture relationships with federal agencies that oversee competitive grant funding
- Understand typical mobility-related "asks" of major economic development projects
- Understand the region's "mega sites" and the mobility investments that could serve them better

How to Invest for Success in Your Community

- Fund the planning and feasibility studies needed to make projects shovel-ready and shovel-worthy
- Consider a transportation bond to provide local matching funds to leverage federal funds
- Work with businesses and anchor institutions to develop collaborative partnerships and solutions
- Revise land use, parking & affordable housing policies to align with multi-modal corridor standards

This policy document was developed by Central Pines Regional Council. Visit centralpinesnc.gov/mobility-transportation/urban-mobility for additional information.

TRIANGLE WEST Transportation Planning Organization

CAMPO NC Capital Area Metropolitan Planning Organization

Make NC a Leader in Active Transportation Investments

A Triangle Metro Region Transportation Priority

Surpass peer states in funding economically beneficial and safety-focused bicycle and pedestrian projects and programs

Whether it's a critical link in NCDOT's Great Trails State Plan, an important sidewalk connection to make travel safer, or a Main Street bike and pedestrian project to serve businesses, state funding provides crucial leverage for federal funds and local contributions.

- 16% of crash fatalities are either pedestrians or cyclists -

North Carolina and the Triangle Metro Region should prioritize active transportation investments that support healthy and safe communities. Primary focus areas are:

- Improved implementation of **Complete Streets** projects
- **Active Routes to School, Parks, and Transit** approaches that have demonstrated health, equity, and academic performance benefits.

Complete Streets

What success looks like: NCDOT Complete Streets policy implementation is based on the land use and travel characteristics of corridors, along with the needs of users, not on the type of facility that is built or the community it is in. NCDOT, MPOs, RPOs, and local communities seamlessly blend federal, state and local funds to achieve results.

A Successful Complete Street

Key State Actions

- Restore state funding for independent active transportation projects to put all modes on a level playing field.
- Make facility maintenance easier.
- Lower the local match requirements to incentivize more investments.
- Leverage all funding programs, including safety, for active transportation.
- Develop best practices for tracking success in active transportation.

Triangle Projects That Could Benefit

- NC 98 Corridor
- Triangle Bikeway
- NCDOT Great Trails State routes

TRIANGLE METRO REGION Chatham, Durham, Franklin, Granville, Harnett, Johnston, Lee, Moore, Orange, Wake

Active and Safe Routes to Schools, Parks and Transit

What success looks like: Communities partner with NCDOT, MPOs, schools and transit agencies to expand the reach of the Active Routes to School program to link neighborhoods to parks, transit routes, existing schools and planned schools.

A Successful Active School

Key Policy Considerations

- Physical activity has a proven positive impact on learning and health
- Schools that participate see improvements in academic performance as well as classroom behavior
- Working together, NCDOT and MPOs can use flexible funding for active routes to schools, parks and transit
- A "Vision Zero" approach can lead to safety funding proportional to biking and walking fatalities

Next Steps for the Metropolitan Planning Organizations

- Assign MPO staff to work with NCDOT to track complete streets implementation progress.
- Work with NCDOT to develop modified procedures and standards that can make the design, funding, and maintenance of complete street elements easier to accomplish.
- Maintain the current emphasis on active and safe routes to schools, but expand the focus to parks, transit stops, job hubs, and grocery stores.
- Work with legislators to restore state funds for stand-alone bicycle/pedestrian projects.
- Give priority to projects with active transportation elements in existing funding programs.
- Work with NCDOT staff to allocate maintenance funds for state roads transferred to municipal responsibility.

How to Support Active Transportation Investment in Your Community

- School staff and PTAs organize 'walking and cycling school bus' efforts.
- Staff and advisory boards give input at early stages of school siting and design processes, and design criteria for schools support walking and biking access.
- Active transportation investments and strategies are infused in all local land use, transportation, parks and school planning and site selection efforts, focusing on equitable investments to connect neighborhoods to key hubs and services.

This policy document was produced by Central Pines Regional Council.
Visit centralpinesnc.gov/mobility-transportation/urban-mobility for additional information.

TRIANGLE WEST

CAMPO
NC Capital Area Metropolitan Planning Organization

Strengthen Support for Demand Management & Technology

A Triangle Metro Region Transportation Priority

Stabilize and grow state investment in Transportation Demand Management (TDM) to match local and regional commitments. Implement the Regional Technology (ITS) Plan for roadways and transit.

The most cost-effective dollar spent is on efficiently managing the demand for the supply of roads we already have. Working with employers on ways to offer workers alternatives to peak-hour, drive-alone commuting and deploying technologies to maximize the roadway supply are key elements of the smart city movement.

- The Triangle TDM program has reduced vehicle miles traveled by over 300 million miles over the past 5 years -

The Triangle Metro Region is already a leader in the state in deploying emerging technologies and demand management solutions that optimize roadway and transit capital projects. Two key focus areas should be:

- Taking the already successful Regional Transportation Demand Management Partnership to the next level.
- A three-pronged approach to Smart Cities Technology Applications that optimizes how we travel and paves the way for automated, connected vehicles.

Regional Transportation Demand Management Partnership

What success looks like: NCDOT, the Triangle Metro's MPOs and key partners collaborate to recruit, recognize and reward employers and communities that implement different tiers of Transportation Demand Management practices.

Employer Success

GoPass

BEST Workplaces for Commuters

Key Ingredients

- A regional collaboration between NCDOT, both MPOs and Triangle J COG with 14 competitively-selected service providers.
- Employer-focused with emphasis on anchor institutions, city centers and the RTP
- Coordinated outreach, including virtual webinars on telecommuting during COVID.

Success Metrics (FY19)

- 6.5 million vehicle trips avoided
- 70 million commute miles reduced
- 2.9 million gallons of gas saved
- 58 million pounds of carbon dioxide release prevented
- 32 designated Best Workplaces for Commuters

TRIANGLE METRO REGION Chatham, Durham, Franklin, Granville, Harnett, Johnston, Lee, Moore, Orange, Wake

Smart City Technologies

What success looks like: Technology applications that overcome uncertainty and take evidence-based steps to better manage freeways, local streets and travel in our region's hubs.

Active Freeway Management

- Melds communications, controls and optimization strategies
- Reduces delay and increases reliability
- Provides as much as an additional lane of freeway capacity
- More cost-effective than traditional road projects
- Can be used with managed lanes and toll facilities

Traffic Signal Systems

- Integrated, community-wide network for maximum benefit
- Linked to a traffic management center
- Efficient congestion management and faster incident response
- Key element for connected & automated vehicle infrastructure

Mobility in Regional Hubs

- City centers and anchor institutions are key destinations
- Combination of technology, pricing and parking strategies
- People-friendly, rather than vehicle-oriented, actions
- Apply lessons learned from Durham's Bloomberg Mayor's Challenge Grant to other key job hubs.

Next Steps for the Metropolitan Planning Organizations

- Work with NCDOT to use federal Congestion Mitigation and Air Quality (CMAQ) funding on eligible TDM and technology projects.
- Work with NCDOT and other partners to transform the Best Workplaces program into a tiered "best in class" statewide recognition program for employers and communities with TDM programs.
- Lead the implementation of the new Regional Intelligent Transportation Systems (ITS) plan by forming a work group and prioritizing actions.
- Work with state officials to reinstate the ability of local communities to adopt TDM ordinances in places where criteria for travel alternatives can be met.
- Include equity concerns in TDM funding decisions and program monitoring.

How to Support TDM and Technology in Your Community

- Engage large employers, including local government, to implement TDM practices.
- Seek opportunities to deploy emerging technologies.
- Participate in the new Regional ITS Deployment Plan Working Group.
- Work with NCDOT and MPOs on signal system and active freeway management opportunities.

This policy document was produced by Central Pines Regional Council. Visit centralpinesnc.gov/mobility-transportation/urban-mobility for additional information.

TRIANGLE WEST Transportation Planning Organization

CAMPO NC Capital Area Metropolitan Planning Organization

Appendix 7: Air Quality

The National Ambient Air Quality Standards (NAAQS) defines the allowable concentration for six different pollutants (carbon monoxide, lead, nitrogen dioxide, particulate matter, ozone, and sulfur dioxide). In the past, portions of the Triangle area were designated as "non-attainment" for oxides of nitrogen and volatile organic compounds (VOC) that are precursors to ozone, and for carbon monoxide because the area did not meet the NAAQS standard. As a result, North Carolina Department of Environment and Natural Resources (NCDENR), which is responsible for creating the State Implementation Plan (SIP) to address the non-attainment issues in the Triangle area in the SIP. Basically, the MPOs complied with the SIP by demonstrating that certain emissions from the future transportation sector would not exceed a specified threshold, called the SIP budget. The compliance requirements and emission calculation methodology were presented in a detailed report called the *Research Triangle Regional Conformity Determination Report*. The 20-year CO maintenance requirements for the Triangle expired in 2015.

On December 26, 2007, the Triangle Area was redesignated as attainment with a maintenance plan for ozone under the eight-hour standard. The U.S. Court of Appeals for the DC Circuit in the South Coast Air Quality Management District v EPA, No. 15-1115, issued a decision on February 16, 2018. In that decision, the Court struck down portions of the 2008 Ozone National Ambient Air Quality Standards (NAAQS) State Implementation Plan Requirements Rule which vacated the revocation of transportation conformity requirements for the 1997 8-hour Ozone NAAQS.

In November 2018, U. S. EPA issued Guidance for the South Coast v EPA Court Decision. U. S. EPA's guidance states that transportation conformity for MTPs and TIPs for the 1997 ozone NAAQS can be demonstrated without a regional emissions analysis pursuant to 40 CFR 93.109(c). Transportation conformity for the 1997 ozone NAAQS would be required on MTP and TIP actions as of February 16, 2019.

As a result, the Triangle is still required to demonstrate transportation-air quality conformity, but is not required to calculate future emissions and compare them to an emissions limit, termed a "budget." However, the MPOs believe that monitoring and lowering pollutant emissions is a prudent practice given the positive health, environmental and economic benefits of doing so. Thus, to ensure that the *Destination 2055* MTP continues to support these positive benefits, this appendix compares the emissions set forth in the SIP that was used for the last long-range plan that required a quantitative analysis (2040 MTP) with those estimated to result from implementation of the 2055 MTP.

The 2055 MTP Conformity Determination Report can be viewed on each MPO's web site and on the Central Pines Regional Council website.

2055 MTP Air Quality

Destination 2055 has a significant focus on air quality:

- Goal -- Protect the Human and Natural Environment and Minimize Climate Change

- CAMPO Objectives – reduce mobile source emissions, greenhouse gas emissions and energy consumption
- TWTPO Objectives – reduce transportation sector emissions; achieve net zero carbon emissions

The tables that follow compare the SIP budget used in the 2040 MTP, with the projected emissions from the current 2055 MTP plan. The values are for the daily kilograms of emissions of oxides of nitrogen (NOx) and carbon monoxide (CO) for the counties that are in the respective air quality areas. In every case, the projected 2055 MTP emissions are only a fraction of the SIP budget, being as low as 5% in Granville County for NOx and only reaching the highest fraction among the group in Wake County at 19% for NOx and 15% for CO. These future lower emissions are not surprising. It is expected that the Corporate Average Fuel Economy (CAFE) standards will continue to improve the average fuel economy of cars and light trucks. In addition, vehicle emission standards continue to reduce tailpipe pollutants and improve fuel quality.

Table A7.1: Daily 2055 NO_x Emissions (kg/day) compared to 2040 SIP

County[1]	2040 MTP SIP Budget	2055 MTP	MTP / SIP Budget
Durham	4,960	814	16%
Wake	16,532	3,161	19%
Granville	1,714	93	5%
Franklin	1,139	146	13%
Johnston	5,958	672	11%
Orange	3,742	423	11%

[1] *Chatham not included because only partial county data is available for the prior budget*

Table A7.2: Daily 2055 CO Emissions (kg/day) compared to 2040 SIP

County[2]	2040 MTP SIP Budget	2055 MTP	MTP / SIP Budget
Durham	160,771	13,283	8%
Wake	348,604	51,556	15%

[2] *Only Durham and Wake counties had a prior CO budget*

The next three tables show daily pollutant emissions from the transportation sector for the Triangle Region, Capital Area MPO and Triangle West TPO. The tables feature the different pollutants by the base year (year 2020), Existing + Committed (E+C), and adopted 2055 MTP scenarios. The E+C is essentially a no-build scenario. It is the population and employment in the year 2055 on the current and underway network of roadways and transit service. The MOVES5 emissions model uses vehicle-miles-traveled (VMT) and speed data from the Triangle Regional Model (i.e., transportation model) to produce this data.

Although the VMT will increase nearly 64% over this time period (2020 to 2055), the pollutants are forecasted to decrease. This reduction comes because tailpipe emissions standards continue to improve, the efficiency of the motor vehicle fleet (average miles per gallon) is expected to improve, the age of the motor fleet is getting newer, and the proportion of electric vehicles is expected to increase.

Table A7.3: Emissions by Scenario - Triangle Region

Pollutant/Units	Existing (2020)	2055 Existing + Committed	2055 Adopted	% Change 2020-55
Carbon Monoxide (CO) / 1,000 kg	264	95	94.4	-64%
Nitrous Oxides (NO_x) / 1,000 kg	27	6	5.8	-79 %
Volatile Organic Compounds (VOC) / 1,000 kg	20	11	10.5	-48 %
Particulate Matter ($PM_{2.5}$) / kg	632	101	100.3	-84 %
Greenhouse Gases (CO_2 equivalent) / 1,000,000 kg	27	16	16.4	-39 %
Daily Energy Consumption per capita / gallons of gasoline	1.4	0.6	0.65	-54 %

Note: CO_2 typically represents about 80% of Greenhouse Gas (GHG) emissions.

Table A7.4: Emissions by Scenario - Capital Area MPO

Pollutant/Units	Existing (2020)	2055 Existing + Committed	2055 Adopted	% Change 2020-55
Carbon Monoxide (CO) / 1,000 kg	166	62	63.02	-62%
Nitrous Oxides (NO_x) / 1,000 kg	17	3	3.86	-77%
Volatile Organic Compounds (VOC) / 1,000 kg	13	7	7.00	-86%
Particulate Matter ($PM_{2.5}$) / kg	396	66	66.96	-83%
Greenhouse Gases (CO_2 equivalent) / 1,000,000 kg	17	11	10.95	-36%
Daily Energy Consumption per capita / gallons of gasoline	1.3	0.6	0.62	-52%

Note: CO_2 typically represents about 80% of Greenhouse Gas (GHG) emissions.

Table A7.5: Emissions by Scenario - Triangle West TPO

Pollutant/Units	Existing (2020)	2055 Existing + Committed	2055 Adopted	% Change 2020-55
Carbon Monoxide (CO) / 1,000 kg	63	20	19.6	-69%
Nitrous Oxides (NO_x) / 1,000 kg	6	1	1.2	-80%
Volatile Organic Compounds (VOC) / 1,000 kg	5	2	2.2	-56%
Particulate Matter ($PM_{2.5}$) / kg	151	21	20.9	-86 %
Greenhouse Gases (CO_2 equivalent) / 1,000,000 kg	6	3	3.4	-43%
Daily Energy Consumption per capita / gallons of gasoline	1.5	0.7	0.73	-51%

Note: CO_2 typically represents about 80% of Greenhouse Gas (GHG) emissions.

Detailed Calculations

Listed below are more detailed calculations from the emissions analysis output across a range of parameters.

Table A7.6: Triangle Region Weekday Emissions based on 2055 MTP

Pollutant	Units of Measure	Modeled 2055 Daily Emissions
Carbon Monoxide (CO)	kilograms	94,356
Nitrous Oxides (NO_x)	kilograms	5,784
Volatile Organic Compounds (VOC)	kilograms	10,485
Particulate Matter ($PM_{2.5}$)	kilograms	100
Daily CO_2 Equivalent	1000 kilograms	16,398
Daily CO_2 Equivalent Weekday per capita	kilograms	4.7
Total Daily Energy Consumption	kilojoules	298,000,000,000
Total Daily Energy Consumption	gallons (US) of auto gasoline	2,261,688
Daily Energy Consumption per capita	gallons (US) of auto gasoline	0.65
Population		3,474,487

Data run using Wake County emission coefficients and regional VMT

Table A7.7: Capital Area MPO Weekday Emissions based on 2055 MTP

Pollutant	Units of Measure	Modeled 2055 Daily Emissions
Carbon Monoxide (CO)	kilograms	63,019
Carbon Monoxide (CO) per capita	kgs/pers	.025
Nitrous Oxides (NO_x)	kilograms	3,863
Nitrous Oxides (NO_x) per capita	kgs/pers	.0016
Volatile Organic Compounds (VOC)	kilograms	7,003
Volatile Organic Compounds (VOC) per capita	kgs/per	.0029
Particulate Matter ($PM_{2.5}$)	kilograms	66,962
Particulate Matter ($PM_{2.5}$) per capita	kgs/per	.027
Daily CO_2 Equivalent	kilograms	10,951,661
Daily CO_2 Equivalent Weekday per capita	kgs/person	4.47
Total Daily Energy Consumption	gallons (US) of auto gasoline	1,510,546
Daily Energy Consumption per capita	gallons (US) of auto gasoline	0.62
Population		2,450,054
VMT Factor - CAMPO		67 %

Based on TRM Summary Report

Table A7.8: Triangle West TPO Weekday Emissions based on 2055 MTP

Pollutant	Units of Measure	Modeled 2055 Daily Emissions
Carbon Monoxide (CO)	kilograms	19,622
Carbon Monoxide (CO) per capita	kilograms	0.030
Nitrous Oxides (NO_x)	kilograms	1,203
Nitrous Oxides (NO_x) per capita	kilograms	0.0019
Volatile Organic Compounds (VOC)	kilograms	2,181
Volatile Organic Compounds (VOC) per capita	kilograms	0.0034
Particulate Matter ($PM_{2.5}$)	kilograms	20.85
Particulate Matter ($PM_{2.5}$) per capita	kilograms	0.000032
Daily CO_2 Equivalent	1000 kilograms	3,410
Daily CO_2 Equivalent Weekday per capita	kilograms	5.3
Total Daily Energy Consumption	gallons (US) of auto gasoline	470,344
Daily Energy Consumption per capita	gallons (US) of auto gasoline	.73
Population		647,968
VMT Factor - TWTPO		20.8%

Based on TRM Summary Report

Table A7.9: Chatham County Weekday Emissions based on 2055 MTP

Pollutant	Units of Measure	Modeled 2055 Daily Emissions
Carbon Monoxide (CO)	kilograms	3,521
Nitrous Oxides (NO_x)	kilograms	216
Volatile Organic Compounds (VOC)	kilograms	391
Particulate Matter ($PM_{2.5}$)	kilograms	3.74
Daily CO_2 Equivalent	1000 kilograms	612
Total Daily Energy Consumption	gallons (US) of auto gasoline	84,390
VMT Factor - Chatham		3.7%

Table A7.10: Durham County Weekday Emissions based on 2055 MTP

Pollutant	Units of Measure	Modeled 2055 Daily Emissions
Carbon Monoxide (CO)	kilograms	13,283
Nitrous Oxides (NO_x)	kilograms	814
Volatile Organic Compounds (VOC)	kilograms	1,476
Particulate Matter ($PM_{2.5}$)	kilograms	14.1
Daily CO_2 Equivalent	1000 kilograms	2,308
Total Daily Energy Consumption	gallons (US) of auto gasoline	318,389
VMT Factor - Durham		14.1%

Table A7.11: Franklin County Weekday Emissions based on 2055 MTP

Pollutant	Units of Measure	Modeled 2055 Daily Emissions
Carbon Monoxide (CO)	kilograms	2,388
Nitrous Oxides (NO_x)	kilograms	146
Volatile Organic Compounds (VOC)	kilograms	265
Particulate Matter ($PM_{2.5}$)	kilograms	2.5
Daily CO_2 Equivalent	1000 kilograms	415
Total Daily Energy Consumption	gallons (US) of auto gasoline	57,235
VMT Factor - Franklin		2.5%

Table A7.12: Granville County Weekday Emissions based on 2055 MTP

Pollutant	Units of Measure	Modeled 2055 Daily Emissions
Carbon Monoxide (CO)	kilograms	1,510
Nitrous Oxides (NO_x)	kilograms	93
Volatile Organic Compounds (VOC)	kilograms	168
Particulate Matter ($PM_{2.5}$)	kilograms	1.6
Daily CO_2 Equivalent	1000 kilograms	262
Total Daily Energy Consumption	gallons (US) of auto gasoline	36,185
VMT Factor - Granville		1.6%

Table A7.13: Harnett County Weekday Emissions based on 2055 MTP

Pollutant	Units of Measure	Modeled 2055 Daily Emissions
Carbon Monoxide (CO)	kilograms	1,957
Nitrous Oxides (NO_x)	kilograms	120
Volatile Organic Compounds (VOC)	kilograms	217
Particulate Matter ($PM_{2.5}$)	kilograms	2.1
Daily CO_2 Equivalent	1000 kilograms	340
Total Daily Energy Consumption	gallons (US) of auto gasoline	46,914
VMT Factor - Harnett		2.1%

Table A7.14: Johnston County Weekday Emissions based on 2055 MTP

Pollutant	Units of Measure	Modeled 2055 Daily Emissions
Carbon Monoxide (CO)	kilograms	10,956
Nitrous Oxides (NO_x)	kilograms	672
Volatile Organic Compounds (VOC)	kilograms	1,218
Particulate Matter ($PM_{2.5}$)	kilograms	11.6
Daily CO_2 Equivalent	1000 kilograms	1,904
Total Daily Energy Consumption	gallons (US) of auto gasoline	262,620
VMT Factor - Johnston		11.6%

Table A7.15: Orange County Weekday Emissions based on 2055 MTP

Pollutant	Units of Measure	Modeled 2055 Daily Emissions
Carbon Monoxide (CO)	kilograms	6,904
Nitrous Oxides (NO_x)	kilograms	423
Volatile Organic Compounds (VOC)	kilograms	767
Particulate Matter ($PM_{2.5}$)	kilograms	7.3
Daily CO_2 Equivalent	1000 kilograms	1,200
Total Daily Energy Consumption	gallons (US) of auto gasoline	165,485
VMT Factor - Orange		7.3%

Table A7.16: Person County Weekday Emissions based on 2055 MTP

Pollutant	Units of Measure	Modeled 2055 Daily Emissions
Carbon Monoxide (CO)	kilograms	591
Nitrous Oxides (NO_x)	kilograms	36
Volatile Organic Compounds (VOC)	kilograms	66
Particulate Matter ($PM_{2.5}$)	kilograms	.63
Daily CO_2 Equivalent	1000 kilograms	103
Total Daily Energy Consumption	gallons (US) of auto gasoline	14,167
VMT Factor - Person		0.6%

Table A7.17: Wake County Weekday Emissions based on 2055 MTP

Pollutant	Units of Measure	Modeled 2055 Daily Emissions
Carbon Monoxide (CO)	kilograms	51,556
Nitrous Oxides (NO_x)	kilograms	3,161
Volatile Organic Compounds (VOC)	kilograms	5,729
Particulate Matter ($PM_{2.5}$)	kilograms	54.8
Daily CO_2 Equivalent	1000 kilograms	8,960
Total Daily Energy Consumption	gallons (US) of auto gasoline	1,235,792
VMT Factor - Wake		54.6%

Appendix 8: MTP Draft Plan & Draft Report Comments

Appendix 1 describes the complete community engagement process for the development of the *Destination 2055* Metropolitan Transportation Plan and provides links to various resources related to the engagement. For ease of reference, this appendix extracts the information specifically related to the draft plan and this MTP report, since it was the final opportunity to influence the plan and report and completes the activities laid out in each MPO's Public Participation Plan.

Draft Plan & MTP Report Comments and Responses

The MPOs released a draft plan called the Preferred Option and then a full report based on that draft plan. Again, the MPOs used several different media to encourage and gather feedback.

Written Comments received by Triangle West TPO (copies of the public comments received, mostly by email, in response to the Preferred Option and full report):

- To be added in final report

Written Comments received by Capital Area MPO (copy of the full text of comments that CAMPO received in emails, voicemail, letter and public hearing for the entire 2055 MTP public engagement process – including Goals and Objectives, Alternatives Analysis and Draft Plan):

- To be added in final report

For additional information:

For additional details, to view other materials such as paid advertisements, email blasts, survey questions or response data, etc., contact staff from either CAMPO (comments@campo-nc.us) or Triangle West TPO (PublicComments@twtpo.org).

Appendix 9: Acronyms

AV:	Autonomous Vehicle
BGMPO:	Burlington-Graham Metropolitan Planning Organization
BIL:	Bipartisan Infrastructure Law (current federal law; also known as IIJA)
CAAA:	Clean Air Act Amendments of 1990 (United States)
CAMPO:	Capital Area Metropolitan Planning Organization
CAV:	Connected and Autonomous Vehicles
CFR:	Code of Federal Regulations
CHT:	Chapel Hill Transit
CIP:	Capital Improvement Plan (or Program)
CMAQ:	Congestion Mitigation/Air Quality
CMP:	Congestion Management Process
CO:	Carbon Monoxide
CO_2:	Carbon Dioxide
CPRPO:	Central Pines Rural Planning Organization
CTP:	Comprehensive Transportation Plan
DAQ:	Division of Air Quality (North Carolina)
DCHC MPO:	Durham-Chapel Hill –Carrboro Metropolitan Planning Organization (former name of TWTPO/Triangle West Transportation Planning Organization)
DEQ:	Department of Environmental Quality (North Carolina)
DMV:	Division of Motor Vehicles
DOT:	Department of Transportation (North Carolina)
EPA:	Environmental Protection Agency (United States)
FAMPO:	Fayetteville Area Metropolitan Planning Organization
FAST Act:	Fixing America's Surface Transportation Act (federal law prior to IIJA/BIL)
FHWA:	Federal Highway Administration
FRA:	Federal Railroad Administration
FTA:	Federal Transit Administration

HBO:	Home Based Other (trip purpose)
HBS:	Home Based Shopping (trip purpose)
HBW:	Home Based Work (trip purpose)
HOT:	High Occupancy Toll
HOV:	High Occupancy Vehicle
HPMS:	Highway Performance Management System
HTF:	Highway Trust Fund
I/M:	Inspection/Maintenance
IIJA:	Infrastructure Investment and Jobs Act (current federal law; also known as BIL)
ITRE:	Institute for Transportation Research and Education
ITS:	Intelligent Transportation Systems
KTRPO:	Kerr-Tar Rural Transportation Planning Organization
LPA:	Lead Planning Agency
MAP-21:	Moving Ahead for Progress in the 21st Century (federal law prior to the FAST Act)
MIS:	Major Investment Study
MPO:	Metropolitan Planning Organization
MTIP:	Metropolitan Transportation Improvement Program
MTP:	Metropolitan Transportation Plan
NAAQS:	National Ambient Air Quality Standards
NCDOT:	North Carolina Department of Transportation
NHB:	Non Home Based (trip purpose)
NO_x:	Nitrogen Oxides
RDU:	Raleigh-Durham International Airport
REINVEST:	Subset of neighborhoods based on measures of Race, Ethnicity, Income, Vehicles and Housing Status
RPO:	Rural Transportation Planning Organization
RTAC:	Rural Transportation Advisory Committee
RTCC:	Rural Technical Coordinating Committee
RVP:	Reid Vapor Pressure

SIP:	State Implementation Plan (for air quality)
SPOT:	Strategic Prioritization Office - Transportation
STAC:	Special Transit Advisory Commission
STBG:	Surface Transportation Block Grant Program (federal funding category)
STBG-DA:	Surface Transportation Block Grant Program Direct Allocation
STI:	Strategic Transportation Investments (NC transportation legislation)
TAC:	Transportation Advisory Committee
TAP:	Transportation Alternatives Program (federal funding program)
TARPO:	Triangle Area Rural Transportation Planning Organization (former name of CPRPO/Central Pines Rural Planning Organization)
TAZ:	Traffic Analysis Zone
TC:	Technical Committee
TCC:	Technical Coordination Committee
TCM:	Transportation Control Measure
TDM:	Transportation Demand Management
TIFIA:	Transportation Infrastructure Finance and Innovation Act
TIP:	Transportation Improvement Program
TMA:	Transportation Management Area
TPO:	Transportation Planning Organization
TRM:	Triangle Regional Model
TRMG2:	Triangle Regional Model Generation 2
TSM:	Transportation System Management
TWTPO:	Triangle West Transportation Planning Organization (Formerly DCHC MPO)
UCPRPO:	Upper Coastal Plain Rural Transportation Planning Organization
UPWP:	Unified Planning Work Program – the annual planning budget by task for an MPO
USEPA:	United States Environmental Protection Agency
V/C:	Volume to Capacity Ratio (measure of congestion on a road segment)
VHT:	Vehicle Hours of Travel
VKT:	Vehicle Kilometers of Travel

VMT: Vehicle Miles of Travel

VOC: Volatile Organic Compounds

YOE: Year of Expenditure

Appendix 10: Detailed Transportation & Growth Maps and Measures of Effectiveness Table

Detailed Transportation and Growth Maps

To provide greater levels of detail and the ability to focus in on specific portions of the region to see what investments are planned in what time frames, the MPOs have created online mapping tools rather than include paper copies of maps in a separate appendix. The maps for each MPO may be accessed at the web pages linked below:

- Capital Area MPO (CAMPO) Maps
- Triangle West TPO Maps

Measures of Effectiveness

Evaluation measures provide a comparative set of metrics for statistical analyses between transportation systems and land use scenarios. They also provide an opportunity to validate the usefulness of the Triangle Regional Model (TRM) as a tool to perform travel forecasts and create output necessary for staff, elected officials, and the public to determine the best approach to invest limited financial resources in the regional transportation system. Comparisons can be performed in a number of ways for different purposes to depict the 2055 MTP. As a result, measures of effectiveness for future TRM runs may vary slightly from those presented in this appendix.

The table on the next few pages compares the transportation network performance for the Capital Area MPO and Triangle West TPO planning areas for the 2020 Base network, the 2055 Deficiency network (Existing + Committed), and the 2055 Metropolitan Transportation Plan (MTP) network. The 2020 network represents the current state of the system. The 2055 E+C (existing plus committed) network includes only those projects that will be operational in the next few years but serving the forecast 2050 population and employment. The 2055 MTP network represents the highway and transit networks from the 2055 MTP, serving the 2055 forecasted population and employment.

The measures of effectiveness in this summary table are system-wide metrics and therefore do not provide performance information on specific roadways or travel corridors, or at the scale of a municipality or type of area (e.g., urban and suburban). The congestion maps (V/C maps), presented in Section 6.3 of the full report, provide a more localized picture of transportation performance for individual roadways or roadway segments. The conclusions drawn from the measures of effectiveness (system-wide) and congestion maps (roadway specific) can be compared to see the differences between localized and regional performance.

Table A10.1: Measures of Effectiveness by Scenario (Based on Triangle Regional Model Generation 2)

	2020 Base Year		2055 Existing + Committed		2055 MTP	
	CAMPO	TWTPO	CAMPO	TWTPO	CAMPO	TWTPO
Roadway Measures						
Vehicle Miles Traveled (VMT)						
Total Daily VMT	36,054,920	13,767,455	60,678,004	19,448,645	62,347,177	19,413,241
Daily VMT per Capita	26	31	25	30	25	30
Vehicle Hours Traveled (VHT)						
Total Daily VHT	736,455	290,474	1,386,940	460,352	1,349,025	440,484
Daily VHT per Capita	32	39	34	43	33	41
Average Speed by Time of Day (miles per hour) - All Facilities						
Daily Average Speed	49	47	44	42	46	44
Morning (AM) Peak Period Average Speed	49	48	44	44	47	45
Afternoon (PM) Peak Period Average Speed	47	45	40	39	44	41
Daily Average Speed by Facility (miles per hour)						
Freeways	64	61	57	52	59	56
Highways	53	53	47	52	51	45
Arterials & Collectors	42	39	38	36	41	37
Local	33	27	31	26	31	25
Afternoon (PM) Peak Period Average Speed by Facility (miles per hour)						
Freeways	63	58	53	48	55	53
Highways	51	53	43	51	48	44
Arterials & Collectors	41	38	35	34	39	35
Local	33	27	30	25	30	25

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	2020 Base Year		2055 Existing + Committed		2055 MTP	
	CAMPO	TWTPO	CAMPO	TWTPO	CAMPO	TWTPO
Daily Average Travel Length for All Motorized Person Trips						
Travel Time (minutes)	9.9	9.2	10.1	9.1	9.9	9.2
Travel Distance (miles)	7.6	6.6	7.0	6.1	7.4	6.5
Morning (AM) Peak Period Average Travel Length for Motorized Work Trips						
Travel Time (minutes)	16.7	13.7	18.4	13.9	16.9	13.4
Travel Distance (miles)	13.5	10.4	13.3	9.8	13.6	10.1
Afternoon (PM) Peak Period Average Travel Length for All Motorized Person Trips						
Travel Time (minutes)	9.8	9.0	9.9	8.9	9.7	9.0
Travel Distance (miles)	7.5	6.5	6.8	6.0	7.3	6.4
Daily Average Travel Length for Commercial Vehicle (CV) Trips						
Travel Time (minutes)	9.5	8.4	9.7	8.4	9.6	8.5
Travel Distance (miles)	7.4	6.3	6.9	5.8	7.3	6.3
Daily Average Travel Length for Truck Trips						
Travel Time (minutes)	11.8	11.1	12.1	11.0	11.8	11.0
Travel Distance (miles)	9.3	8.6	8.7	7.9	9.2	8.5
Daily Travel Delay						
Total Daily Delay (hours)	33,033	14,047	199,307	64,049	132,909	46,580
Daily Delay per Capita (minutes)	1.4	1.9	4.9	6.0	3.2	4.3
Total Daily Truck Delay (hours)	1,816	943	11,587	4,871	8,524	3,620
Daily Per-trip Truck Delay (minutes)	0.7	1.0	2.5	3.1	1.8	2.3

	2020 Base Year		2055 Existing + Committed		2055 MTP	
	CAMPO	TWTPO	CAMPO	TWTPO	CAMPO	TWTPO
Percent of Vehicle Miles Traveled Under Congested[1] Conditions by Time of Day						
Daily Average Congested % of VMT	0.3%	0.1%	3.1%	4.2%	1.3%	2.2%
Morning (AM) Peak Period Congested % of VMT	0.1%	0.1%	3.4%	1.0%	0.9%	0.7%
Afternoon (PM) Peak Period Congested % of VMT	0.8%	0.1%	7.1%	9.0%	2.8%	4.0%
Daily Average Percent of Vehicle Miles Traveled Under Congested Conditions by Facility Type						
Freeways	0.3%	0.0%	5.3%	7.5%	2.0%	3.5%
Highways	0.0%	0.0%	1.9%	0.0%	0.8%	0.0%
Arterials & Collectors	0.2%	0.1%	1.5%	1.0%	0.7%	0.6%
Local	0.4%	0.1%	1.0%	0.2%	0.9%	0.1%
Afternoon (PM) Peak Period Percent of Vehicle Miles Traveled Under Congested Conditions by Facility Type						
Freeways	1.4%	0.0%	12.9%	16.9%	4.8%	6.4%
Highways	0.0%	0.0%	6.4%	0.0%	3.4%	0.0%
Arterials & Collectors	0.4%	0.2%	3.0%	2.2%	1.3%	1.3%
Local	0.4%	0.2%	1.5%	0.2%	1.5%	0.1%
Trip-Based Mode Share Measures						
All Daily Trips						
Drive Alone (Single Occupant Vehicle, SOV)	49%	48%	43%	43%	45%	43%
Carpool (Shared Ride)	37%	29%	39%	32%	35%	28%
Non-Motorized (Bike and Walk)	14%	21%	16%	22%	17%	24%
Transit[2]	0.8%	2.6%	1.8%	2.8%	3.4%	5.1%

[1] For modeling purposes, congestion is defined as Level of Service (LOS) E or worse, represented by roadway segments with a volume-to-capacity (V/C) ratio greater than 1.0.
[2] Transit mode share includes home-based local bus, express bus, bus rapid transit, and rail trips, plus all non-home-based transit trips.

	2020 Base Year		2055 Existing + Committed		2055 MTP	
	CAMPO	TWTPO	CAMPO	TWTPO	CAMPO	TWTPO
Morning (AM) Peak Period Work Trips						
Drive Alone (Single Occupant Vehicle, SOV)	88%	84%	84%	81%	83%	79%
Carpool (Shared Ride)	8.3%	8.5%	8.3%	8.7%	8.3%	8.6%
Non-Motorized (Bike and Walk)	3.1%	3.9%	6.4%	6.5%	6.4%	8.0%
Transit	1.0%	3.9%	1.7%	3.4%	2.5%	4.9%
All Afternoon (PM) Peak Period Trips						
Drive Alone (Single Occupant Vehicle, SOV)	47%	46%	44%	44%	43%	42%
Carpool (Shared Ride)	41%	34%	39%	33%	39%	32%
Non-Motorized (Bike and Walk)	12%	18%	15%	21%	15%	21%
Transit	0.8%	2.5%	1.8%	2.6%	3.5%	4.8%
Transit Measures						
Daily Transit Ridership (by MPO)						
Total Transit Ridership	55,379	65,646	232,546	107,826	403,590	200,307
Transit Ridership per Capita	0.04	0.15	0.10	0.17	0.16	0.31
Daily Transit Ridership by Transit Type (Regionwide)						
Total Local and Express Bus Ridership	121,376		295,178		365,504	
Total Bus Rapid Transit (BRT) Ridership	-		45,711		239,275	
Total Rail Ridership	-		-		3,175	

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	2020 Base Year		2055 Existing + Committed		2055 MTP	
	CAMPO	TWTPO	CAMPO	TWTPO	CAMPO	TWTPO
Daily Transit Ridership by Agency (Regionwide)						
Chapel Hill Transit	23,009		40,746		51,618	
Chatham Transit	40		128		85	
Duke Transit	9,013		12,835		12,352	
GoCary	1,999		237		2,827	
GoApex	-		14,386		24,690	
GoDurham	24,282		37,725		61,068	
GoRaleigh	33,051		160,979		311,003	
GoTriangle	19,476		44,466		113,130	
NCSU Wolfline	10,220		29,031		30,535	
Orange County Public Transit	116		183		341	
Piedmont Authority for Regional Transportation	168		173		305	
Daily Transit Service and Usage Measures (Regionwide)						
Total Transit Service Miles	57,577		90,376		160,789	
Transit Service Miles on High Frequency Routes[3]	20,183		44,130		95,311	
Total Transit Passenger Miles	417,940		1,313,279		3,761,280	
Other Measures						
Total Daily Person Trips	5,249,569	1,998,165	10,586,323	3,292,099	10,108,638	3,137,737
Total Daily Work Trips	495,430	165,414	870,851	236,417	885,480	238,456
Total Daily CV (commercial vehicle) Trips	620,815	250,978	1,187,103	423,029	1,215,171	425,918
Total Daily Truck Trips	154,322	58,953	282,102	95,136	290,314	96,103

[3] High-frequency transit service is defined as bus routes with peak-period headways of 15 minutes or less.

	2020 Base Year		2055 Existing + Committed		2055 MTP	
	CAMPO	TWTPO	CAMPO	TWTPO	CAMPO	TWTPO
Total Lane Miles	7,644	2,580	8,160	2,655	9,774	2,821
Socioeconomic Data						
Household Population	1,373,756	449,791	2,425,432	644,006	2,456,004	647,968
Employment	671,950	310,491	1,431,491	571,567	1,448,166	571,834

Notes:

- *Morning (AM) Peak Period is between 6:00 AM and 9:00 AM. Afternoon (PM) Peak Period is between 3:30 PM and 6:30 PM.*
- *Travel time is in minutes and distance is in miles. VMT does not include travel on model centroid connectors.*
- *Commercial Vehicles include large and small trucks and vans.*
- *Trucks = a subset of Commercial Vehicles that includes only large trucks.*
- *Average Speed, Percent of VMT Experiencing Congestion, and Hours of Delay calculations do not include local streets or centroid connectors (which often represent local streets in modeling networks).*

Appendix 11: Financial Plan Details

Appendix 11 includes a discussion of the assumptions and methods used in the development of the 2055 MTP financial plan, which is covered in Chapter 8. This appendix focuses on how the values used in this plan may differ from other sources, and how the fiscal constraint spreadsheet developed by the Central Pines Regional Council can be used and modified to analyze different sets of assumptions or provide revised estimates as plans are revised.

Chapter 8 shows costs and revenues in "constant 2026 dollars" for several reasons:

1. Underlying data sources treat future inflation differently, so stating all costs in a common 2026 base provides a consistent way to treat revenues and costs, regardless of what future inflation may actually be.
2. During the development of the MTP, the timing of projects is often modified throughout the plan development, review and adoption process, which would require recalculation of (and thus changed totals for) project costs if they are stated in current/actual dollars (also termed "year-of-expenditure" dollars) as they are moved to different years as part of the draft plan review and revisions arising from community engagement.
3. Costs for projects are typically developed as if they were built today and in a single year, but many projects have multi-year schedules, with design and engineering, right-of-way acquisition, utility work, and construction taking place over several years.
4. People think in terms of the value of a dollar today, so putting costs and revenues in future inflated "year-of-expenditure" dollars for some future year makes it difficult for people to understand the context of investments.
5. In recent years, we have observed relatively high rates of inflation for construction and right-of-way costs, but since inflation rates change over time due to a number of economic factors we cannot accurately predict future fluctuations from year to year.
6. Major financial inputs for the plan are either underway or will be significantly revised in the near future, further complicating the ability to estimate the exact timing of projects. For example, Transit Plan updates are anticipated in Durham, Orange, and Wake Counties on regular cycles over the coming years, which will have impacts on the scope, cost, and timing of future transit projects.

For all these reasons, the foundations for both the revenues and costs in the financial plan are expressed in 2026 constant dollars, as summarized below. The Central Pines Regional Council staff maintains a fiscal constraint workbook that can translate both revenues and costs between 2026 and future years, using various assumptions about both cost inflation and revenue growth. As an example, since local transit revenues are tied to sales taxes, cost inflation for items on which transit sales tax is collected will lead to higher revenues than would occur in the absence of inflation. Since MTP investments take place over a 30-year time period, using a long-term average inflation rate (historically around two to three percent) is generally considered advisable, even though inflation will vary during the period.

The default financial model starts with a 2.5% annual discount rate (and inflation rate) to translate constant 2026 dollars into any future year dollars, as shown in the table below.

Table A11.1: Comparison between Constant Dollars and Year of Expenditure Dollars

Time Value of Money @ 2.5% annual inflation rate	2026	2027	2028	2029
Constant 2026 Dollars	$100	$100	$100	$100
Current Dollars (Year of Expenditure) for Year Shown	$100	$103	$105	$108

This appendix also notes the two important new revenue sources that are included in the last two decades of this plan: increased state transportation revenues based on the NC FIRST Commission recommendations and additional local-option revenues similar to those currently being developed in the Charlotte region. More detail on the NC FIRST process and recommendations can be found at https://www.ncdot.gov/about-us/how-we-operate/finance-budget/nc-first/Pages/default.aspx.

Although this financial plan addresses revenues and costs as if they were independent of each other, in North Carolina's transportation funding prioritization process they are tightly linked – many revenues are *only* available if corresponding costs are associated with narrowly-defined project types. The revenues section below discusses how this inflexibility affects the financial plan.

Potential Sources for New/Additional Revenues

NC FIRST Commission

The NC FIRST Commission recommended that the state consider ways to generate an additional $20 billion for transportation over a period of ten years, and highlighted a number of potential ways this funding could be generated through a combination of methods. These possible options included:

- Increasing the Highway Use Tax
- Eliminating the net-of-trade exemption to the Highway Use Tax
- Transferring proceeds from short-term vehicle rentals, vehicle subscription services, and car sharing from the General Fund to transportation purposes
- Raising the state sales tax and reducing the motor fuels tax
- Taxing transportation network companies
- Increasing the Electric Vehicle Fee/Hybrid Vehicle Fee
- Amending DMV registration fees for heavy vehicles
- Automatically adjusting DMV fees for inflation
- Authorizing a Road Impact Fee for e-commerce deliveries
- Instituting a mileage-based user fee
- Highway tolling
- Public-private partnerships
- State Infrastructure Bank
- Franchising air space
- Monetizing rights-of-way

More information on NC FIRST can be found at https://www.ncdot.gov/about-us/how-we-operate/finance-budget/nc-first/Pages/default.aspx.

One Cent Sales Tax Equivalent

For the purposes of calculating potential revenues for the *Destination 2055* MTP we estimated the potential funding that could be raised through a one-cent sales tax increase in the MPO member counties, with those funds being earmarked for transportation. However, the MTP does not *require* that this revenue be raised through a sales tax; rather, we must show that the revenue numbers in the plan represent a reasonable estimate of what *could* happen. To aid in this, we have calculated a number of alternative sources that could feasibly generate revenue comparable to the levels that could be generated by a one-cent sales tax (approximately $10 billion in constant 2026 dollars over the 20 years between 2036 and 2055).

Other potential sources to generate this level of revenue could include (but are not limited to):

- Local property taxes – The current (2026) valuation of property in the eight counties that make up the Capital Area MPO and Triangle West TPO is approximately $533 billion. A property tax of approximately 9.4 cents per $100 valuation in these counties could generate approximately $500 million in 2026 (or $10 billion over 20 years if all else were held constant).
- Vehicle Miles Traveled Fee/Mileage-based User Fee – The base year (2020) total average daily vehicle miles traveled in the Triangle region (based on the Triangle Regional Model) is approximately 57 million miles, which translates to about 21 billion miles annually. A mileage-based user fee of approximately 2.4 cents per mile in this region could generate approximately $500 million per year based on those 2020 traffic volumes, which would grow over time as traffic volumes grow in the region.

Conversion of Cost & Revenue Data between Constant Dollars and Year of Expenditure Dollars

Federal regulations require Metropolitan Transportation Plans to provide financial data in the year of expenditure. The tables that follow provide a comparison of the balanced cost and revenue data in Constant Year 2026 Dollars (as reported in Chapter 8 of this plan) and anticipated Year of Expenditure Dollars for each MPO. This has been done by assuming a 2.5% annual inflation rate to convert anticipated total revenues and using the mid-point year of each decade for converting the project costs for each decade of funding in the plan (2026-2035 midpoint year 2030, 2036-2045 midpoint year 2040, and 2046-2055 midpoint year 2050).

Table A11.2: Capital Area Metropolitan Planning Organization Revenues (in Millions)

Revenue Categories	Constant 2026 $			Year of Expenditure $		
	2026-2035	2036-2045	2046-2055	2026-2035	2036-2045	2046-2055
General State/Federal Capital Funding (Traditional STI Sources)	$6,171	$6,895	$6,621	$6,819	$9,881	$12,133
Local Funding for Roads and Complete Streets (non-transit projects)	$943	$934	$632	$1,042	$1,325	$1,151
Private Funding	$226	$276	$560	$250	$392	$1,020
CMAQ Funding	$85	$79	$71	$94	$112	$130
Toll Revenue	$1,013	-	$146	$1,119	-	$266
RDU Airport Funding	$2,500	-	-	$2,763	-	-
Continued Funding to Support Pre-existing Transit Services (all sources)	$750	$780	$797	$841	$1,120	$1,463
Funding sources for New or Expanded Transit Services (county transit taxes, grants, and financing)	$2,787	$2,673	$2,365	$3,147	$3,782	$4,351
Maintenance & Operations funding through NC Highway Fund	$4,084	$4,223	$4,211	$4,573	$6,053	$7,715
NC FIRST Commission Revenue (new funding)	-	$3,800	$3,866	-	$5,450	$7,098
Additional One Cent Sales Tax Equivalent (new funding)	-	$3,489	$3,408	-	$5,003	$6,251
Total Revenues	**$18,559**	**$23,149**	**$22,677**	**$20,648**	**$33,118**	**$41,578**

Table A11.3: Capital Area Metropolitan Planning Organization Costs (in Millions)

Revenue Categories	Constant 2026 $			Year of Expenditure $		
	2026-2035	2036-2045	2046-2055	2026-2035	2036-2045	2046-2055
Transit Capital & Operations	$3,536	$3,803	$3,502	$3,907	$5,395	$6,377
Active Transportation & TDM/TSMO	$907	$3,056	$3,022	$1,002	$4,335	$5,503
Roadway Capital Investment	$6,517	$10,178	$10,083	$7,202	$14,438	$18,361
Maintenance & Operations	$4,084	$4,746	$4,723	$4,513	$6,732	$8,601
RDU Airport Funding	$2,500	-	-	$2,763	-	-
Total Revenues	**$17,544**	**$21,783**	**$21,330**	**$19,387**	**$30,900**	**$38,842**

Table A11.4: Triangle West Transportation Planning Organization Revenues (in Millions)

Revenue Categories	Constant 2026 $			Year of Expenditure $		
	2026-2035	2036-2045	2046-2055	2026-2035	2036-2045	2046-2055
General State/Federal Capital Funding (Traditional STI Sources)	$1,772	$2,285	$2,153	$1,956	$3,274	$3,945
Local Funding for Roads and Complete Streets (non-transit projects)	$80	$80	$80	$88	$113	$145
Private Funding	$39	$147	$97	$43	$208	$175
CMAQ & CRP Funding	$28	$32	$27	$31	$45	$50
Toll Revenue	-	-	-	-	-	-
RDU Airport Funding	-	-	-	-	-	-
Continued Funding to Support Pre-existing Transit Services (all sources)	$568	$562	$551	$636	$806	$1,011
Funding sources for New or Expanded Transit Services (county transit taxes, grants, and financing)	$1,321	$891	$985	$1,508	$1,301	$1,800
Maintenance & Operations funding through NC Highway Fund	$1,273	$1,242	$1,187	$1,425	$1,781	$2,174
NC FIRST Commission Revenue (new funding)	-	$1,221	$1,222	-	$1,751	$2,243
Additional One Cent Sales Tax Equivalent (new funding)	-	$1,506	$1,470	-	$2,160	$2,696
Total Revenues	**$5,080**	**$7,966**	**$7,771**	**$5,687**	**$11,439**	**$14,239**

Table A11.5: Triangle West Transportation Planning Organization Costs (in Millions)

Project/Service Categories	Constant 2026 $			Year of Expenditure $		
	2026-2035	2036-2045	2046-2055	2026-2035	2036-2045	2046-2055
Transit	$1,449	$1,548	$2,299	$1,599	$2,187	$4,158
Bicycle & Pedestrian	$548	$1,360	$928	$605	$1,922	$1,679
Roadway/Complete Street	$1,233	$2,658	$1,941	$1,361	$3,756	$3,511
Roadway Operations & Maintenance	$1,591	$2,005	$2,306	$1,756	$2,833	$4,171
Total Costs	**$4,821**	**$7,571**	**$7,475**	**$5,321**	**$10,698**	**$13,519**

Appendix 12: Title VI & Critical Environmental Resource Maps

This appendix contains a series of maps illustrating the results of analyzing Title VI communities criteria and inventorying critical environmental resources. A brief overview of the two sets of maps is given below, with additional details given in Chapter 9 of the *Destination 2055* MTP report. An online, interactive map that includes all layers in this appendix can be viewed [Link to be inserted when ready].

Title VI Maps

The first set of five maps in this appendix display 2055 MTP highway projects (all, new, widening, and others) and transit corridors overlayed on Title VI communities. Title VI Communities were identified for the Triangle West TPO and CAMPO region using American Community Survey 2019-2023. For the Triangle West TPO five (5) categories were used to identify Title VI communities: Minority, Zero Car, Low Income, Senior, and Limited English Proficiency. For the CAMPO six (6) categories were used to identify Title VI communities: Race, Ethnicity, Zero Car, Low Income, Senior, and Limited English Proficiency. The percentage of the population in each census block group was calculated for each indicator, with block groups in the 75th percentile (top 25%) counted as meeting each indicator threshold. The composite Title VI communities layer shown in the first five maps displays the total number of thresholds that were met for each block group in the region.

Critical Environmental Resource Maps

The second set of eleven maps in this appendix display 2055 MTP and Comprehensive Transportation Plan (CTP) highway projects to identify projects that might have significant impacts on the environment or protected spaces. Many of the CTP projects are not included in the final adopted 2055 MTP, but are included in these maps to ensure that a comprehensive record of all of the potential future projects was being evaluated.

Environmental Justice Metrics

As part of the MPOs efforts to better document the impact of the recommended improvements to the transportation network for the region, additional land use displacement metrics are being studied for inclusion in future joint MTPs.

Currently, a summary analysis of the impact of highway improvements on forecasted land use values for parcels within the region is under development. This analysis applies approximate right-of-way buffers to mapped highway corridors in the region and then tabulates the number and area of parcels that fall within them.

These tabulations are further summarized in Table 1 by land use type (forecast in 2055) as designated by the local planning staff responsible for submitting this data at the outset of MTP development – this analysis is available for the full region including both MPOs. Finally, these tabulations are summarized in Table 2 by the underlying presence of identified Title VI communities (as outlined earlier in this appendix) – this analysis is only available for CAMPO.

This preliminary analysis permits MPO staff to begin cataloging the direct impact of highway improvement recommendations to future land use and the communities that are historically most likely to be excluded from planning outreach efforts. Future development of this analysis aims to apply a statistically rigorous measure of impact that better answers questions such as:

> *"When compared to the entire region, are the recommended highway improvements in this plan significantly impacting particular subsets of forecasted land use and communities of concern?"*
>
> *"What impacts from the recommended improvements are considered beneficial or consequential to these land use types and communities of concern?"*

Table A12.1: Area of Impact (sq miles) of Recommended Highway Improvements by Forecasted Land Use Type (2055) - *CAMPO & Triangle West TPO Areas*

Land Use Type	New Location	Other	Widening	Total Area
Civic	0.49	0.75	0.91	**2.15**
Commercial	0.71	1.03	3.21	**4.95**
Residential	1.82	1.15	5.77	**8.74**
School	0.00	0.07	0.08	**0.15**
Total Area	**3.02**	**3.00**	**9.97**	**15.99**

Table A12.2: Summary Count and Percentage Total of Parcels by Land Use Type and Title VI Community Status Impacted by Recommended Highway Improvements - *CAMPO Region Only*

Analysis Zone	Residential Parcels (and %)	Commercial Parcels (and %)	Civic Parcels (and %)	School Parcels (and %)
Entire CAMPO Region	494,816 (100%)	27,982 (100%)	19,231 (100%)	594 (100%)
CAMPO Title VI Community	186,530 (37.7%)	14,038 (50.2%)	8,852 (46.0%)	332 (55.9%)
CAMPO Highway Project Buffer	24,544 (5.0%)	6,296 (22.5%)	2,808 (14.6%)	153 (25.8%)
CAMPO Highway Project Buffer and Title VI Community	**8,874 (1.8%)**	**2,640 (9.4%)**	**1,259 (6.5%)**	**81 (13.6%)**

Figure A12.1: 2055 MTP Highway Projects overlaid on Title VI Communities

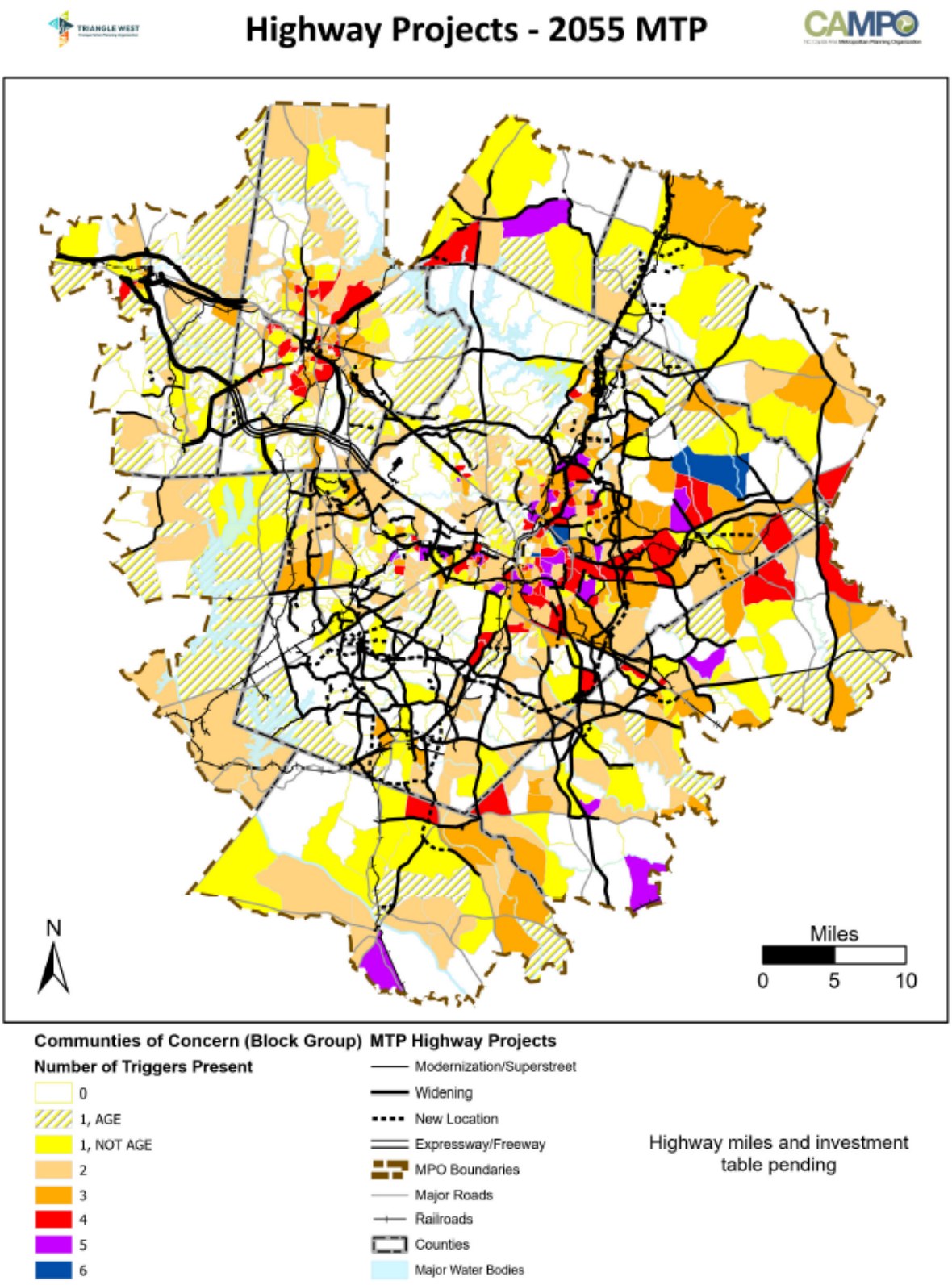


Figure A12.2: 2055 MTP New Location Highway Projects overlaid on Title VI Communities

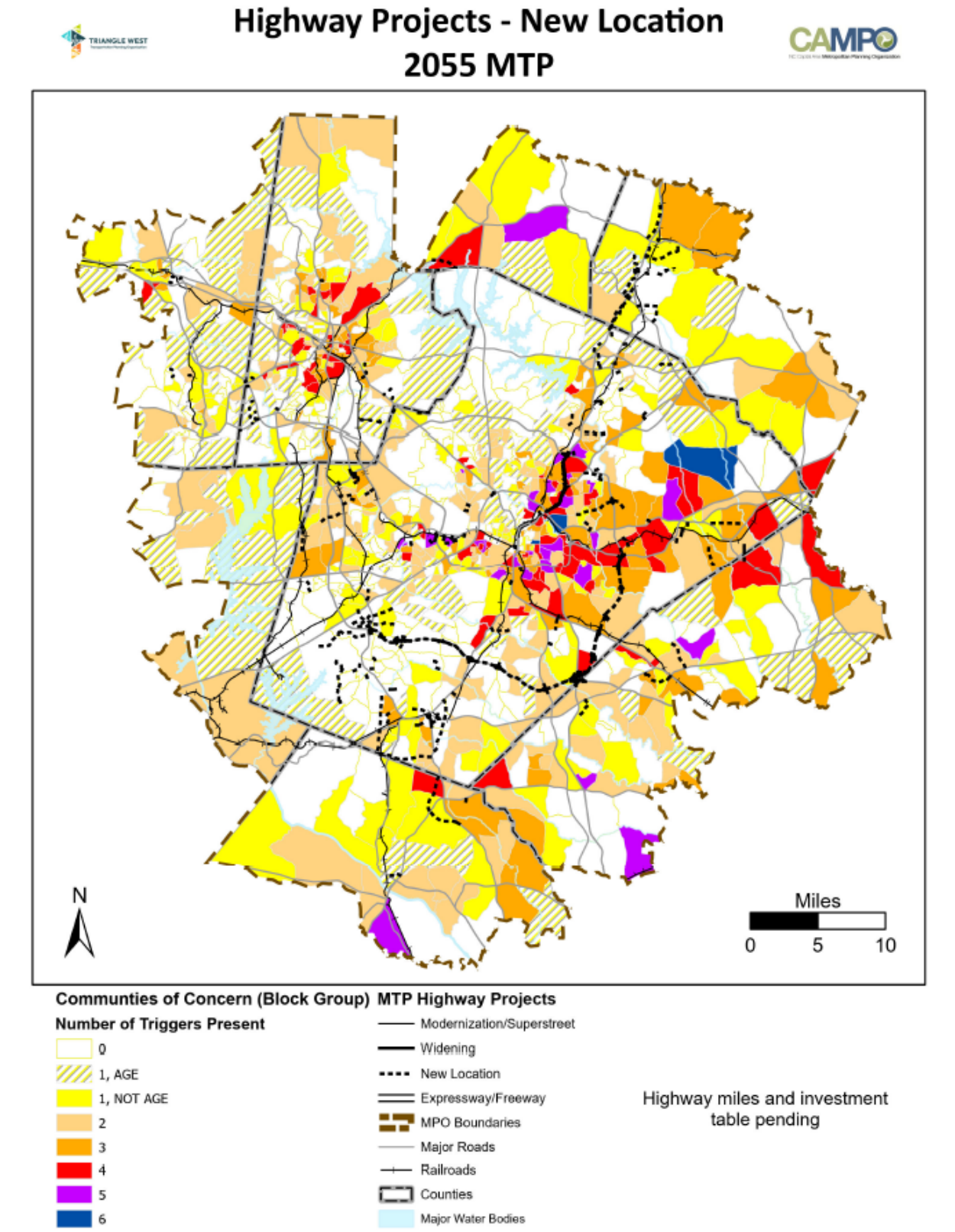


Figure A12.3: 2055 MTP Widening Highway Projects overlaid on Title VI Communities

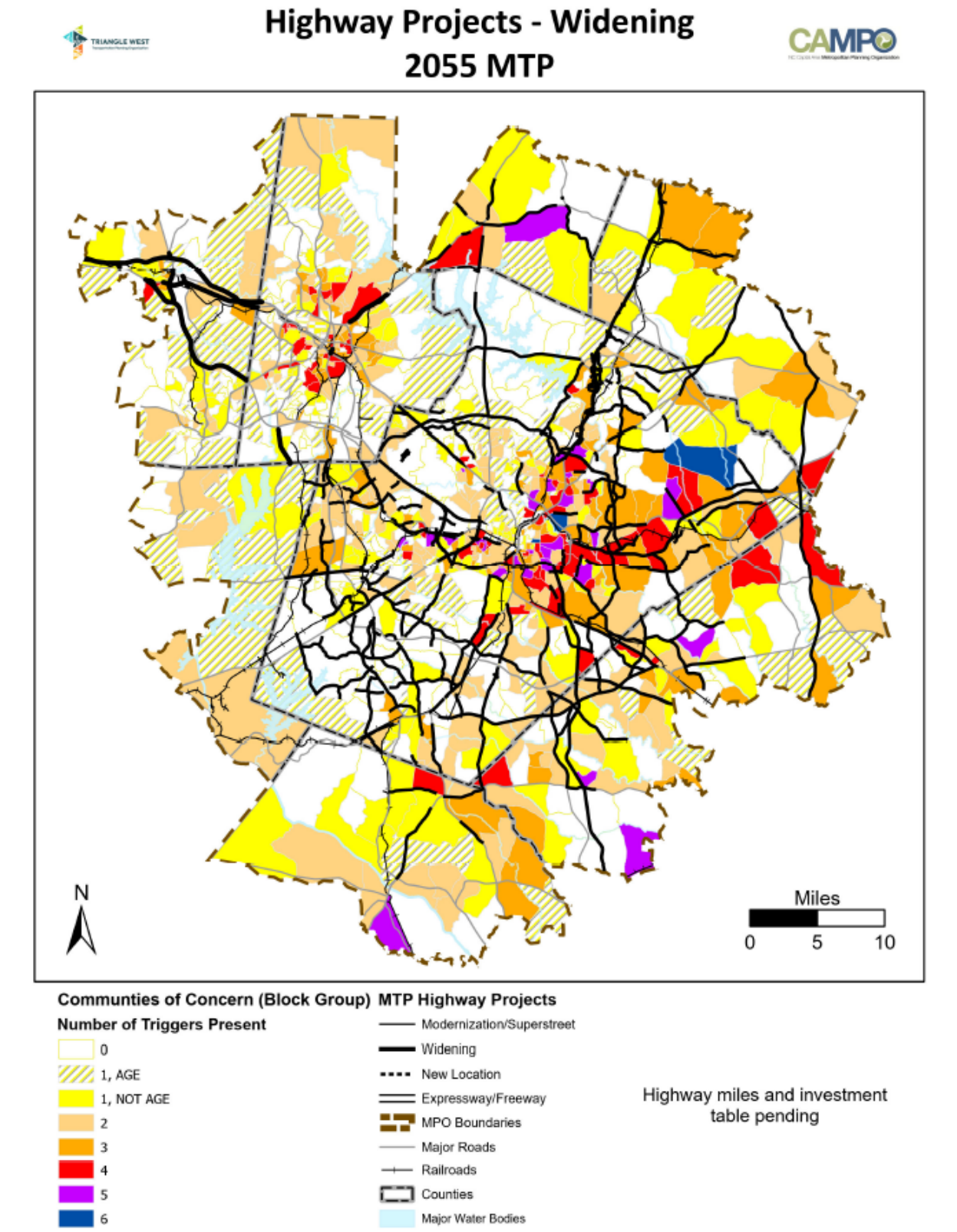


Figure A12.4: 2055 MTP Other Highway Projects overlaid on Title VI Communities

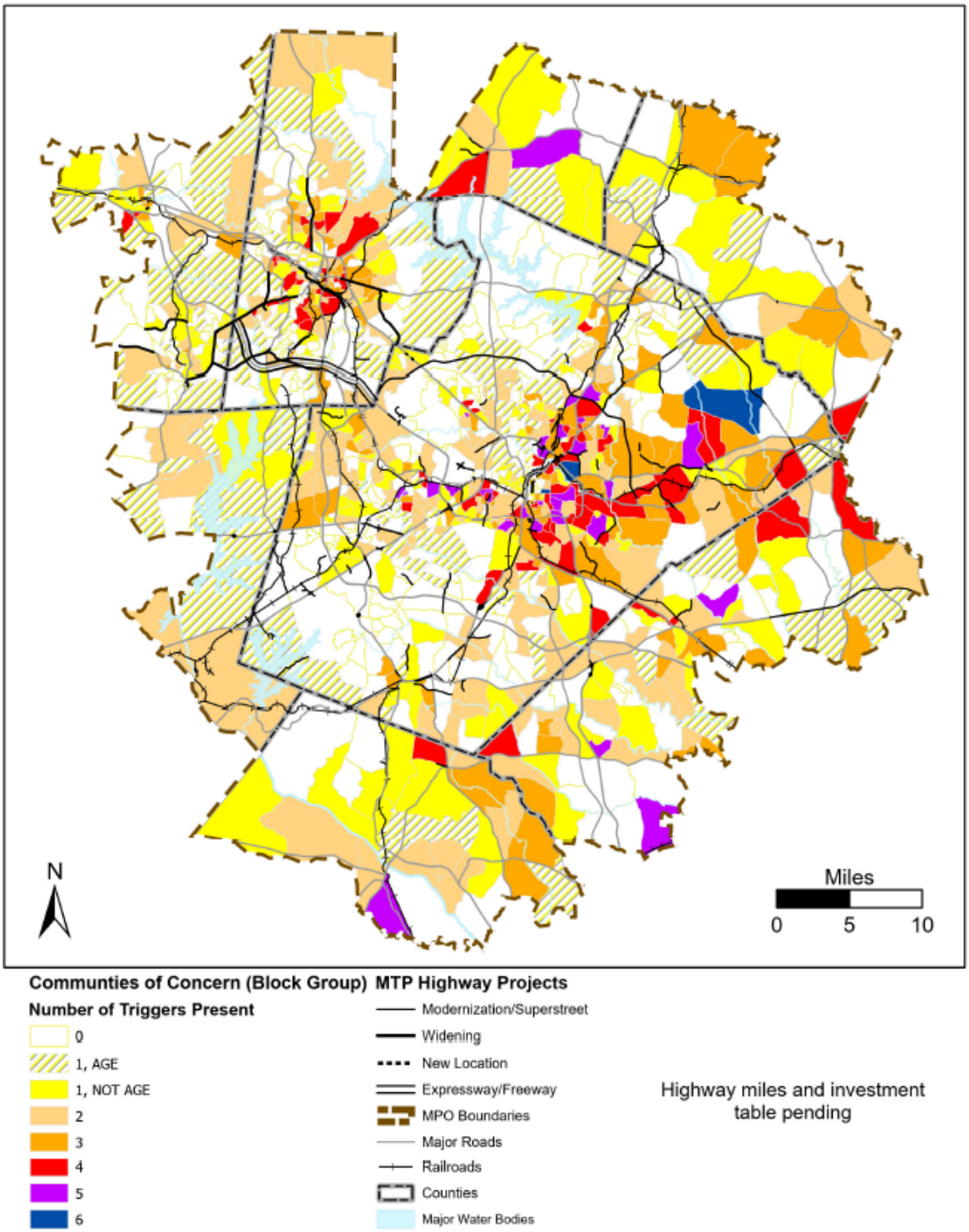


Figure A12.5: 2055 MTP Transit Corridors overlaid on Title VI Communities

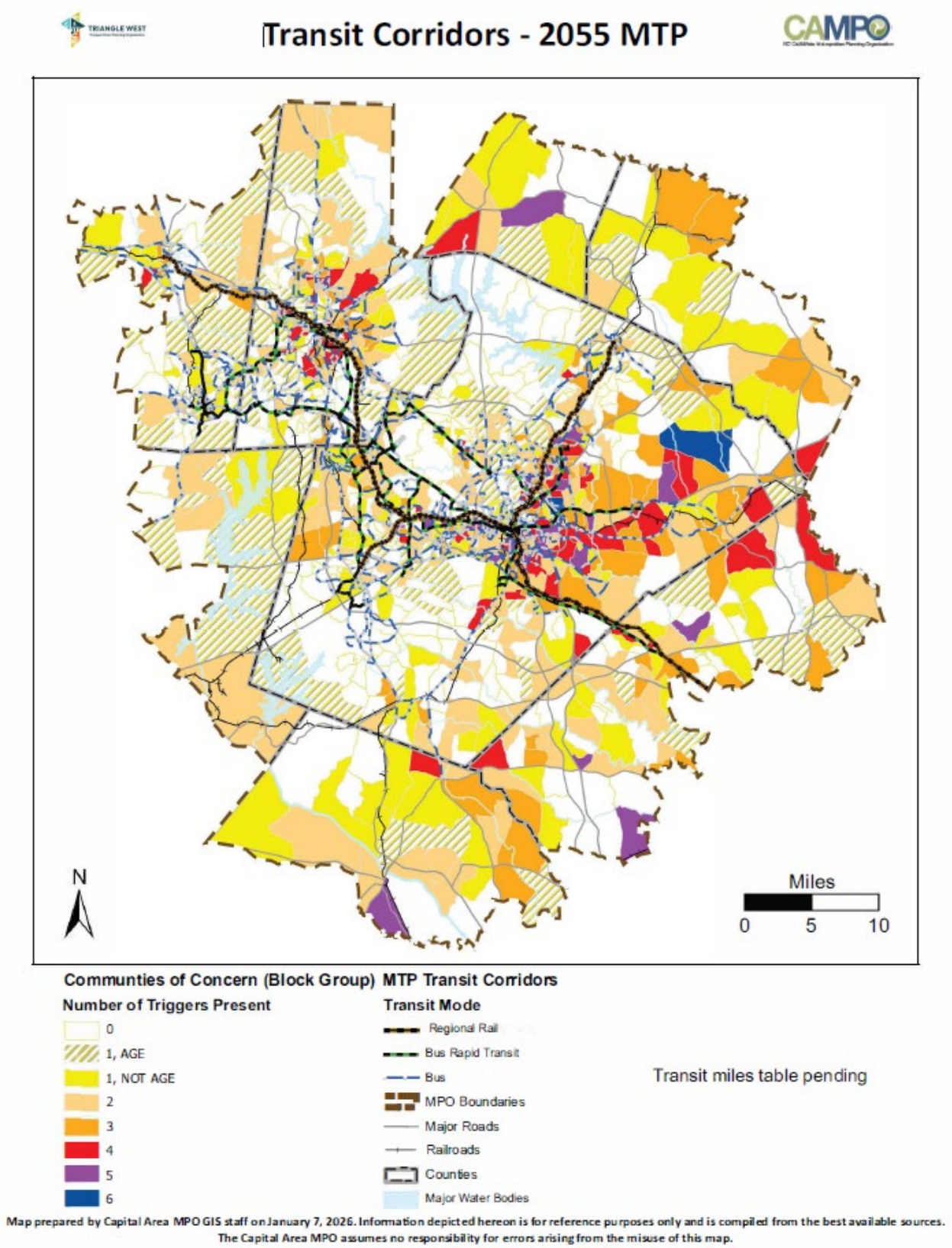


Figure A12.6: Biodiversity and Wildlife Habitat overlay map

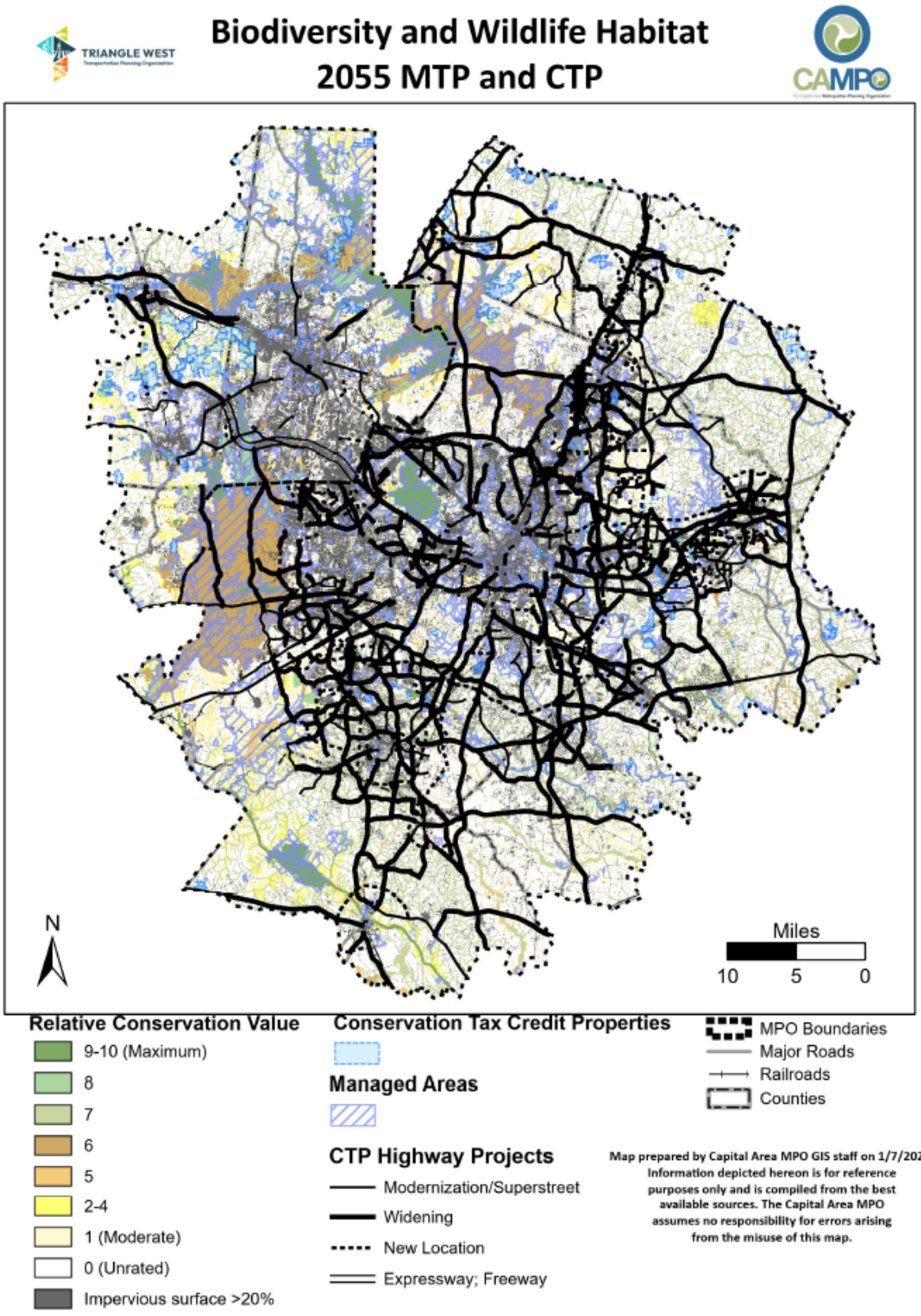


Figure A12.7: Development overlay map

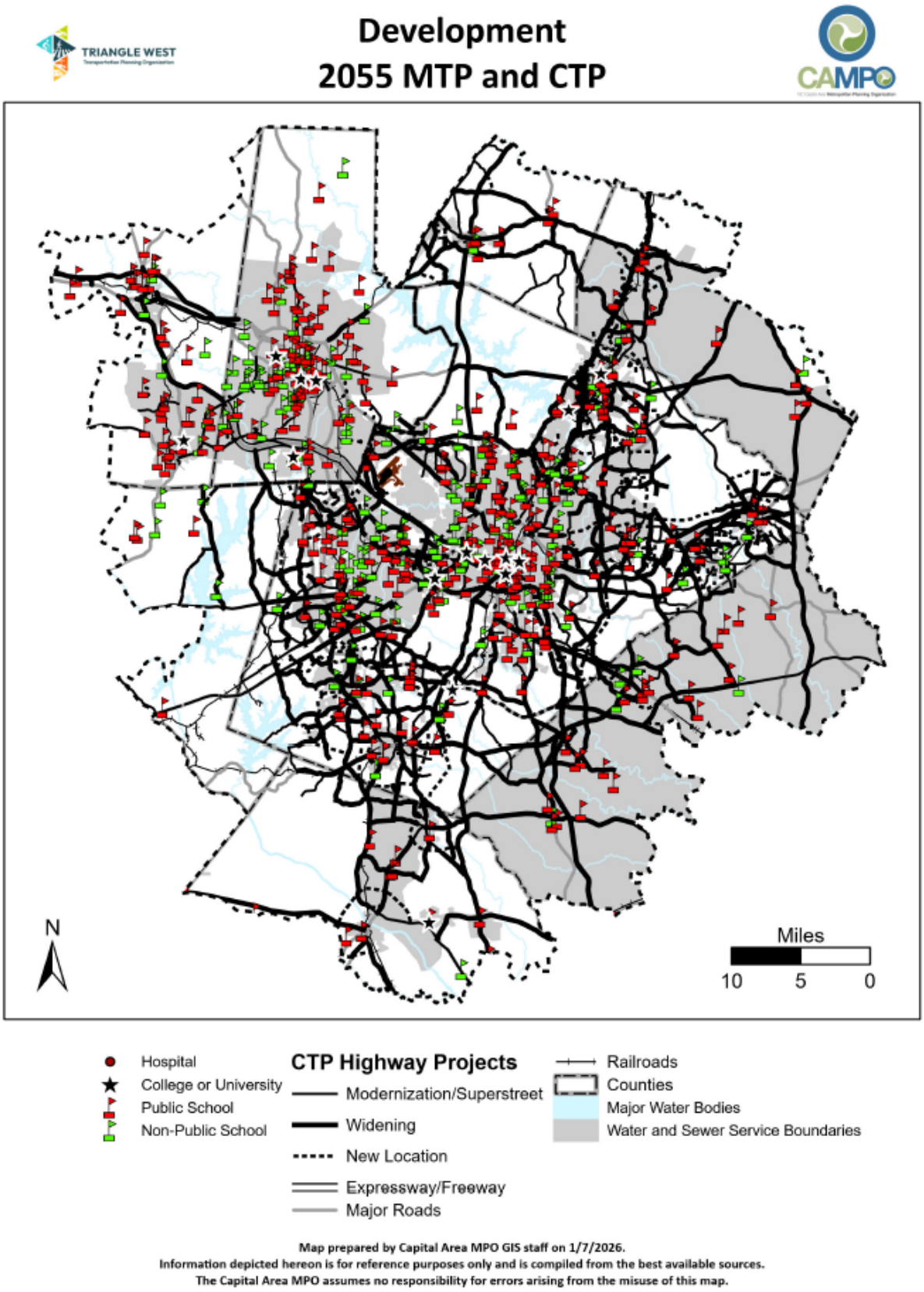


Figure A12.8: Farmland overlay map

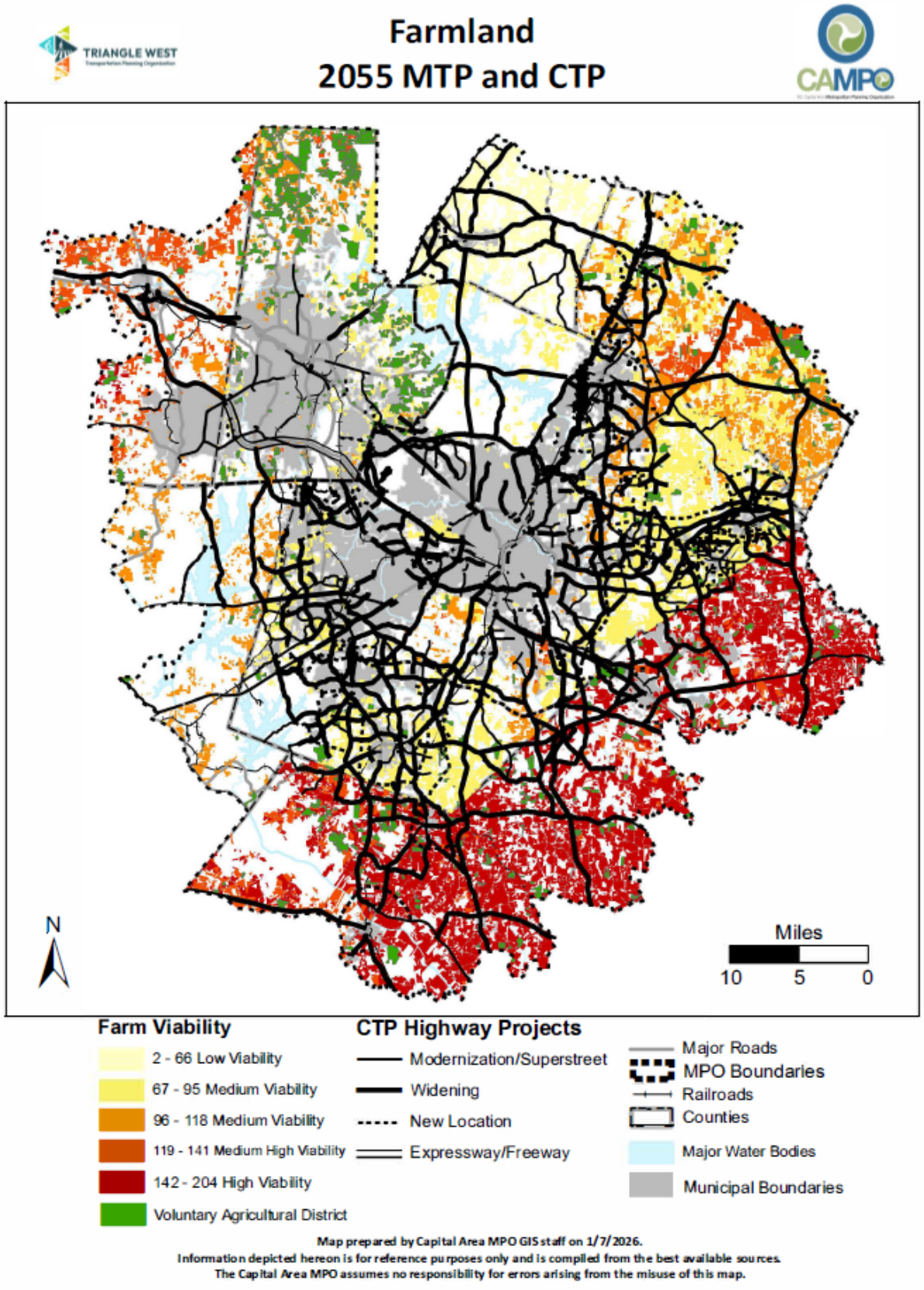


Figure A12.9: Forest overlay map

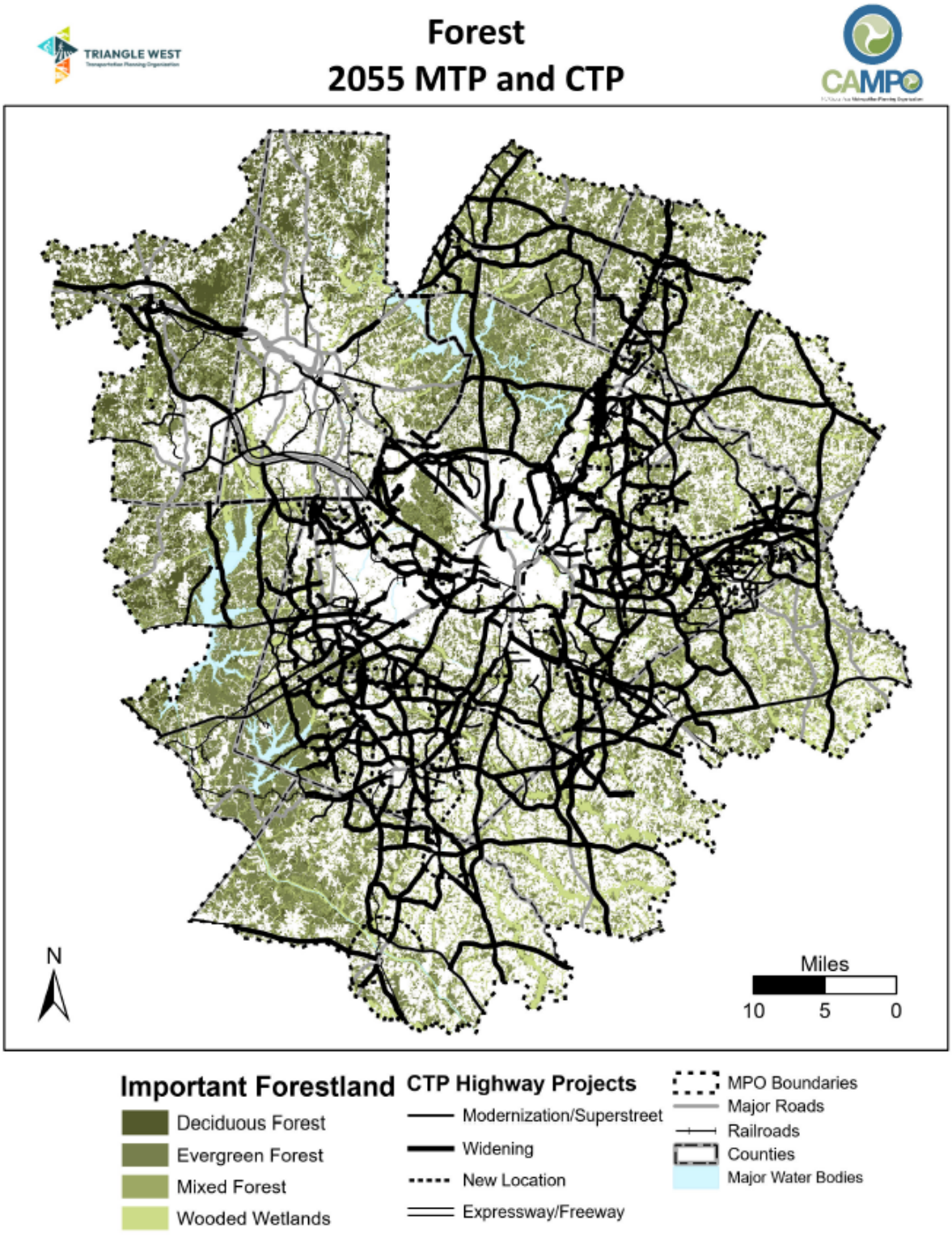


Figure A12.10: Gameland/Hunting Safety Buffer/Smoke Awareness Area overlay map

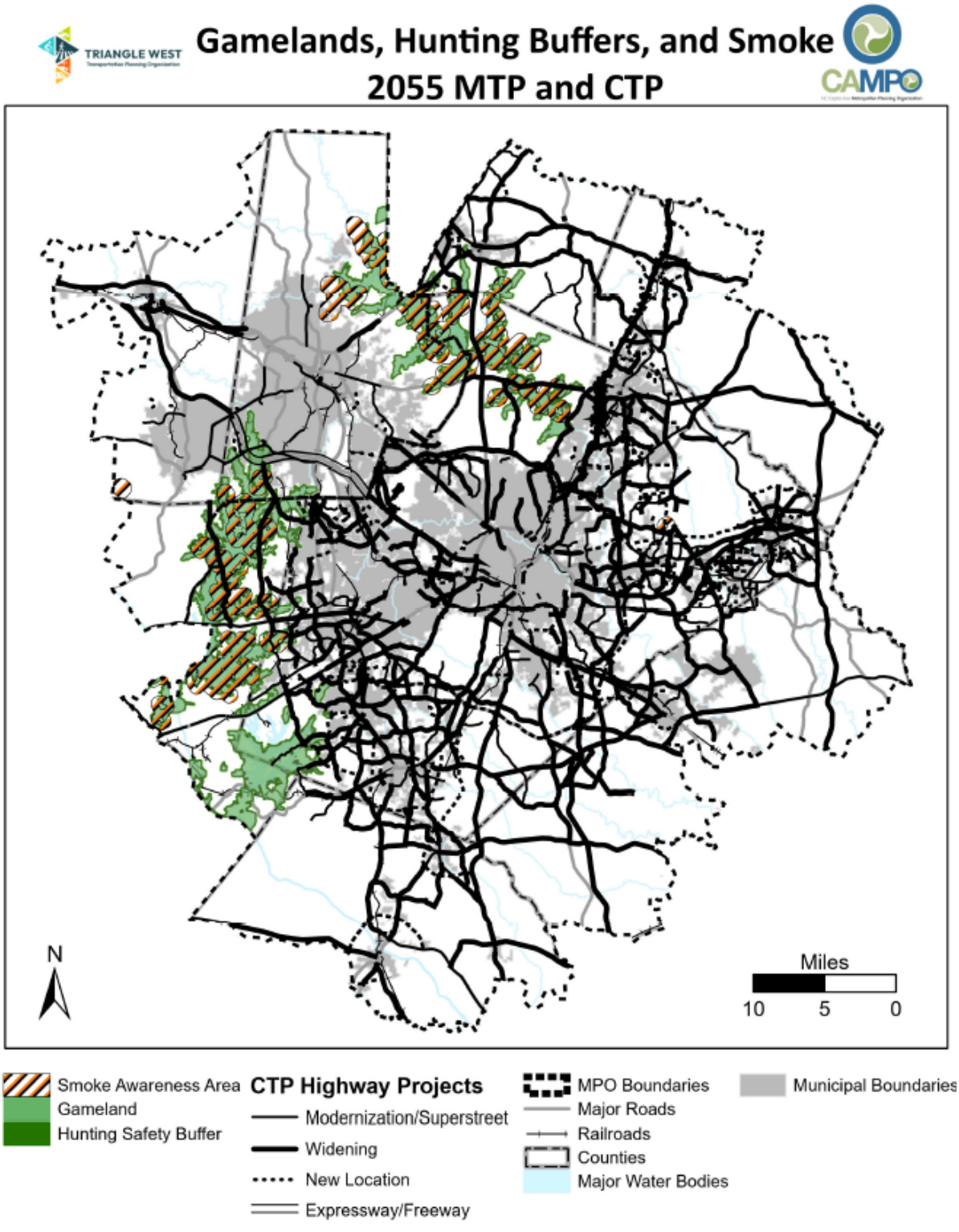


Figure A12.11: Hazards overlay map

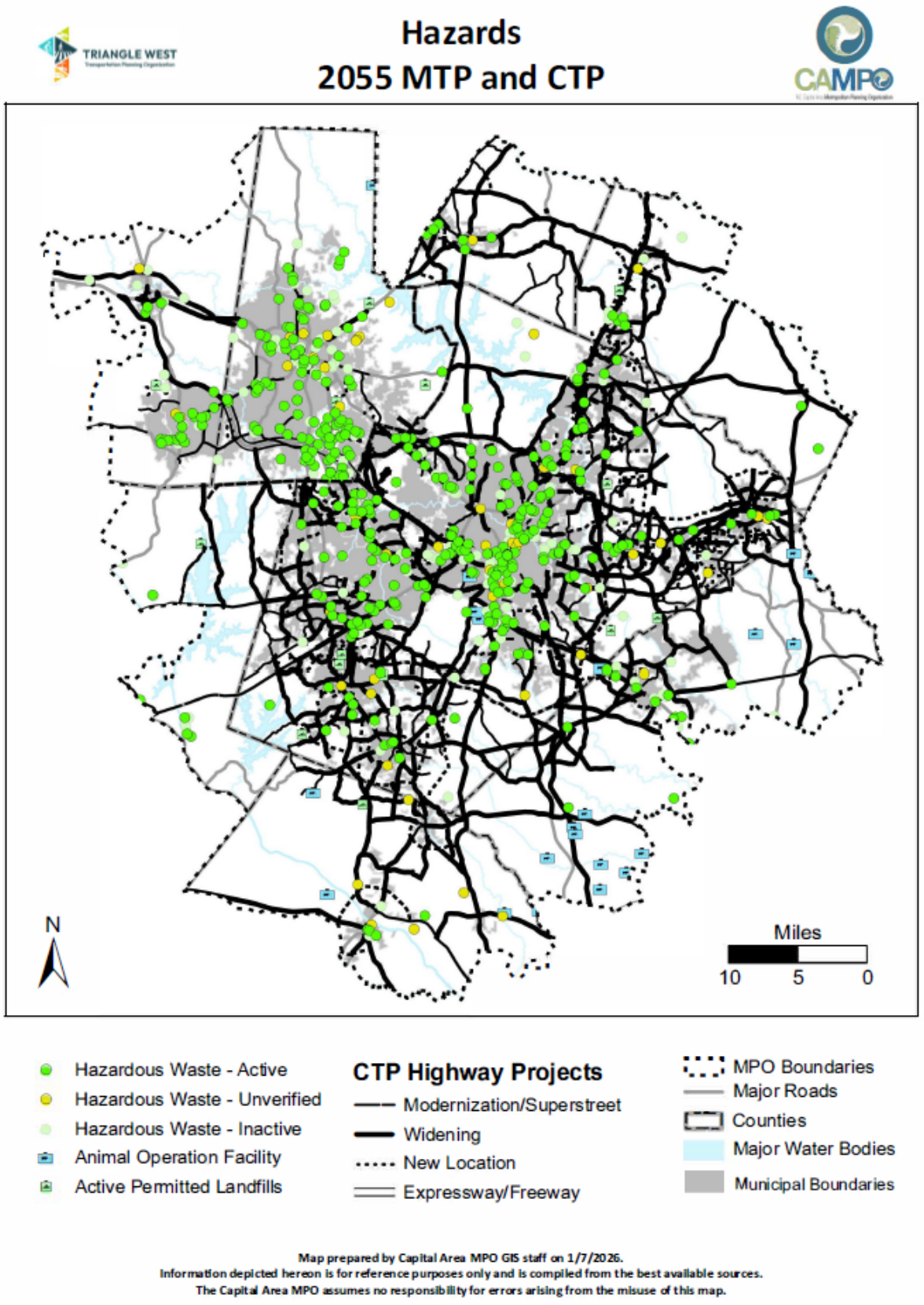


Figure A12.12: Historic Sites overlay map

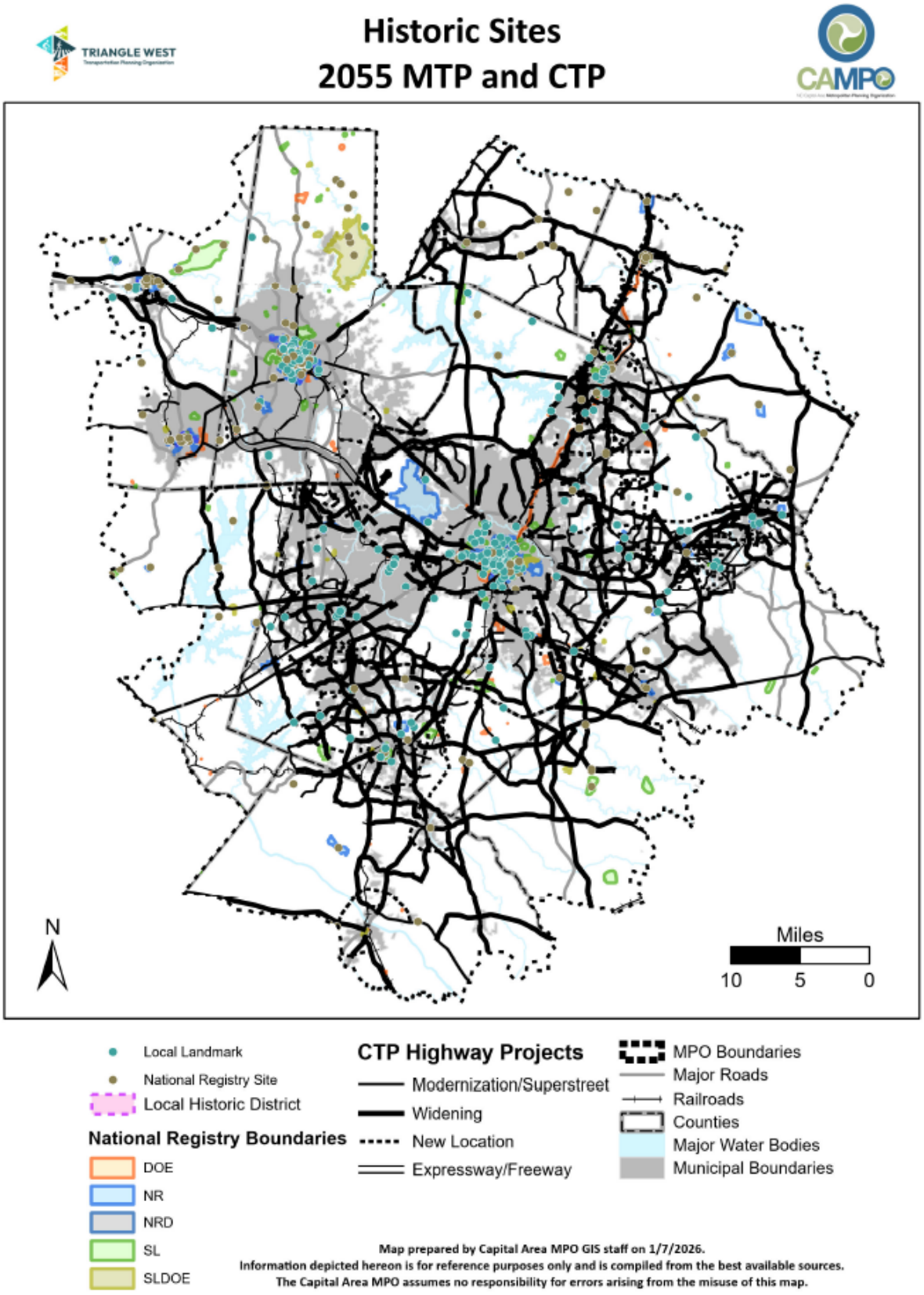


Figure A12.13: Parks and Recreation overlay map

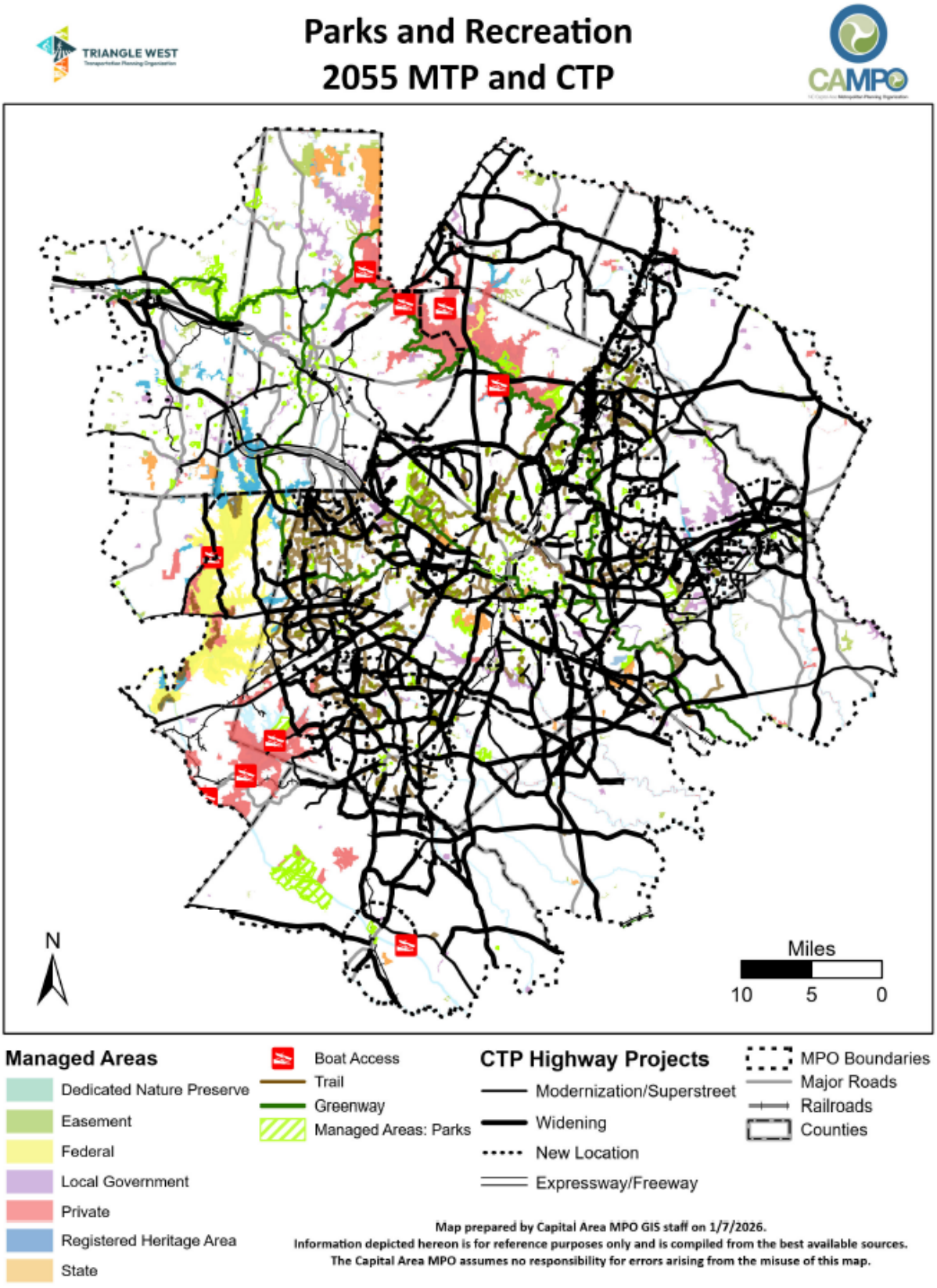


Figure A12.14: Water Resources overlay map

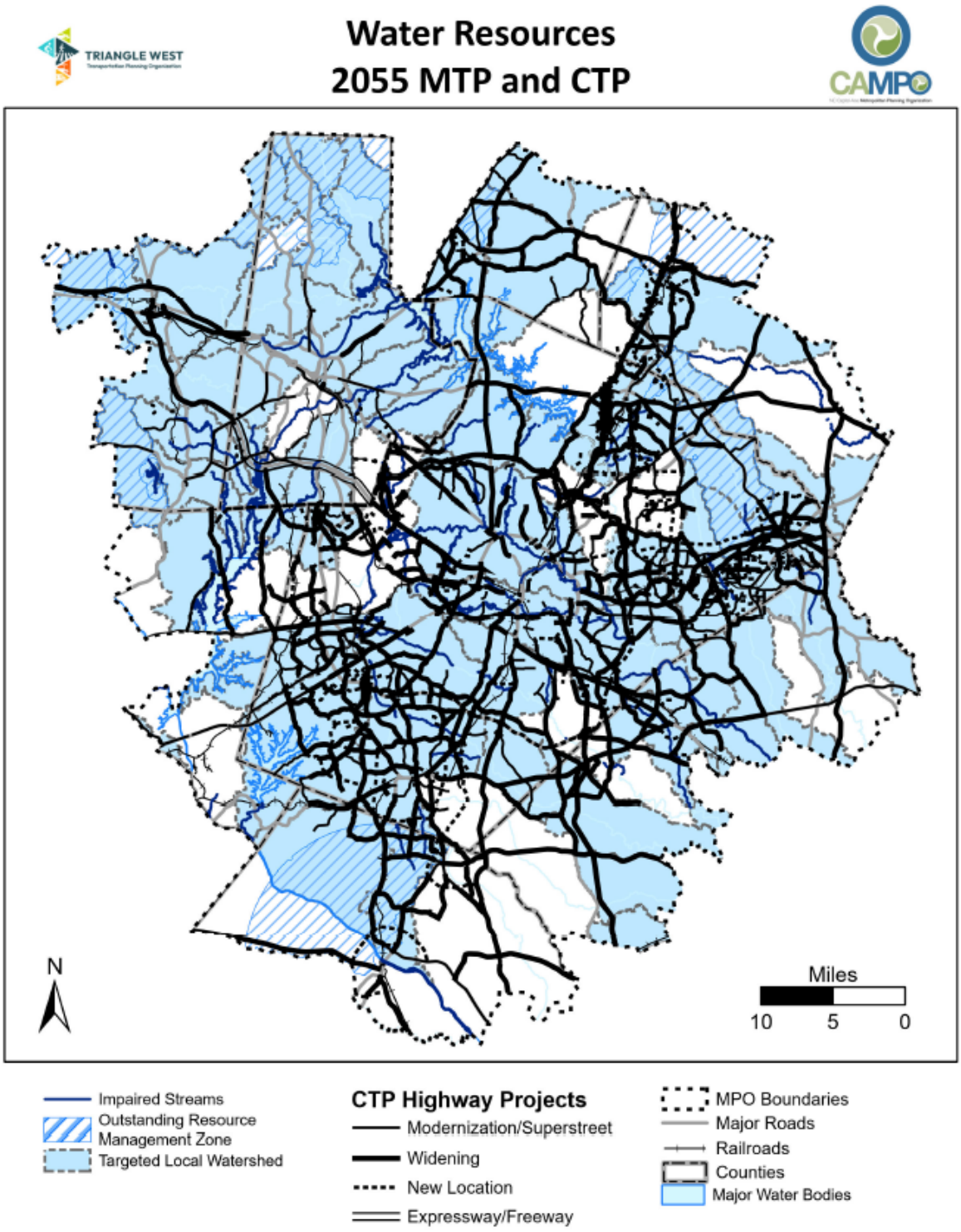


Figure A12.15: Water Supply overlay map

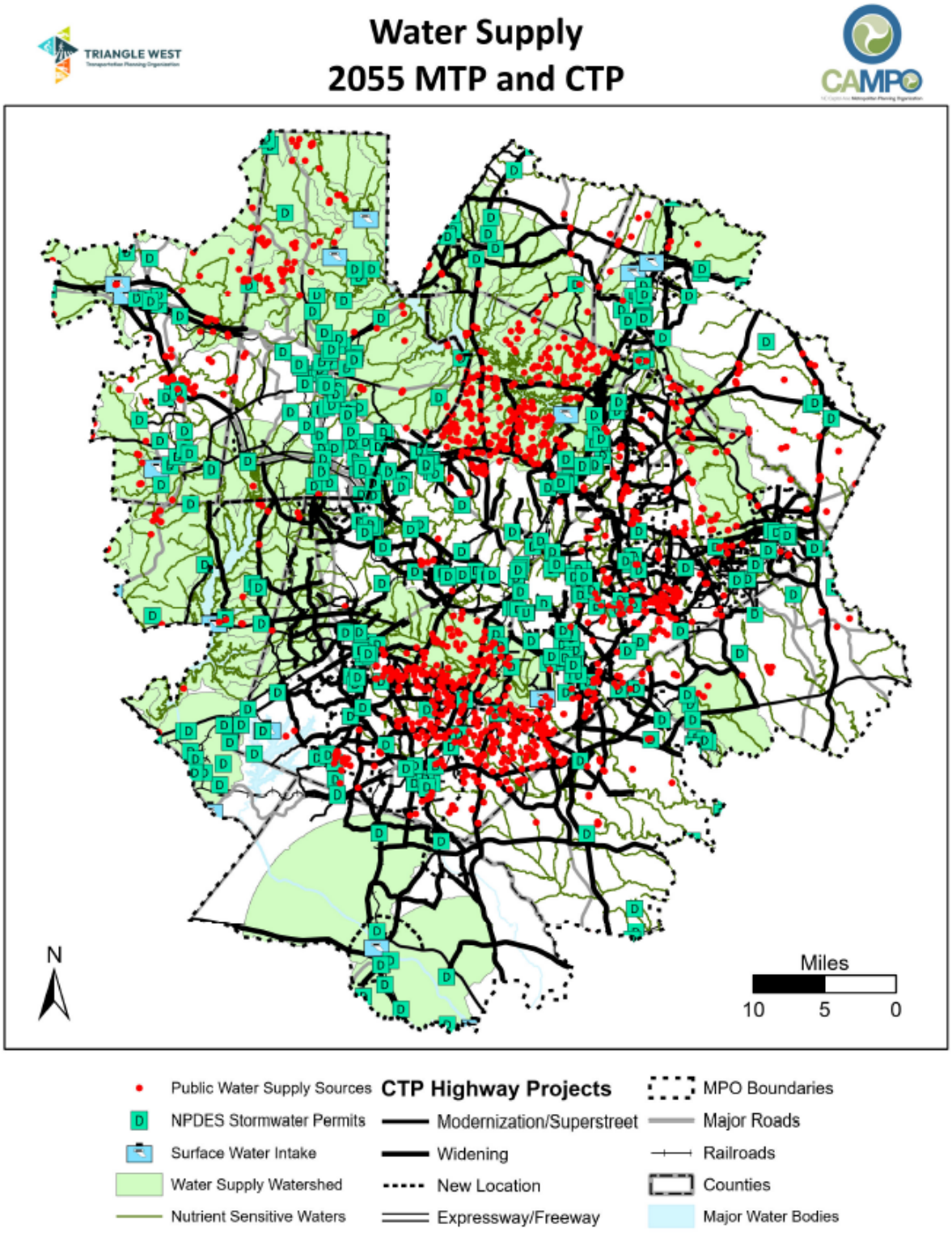
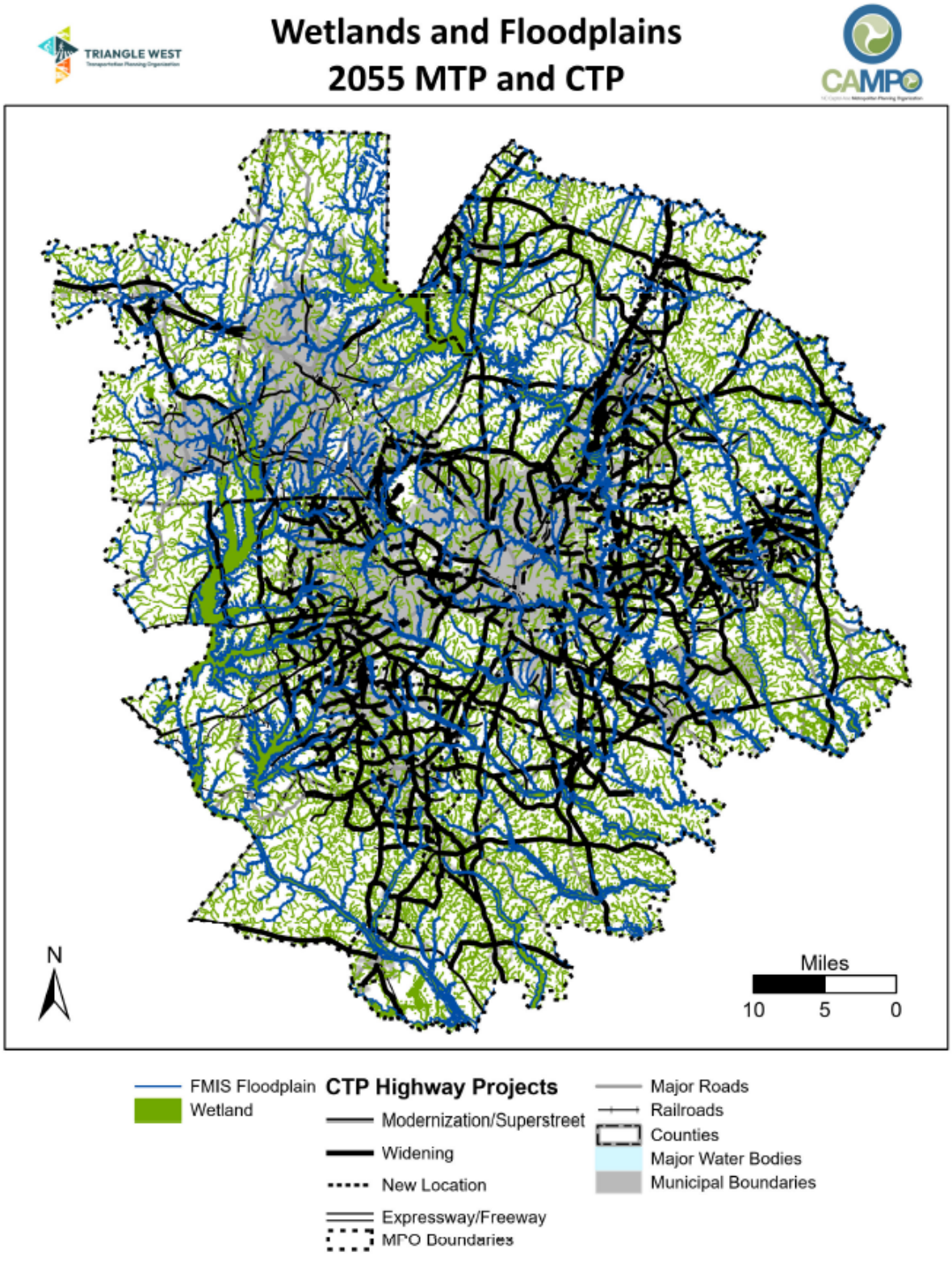


Figure A12.16: Wetlands and Floodplains overlay map



Appendix 13: Federal Transportation Performance Measures

Appendix 13 includes the federally-required performance measures at the time of this plan's initial adoption. Section 4.4 of the plan puts the federal Transportation Performance Measures (TPMs) performance measures in context with the full set of performance measures associated with the *Destination 2055* MTP. Since the MPOs and NCDOT periodically update the specific target values of some of the measures, this appendix is designed to be able to provide a guide to the values without requiring an amendment of the full plan.

Overview

The two MPOs are required by federal law to adopt specific transportation performance measures. These measures are divided into four categories: Safety (Highway and Public Transit), Pavement and Bridge Condition, System Performance/Freight, and Transit Assets.

The following are the values for each performance measure at the time of initial MTP adoption. These values are revised periodically, and the most current values can be obtained from each MPO website.

Highway Safety Measures

The safety measure is a federal Transportation Performance Measure (TPM) and thus the MPOs are required to set targets for those measures and include those targets in their long-range transportation plan, i.e., Metropolitan Transportation Plan (MTP). Until 2025, CAMPO and Triangle West TPO both resolved to plan and program projects to meet the targets in the North Carolina 2022 Highway Safety Improvement Plan (HSIP). The HSIP targets were set to reduce fatalities and serious injuries by one-half by the year 2035, and eventually to zero by the year 2050.

However, beginning in 2026, both CAMPO and Triangle West TPO plan to use new methodologies for developing targets. CAMPO's methodology calls for reducing crashes by 1% annually in the near-term, with higher reduction percentages in later years toward a long-term goal of reaching zero, based on CAMPO's recent Blueprint for Safety Plan. Triangle West TPO's methodology will also be updated in 2026, based on the TPO's recent Safe Streets for All/Vision Zero Action Plan.

Based on the U.S. Department of Transportation (USDOT)/Federal Highway Administration (FHWA) review of the safety targets and actual data, North Carolina has not met or made significant progress toward achieving its safety performance targets. In fact, the number of fatalities and serious injuries and the corresponding rates continue to increase. As a result, the North Carolina Department of Transportation (NCDOT) must ensure that all federal Highway

Safety Improvement Program (HSIP) funding is obligated to safety projects and must develop a detailed implementation plan.

Below, the CAMPO and TWTPO safety target data are presented in tables that show the 5-year rolling average.

Table A13.1: Capital Area MPO Annual Safety Data and Targets

Data Years	Avg. Fatalities	Avg. Fatality Rate	Avg. Serious Injuries	Avg. Serious Injury Rate	Avg. Non-motorized Fatalities & Serious Injuries
2008-2012	95.6	0.880	149.8	1.378	32.4
2009-2013	95.2	0.864	147.0	1.333	34.0
2010-2014	92.4	0.823	155.0	1.378	36.6
2011-2015	92.0	0.793	163.6	1.403	40.8
2012-2016	95.8	0.797	193.4	1.591	43.6
2013-2017	93.8	0.756	255.0	2.012	47.0
2014-2018	93.6	0.729	328.4	2.519	50.8
2015-2019	99.2	0.748	412.8	3.085	62.4
2016-2020	108.2	0.836	485.6	3.730	71.8
2017-2021	115.4	0.888	542.2	4.152	75.6
2018-2022	131.8	1.000	558.0	4.232	85.2
2019-2023	141.8	1.062	568.2	4.259	88.8
2020-2024	139	0.851	590	3.611	95
2026 Target	136	0.817	578	3.5	93

Each column is calculated as a five-year rolling average annual incident rate.

Table A13.2: Triangle West TPO Annual Safety Data and Targets

Data Years	Avg. Fatalities	Avg. Fatality Rate	Avg. Serious Injuries	Avg. Serious Injury Rate	Avg. Non-motorized Fatalities & Serious Injuries
2008-2012	29.6	0.630	74.6	1.590	18.6
2009-2013	30.8	0.640	70.8	1.474	17.6
2010-2014	32.0	0.647	74.8	1.514	18.6
2011-2015	32.8	0.651	80.6	1.601	20.2
2012-2016	34.0	0.658	79.4	1.541	20.8
2013-2017	36.0	0.675	84.8	1.586	19.4
2014-2018	36.0	0.658	88.4	1.615	20.2
2015-2019	38.8	0.695	95.8	1.716	22.4
2016-2020	41.4	0.764	107.4	1.995	24.0
2017-2021	42.2	0.789	124.0	2.340	25.8
2018-2022	44	0.825	138.6	2.640	28.6
2019-2023	46.4	0.866	147.4	2.768	28.4
2020-2024	48.0	0.893	147.8	2.775	29.6
2026 Target	#	#	#	#	#

Each column is calculated as a five-year rolling average annual incident rate.
The TWTPO 2026 values will be adopted in February 2026 and presented in the table above.

Public Transit Safety Measures

This transit safety measure is a federal Transportation Performance Measure (TPM). Thus, the MPOs are required to support the Public Transportation Agency Safety Plan (PTASP) targets that the relevant transit systems set, and include the targets in their long-range transportation plan, i.e., Metropolitan Transportation Plan (MTP). The transit systems that receive urbanized area formula grants must develop and implement a safety management system (SMS) that encompasses the following targets:

- the number and rate of fatalities, injuries and events; and,
- the mean distance between mechanical failures.

These targets and the values are presented in the table below:

Table A13.3: Capital Area MPO and Triangle West TPO Transit Safety Data and Targets

Transit System	Fatalities (Number[1] / Rate[2])	Injuries (Number[1] / Rate[2])	Events[4] (Number[1] / Rate[2])	Mechanical Failures (Distance[3])
Chapel Hill Transit				
Fixed Route	0 / 0	0 / 0	0 / 0	25,000
Non-fixed Route	0 / 0	0 / 0	2.34 / 0.6	35,000
GoCary				
Fixed Route	0 / 0	3 / 0.5	7 / 1.18	20,000
Non-fixed Route	0 / 0	1 / 0.2	1 / 0.2	60,000
GoDurham				
Fixed Route	0 / 0	11 / 0.3	46 / 7.2	20,551
Non-fixed Route	0 / 0	0 / 0	1 / 0.05	50,000
GoRaleigh				
Fixed Route	0 / 0%	15 / 1.64	113 / 4.63	0
Non-fixed Route	0 / 0	15 / 0.64	30 / 1.36	0
GoTriangle				
Fixed Route	0 / 0	3 / 1	9 / 3	211,590
Non-fixed Route	0 / 0	0 / 0	2 / 1	0
Go Wake Access[5]				
Non-fixed Route	0 / 0	2 / 0.11	NA / 0.8	87,966
Orange Public Transportation				
Fixed Route	0 / 0	1 / 0.238	1.5 / 1.5	25,000
Non-fixed Route	0 / 0	1 / 0.238	1.5 / 1.5	25,000

Notes:

[1]Total is per year

[2]Rate is per 100,000 vehicle revenue miles

[3]Distance is mean miles between major mechanical failures

[4]Events are reportable fatalities, injuries, evacuations, collisions and incidents

[5]GoWake Access does not operate fixed route service

Pavement and Bridge Condition Measures

Over the last few years, CAMPO and TWTPO each adopted resolutions to support the North Carolina targets for pavement and bridge condition as part of the federal Transportation Performance Measures (TPM) targets. As required by federal regulations, these TPMs must be adopted as part of the Metropolitan Transportation Plan (MTP).

The pavement and bridge condition TPMs were last adopted in 2023, and must be updated every four years. The tables below show the current adopted measures, which are the same for both MPOs.

Table A13.4: Current Approved Pavement & Bridge Condition Targets

Performance Measure	2-Year Target (2023)	4-Year Target (2025)
% Interstate Pavement Condition (Good)	60.0%	62.0%
% Interstate Pavement Condition (Poor)	1.8%	1.5%
% Non-Interstate NHS Pavement Condition (Good)	30.0%	31.0%
% Non-Interstate NHS Pavement Condition (Poor)	3.5%	3.0%
% NHS Bridges Condition (Good)	38.0%	36.0%
% NHS Bridges Condition (Poor)	5.0%	5.0%

System Performance/Freight Measures

The roadway and truck travel time reliability measures are a federal Transportation Performance Measure (TPM) and thus the MPOs are required to set targets for those measures and include those targets in their long-range transportation plan, i.e., Metropolitan Transportation Plan (MTP). CAMPO and TWTPO both resolved to plan and program projects to contribute toward the accomplishment of the targets shown in the table below.

Table A13.5: Current Approved System Performance/Freight Targets

Performance Measure	2-Year Target (2023)	4-Year Target (2025)
Interstate Level of Travel Time Reliability	75.0%	75.0%
Non-Interstate NHS Level of Travel Time Reliability	70.0%	70.0%
Interstate Truck Travel Time Reliability	1.70	1.70

Level of Travel Time Reliability (LOTTR or TTR) measures the percent of person miles traveled that are reliable. As the percent increases, travelers are less likely to experience unexpected delays and less likely to have to leave early for a trip to anticipate unexpected delays and arrive on time. TTR uses actual vehicle travel data, not data from the Triangle Regional Model (TRM), and thus the data cannot be forecasted. As a result, there is not a TTR measure for the year 2055. Nonetheless, the TTR is still an important performance measure to consider in long-range transportation planning to understand the overall health of the major transportation corridors.

The Truck Travel Time Reliability Index (TTI) is a similar measure of reliability except a decrease in the value of the measure signifies an improvement in travel reliability for trucks.

Transit Asset Management Measures

The Transit Asset Management – State of Good Repairs (TAM – SGR) measure is a federal Transportation Performance Measure (TPM). Thus, the MPOs are required to support the TAM targets that the relevant transit systems set, and include the targets in their long-range transportation plan, i.e., Metropolitan Transportation (MTP). The transit systems that are federal grantees or subrecipients must develop and implement a transit asset management system. Some transit systems in the MPOs (e.g., Chatham Transit Network, Orange Public Transportation and Durham County Access) have chosen to be part of a group plan organized by the North Carolina Department of Transportation/Integrated Mobility Division (NCDOT/IMD) and therefore are not included in this presentation. TAM includes targets for rolling stock, equipment, and facilities.

The table below shows the target percentage for the assets that are not in a state of good repair. This data is from the Federal Transit Administration's (FTA) National Transit Database (NTD) for the year 2025.

Table A13.6: Transit Asset Management Targets

Asset Class	Chapel Hill Transit	GoDurham	GoRaleigh	GoTriangle
Revenue Vehicles - Age (% of revenue vehicles within a particular asset class that have met or exceeded their useful life benchmark)				
AO - Automobile	0	33.3	22.2	0
BU - Bus	0	26.98	0	55
CU - Cutaway Bus	0	6.12	N/A	20
MB - Mini-bus	N/A	N/A	N/A	N/A
MV - Mini-van	N/A	N/A	N/A	0
SV - Sport Utility Vehicle	N/A	N/A	N/A	0
VN - Van	N/A	100	N/A	0
FB - Ferry Boat	N/A	N/A	N/A	N/A
SB - School Bus	N/A	N/A	N/A	N/A
Other	N/A	N/A	N/A	N/A
Equipment - Age (% of vehicles/equipment that have met or exceeded their useful life benchmark)				
Non-revenue/Service Automobile	N/A	N/A	N/A	N/A
Steel Wheel Vehicles	N/A	N/A	N/A	N/A
Trucks and Other Rubber Tire Vehicles	0	0	0	20
Maintenance Equipment	N/A	N/A	N/A	N/A
Computer Software	N/A	N/A	N/A	N/A
Custom	N/A	N/A	N/A	N/A
Facilities - Condition (% of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) scale)				
Administration	0	0	20	0
Maintenance	0	0	20	0
Parking Structures	N/A	0	0	0
Passenger Facilities	N/A	0	0	0
Shelter	N/A	N/A	N/A	N/A
Storage	N/A	N/A	N/A	N/A
Custom	N/A	N/A	N/A	N/A

Notes - NA: System does not have an asset in this class that requires monitoring.

The following regional TAM targets have been adopted by CAMPO and the Triangle West TPO:

Table A13.7: Current Capital Area MPO Regional Transit Asset Management Targets

Asset Class	Performance Measure	Target
Revenue Vehicles	% of vehicles that have met or exceeded their useful life	20%
Equipment	% of non-revenue vehicles that have met or exceeded their useful life	22%
Facilities	% of all buildings or structures with a condition rating below 3.0 on the federal Transit Economic Requirements Model (TERM) Scale	20%

Approved by CAMPO board in 2025

Table A13.8: Current Triangle West TPO Regional Transit Asset Management Targets

Asset Class	Performance Measure	GoDurham Target	GoTriangle Target	Chapel Hill Transit Target
Revenue Vehicles	% of vehicles that have met or exceeded their useful life	44%	20%	19% fixed route / 0% demand response
Equipment	% of non-revenue vehicles that have met or exceeded their useful life	78%	87%	20%
Facilities	% of all buildings or structures with a condition rating below 3.0 on the federal Transit Economic Requirements Model (TERM) Scale	0%	0%	10%

Approved by Triangle West TPO board in 2022

Appendix 14: Pre-MTP Scenario Testing Results

In the spring of 2024, the Capital Area MPO and Triangle West TPO engaged in a pre-MTP "learning scenario" exercise. This exercise looked at several "extreme" scenarios in order to better understand the potential impacts of various "what if…" questions regarding the different "levers" available to decision makers. This analysis was conducted before the official alternatives analysis of the MTP process, and was used to help inform that process. The document in this appendix is a summary of the pre-MTP "learning scenario" analysis. Please note that the document was created before Triangle West TPO changed its name, so it still refers to Triangle West TPO by its old name of Durham-Chapel Hill-Carrboro MPO (DCHC MPO or DCHC).

DESTINATION 2055
Metropolitan Transportation Plan for the Triangle Region

Pre-MTP Scenario Testing Results

Purpose of the Pre-MTP Scenario Testing

The typical process for developing a Metropolitan Transportation Plan (MTP) includes the identification of plan goals, forecasting of future conditions, evaluation of multiple transportation investment alternatives, selection of a preferred solution, and creation of a final plan. Due to time and resource constraints and other practical limitations, we often do not have an opportunity during the official MTP process to test and answer all the "what if..." questions that may be of interest to answer. This pre-MTP scenario testing exercise was created to allow the Triangle Region to answer some of those "what if..." questions, and to hopefully use the knowledge learned through the exercise to inform the alternatives that get analyzed as part of the official 2055 MTP process.

The Tested Scenarios

Baseline Scenario (2050 MTP)

This scenario represents the existing adopted 2050 MTP and serves as a baseline of comparison against which the other scenarios can be tested (i.e. do the other scenarios perform better or worse than the existing plan?).

Transit-focused Scenario

The concept of this scenario is to maximize the use of transit by concentrating development in areas with high-quality/high-frequency transit service and improving service frequencies/doubling the amount of service provided.

Equity-focused Scenario

This scenario looks at a variety of methods for improving transportation outcomes for low-income and zero-car households such as locating more jobs near low-income neighborhoods or more affordable housing near jobs.

VMT Reduction Scenario

The focus of this scenario is on identifying different factors that would reduce the growth of vehicle miles traveled (VMT) compared to the 2050 MTP baseline (note: due to population growth, VMT will still grow from 2020 to 2050).

Flexible Funding Scenario

This scenario examines the possibilities for funding different portfolios of transportation projects based on three different assumptions regarding funding constraints/restrictions and funding amounts.

Highway-focused Scenario

In this scenario we are testing the potential positive and negative impacts of making large investments in freeway/expressway widening projects and lower-density, highway-oriented development patterns.

How to Understand and Use this Document

- The next several pages provide more detailed information about the individual scenario results and key findings.
- All numbers are forecasts for the year 2050, including numbers in the baseline scenario.
- Performance indicators showing a scenario performs **better** than the baseline are typically shown in green text, while those performing **worse** than the baseline are typically shown in orange text.
- The analyzed scenarios were intentionally created to be "extreme" and not necessarily realistic. The intent is not to use these extreme scenarios in the 2055 MTP, but rather to learn lessons from these about how these various decision making levers might be used more practically in the upcoming 2055 MTP alternatives analysis phase.

Comparison of 2050 Baseline Data with 2020 Existing Data (Regionwide)

In order to compare scenarios, it is necessary to establish a "**baseline**" case against which to measure. For this exercise, our baseline scenario is based on the **2050 Metropolitan Transportation Plan** forecast measures for the year 2050. The table below shows the forecasted values for various measures in the 2050 baseline, as well as a comparison to the 2020 "existing" data. **Please note that all scenarios in the remainder of this document are referring to the 2050 forecast from the adopted MTP when referring to the "baseline," NOT the 2020 existing year data. All comparisons in later scenarios are based on forecast data for the year 2050.**

Measures	2020	2050	
Population	2.0 million	3.3 million	62%
Jobs	1.1 million	1.9 million	80%
Highway Lane Miles	13,000	16,000	19%
Daily Vehicle Miles Traveled (VMT)	55 million	89 million	61%
Daily VMT Per Capita	27.2	27.0	0.7%
Daily Transit Ridership	127,000	398,000	213%
Daily Transit Passenger Service Miles	415,000	1.9 million	361%
Daily Transit Service Miles	46,000	149,000	228%
Single-occupant Vehicle Share of Auto Trips	76.7%	75.6%	1.4%
Daily Congested VMT	5 million	21 million	307%
Average Congested Travel Time (minutes)	33.9	34.8	2.7%
Average Congested Travel Distance (miles)	4.6	5.1	11%
Daily Hours of Delay	59,000	236,000	301%
Daily Hours of Delay for Low-income Zones	500	1,500	231%
Daily Hours of Delay for Zero-car Zones	500	1,300	143%

Measures	2020	2050	
Average Transit Congested Time (minutes)	106	104	2.1%
Transit Congested Time, Low-inc. Zones	26.6	25.1	6%
Transit Congested Time, Zero-car Zones	36.6	36.4	0.5%
Auto Congested Time, Low-income Zones	7.7	8.5	9%
Avg # Jobs in 30 min by Transit, Zero-car	14,000	42,000	207%
Avg # Jobs in 30 min by Walking, Zero-car	16,000	32,000	108%
Avg # Jobs in 30 min by Transit, Low-income	9,000	23,000	167%
Avg # Jobs in 30 min by Auto, Low-income	563,000	900,000	60%
Avg # Jobs in 30 min by Walk, Low-income	10,000	18,000	88%
Household Population in Travel Choice Nbrhd	490,000	904,000	84%
Jobs in Travel Choice Neighborhoods	581,000	1.2 million	101%
Daily Greenhouse Gas Emissions (tons)	25,900	25,700	0.7%
Daily Fuel Consumption (gallons)	2.4 million	2.7 million	12%

The green arrows above show the measures where the current 2050 MTP would improve conditions compared to existing (2020) conditions.

Regional Summary of Scenario Outcomes

Comparison of 2050 Baseline Data with Each Tested 2050 Scenario (Regionwide)

Performance Measures	2050 MTP Baseline	Transit-focused	Equity-focused A	Equity-focused B	Equity-focused C	VMT Reduction	Flexible Funding A	Flexible Funding B	Flexible Funding C	Highway-focused
Regional Population	3.3 million	—	—	—	—	—	—	—	—	—
Regional Jobs	1.9 million	—	—	—	—	—	—	—	—	—
Highway Lane Miles	16,000	—	—	—	—	—	↓	↓	↓	↑
Daily Vehicle Miles Traveled (VMT)	89 million	↓	—	—	↓	↓	—	↓	—	↑
Daily VMT Per Capita	27.0	↓	—	—	↓	↓	—	↓	—	↑
Daily Transit Ridership	398,000	↑↑	↑	↑	↑↑	↑↑	↓	↓	↓↓	↓
Daily Transit Passenger Service Miles	1.9 million	↑↑	↑	↑	↑↑	↑↑↑	—	↓	↓	↓
Daily Transit Service Miles	149,000	↑↑	—	↑↑	↑↑	↑↑	↓↓	↓↓	↓↓	—
Single-occupancy Vehicle (SOV) Share of Auto Trips	75.6%	—	—	—	—	↓	—	—	—	—
Daily Congested Vehicle Miles Traveled	21 million	—	↑	—	↓	↓↓	↑	↑↑	↑	↓↓↓
Average SOV Auto Congested Travel Time (AM, min)	34.8	—	—	—	—	↓	↑	↑	↑	↓
Average SOV Auto Congested Travel Distance (AM, mi)	5.1	↓	—	—	↓	↓	↑	↑↑	↑	↓↓↓
Daily Hours of Delay (all trips)	236,000	↑	↑	—	—	↓	↑	↑↑	↑	↓↓↓
Daily Hours of Delay for Poverty Households	1,500	↑	↑	↓↓	↑↑	↓↓	↑	↑↑	↑	↓↓↓
Daily Hours of Delay for Zero-car Households	1,300	↑↑	↑	↓	↑↑	↓	—	↑	↑	↓↓↓
Average Transit Congested Travel Time (AM, minutes)	104	↓	—	↓	↓	↓	↓	—	↑	↓
Transit Congested Travel Time for Poverty Zones	25.1	↓	—	↑	↑	↓	—	—	↑	↓
Transit Congested Travel Time for Zero-car Zones	36.4	↓	↑	—	↓	↓	—	—	—	↓
Auto Congested Travel Time for Poverty Zones	8.5	↓	—	↓	↓	↓	—	↑	—	↓
Average Jobs within 30 mins by Transit, Zero-car zones	42,000	↑↑	↑↑	↑↑	↑↑	↑↑	—	—	↓	↓
Average Jobs within 30 mins by Walk, Zero-car zones	32,000	↑	↑↑	↑	↑↑	↑	—	—	—	↓
Average Jobs within 30 mins by Transit, Poverty zones	23,000	↑↑	↑	↑↑	↑↑↑	↑↑	—	—	↓	↓
Average Jobs within 30 mins by Auto, Poverty zones	900,000	—	↓	↑	↑	↑	—	↓	↓	↑
Average Jobs within 30 mins by Walk, Poverty zones	18,000	↑	↑	↑	↑↑	↑	—	—	—	↓
% Poverty Households in Travel Choice Neighborhoods	40%	↑↑	—	↓	↑↑	↑↑	—	—	—	↓
Household Population in Travel Choice Neighborhoods	904,000	↑↑↑	—	—	↑↑↑	↑↑↑	—	—	—	↓
Jobs in Travel Choice Neighborhoods	1.2 million	↑↑	↑	—	↑↑	↑↑	—	—	—	↓
Daily Greenhouse Gas Emissions (tons)	25,700	↓	—	—	↓	↓	—	—	—	—
Daily Fuel Consumption (gallons)	2.7 million	↓	—	—	↓	↓	—	↓	—	—
Acres of Land Developed 2020-2050	162,000	↓↓↓	—	↓	↓↓↓	↓↓↓	—	—	—	↑↑

- ↑ or ↓ indicates whether a scenario has a higher (↑) or lower (↓) performance result compared to the baseline. ↑ or ↓ indicates that a result is "better" than the baseline, while ↑ or ↓ indicates that a result is "worse" than the baseline.
- Amounts of change: "—" indicates no change or very small change (less than +/-1%); ↑ indicates a change between +/-1% and +/-10%; ↑↑ is a change between +/-10% and +/-50%; and ↑↑↑ shows a change of greater than +/-50%.

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Transit-Focused Scenario Results

Transit-focused Scenario Purpose

The goal of this scenario is to test the outcomes of a future in which large investments are made in transit services and infrastructure, resulting in a doubling of service frequencies, and all future growth is funneled into areas with access to Bus Rapid Transit (BRT), Commuter Rail, and/or high-frequency bus transit routes. It provides a picture of the impacts that these types of changes could have on the regional transportation system.

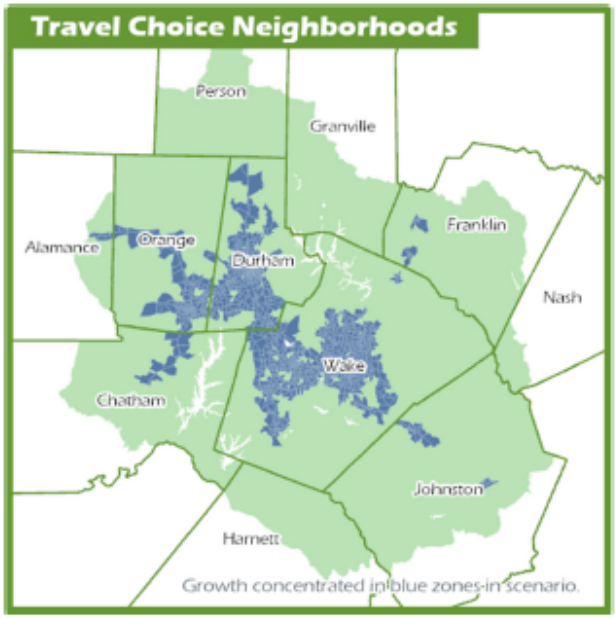
How was the Transit-focused Scenario defined?

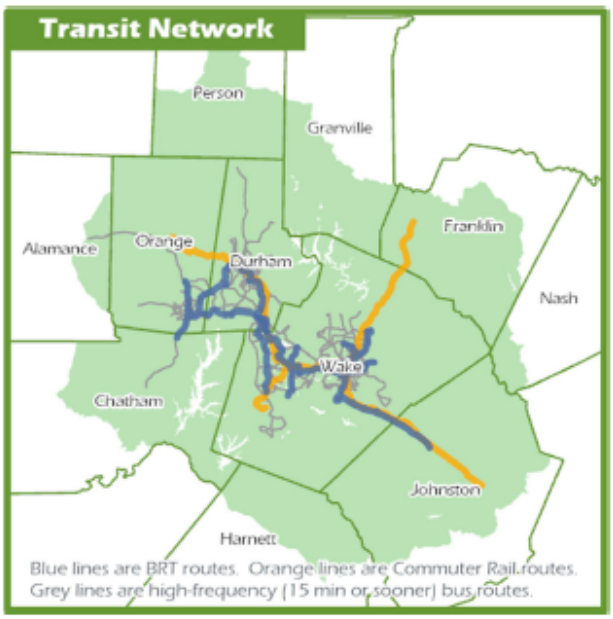
Land Use/Development Assumptions

In this scenario, we assumed that all future development between 2020 and 2050 would occur within "travel choice neighborhoods", which are neighborhoods located near planned BRT and commuter rail stations, or along bus routes with service every 15 minutes (or less), within walking distance.

Transportation Network Assumptions

For this scenario, all planned BRT and commuter rail facilities from the 2050 MTP were assumed to be in place, and frequencies of service on all transit lines were assumed to be doubled (e.g. a bus line with 2 buses per hour (30-minute service) in the MTP would have 4 buses per hour (15-minute service) in this scenario.





Is this scenario's development pattern feasible?

We know that market forces will result in some portion of future development occurring outside the transportation choice neighborhoods, but for the purposes of this exercise we should test whether it is possible to locate all future development in these areas based on existing land use plans. There is significant capacity available for future development in these zones, but not enough to accommodate all of the types of anticipated growth in all locations. In order to fit the planned growth in these areas, the densities of future housing growth in some locations would need to be as much as **8.5 times higher** and employment density in some locations as much as **2 times higher** than currently planned.

Transit-Focused Scenario Outcomes

Roadway Travel Time and Congestion

The transit-focused scenario shows **mixed, but mostly neutral or positive, results** with regard to roadway travel time and congestion performance measures; this is at least partly due to the scenario including all the same highway improvements as the 2050 MTP baseline and simply adding additional transit services on top of that.

Reduces vehicle miles traveled (VMT), both total and per capita, by about **5%** compared to the baseline, or **5 million** fewer per day.

Reduces the amount of VMT occurring in congested conditions by **0.6%** and the peak period congested travel distance by **3.5%**.

Increases total systemwide hours of delay by about **2%** from 236,000 hours to 240,000 hours when compared to the baseline.

Negligible impact on average congested travel time by automobile (increases by less than 0.1%).

Accessibility & Alternate Modes

As might be expected, this scenario performs well on measures related to accessibility and non-auto travel modes as compared to the 2050 MTP baseline. Of particular note, it **more than doubles** the number of households in the region that would be located near high-quality transit services (about 2 million) as compared to the baseline (about 900,000).

Increases transit ridership by **34%** as compared to the baseline scenario (adding **135,000** daily trips).

Reduces congested travel times on transit by **4%** overall, with a **4.4%** reduction for low-income households compared to baseline.

Increases the number of jobs within 30 minutes of low-income households by **26%** by transit, **4%** by walking, and **1%** by auto..

Increases the number of jobs in areas near high-quality transit services by **36%** and the number of households near transit by **120%**.

Environment, Health & Quality of Life

The transit-focused scenario generally had **positive impacts** on environment, health, and quality of life metrics.

Reduces the amount of land consumed by future development by **63%** compared to the baseline, or **>100,000** fewer acres developed.

Reduces estimated Greenhouse Gas (GHG) emissions by **5%** compared to the baseline, for over **1,200** fewer tons of emissions daily.

Reduces estimated vehicle fuel consumption by **5%** compared to the baseline, for approximately **133,000** fewer gallons used per day.

What did we learn from the Transit-Focused Scenario?

While it is unreasonable to assume all future growth would occur in transit-accessible areas of the region, it is clear that there are real **transportation system benefits** to allowing and encouraging some amount of additional development to occur in these areas, and to invest in improvements that expand the reach of the high-quality/high-frequency transit network in the region. Potential **positive benefits** include reductions in vehicle miles traveled, improved job accessibility by transit and walking, reduced fuel consumption and greenhouse gas emissions, and reduced transit travel times. While the changes in development patterns would result in a small increase in hours of delay, most of the other roadway metrics studied would be **neutral or slightly improved** in this scenario.

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Equity-focused Scenario Results

Equity-focused Scenario Purpose

The intent of this scenario is to examine different options for development patterns, housing policies, and transportation investments that could result in improved equitability in transportation outcomes between disadvantaged and non-disadvantaged communities. In combination, these can provide information about the potential impacts of different policy decision making actions on the equitability of transportation system outcomes. It should be noted that most of the assumptions in these scenarios depend heavily on decisions about land use and housing policies that are beyond the purview of a transportation plan to address, but are nonetheless critical to consider as factors on transportation results.

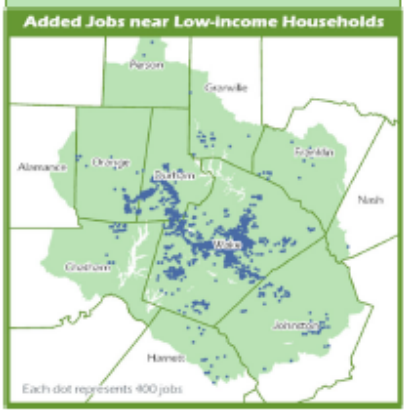
How was the Equity-focused Scenario Defined?

Three different options were tested for this scenario:

Option A

Moving Jobs to People

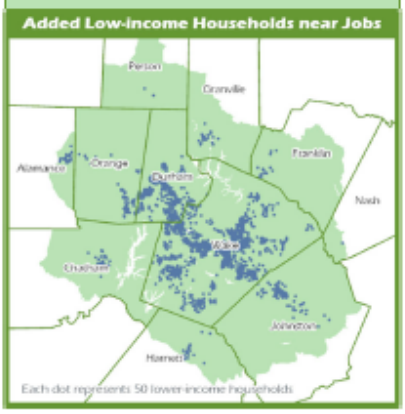
- Examined the effects of moving more future job growth to be located near areas with higher concentrations of disadvantaged residents
- In concept, by locating more future jobs in or near lower-income communities it should improve access both to jobs and to retail and services for residents of those communities
- Placed future job growth in areas in/near existing zones with more low-income and/or zero-car households



Option B

Moving People to Jobs

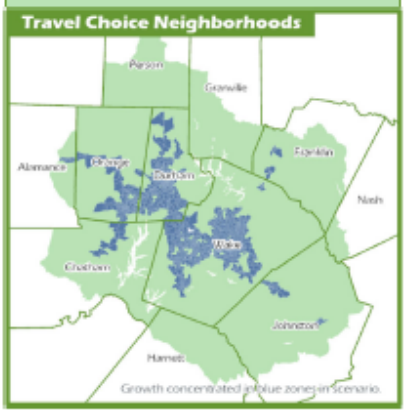
- Examined the effects of moving more future lower-income/affordable housing to be located near areas with higher anticipated future job growth
- In concept, by locating more affordable housing near growing/future job centers it should allow more low-income residents an opportunity to live near their job and reduce their commuting burden
- Placed future low-income household growth in zones near future job growth



Option C

Transit + Equity

- Examined the effects of proactively focusing future affordable housing in areas near high-quality/high-frequency transit services
- In concept, by ensuring more affordable housing is built near transit corridors/services it should improve lower-income and zero-car residents' access to both jobs and retail/services
- Used same job/housing growth locations from transit-focused scenario, but with higher proportion of low-income



Equity-Focused Scenario Outcomes

Option A: Moving Jobs to People

This scenario option shows **mixed results**, with some key measures showing improvement over the 2050 baseline but the majority of measures showing either negligible or negative benefits. The positive benefits are related to **higher transit service and ridership, and improved job access by transit and walking**. Negative outcomes are primarily related to **higher delay and congested auto travel times and reduced job access by auto**. Most other measures are comparable to the baseline, with no major impact on outcomes.

- **Increases** transit ridership by **8%** and transit passenger miles by **9%**
- **Increases** job access for low-income areas by transit and walking by **9-10%**, and for high-zero-car areas by **11-12%**

- **Increases** congested VMT by **3%**
- **Increases** hours of delay by **5%**, and by **6%** for low-income households
- **Reduces** jobs within 30 minutes by auto from low-income areas by **2%**

Option B: Moving People to Jobs

This scenario option shows **largely positive results**, some significant, with relatively fewer negative results as compared to the baseline. The positive benefits are related to **higher transit service and ridership, fewer hours of delay for poverty and zero-car households, improved job access by all modes, and less land consumed by development**. Negative outcomes are primarily related to **longer congested travel times by transit for low-income households** and **fewer low-income households located in transit-accessible neighborhoods**.

- **Increases** transit passenger miles by **9%**
- **Reduces** hours of delay for low-income households by **27%**
- **Increases** job access for low-income areas by transit **30%**, auto **5%**, & walking **9%**

- **Increases** congested travel time by transit for low-income households by **4%**
- **Reduces** number of low-income households within "travel choice neighborhoods" by **2%**

Option C: Transit + Equity

This scenario option shows **the most significant positive results of the three equity scenarios**. Most measures show positive outcomes, but the most significant are related to **higher transit service and ridership, improved job access by all modes, and less land consumed by development**. However, the few negative outcomes are directly affecting low-income and zero-car households: **higher hours of delay for both of these population groups and longer congested travel times by transit for low-income households**.

- **Reduces** overall VMT by **6%**
- **Increases** transit passenger miles by **43%**
- **Increases** job access for low-income areas by transit **54%**, auto **10%**, & walking **22%**
- **Reduces** land consumption by **63%**

- **Increases** hours of delay for low-income households by **24%**, and for zero-car households by **34%**
- **Increases** congested travel times by transit for low-income households by **7%**

What did we learn from the Equity-Focused Scenario?

The analysis suggests that in order to address concerns of equity with regard to transportation system performance and future development patterns, some combination of policies that **promote more affordable housing in areas proximate to emerging job centers** and policies that **promote more affordable housing in areas served by high-quality transit services** would likely have the biggest positive impacts. However, it should be noted that these types of housing policy decisions are greatly affected by factors outside of the transportation planning process and may require significant actions by local governments in order to implement.

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VMT Reduction Scenario Results

The purpose of the VMT Reduction scenario is to identify and analyze potential land use, transportation, and policy factors that could be combined to minimize the growth of vehicle miles traveled (VMT) in the region in the future. As the Triangle Region adds 1 million residents over the next 30 years, some amount of VMT growth is likely inevitable, but this scenario identifies multiple potential methods and tools with the greatest potential for limiting future VMT growth.

How was the VMT Reduction Scenario defined?

Based on analysis using the regional travel demand model, staff identified four primary factors that would have the most impact in terms of reducing future vehicle miles traveled:

Concentration of Development in Areas Served by High-quality/High-frequency Transit ("Travel Choice Neighborhoods")

- Enables more trips to be possible by transit and walking, reducing the need for auto trips
- For purposes of this scenario, assumes all future growth occurs in the Travel Choice Neighborhoods (similar to the Transit-focused Scenario)

Increasing Transit Frequencies/Reducing Headways between Transit Vehicles

- Increases likelihood of selecting transit as a travel mode by reducing transit vehicle wait times
- For purposes of this scenario, assumes the same transit services as shown in the 2050 MTP, but with double the frequency (similar to the Transit-focused Scenario)

Instituting a VMT Fee

- A VMT fee is a method of charging a per-mile fee for the use of a motor vehicle
- This scenario is agnostic about the specific mechanics of how a fee might be administered
- For purposes of this scenario, assumes a fee rate of 5 cents per mile on all non-tolled roadways

Increasing the Rate of Working from Home

- Reduces demand for trips, particularly during peak AM and PM commute periods
- For purposes of this scenario, assumes that approximately 20% of home-to-work commute trips are removed (focusing on office and service job types) due to increased work-from-home

To make it easier to equitably compare the results of this VMT reduction scenario with the Transit-focused scenario, both use the same assumptions about the location of development and the location/frequency of transit improvements. This allows a cleaner comparison of the impacts of the development concentration and transit frequency VMT-reduction factors (which match the Transit-focused scenario) against the impacts of the VMT fee and teleworking factors (which are only in this scenario).

The 2050 Metropolitan Transportation Plan (baseline for comparison) shows an increase in VMT from approximately **55 million** miles per day in 2020 to **89 million** miles per day in 2050, an increase of over **60%** in the next 30 years. However, this increase is attributable to the growth of the region, rather than from individuals driving more. The per-capita VMT rate remains steady around **27 miles** per day in both 2020 and 2050. So any future VMT reductions compared to baseline *in the scenarios* would be a per-capita VMT reduction from today.

VMT Reduction Scenario Outcomes

Roadway Travel Time and Congestion

The VMT reduction scenario shows **positive results** on most performance measures across the board, including the roadway and congestion measures; the focus that this scenario has on actions to minimize VMT growth and reduce VMT per capita also has the benefit of improving congestion metrics as compared to the baseline scenario.

Reduces vehicle miles traveled (VMT), both total and per capita, by about **8%** compared to the baseline, or **7 million** fewer per day.

Reduces the amount of VMT occurring in congested conditions by **12%** and the peak period congested travel distance by **8%**.

Reduces total systemwide hours of delay by about **9%** from 236,000 hours to 215,000 hours when compared to the baseline.

Reduces the share of auto trips taken by single-occupancy auto by **1.7%** and average congested travel time by **1.6%**.

Accessibility & Alternate Modes

Due to the transit improvements and denser, transit-supportive development pattern of this scenario, it **performs well** on accessibility, transit, and walking measures. Similar to the transit-focused scenario, it **more than doubles** the number of households in the region that would be located near high-quality transit services as compared to the baseline.

Increases transit ridership by **45%** as compared to the baseline scenario (adding **180,000** daily trips).

Reduces congested travel times on transit by **4.7%** total, with a **5.3%** reduction for low-income households compared to baseline.

Increases the number of jobs within 30 minutes of low-income households by **27%** by transit, **4%** by walking, and **4%** by auto..

Increases the number of jobs in areas near high-quality transit services by **36%** and the number of households near transit by **120%**.

Environment, Health & Quality of Life

The VMT Reduction scenario generally had **positive impacts** on environment, health, and quality of life metrics.

Reduces the amount of land consumed by future development by **63%** compared to the baseline, or **>100,000** fewer acres developed.

Reduces estimated Greenhouse Gas (GHG) emissions by **7.5%** compared to the baseline, for over **1,900** fewer tons of emissions daily.

Reduces estimated vehicle fuel consumption by **7.5%** compared to the baseline, for approximately **200,000** fewer gallons used per day.

What did we learn from the VMT Reduction Scenario?

Pursuing actions that result in reduced growth of VMT and reduced vehicle miles traveled per capita **would have a positive impact** on many of CAMPO and DCHC MPO's goals and performance measures, typically being the most improved among all scenarios, particularly for the environment and quality of life related measures. However, the assumptions made in crafting this scenario are relatively extreme; more modest, realistic policy interventions would likely result in more modest results in turn. By pairing the telework and VMT fee assumptions of this scenario with the land use and transportation investments of the transit-focused scenario it yielded greater improvements than the transit-focused scenario was able to accomplish alone.

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Flexible Funding Scenario Results

Unlike many of the other scenarios, the Flexible Funding Scenario is focused on the issue of transportation funding, and some of the limitations imposed on the Metropolitan Transportation Planning process as a result of funding constraints. This scenario has been created to enable the MPOs to consider the different transportation investment decisions that could be made if funding restrictions and rules were to change, and the impacts of those alternative investment choices.

How was the Flexible Funding Scenario defined?

Three transportation investment scenarios were created based on the following assumptions about funding rules and constraints:

Option A

- No change in the total amount of funding available for capital projects
- Removal of restriction that Strategic Transportation Investments (STI) funds must be spent only within the separate Statewide Mobility, Regional Impact, and Division Needs project categories
- Flexibility to spend STI funds on projects in any category

Option B

- No change in the total amount of funding available for capital projects
- Removal of all restrictions that the Strategic Transportation Investments (STI) places on funding, including the categories discussed in Option 1, as well as removal of caps or restrictions on certain transportation modes or corridors
- Flexibility to spend STI funds on any project

Option C

- A shift of more money toward maintenance and operations needs over time results in less funding available for capital projects
- Assumes that funding mix shifts from current one-third to maintenance/operations & two-thirds to capital/expansion, to a future funding split of half to maintenance/operations and half to capital/expansion

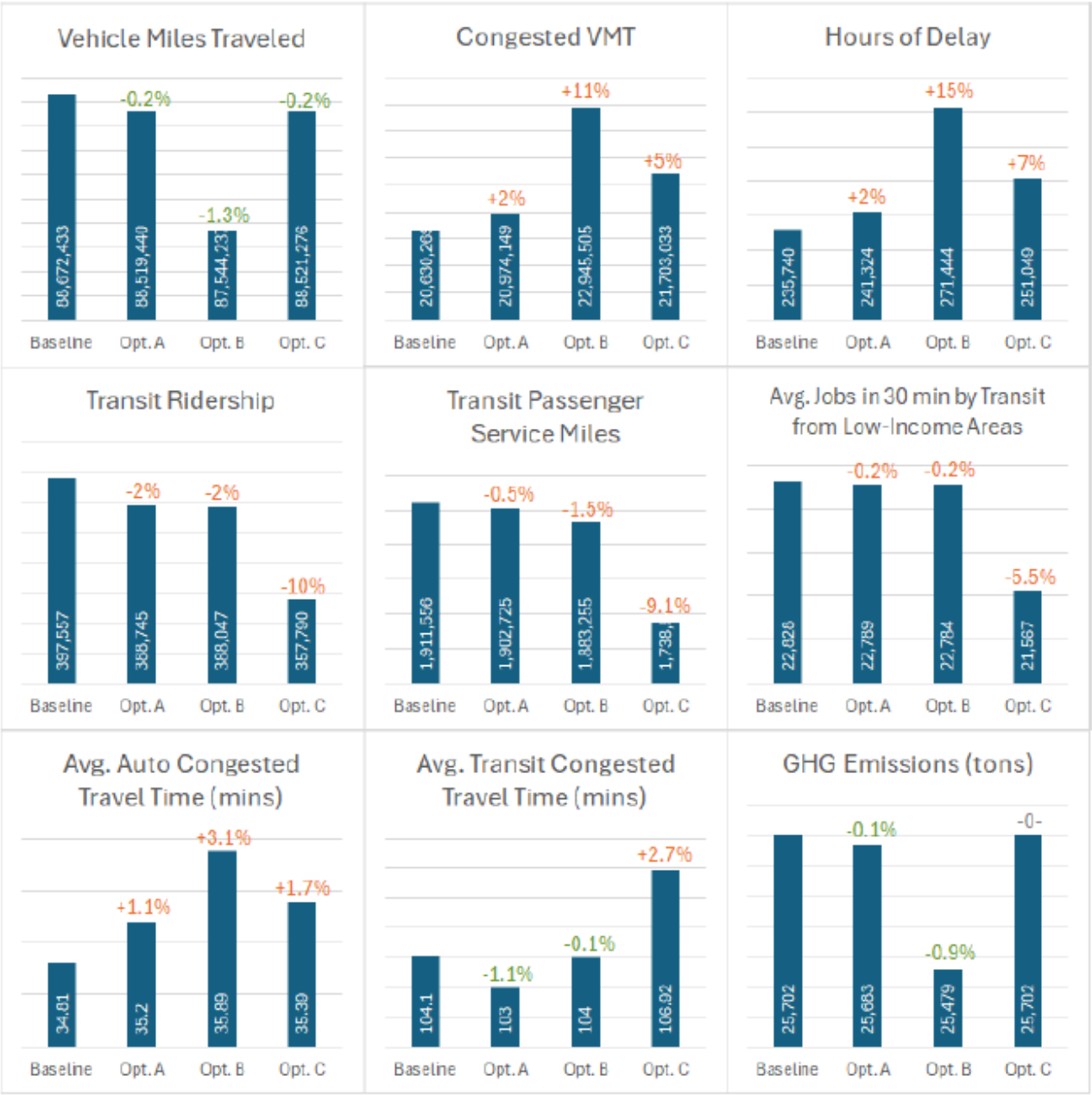
Starting from the existing 2050 MTP project list, each MPO developed a new project list for each option:

- For the CAMPO area, staff created a project list based on their standard methodology for selecting MTP projects, but without Statewide/Regional/Division category restrictions. In practice, this led to a list with many **additional projects in the Division Needs category** than under the typical STI rules.
- For the DCHC MPO area, the existing 2050 MTP project list had already assumed this type of change could happen so **no additional changes** were needed.

- For the CAMPO area, staff created a project list based on their standard methodology, but without any STI restrictions such as funding categories or transit/bike/ped modal funding caps. This led to a list with **additional projects in the Division Needs category and additional non-roadway projects**.
- For the DCHC MPO area, the existing 2050 MTP project list had already assumed this type of change could happen so **no additional changes** were needed.

- For both the CAMPO and DCHC MPO areas, Option C results in less funding available for capital/expansion projects, requiring staff to cut back the existing 2050 MTP project list based on their typical project selection methodologies.
- This resulted in a **smaller set of future projects** being tested in the scenario. However, it also means a **larger amount of funding** for such items as road resurfacing, bridge replacement, and roadside maintenance.

Flexible Funding Scenario Outcomes



What did we learn from the Flexible Funding Scenario?

There are tradeoffs in all decision making, and the results of each of these analyses are mixed. All three options **reduced VMT and greenhouse gas emissions but also increased congestion and delay**, with Option B seeing the largest changes in this regard. **Travel times for autos are higher** than the 2050 baseline in all three options, but **transit travel times are slightly improved** in Options A and B. While all three options would result in **lower transit ridership** than the baseline, Option C is particularly hard hit by this given the lower amount of funding available for projects in that scenario.

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Highway-Focused Scenario Results

Highway-focused Scenario Purpose

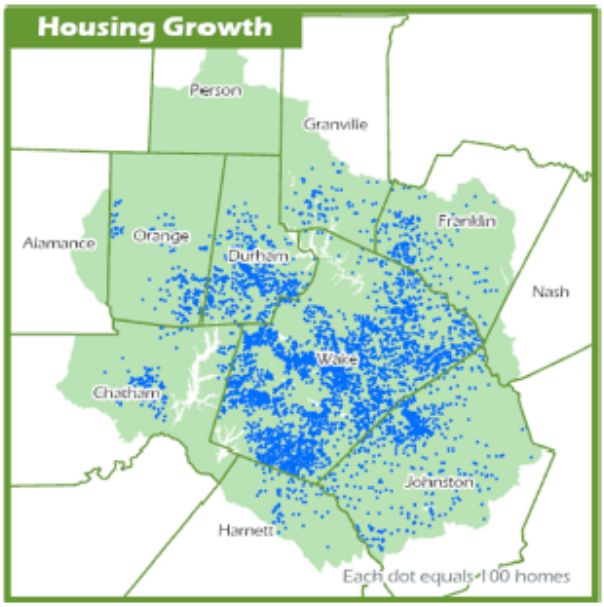
The Triangle Region is projected to add approximately 1 million new residents between 2020 and 2050. This scenario assumes land use patterns are lower-density and highway-oriented and transportation investments are directed toward major highway expansions. It answers questions about the impacts of continued low-density expansion on the transportation network and how investments in major highways compares with other investment options.

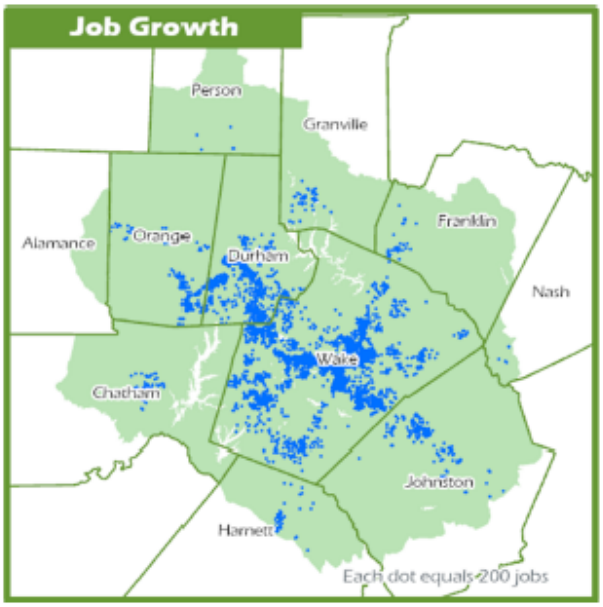
How was the Highway-focused Scenario defined?

Land Use/Development Assumptions

For the Highway Scenario we developed a future development/growth forecast that disperses development more broadly across the Triangle region at lower densities and that focuses future development primarily around access to the highway network. The overall amount of growth assumed to happen within each county did not change—only the location and density of the development within each county.

The maps below show the distribution of new housing units and new jobs added between 2020 and 2050 in the Highway Scenario. Each dot represents 100 added homes or 200 added jobs between 2020 and 2050.





Transportation Network Assumptions

The transportation network for this scenario is largely the same as the baseline scenario, but with one major difference: the number of lanes on freeways and expressways in this scenario is doubled, increasing the capacity of the region's main highways. For example, a freeway with 6 lanes in the baseline scenario has 12 lanes in the highway scenario.

Highway-Focused Scenario Outcomes

Roadway Travel Time and Congestion

As might be expected from a scenario that focuses on major investments in highway widening projects (doubling of freeway and expressway lane miles), there are **improvements in a number of the roadway congestion measures**. However, the impact of these improvements on overall regional performance measures is **tempered by the large, costly investment in major roadway widenings**.

Reduces average AM peak period commute travel times (by auto) from **35 minutes** in the baseline to **32 minutes** (**9%** reduction).

Reduces total systemwide hours of delay by **86%**, from 236,000 hours to 32,000 hours when compared to the baseline.

Increases vehicle miles traveled (VMT), both total and per capita, by about **7%** as compared to the baseline scenario.

Increases highway lane miles by **9%** compared to the baseline, by adding **2,156** miles of new freeway/expressway lanes (doubling).

Accessibility & Alternate Modes

As a scenario that focuses on improvements to the highway network and the dispersion of future growth at a lower density, this scenario results in **lower transit ridership and lower access to jobs by alternate modes of transportation** (walking, biking, transit), but does show improvements in job accessibility by automobile.

Reduces transit ridership by **8.5%** as compared to the baseline scenario (from 398,000 daily trips to 364,000 daily trips).

Increases the number of jobs within 30 minutes of low-income households by automobile by **22%**.

Reduces the number of jobs within 30 minutes of low-income households by **4%** for transit trips and by **10%** for walking trips.

Reduces the number of jobs in areas near high-frequency transit services by **10%** & the number of households near transit by **6%**.

Environment, Health & Quality of Life

The highway-focused scenario generally had the **largest negative impacts** on environment, health, and quality of life metrics out of all the tested scenarios.

Increases the amount of land consumed by future development by **22%** compared to the baseline, or **35,000** additional acres developed.

Increases estimated Greenhouse Gas (GHG) emissions by **0.5%** compared to the baseline, for over **100** additional tons of emissions daily..

Increases estimated vehicle fuel consumption by **0.5%** compared to the baseline, or about **15,000** additional gallons used per day.

What did we learn from the Highway-Focused Scenario?

Massive, costly investments in freeway widening projects **could lead to reductions** in overall regional automobile congestion and delay metrics. However, localized congestion on many non-freeway road segments, particularly those that connect with freeways, **could also get worse** as more drivers are attracted to make more (and longer) trips using the expanded freeway network. This scenario would result in less usage of alternative modes such as walking and transit, and consume more land with future development.

Summary of Scenario Outcomes—CAMPO

Comparison of 2050 Baseline Data with Each Tested 2050 Scenario (CAMPO Area Only)

Performance Measures	2050 MTP Baseline	Transit-focused	Equity-focused A	Equity-focused B	Equity-focused C	VMT Reduction	Flexible Funding A	Flexible Funding B	Flexible Funding C	Highway-focused
CAMPO Area Population	2.3 million	↑	—	—	↑	↑	—	—	—	—
CAMPO Area Jobs	1.3 million	—	↓	—	—	—	—	—	—	—
Highway Lane Miles	10,000	—	—	—	—	—	↓	↓↓	↓	↑
Daily Vehicle Miles Traveled (VMT)	60 million	↓	—	—	↓	↓↓	—	↓	—	↑
Daily VMT Per Capita	25.6	↓	—	—	↓	↓↓	—	↓	—	↑
Daily Transit Ridership	Data currently only available at regionwide level (see regional summary table)									
Daily Transit Passenger Service Miles										
Daily Transit Service Miles										
Single-occupancy Vehicle (SOV) Share of Auto Trips	72.1%	—	—	—	—	↓	—	—	—	—
Daily Congested Vehicle Miles Traveled	13 million	↓	↑	↓	↓	↓↓	↑	↑↑	↑	↓↓↓
Average SOV Auto Congested Travel Time (AM, min)	25.3	—	—	—	—	↓	—	↑	↑	↓
Average SOV Auto Congested Travel Distance (AM, mi)	2.9	↓↓	↓	↓	↓↓	↓↓	↑↑	↑↑	↑↑	↓↓↓
Daily Hours of Delay (all trips)	140,000	↑	↑	↓	—	↓↓	↑	↑↑	↑	↓↓↓
Daily Hours of Delay for Poverty Households	800	↑	↑↑	↓↓	↑↑	↓↓	↑	↑↑	↑	↓↓↓
Daily Hours of Delay for Zero-car Households	800	↑↑	↑↑	↓↓	↑↑↑	↑	—	↑	↑	↓↓↓
Average Transit Congested Travel Time (AM, minutes)	106	↓	—	↓	↓	↓	—	—	—	↓
Transit Congested Travel Time for Poverty Zones	19.6	↓	—	↑	↑↑	↓	—	—	—	↓
Transit Congested Travel Time for Zero-car Zones	35.0	—	—	↓	↑	↓	—	↑	↑	↓
Auto Congested Travel Time for Poverty Zones	4.5	↓	—	—	—	↓	—	↑	↑	↓
Average Jobs within 30 mins by Transit, Zero-car zones	65,000	↑↑	↑↑	↑	↑↑	↑↑	—	—	—	↓↓
Average Jobs within 30 mins by Walk, Zero-car zones	42,000	↑↑	↑↑	—	↑↑	↑↑	—	—	—	↓
Average Jobs within 30 mins by Transit, Poverty zones	30,000	↑↑	↑↑	↑↑	↑↑↑	↑↑	—	—	—	↓
Average Jobs within 30 mins by Auto, Poverty zones	1.1 million	—	↓	↑	↑↑	↑	—	↓	—	↑
Average Jobs within 30 mins by Walk, Poverty zones	19,000	↑	↑↑	↑↑	↑↑	↑	—	—	—	↓↓
% Poverty Households in Travel Choice Neighborhoods	37%	↑↑	—	↓	↑↑	↑↑	—	—	—	↓
Household Population in Travel Choice Neighborhoods	591,000	↑↑↑	—	↓	↑↑↑	↑↑↑	—	—	—	↓
Jobs in Travel Choice Neighborhoods	751,000	↑↑	↑	—	↑↑	↑↑	—	—	—	↓↓
Daily Greenhouse Gas Emissions (tons)	17,000	↓	↑	—	↓	↓	↑	—	—	↑
Daily Fuel Consumption (gallons)	1.8 million	↓	—	—	↓	↓	—	—	—	↑
Acres of Land Developed 2020-2050	111,000	↓↓↓	—	↓	↓↓↓	↓↓↓	—	—	—	↑↑

- ↑ or ↓ indicates whether a scenario has a higher (↑) or lower (↓) performance result compared to the baseline. ↑ or ↓ indicates that a result is "better" than the baseline, while ↑ or ↓ indicates that a result is "worse" than the baseline.
- Amounts of change: "—" indicates no change or very small change (less than +/-1%); ↑ indicates a change between +/-1% and +/-10%; ↑↑ is a change between +/-10% and +/-50%; and ↑↑↑ shows a change of greater than +/-50%.

Summary of Scenario Outcomes—DCHC

Comparison of 2050 Baseline Data with Each Tested 2050 Scenario (DCHC MPO Area Only)

Performance Measures	2050 MTP Baseline	Transit-focused	Equity-focused A	Equity-focused B	Equity-focused C	VMT Reduction	Flexible Funding A	Flexible Funding B	Flexible Funding C	Highway-focused
DCHC MPO Area Population	660,000	↑	—	↑	↑	↑	—	—	—	—
DCHC MPO Area Jobs	520,000	↑	↑	—	↑	↑	—	—	—	—
Highway Lane Miles	2,700	—	—	—	—	—	—	—	—	↑↑
Daily Vehicle Miles Traveled (VMT)	18 million	—	—	—	—	↓	—	—	—	↑↑
Daily VMT Per Capita	27.5	↓	—	↓	↓	↓	—	—	—	↑↑
Daily Transit Ridership	Data currently only available at regionwide level (see regional summary table)									
Daily Transit Passenger Service Miles										
Daily Transit Service Miles										
Single-occupancy Vehicle (SOV) Share of Auto Trips	75.3%	—	—	—	—	↓	—	—	—	—
Daily Congested Vehicle Miles Traveled	5.5 million	—	↑	↓	—	↓	↑	—	↑	↓↓↓
Average SOV Auto Congested Travel Time (AM, min)	16.5	—	—	—	—	—	—	—	—	↓
Average SOV Auto Congested Travel Distance (AM, mi)	2.2	—	—	↑	↓	↓	—	—	—	↓↓↓
Daily Hours of Delay (all trips)	52,000	↑	↑	↑	—	↓↓	↑	—	↑	↓↓↓
Daily Hours of Delay for Poverty Households	200	↑	—	↓↓	↑↑	↓↓	—	—	↑	↓↓↓
Daily Hours of Delay for Zero-car Households	200	↑	↓	↑	↑	↓↓	—	—	—	↓↓↓
Average Transit Congested Travel Time (AM, minutes)	89	↓	—	↓	↓	↓	—	—	↑	↓
Transit Congested Travel Time for Poverty Zones	31.7	↓	—	—	—	↓	—	—	↑	—
Transit Congested Travel Time for Zero-car Zones	37.0	↓	—	↓	↓	↓	—	—	↑	↓
Auto Congested Travel Time for Poverty Zones	5.0	↑	—	↑	↑	—	—	—	—	↓
Average Jobs within 30 mins by Transit, Zero-car zones	36,000	↑↑	↑	↑↑	↑↑	↑↑	—	—	↓	↓
Average Jobs within 30 mins by Walk, Zero-car zones	36,000	↑	↑	↑	↑	↑	—	—	—	↓
Average Jobs within 30 mins by Transit, Poverty zones	25,000	↑↑	↑	↑↑	↑↑	↑↑	—	—	↓↓	↓↓
Average Jobs within 30 mins by Auto, Poverty zones	1.1 million	—	↓	↑	↑	↑	↓	↓	↓	—
Average Jobs within 30 mins by Walk, Poverty zones	25,000	—	↑	↑	—	—	—	—	—	↓
% Poverty Households in Travel Choice Neighborhoods	64%	↑↑	—	—	↑↑	↑↑	—	—	—	↓
Household Population in Travel Choice Neighborhoods	308,000	↑↑↑	—	↑	↑↑↑	↑↑↑	—	—	—	↓
Jobs in Travel Choice Neighborhoods	416,000	↑↑	↑	—	↑↑	↑↑	—	—	—	↓
Daily Greenhouse Gas Emissions (tons)	5,000	↑	↑	—	—	↓	—	↑	—	↑
Daily Fuel Consumption (gallons)	554,000	↑	↑	—	—	↓	—	↑	—	↑
Acres of Land Developed 2020-2050	16,000	↑↑	↓	—	↑↑	↑↑	—	—	—	↑↑

- ↑ or ↓ indicates whether a scenario has a higher (↑) or lower (↓) performance result compared to the baseline. ↑ or ↓ indicates that a result is "better" than the baseline, while ↑ or ↓ indicates that a result is "worse" than the baseline.
- Amounts of change: "—" indicates no change or very small change (less than +/-1%); ↑ indicates a change between +/-1% and +/-10%; ↑↑ is a change between +/-10% and +/-50%; and ↑↑↑ shows a change of greater than +/-50%.

Appendix 15: Alternatives Analysis

This appendix is intended to clarify what scenarios are in the context of the *Destination 2055* alternatives analysis, to describe these alternative scenarios, and to provide clear labels and terminology for use in communicating this information.

Overview

A scenario describes a way that a future *might* be, but it is not the same as a forecast (a prediction of the way the future *will* be) or a plan (a statement of the way the future *should* be). Since it is very difficult to know what the future will actually be like, we go through a process of developing multiple alternative future scenarios to understand the potential impacts of different variables. These alternative scenario characteristics are asserted based on both evidence and judgment – making these assertions and the reasoning behind them both explicit and transparent is key to the effective creation and analysis of alternatives.

Scenarios are most helpful in understanding how *realistic changes* to current trends or current adopted plans might influence mobility and access. In theory, just about any variable could be part of a tested scenario; however, since the purpose of *Destination 2055* is to make informed decisions about mobility investments (largely in response to anticipated growth) we decided early in the process to focus on two overarching variables in building the alternative scenarios – decisions about future land use patterns and decisions about future transportation investment choices.

There are two fundamental foundations to each alternative scenario:

- A ***development foundation*** that describes a regional pattern of land use/future development; and
- A ***mobility investment foundation*** that defines the road, transit, cycling, and pedestrian networks and transportation services that could be invested in or implemented in relation to the proposed land development pattern.

The two foundations can be combined in different ways to form a matrix of alternative analysis scenarios, as shown in Figure A15.1. The highlighted combinations represent those that were analyzed as part of the *Destination 2055* process.

This appendix describes a number of potential ways to *build* alternative scenarios; however, only a subset of these potential alternative scenarios was *analyzed* using CommunityViz and the Triangle Regional Model to report results and performance measures in the MTP. Based on the outcome of the alternatives analysis, a "Preferred Scenario" was then developed to serve as the basis for creating the final adopted plan.

In Winter 2023-24, a pre-MTP scenario analysis was conducted with the intent of creating a number of "learning scenarios" designed to answer a variety of what-if questions and more extreme/less realistic possibilities. Applicable lessons that were learned from those pre-MTP scenarios have been incorporated into the alternatives that were studied for *Destination 2055*. Because the learning scenarios had already addressed some of the more extreme what-if

questions, the scenarios tested for *Destination 2055* focused on more realistic options that reasonably align selected development foundations with similar/related mobility investment foundations as shown in Figure A15.1.

Figure A15.1: *Destination 2055* Scenario Framework

		Mobility Investment Foundation				
		E Existing & Committed	T Trend	M Mobility Corridors	C Complete Communities	U Unconstrained
Development Foundation	P Community Plans	Deficiency & Needs Scenario	Plans & Trends Scenario	Shared Leadership Scenario		
	O Opportunity Places				All Together Scenario	
	B Build Out					

Note: moving from left to right, and from top to bottom, each scenario builds on the elements of the preceding scenarios.

Alternative Scenario Characteristics & Definitions

This section outlines the characteristics of each of the potential Development Foundations and Mobility Investment Foundations that can be used to create alternative scenarios.

Development Foundations

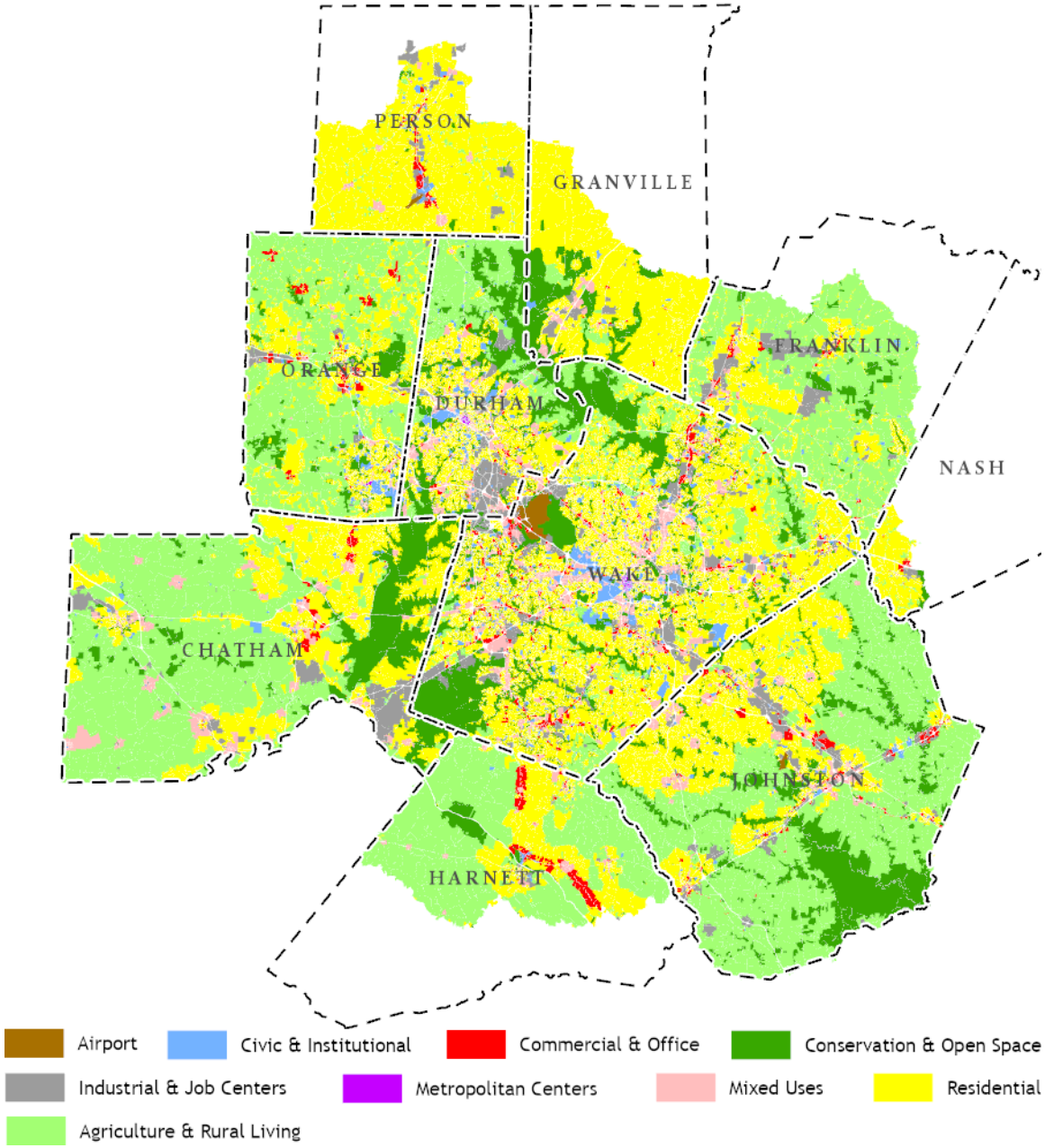
Transportation serves development, so it is important to first define the development foundation of each scenario. Scenarios can be based on existing development patterns or existing policies such as local land use plans, or based on other policy-driven factors to shift development toward or away from certain locations of features or asserting development in certain locations or situations for policy reasons.

P Community Plans

The Community Plans development foundation is based on the future land use category designations shown on locally-adopted land use plans (or the most-likely future land use designations based on a local plan that is currently in-development). Initial input for this was gathered from local communities in late 2023/early 2024, and local staff were given an opportunity to review and provide corrections to this data in late 2024. This information is fed into the CommunityViz land use model as "place type" information that shows what type and

density of development is possible within a particular location and "development status" information that shows whether a specific location is developable in the future or not.

Figure A15.2: Generalized Land Uses Reflected in Community Plans



Note: Parcel-based information has been aggregated from the original 42 placetype categories into the more generalized categories above to make the map easier to read.

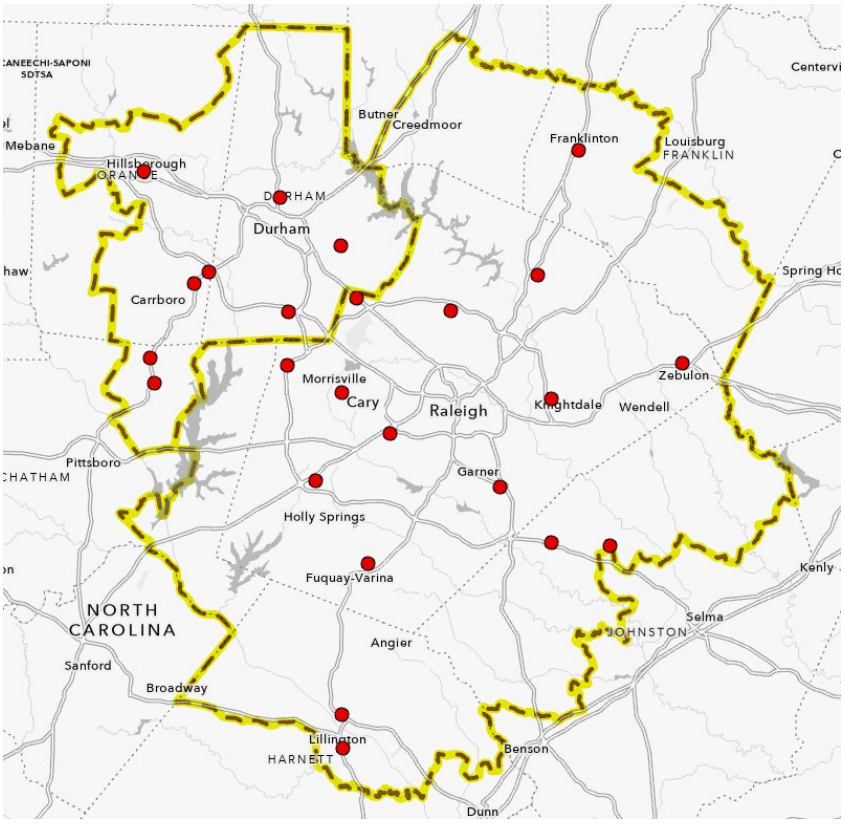
O Opportunity Places

Much of the Opportunity Places development foundation is built upon the same assumptions as the Community Plans foundation. However, there are four discrete types of defined

"Opportunity Places" where there are changes in land uses and densities as compared to the Community Plans development foundation:

- *Anchor Institutions* where future development was asserted in the Community Plans foundation—Duke University, NC Central University, NC State University, and UNC Chapel Hill. Each of these anchor institutions has an asserted 20% increase in its job growth.
- *Mobility Hubs* along major corridors at designated activity centers, largely taken from centers identified in other studies. For undeveloped or redevelopable parcels in each Mobility Hub area, underlying assumptions about the future land use of the parcel are modified to allow transit-supportive densities of future development. Figure A15.3 shows the locations of these defined mobility hubs.
- *Affordable Housing Opportunity Sites*, where new legally-binding affordable housing could be placed on publicly-owned property in close proximity to frequent transit services. A total of 10,000 future added multi-family residential units are asserted in these areas.
- *Equitable Transit-Oriented Development (TOD)* - Parcels that are coded as undeveloped, underdeveloped or redevelopable in the Community Plans development foundation and are within ½ mile of a frequent transit service, rail station, or Bus Rapid Transit station. For these parcels, underlying assumptions about the future land use of the parcel are modified to allow transit-supportive densities of future development.

Figure A15.3: Mobility Hubs



B Build Out

The Build Out development foundation has the same basic input information about future land use types, densities, and locations as the Community Plans foundation, but does not constrain the future growth amount based on a guide total of overall growth. It answers the question of what the total capacity for potential development in the region might be, based on plans. The Build Out development foundation is not a realistic one, so is rarely used in an official scenario, but can still provide useful data for analysis.

Mobility Investment Foundations

Mobility investment consists of both networks and services. Separate but related networks include roads, transit, and pedestrian/bicycle facilities. Services include activities and investments designed to make the use of the networks most effective - examples include the use of advanced technologies, transportation demand management, and pricing of parking and transit.

Destination 2055 develops these mobility foundations using two principal sources:

- *Fiscal Constraint* – sources that start with current state and federal transportation funding legislation and local government historical investment patterns, then supplements these in some scenarios with potential changes to funding expectations, usually in the second or third decade of a scenario.
- *Plans and Programs* – sources that are bracketed by a floor of the current Transportation Improvement Programs (TIPs) and a ceiling of the Comprehensive Transportation Plans (CTPs) for the region. The mix of roadway and transit investments can be varied in scenarios by selecting sets of transit and roadway projects closer to the floor (constrained) or closer to the ceiling (aspirational).

The mobility investment foundations described below represent different combinations of future transportation networks and services based on different assumptions about funding expectations and programmatic constraint versus aspiration.

E Existing & Committed

In the Existing & Committed foundation, we only include existing roadways, transit facilities/services, and bicycle/pedestrian facilities, plus those that are underway or committed for funding within the current Transportation Improvement Program (generally expected to be built within the next 4-5 years). This serves as a baseline for comparisons to other scenarios.

T Trend Investment

The "trend" mobility investment foundation is based on a future condition where funding and policy conditions will be similar to current conditions, including the following funding assumptions:

- State funding in line with NCDOT forecasts

- Constrained by STI limitations (funding categories, mode caps, corridor caps, etc.)
- Federal funding maintained at current IIJA levels
- Transit investments consistent with county plans/funding forecasts
- Rail – partnerships for increased intercity passenger services
- Local funding as identified by jurisdictions

M Mobility Corridors

In the Mobility Corridors foundation, funding is generally higher across the board based on the following assumptions:

- Building on the baseline assumptions of the Trend Investment foundation
- Additional state funding based on NC First Commission recommendations, starting in the second decade
- Modest growth of federal funding to keep pace with inflation
- Additional transit investments beyond the horizon of county transit plans
- Added flexibility in STI restrictions beginning in second decade
- Modest increase in local funding compared to historical trend

C Complete Communities

The Complete Communities mobility investment foundation builds upon the Mobility Corridors foundation above, but with additional focused investment on complete and safe streets, active transportation, and transit based on the following assumptions:

- Building on the baseline assumptions of the Mobility Corridors investment foundation
- Additional local/regional funding (source of funding is agnostic, estimated based on multiple potential methods)
- Potential for additional funding from state or other regional partners
- Additional focus on transit, active transportation and Complete/Safe Street investments

U Unconstrained (Comprehensive Transportation Plan)

The unconstrained mobility investment foundation represents the full list of potential transportation investment projects that have been identified in Comprehensive Transportation Plans (CTPs). CTPs are "needs-based" plans that identify potential future projects without regard to the availability of funding. These represent the universe of projects that would be desirable to build if funding were not a constraint.

Alternative Scenarios

Each of the alternative scenarios developed and tested for *Destination 2055* is based on the combination of a development foundation and a mobility investment foundation as described above.

Deficiency & Needs Scenario P E

The Deficiency & Needs scenario combines the Existing & Committed mobility foundation and the Community Plans development foundation in order to depict what would happen if development continues in line with current plans, but no additional investments are made in new transportation improvements beyond those already "in the works." This can be thought of as a "worst-case" scenario in which anticipated population growth takes place but a commensurate level of transportation investment does not. This is not intended to be a *realistic* scenario, but does provide us with useful information. The analysis of the *transportation system deficiencies* that come out of this scenario serves as a basis for determining locations where additional transportation improvements may be needed. This scenario also serves as a useful baseline for comparison against other scenarios.

Plans & Trends Scenario P T

The Plans & Trends scenario represents the case of what is likely to occur without any changes to existing patterns of transportation funding and investment decisions or land use planning policies. It is created by merging the Community Plans development foundation with the Trend mobility investment foundation. This is the "simplest" alternative to implement, but that does not mean it is "easy" to achieve. This scenario assumes that we can rely on tried-and-true revenue streams and transportation/land use decision-making policies and procedures.

Shared Leadership Scenario P M

The Shared Leadership scenario can be thought of as a stronger partnership between local governments and state and federal governments, emphasizing multi-modal investments in key corridors, which the scenario terms "Mobility Corridors." It examines what would happen if there is a shift in the type of mobility investments being made in the region, but development patterns are still in keeping with the vision laid out in existing local land use plans, and is created by combining the Community Plans development foundation with the Mobility Corridors investment foundation. State and federal governments would provide both more funding and more flexibility in the use of said funding in order to better reflect the priorities of the community. The increased funding assumptions are based largely on the recommendations of the NC FIRST Commission which highlighted a need for additional state transportation funding, as well as modest increases in expected federal and local funding sources.

All Together Scenario O C

The All Together scenario is the region's most ambitious scenario. It is based on the Opportunity Places development foundation, in which communities would reorient land use/development patterns in specific locations to enable more sustainable and efficient travel, with an emphasis on linking neighborhoods to major job hubs along transportation investment corridors. This scenario largely builds on the "mobility corridors" of the Shared Leadership scenario, but with

added flexibility in state revenue sources and increased local tax revenues in order to fund additional transit, active transportation, and complete street investments as outlined in the Complete Communities mobility investment foundation.