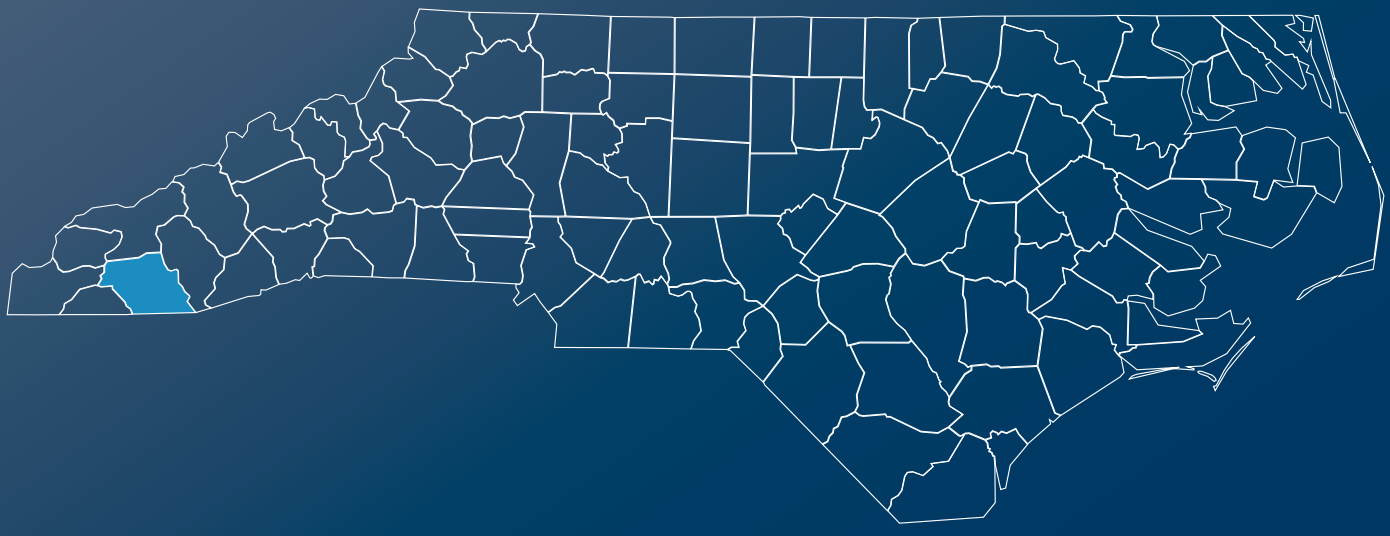
MACON COUNTY

COMPREHENSIVE TRANSPORTATION PLAN

APPENDIX



OCTOBER 2021

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CTP PROCESS

A Comprehensive Transportation Plan (CTP) is developed to ensure that the transportation system will meet the needs of the region for the planning period. The CTP serves as an official guide to providing a well-coordinated, efficient and economical transportation system for the future of the region. This document should be used by the local officials to ensure that planned transportation facilities reflect the needs of the public, while minimizing the disruption to local residents, businesses and environmental resources. The CTP process consists of seven Phases and 19 process steps that outline the sequence of major activities. The basic flow of the process is shown in the figure below:

Process Guidance - 7 Phases to develop a CTP						
	CTP STEERING COMMITTEE INVOLVEMENT (PHASES 2–6)					
PHASE 1 **CTP Set-Up**	PHASE 2 **Develop Vision**	PHASE 3 **System Assessment**	PHASE 4 **Analyze Alternatives**	PHASE 5 **Develop Draft Plan**	PHASE 6 **Adopt Plan**	PHASE 7 **CTP Close-Out**
Initiate Study & Gather data	Hold Initial Meetings	Perform Highway Analysis	Evaluate Constraints	Agree on "Draft" plan	Seek Local Adoption	Distribute Adopted Plan
Establish Study Scope	Develop Community Vision	Perform Non-Highway Analysis	Evaluate Future Year Solutions	Complete Plan	Seek BOT Adoption	Archive Project file
Prepare Meeting Basics	Select Roads to study	Perform Multmodal Assessment	Validate Plan against Vision			Publish CTP

The process is structured with the intent to offer flexibility to meet an area's planning needs. It balances the need to meet multimodal transportation demands while considering the natural and human environment within a community. It forms a strong connection between an area's transportation plan, locally adopted land development plans, and community vision. It includes a thorough public involvement process.

INTERAGENCY COORDINATION

During the long range transportation planning process it is important to coordinate with environmental resource agencies and other local, state, and federal agencies and entities. In North Carolina, this coordination can follow the Interagency Coordination Protocol, which provides a consistent methodology for completing and documenting interagency coordination and facilitating the exchange of information in comprehensive transportation planning. The purpose is to provide an efficient way to get meaningful input from interagency partners on long range transportation plans, in order to positively impact the development of the transportation plans and the resultant project proposals. Following is a summary of the coordination that was conducted as part of this CTP study.

☑ Initiate Contact

An email notifying agency partners to the start of the Macon County CTP study was sent to them informing them of the first steering committee meeting. The email was also used to identify appropriate contacts for each agency as well as any additional contacts recommended. Agency partners were informed on the overall process of the CTP, the study area covered, and the future of the study.

☑ Coordinate with Agencies on Data & Goals

Agency members were notified of the Macon County Goals and Objectives Survey. This survey was released to the public in Macon County help create the vision, goals, and objectives of the Macon CTP. It also allowed participants to identify local concerns.

In another email, agency members were sent environmental maps that covered various environmental data layers. The purpose of this is to verify these data layers and to ensure they reflect the study area. To view the maps with the information sent, refer to the environmental maps in the Analysis Data section.

☑ Validating Resources & Transportation Priorities

Agency members were asked to verify information shared with them and to identify critical areas that should be taken into consideration throughout the study. Two agency members responded with additional resources to be used in consideration of the study area. Resources given by agency members at this stage included water classification maps, endangered species and water quality information.

☑ Coordinate on Project Proposals & Alternative Analysis

Project recommendations lists and maps were sent to interagency members to request any information on concerns on the proposed recommendations. Phone calls and additional emails were used to further exchange information regarding the CTP Process and project sheets.

☑ Submit Draft Transportation Plan for Review

Draft Maps and Project Sheets were emailed to Interagency members for review. No additional comments were received.

COMMUNITY UNDERSTANDING

The purpose of the Community Understanding Report (CUR) is to provide key information about the features of a planning area relevant for a Comprehensive Transportation Plan (CTP) study and future development of transportation proposals. The Rural Planning Organization (RPO) staff, the Transportation Planning Division (TPD) Project Engineer and the CTP Steering Committee members utilize the CUR information for various purposes during a CTP study.

The CUR covers multiple pieces of information used in the CTP Study, including:

- ☑ Population Trends
- ☑ Demographics
- ☑ Community Character
- ☑ Schools
- ☑ Public Safety/Emergency Response
- ☑ Economic Conditions
- ☑ Developmental Goals
- ☑ Farming Operations
- ☑ Natural and Cultural Resources
- ☑ Transportation Choices
- ☑ Seasonal Traffic and Special Events

Macon County Comprehensive Transportation Plan
Community Understanding Report

1. Population Trends

Why important?	Population trends and projections provide the greatest overall sense of community direction. It can illuminate if an area is thriving, growing, aging, or losing population. It provides a high-level overview if it is an area where people and/or businesses want to move – or remain if already in an area. This is important information for almost all planning, and many public policy efforts.
Potential Data Source(s)	US Census Bureau, NC Office of State Budget and Management
Other Source(s)	Land use/comprehensive plans

Time Period	Macon County	Annual Growth Rate
1990 Census Population	23,499	--
2000 Census Population	29,811	2.4%
2010 Census Population	33,922	1.3%
2017 American Community Survey Estimate	34,160	0.1%
NC State Demographer Projection (2020)	36,897	2.6%
NC State Demographer Projection (2030)	40,862	1.0%
NC State Demographer Projection (2039)	44,434	0.9%

A. What are the two most important reasons Macon County experienced the population trends it did?
   - **1990s economic expansion and housing boom**
   - **2008 economic recession and housing bubble burst**

B. What are the two most important reasons the Macon County is likely to experience the population trends forecast?
   - **Limited developable land due to large public land holdings, steep slopes, and lack of water/sewer expansion capability because of topography and geology.**

- **General trends toward urbanization across the country, but significant local examples of people moving to Macon County from larger cities in search of rural lifestyle and outdoor recreation opportunities.**

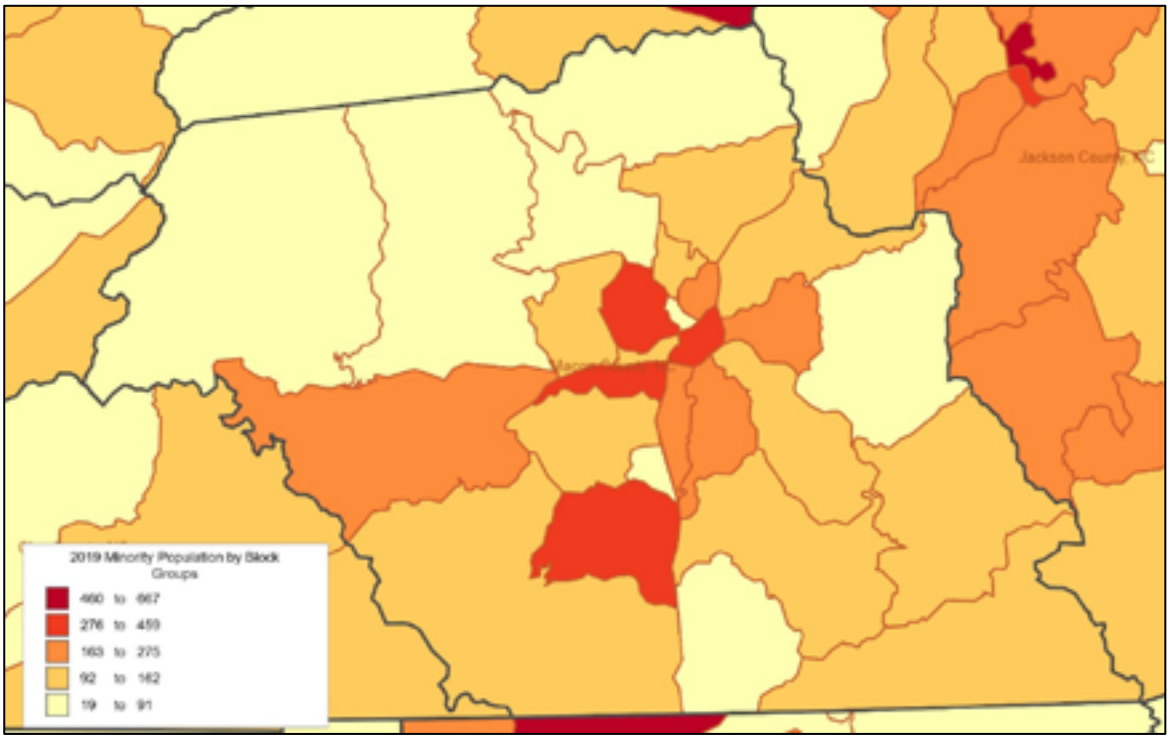
C. If known, how is the study area expected to grow? Which areas will have lower or higher growth?
   - **South of Franklin down Georgia Rd is primed for commercial growth.**
   - **East of Franklin along Sylva Rd is likely to experience higher residential growth.**
   - **Construction of new Angel Medical Center on US 441 and Main St. may induce additional office space and medical facilities around that intersection.**

2. Population Demographics

Why important?	Population demographic data are important for understanding community characteristics. Different race, age, income, and ethnic populations may have different communication needs during the CTP process.
Data Sources	US Census Bureau, American Community Survey

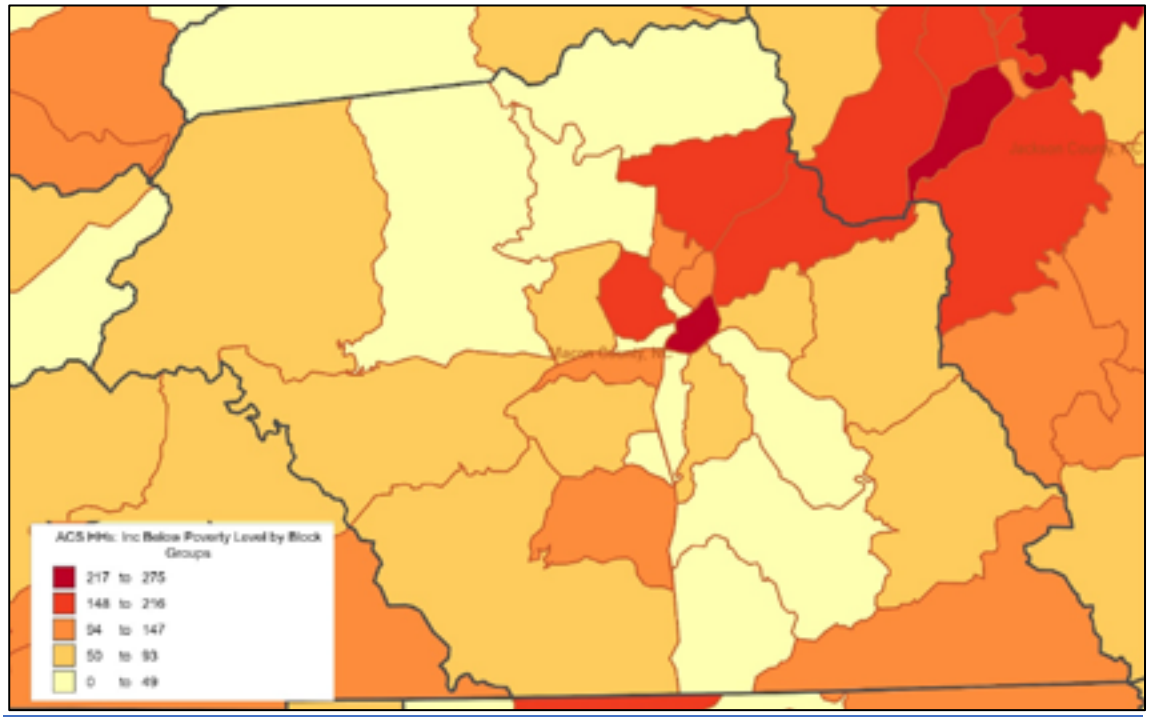
A. Identify notable and/or **underrepresented communities** in the Macon County that need to be considered during the CTP process (total and percentage if available)? This does not need to be limited to LEP groups.

- **Black or African American: 461/34,160 (ACS 2017).**
- **Some other race alone: 1,090/34,160 (ACS 2017).**
- **Hispanic or Latino: 2,328/34,160 (ACS 2017).**
- **Minority populations are most prevalent in Franklin and south of Franklin (ESRI 2019).**



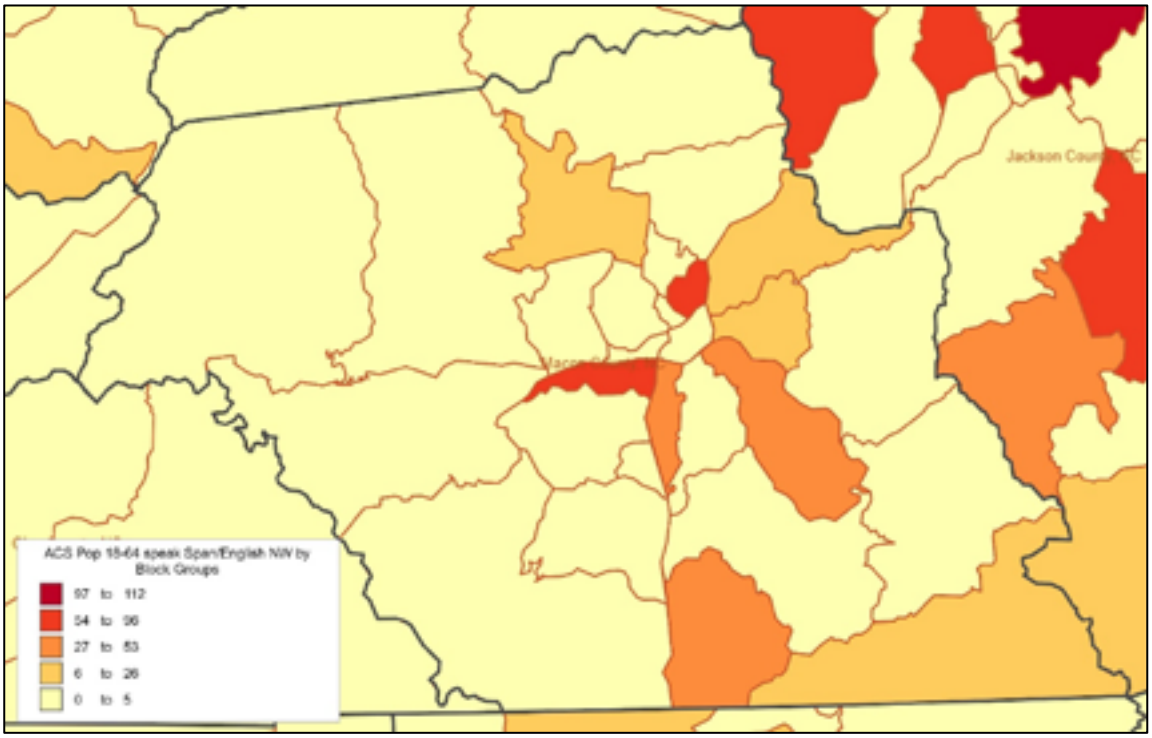
B. Note **low income** populations in Macon County (total and percentage).

- **5,980/34,160 persons, or 17.7% of the population is below the poverty level (ACS 2017)**
- **The highest concentrations of households living below the poverty level are in Franklin and East Franklin (ESRI, 2019).**



C. Identify the main **Limited English Proficiency** (LEP) language groups. Note which LEP language groups total 5% or greater, or 1000, whichever is less.

- **256 out of 15,513 households (1.7%) in Macon County are limited English-speaking households.**
  - **220 speak Spanish**
  - **22 speak other Indo-European languages**
  - **14 speak Asian and Pacific Island languages.**

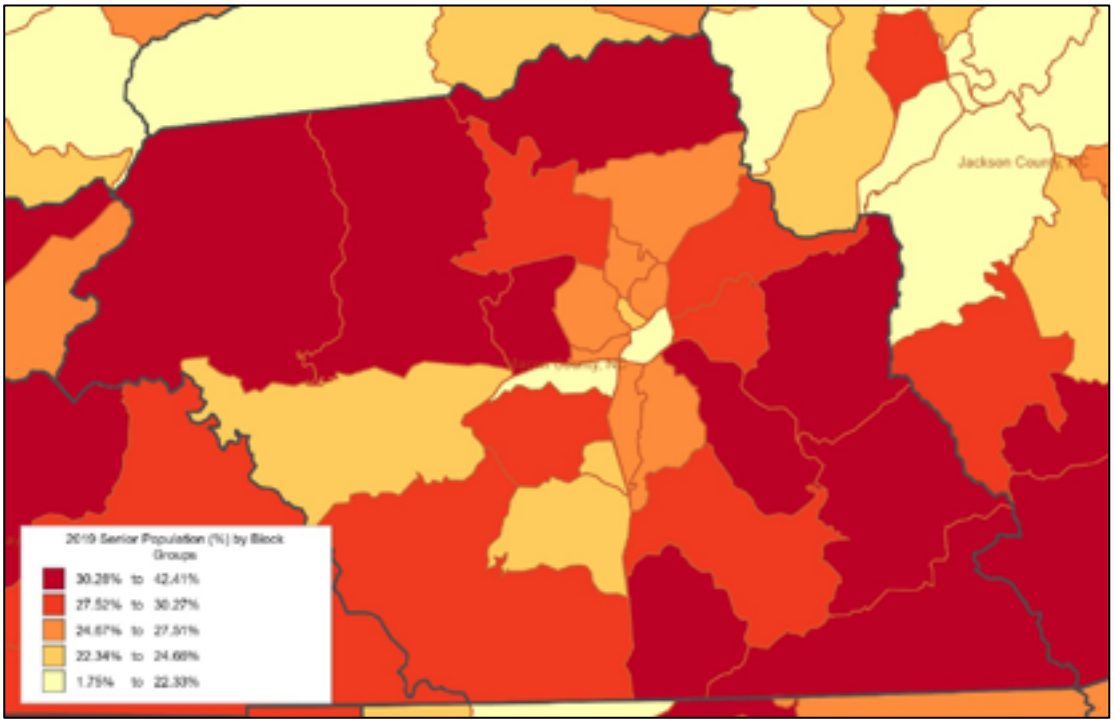


D. Are there areas within Macon County where concerns about race, ethnicity, income have affected project outcomes? (Provide examples and location).
   - **None known.**

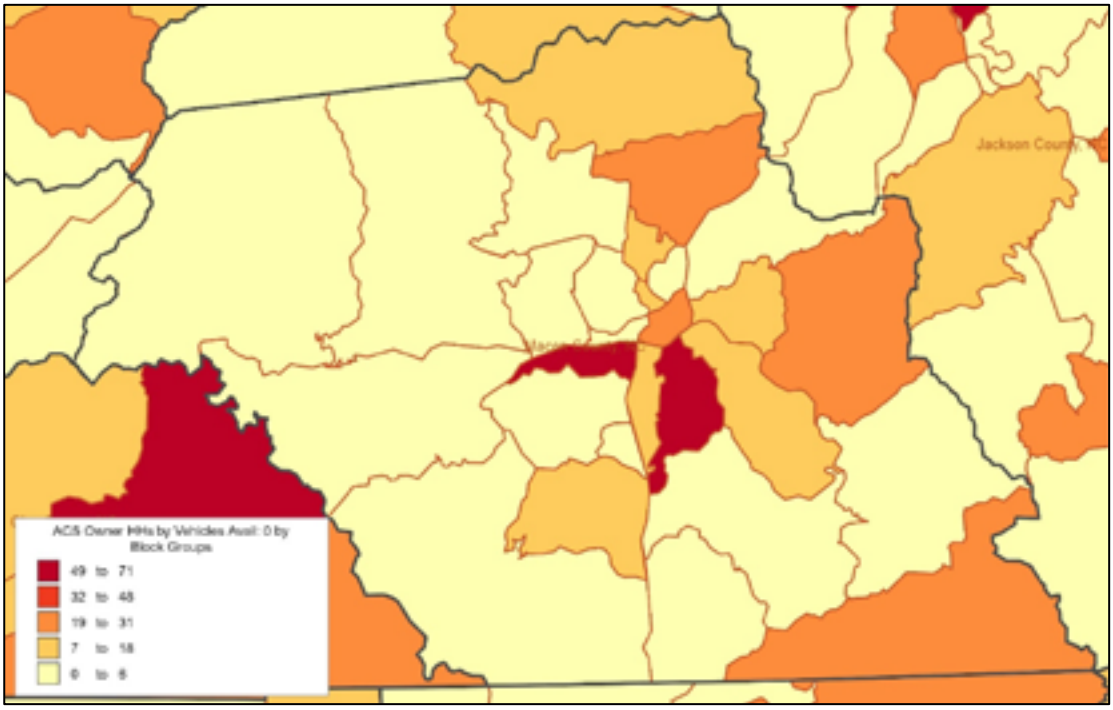
E. Are there communities or populations within Macon County that have raised a concern about lack of voice in public opinions? (Provide examples and location).
   - **None known.**

F. Are the communities in the previous two sections dispersed across the study are or in a specific area?
   - **None known.**

G. Identify the presence and locations of other potential transportation disadvantaged populations, including households with zero autos and seniors.
   - **12,106 out of 34,160 people in Macon County are over the age of 60 (ACS 2017). The areas of Macon County with the highest percentage of elderly population are in the Franklin area and southeastern area near Highlands.**



- **Out of 15,513 households in Macon County, 908 or 5.9% have no vehicle available (ACS 2017).**



- **18% of Macon County's total civilian noninstitutionalized population has a disability (6,122 out of 33,954) (ACS 2017). Many of the disabled population live in the block groups south of Franklin.**

3. Community Character, Facilities, and Resources

Why important?	Community character may reflect history, tenure, and intent. Community character is often what people like about where they live – characteristics that reflect a "sense of place". The goals of one community may not reflect the goals or what is important to another community – it is usually location (and sometimes neighborhood) specific.
Data Source(s)	Historic Resources – National Register & Determined Eligible polygons
Other Source(s)	Local planner, land use/land development plan, comprehensive plan, local historic properties office/planner, historic properties advocacy group, town/county/city manager, NC Department of Commerce Division of Community Assistance, recent project level Community Impact Assessment, and/or Indirect & Cumulative Effects reports

A. List existing or planned parks and recreational facilities.
- **Veteran's Park**
- **Parker Meadows**
- **County Dog Park**
- **Cullasaja Park**
- **Industrial Park**
- **The Greenway**
- **Wesley's Park**
- **Jaycee Park**
- **Highlands Recreational Park**
- **Nantahala Recreational Park**

B. List existing or planned community centers, libraries, and other gathering places.
- **Robert C. Carpenter Community Building**
- **Highlands Library**
- **Macon County Library**
- **Nantahala Library**

C. List performing arts centers, museums, and other cultural or entertainment venues, etc.
- **Tartan's Museum**
- **Macon County Historical Society Museum**
- **Smoky Mtn. Performing Arts Center**
- **Bascom Arts**

D. List historic downtowns or unincorporated communities with significant sense of identity.
- **Franklin**
- **Highlands**
- **Cowee**
- **Nantahala**

E. List any historic districts, important gateways, viewsheds, or other areas to be protected or enhanced?
- **Little Tennessee Greenway**
- **Winding Stair Gap overlook**
- **Cowee Mountain viewshed**
- **Cullasaja Gorge**
- **Historic Cowee School**
- **Historic Nantahala School**

F. List mixed use urban centers.
- **none**

G. List major industrial parks, office parks and single use centers.
- **The industrial park at Industrial Park Rd and US 64 has seen decreased activity in recent years and has some vacancies. It currently houses a UPS customer center, some county property and Southwestern Community College training operations.**

H. List large commercial strips and single use corridors (from a traffic generating perspective).
- **US 23/US 441 (Georgia Rd)**
- **US 23/US 441 (Sylva Rd)**
- **NC 28 (Highlands Rd) in Franklin**

4. Schools

Why important?	Schools (*including private schools, charter schools, and community colleges*), and parks are important community resources that reflect interest, participation, and investment across generations. They are often landmarks and resources around which communities congregate, socialize, and recreate.
Potential Data Sources	Macon County School System, Community College System; NCDOT crash data for bicycles, pedestrians, schoolbuses, other vehicles;

Provide enrollment data for each school in Macon County.

Macon County Public School System.

School	Grades	2000	2010	2020	2030 (est.)	2040 (est.)
Macon Program for Progress Head Start	0-5			301		
Highlands School	K-12	447	357	388	360	350
Nantahala School	K-12	151	107	83	75	70
Cartoogechaye Elem	PreK-4	331	352	353	375	400
East Franklin Elem.	K-4	382	415	370	380	390
Iotla Valley Elem.	PreK-4	276	260	382	400	415
South Macon Elem.	PreK-4	515	521	516	525	545
Mountain View Intermediate	5-6	-	606	645	660	670
Macon Middle	7-8	892	568	652	625	635
Franklin High	9-12	1053	1006	925	900	910
Macon Early College	9-13	-	132	140	150	160
Union Academy	7-12	-	56	101	115	125

Private Schools.

School	Grades	2000	2010	2020	2030 (est.)	2040 (est.)
Trimont Christian Academy.	0-8			132		

Higher Education.

School	2007-08	2010-11	2019-20	2020-21
Southwestern Community College, Macon Campus	489	645	396	349

A. Are there any plans for new school construction, expansion, consolidation, or closure?
   - **There are no plans at this time to build, consolidate or close any Macon County Schools.**

B. Are there any significant traffic or congestion issues associated with any of the schools in Macon County?
   - **Intersection of Wells Grove Road and Clarks Chapel Road around Macon Middle School and Mountain View Intermediate.**
   - **General congestion at 100 Panther Drive and Porter Street around Franklin High School**

C. Are there any safety issues associated with any of the schools in Macon County? Include pedestrian, bicycle, bus, and personal vehicle safety issues.
   - **Possible safety concerns with Boulevard Concept and Prentiss/Addington/441 intersection**

D. Are there any routes that school buses have difficulty navigating, turning around, or otherwise providing adequate service to the community?
   - **There are many turnarounds within the county that are difficult to navigate with a bus; including but not limited to:**
   - **Peeks Creek Rd, Ellijay Rd, Burnette Rd, Middle Creek, Tessentee Rd, Rey Cove Rd, Poplar Cove Rd, etc.**
   - **Prentiss Bridge and Georgia Rd intersection**

5. Public Safety/Emergency Response

Why important?	Transportation infrastructure is a key component for emergency response. It also contributes to public safety impacts.
Data Sources	Macon County Emergency Management Director
Other Source(s)	Local emergency management, law enforcement contacts.

A. Are there locations in Macon County with a high incidence of medical response calls or search and rescue operations? (outdoor recreation sites, retirement communities, summer camps, etc.)

- **Georgia Rd – this corridor has a high incidence of crashes including serious injuries.**
- **Cullasaja Gorge – US 64 East between Franklin and Highlands has a high number of crashes. The straight stretches east of Franklin has seen some crashes with serious injuries, continuing to Buck Creek Rd.**
- **Appalachian Trail search and rescue response. Starting in February there will be several carry-outs during the hiking season. The section near Clay County is especially challenging, and there is a long distance between shelters. Usually access via Deep Gap, Siler Bald, and Wayah Bald.**
- **Waterfall injuries and deaths are infrequent but challenging. There are also occasional boating/swimming emergencies on Nantahala Lake.**
- **The National Guard and NC Emergency Management partnered on a lift helicopter based in Salisbury. It is a four-hour trip to get to Macon County after stopping in Asheville to refuel and pick up rescue personnel. Unofficially previous ranger open gates ATVs operations.**
- **NC Emergency Management currently has three drones based in Madison County that can be called in. They can take video but can't carry anything. Drones in house would be helpful for emergencies, especially if they could carry a radio or water to a victim. Macon County already has a pilot who could operate a drone.**

B. Are there any locations in Macon County with a high incidence of public safety/law enforcement calls?

- **Housing areas around Georgia Rd have somewhat frequent calls.**
- **There are a number of opioid issues and calls to administer Narcan.**

C. Are there any locations in Macon County with known access issues, unreliable response time, evacuations, etc.?

- **Highlands if difficult to access and response time varies depending on conditions. US 64 through the Cullasaja gorge is unreliable and would be catastrophic if it ever failed. Improving NC 106 would help. It is hard to serve Highlands without pulling resources from the rest of the county. There are three ambulance crews in Franklin, one in Highlands, and one in Nantahala. We like to station one Franklin truck in Otto to cover Scaly Mountain. Highlands gets 500-600 calls per year or one-two per day. Franklin has 15-25 calls per day. If an ambulance must go to Asheville or Gainesville, it is out of service for four hours. Out-of-county transports cause us to drop below minimum staffing numbers. Running two concentric circles to have 911 coverage. Macon County has similar volumes as Haywood County, but it costs more to serve.**

6. Economic Conditions

Why important?	The local economy is the lifeblood of the community. Without access to jobs, communities may fade away.
Potential Data Source(s)	Industry Category: *http://accessnc.commerce.state.nc.us/EDIS/demographics.html* Top employers: *http://accessnc.commerce.state.nc.us/EDIS/business.html*
Other Source(s)	Economic development office or agency (chamber of commerce), local planner, town/county/city manager, economic development plan, recent project level Community Impact Assessment and/or Indirect & Cumulative Effects reports

A. Where are the major employment centers in Macon County currently located?

- **Downtown Franklin**
- **Downtown Highlands**
- **Georgia Rd. US 23/441**
- **Sylva Rd. US 23/441**
- **US 64 west to industrial park**
- **US 64 east from Franklin toward Highlands**

B. Are these employment centers expected to expand?

- **The US 23/441 corridor will likely see expansion.**

C. Are there other areas that are expected to develop into major employment centers in the future?

- **64 east towards Highlands**

D. Are there other major employment centers outside of Macon County than influence commuter travel patterns within Macon County?

- **Western Carolina University in Jackson County**
- **Harris Regional Hospital in Jackson County**
- **Harrah's Casino in Jackson County**

E. Are there areas with a higher concentrations of freight movement and truck traffic?

- **US 23/441**
- **US 64**

F. Are there other areas that are expected to grow more freight demand and truck traffic in the future?

- **US 23/441**
- **US 64**

G. Which industry categories employ the most people (note the number of jobs if available)?

- **Retail**
- **Tourism Hospitality**
- **Government**
- **Education**

H. Which specific companies employ the most people? (note the number of jobs if available)?

- **Drake Enterprises**
- **Ingles Markets**
- **Walmart**
- **Tek-Tone**
- **Old Edwards Inn and Spa**
- **Macon County (including School system)**

I. Which industries/companies are expected to produce the most job growth in the next 10-20 years?

- **Hospitality and travel and tourism**
- **Retail**

J. Which industries/companies are expected to produce the most freight demand/truck traffic in the next 10-20 years?

- **Outdoor recreation**
- **Tourism**

7. Development Goals

Why important?	Understanding local development vision and goals is necessary to assess and plan future transportation and other infrastructure. This information is also significant for assessing cumulative human and natural environment effects during planning activities.
Potential Data Source(s)	Local future land use GIS layers, if available
Other Source(s)	Local planner(s), land use/land development plan, comprehensive plan, town/county/city manager, economic development office, economic development plan, chamber of commerce, recent project level Community Impact Assessment, and/or Indirect & Cumulative Effects reports.

A. Identify major target areas for residential development.
   - **Holly Springs community**

B. Identify major target areas for employment centers.
   - **East Franklin, intersection of US 23/US 441 and East Main St.**

C. Identify major target areas for commercial development.
   - **East Franklin, intersection of US 23/US 441 and East Main St.**
   - **South Franklin, Georgia Rd.**

D. Will development density be higher, lower or about the same as existing development?
   - **About the same.**

E. Will the proximity of housing to jobs, shopping and services be more, less or about the same as existing development?
   - **About the same.**

F. What plans for land use, highways, sidewalks, greenways, and bicycle routes already exist in the planning area? (Provide a link or where to find it.)
   - **Macon County Comprehensive Plan**
   - **Franklin Comprehensive Plan**
   - **Franklin Bike/Walk Plan**
   - **Highlands Land Use Plan**
   - **Southern Blue Ridge Bicycle Plan (regional plan includes Macon County)**

8. Farming Operations

Why important?	Agriculture remains an important industry in North Carolina. North Carolina ranks 7th in the United States in farm profits. It is a very important contributor to the economic health of North Carolina, particularly for rural areas. The sector adds $70 billion annually to the State's economy, accounting for 18% of the State's income and employing 17% of its workforce.
Potential Data Source(s)	***http://srsfia2.fs.fed.us/states/north_carolina.shtml*** ***Farms***: *http://www.ncagr.gov/stats/codata/index.htm* ***Timber****: pages 18-19 of report (http://www.srs.fs.usda.gov/pubs/rb/rb_srs088.pdf)*
Other Source(s)	County Soil & Water Conservation office, NC Farm Bureau, local Farm Bureau office, NC Department of Agriculture, recent project level Community Impact reports

A. List roads that are known to be impacted by farming equipment or timber trucks.
   - **Practically all secondary roads**

B. Are any farms given special designation (Century Farms, voluntary agricultural districts VADs/EVADs, preservation agreements)?
   - **Eleven century farms**
   - **A few preservation agreements and VADs but no EVADs**

9. Natural and Cultural Resources

Why important?	Natural and cultural resources are an integral part of understanding the character of a community, and in many cases are important components of the economy. Avoiding impacts to important natural and cultural resources is an important consideration when planning potential transportation improvement projects.
Potential Data Source(s)	Natural Heritage Program Database: Conservation Planning Tool: *https://www.ncnhp.org/conservation/conservation-planning-tool/maps-and-data* NC Wildlife Resource Commission's Green Growth Toolbox: *http://www.ncwildlife.org/Conserving/Programs/GreenGrowthToolbox.aspx*
Other Source(s)	Land use/land development plan, comprehensive plan, local planner, local watershed association, land trust, North Carolina Natural Heritage Program, recent project level Community Impact Assessment and/or Indirect & Cumulative Effects reports. Local land use GIS layers.

A. List and describe significant natural resources (aquatic, terrestrial, biological, geological, etc.) in Macon County.
- **Cullasaja Gorge**
- **Little Tennessee River**
- **Nantahala Lake**
- **Coweeta Hydrological Laboratory**
- **Tellico Valley**
- **Winding Stair Gap**

B. List and describe significant cultural resources (archaeological, architectural, historical, etc.) in Macon County.
- **Nikwasi Mound**
- **Cowee Mound**
- **Cherokee Cultural Corridor**
- **Cowee School**
- **Cowee's West Mill Historic District**
- **Tellico Valley**
- **Nantahala**

C. List any local data sources such as GIS layers, inventories, or reports that would be relevant for the CTP planning process.
- **www.nikwasi-initiative.org**
- **www.MainspringConserves.org**
- **https://www.srs.fs.usda.gov/coweeta/**

10. Transportation Choices

Why important?	Transportation choice has been identified by increasing numbers of communities, groups, and stakeholders as important to a community's livability and quality of life. It is important to document this as part of community understanding because it is a critical component of long-range transportation planning.
Potential Data Source(s)	Local transportation GIS layers, if available.
Other Source(s)	Local transportation planner(s), local transportation plans (particularly if they include a bicycle component), local planner(s), land use/land development plan, comprehensive plan, town/county/city manager, recent project level Community Impact Assessment, and/or Indirect & Cumulative Effects reports.

A. Identify major existing and proposed bicycle and pedestrian destinations.
   - **Downtown Franklin**
   - **Little Tennessee River Greenway**

B. Identify major existing and proposed transit (bus and/or rail) destinations.
   - **Franklin**
   - **Highlands**
   - **Nantahala**

11. Seasonal Traffic and Special Events

Why important?	Estimating peak traffic volumes
Potential Data Source(s)	Tourism Development Authority, Chamber of Commerce
Other Source(s)	County and municipal staff and steering committee members

A. List major attractions or events (example: sporting events, festivals, tourism destinations/attractions).

- **Pumpkinfest**
- **Parker Meadows sports tournaments**
- **Macon County Gem Festival**
- **Taste of Scotland Festival**

B. List areas and routes that experience higher seasonal traffic

- **US 64**
- **NC 106**
- **Wayah Rd**
- **US 23/441**

SOCIO-ECONOMIC DATA FORECASTING METHODOLOGY

In the development of the Macon County CTP, existing and anticipated deficiencies were determined through an analysis of the transportation system looking at both current and future travel patterns. The following socio-economic factors are integral to establish planning assumptions for this study.

- ☑ Population Trend and Projection
- ☑ Land Use
- ☑ Employment Trend and Projection
- ☑ Growth Rate Methodology

Travel demand was projected from 2010 to 2035 using a trend line analysis based on Annual Average Daily Traffic (AADT) from 1990 to 2017. In addition, local land use plans and growth expectations were used to further refine future growth rates and patterns. For this CTP, the 2019 Macon County Comprehensive Plan was used.

The CTP Steering Committee worked with NCDOT to estimate population growth, economic development potential, and land use trends to determine the potential impacts on the future transportation system in 2045. This data was endorsed by the Macon County Commissioners on Nov. 12, 2019.

Population

Data from the Office of State Budget and Management (OSBM) was used to estimate population trends. The base year population data agreed with other sources such as Assess NC (Macon County Profile for June 2019) and the Macon County Comprehensive Plan. Population trends from OSBM gave a population growth of about 1.5 percent. Population trends estimated by using the annual growth rate (AGR) from previous years (1990-2017) and estimated AGR into the future gave a growth rate of about 1.2%.

Year	Population
1990	23,499
2000	29,806
2010	33,922
2015	34,771
2017	35,596
2020*	37,160
2025*	39,772
2030*	42,382
2035*	44,993
2045**	50,470

http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show

Accessed on February 26, 2019

*Projections by the North Carolina OSBM

**Extrapolated by NCDOT using 1.5% AGR

Due to feedback from the steering committee, the growth rate was chosen to be 1.2 percent due to the members stating that the county may not be able to sustain the higher growth. This is due to the aging population in Macon County. North Carolina's overall population growth is similar at about 1.1 percent. The growth rate selected by the steering committee would predict an average annual population growth of about 427 people. The future population values for this projection are shown below.

Year	2017	2020	2025	2030	2035	2040	2045
Population	35,596	36,877	39,013	41,149	43,285	45,420	47,556

Land Use

G.S. §136-66.2 requires that local areas have a current (less than five years old) land development plan prior to adoption of the CTP. For this CTP, the 2019 Macon County Comprehensive Plan was used to meet this requirement.

Land use refers to the physical patterns of activities and functions within an area. Traffic demand in a given area is, in part, attributed to adjacent land use. For example, a large shopping center typically generates higher traffic volumes than a residential area. The spatial distribution of different types of land uses is a predominant determinant of when, where, and to what extent traffic congestion occurs. The travel demand between different land uses and the resulting impact on traffic conditions varies depending on the size, type, intensity, and spatial separation of development. Additionally, traffic volumes have different peaks based on the time of day and the day of the week. For transportation planning purposes, land use is divided into the following categories:

Residential:

Land devoted to the housing of people, with the exception of hotels and motels which are considered commercial.

Commercial:

Land devoted to retail trade including consumer and business services and their offices; this may be further stratified into retail and special retail classifications. Special retail would include high-traffic establishments, such as fast food restaurants and service stations; all other commercial establishments would be considered retail.

Industrial:

Land devoted to the manufacturing, storage, warehousing, and transportation of products.

Public:

Land devoted to social, religious, educational, cultural, and political activities; this would include the office and service employment establishments.

Agricultural:

Land devoted to the use of buildings or structures for the raising of non-domestic animals and/or growing of plants for food and other production.

Mixed Use:

Land devoted to a combination of any of the categories above.

Anticipated future land development is, in general, a logical extension of the present spatial land use distribution. Locations and types of expected growth within the planning area help determine the location and type of proposed transportation improvements. Most growth in Macon County is expected to occur in the vicinity of East Franklin and along the U.S. 441 corridor.

Employment

Data from the Bureau of Labor Statistics (BLS) was used to estimate future employment conditions. The base year employment conditions agreed with other sources such as the N.C. Department of Commerce County Profile and Assess NC (Macon County Profile for June 2019) and the Macon County Comprehensive Plan. The 2045 employment totals were based on an employment-population ratio of .42, which is in line with recent trends.

Year	Macon County Population	Macon County Employment	Employment/ Population Ratio
1990	23,499	10,725	0.46
2000	29,806	13,619	0.46
2010	33,947	13,679	0.40
2015	34,727	14,194	0.41
2016	35,075	14,399	0.41
2017	35,596	14,535	0.41
2045*	47,556	19,974	0.42

www.bls.gov/lau/
Accessed on June 5, 2019
*Extrapolated by NCDOT using ratio

Growth Rate Methodology

Historic Traffic Trends will be analyzed and used to linearly project 2045 volumes. Population and employment trends will be used by the CTP steering committee to establish a low, medium, and high growth rate that will be used to inform projected 2045 traffic volumes. Facilities will be increased by their historic growth unless the determined growth rate by the steering committee is higher. Areas of negative or zero growth will grow at a conservative rate of the established low growth. Areas with anticipated development will use the established high growth rate.

CTP Estimates	2017	2045
Population	35,596	47,556
Employment	14,535	19,974

Growth	Percent Linear Annual Growth Rate
Low	0.1%
Medium	1.2% (Projected population growth)
High	1.5%

TRANSPORTATION PLANNING ANALYSIS DATA

Various pieces of information were used to help analyze the existing transportation system. This section covers some of the data used and maps associated with it which includes:

- ☑ Bridge Deficiency Assessment
- ☑ Traffic Crash Analysis
- ☑ Consideration of Natural and Environmental Features
- ☑ Existing Freight/Truck data
- ☑ Resiliency

Bridge Deficiency Assessment

Bridges are a vital element of a highway system. First, they represent the highest unit investment of all elements of the system. Second, any inadequacy or deficiency in a bridge reduces the value of the total investment. Finally, a bridge presents the greatest opportunity of all potential highway failures for disruption of community welfare. For these reasons, it is imperative that bridges be constructed to the same design standards as the system of which they are a part.

The NCDOT Structures Management Unit inspects all bridges in North Carolina at least once every two years. Bridges having the highest priority are replaced as federal and state funds become available. Forty-eight deficient bridges were identified on roads evaluated as part of the CTP and are illustrated in Figure 6. Of these, two are scheduled for replacement in the 2020 – 2029 TIP. Additionally, two others occur along roadways recommended for improvement in the CTP. As deficient bridges are replaced, every consideration should be given to proposed CTP recommendations and cross sections associated with the recommendations.

The Structures Management Unit analyzes bridges within the Division and shares this information with the Division Bridge Program Manager to assist in determining the prioritization of the bridge projects. The structures unit utilizes various metrics such as condition, structural adequacy, safety, serviceability, and functional capability during this analysis. Once the Division and Structures Management Unit agree upon the bridge replacement priority, the bridges with the highest priority are replaced as Federal and State funds become available.

A bridge is considered deficient if it is either structurally deficient or functionally obsolete. Structurally deficient means there are elements of the bridge that need to be monitored and/or repaired. The fact that a bridge is structurally deficient does not imply that it is likely to collapse or that it is unsafe. It means the bridge must be monitored, inspected, and repaired/replaced at an appropriate time to maintain its structural integrity. A functionally obsolete bridge is one that was built to standards that are not used today. These bridges are not automatically rated as structurally deficient, nor are they inherently unsafe. Functionally obsolete bridges are those that do not have adequate lane widths, shoulder widths, or vertical clearances to serve current traffic demand or to meet the current geometric standards. These bridges also may be occasionally flooded.

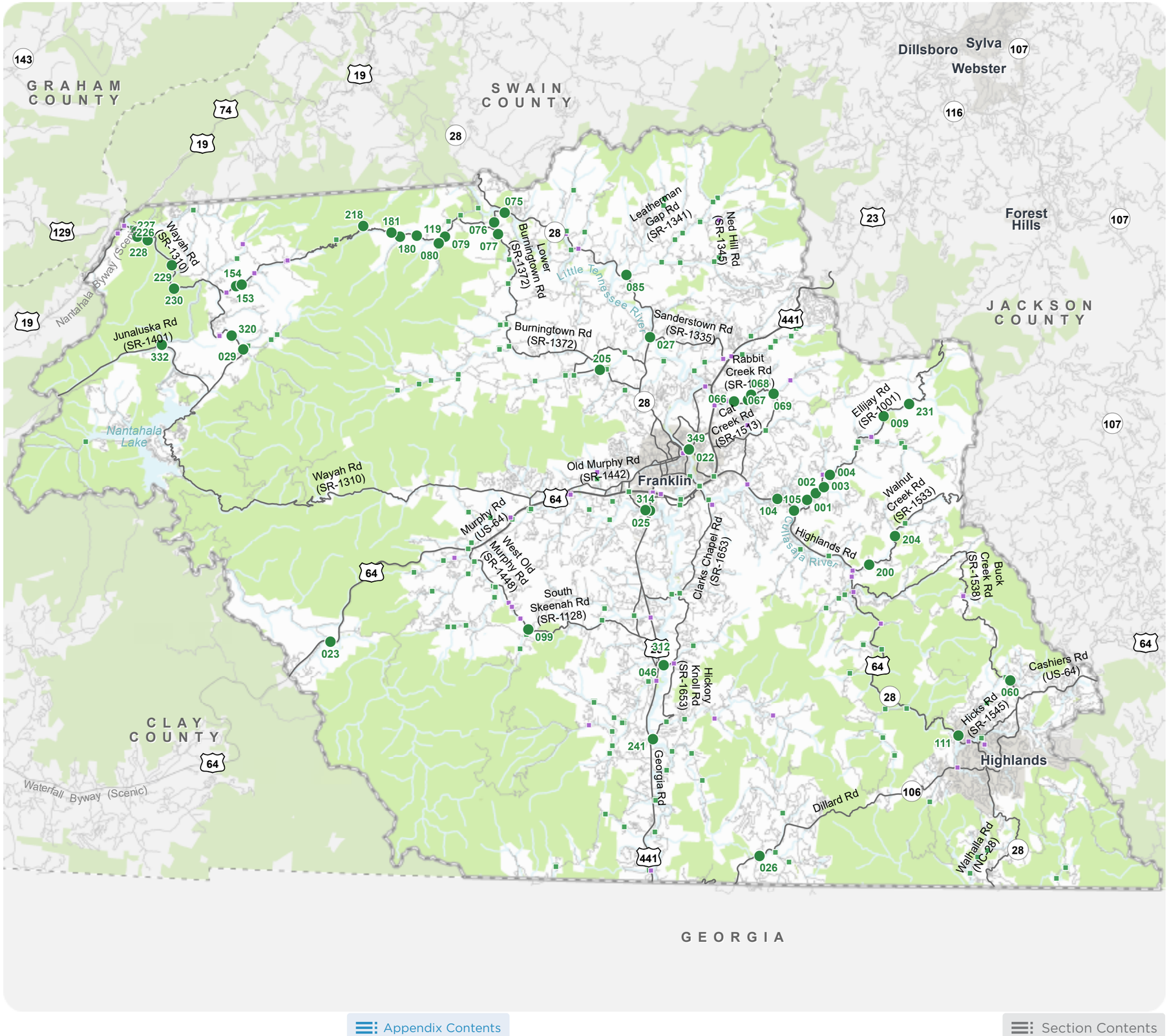
Deficient bridges on roads in the CTP are shown in the table below. For more information on deficient bridges within the planning area, contact the Structures Management Unit using the information in the contacts section of the appendix.

Bridge ID	Facility	Feature	Condition	CTP Project
1	SR1524	ELLIJAY CREEK	Functionally Obsolete	MACO40004-H
2	SR1001	ELLIJAY CREEK	Functionally Obsolete	MACO40004-H
3	SR1526	ELLIJAY CREEK	Functionally Obsolete	MACO40004-H
4	SR1001	ELLIJAY CREEK	Functionally Obsolete	MACO40004-H
9	SR1001	NORTH PRONG ELLIJAY CREEK	Structurally Deficient & Functionally Obsolete	B-6029
22	US441 BUS.(CLOSED)	LITTLE TENNESSEE RIVER	Structurally Deficient & Functionally Obsolete	B-5125
23	US64	NANTHALA RIVER	Structurally Deficient	MACO20003-H
25	US23,441	CARTOOGECHAYE CREEK	Functionally Obsolete	
26	NC106	MIDDLE CREEK	Structurally Deficient & Functionally Obsolete	MACO30003-H
27	NC28	LITTLE TENNESSEE RIVER	Functionally Obsolete	
29	SR1475	WHITEOAK CREEK	Functionally Obsolete	
46	SR1644	LITTLE TENNESSEE RIVER	Functionally Obsolete	
60	SR1540	BIG CREEK	Functionally Obsolete	
66	SR1513	RABBIT CREEK	Functionally Obsolete	MACO40007-H
67	SR1513	RABBIT CREEK	Structurally Deficient & Functionally Obsolete	MACO40007-H
68	SR1513	RABBIT CREEK	Structurally Deficient	
69	SR1513	RABBIT CREEK	Functionally Obsolete	
75	SR1455	LITTLE TENNESSEE RIVER	Functionally Obsolete	

Bridge ID	Facility	Feature	Condition	CTP Project
77	SR1372	BURNINGTOWN CREEK	Structurally Deficient & Functionally Obsolete	
79	SR1369	TELLICO CREEK	Functionally Obsolete	
80	SR1368	TELLICO CREEK	Functionally Obsolete	
85	NC28	COWEE CREEK	Structurally Deficient & Functionally Obsolete	
99	SR1128	JAMES CREEK	Functionally Obsolete	
104	US64	CULLASAJA RIVER	Structurally Deficient	MACO20004-H
105	US64,NC28	CULLASAJA RIVER	Functionally Obsolete	MACO20004-H
111	US64,NC28	BIG CREEK	Structurally Deficient	
119	SR1369	TELLICO CREEK	Functionally Obsolete	
153	SR1365	OTTER CREEK	Structurally Deficient & Functionally Obsolete	
154	SR1365	OTTER CREEK	Functionally Obsolete	
180	SR1369	SUGAR COVE CREEK	Structurally Deficient & Functionally Obsolete	
181	SR1369	TELLICO CREEK	Functionally Obsolete	
200	SR1533	WALNUT CREEK	Structurally Deficient & Functionally Obsolete	
204	SR1533	WALNUT CREEK	Structurally Deficient	
205	SR1434	IOTLA CREEK	Functionally Obsolete	MACO40001-H
218	SR1369	INDIAN BRANCH	Functionally Obsolete	
226	SR1310	NANTAHALA RIVER	Functionally Obsolete	
227	SR1310	NANTAHALA RIVER	Functionally Obsolete	
228	SR1310	NANTAHALA RIVER	Structurally Deficient & Functionally Obsolete	
229	SR1310	NANTAHALA RIVER	Functionally Obsolete	
230	SR1310	NANTAHALA RIVER	Structurally Deficient & Functionally Obsolete	
231	SR1001	WILDCAT CREEK	Structurally Deficient & Functionally Obsolete	
241	SR1636	LITTLE TENN.RVR.OVERFLOW	Functionally Obsolete	
312	SR1122	BATES BRANCH	Functionally Obsolete	
314	SR1152	CARTOOGECHAYE CREEK	Functionally Obsolete	MACO40008-H
320	SR1423	WHITEOAK CREEK	Structurally Deficient	
349	US441B SBL	LITTLE TENNESSEE RIVER	Functionally Obsolete	
332	PENSTOCK	SR1401	Functionally Obsolete	

Figure 2

BRIDGE DEFICIENCIES



Full report at:
https://tinyurl.com/MaconCTP

0 1 2 4 6 Miles

N

MACON COUNTY

CTP Analysis and Information

Bridge Features

- # Deficient Bridge
- Bridge
- Other Structure

Other Features

- Study Road

Base map date: March 18, 2019

Legal Disclaimer

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Plan Date: January 25, 2021

Appendix Contents
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Traffic Crash Analysis

Traffic crashes are often used as an indicator of risk along our roadways. Crash patterns obtained from an analysis of crash data can lead to the identification of improvements that will reduce the frequency and severity of crashes. The Traffic Safety Unit of NCDOT's Transportation Mobility and Safety Division identifies high frequency crashes at intersections and along roadway sections during a five-year period.

The primary method for identifying locations that are likely to produce a safety project is through the Highway Safety Improvement Program (HSIP). The HSIP provides a continuous and systematic process that identifies, reviews, and addresses specific traffic safety concerns throughout the state (https://connect.ncdot.gov/resources/safety/pages/nc-highway-safety-program-and-projects.aspx). The program is structured in several distinct phases:

A system of safety warrants is developed to identify locations that are possibly deficient.

- Locations that meet warrant criteria are categorized as potentially hazardous (PH) locations.
- Detailed crash analyses are performed on the PH locations with the more severe and correctable crash patterns.
- The Regional Traffic Engineering staff performs engineering field investigations.
- The Regional Traffic Engineering staff utilizes Benefit: Cost studies and other tools to develop safety recommendations.
- Depending on the cost and nature of the countermeasures, the investigations may result in requesting Division maintenance forces to make adjustments or repairs, developing Spot Safety projects, developing Hazard Elimination projects, making adjustments to current TIP project plans or utilizing other funding sources to initiate countermeasures.
- Selected projects are evaluated to determine the effectiveness of countermeasures.

The ultimate goal of the HSIP is to reduce the number of traffic crashes, injuries and fatalities by reducing the potential for and the severity of these incidents on public roadways.

A planning level crash analysis performed for the Macon County CTP factored crash frequency, crash type, and crash severity. Crash frequency is the total number of reported collisions and contributes to identifying intersections that may have congestion, operational, or safety problems. Crash type describes the types of crashes that are occurring at a location. This information is critical in diagnosing the cause of crashes and recommending appropriate measures to reduce the frequency and severity of crashes at a given location. Crash severity is a metric that can be used to describe how severe the injuries were from traffic crashes at a general location.

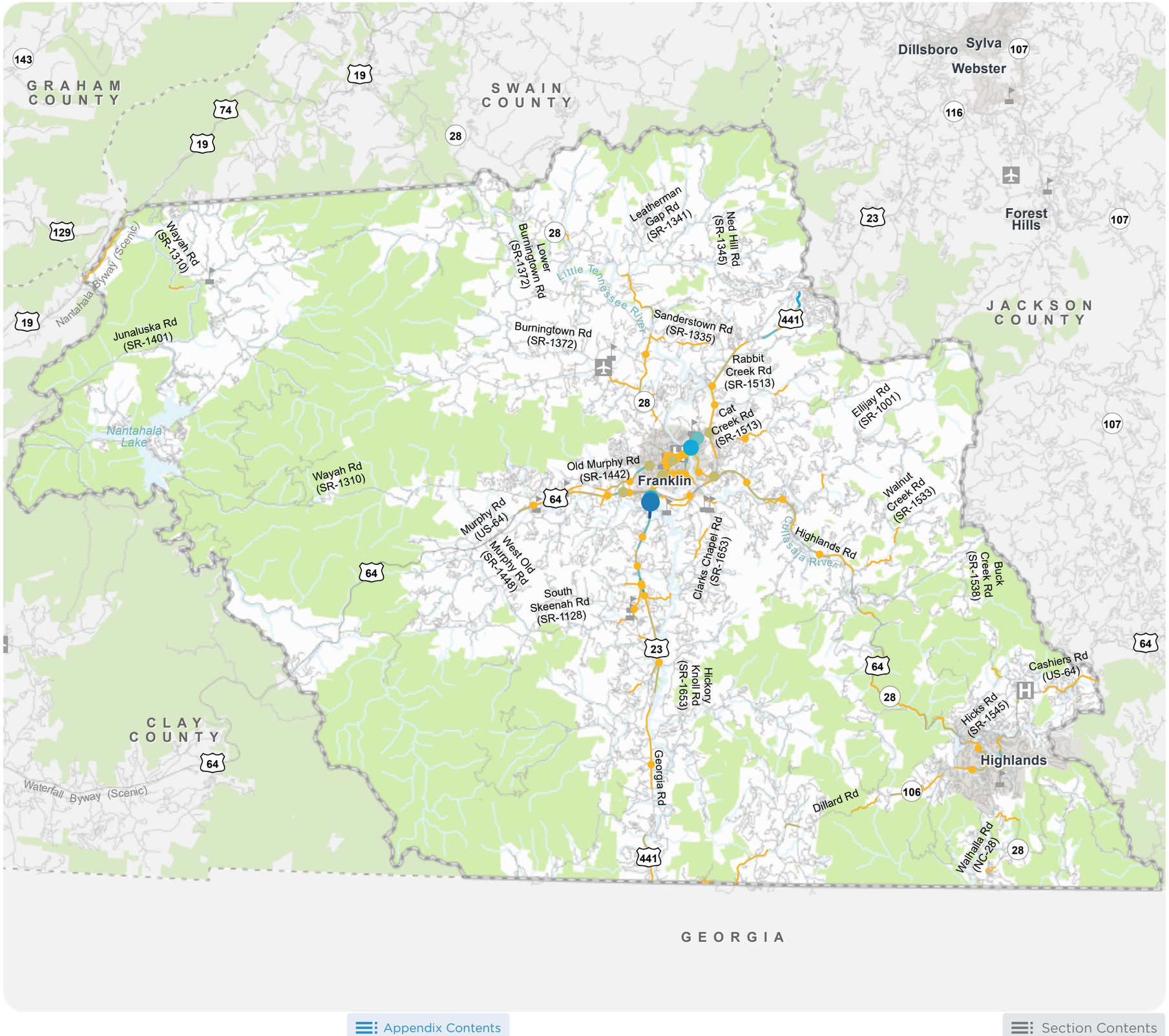
The severity index is a measure of the average severity of crashes occurring at a particular location. This measure can be useful when comparing locations to get some sense of the relative severity of crashes at one location versus another. A location with a higher severity index indicates more severe injury crashes, in general, have occurred at that location.

The table in this section depicts a summary of the crashes occurring in the planning area between Jan. 1, 2014 and Dec. 31, 2018. The data represents locations with five or more crashes. The "Number of Crashes" column indicates the number of crashes reported within 150 feet of the intersection during the study period. The severity listed is the average crash severity for reported crashes at that location. The NCDOT is involved with investigating and improving many of these locations. To request a more detailed analysis for any of the locations listed in the table below, or other intersections of concern, contact the Division Traffic Engineer. Contact information for the Division Traffic Engineer is included in the contacts section of the appendix.

Map Index	Number of Crashes	Road A	Road B	Average Severity
1	49	US 23	SR 1687	3.76
2	38	US 23	SR 1660	2.95
3	31	US 441BUS	NC 28	5.12
4	24	US 441BUS	SR 1325	3.47
5	19	US 64	SR 1153	2.95
6	19	US 64	NC 106	2.56
7	17	US 441BUS	SR 1489	6.33
8	17	US 23	US 441BUS	7.20
9	14	US 441BUS	SR 1158	2.59
10	13	US 23	US 441BUS	2.71
11	12	US 64	THIRD	1.62
12	12	US 441BUS	US 441BUS	2.23
13	10	US 23	US 64	2.48
14	10	SR 1442	MAPLE	3.96
15	9	US 441BUS SB COUPLET	PATTON	1.00
16	8	SR 1667	SR 1729	1.93
17	8	US 23	SR 1110	5.63
18	8	US 23	SR 1135	11.40
19	8	US 23	SR 1122	12.33
20	7	SR 1729	MILL	3.11
21	7	SR 1154	SR 1442	5.23
22	7	US 64	SR 1146	17.11
23	7	NC 28	SR 1335	2.06
24	7	US 441BUS SB COUPLET	SR 1489	2.06
25	7	US 441BUS SB COUPLET	SR 1462	2.06
26	7	US 441BUS SB COUPLET	ROGER	1.00
27	7	US 441BUS	SR 1667	3.11
28	7	US 441BUS	NC 28	3.11
29	7	SR 1154	SR 1170	2.06
30	7	US 23	WESTGATE PLAZA	2.06
31	7	US 23	SR 1649	24.77
32	7	US 23	SR 1504	11.83
33	7	US 23	SR 1142	3.11
34	7	US 23	SR 1115	5.23
35	6	NC 106	MUNGER	3.47
36	6	NC 28	SR 1489	3.47
37	6	SR 1122	SR 1135	4.70
38	6	NC 28	FOX RIDGE	4.70
39	6	US 64	SR 1565	4.70
40	6	US 64	SR 1517	2.23
41	6	US 441BUS SB COUPLET	MAIN	3.47
42	6	US 441BUS	WILSON	2.23
43	6	US 441BUS	SR 1157	2.23
44	6	US 441BUS	PATTON	1.00
45	6	US 441BUS	DERBY	1.00
46	6	US 23	SR 1659	16.10

Figure 3

PLANNING LEVEL CRASH LOCATIONS



MACON COUNTY

CTP Analysis and Information

High Frequency Crash Features
(January 2014 - December 2018)

Total Crashes	Intersection	Road Section
5 - 9		
10 - 19		
20 - 29		
31 - 39		
40 - 49		
50 and above		

Full report at:
https://tinyurl.com/MaconCTP

N

0 1 2 4 6 Miles

Base map date: March 18, 2019

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Plan Date: January 25, 2021

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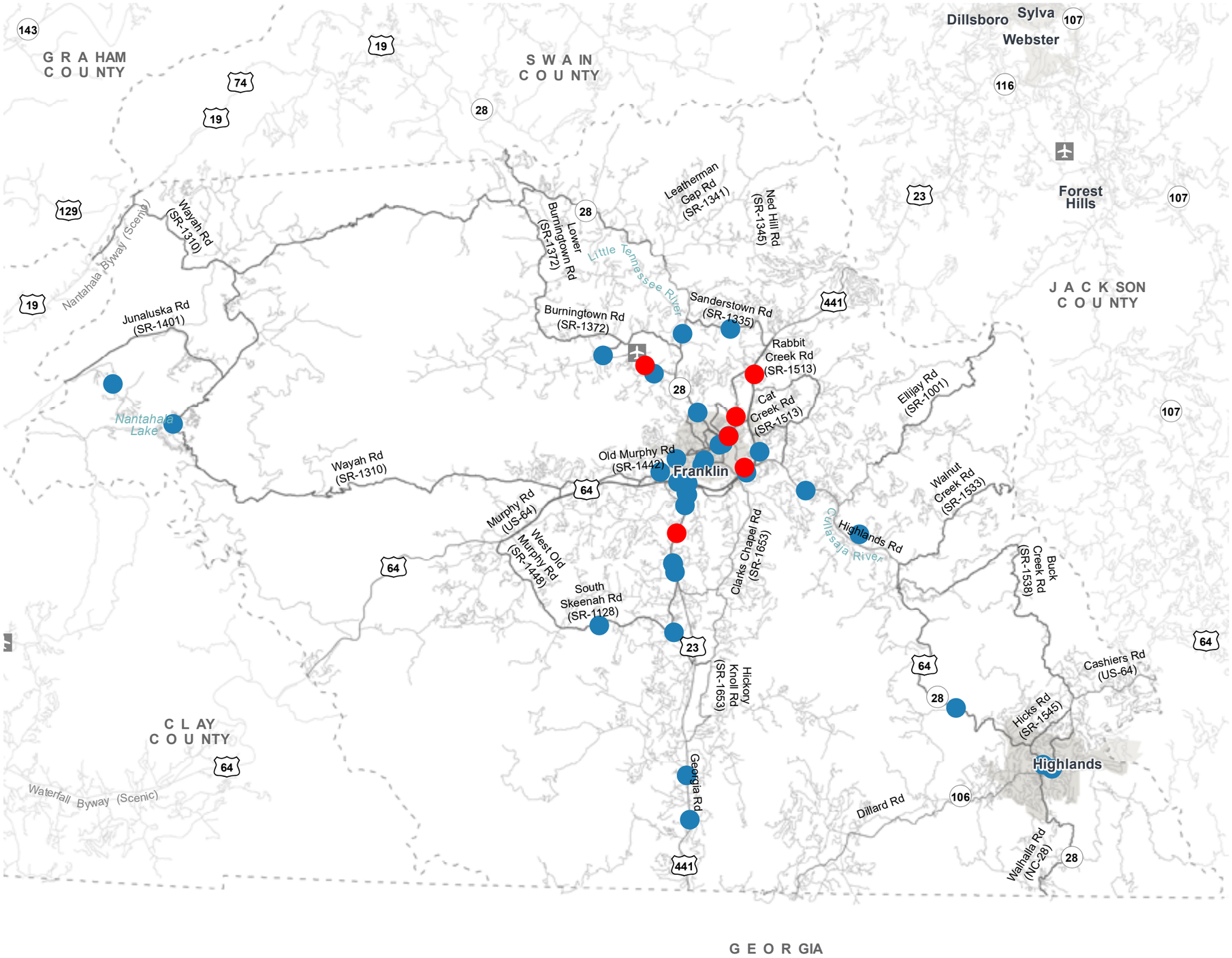
Figure 4

BIKE/PED CRASH LOCATIONS



MACON COUNTY

CTP Analysis and Information

Crash Features
(2007-2016)

Mode	Intersection
Bicycle	
Pedestrian	

Other Features

Study Road

Full report at:
http://tinyurl.com/DCHC-CTP

N

0 1 2 4 6 8 Miles

Sheet 1 of 2

Base map date: March 18, 2018

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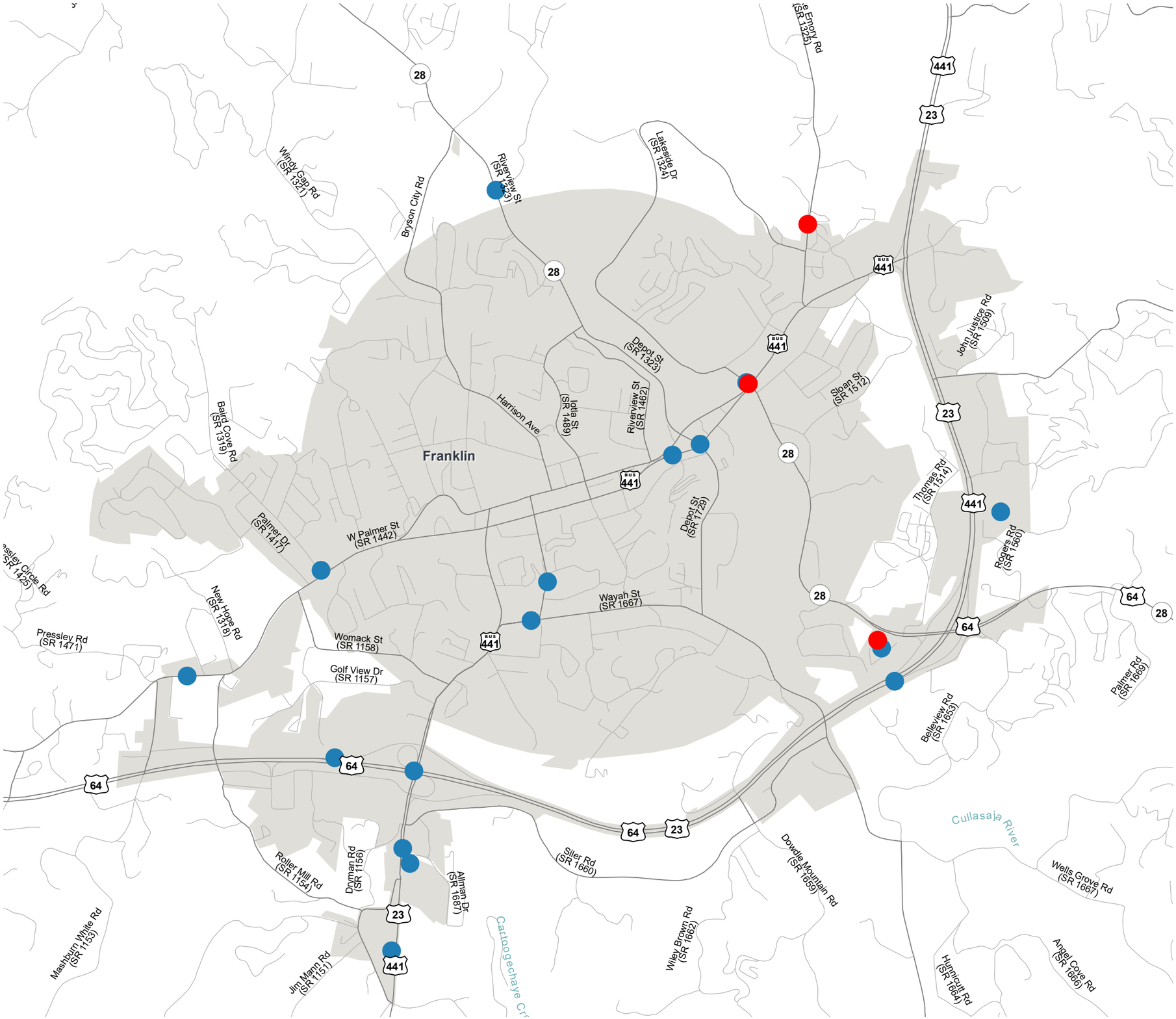
Plan Date: July 09, 2020

Figure 4

BIKE/PED CRASH LOCATIONS



MACON COUNTY

TOWN OF FRANKLIN INSET

CTP Analysis and Information

Crash Features
(2007-2016)

Mode	Intersection
Bicycle	●
Pedestrian	●

Other Features

Study Road

Full report at:
http://tinyurl.com/DCHC-CTP

N

0 0.5 1 Miles

Sheet 2 of 2
Inset A

Base map date: March 18, 2018

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Plan Date: July 09, 2020

Appendix Contents

Section Contents

Consideration of Natural and Human Environment

Environmental features are a key consideration in the transportation planning process. Section 102 of the National Environmental Policy Act (NEPA) requires consideration of impacts on wetlands, wildlife, water quality, historic properties and public lands. While a full NEPA evaluation was not conducted as part of the CTP, every effort was made to minimize potential impacts to these features using the best available data. Any potential impacts to these resources were identified as a part of the project proposals on the project sheets. Prior to implementing transportation recommendations of the CTP, a more detailed environmental study would need to be completed in cooperation with the appropriate environmental resource agencies.

Environmental Features

A full listing of environmental features that are typically examined as a part of a CTP study is shown in the following tables. Environmental features occurring within Macon County are shown in Figure 7 and are shown in **bold** text in the table below.

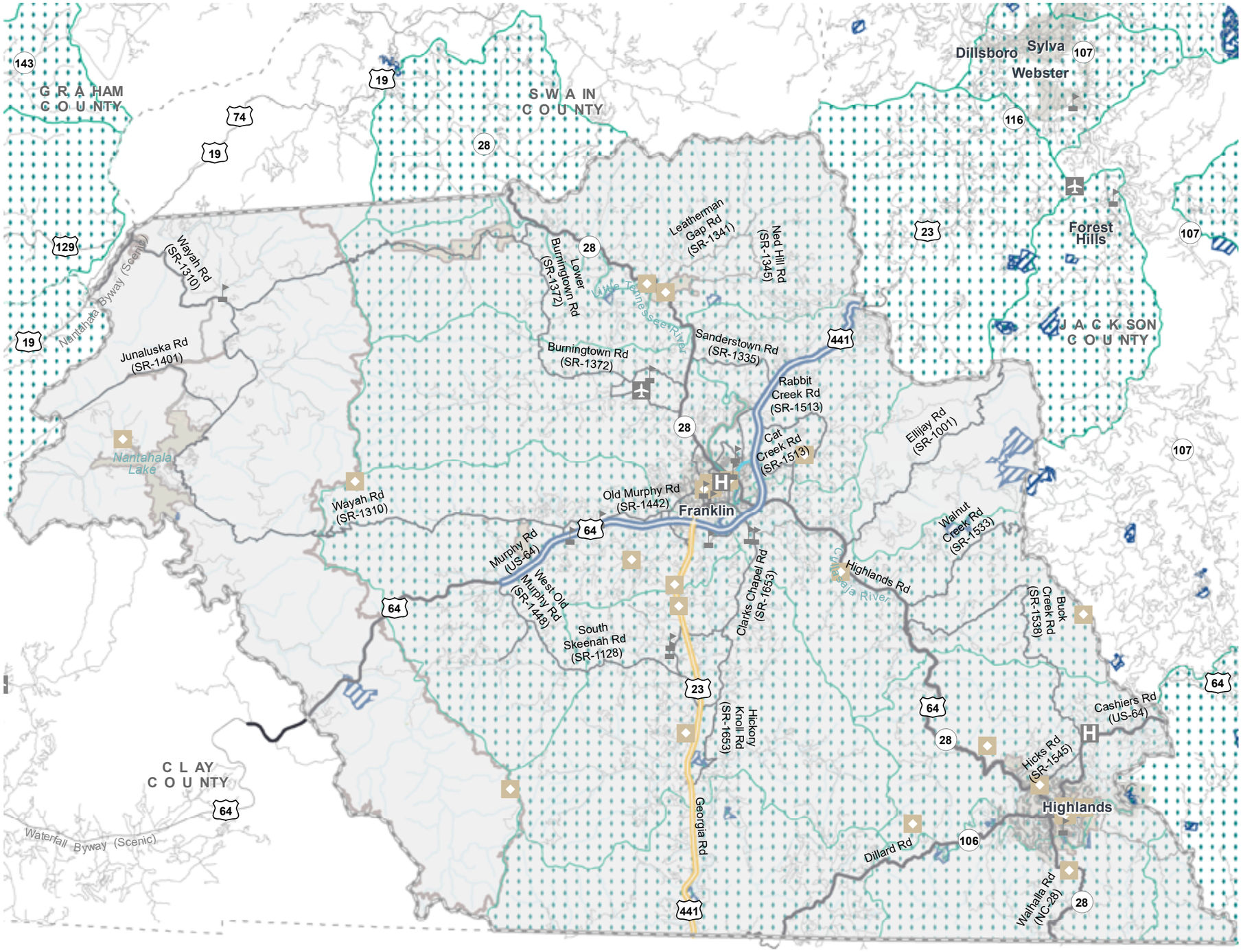
Table 1 – Environmental Features

- 24k Hydro Lines
- **303D Streams**
- Airport Boundaries
- Anadromous Fish Spawning Areas
- APNEP - Submerged Aquatic Vegetation
- Beach and Waterfront Access
- **Benthic Habitat**
- **Bicycle Routes**
- **Boating Access**
- **Churches and Cemeteries**
- **Colleges and Universities (Points)**
- **Conservation Tax Credit Properties**
- **Critical Habitat for Threatened and Endangered Species**
- Emergency Operation Centers
- Fish Nursery Areas
- **Hazard Substance Disposal Sites (points & polygons)**
- **Hazardous Waste Facilities**
- **High Quality Waters and Outstanding Resource Water Management**
- **Historic Resources – National Register and Determined Eligible (points and polygons)**
- **Hospitals**
- Hydrography - 1:24,000-scale (polygons)
- **Landscape Habitat Indicator Guilds (LHIGs) Managed Areas**
- **National Wetlands Inventory (polygons)**
- **Natural Heritage Element Occurrences**
- NC-CREWS: N.C. Coastal Region Evaluation of Wetland Significance
- NCDOT Maintained Mitigation Sites
- Railroads (1:24,000)
- Recreation Projects - Land and Water Conservation Fund
- Regional Trails
- Sanitary Sewer Systems - Treatment Plants
- **Schools (Public & Non-Public)**
- Significant Natural Heritage Areas
- State Natural and Scenic Rivers
- State Parks
- **Target Local Watersheds - EEP**
- **Trout Streams (DWQ)**
- Trout Waters WRC (arcs & polygons)
- Unique Wetlands
- **Water Distribution Systems – Tanks & Treatment Plants**
- **Water Supply Watersheds**

Archaeological sites were also considered but are not mapped due to restrictions associated with the sensitivity of the data.

Figure 5

ENVIRONMENTAL FEATURES



MACON COUNTY

CTP Analysis and Information

Primary Environmental Features Legend

- School - Colleges & Universities
- Hospital
- Historic Resources - National Register and Determined Eligible (Point)
- Targeted Local Watersheds - EEP
- Conservation Tax Credit Properties
- Historic Resources - National Register and Determined Eligible (Polygon)
- National Wetlands Inventory (NWI)

Full report at:
https://tinyurl.com/MaconCTP

N

0 1 2 4 6 Miles

Sheet 1.1 of 3

Base map date: March 18, 2019

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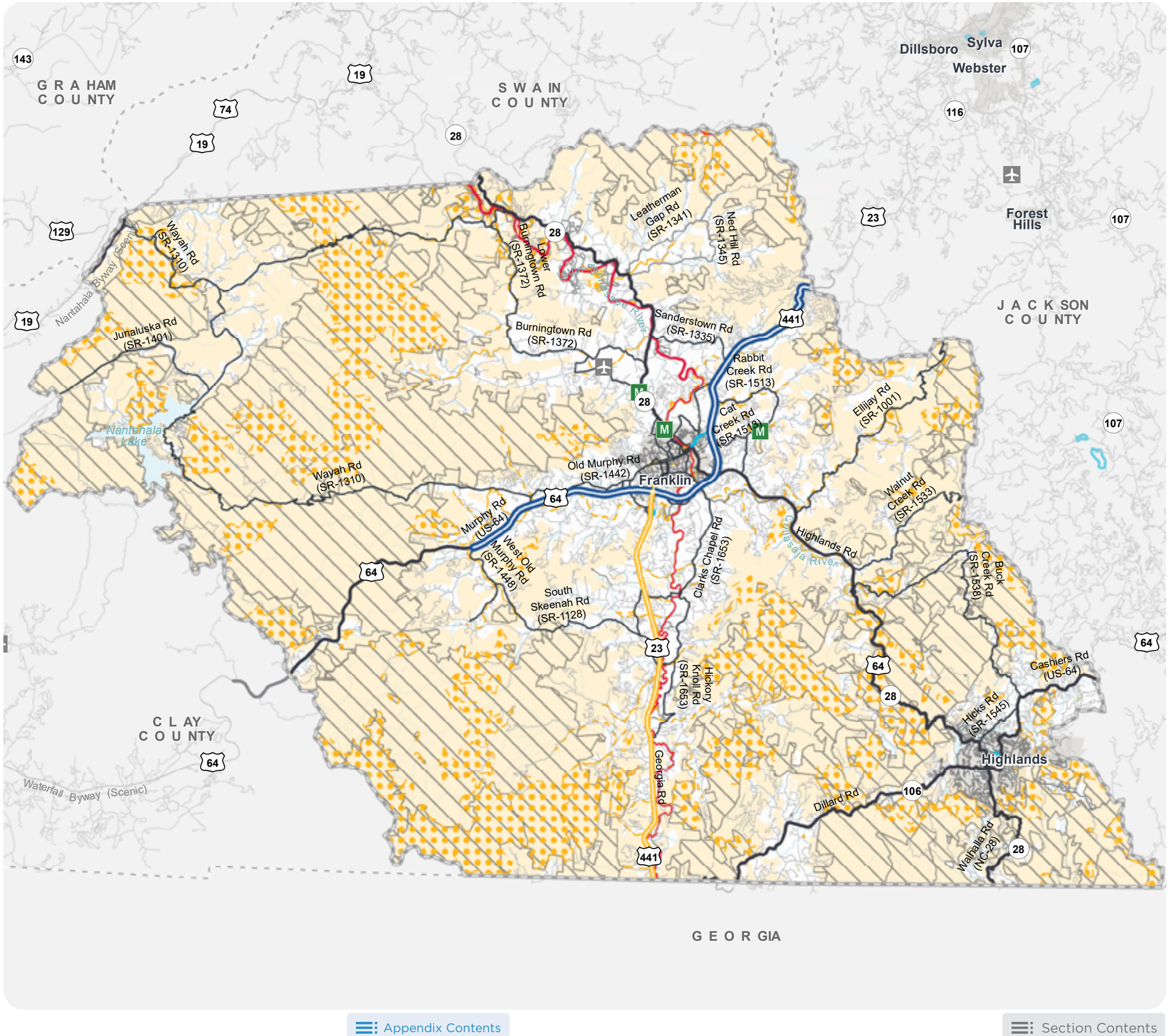
Plan Date: June 25, 2020

Appendix Contents

Section Contents

Figure 5

ENVIRONMENTAL FEATURES



MACON COUNTY

CTP Analysis and Information

Primary Environmental Features Legend

- M — Mitigation Site - NCDOT Maintained
- Critical Habitat for Threatened and Endangered Species
- Critical Habitat for Threatened and Endangered Species
- Land and Water Conservation Fund (Recreation Projects)
- Natural Heritage Significant Areas
- Managed Areas
- Landscape Habitat Indicator Guilds

Full report at:
https://tinyurl.com/MaconCTP

N

0 1 2 4 6 Miles

Sheet 1.2 of 3

Base map date: March 18, 2019

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Plan Date: June 25, 2020

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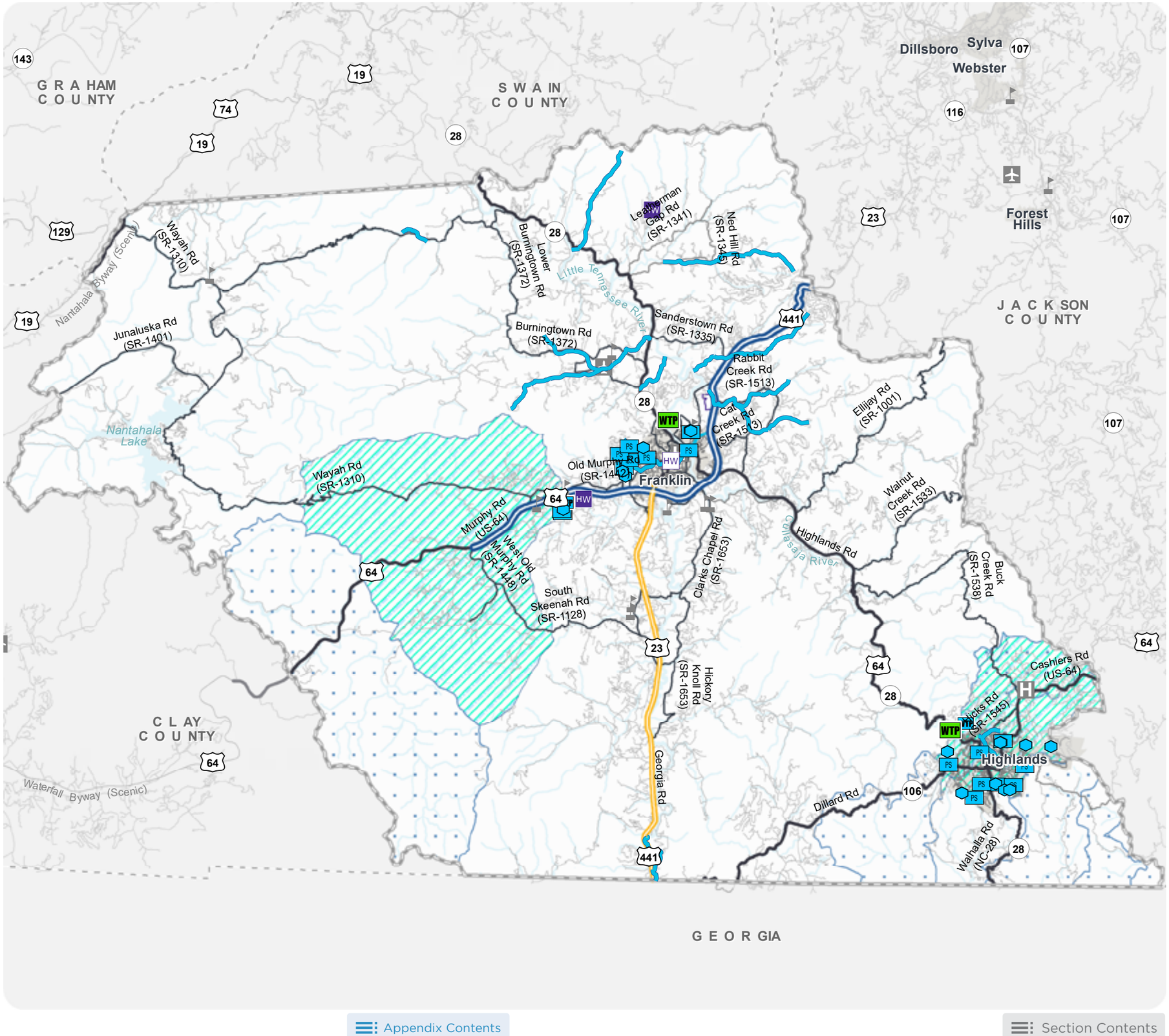
Figure 5

ENVIRONMENTAL FEATURES



Appendix Contents

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MACON COUNTY

CTP Analysis and Information

Environmental Features Legend

- Hazard Substance Disposal Site
- Hazardous Waste Facility
- Sanitary Sewer System - Treatment Plant
- WaterTanks
- Water Distribution System - Treatment Plant
- Water System Pumps
- 303d - Streams
- Hazard Substance Disposal Area
- Benthic Habitat
- High Quality Waters and Outstanding Resource Water Management
- Water Supply Watershed

Full report at: https://tinyurl.com/MaconCTP

N

0 1 2 4 6 Miles

Sheet 2.1 of 3

Base map date: March 18, 2019

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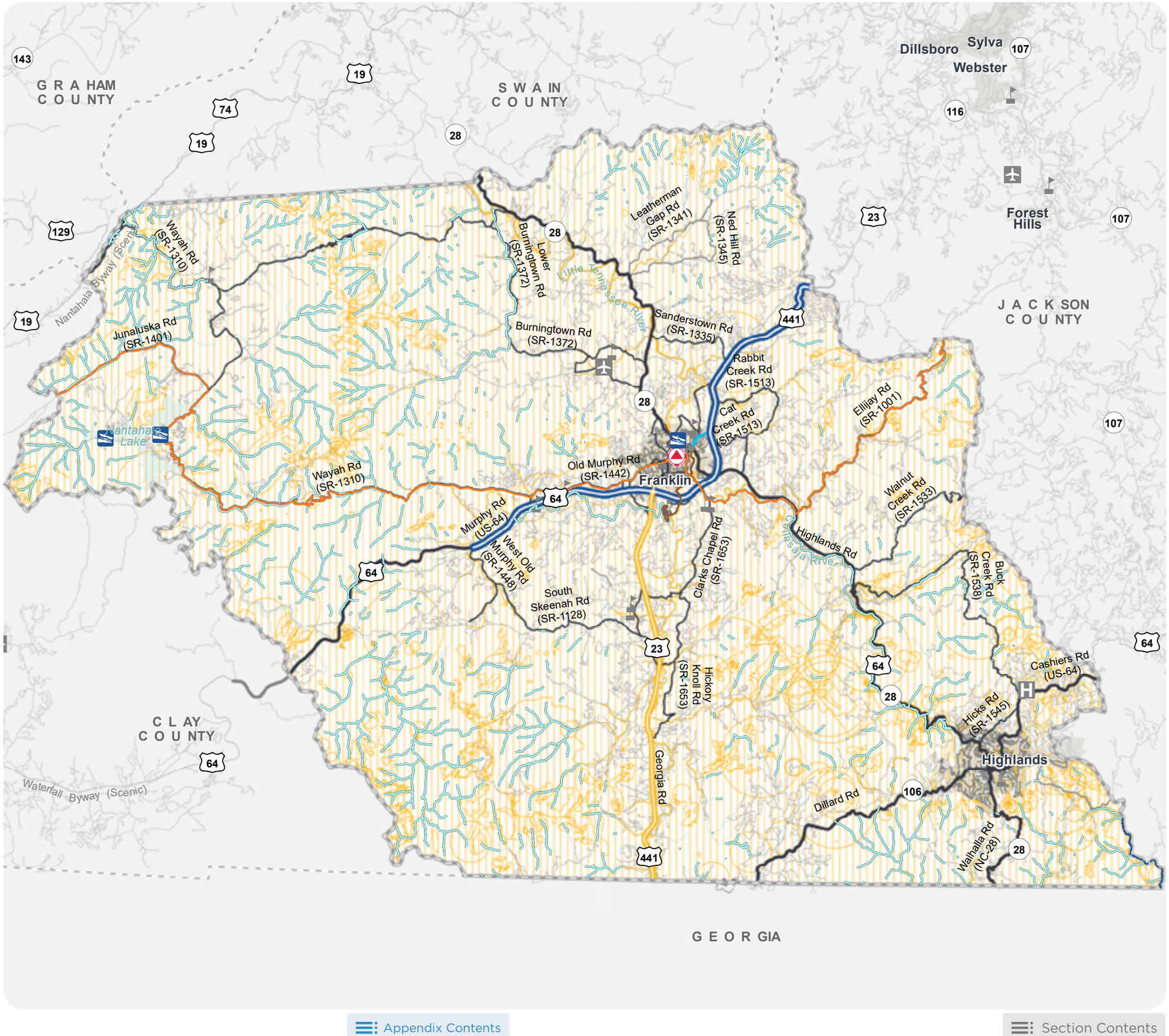
Plan Date: June 25, 2020

Figure 5

ENVIRONMENTAL FEATURES



MACON COUNTY

CTP Analysis and Information

Environmental Features Legend

- Boating Access - Public
- Emergency Operation Center
- Bicycle Routes
- Regional Trails
- Wild & Scenic Rivers
- Trout Streams
- Natural Heritage Element Occurrences

Full report at:
https://tinyurl.com/MaconCTP

N

0 1 2 4 6 Miles

Sheet 2.2 of 3

Base map date: March 18, 2019

Legal Disclaimer

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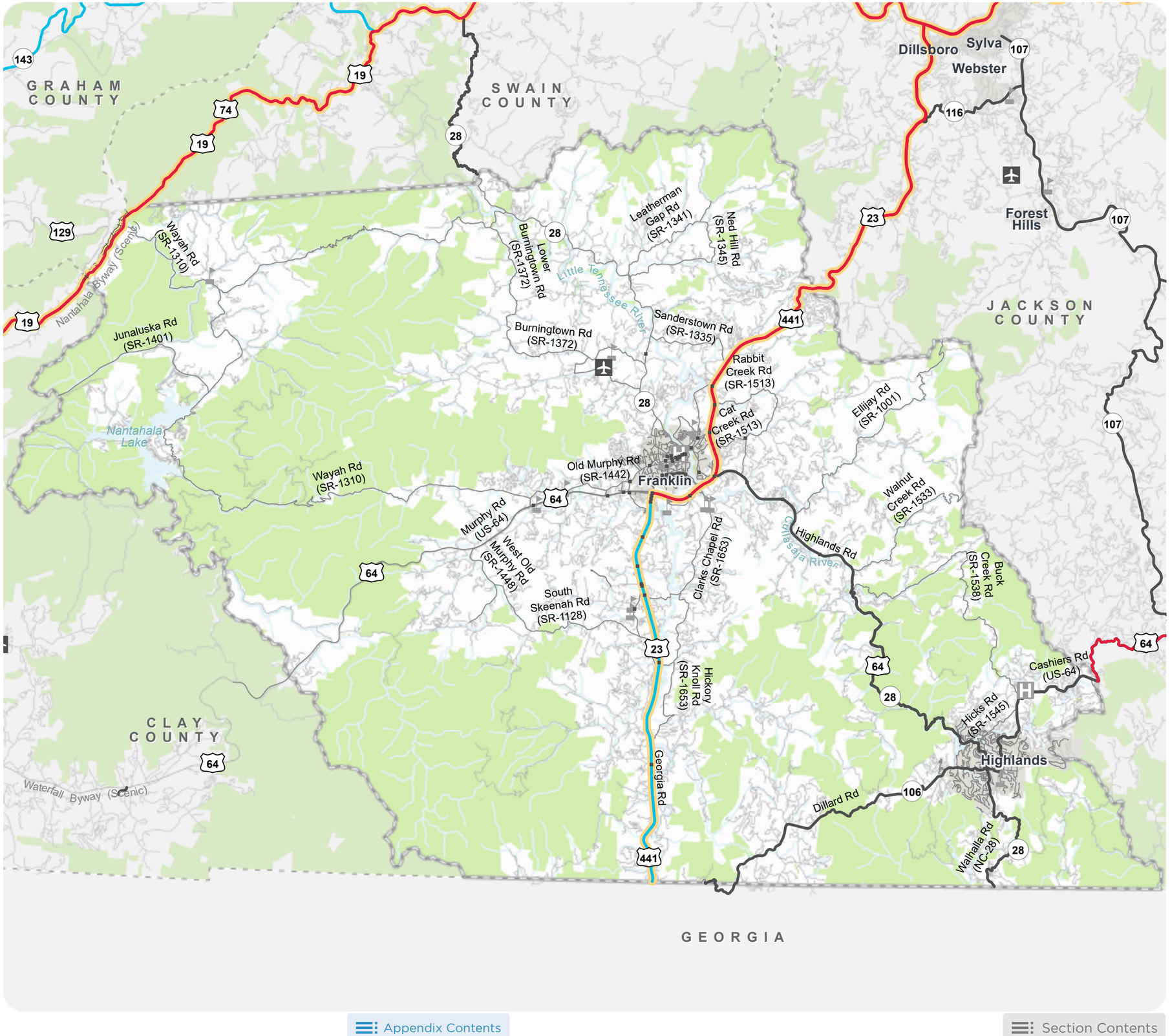
Plan Date: July 09, 2020

Figure 6

FREIGHT MAP



MACON COUNTY

CTP Analysis and Information

Freight Features

- Priority Highway Freight Network
- Active Rail
- High Crash Intersection
- Study Road

NCDOT Truck Network

- Restricted
- Reasonable Access
- Unrestricted

Intermodal Truck Terminals

- Air
- Rail
- Truck
- Port & Rail
- All Other Types

Other Features

- Airport
- Existing Freight Generator
- Military Facility
- Seaport
- Future Freight Generator
- Military Installation

Full report at:
https://tinyurl.com/MaconCTP

N

0 1 2 4 6 Miles

Base map date: March 18, 2019

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Plan Date: January 25, 2021

Resiliency

NCDOT is developing a statewide Risk and Resiliency Plan, which will include a Vulnerability and Risk assessment for all the Strategic Transportation Corridors (STCs). The aim of the Risk and Resiliency Plan is to achieve the initial objectives set forth by Governor Cooper's Executive Order 80 Section 9 (EO 80) and define meaningful, action-oriented pathways to further understand, identify and manage weather and climate risk and vulnerabilities in order to plan, design, build and maintain a more resilient and sustainable transportation network.

With Macon County being in a mountainous location, there are multiple environmental factors that were considered during the CTP process. Some roads had unaddressed deficiencies due to being alongside cliffs or beside steep slopes. New location projects are often limited due to the terrain, so improving existing roads is often ideal. Road closings can be a big factor in certain areas; therefore, improving alternate routes was important in the development of this CTP.

MULTIMODAL ANALYSIS

This appendix section shows documentation for the methodologies used for each mode of transportation. This section provides maps utilized in the analysis process for each mode.

The following information is provided in this section

☑ Highway

- **Highway Analysis**
- **Implementation of analysis**
- **Base Year Volume and Capacity Maps**
- **Future Year (Existing and Committed Projects) Volume and Capacity Maps**

☑ Bicycle and Pedestrian

- **Bicycle and Pedestrian Analysis**
- **Destination Analysis Map**
- **Map of Bicycle Recommendations from Local Plans**
- **Map of Pedestrian Proposals from Local Plans**

☑ Public Transportation

- **Existing Public Transportation Services**
- **The vision for Public Transportation**
- **Public Transportation Analysis**
- **Maps for Public Transportation Analysis**

HIGHWAY

Analysis of the Existing and Future Transportation System

In order to develop a CTP, the following are considered:

- **Analysis of the transportation system, including any local and statewide initiatives;**
- **Impacts to the natural and human environment, including natural resources, historic resources, homes and businesses;**
- **Public input, including community vision and goals and objectives.**

Analysis Methodology and Data Requirements

Reliable forecasts of future travel patterns must be estimated to analyze the ability of the transportation system to meet future travel demand. These forecasts depend on careful analysis of the character and intensity of existing and future land use and travel patterns.

An analysis of the transportation system looks at both current and future travel patterns and identifies existing and anticipated deficiencies. This is usually accomplished through a capacity deficiency analysis, a traffic crash analysis, and a system deficiency analysis. This information, along with population growth, economic development potential, and land use trends, is used to determine the potential impacts on the future transportation system.

Roadway System Analysis

An important stage in the development of a CTP is the analysis of the existing transportation system and its ability to serve the area's travel demand. Emphasis is placed not only on detecting the existing deficiencies, but also on understanding the causes of these deficiencies. Roadway deficiencies may result from inadequacies in pavement widths, intersection geometry, or intersection controls. System deficiencies may result from missing travel links, bypass routes, loop facilities, or radial routes; or improvements needed to meet statewide initiatives.

One of those statewide initiatives is the Strategic Transportation Corridors (STC) adopted by the Board of Transportation on March 4, 2015.

The STC identified a network of critical multimodal transportation corridors considered the backbone of the state's transportation system. These 25 corridors move most of our freight and people, link critical centers of economic activity to international air and sea ports, and support interstate commerce. They must operate well to help North Carolina attract new businesses, grow jobs and catalyze economic development.

The primary purpose of the STC is to provide North Carolina with a network of high-priority, multimodal transportation corridors and facilities that connect statewide and regional activity centers to enhance economic development, promote highly-reliable, efficient mobility and connectivity, and support good decision-making. The primary goal to support this purpose is to create a greater consensus towards the development of a genuine vision for each corridor that establishes the statewide or regional importance of facilities and the need for maintaining high capacity and travel speed. During the development of CTPs, the STC network should be cross-referenced to ensure plan consistency. Incorporating the statewide and regional mobility goals set forth in the STC network should be done in a manner that fits with the character and vision for the community or county. If this cannot be achieved through the use of existing facilities, an alternative solution should be sought.

In the development of this plan, travel demand was projected from 2017 to 2045 using a trend line analysis based on Annual Average Daily Traffic (AADT) from 2002 to 2017. In addition, local land

use plans and growth expectations were used to further refine future growth rates and patterns. The established future growth rates were endorsed by the Macon County Commissioners (Nov. 12, 2019), Town of Franklin Council (Dec. 2, 2019), and Town of Highlands Council (Nov. 21, 2019). Refer to the socio-economic data forecasting methodology for more information.

Existing and future travel demand is compared to existing roadway capacities. Capacity deficiencies occur when the traffic volume of a roadway exceeds the roadway's capacity. Roadways are considered near capacity when the traffic volume is at least 80 percent of the capacity. Refer to maps labeled Figure 2 for existing and future capacity deficiencies. The 2045 traffic volumes in Figure 2 are an estimate of the traffic volume in 2045 with only existing plus committed projects assumed to be in place, where committed is defined as projects programmed for construction in the 2020 – 2029 Transportation Improvement Program (TIP).

Capacity is the maximum number of vehicles with a "reasonable expectation" of passing over a given section of roadway, during a given time period under prevailing roadway and traffic conditions. Many factors contribute to the capacity of a roadway including the:

- **Geometry of the road (including number of lanes), horizontal and vertical alignment, and proximity of perceived obstructions to safe travel along the road;**
- **Typical users of the road, such as commuters, recreational travelers, and truck traffic;**
- **Access control, including streets and driveways, or lack thereof, along the roadway;**
- **Development along the road, including residential, commercial, agricultural, and industrial developments;**
- **Number of traffic signals along the route;**
- **Peaking characteristics of the traffic on the road;**
- **Characteristics of side-roads feeding into the road; and**
- **Directional split of traffic or the percentages of vehicles traveling in each direction along a road at any given time.**

The relationship of travel demand compared to the roadway capacity determines the level of service (LOS) of a roadway. Six levels of service identify the range of possible conditions. Designations range from LOS A, which represents the best operating conditions, to LOS F, which represents the worst operating conditions.

LOS D indicates "practical capacity" of a roadway, or the capacity at which the public begins to experience delay. The practical capacity for each roadway was developed based on the 2000 Highway Capacity Manual using the Transportation Planning Branch's LOS D Standards for Systems Level Planning. Recommended improvements and overall design of the transportation plan were based upon achieving a minimum LOS D on existing facilities and a LOS C for new facilities. Refer to the Definition and References section of the appendix for detailed information on LOS.

Implementation

The CTP is based on the projected growth for the planning area. It is possible that actual growth patterns will differ from those logically anticipated. As a result, it may be necessary to accelerate or delay the implementation of some recommendations found in this plan. Some portions of the plan may require revisions to accommodate unexpected changes in development. Therefore, any changes made to one element of the CTP should be consistent with the other elements.

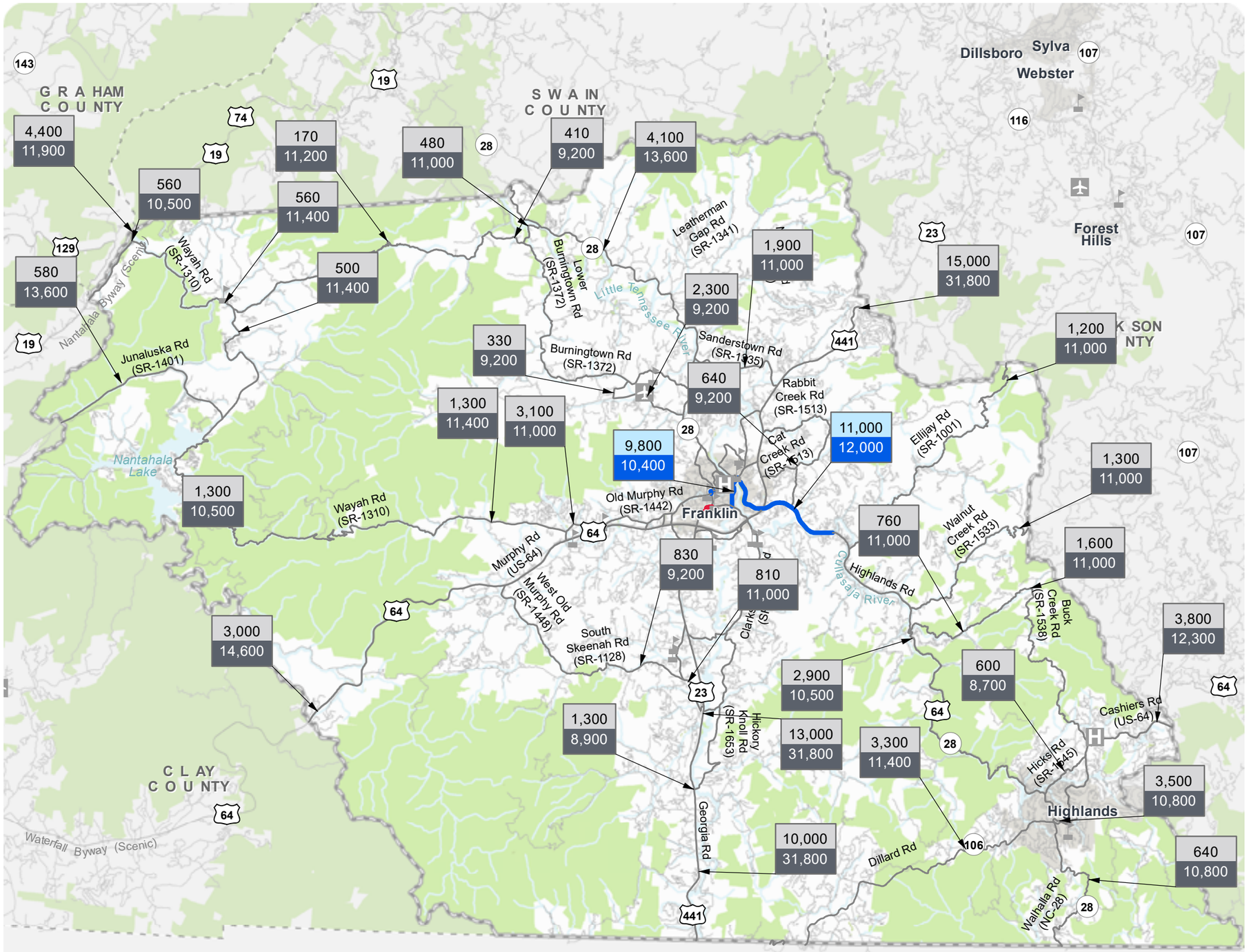
Initiative for implementing the CTP rests mostly with the policy boards and residents of Macon County. As transportation needs throughout the state exceed available funding, it is imperative that the local planning area aggressively pursue funding for priority projects. Projects should be

prioritized locally and submitted to the Southwestern RPO for regional prioritization and submittal to NCDOT. Refer to the Contact Information section of the Appendix for contact information on regional prioritization and funding. Local governments may use the CTP to guide development and protect corridors for the recommended projects. It is critical that NCDOT and local governments coordinate on relevant land development reviews and all transportation projects to ensure proper implementation of the CTP. Local governments and NCDOT share the responsibility for access management and the planning, design and construction of the recommended projects.

Recommended improvements shown on the CTP map represent an agreement of identified transportation deficiencies and potential solutions to address the deficiencies. While the CTP does propose recommended solutions, it may not represent the final location or cross section associated with the improvement. All CTP recommendations are based on high level systems analyses that seek to minimize impacts to the natural and human environment. Prior to implementing projects from the CTP, additional analysis will be necessary to meet the National Environmental Policy Act (NEPA) or the North Carolina (or state) Environmental Policy Act (SEPA). During the NEPA/SEPA process, the specific project location and cross section will be determined based on environmental analysis and public input. This CTP may be used to support transportation decision making and provide transportation planning data in the NEPA/SEPA process.

Figure 7

2017 VOLUME AND CAPACITY DEFICIENCIES



MACON COUNTY

CTP Analysis and Information

Volume and Capacity Ratio Features
(Base Year 2017)

2017 Volume / Capacity	Under Capacity (0-0.79)
2017 Volume / Capacity	Near Capacity (0.80-0.99)
2017 Volume / Capacity	Over Capacity (1.00+)

Other Features

Studied Roads

Full report at:
https://tinyurl.com/MaconCTP

N

0 1 2 4 6 Miles

Sheet 1 of 2

Base map date: March 18, 2019

Legal Disclaimer

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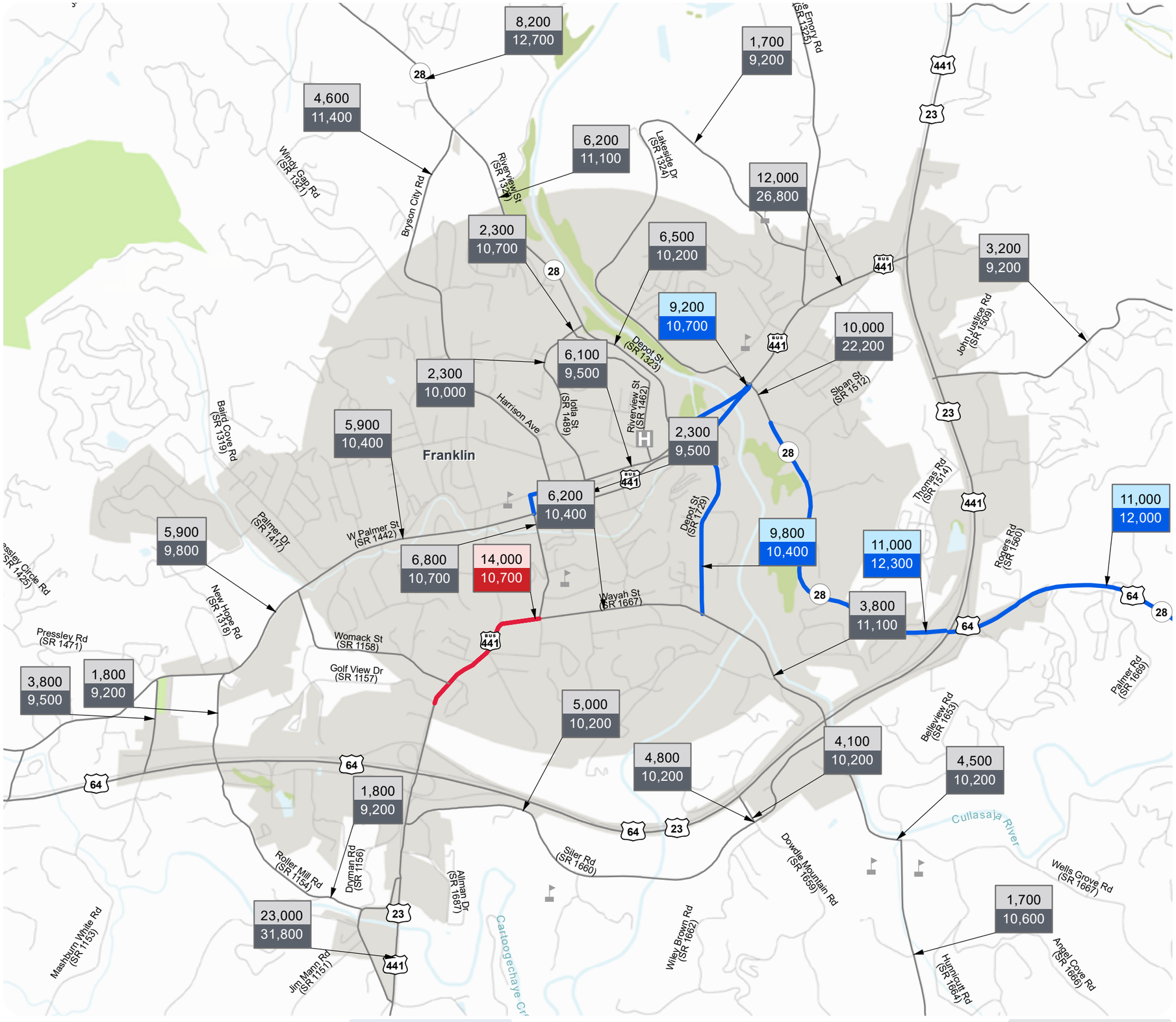
Plan Date: July 09, 2020

Figure 7

2017 VOLUME AND CAPACITY DEFICIENCIES



MACON COUNTY

TOWN OF FRANKLIN INSET

CTP Analysis and Information

Volume and Capacity Ratio Features
(Base Year 2017)

2017 Volume / Capacity	Under Capacity (0-0.79)
2017 Volume / Capacity	Near Capacity (0.80-0.99)
2017 Volume / Capacity	Over Capacity (1.00+)

Other Features

Studied Roads

Full report at:
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N

0 0.4 0.8 Miles

Sheet 1A of 2
Inset A

Base map date: March 18, 2019

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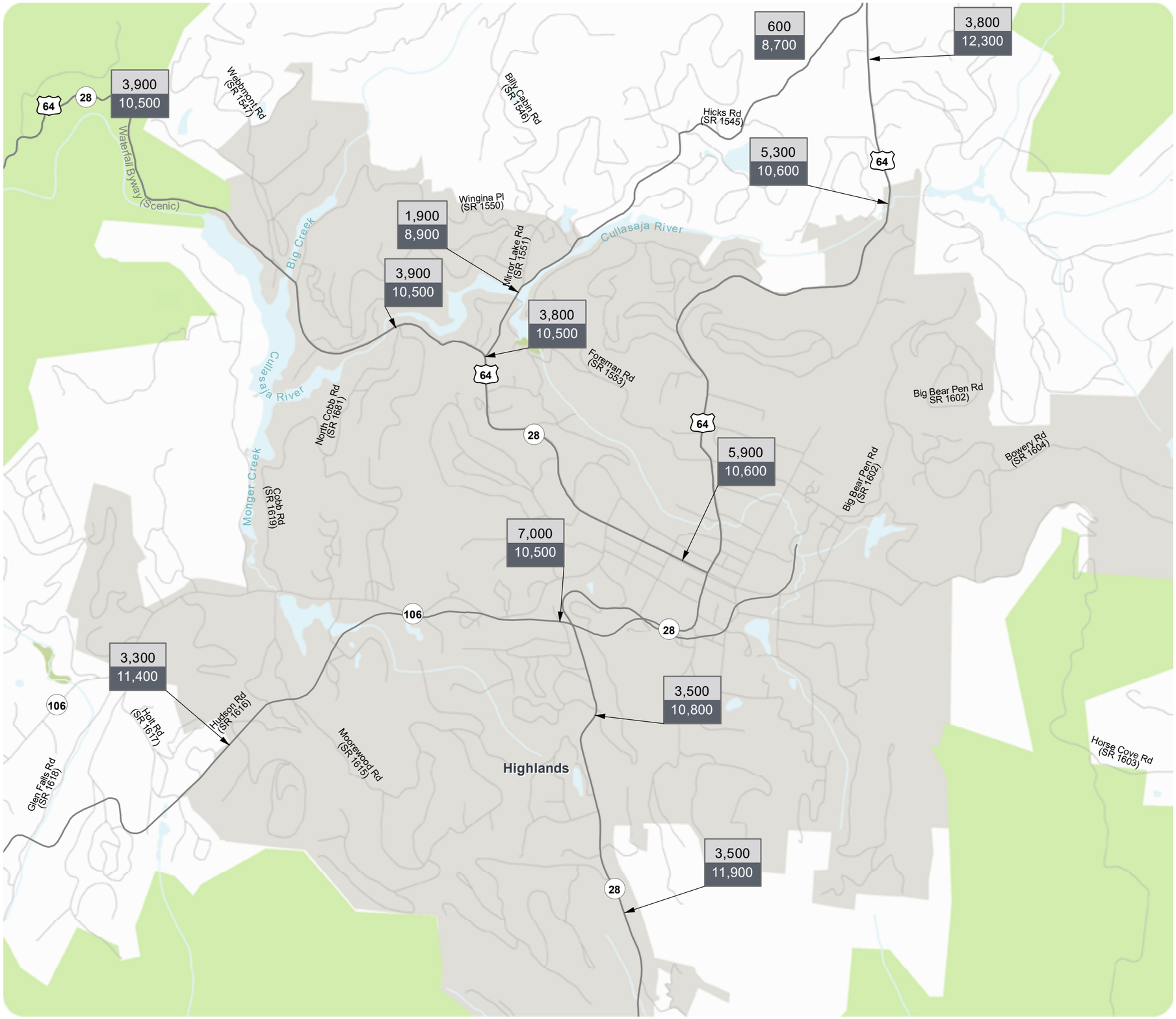
Plan Date: July 09, 2020

Figure 7

2017 VOLUME AND CAPACITY DEFICIENCIES



MACON COUNTY

TOWN OF HIGHLANDS INSET

CTP Analysis and Information

Volume and Capacity Ratio Features
(Base Year 2017)

2017 Volume / Capacity	Under Capacity (0-0.79)
2017 Volume / Capacity	Near Capacity (0.80-0.99)
2017 Volume / Capacity	Over Capacity (1.00+)

Other Features

Studied Roads

Full report at:
https://tinyurl.com/MaconCTP

N

0 0.35 0.7 Miles

Sheet 1B of 2
Inset B

Base map date: March 18, 2019

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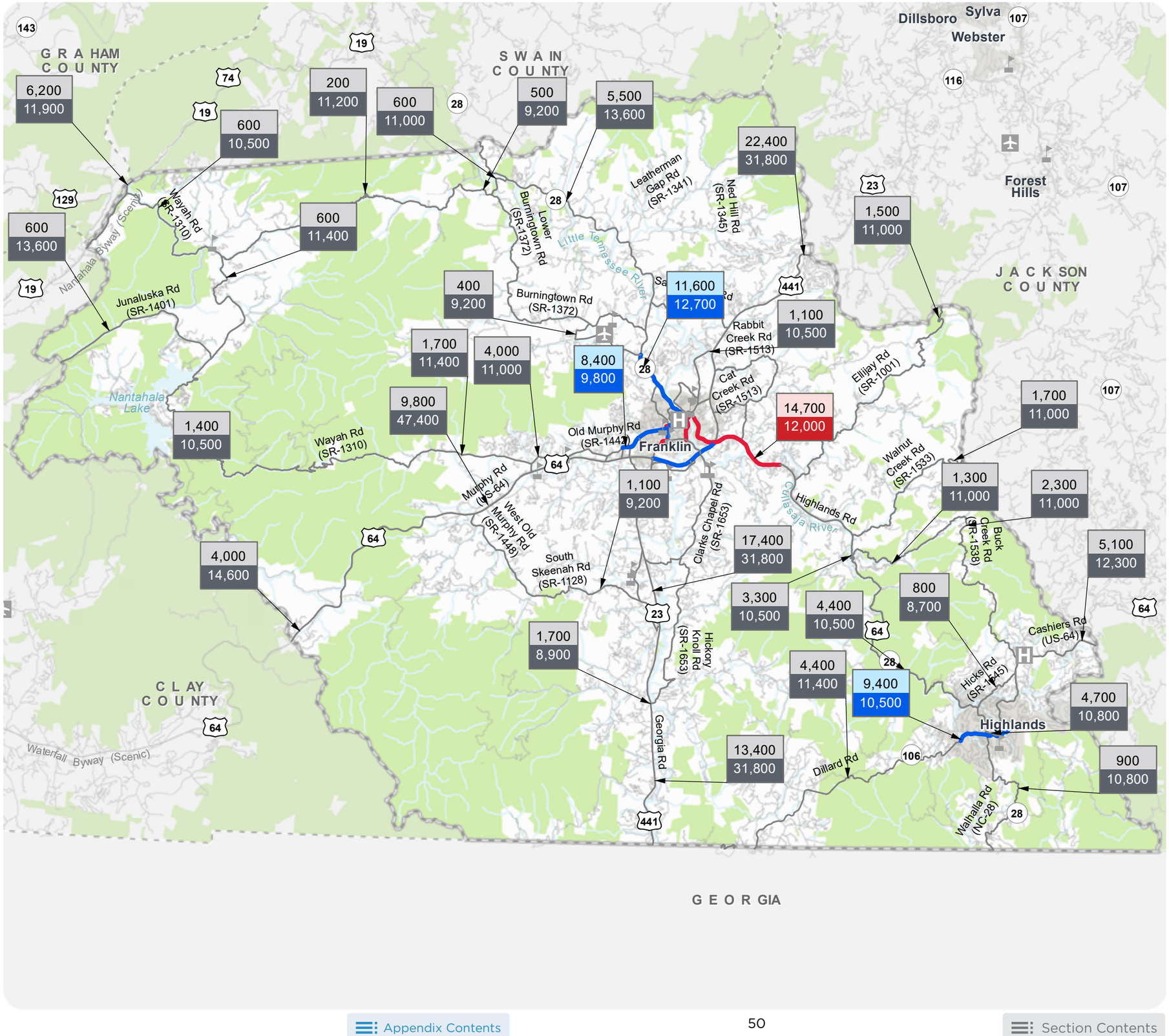
Plan Date: July 09, 2020

Figure 7

2045 VOLUME AND CAPACITY DEFICIENCIES



MACON COUNTY

CTP Analysis and Information

Volume and Capacity Ratio Features
(Future Year 2045)

2045 Volume / Capacity	Under Capacity (0-0.79)
2045 Volume / Capacity	Near Capacity (0.80-0.99)
2045 Volume / Capacity	Over Capacity (1.00+)

Other Features

Studied Roads

Full report at:
https://tinyurl.com/MaconCTP

0 1 2 4 6 Miles

N

Sheet 2 of 2

Base map date: March 18, 2019

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Plan Date: July 09, 2020

Figure 7

VOLUME AND CAPACITY DEFICIENCIES

MACON COUNTY

TOWN OF FRANKLIN INSET

CTP Analysis and Information

Volume and Capacity Ratio Features
(Future Year 2045)

- 2045 Volume / Capacity — Under Capacity (0-0.79)
- 2045 Volume / Capacity — Near Capacity (0.80-0.99)
- 2045 Volume / Capacity — Over Capacity (1.00+)

Other Features

- Studied Roads

Full report at:
https://tinyurl.com/MaconCTP

N

0 0.425 0.85 Miles

Sheet 2A of 2
Inset A

Base map date: March 18, 2019

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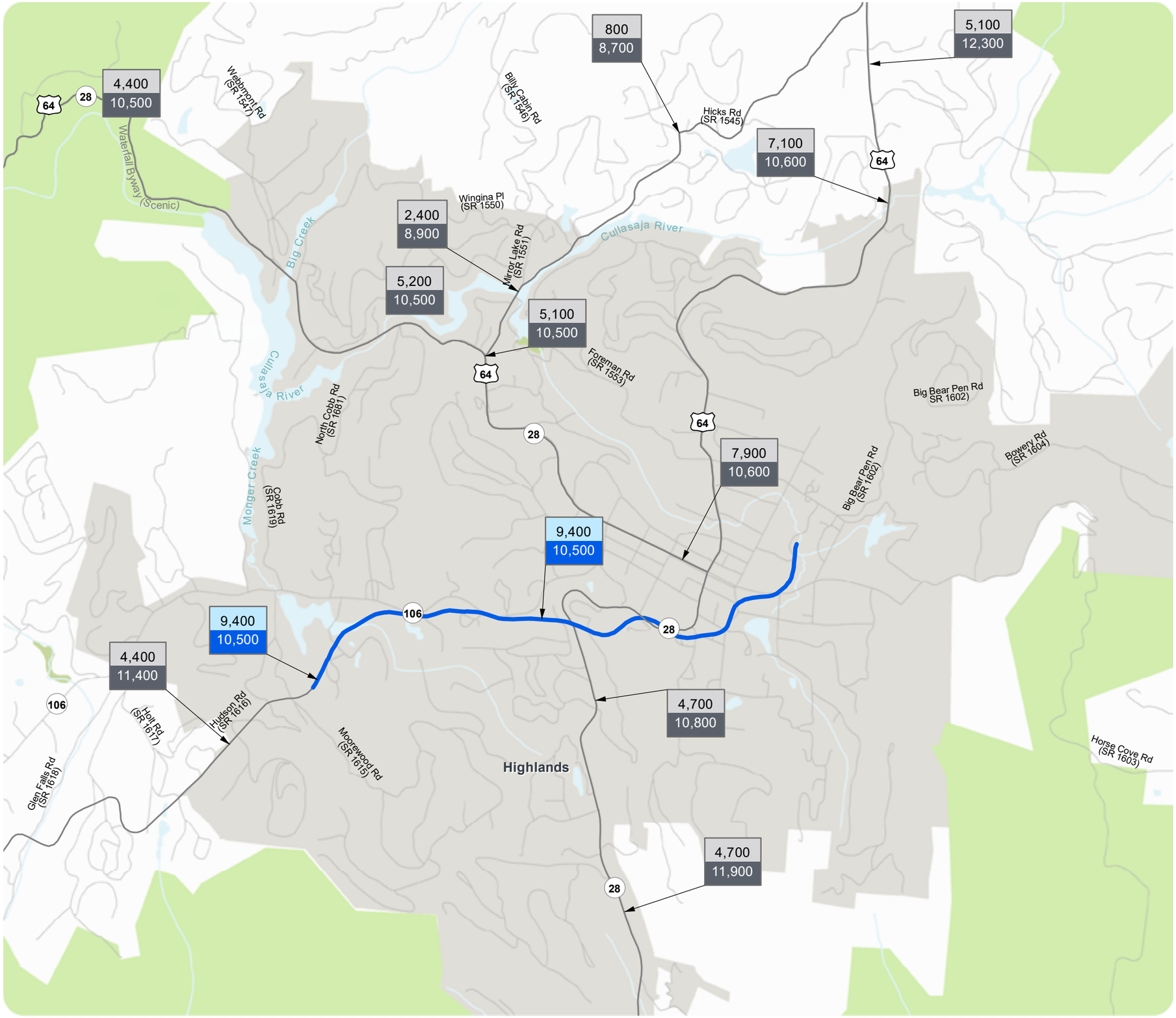
Plan Date: July 09, 2020

Figure 7

VOLUME AND CAPACITY DEFICIENCIES



MACON COUNTY

TOWN OF HIGHLANDS INSET

CTP Analysis and Information

Volume and Capacity Ratio Features
(Future Year 2045)

2045 Volume / Capacity	Under Capacity (0-0.79)
2045 Volume / Capacity	Near Capacity (0.80-0.99)
2045 Volume / Capacity	Over Capacity (1.00+)

Other Features

Studied Roads

Full report at:
https://tinyurl.com/MaconCTP

N

0 0.35 0.7 Miles

Sheet 2B of 2
Inset B

Base map date: March 18, 2019

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Plan Date: July 09, 2020

BICYCLE AND PEDESTRIAN

Bicyclists and pedestrians are a growing part of the transportation system in North Carolina. Many communities are working to improve mobility for bicyclists and pedestrians.

NCDOT is committed to providing an efficient multi-modal transportation network. NCDOT updated the 2009 Complete Streets Policy in 2019. An Action Plan and Implementation Guide were developed to support the policy. The 2019 Complete Streets Policy eliminated the 2009 Complete Streets Policy, the 2012 complete Streets Planning and Design Guidelines, the 2009 Bicycle Policy, the 2001 Pedestrian Policy Guidelines, and the 1994 Administrative Action to Include Local Adopted Greenway Plans in the NCDOT Highway Planning Process. The complete streets policy now covers guidelines from the other policies.

The 2000 NCDOT Pedestrian Policy Guidelines specify that NCDOT will participate with localities in the construction of sidewalks as incidental features of highway improvement projects. At the request of a locality, state funds for a sidewalk are made available if matched by the requesting locality, using a sliding scale based on population.

NCDOT's administrative guidelines, which were adopted in 1994, ensure that greenways and greenway crossings are considered during the highway planning process. This policy was incorporated so that critical corridors adopted by localities for future greenways will not be severed by highway construction.

Reference

Inventories of existing and planned bicycle and pedestrian facilities for the planning area are presented on the inventory section of the CTP. The Bike/Walk Franklin Plan and the Southern Blue Ridge Bike Plan were used in the development of these elements of the CTP. All recommendations for bicycle and pedestrian facilities were coordinated with the local governments and the NCDOT Division of Bicycle and Pedestrian Transportation. Refer to the contacts section of the appendix for contact information for the Division of Bicycle and Pedestrian Transportation.

Community Feedback

The Macon County CTP Survey showed the desire to expand available biking and walking options, especially within Franklin and Highlands. Comments on the survey included:

- Desire to connect sidewalks within downtown Franklin
- Adding bike and pedestrian accommodations to key destinations (schools, stores, etc)
- Improving the safety of cyclists and pedestrians

Bicycle and Pedestrian Analysis

Throughout the process of the CTP, existing conditions and local plans were used to analyze the bicycle and pedestrian needs. The steering committee identified major destinations that people would walk or bike to; these destinations were marked on an analysis map. This map placed two-mile buffers around these key destinations with the purpose of identifying roadways that served as important connectors between them. The identified connectors were reviewed and considered for bicycle and/or pedestrian recommendations. This map was used along with bicycle and pedestrian crash analysis maps to identify roadways in need of bicycle or pedestrian facilities.

The Bike/Walk Franklin Plan and the Southern Blue Ridge Bike Plan were also heavily referenced during this step and compiled in the maps in this section of the appendix. In accordance to the Complete Streets Policy, roadway facilities with highway improvement recommendations were also evaluated for bicycle and pedestrian improvements.

Bicycle improvements aimed to provide connected facilities that accommodate bikes with the addition of bike lanes, multiuse paths, or paved shoulders. Many project recommendations were those pulled from the local plans with some including facilities on the NC 2 – Mountains to Sea Bike Route. The steering committee also recommended improved signage along the state Bike Route. Pedestrian improvements aimed to improve and expand connections between sidewalks within town limits.

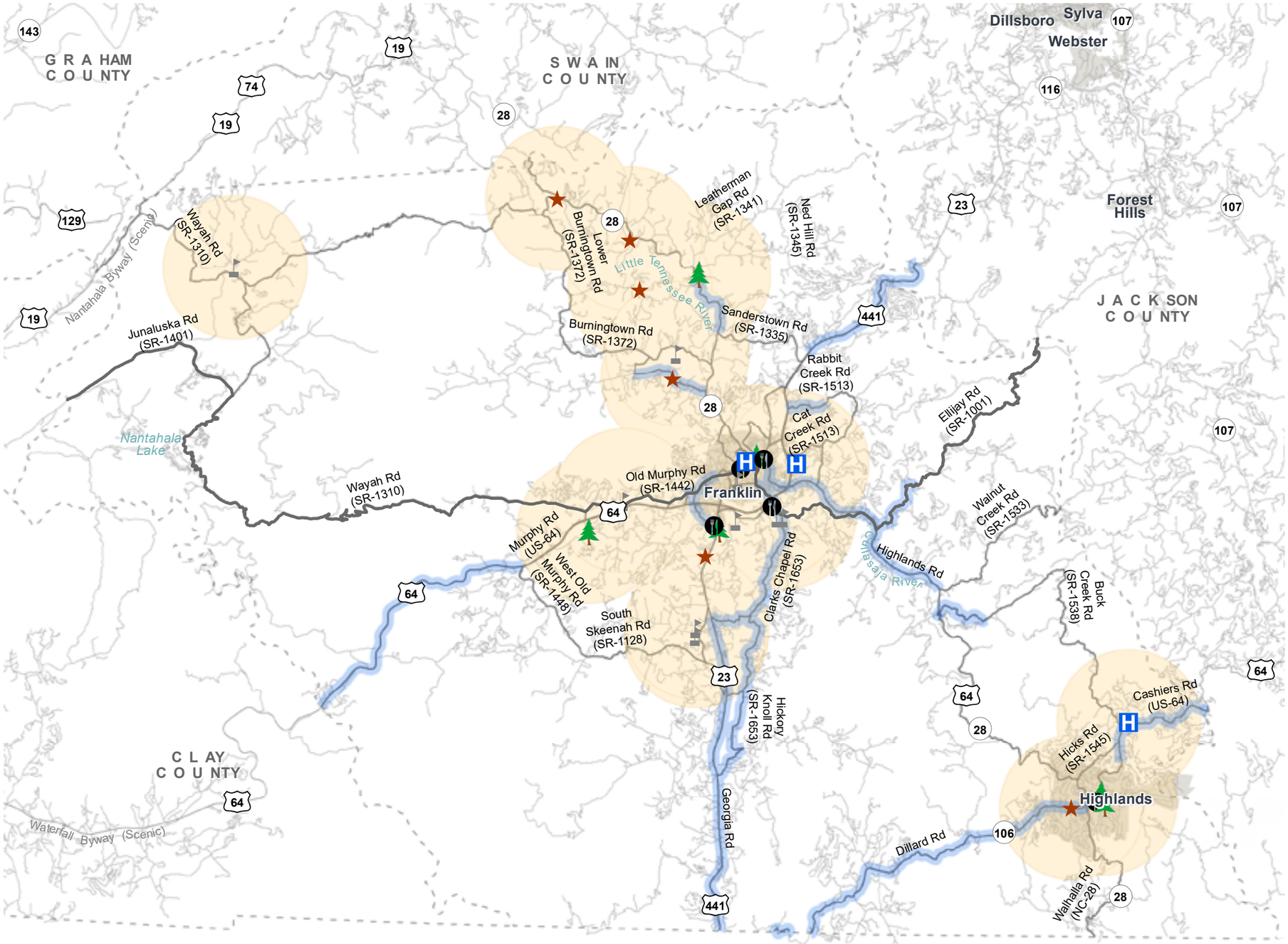

Figure 8

Bicycle Analysis

MACON COUNTY

CTP Analysis and Information

Bicycle Features

- NC 2 - Bike Route Mountains to Sea
- Draft Highway Proposals

Destinations

- Medical Centers
- Park/Community Center
- Schools
- Shopping Centers
- Other
- 2 mile buffer

Full report at: https://tinyurl.com/MaconCTP

N

0 1 2 4 6 8 Miles

Base map date: March 18, 2019

Legal Disclaimer

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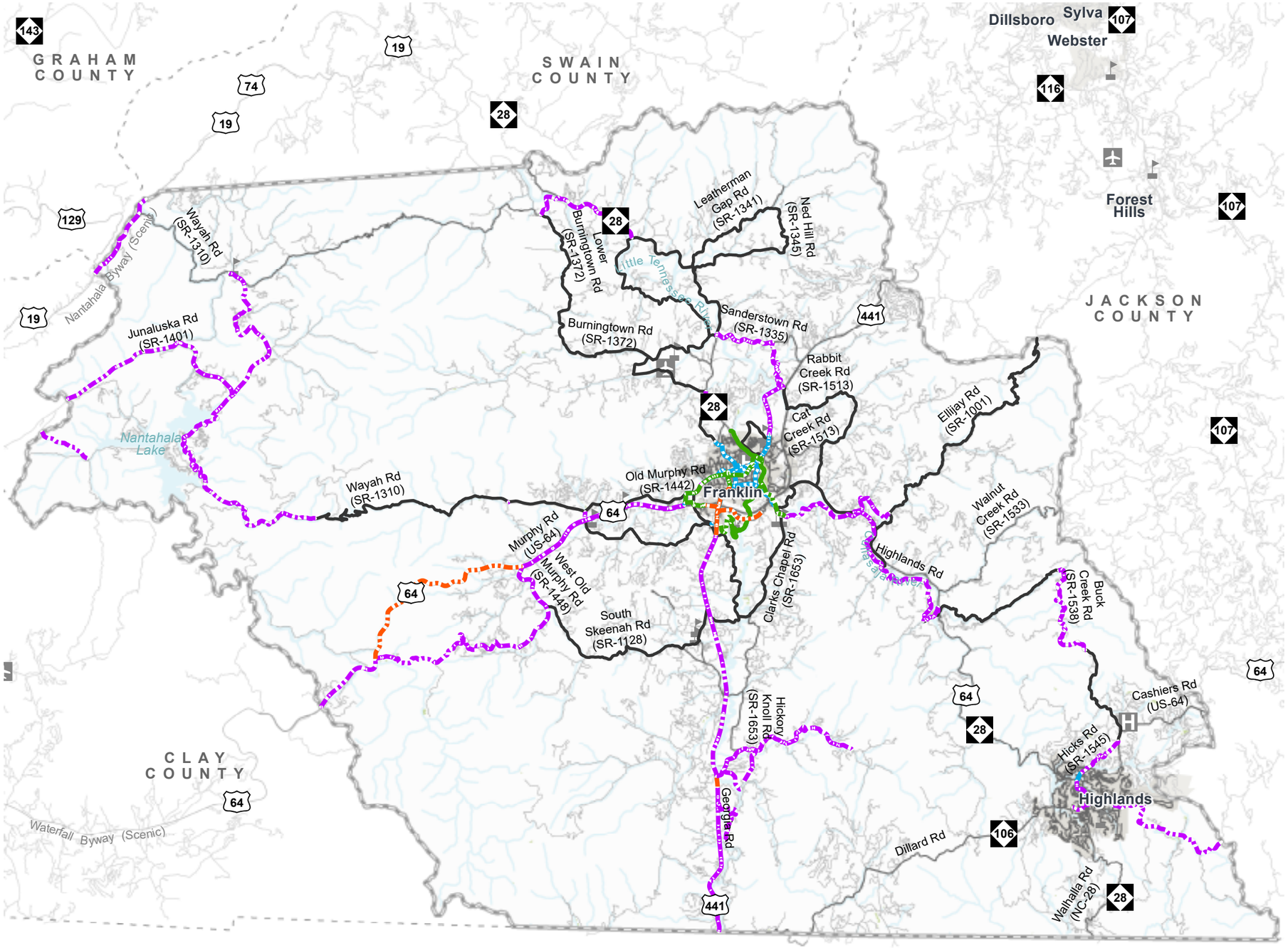
Plan Date: June 25, 2020

Figure 9

Bicycle Analysis - Local Plans



MACON COUNTY

CTP Analysis and Information

Bicycle Features

- Designated Local Bike Routes
  - Bike Lane
  - Paved Shoulder
  - Shared Lane
- Existing Greenway
- Proposed Greenway

Full report at:
https://tinyurl.com/MaconCTP

N

0 1 2 4 6 8 Miles

Sheet 1 of 3

Base map date: March 18, 2019

Legal Disclaimer

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Plan Date: January 25, 2021

Figure 9

Bicycle Analysis - Local Plans

MACON COUNTY

CTP Analysis and Information

Town of Franklin

Bicycle Features

- Designated Local Bike Routes
  - Bike Lane
  - Paved Shoulder
  - Shared Lane
- Existing Greenway
- Proposed Greenway

Full report at:
https://tinyurl.com/MaconCTP

N

0 0.5 1 Miles

Sheet 2 of 3

Base map date: March 18, 2019

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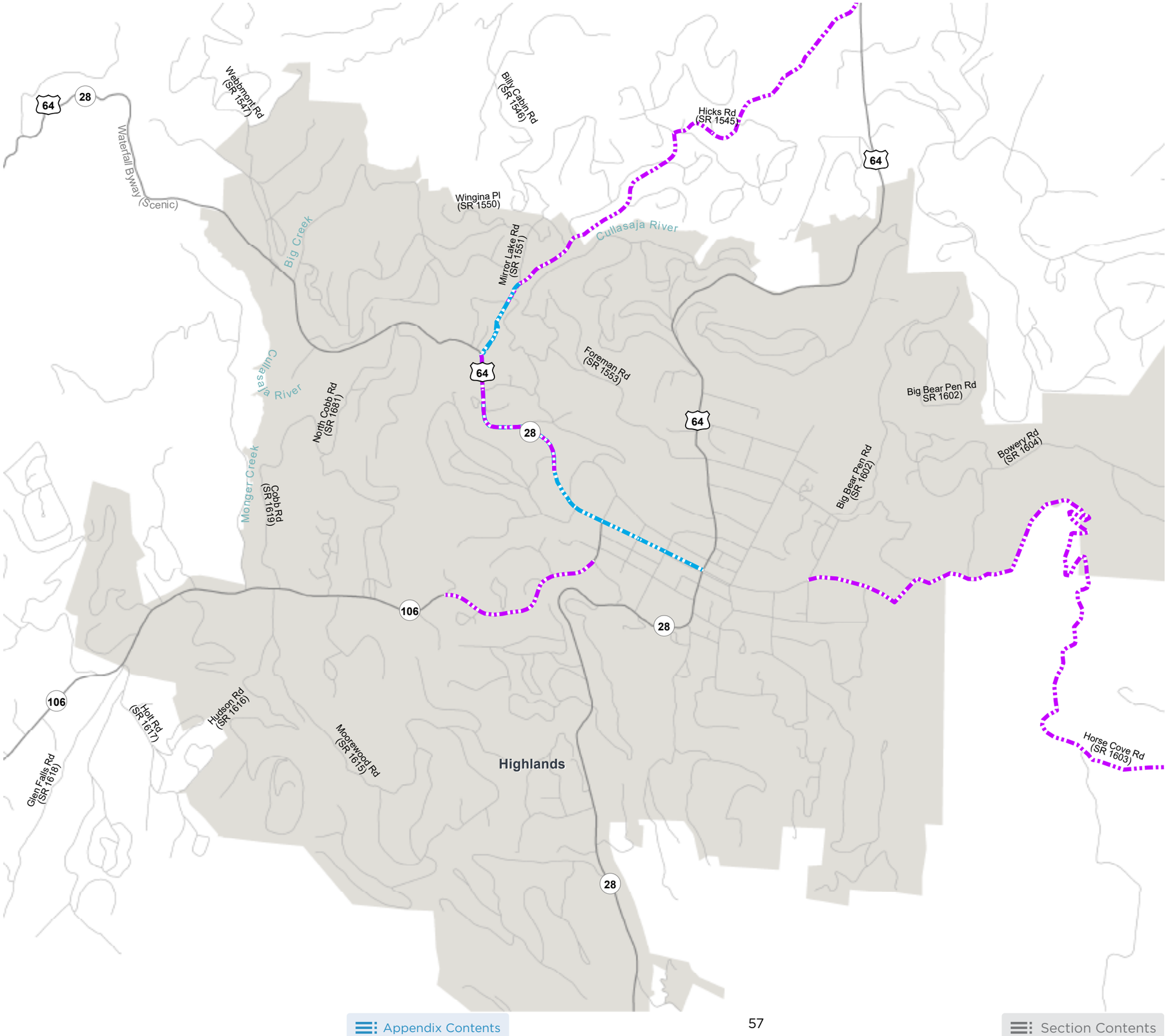
Plan Date: January 25, 2021

Figure 9

Bicycle Analysis - Local Plans



MACON COUNTY

CTP Analysis and Information

Town of Highlands

Bicycle Features

- Designated Local Bike Routes
  - Bike Lane
  - Paved Shoulder
  - Shared Lane
- Existing Greenway
- Proposed Greenway

Full report at:
https://tinyurl.com/MaconCTP

N

0 0.375 0.75 Miles

Sheet 3 of 3

Base map date: March 18, 2019

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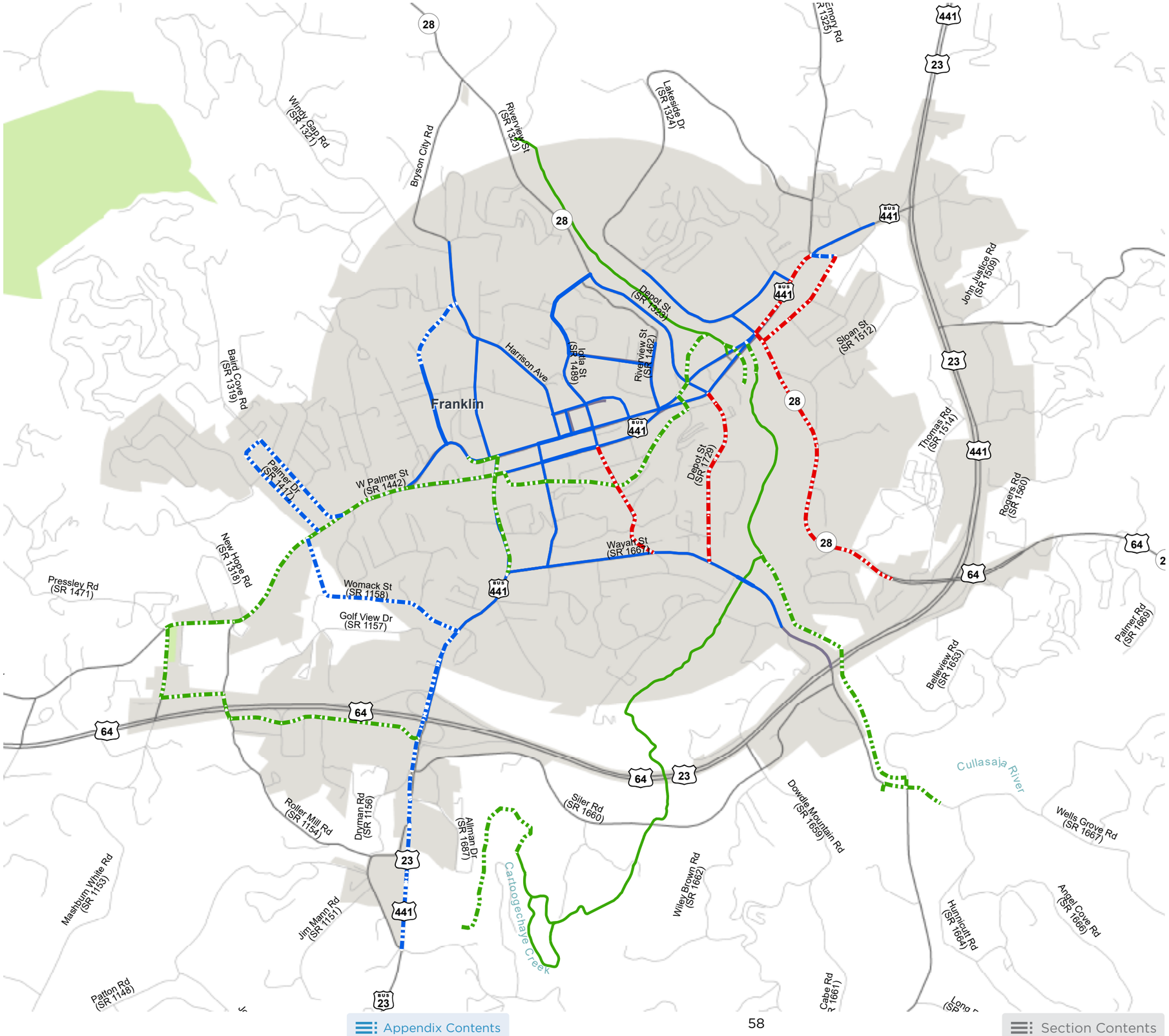
Plan Date: January 25, 2021

Figure 10

Pedestrian Analysis - Local Plans



MACON COUNTY

CTP Analysis and Information

Town of Franklin

Pedestrian Features

- Existing Sidewalk
- Sidewalk Proposal
- Sidewalk Improvement
- Existing Greenway
- Greenway Proposal

Full report at:
https://tinyurl.com/MaconCTP

N

0 0.5 1 Miles

Base map date: March 18, 2019

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Plan Date: January 25, 2021

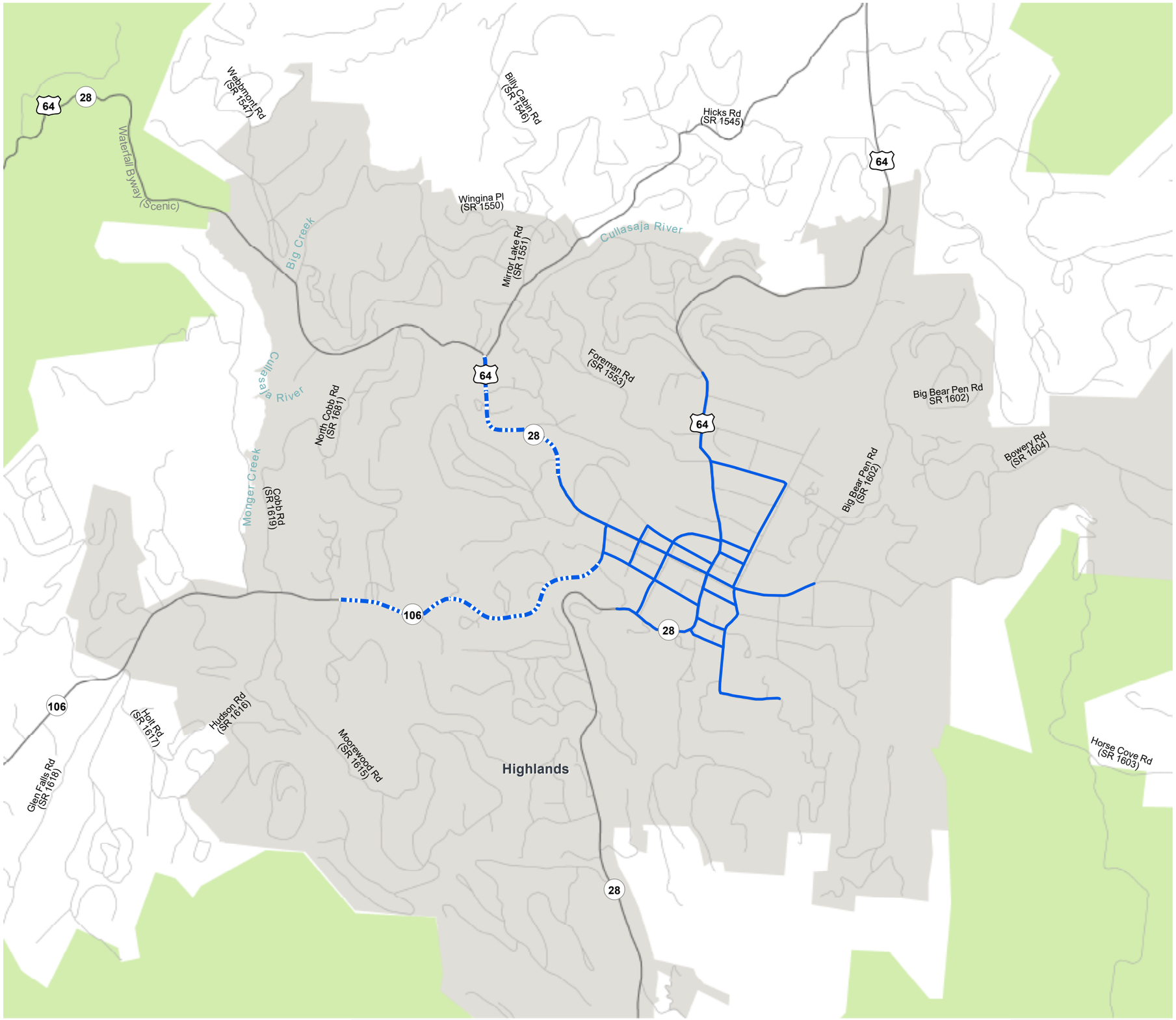

Figure 10

Pedestrian Analysis - Local Plans

MACON COUNTY

CTP Analysis and Information

Town of Highlands

Pedestrian Features

- Existing Sidewalk
- Sidewalk Proposal
- Sidewalk Improvement
- Existing Greenway
- Greenway Proposal

Full report at:
https://tinyurl.com/MaconCTP

N

0 0.375 0.75 Miles

Base map date: March 18, 2019

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Plan Date: January 25, 2021

PUBLIC TRANSPORTATION

Public transportation and rail are vital modes of transportation that give alternatives for transporting people and goods from one place to another. North Carolina's public transportation systems serve more than 50 million passengers each year. Five categories define North Carolina's public transportation system: community, regional community, urban, regional urban and intercity.

Urban Transportation Fixed Corridors

There are currently nineteen urban transit systems operating in North Carolina, from locations such as Asheville and Hendersonville in the west to Jacksonville and Wilmington in the east. In addition, small urban systems provide service in three areas of the state. Consolidated urban-community transportation exists in five areas of the state. In those systems, one transportation system provides urban and rural transportation within the county.

- **Fixed Routes – Local**: Provides service to every stop along the route
- **Fixed Route – Express**: Does not provide service every stop along the route
- **Bus on Shoulder (BOSS)**: Specific routes designated to bypass congested traffic areas
- **Bus Rapid Transit Busways** that operate in rapid transit highway corridors

Rural Fixed Corridors

Local transportation efforts formerly centered on assisting clients of human service agencies. Today, most rural systems serve the public and those clients.

- **Deviated Fixed Route** – Transit service provided that uses a hybrid of fixed-route and demand response services. With this type of service, buses stop at fixed points and maintain a timetable but can deviate from the route to go to a specific location for a scheduled request.

Regional Fixed Corridors

Regional Transit Service that connects local and regional providers, and transportation authorities. Regional community transportation systems are composed of two or more contiguous counties providing coordinated/consolidated service. Although such systems are not new, single-county systems are encouraged to consider mergers to form more regional systems.

Park and Ride Lots

Vehicle lots designed for transit commuters.

An inventory of existing and planned fixed public transportation routes for the planning area is presented on the inventory table. All recommendations for public transportation were coordinated with the local governments and the Public Transportation Division of NCDOT. Refer to the contact section of the appendix for contact information for the Public Transportation Division.

Existing Public Transportation

Macon County Transit provides public services to take people to local shopping centers, work, medical appointments and many other places. There are two major ways these services are provided: A deviated-fixed transit route and demand response services. These systems provide travel for workers, medical appointments and hikers.

A Fare Card System is available for Macon County Transit demand-response services. Passengers can purchase a card with a QR code as a refillable card to pay fees. Fare cards can be purchased and

refilled at the transit office or from the driver. The ability to refill the card online and expand its use to work with the Mountain Gem Route is being investigated.

Deviated Fixed Route:

Macon County Transit's Deviated-Fixed route is composed of two buses traveling along a fixed route with the ability to deviate from the route to pick-up or drop off passengers. The Mountain Gem Route is the Deviated-Fixed route, a one-hour loop available locally in the Franklin area. The buses can deviate up to around 1/4 of a mile and run from 8 a.m. to 4:20 p.m. Monday through Friday.

The Mountain Gem Route does have a few major common bus stops:

- **Westgate Terrace**
- **Westgate Plaza**
- **Orchard View Apartments**
- **Macon County Library**
- **Wal-Mart**
- **Ulco Bluff Apartments**
- **Oak Forest Apartments**
- **Hot Spot**
- **Bi-Lo**
- **Holly Haven Apartments**
- **Main Street Gazebo**

Due to the allowance of minor deviations, buses can drop off passengers closer to their destinations. This could be helpful for disabled and elderly passengers.

An analysis of GPS Data revealed common deviations from the fixed route. Those included: the Macon County Public Health Center, Angel Medical Center, East Franklin Shopping Area and Ingles Market Area on West Palmer Street. (See Deviated Fixed Transit Map and Methodology)

Demand Response:

Macon County Transit's Demand Response service allows the public to schedule rides within and outside of the Franklin area from Monday through Friday. These requests are best made in advance since they are taken on a first call, first serve basis. Appointments outside Franklin must be scheduled at least one week in advance.

Many regional trips to places such as Ashville are provided in partnership with the Clay County Transit systems to efficiently transport passengers since buses are already going that direction. Currently, the Macon County Transit Center acts as a transfer facility for these trips.

An analysis of GPS data for Demand Response showed common destinations and requests included: the Macon County Senior Services Center, Davita Dialysis Center, Wesley Park, and Wal-Mart. Out of county trips were often trips to Sylva. (See Demand Response Transit Map and Methodology)

Park and Ride Lots:

Currently, there are two existing Park and Ride Lots in Macon County. One is along U.S. 23/441 near Sanderstown Road (State Road 1335) and the other is along U.S. 64 (Murphy Road) near Sloan Road (State Road 1175). Three Park and Ride Lot proposals were carried over from the 2012 Macon County CTP.

Community Feedback

The Macon County CTP Survey showed that Macon County Transit is an important service especially for elderly populations. Comments on the survey included:

- **Expanding hours of operations (weekends)**
- **Signs or shelters to better indicate transit stops**
- **Additional stops**
- **Expanding transit outside Franklin**

Future of Transit

The vision for the future of Macon County Transit is to provide services to all transit riders and improve the efficiency of the transit system through emerging technology, seamless transportation, and expansion of services. This vision consists of:

- **Enhancing transportation to Highlands and other communities**
- **Improving coordination and usability for travel between counties for seamless interactions.**
- **Increasing awareness of available public transportation services and their intended use.**
- **Growing Fixed Route Services and encourage mixed use transportation**
- **Expanding existing services**

Methodology

GPS data for year 2019 was used to track the coordinates of bus locations at different times during its operation. The data provided by Macon County Transit tracked the buses approximately every minute (sometimes more frequently) while they were operating.

Objective:

A heat map to analyze this data. The data only shows coordinates, date and time. While it does not tell how many riders are on the bus itself, it can tell the locations that the buses are traveling to.

- **Deviated Fixed:** Most of the data points are along the fixed route since the buses in this data cover only those that use this system. The objective of the heat map for this data is to see where the buses frequently deviated to, outside of the fixed path. If there were frequent requests to stops at locations outside of the original route, they are identified as areas of interest.
- **Demand Response:** The demand response data had a lot of data points. The objective of the heat map was to find the locations where stops were frequently requested. A coverage map is also useful to see which areas have requests and to see how far away buses were driving.

Method

Filtering the data: Due to the number of data points, only 2019 points on odd months, starting with January, were used. The data was also reduced to only show every other minute. Additionally, certain days and certain data points are in awkward locations that could easily be data gathering errors. Certain days were deleted where this occurrence in large numbers was noted; however, with such a large number of points, there may be additional errors.

Point Density Tool: The Point Density Tool was used to create the "heat map" to identify the areas of interest. The tool takes each point and creates a buffer around it with a base value. The value in each cell increases depending on how many buffers overlap at the cell's location.

Output

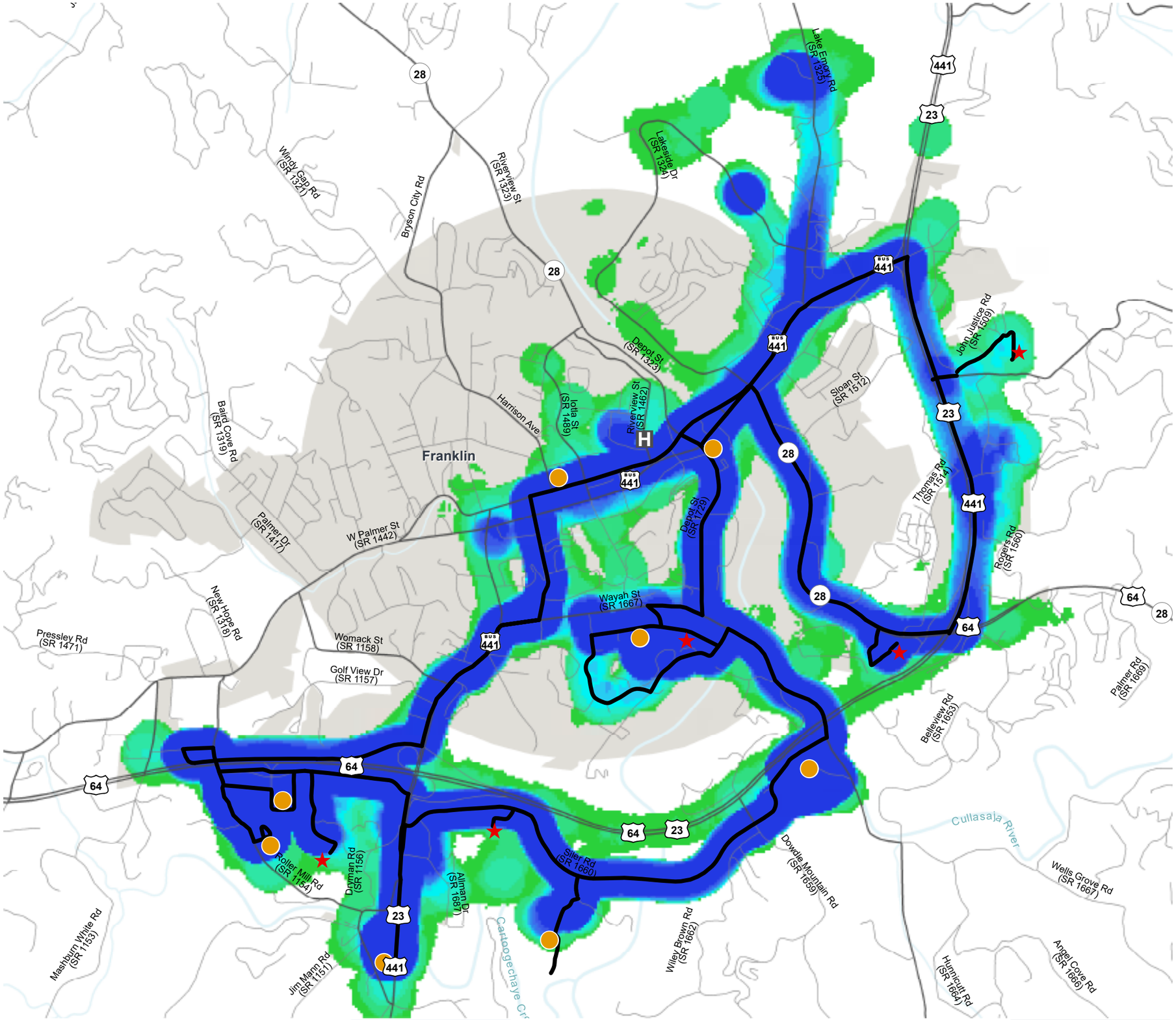
This data shows the locations where buses pass through frequently or remain for extended periods of time (e.g. stops). It was important to investigate reasons why certain areas are identified. For example, certain locations had a great frequency of buses but upon further analysis, it showed that a bus may have been stationed there for several days for some reason. Another location showed great frequency, but it was the transit building where buses are parked. These locations were either removed or kept in mind when analyzing the maps.

- **Deviated-Fixed:** The map shows the fixed route boldly; however, spots outside of that route were also shown to be highlighted on the higher end. Some of these spots included the Macon County Public Health Center, Angel Medical Center, East Franklin Shopping Area, and Ingles Market Area on West Palmer Street. These exclude transit stops and the transit parking lot.
- **Demand Response:** The map shows a few points of interest. Even though the data was much greater, it was much more spread out. This causes many of the less frequent locations to be excluded since they are grouped together. Areas of interest include: the Macon County Senior Services Center, Davita Dialysis Center, Wesley Park, and Wal-Mart.
- **Regional Travel:** The data showed that most out-of-county trips were to Sylva with a few trips to Asheville. No trips were shown to go west of Macon County, based on the data evaluated.

See the Macon County Transit Analysis Maps for visuals.

Figure 11

Public Transportation Analysis



MACON COUNTY

CTP Analysis and Information

Public Transportation Features

Deviated-Fixed Route

Mountain Gem Route

Stops

Call-Only Stops

High 570+

Frequency of Transit Buses 280

Low 150

Full report at: https://tinyurl.com/MaconCTP

N

0 0.45 0.9 Miles

Sheet 1 of 2

Base map date: March 18, 2019

Legal Disclaimer

This product contains mapping data for informational and planning purposes only, and is subject to change. Users should review or consult the primary data sources to ascertain the usability of the information.

Plan Date: January 25, 2021

Figure 11

Public Transportation Analysis

MACON COUNTY

CTP Analysis and Information

Public Transportation Features

Demand Response

- Mountain Gem Route
- Stops
- ★ Call-Only Stops

High	90,000+
Frequency of Transit Buses	4,000
Low	370

Full report at:
https://tinyurl.com/MaconCTP

N

0 0.45 0.9 Miles

Sheet 2 of 2

Base map date: March 18, 2019

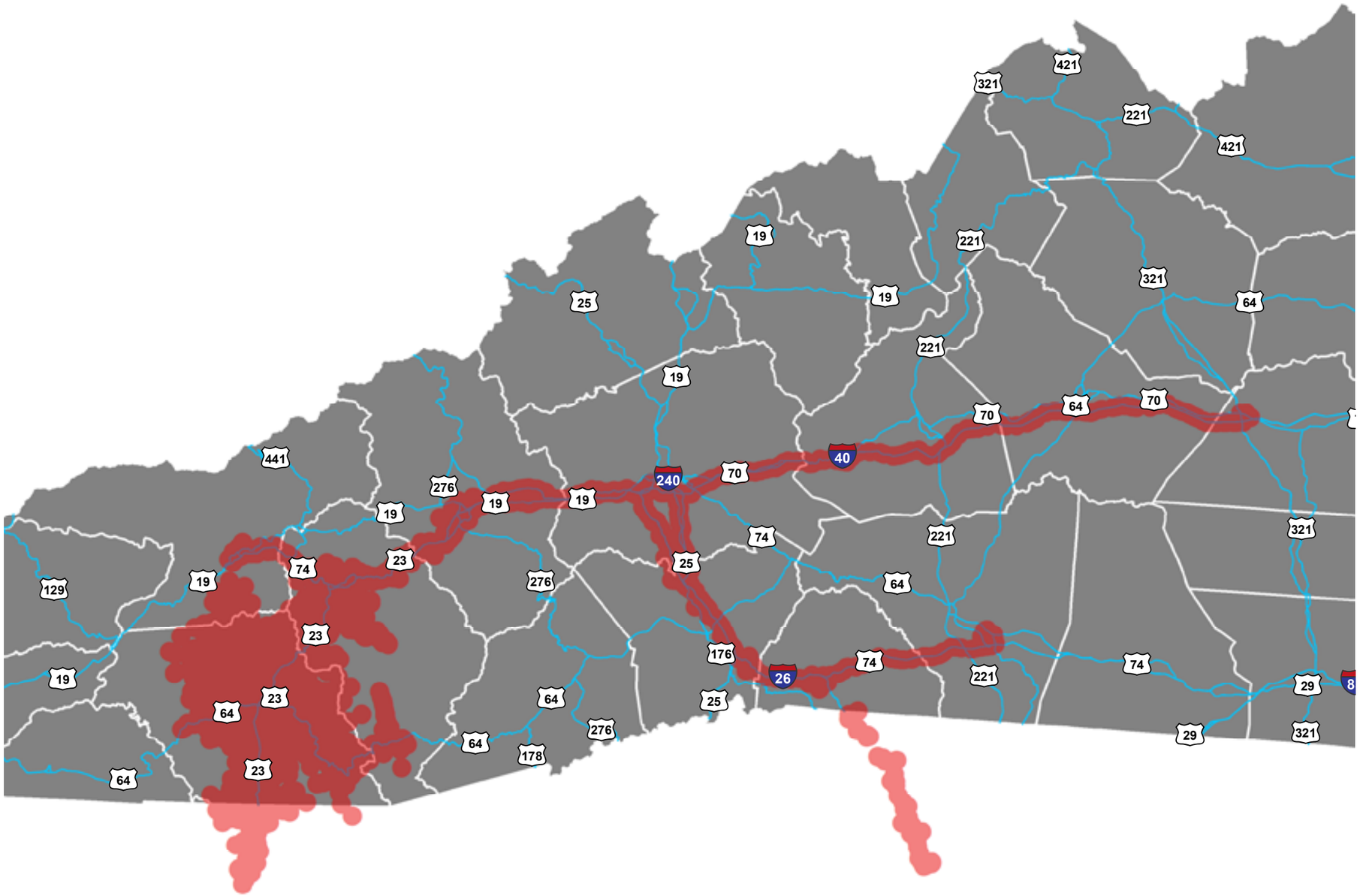
Legal Disclaimer

This product contains mapping data for informational and planning purposes only, and is subject to change. Users should review or consult the primary data sources to ascertain the usability of the information.

Plan Date: January 25, 2021

Figure 12

Public Transportation Coverage



MACON COUNTY

CTP Analysis and Information

Public Transportation Features

Demand Response

- Transit Bus Passed here
- US Routes
- Counties

Full report at:
https://tinyurl.com/MaconCTP

N

0 3 6 12 18 24 30 36 Miles

Base map date: March 18, 2019

Legal Disclaimer

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Plan Date: July 15, 2020

ALTERNATIVE ANALYSIS

A component of the long-range transportation planning process is the development and evaluation of options for transportation solutions to meet the identified needs or deficiencies in an area. Alternative analysis studies options for the scope, concept, and location of a transportation proposal to serve the deficiency or need. Scenario analysis studies multiple options and alternatives that may include multiple profiles for the underlying land use assumptions. This analysis is less detailed than what is done later in the project development process and is used as a preliminary resource to identify potential alternatives.

Alternatives are evaluated and separated into three categories.

- **Unreasonable alternatives** are alternatives considered but recommended for elimination from further study based on planning level analysis. An alternative is unreasonable if it fails to meet the community's vision, address the transportation deficiency, and/ or has unacceptable impacts to the natural or human environment.
- The **CTP project proposal** is the alternative selected to be shown on the adopted CTP map. The CTP project proposal is selected based on a planning level analysis as the one that best meets the community's vision, addresses the transportation deficiency, and avoids and/ or minimizes impacts to the natural and human environment.
- **Other Alternatives studied** are alternatives that were considered and, though they were not selected as the CTP project proposal, they were not found to be 'unreasonable'. These alternatives may be considered for future studies, though this decision is to be made a later time.

PUBLIC INVOLVEMENT

Public involvement is a key element in the transportation planning process. Adequate documentation of this process is essential for a seamless transfer of information from systems planning to project planning and design.

Throughout the course of the study, the NCDOT Transportation Planning Branch worked with the Macon County CTP Steering Committee, which included a representative from each municipality, county staff, the transit agency, the RPO and others. The committee provided information on local plans, developed transportation vision and goals, discussed population and employment projections, and developed proposed CTP recommendations.

CTP Coordinating Committee Members

At the start of the CTP study, a steering committee was formed to guide development of the plan. The committee had representatives from various interest groups responsible for capturing the transportation needs of the community.

CTP Vision, Goals, and Objectives

The CTP vision, goals and objectives were developed as part of the public involvement process to help identify the community's outlook on the future of transportation for all modes. The CTP Steering Committee develops the draft vision, goals and objectives, which are refined with input from residents through the CTP Goals & Objectives Survey. These products are used as guides while the CTP is being developed.

The vision statement, goals and objectives reflect what is important for the area and define any local preferences concerning the transportation system and community assets. The vision statement is the framework for the area's strategic planning. Goals and objectives document how the area plans to fulfill its vision. The goals break down the vision statement into themes, while the objectives document how the area plans to make progress to achieve each goal.

Macon County CTP Vision:

"Macon County envisions a safe and reliable multi-modal transportation network that accommodates all users and connects our people with the goods and services they need to thrive.

This transportation system supports economic development opportunities, promotes healthy communities, and adapts to changing technologies while preserving the natural beauty and rural character of our county."

Vision statement from Macon County CTP Steering Committee Steering

Goals & Objectives:

1. **Provide a safer transportation system.**
   Strive to reduce crashes among all modes and promoting safe driving behaviors through speed enforcement, medians, and other tools that allow for safe and reliable travel.

2. **Provide a multi-modal transportation system.**
   Support advancements of transportation services that allow people that may not own a personal vehicle to travel, such as: expanding greenways, constructing sidewalks to primary destinations, and expanding transit hours of operation.

3. **Provide a transportation system that accommodates all users.**
   Provide mobility for both young and elderly travelers without vehicles as well as visitors and freight providers.

4. **Provide transportation system that connects people with destinations.**
   Preserve the travel time on primary routes while improving connections between major destinations such as employment centers and schools.

5. **Provide a transportation system that promotes healthy communities.**
   Provide transportation options that allow people to safely walk or bike to destinations, connecting communities.

6. **Provide a transportation system that adapts to changing technologies.**
   Prepare for technological advances that will impact the future of the transportation system such as electric and automated vehicles and drones, and provide the necessary infrastructure to be compatible with them.

7. **Provide a transportation system that preserves the natural beauty and rural character of Macon County.**
   Acknowledge that some roads in rugged terrain may not be feasible to improve due to impacts to the human and natural environment.

Public input was a crucial component of the Macon County CTP planning process. There were four rounds of public involvement opportunities throughout the process. These opportunities were used to receive feedback on local goals, concerns, and proposed recommendations. In the attempt reach to a large group of people, various methods of advertising were used to aid in the participation of each.

Rounds of Public Involvement

- Macon County CTP Survey #1 (May-July 2019)
- Macon County CTP Survey #2 (August-September 2020)
- Southwestern RPO Public Comment Period (April-May 2021)
- Local Board Adoption Meetings (April – May 2021)

The Covid-19 pandemic prevented some of the typical face-to-face public workshops, so the project team increased other outreach methods.

- A project website was created and updated with ongoing public involvement opportunities, maps, data, and materials from the steering committee meetings. https://regiona.org/rpo-plansprojects/macon-county-ctp/
- 6000 postcards were printed to promote the survey; these were distributed to all students through the Macon County Public School system and other locations throughout the county.
- The surveys were translated into Spanish and Spanish advertisements were placed in the local shops.
- The surveys were also available on paper for people who don't use the internet.
- Contact lists from previous surveys were emailed.
- Paid Facebook Advertisements targeted to Macon County boosted the overall reach to over 50,00 Facebook users.
- Traditional newspaper advertisements.
- Posters advertising the survey were placed on transit buses, libraries, community centers, and other public places.
- Steering committee members assisted with distribution by sharing with their contacts.

Round 1: Macon County CTP Survey #1 (May-July 2019)

Near the start of the CTP Study, an online survey was developed to obtain public input on goals, priorities, and concerns about Macon County's transportation system. This survey asked participants to rank their transportation priorities from selections including safety, transit, modernization, active transportation, the environment, and others. The survey also provided the opportunity to highlight the location of any transportation concerns in the area on an interactive map.

A total of 663 responses were received during this phase of public involvement. Feedback received in the priorities and modal questions were referenced when reviewing the goals and objectives for the Macon County CTP. The list of concerns from the survey were mapped out and were utilized to find potential areas of improvement when developing project recommendations.

https://maconmoves-demo.metroquest.com/

https://regiona.org/wp-content/uploads/Macon-CTP-Survey-Results-Web.pdf

https://www.google.com/maps/d/u/0/viewer?mid=17sVwhLnwRmqhEoGSzK6TuWYJKqoAGyCs&ll=35.1553005026649%2C-83.45463458136939&z=11

Round 2: Macon County CTP Survey #2 (August-September 2020)

After the development of project recommendations, another survey was developed to receive feedback on each proposed project. Typically, in-person public meetings are held to gather feedback at this stage; however, due to the Covid-19 pandemic and restrictions on public gatherings, an online survey was used to get public input. This survey covered all the project proposals included in the CTP for every mode covered: Highway, Public Transportation, Bicycle, and Pedestrian. Each project had the recommendation description in the survey, allowing participants to agree, disagree, and comment on each project. A presentation was also linked to the survey to give more context on the identified need for each project.

A total of 202 participants provided input during this phase of public involvement. Feedback received during this survey was reviewed and discussed by the steering committee. Feedback from this survey was documented on the project sheets of the corresponding project. Several projects were removed from the final CTP based on negative public feedback. These included:

- Highway and bicycle improvements along Hickory Knoll Road
- Highway and bicycle improvements along Tessentee Road
- Bicycle improvements along Horse Cove Rd/Main St/Whiteside Cove Rd

https://maconmoves2-demo.metroquest.com/

https://regiona.org/wp-content/uploads/Macon-CTP-Project-Recommendations.pdf

Round 3: Southwestern RPO Public Comment Period (April-May 2021)

In addition to adoption by the local governments in Macon County, the Southwestern RPO's Transportation Advisory Committee votes to endorse the local CTP. The Southwestern RPO advertised a public comment period prior to the RPO meeting to endorse the CTP. The RPO received a total of 46 responses related to the following project proposals:

- one comment opposed the proposal on East Palmer St in downtown Franklin
- one comment opposed the proposals for NC 106, Buck Creek Rd, Ellijay Rd, and Rabbit Creek Rd.
- two comments support the proposal for NC 28 improvements
- one comment supports all the sidewalk proposals in Franklin
- 42 comments oppose the NC 28 proposal

Round 4: Local Adoptions and Endorsements (April-May)

Near the end of the CTP, each municipality and county in the study area adopted the Macon County CTP at each of their board meetings. The Southwestern RPO also endorsed at their May Transportation Advisory Committee contingent to the Highlands adoption. All of these meetings were advertised and open to the public for comment.

- Macon County (April 13th, 2021)
- Town of Franklin (May 3rd, 2021)
- Town of Highlands (May 27th, 2021)
- Southwestern Rural Planning Organization (May 24th, 2021)

G&O Survey results

G&O Survey questions


4 Do you Agree or Disagree?
What to do
Next Task
STRATEGIES
Roadway
Public Transit
Pedestrian
Bicycling
Aviation
Public Transit Services
More about this
Public transit routes, stops, and hours of service should be expanded.
Agree
Disagree
Comment
Carpooling and vanpooling programs are needed.
Private transportation services (i.e. taxis, Uber, Lyft) are needed.
Suggest another
Next Category


4 Do you Agree or Disagree?
What to do
Next Task
STRATEGIES
Roadway
Public Transit
Pedestrian
Bicycling
Aviation
Pedestrian Facilities
More about this
More sidewalks and crosswalks are needed for people to walk safely to their destinations.
Agree
Disagree
Comment
Greenways should be expanded for recreation and transportation.
It is difficult to move between destinations in Macon County without a car.
Suggest another
Next Category


4 Do you Agree or Disagree?
What to do
Next Task
STRATEGIES
Roadway
Public Transit
Pedestrian
Bicycling
Aviation
Bicycle Facilities
More about this
Bike lanes or paved shoulders should be included on roads where feasible.
Agree
Disagree
Comment
Motor vehicles (cars, trucks, etc.) and bicycles should share the road.
Increase awareness of bicyclists through road markings and signage.
Suggest another
Next Category

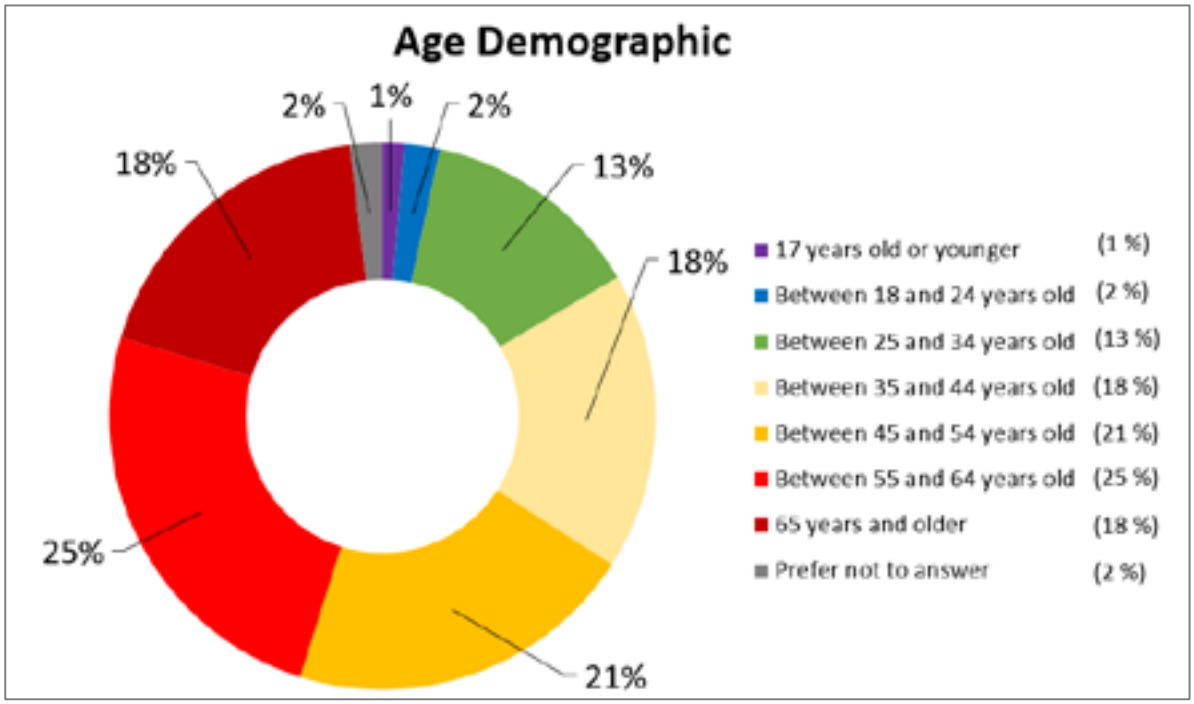

4 Do you Agree or Disagree?
What to do
Next Task
STRATEGIES
Roadway
Public Transit
Pedestrian
Bicycling
Aviation
Macon County Airport Facilities
More about this
Airport infrastructure (i.e. runway, hangar, terminal) should be expanded and improved.
Agree
Disagree
Comment
Improve access to and from the airport for air travelers.
The airport is important to the economy of Macon County.
Suggest another
Next Task

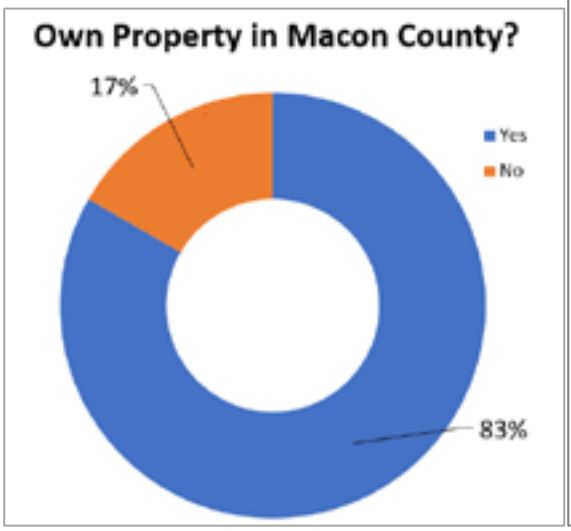

5 Thank you!
What to do
WRAP UP
Final Questions (Optional)
Enter the zip code of your primary residence:
Type...
Enter the zip code of your primary job:
Type...
Do you own property in Macon County?
Select:
Race/Ethnicity
Select:
Age
Select:
Enter Email for future updates (optional)
Type...
Submit Final Questions
Skip
Thank you!
The information you provide will not be shared, however, it will help us know who we are reaching with this survey. Thank you for your input!
Click here to view maps and other information.
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

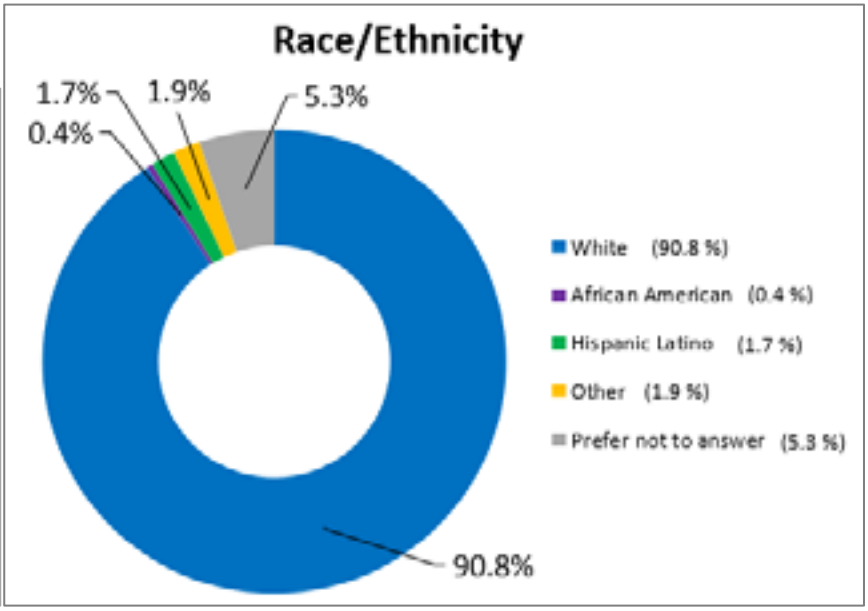
Macon County Survey Results

Total of 663 Participants!

Demographics:





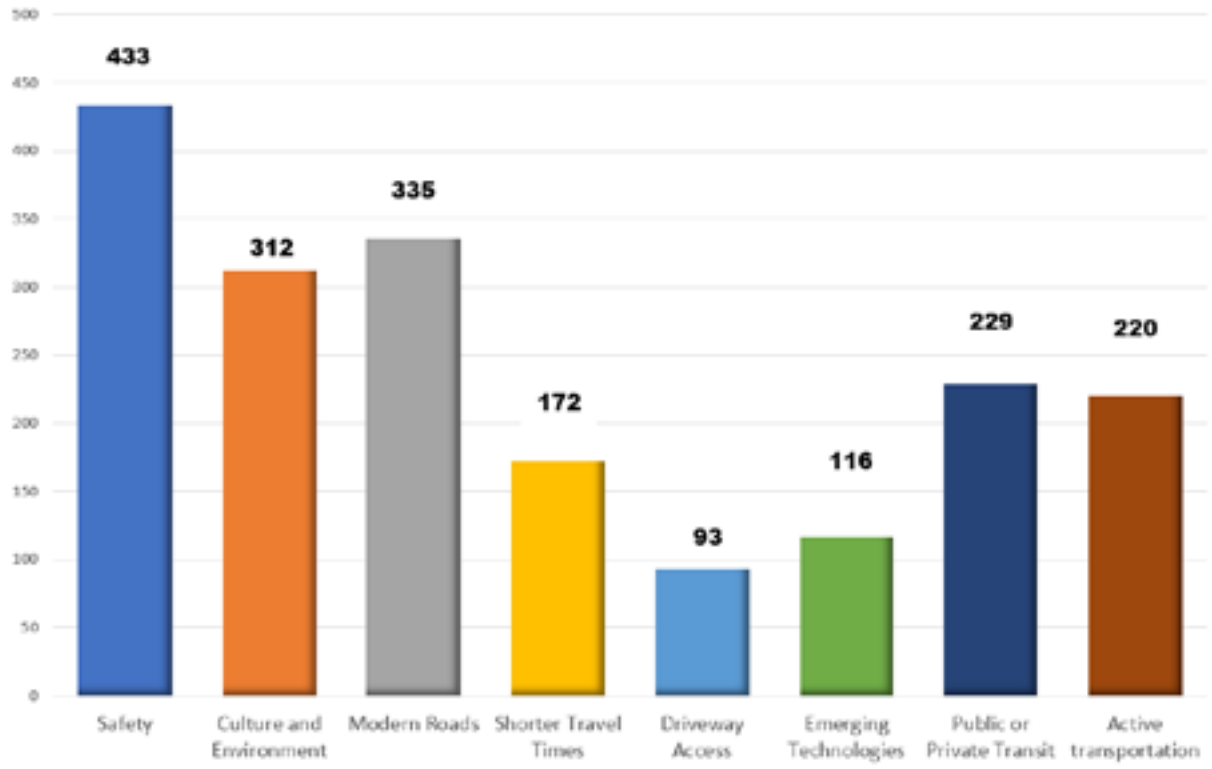


Priorities Breakdown

What is most important to you?

Order your top 4 priorities from most important to least important. (1 being the most important)

Number of times selected as one of the top 4 priorities:



Mapping Summary Breakdown

Participants were able to select a marker type from the list (Roadway, Bike, Pedestrian, Transit, or other issues) to identify the location of their concerns by placing it on the map. They were also able to further specify the type of concern based on the mode. Comments were reviewed for each facility.

Note: Some did not select the type of issue and simply placed down the marker

- **Roadway:**
  - 437 Markers Placed, 256 with comments
    - 50 Traffic Congestion
    - 40 Crash Problem
    - 39 Narrow Lanes
    - 20 Limited Sight Distance
    - 13 Confusing Traffic Signal
    - 59 Other
- **Transit:**
  - 151 Markers Placed, 48 with comments
    - 60 Transit Stop Needed
    - 5 Park and Ride Needed
    - 5 Bus Shelter Needed
    - 15 Other
    - Note: One individual placed 45 Transit Stop Needed Symbols (at different locations)
- **Bicycle:**
  - 124 Markers Placed, 53 with comments
    - 43 Bike Lane Needed
    - 4 Greenway Needed
    - 2 Bike Signage Needed
    - 1 Bike Racks Needed
    - 6 Other
- **Pedestrian:**
  - 193 Markers Placed, 103 with comments
    - 72 Sidewalk Needed
    - 10 Crosswalk Needed
    - 9 Greenway Needed
    - 2 Other
  - Note: One individual placed 62 markers outlining a large portion of Clark's Chapel Road. Because of this, 61 markers were removed and 1 was left representing his feedback.
- **Other Issues:**
  - 3 Markers were Placed
    - 1 comment was transit related, 1 was regarding crosswalks, the other had no comment.

Strategies Breakdown

Participants were given 3 statements per mode of transportation and responded if they agreed or disagreed.

Roadway	% Agree	% Disagree
Road improvements are needed, even though they typically have some unavoidable impacts.	95	5
I am willing to exchange frequent access to driveways and intersections for more reliable travel time.	65	38
Intersections should be improved for easier navigation by large trucks and buses.	84	16

Public Transportation	% Agree	% Disagree
Public transit routes, stops, and hours of service should be expanded.	80	20
Carpooling and vanpooling programs are needed.	55	45
Private transportation services (i.e. taxis, Uber, Lyft) are needed.	73	27

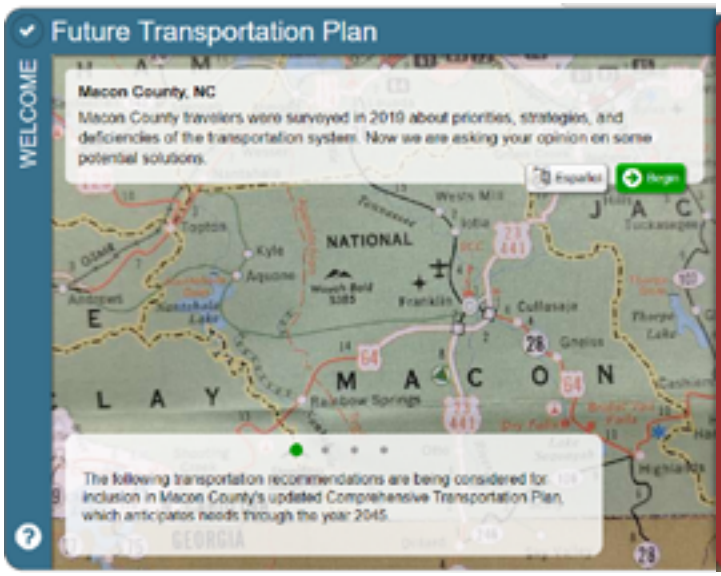
Bicycle	% Agree	% Disagree
Bike lanes or paved shoulders should be included on roads where feasible.	83	17
Motor vehicles (cars, trucks, etc.) and bicycles should share the road.	54	46
Increase awareness of bicyclists through road markings and signage.	83	17

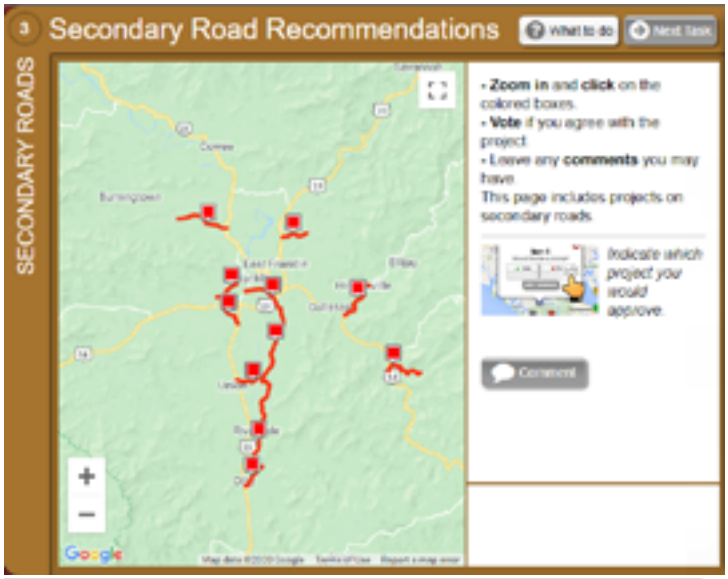
Pedestrian	% Agree	% Disagree
More sidewalks and crosswalks are needed for people to walk safely to their destinations.	84	16
Greenways should be expanded for recreation and transportation.	77	23
It is difficult to move between destinations in Macon County without a car.	91	9

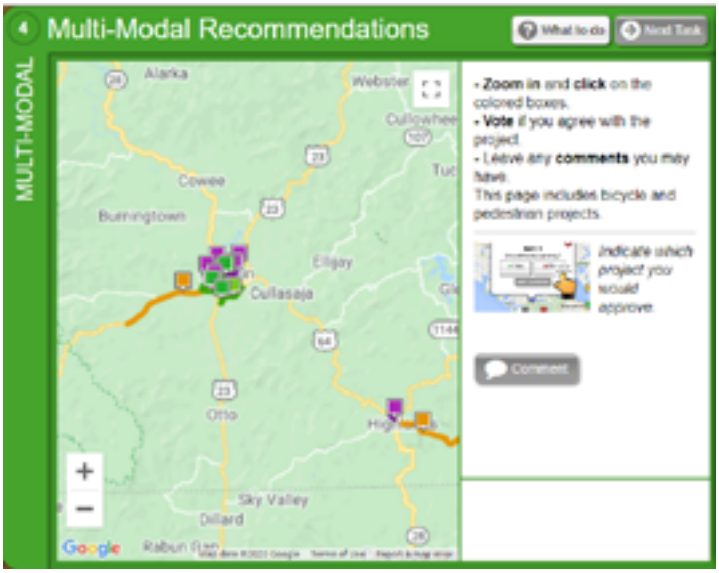
Aviation	% Agree	% Disagree
Airport infrastructure (i.e. runway, hangar, terminal) should be expanded and improved.	52	48
Improve access to and from the airport for air travelers.	51	49
The airport is important to the economy of Macon County.	64	36

Public Involvement Survey Results

Public Involvement Survey Questions



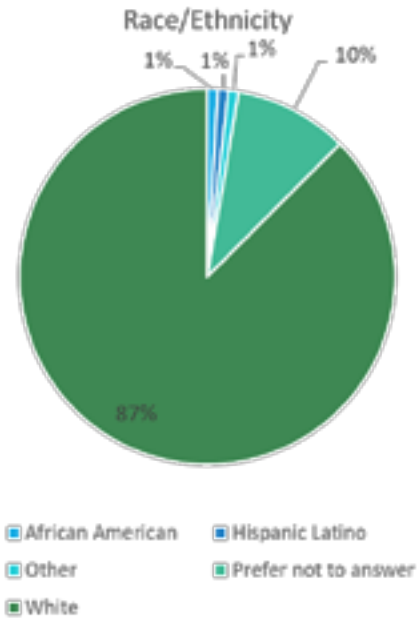


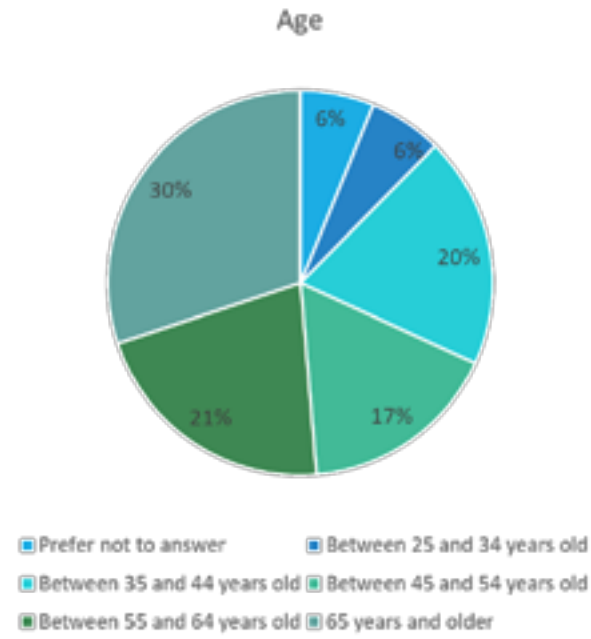


Macon County Public Input Survey Results

Total of 202 Participants!

Demographics:





Below is feedback received on each project presented to the public and any additional comments discussed by the steering committee. To see the descriptions shown in the survey in more detail, see the PowerPoint shared with those taking the survey. (Insert Link here)

Highway Proposals:

- **US 23/441 (Georgia Road):** From Georgia State Line to Prentiss Bridge Road
  - This proposal was rated by 126 participants. About 67% of participants agreed with this proposal.
  - 13 comments were left on this project. Four of the comments stated to leave this road alone or to repave/improve signage; while four others said that the drainage concern needed to be addressed. Four comments disagreed with the addition of bicycle lanes. One comment stated the need to have this be a beautiful gateway into the county. Some of the comments also mentioned their preference in location of the proposed park and ride lot.
- **US 23 and US441 BUS Intersection**
  - This proposal was rated by 65 participants. About 77% agreed with this proposal.
  - 9 comments were left on this project. Four comments wanted the restoration of the longer merge lane. Four others commented on the existing design being bad and difficult to navigate. One person stated to leave this intersection alone.
- **US 23/441 (Sylva Road):** From the end of the four-lane section near Sanderstown Rd to the Jackson County Line
  - This proposal was rated by 124 participants. About 69% agreed with this proposal.
  - 9 comments were left on this project. Three comments stated that this should be a priority and would help reduce accidents and three others agreed that it was a dangerous area. Three disagreed with removing the center turn lane.
  - The steering committee mentioned that a guardrail along the median could help minimize cross-over crashes.
- **US 64 (Murphy Road):** From the Clay County Boundary to W Old Murphy Road
  - This proposal was rated by 108 participants. About 78% agreed with this proposal.
  - 9 comments were left on this project. Four comments expressed their agreements with the proposal's inclusion of climbing lanes. Five comments disagreed with bike accommodations.
- **US 64/NC 28 (Highlands Road):** From Rogers Road to Walnut Creek Road
  - This proposal was rated by 139 participants. About 69% agreed with this proposal.
  - 6 comments were left on this project. Two comments stated that it was a dangerous road with multiple accidents. Other comments varied greatly: adding asphalt on each side of the road, disagreement with paved shoulders, adding sidewalks, and only agreeing with the park and ride lot.
- **US 64 (N 4th Street):** From Highlands Town Limits to the Jackson County Line
  - This proposal was rated by 94 participants. About 73% agreed with this proposal.
  - 4 comments were left on this project. Comments agreed on the need for mobility, safety, and sight distance along this corridor to help with the connection to the hospital and Cashiers.
- **US 441 BUS**: From Porter Street to Big Bear Lane
  - This proposal was rated by 134 participants. About 80% agreed with this proposal.

  - 4 comments were left on this project. Two comments proposed converting the facility to two-way traffic with parallel parking. One comment said to leave it alone.
  - The steering committee stated that converting this facility to two-way traffic would be a very significant change.
- **NC 28 (Highlands Road):** From US 441 BUS (E Main Street) to Thomas Road
  - This proposal was rated by 138 participants. About 69% agreed with this proposal.
  - 7 comments were left on this project. Four comments stated that they did not agree with the design, but two agreed with bike lanes. Two comments said that improvements could be good for business. One comment said sidewalks are a great idea.
  - The steering committee discussed the emphasis on access management. Improvements at intersections near the new planned subdivision or at the northern intersection at Crane Circle were mentioned to help with access management.
- **NC 28 (Bryson City Road):** From Sanderstown Road to Cowee Creek Road
  - This proposal was rated by 138 participants. About 69% agreed with this proposal.
  - 3 comments were left on this project. Two comments agreed improving the mobility and safety of this road. One comment stated it would be bad for the scenic beauty of the area.
  - The steering committee agreed with the safety concerns near Cowee Baptist Church. The committee also decided to combine this proposal with the intersection proposal on this street.
- **NC 28 (Bryson City Road) and Cowee Creek Road Intersection**
  - This proposal was rated by 49 participants. About 88% agreed with this proposal.
  - No comments were left on this project.
  - The steering committee decided to combine this proposal with the road improvements proposal along this section.
- **NC 106 (Dillard Road):** From the Georgia State Line to US 64
  - This proposal was rated by 109 participants. About 67% agreed with this proposal.
  - 6 comments were left on this project. Four comments agreed with improvements along this facility. Two comments were not regarding this area.
  - The steering committee stated the importance of improving this facility since it is an important connector to Highlands.
- **Old Murphy Road:** From Sloan Road to West Main Street
  - This proposal was rated by 88 participants. About 76% agreed with this proposal.
  - 2 comments were left on this project. One comment wanted sidewalks and not bicycle paths. The other comment disagreed with the proposal.
- **Roller Mill Road/Belden Circle:** US 23/441 to Old Murphy Road
  - This proposal was rated by 96 participants. About 83% agreed with this proposal.
  - 3 comments were left on this project. Two comments mentioned limited visibility and blind spots along this facility. One agreed that sidewalks were needed due to income housing.
- **Wells Grove Road:** From Porter Street to Clarks Chapel Road
  - This proposal was rated by 95 participants. About 89% agreed with this proposal.
  - 5 comments were left on this project. Three agreed with intersection improvements while another comment stated that this what is most important to them. One comment stated that the roads are currently too narrow to accommodate passing buses.

- **Airport Road (SR 1434):** From Olive Hill Road to NC 28 (Bryson City Road)
  - This proposal was rated by 86 participants. About 55% agreed with this proposal.
  - 5 comments were left on this project. Comments were mixed stating to put bike lanes instead, repave, maybe, or were not familiar with the area.
  - The steering committee stated that improving this facility towards the airport was important to improve safer connectivity towards the airport and from an economic development standpoint.
- **Buck Creek Road:** From US 64 (Highlands Road) to Teague Estates Road
  - This proposal was rated by 99 participants. About 80% agreed with this proposal.
  - 3 comments were left on this facility. These comments varied from stating the road was dangerous, agreeing with correcting curves, and to stop widening the roads.
- **Clarks Chapel Road:** From Wells Grove Road to Hickory Knoll Road
  - This proposal was rated by 93 participants. About 67% agreed with this proposal.
  - 2 comments were left on this facility. One comment agrees with the need for improvements and the other states that the current road is too narrow for buses to pass safely.
- **Ellijay Road:** From US 64 (Highlands Road) to Grayson Higdon Road
  - This proposal was rated by 87 participants. About 70% agreed with this proposal.
  - 6 comments were left on this facility. Three would like the bridge replaced with some disagreeing with the widening. One comment states the need for this to become a reliable travel option. Others commented to slow down speeds or that they were not familiar with this road.
- **Hickory Knoll Road:** From Tessentee Road to Clarks Chapel Road
  - This proposal was rated by 84 participants. About 48% agreed with this proposal.
  - No comments were left on this project.
  - The steering committee agreed to **remove** this project stating that it is a decent road despite having narrow lanes.
- **Prentiss Bridge Road (SR 1649):** From US 441/23 (Georgia Road) to Clarks Chapel Road
  - This proposal was rated by 97 participants. About 66% agreed with this proposal.
  - 1 comment was left on this project stating that the road was too narrow.
- **Rabbit Creek Road (SR 1504):** From US 441 (Sylva Road) to the bridge near Ferguson Road
  - This proposal was rated by 81 participants. About 51% agreed with this proposal.
  - No comments were left on this project.
  - The steering committee agreed that this project was a good long-range propjet due to a lot of big farmland and the potential for residential development. The road also is narrow, steep and has no paved shoulders.
- **Tessentee Road (SR 1636):** From US 23/441 (Georgia Road) to Hickory Knoll Road
  - This proposal was rated by 85 participants. About 53% agreed with this proposal.
  - 2 comments were left on this project. The comments stated that they were not familiar with this section and that they were not sure about the amount of traffic.
  - The steering committee agreed to **remove** this project stating that it is a decent road despite having narrow lanes.

Bicycle Only:

- **US 64/Sloan Rd:** From W Old Murphy Rd (SR 1448) to Carolina Dr
  - This proposal was rated by 85 participants. About 74% agreed with this proposal.
  - 2 comments were left on this project. Both comments disagreed with the inclusion of bicycles on this facility
- **Horse Cove Rd (SR 1603)/Main Street/Whiteside Cove Rd**
  - This proposal was rated by 38 participants. About 55% agreed with this proposal.
  - Only one comment on this project which stated that they preferred paved shoulders.
  - The steering committee agreed to **remove** this proposal.

Bicycle and Pedestrian:

- **Siler Road (SR 1660)/Dowdle Mountain Rd (SR 1659):** From US 23/441 Georgia Road to Wells Grove Road (SR 1667)
  - This proposal was rated by 91 participants. About 75% agreed with this proposal.
  - 3 comments were left on this project. Two comments stated that it is a priority while one only wanted the sidewalk improvements

Pedestrian Only:

- **US 64/NC 28 (Franklin Rd):** From Mirror Lake Road (SR 1551) to Will Henry Steven's Bridge
  - This proposal was rated by 41 participants. About 83% agreed with this proposal.
  - No comments
- **US 441 BUS (Main St)/First St/Old Cat Creek Rd:** From Lakeside Drive (SR 1324) to Lake Emory Road (SR 1325)
  - This proposal was rated by 83 participants. About 77% agreed with this proposal.
  - No comments
- **Baird Cove Rd (SR 1319)/Palmer Dr:** From W Palmer St (SR 1442) to Palmer Dr (SR 1417)
  - This proposal was rated by 87 participants. About 77% agreed with this proposal.
  - No comments
- **Depot St (SR 1729):** From Wells Grove Road (SR 1667) to US 441 BUS (E Main Street)
  - This proposal was rated by 87 participants. About 77% agreed with this proposal.
  - 1 comment stated it should be a priority.
- **Green St:** From Wild Mint Road to Harrison Avenue
  - This proposal was rated by 86 participants. About 83% agreed with this proposal.
  - 1 comment stated to widen this road if there is room.
- **Phillips St (SR 1718):** From US 441 BUS (E Palmer Street) to Wayah Street (SR 1667)
  - This proposal was rated by 78 participants. About 87% agreed with this proposal.
  - No comments
- **Womack St (SR 1158):** From Old Murphy Road (SR 1442) to US 441 BUS (Georgia Road)
  - This proposal was rated by 90 participants. About 77% agreed with this proposal.
  - No comments

Multiuse Path:

- **The Crawford Branch Greenway**
  - This proposal was rated by 89 participants. About 88% agreed with this proposal.
  - No comments
- **The Little Tennessee Greenway Extension**
  - This proposal was rated by 97 participants. About 91% agreed with this proposal.
  - 4 comments were left on this proposal. All of them supported the project, stating that it was a priority and a huge asset to the community.
- **The Southwest Loop Trail**
  - This proposal was rated by 90 participants. About 84% agreed with this proposal.
  - 3 comments were left on this proposal. One comment agreed on improving bike and trail safety and another thought it should be extended to include Roller Mill Road. One comment disagreed with the inclusion of bikes.

STIP PROJECTS AND UNADDRESSED DEFICIENCIES

This section presents project proposals for each mode of transportation in the Macon County CTP.

NCDOT adopted a **"Complete Streets"** policy in July 2009 and it was updated in 2019. The policy directs the department to consider and incorporate several modes of transportation when building new projects or making improvements to existing infrastructure. Under this policy, the department will collaborate with cities, towns and communities during the planning and design phases of projects. Together, they will decide how to provide the transportation options needed to serve the community and complement the context of the area. The benefits of this approach include:

- **making it easier for travelers to get to their destinations;**
- **encouraging the use of alternative forms of transportation;**
- **building more sustainable communities;**
- **increasing connectivity between neighborhoods, streets and transit systems;**
- **improving safety for pedestrians, cyclists and motorists.**

Complete streets are streets designed to be safe and comfortable for all users, including pedestrians, bicyclists, transit riders, motorists and individuals of all ages and capabilities. These streets generally include sidewalks, appropriate bicycle facilities, transit stops, right-sized street widths and context-based traffic speeds. These streets are well-integrated with surrounding land uses. The complete street policy and concepts were used in the development of the CTP. The CTP proposes projects that include multi-modal project proposals as documented in the project sheets within this section. Refer to the project sheets for recommended cross sections for all project proposals and refer to the NCDOT Cross sections for more detailed information on the typical sections.

STIP Projects

As discussed in the Highway Analysis section, the capacity deficiency analysis of the highway element of the CTP, the annual average daily traffic (AADT) in 2017 and the projected vehicles per day (vpd) in 2045 were compared to the 2017 Level of Service (LOS) D capacity for each facility. The future year analysis assumed that projects listed in the 2020–2029 State Transportation Improvement Program (STIP) were built. These projects include:

- **U.S. 23- U.S. 441 (Georgia Road), R-5734A:**
  Upgrading this facility to a four-lane divided expressway with construction starting in 2019.
- **U.S. 23- U.S. 441 (Georgia Road), R-5734B:**
  Upgrading this facility to a four-lane divided expressway with a right-of-way acquisition in FY 2020 and construction in FY 2023.
- **U.S. 23/U.S. 64/ U.S. 441, U-5604:**
  Improvements to intersections at Womack Street, Maple Street, Porter Street and Depot Street with a construction year in 2019.

Unaddressed Deficiencies

During the process of the CTP, the roads were studied to identify deficiencies. Some of these deficiencies have physical or environmental restrictions that make them unfeasible to propose a project. The following deficiencies were identified during the development of the CTP, but they remain unaddressed by projects:

- **U.S. 64 (Highlands Road)** was identified to have lane widths that vary between 9 and 10 feet with no paved shoulders. The curviness of this road obscures the sight distance at many locations along U.S. 64. High level environmental impact analysis shows this facility is within the Nantahala National Forest and the Cullasaja Gorge federal managed area. It is also within the vicinity of highly rated Natural Heritage Significant Areas and trout waters. At multiple parts of this road, the road is surrounded by rock faces or by drop offs leading to the Cullasaja gorge. This facility is a scenic byway and is known for seasonal tourism. The survey had multiple comments along this facility with most of them stating narrow lanes or slow vehicles like trucks.
- **Walnut Creek Road (State Road 1533)** was identified to have 9-foot lanes with no paved shoulders. The road is within the Nantahala National Forest and adjacent to high-quality streams and identified trout waters. Widening or straightening the road is not practical due to the terrain and potential impacts to natural and cultural resources. This facility is overall a low volume road with many curves. The survey had no comments concerning this facility.
- **Wayah Road (State Road 1310)** was identified to have 9-foot lanes with no paved shoulders. The road is within the Nantahala National Forest and adjacent to high-quality streams. Widening or straightening the road is not practical due to the terrain and potential impacts to natural and cultural resources. This facility is overall a low volume road with many curves. The survey had very little comments concerning this facility.
- **Tellico Road/Otter Creek Road** were identified to have 9-foot lanes or less in several areas. These roads have unpaved sections with steep grades, curves, narrow lanes, and no shoulders. Widening or straightening the road is not practical due to the terrain and potential impacts to managed areas such as the Nantahala National Forest, game lands, and natural heritage sites.
- **Hickory Knoll Road (State Road 1653) and Tessentee Road (State Road 1636)** were identified to have 9-foot wide lanes and no paved shoulders. These road projects had mixed approvals with the public during the public input phase. The steering committee decided to remove these facilities from the CTP.
- **Downtown Franklin displayed areas that are shown to be overcapacity.** U.S. 441 Business (Wayah Street), Depot Street (State Road 1729), and parts of U.S. 441 Business (Main street) are projected to be over capacity in 2045. Intersection improvement projects implementing roundabouts are under construction. The survey showed multiple comments along these facilities, with most of them discussing the roundabout implementation.

CTP PROJECTS

The following pages contain project sheets for each recommendation, organized by CTP modal element. The information provided in the problem statement is intended to help support decisions made in the NEPA/SEPA process.

US 23/441

US 23/441 (Sylva Road) and US 441 BUS (E Mains Street) Intersection

US 23/441 (Sylva Road)

US 64 (Murphy Road)

US 64/NC 28 (Highlands Road)

US 64 (N 4th Street)

US 441 BUS (Main Street/E Palmer Street)

NC 28 (Highlands Road)

NC 28 (Bryson City Road)

NC 106 (Dillard Road)

Airport Road (SR 1434)

Buck Creek Road (SR 1535)

Clarks Chapel Road (SR 1653)

Ellijay Road (SR 1001)

Old Murphy (SR 1442)

Prentiss Bridge Road (SR 1649)

Rabbit Creek Road (SR 1504)

Roller Mill Road (SR 1154) /Belden Circle (SR 1152)

Wells Grove (SR 1667)

US 23/441

From the Georgia State Line to Prentiss Bridge Road (SR 1649)

Local ID: **R-5734C**

Purpose: **Access**

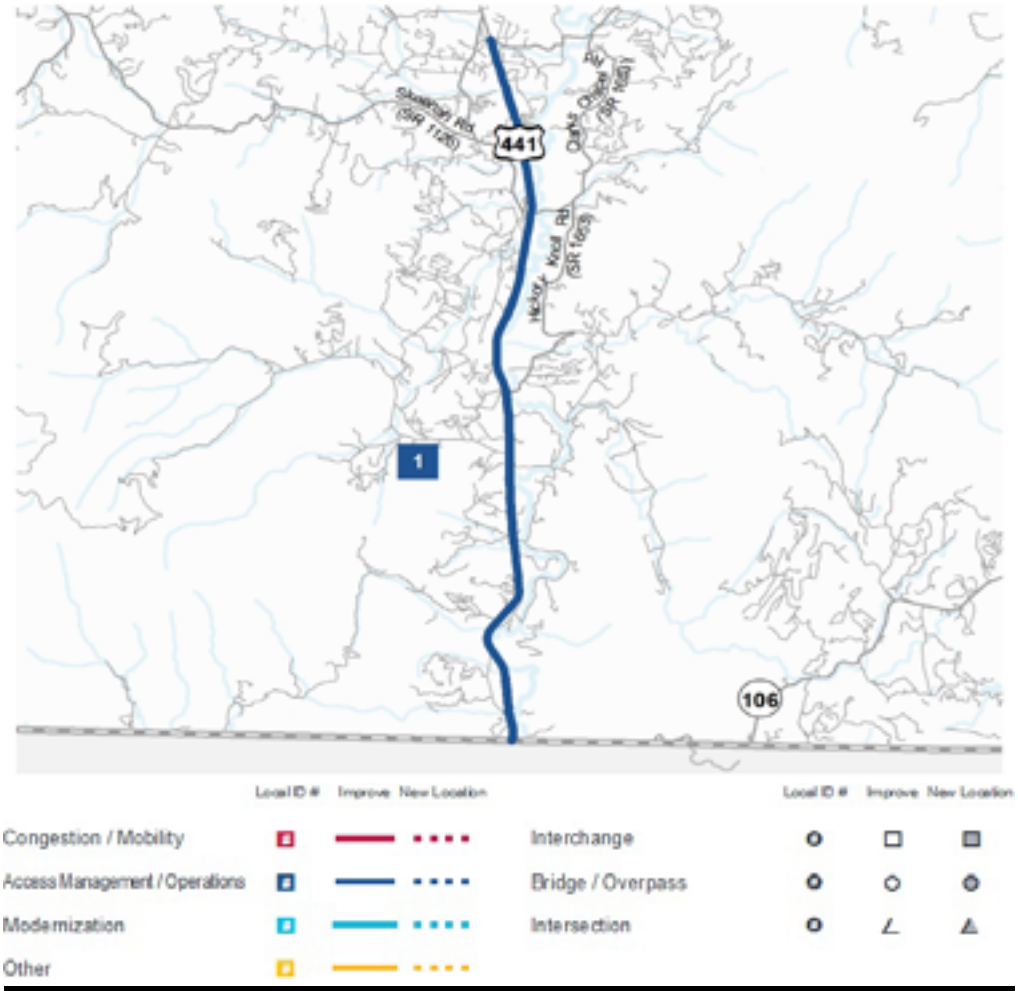
Improvement: **Improve Existing**

Identified Need

The US 441 (Georgia Road) corridor is currently a five-lane facility. Mobility on this facility is impaired by numerous driveway cuts, lack of traffic signals and unprotected left turns. Three high frequency crash intersections were also identified along the facility.

Recommendation

Redesign to a four-lane boulevard by replacing the center turn lane with a median, providing reduced-conflict intersections and bicycle lanes. Add a park-and-ride lot near the intersection at Coweeta Church Road (SR 1115).

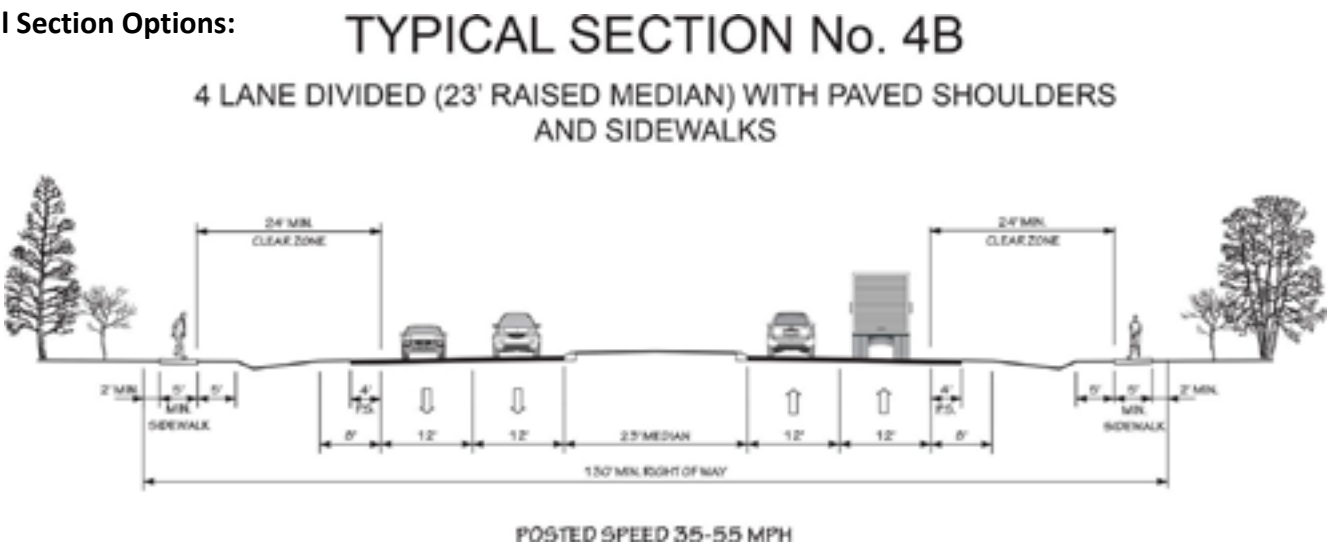


Proposal At A Glance	
Highway Class	Access Management & Operation
Facility Type	Boulevard
Typical Section	04 B
Section Options	-
Estimated Cost	-
Length (miles)	9.0
Existing ROW (feet)	100
Safety Risk Score	78

Proposal Data:	2017 Base Year	2045 Future Year	
Improved Route	Existing	Without Proposal	With Proposal
Facility Type	Major Thoroughfare Multi-lane	Major Thoroughfare Multi-lane	Boulevard
Travel Lanes	4	4	4
Volume (vpd)	10000-14000	13400-18700	13400-18700
Capacity (vpd)	31800	31800	43900

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:
None



Project Overview

Project History
This project is part of the R-5734 project to widen and upgrade US 23/441 (Georgia Road). This is a continuation of that project which involves a four-lane divided cross section with reduced conflict intersections.

In 2020-2029 STIP:

- R-5734A: US 64 to Wide Horizon Drive (SR 1652)/Belden Circle (SR 1152) - Construction Year 2019
- R-5734B: : Wide Horizon Drive (SR 1652)/Belden Circle (SR 1152) to Prentiss Bridge Road (SR 1649) - ROW Year: 2020, Construction Year: 2023
- R-5734C: Prentiss Bridge Road (SR 1649) to the Georgia State Line - ROW Year 2029, Construction Year: Post Year

Linkage to Other Plans
US 23/441 (Georgia Road) is an "Other Principal Arterial" on the Federal Functional Classification System. It is a part of Corridor B in the Strategic Transportation Corridor that goes from Georgia to US 74 in Jackson County due to the significance of the regional and statewide traffic it provides. This facility is also identified as part of the North Carolina Priority Highway Freight Network in the North Carolina Statewide Multimodal Freight Plan. This Project was identified on the 2012 Macon County CTP as part of MACO0009-H and MACO0004-T.

Multi-modal Considerations
A bike lane is proposed on this facility as a continuation of parts A and B of this project. Macon County Operates on a deviated-fixed route as well as demand response. The deviated-fixed route does not reach this section of the facility; however, it is within the demand-response area. A park-and-ride lot is proposed like in the 2012 Macon CTP near Coweeta Church Road (SR 1115).

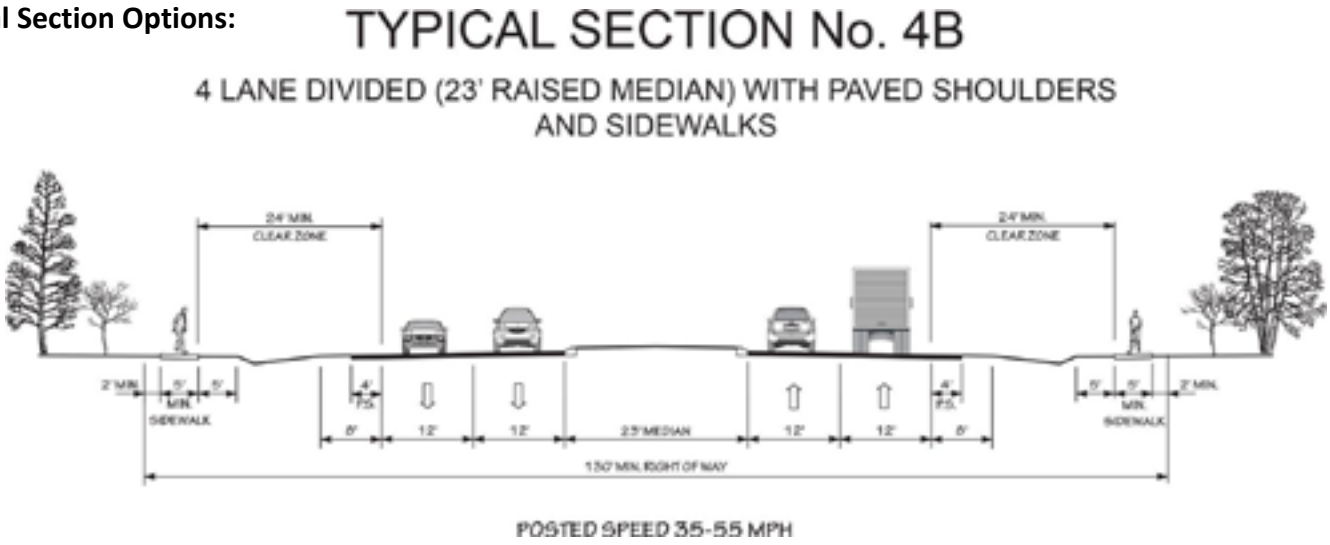
CTP Goal Analysis

Vision, Goals, & Objectives
The purpose of this project is to provide access and improve safety along this facility. The Macon County CTP Goals include providing safer, reliable and a multimodal transportation system. The control of access in a divided facility provides a safer facility while increasing the travel time reliability on left turn lanes and increasing the mobility of through movement. Bicycle lanes help accommodate cyclists while connecting people to the destinations along the facility.

Goals & Objectives Survey
Georgia Road was one of the facilities with the most comments on the survey. Respondents described problems along this facility by stating crash issues, turning movements, and speeding concerns. Many comments also described concerns of water buildup during times of rain which cause safety issues such as hydroplaning.

Public Input Survey
This proposal was rated by 126 participants. About 67% of participants agreed with this proposal. Thirteen comments were submitted on this project. Four of the comments stated to leave this road alone or to repave/improve signage; while four others said that the drainage concern needed to be addressed. Four comments disagreed with the addition of bicycle lanes. One comment stated the need to have this be a beautiful gateway into the county. Some of the comments also mentioned their preference in location of the proposed park and ride lot.

Typical Section Options:
None



Potential Impacts

Natural & Human Environmental Context

Based on planning level environmental assessment using available GIS data, the proposed project is within the proximity of the Little Tennessee River which contains threatened and endangered species such as the Spotfin Chub (Erimonax Monachus). It is also within the vicinity of the historic Dr. Alexander C. Brabson house and natural heritage sites.

Relationship to Land Use

The US 23/441 corridor has dense development between US 64 and the Georgia State Line. A new Ingles was opened at the end of 2017. It has many major features such as: the Macon County Fair Grounds, Smokey Mountain Center for the Performing Arts, various restaurants and hotels. It is also linked with access to the Macon County Public Library, Macon Early College, and Wal-Mart. It is an important link to various other schools as well.

Intersection of US 23-441 (Sylva Road) and US 441 BUS (East Main Street)

Local ID: **MACO20001-H**

Purpose: **Mobility**

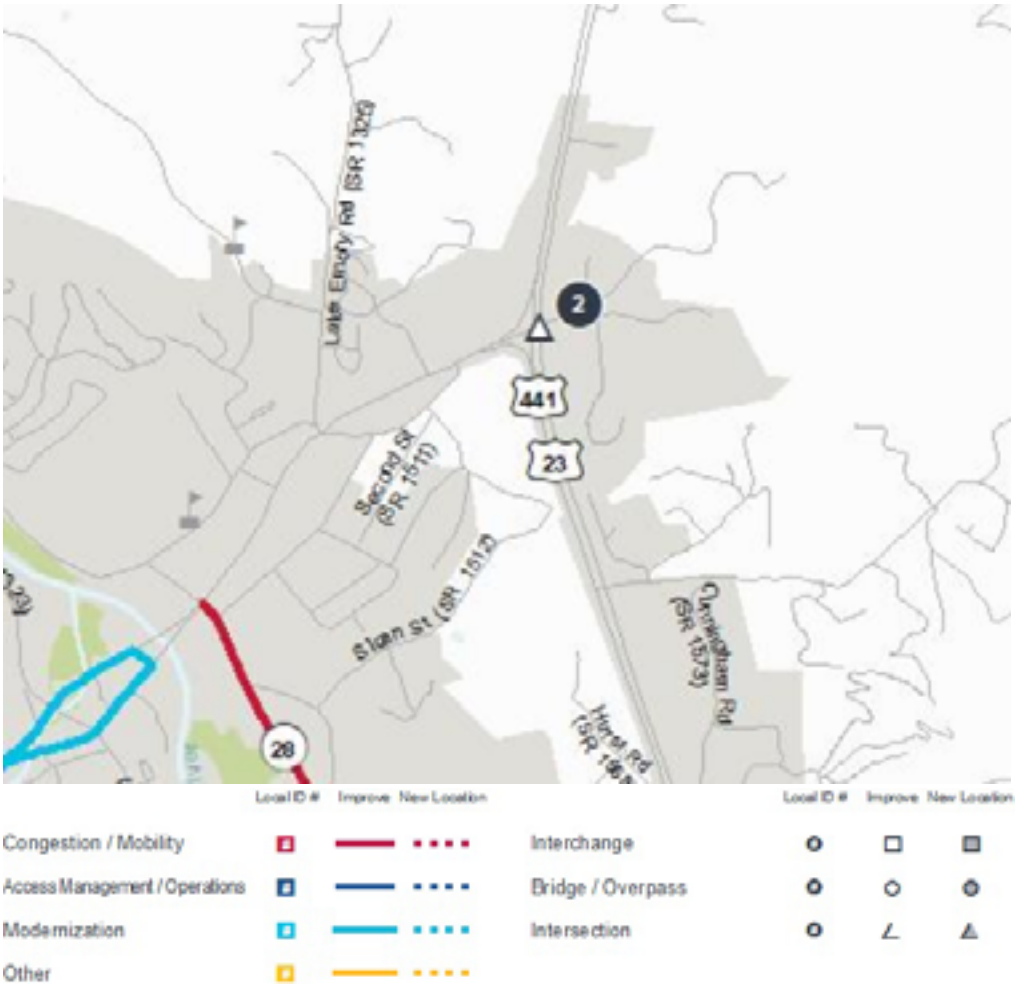
Improvement: **Improve Existing**

Identified Need

This intersection is a major point of access for reaching downtown. A medical center is expected to be built just east of the location. It is shown to have 17 crashes between 2014 and 2018 with one of them being a fatal crash.

Recommendation

Redesign intersection to improve safety, travel-time reliability, and regional mobility on this corridor.



Proposal At A Glance

US 23-441 (Sylva Road)

Highway Class	Modernization
Facility Type	Expressway
Estimated Cost	-
Existing ROW (feet)	90
Safety Risk Score	44.4

US 441 BUS (E Main Street)

Highway Class	Modernization
Facility Type	Major Thoroughfare Multi-lane
Estimated Cost	-
Existing ROW (feet)	100
Safety Risk Score	-

Proposal Data: 2017 Base Year

US 23-441	Existing	US 441 BUS	Existing
Facility Type	Expressway	*Facility Type*	Major Thoroughfare Multi-lane
Travel Lanes	4	*Travel Lanes*	4
Volume (vpd)	19000	*Volume (vpd)*	12000
Capacity (vpd)	38500	*Capacity (vpd)*	26800

Project Overview

Project History and Linkage to Other Plans
US 23/441 (Georgia Road) is an "Other Principal Arterial" on the Federal Functional Classification System. It is a part of Corridor B in the Strategic Transportation Corridor that goes from Georgia to US 74 in Jackson County due to the significance of the regional and statewide traffic it provides. This facility is also identified as part of the North Carolina Priority Highway Freight Network in the North Carolina Statewide Multimodal Freight Plan.

CTP Goal Analysis

Vision, Goals, & Objectives
The purpose of this project is to increase mobility while providing safe movements through this intersection. The Macon County CTP Goals include providing safer, reliable and a multimodal transportation system.

Goals & Objectives Survey
The intersection of US 23/441 (Sylva Rd) and US 441 (Main St) had 13 comments on the Goals & Objectives Survey. Many of the comments stated problems in the current design of the intersection while others expressed safety concerns. This was noted during steering committee meetings to be a dangerous and large intersection.

Public Input Survey
This proposal was rated by 65 participants. About 77% agreed with this proposal. Nine comments were left on this project. Four comments wanted restoration of the longer merge lane. Four others commented on the existing design being bad or difficult to navigate. One comment stated to leave this intersection alone.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, the proposed project is within the Little Tennessee River watershed.

Relationship to Land Use
The west leg of this intersection is a common route to downtown Franklin which includes many businesses such as restaurants and shopping centers. Adjacent facilities include the Angel Medical Center and Franklin High School. The east leg of the intersection has a few businesses as well as a lot with plans for the new Angel Medical Center.

Other Information

Crash data analysis shows a total of 17 crashes in this location. One crash involved a fatality, four had injuries and fourteen had property damage only. Crash data covered incidents from January 2014 to December 2018.
Based on 2017 traffic data, percent truck traffic on US 23-441 and US 441 BUS are approximately 7.6% and 6.4% respectively.
A traffic impact study was made in July 2019 for the planned Angel Medical Center which analyzes the forecasted traffic patterns at this intersection.

US 23/441 (Sylva Road)

From the end of the four lane section near Sanderstown Rd to the Jackson County Line

Local ID: **MACO20002-H**

Purpose: **Mobility**

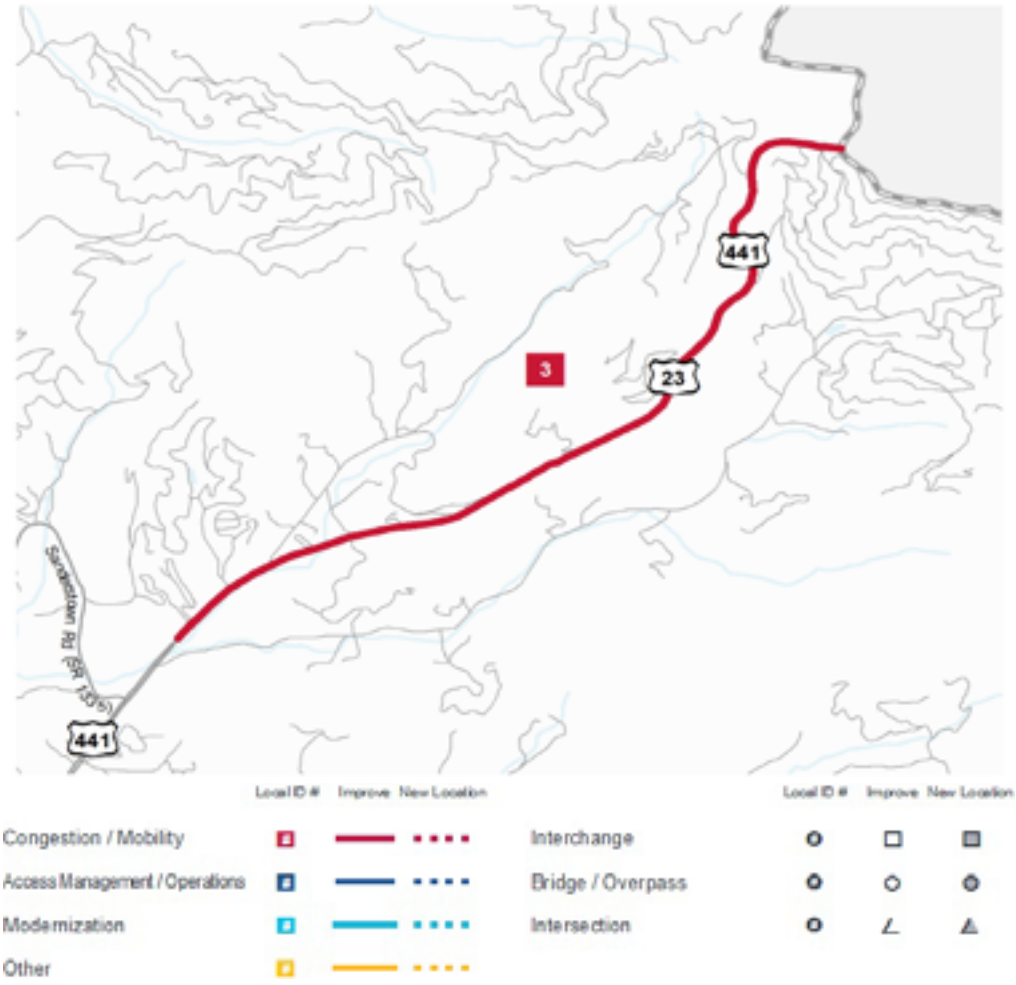
Improvement: **Improve Existing**

Identified Need

This section of US 441 is a 5-lane facility which connects to 4 lane expressways on each end. Data shows 82 crashes recorded between January 2014 and December 2018.

Recommendation

Convert the five-lane section to a four-lane divided expressway to improve safety and mobility on this corridor.



Proposal At A Glance

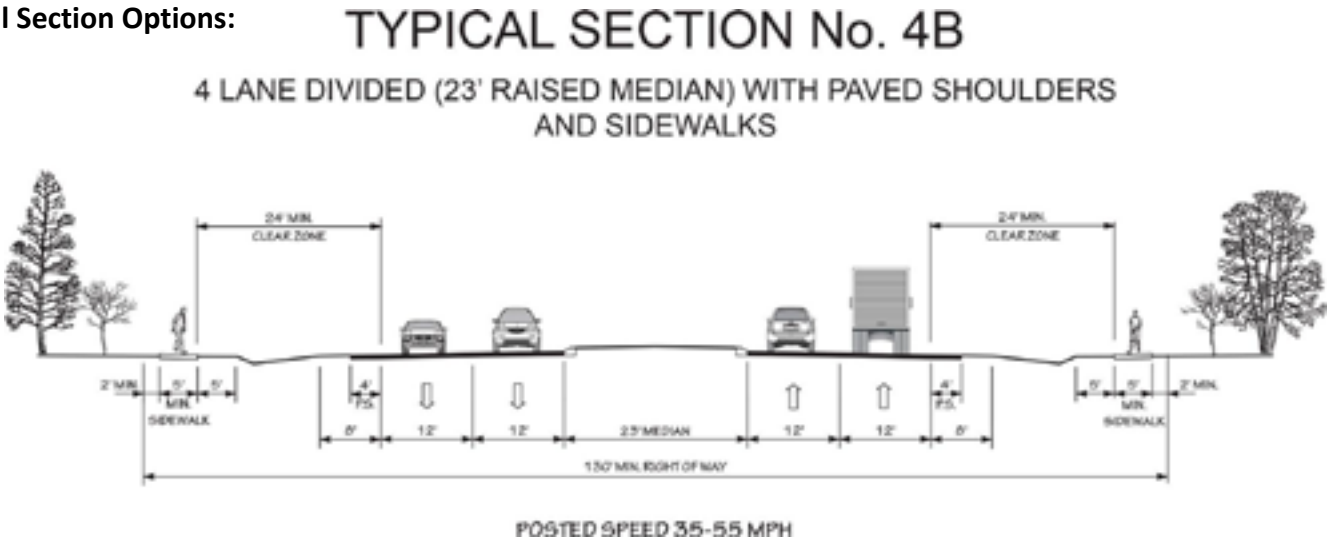
Highway Class	Congestion & Mobility
Facility Type	Expressway
Typical Section	04 B
Section Options	-
Estimated Cost	-
Length (miles)	3.45
Existing ROW (feet)	150
Safety Risk Score	100

Proposal Data: 2017 Base Year / 2045 Future Year

Improved Route	Existing	Without Proposal	With Proposal
Facility Type	Major Thoroughfare Multi-lane	Major Thoroughfare Multi-lane	Expressway
Travel Lanes	4	4	4
Volume (vpd)	15000	22400	22400
Capacity (vpd)	31800	31800	47400

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:
None



Project Overview

Linkage to Other Plans
US 23/441 (Georgia Road) is an Other Principal Arterial on the Federal Functional Classification System. It is a part of Corridor B in the Strategic Transportation Corridor that goes from Georgia to US 74 in Jackson County due to the significance of the regional and statewide traffic it provides. This facility is also identified as part of the North Carolina Priority Highway Freight Network in the North Carolina Statewide Multimodal Freight Plan. This Project was identified on the 2012 Macon County CTP.

Multi-modal Considerations
Due to this facility being a high-speed corridor with changing slopes and a focus on mobility, bicycle and pedestrian facilities were not proposed. Macon County Transit operates on a deviated-fixed route as well as demand response. The deviated-fixed route does not reach this section of the facility; however, it is within the demand-response area.

CTP Goal Analysis

Vision, Goals, & Objectives
The purpose of this project is to provide access and safety along this facility. The four-lane divided expressway supports the Macon County CTP objective that strives to reduce crashes by promoting safer behaviors through medians and other tools. The preservation of it's travel time helps connections between major destinations such as the adjacent downtown and nearby businesses.

Goals & Objectives Survey
There were 8 comments along this section of the facility which all mentioned it being a dangerous location especially near Gold City Lane.

Public Input Survey
This proposal was rated by 124 participants. About 69% agreed with this proposal. Nine comments were left on this project. Three comments stated that this should be a priority and would help reduce accidents and three others agreed that it was a dangerous area. Three disagreed with removing the center turn lane. The steering committee mentioned that a guardrail along the median could help minimize cross-over crashes.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, the proposed project intersects Watauga Creek, identified trout waters. It is also within the area of the Little Tennessee watershed and runs alongside mountainous habitats. The location of this facility often places it between the edge of a rockface and the ledge of a drop. This may cause some constraints on the installation of a median.

Relationship to Land Use
This US 23/441 corridor connects the town of Franklin to Dillsboro, Sylva, and US 74. A new medical center is planned south of this project.

Other Information

Crash data analysis shows a total of 82 crashes on this section of US 23-441 with most of them being near Gold City Lane. Four crashes involved fatalities, twenty-eight had injuries and fifty had property damage only. Crash data covered incidents from January 2014 to December 2018.
Based on 2017 traffic data, percent truck traffic on US 23-441 is approximately 7.6%.

US 64 (Murphy Road)

From the Clay County Boundary to W Old Murphy Road (SR 1448)

Local ID: **MACO20003-H**

Purpose: **Mobility**

Improvement: **Improve Existing**

Identified Need

US 64 is a major facility that connects Hayesville to Franklin. It is also one of the major facilities that has a large percentage of truck traffic. Slow trucks cause a mobility issue when traveling uphill.

Recommendation

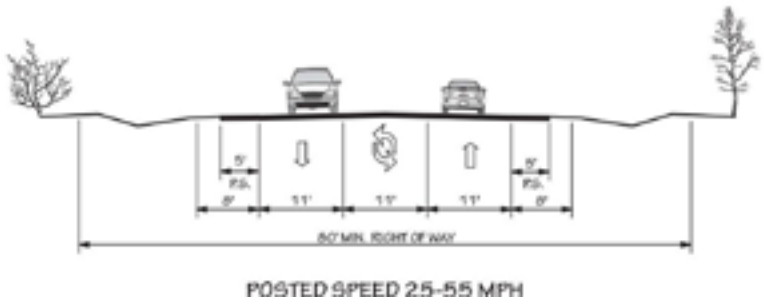
Construct climbing lanes on steep grades to improve mobility, safety and travel time reliability. Add bicycle lanes (see the Southern Blue Ridge Bike Plan).

Proposal At A Glance	
Highway Class	Congestion & Mobility
Facility Type	Major Thoroughfare 2-lane
Typical Section	03 A
Section Options	03 A (Modified)
Estimated Cost	-
Length (miles)	8.11
Existing ROW (feet)	75
Safety Risk Score	56

Proposal Data:	2017 Base Year	2045 Future Year	
Improved Route	Existing	Without Proposal	With Proposal
Facility Type	Major Thoroughfare 2-lane	Major Thoroughfare 2-lane	Major Thoroughfare
Travel Lanes	2	2	3
Volume (vpd)	3000	4000	4000
Capacity (vpd)	14600	14600	15900

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:
03 A (Modified)



Project Overview

Project History and Linkage to Other Plans
US 64 is classified as a minor arterial on the Federal Functional Classification System. This facility was identified on the 2012 Macon County CTP as part of MACO0010-H. It was evaluated as not meeting future mobility and connectivity needs in western North Carolina and Tennessee. This facility was proposed to be upgraded to a boulevard on this plan.

Multi-modal Considerations
The Southern Blue Ridge Bike Plan (2017) Geodatabase recommends a bike lane on this segment. It is recommended that this facility has 5 foot paved shoulders. Macon County Transit operates on a deviated-fixed route as well as demand response. The deviated-fixed route does not reach this section of the facility; however, it is within the demand-response area.

Public Input Survey
This proposal was rated by 108 participants. About 78% agreed with this proposal. Nine comments were left on this project. Four comments expressed their agreements with the proposal's inclusion of climbing lanes. Five comments disagreed with bike accommodations.

CTP Goal Analysis

Vision, Goals, & Objectives
This project aims to improve the mobility of this facility and improve travel that accommodates drivers including freight providers and visitors. The community aims to make regional connections by improving their primary routes.

Goals & Objectives Survey
On the Goals & Objectives Survey, a total of eleven comments were made with 8 comments stating the need of a climbing lane in this facility due to trucks and slower traffic.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, the proposed project is in proximity of the Little Tennessee Watershed and the Cartoogechaye Creek watershed. This project also overlaps with many trout waters and outstanding resource waters (DEQ NC Surface Water Classifications). Rainbow Springs Marsh and the Nantahala Forest are within 100 feet of this area.

Relationship to Land Use
The US 64 corridor connects the town of Franklin to the town of Hayesville. This acts as the major facility that goes through Clay County.

Other Information

Based on 2017 traffic data, percent truck traffic on this section of US 64 is approximately 9.3%.
There is one bridge along this facility which is structurally deficient: Bridge #023. Structurally deficient bridges are bridges that must be monitored, inspected and replaced at the appropriate time.

US 64/NC 28 (Highlands Road)

From Rogers Road to Walnut Creek Road (SR 1533)

Local ID: **MACO20004-H**

Purpose: **Mobility**

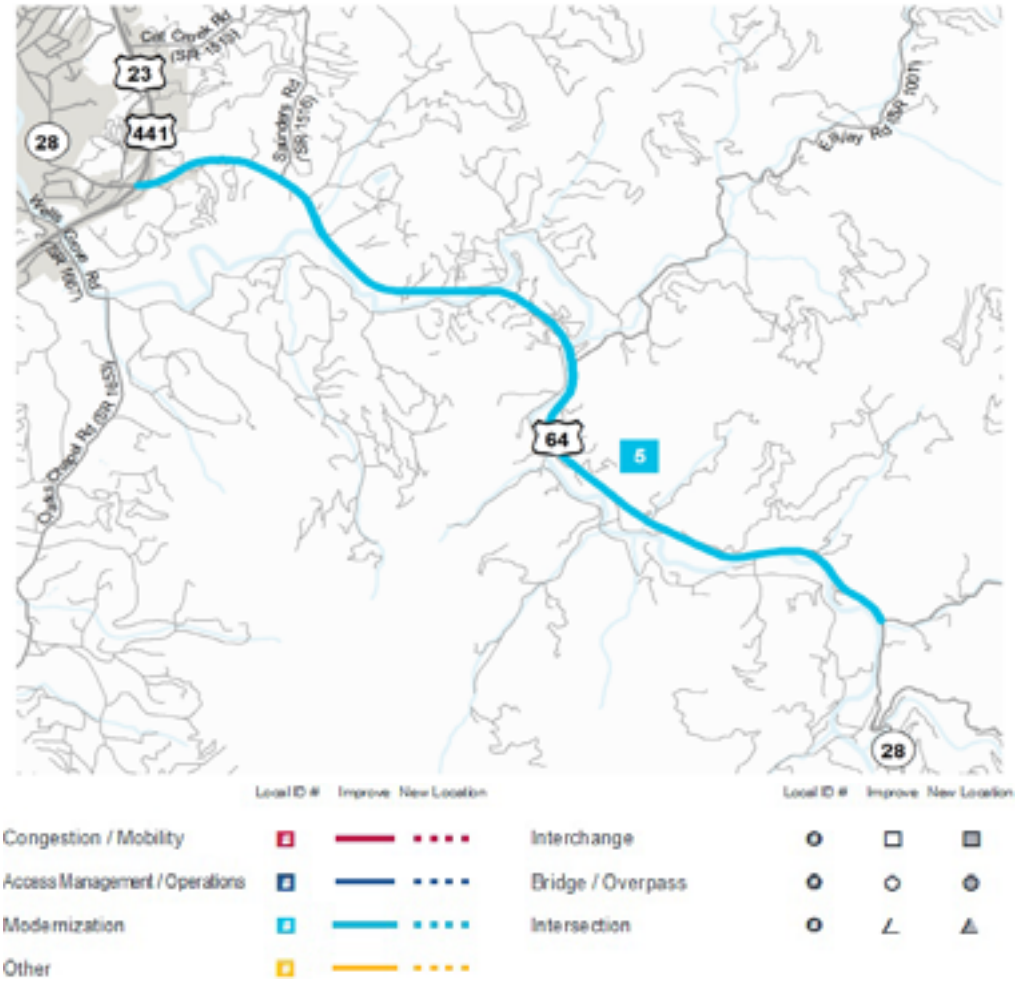
Improvement: **Improve Existing**

Identified Need

US 64 connects Franklin to Highland while providing access to Ellijay Road and Walnut Creek Road. It is projected to be over capacity by 2045.

Recommendation

Modernize the facility to improve mobility and safety. Construct 4-foot paved shoulders throughout, and a park-and-ride lot near the intersection at Ellijay Road (SR 1001).



Proposal At A Glance

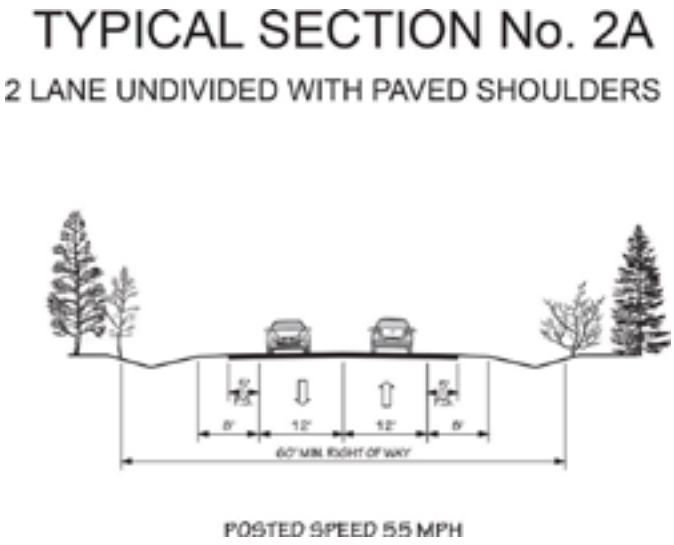
Highway Class	Modernization
Facility Type	Major Thoroughfare 2-lane
Typical Section	02 A
Section Options	-
Estimated Cost	-
Length (miles)	6.03
Existing ROW (feet)	90
Safety Risk Score	100

Proposal Data: 2017 Base Year / 2045 Future Year

Improved Route	Existing	Without Proposal	With Proposal
Facility Type	Major Thoroughfare 2-lane	Major Thoroughfare 2-lane	Major Thoroughfare 2-lane
Travel Lanes	2	2	2
Volume (vpd)	2900-11000	3900-14700	3900-14700
Capacity (vpd)	12000	12000	12000

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	2017
Facility will be Over Capacity (>=100%)	2025

Typical Section Options:
None



Project Overview

Project History and Linkage to Other Plans
US 64 is classified as a minor arterial on the Federal Functional Classification System.
The 1995 Franklin Thoroughfare Plan identified US 64 from Us 23 to Bethel Church Road (SR 1517) as over capacity in the design year of 2020. In the 1997 Macon County Thoroughfare Plan, US 64 from Bethel Church Road (SR 1517 to Ellijay Road (SR 1001) was identified as over capacity in the design year of 2025. A five-lane alternative was opposed by the County Commissioners and an alternative to use a cross section with more than 2 lanes was not deemed acceptable to the community. The 2012 Macon County CTP identified this project from US 23/441 to Buck Creek Road (SR 1538) and recommended 12-foot lanes and 4-foot paved shoulders like the proposal listed.

Multi-modal Considerations
State bike Route 2 currently traverses this corridor for part of its length.
Macon County Transit operates on a deviated-fixed route as well as demand response. The deviated-fixed route does not reach this section of the facility; however, it is within the demand-response area. A park and ride lot is proposed near the intersection of Ellijay Road (SR 1001).

CTP Goal Analysis

Goals & Objectives Survey
On the Goals & Objectives Survey, a few comments mentioned the need for a turn lane and crash locations. Another concern that was mentioned throughout US 64 at the gorge was related to truck traffic.

Public Input Survey
This proposal was rated by 139 participants. About 69% agreed with this proposal. Six comments were left on this project. Two comments stated that it was a dangerous road with multiple accidents. Other comments varied greatly: adding asphalt on each side of the road, disagreement with paved shoulders, adding sidewalks, and only agreeing with the park and ride lot.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, the proposed project is in the proximity of the Little Tennessee Watershed. This facility runs alongside the Cullasaja River which is designated as classification B and trout waters. It is within the vicinity of the Nantahala National Forest and historical resources such as the Scaly mountain.

Relationship to Land Use
This facility helps connect the town of Franklin to the town of Highlands. It leads to a major tourist area near the Nantahala River. There is not too much development along this facility, however; East Franklin is expected to grow in the future.

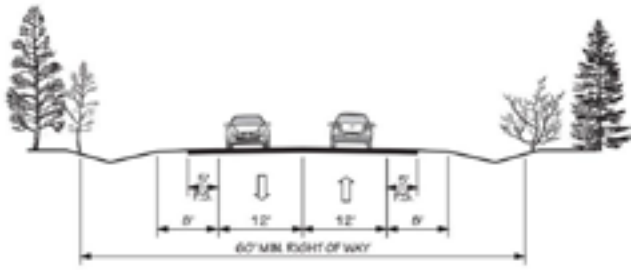
Other Information

Crash data analysis shows a total of 116 crashes on this section of US 64 with all of them being scattered throughout the section. Six crashes involved fatalities, thirty-five had injuries and seventy-five had property damage only. Crash data covered incidents from January 2014 to December 2018.
Based on 2017 traffic data, percent truck traffic on this section of US 64 is approximately 4.5%. There are truck prohibitions east of this project. There are truck prohibitions for US 64 which prevent trucks with a gross vehicle weight in excess of 20,000 pounds to be prohibited from using US 64 east of Franklin to Jackson County. No truck or trailer combinations with more than 4 axles can use US 64 between Walnut Creek Road (SR 1533) and NC 106 in Highlands.
There are two bridges along this facility which is structurally deficient or functionally obsolete: Bridge #104 is structurally deficient and Bridge #105 is

Typical Section Options:
None

TYPICAL SECTION No. 2A

2 LANE UNDIVIDED WITH PAVED SHOULDERS



POSTED SPEED 55 MPH

functionally obsolete. Structurally deficient bridges are bridges that must be monitored, inspected and replaced at the appropriate time. Functionally obsolete bridges are bridges that were built with different standards used today.

US 64 (N 4th Street)

From Highlands Town Limits to the Jackson County Line

Local ID: **MACO20005-H**

Purpose: **Facility Deficiencies**

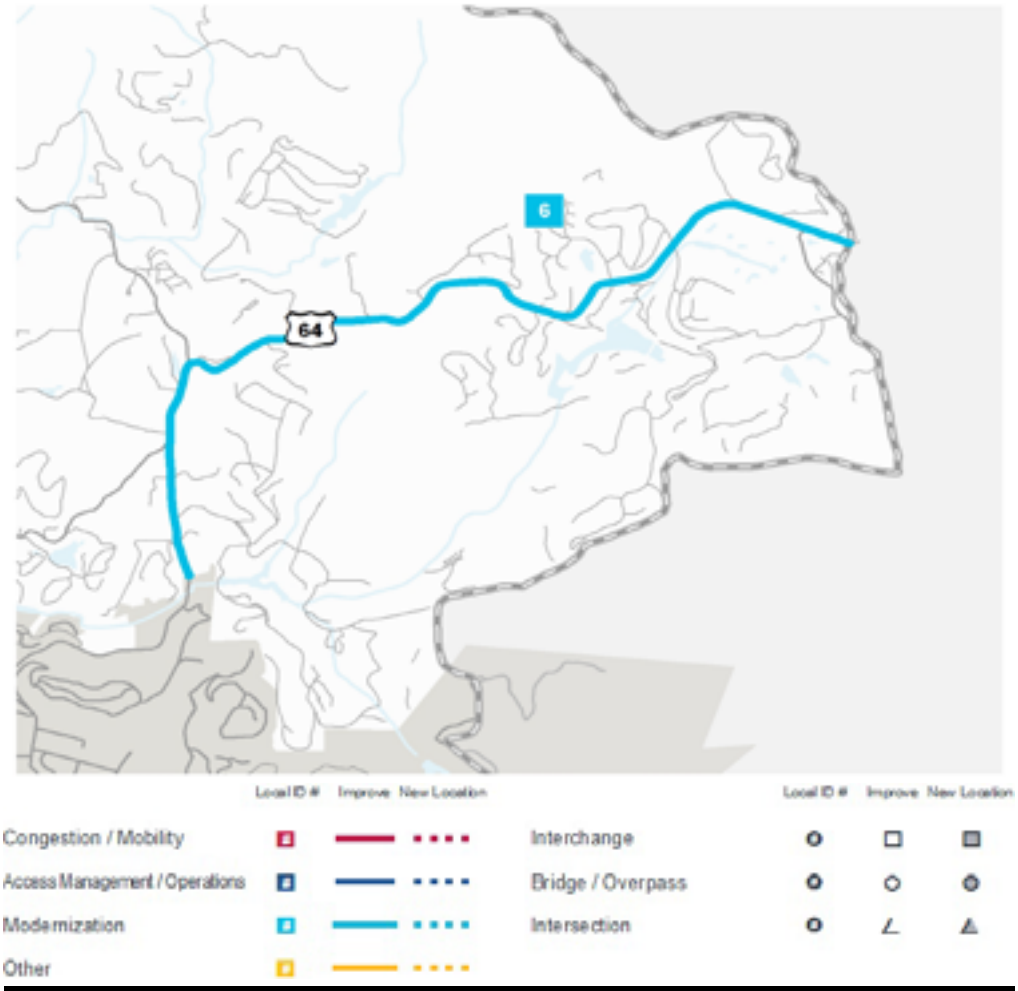
Improvement: **Improve Existing**

Identified Need

This section of US 64 is a connector to Cashiers and the lane width varies from 10 to 11 feet with no paved shoulders.

Recommendation

Modernize facility to improve mobility and safety, including 4-foot paved shoulders.

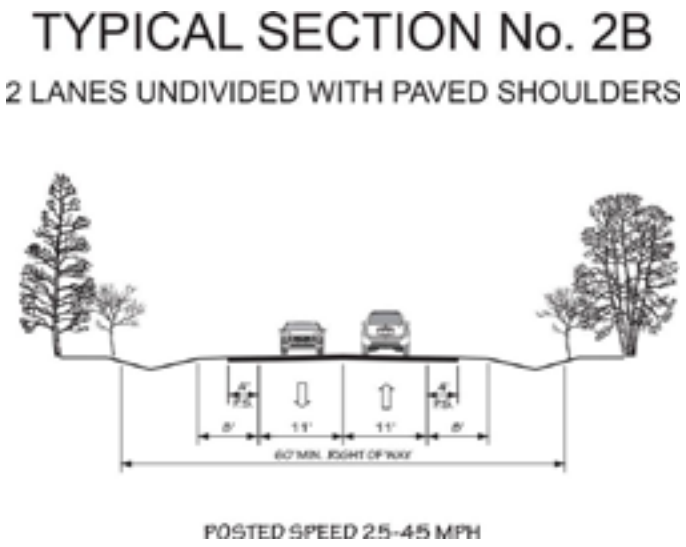


Proposal At A Glance	
Highway Class	Modernization
Facility Type	Major Thoroughfare 2-lane
Typical Section	02 B
Section Options	-
Estimated Cost	-
Length (miles)	3.74
Existing ROW (feet)	80
Safety Risk Score	78

Proposal Data:	2017 Base Year	2045 Future Year	
Improved Route	Existing	Without Proposal	With Proposal
Facility Type	Major Thoroughfare 2-lane	Major Thoroughfare 2-lane	Major Thoroughfare 2-lane
Travel Lanes	2	2	2
Volume (vpd)	3800	5100	5100
Capacity (vpd)	12300	12300	12300

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:
None



Project Overview

Project History and Linkage to Other Plans
US 64 is classified as a minor arterial on the Federal Functional Classification System. This portion of US 64 was identified as needing improvements in the 2012 Macon County CTP.

Multi-modal Considerations
This project is outside of town limits and near the border of Jackson County. It is within the demand response area of Macon County Transit.

CTP Goal Analysis

Vision, Goals, & Objectives
The goal of this project is to improve a major connector between Highlands and Cashiers by modernizing the road. This can provide safer travel in mountainous environments.

Goals & Objectives Survey
On the Goals & Objectives Survey, comments mentioned to upgrade this facility and that the road was deteriorating.

Public Input Survey
This proposal was rated by 94 participants. About 73% agreed with this proposal. Four comments were left on this project. Comments agreed on the need for mobility, safety, and sight distance along this corridor to help with the connection to the hospital and Cashiers.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, the proposed project is in the proximity of the Little Tennessee Watershed. This facility runs alongside the Cullasaja River which is designated as classification B and trout waters. It is within the vicinity of the Nantahala National Forest and historical resources such as the Scaly mountain.

Relationship to Land Use
This facility helps connect the town of Highlands to the town of Cashiers. It provides access to country clubs and tourist areas as well as the Cashiers-Highlands Hospital.

Other Information

Crash data analysis shows a total of 45 crashes on this section of US 64 with all of them being scattered throughout the section. No crashes involved fatalities, four had injuries and forty-one had property damage only. Crash data covered incidents from January 2014 to December 2018.
Based on 2017 traffic data, percent truck traffic on US 23-441 is approximately 4.54%. There are truck prohibitions east of this project.

US 441 BUS (Main Street/E Palmer Street)

From Porter Street to Big Bear Lane

Local ID: **MACO20006-H**

Purpose: **Access**

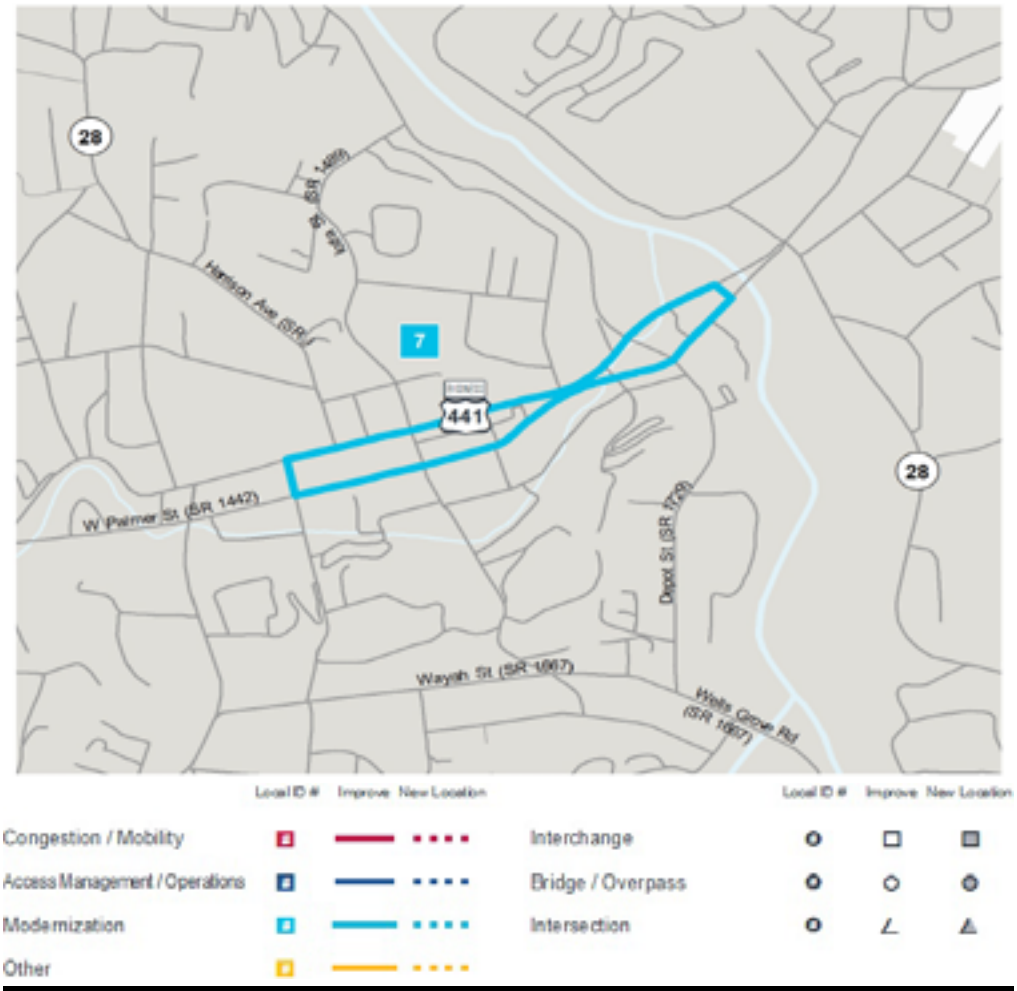
Improvement: **Improve Existing**

Identified Need

This section US 441 BUS is near capacity in 2045. A total of 137 crashes were recorded between January 2014 and December 2018. There are many open driveways and missing sidewalk segments which cause safety concerns.

Recommendation

Modernize Main Street/East Palmer Street to improve traffic flow, access to businesses, and pedestrian safety. Add curb and gutter, sidewalks and driveways improvements.



Proposal At A Glance

Highway Class	Modernization
Facility Type	Major Thoroughfare 2-lane
Typical Section	02 G
Section Options	-
Estimated Cost	-
Length (miles)	1.67
Existing ROW (feet)	30-100
Safety Risk Score	78

Proposal Data:

Improved Route	2017 Base Year Existing	2045 Future Year Without Proposal	2045 Future Year With Proposal
Facility Type	Major Thoroughfare 2-lane	Major Thoroughfare 2-lane	Major Thoroughfare 2-lane
Travel Lanes	2	2	2
Volume (vpd)	6100-9800	7800-12500	7800-12500
Capacity (vpd)	9500-10700	9500-10700	9500-10700

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:
None

Project History/Linkage to Other Plans

Linkage to Other Plans
US 441 BUS (Main Street/E Palmer Street) is a minor arterial on the Federal Functional Classification System. It goes through downtown Franklin and is two one-way pairs. Macon County Transit has a deviated-fixed route that travels along this facility and has a transit stop on it.

Multi-modal Considerations
Downtown Franklin has many disconnected sidewalks. This proposal recommends adding and improving sections with missing sidewalk.

CTP Goal Analysis

Vision, Goals, & Objectives
The purpose of this project is to provide safer access to the businesses. The Macon County CTP Goals include providing safer, reliable and a multimodal transportation system.

Goals & Objectives Survey
This section of US 441 BUS had 20 comments on the Goals & Objectives Survey. Comments stated problems with traffic patterns, high speeds, parking issues, and pedestrian safety.

Public Input Survey
This proposal was rated by 134 participants. About 80% agreed with this proposal. Four comments were left on this project. Two comments proposed converting the facility to two-way traffic with parallel parking. One comment said to leave it alone. The steering committee stated that converting this facility to two-way traffic would be a very significant change.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, the proposed project is within the Little Tennessee River watershed. It runs alongside the Macon County Historical Museum and other historical sites. This facility intersects the Little Tennessee Greenway and is near the Little Tennessee river and its Aquatic Habitat. It is near two managed areas and multiple churches/cemeteries.

Relationship to Land Use
The facility is main street to access businesses in downtown Franklin. Multiple stores, restaurants, banks, and other businesses are on both sides of both of these one way pairs. On some parts of this facility, multiple driveways to businesses are placed very close to the road; while on others, there is on street parking. Some utility poles can be found on sidewalks or driveways in some areas.

Other Information

Crash data analysis shows a total of 137 crashes in this location. One crash involved a fatality, twenty-three had injuries and one-hundred thirteen had property damage only. Crash data covered incidents from January 2014 to December 2018.
Based on 2017 traffic data, percent truck traffic on US 441 BUS is approximately 4.1%.

NC 28 (Highlands Road)

From US 441 BUS (E Main Street) to Thomas Road

Local ID: **MACO30001-H**

Purpose: **Congestion**

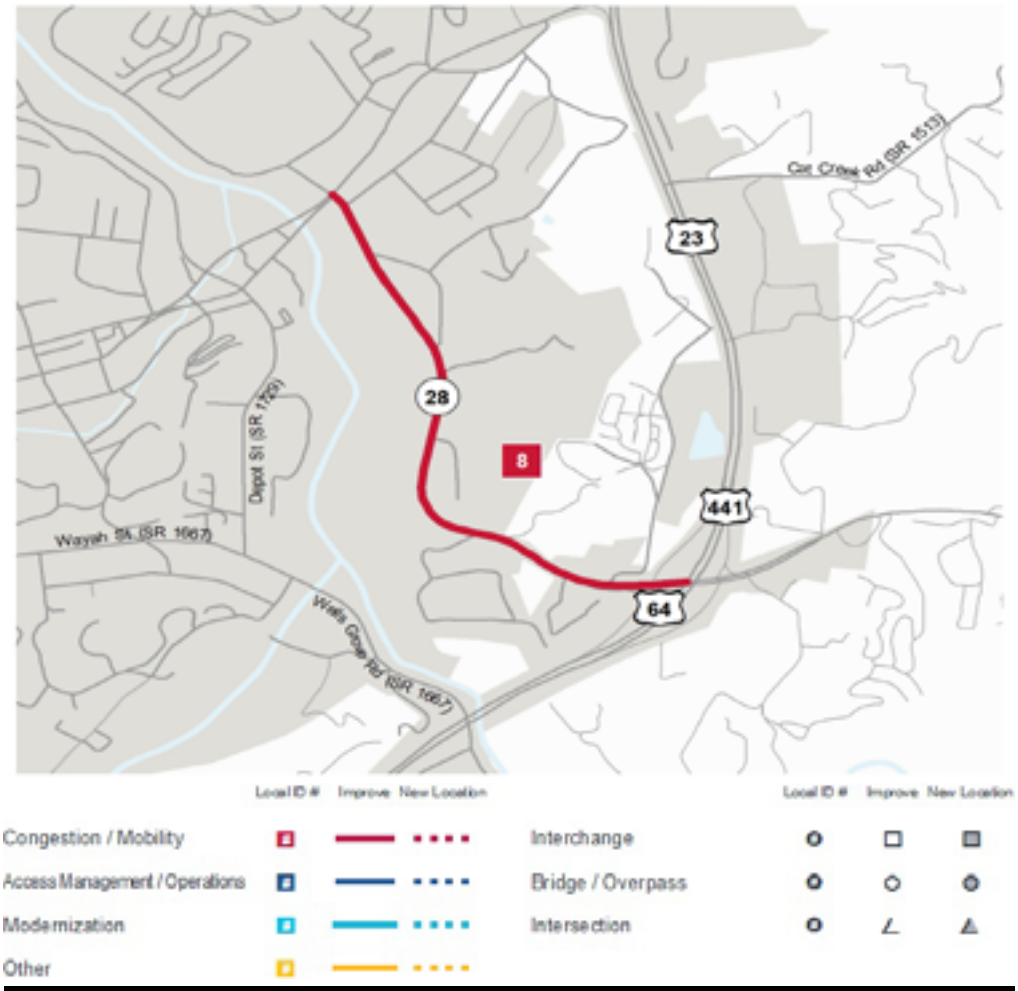
Improvement: **Improve Existing**

Identified Need

This section of NC 28 is projected to be over capacity by 2045 from E Main Street. Multiple driveways hinder mobility along this facility. It serves traffic going to the businesses along the facility. This facility is identified as a high frequency crash section.

Recommendation

Redesign to a two-lane divided facility by replacing the center turn lane with a median, providing reduced conflict intersections and improvements to access management. Add bicycle lanes and complete existing sidewalk (see Page 52 of the 2017 BikeWalk Franklin Plan).

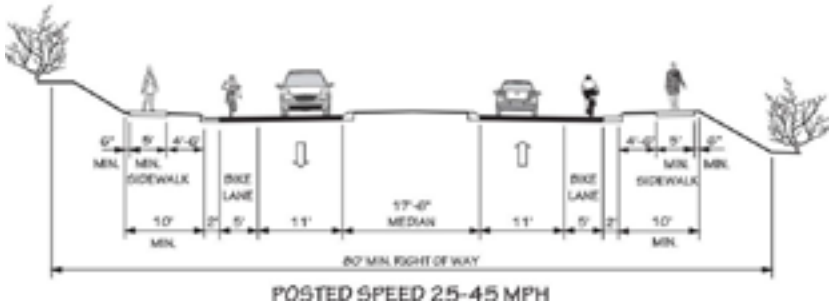


Proposal At A Glance	
Highway Class	Congestion & Mobility
Facility Type	Major Thoroughfare 2-lane
Typical Section	02 L
Section Options	02 K
Estimated Cost	-
Length (miles)	1.33
Existing ROW (feet)	100
Safety Risk Score	56

Proposal Data:	2017 Base Year	2045 Future Year	
Improved Route	Existing	Without Proposal	With Proposal
Facility Type	Major Thoroughfare 2-lane	Major Thoroughfare 2-lane	Major Thoroughfare 2-lane
Travel Lanes	2	2	2
Volume (vpd)	10000-11000	12800-14100	12800-14100
Capacity (vpd)	12300-22200	12300-22200	18500-22200

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	2017
Facility will be Over Capacity (>=100%)	2027

Typical Section Options:
02 K



Project Overview

Project History and Linkage to Other Plans
NC 28 (Highlands Road) is classified as a minor arterial on the Federal Functional Classification System.
This project was identified on the 2012 Macon County CTP as well as the 1995 Franklin Thoroughfare Plan.
During the development of the 2012 Macon County CTP, Franklin expressed a desire to widen this facility to a four-lane divided boulevard and proposals of access management design were considered.

Multi-modal Considerations
This project is proposed to include bicycle lanes to accommodate bicycles. It is also recommended to extend the sidewalk from Thomas Heights Road to US 23-441 (Sylva Road).
Macon County Transit operates on a deviated-fixed route as well as demand response. The Mountain Gem deviated-fixed route passes through this facility, giving passengers access to the destinations along it. NC 28 is also within the demand response area.

CTP Goal Analysis

Vision, Goals, & Objectives
During the process of this CTP, the steering committee discussed that there would be too many impacts to propose a four-lane facility. Controlling access to improve mobility due to the number of driveways along this facility would help improve the mobility and limit points of conflict. The addition of bicycle lanes and extending the sidewalk helps promote a multimodal transportation system and healthy communities.

Goals & Objectives Survey
On the Goals & Objectives Survey, comments mentioned concerns of sight obstruction and signal timings at the Main Street intersection. Other comments stated the desire for sidewalks and bicycle accommodations.

Public Input Survey
This proposal was rated by 138 participants. About 69% agreed with this proposal. Seven comments were left on this project. Four comments stated that they did not agree with the design, but two agreed with bike lanes. Two comments said that improvements could be good for business. One comment said sidewalks are a great idea. The steering committee discussed the emphasis on access management. Improvements at intersections near the new planned subdivision or at the northern intersection at Crane Circle were mentioned to help with access management.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, the project is within the Little Tennessee watershed. It is in the proximity of the Little Tennessee River Aquatic Habitat.

Relationship to Land Use
NC 28 (Highlands Road) provides access to many businesses and is dense with commercial land use. It includes restaurants, shopping, a Flea Market, and a Bi-Lo shopping center. The Bi-Lo shopping center is a major traffic generator and is a transit stop.

Other Information

Crash data analysis shows a total of 19 crashes on this section of NC 28. No crashes involved fatalities, seven had injuries and twelve had property damage only. Crash data covered incidents from January 2014 to December 2018.
Based on 2017 traffic data, percent truck traffic on this section of NC 28 is approximately 4.6%.

NC 28 (Bryson City Road)

From Sanderstown Road (SR 1335) to Cowee Creek Road (SR 1340)

Local ID: **MACO30002-H**

Purpose: **Facility Deficiencies**

Improvement: **Improve Existing**

Identified Need

This section of NC 28 has 9-foot lanes and no paved shoulders. It acts as a connector between the town of Franklin and the town of Cowee.

Recommendation

Modernize the facility to improve mobility and safety. Construct 11-foot lanes, 5-foot paved shoulders, and add a park-and-ride lot near the intersection at Sanderstown Road (SR 1335). Improve the Y intersection at Cowee Creek Road (SR 1340).

Proposal At A Glance

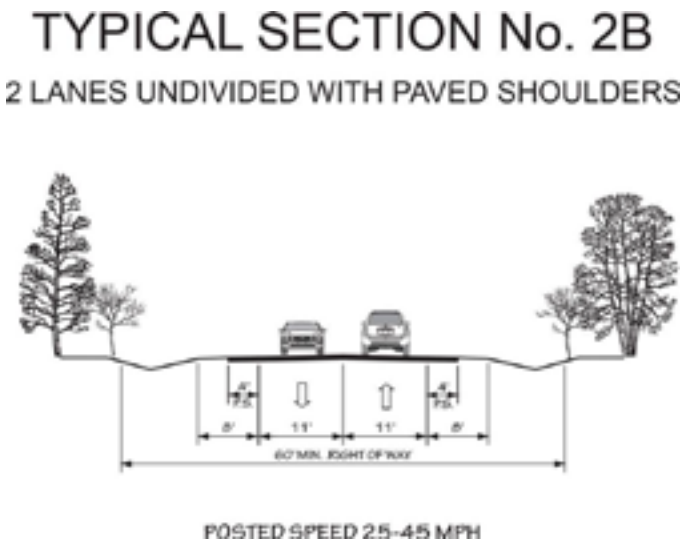
Highway Class	Modernization
Facility Type	Major Thoroughfare 2-lane
Typical Section	02 B
Section Options	2A
Estimated Cost	-
Length (miles)	2.03
Existing ROW (feet)	60
Safety Risk Score	100

Proposal Data: 2017 Base Year / 2045 Future Year

Improved Route	Existing	Without Proposal	With Proposal
Facility Type	Major Thoroughfare 2-lane	Major Thoroughfare 2-lane	Major Thoroughfare 2-lane
Travel Lanes	2	2	2
Volume (vpd)	4100	5500	5500
Capacity (vpd)	13600	13600	14600

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:
2A



Project Overview

Project History and Linkage to Other Plans
This portion of NC 28 is classified as a major collector on the Federal Functional Classification System. The park and ride lot proposal was identified in the 2012 Macon County CTP as MACO0003-T.

Multi-modal Considerations
This project is outside of city limits. It is recommended to widen to 5-foot paved shoulders to accommodate for bicycles.
Macon County Transit operates on a deviated-fixed route as well as demand response. The deviated-fixed route does not reach this section of the facility; however, it is within the demand-response area. A park and ride lot is proposed near the intersection at Sanderstown Road (SR 1335).

CTP Goal Analysis

Vision, Goals, & Objectives
This project improves the connection of the town of Franklin to the town of Cowee through modernizing the roadway. It also aims to accommodate bicycles to support a more multi-modal transportation system.

Goals & Objectives Survey
On the Goals & Objectives Survey, comments mentioned an increased number of bicycles on this facility and concern with the lack of shoulder or bike lanes. A comment on this intersection discussed the difficulty in maneuvering through this intersection. Another comment stated the potential danger of the Y intersection design especially coming from Cowee Creek Rd and turning north towards NC 28.

Public Input Survey
This was shown with the road improvement and intersection improvement separately in the Public Input Survey. The road improvement was rated by 138 participants and about 69% agreed. The intersection improvement was rated by 49 participants with about 88% agreeing. Three comments were left on the road improvements while none on the intersection one. Two comments agreed to improve the mobility and safety of this road. One comment stated it would be bad for the scenic beauty of the area. The RPO received several comments during the public comment period which mentioned the concern of the project impacting the scenic beauty of this area. The steering committee emphasized the need for improvements along this facility, especially near Cowee Baptist Church. Other public comments suggested a need for a wildlife crossing structure in the vicinity of Mason Mountain Drive.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, a portion of the proposed project is within 120ft of the Little Tennessee River. This river is classified as class C waters and home to the threatened species, the Spotfin Chub (Erimonax monachus). The project is in proximity of the NC Clean Water Management Trust Fund Easement and the Little Tennessee River watershed and floodplain.

Other Information

Crash data analysis shows a total of 23 crashes on this section of NC 28. Two crashes involved fatalities, six had injuries and fifteen had property damage only. Crash data covered incidents from January 2014 to December 2018.
Based on 2017 traffic data, percent truck traffic on this section of NC 28 is approximately 9.1%.

NC 106 (Dillard Road)

From the Georgia State Line to US 64

Local ID: **MACO30003-H**

Purpose: **Mobility**

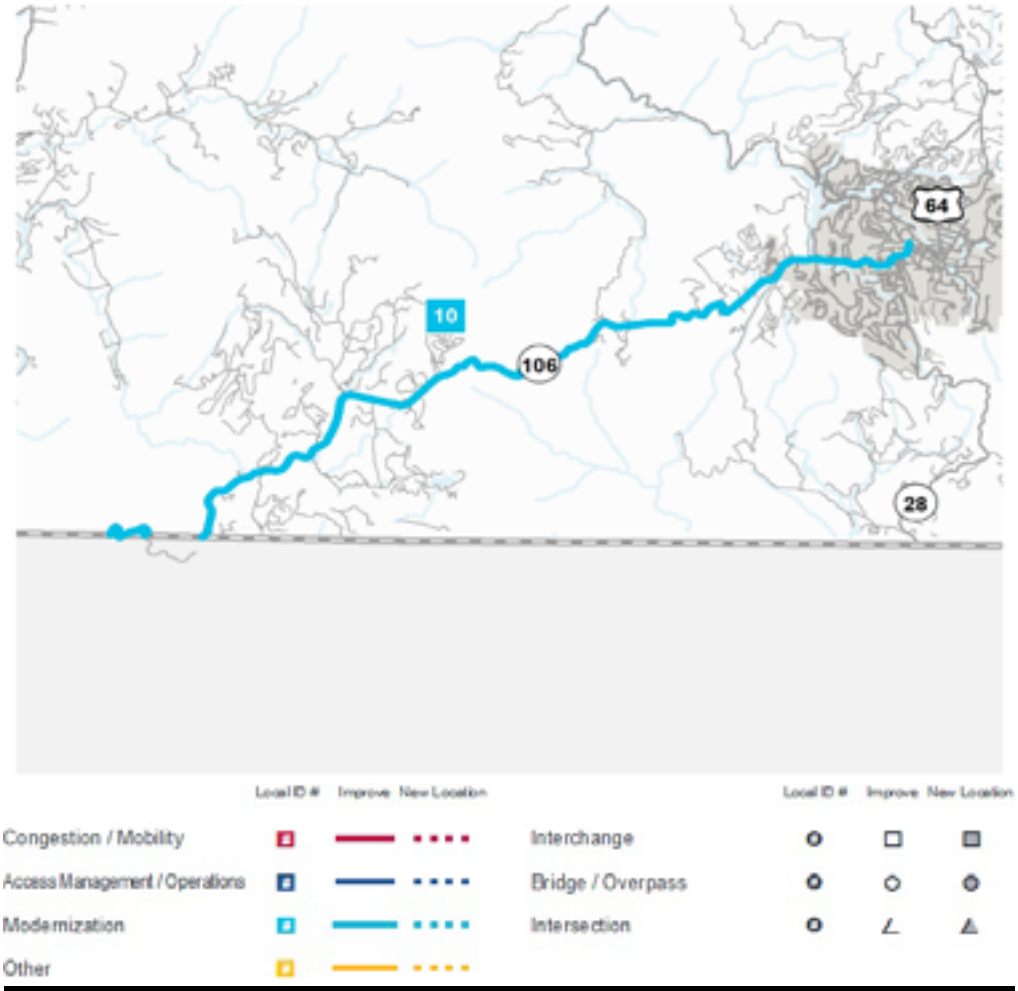
Improvement: **Improve Existing**

Identified Need

NC 106 is a major connector from Franklin to Highlands especially for Freight due to the restrictions on US 64 along the gorge. This facility has sections of 9-foot lanes with unpaved shoulders. Sections of this facility are projected to be near capacity in 2045.

Recommendation

Modernize to 12-foot lanes with 4-foot paved shoulders. Add sidewalk from Hummingbird Ln to Highlands Plaza.

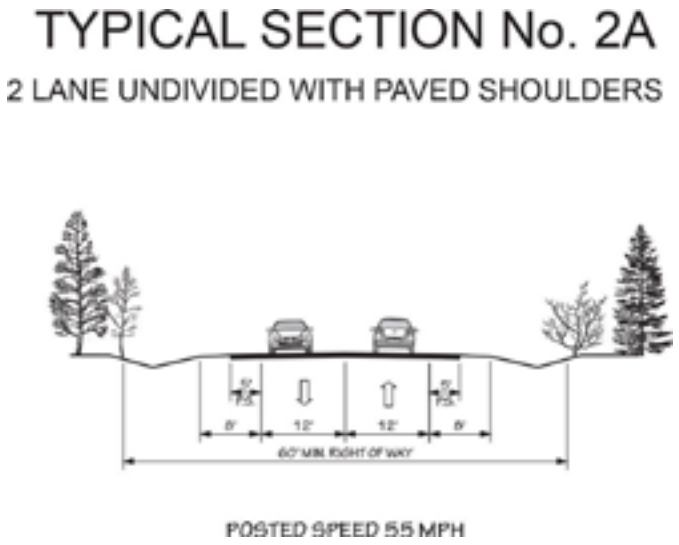


Proposal At A Glance	
Highway Class	Modernization
Facility Type	Major Thoroughfare 2-lane
Typical Section	02 A
Section Options	2B
Estimated Cost	-
Length (miles)	11.14
Existing ROW (feet)	60
Safety Risk Score	89

Proposal Data:	2017 Base Year	2045 Future Year	
Improved Route	Existing	Without Proposal	With Proposal
Facility Type	Major Thoroughfare 2-lane	Major Thoroughfare 2-lane	Major Thoroughfare 2-lane
Travel Lanes	2	2	2
Volume (vpd)	3300-7000	4400-9400	4400-9400
Capacity (vpd)	10500-11400	10500-11400	11600-13100

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:
2B



Project Overview

Project History and Linkage to Other Plans
NC 106 (Dillard Rd) is classified as a major collector on the Federal Functional Classification System.
This recommendation was included in the 2012 Macon County CTP and was later known as project R-5836. Due to comments from public meetings held in August 2018, the project did continue toward funding. This project is included in this CTP as a recommendation from the steering committee to show the need for this facility to be improved.

Multi-modal Considerations This project is recommended to have a sidewalk from Hummingbird Ln to Highlands Plaza.
Macon County Transit operates on a deviated-fixed route as well as demand response. The deviated-fixed route does not reach this section of the facility; however, it is within the demand-response area.

CTP Goal Analysis

Vision, Goals, & Objectives
This project helps NC 106 become a facility that better accommodates all users, including freight providers and visitors. It also helps keep drivers safe on US 64 by incentivizing the removal of truck traffic on that facility in favor of NC 106.

Goals & Objectives Survey
On the Goals & Objectives Survey, many of the comments all stated the need for improving NC 106. Commenters wrote that this facility had low shoulders, narrow lanes, and bad road sections.

Public Input Survey
This proposal was rated by 109 participants. About 67% agreed with this proposal. Six comments were left on this project. Four comments agreed with improvements along this facility. Two comments were not regarding this area. The steering committee stated the importance of improving this facility since it is an important connector to Highlands.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, this project is within the Savannah and Little Tennessee watersheds. It is also within the proximity of the Highlands-Cashiers Land Trust and natural heritage areas like Scaly Mountain and the Nantahala National Forest.

Other Information

Crash data analysis shows a total of 107 crashes on this section of NC 106 with all of them being scattered throughout the section. Two crashes involved fatalities, seventeen had injuries and eighty-eight had property damage only. Crash data covered incidents from January 2014 to December 2018.
NC 106 in the primary route for truck traffic to travel between Franklin and Highlands. The only other major connector, US 64, has truck restrictions due to its narrow lanes and mountainous terrain. Based on 2017 traffic data, percent truck traffic on this section of NC 106 is approximately 6.1%.
One bridge along this facility was shown to be structurally deficient and functionally obsolete: Bridge #026. Structurally deficient bridges are bridges that must be monitored, inspected and replaced at the appropriate time. Functionally obsolete bridges are bridges that were built with different standards used today.

Airport Road (SR 1434)

From Olive Hill Road (SR 1387) to NC 28 (Bryson City Road)

Local ID: **MACO40001-H**

Purpose: **Facility Deficiencies**

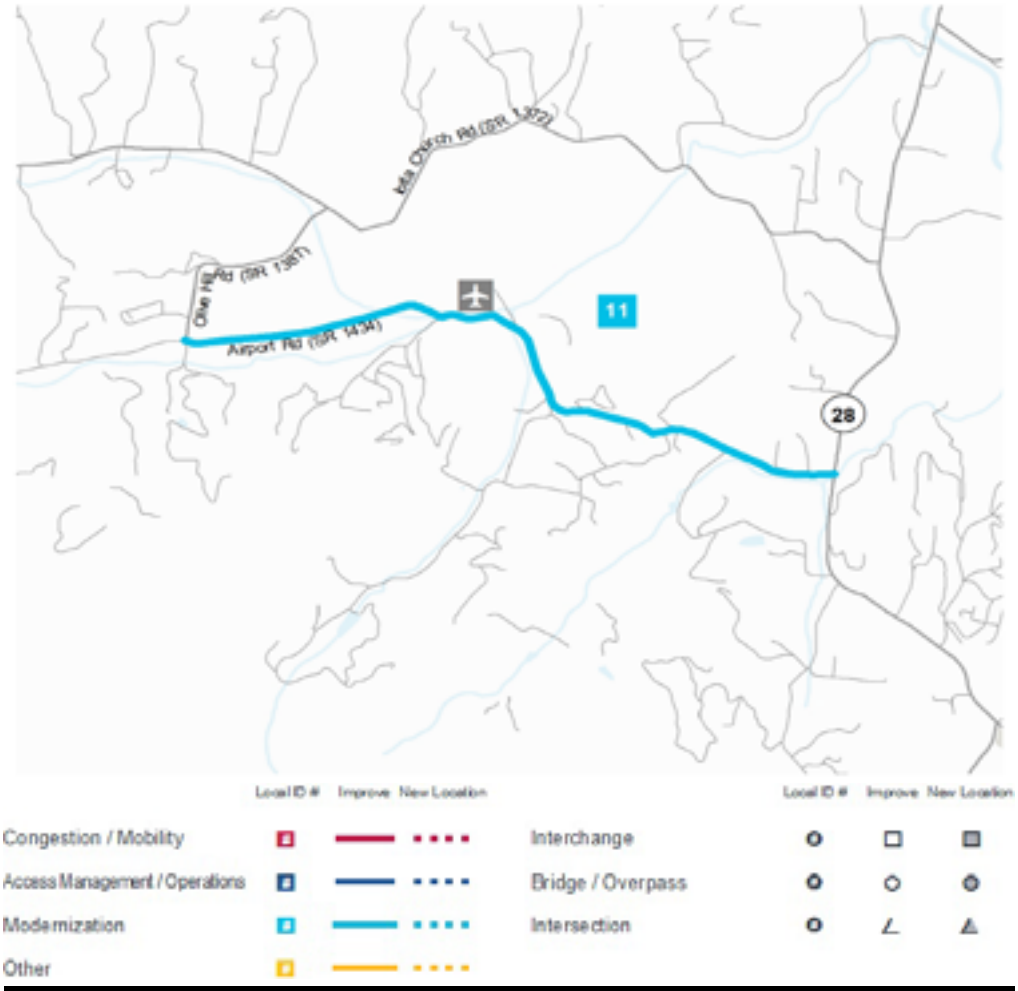
Improvement: **Improve Existing**

Identified Need

Airport Road (SR 1434) connects NC 28 to the Macon County Airport. This facility has 9-foot lanes and no paved shoulders.

Recommendation

Modernize to 11-foot lanes with 4-foot paved shoulders.



Proposal At A Glance

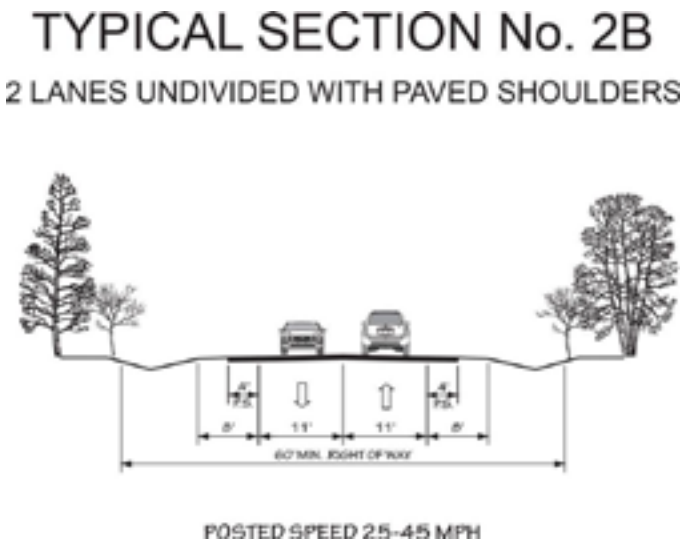
Highway Class	Modernization
Facility Type	Minor Thoroughfare
Typical Section	02 B
Section Options	2A
Estimated Cost	-
Length (miles)	2.3
Existing ROW (feet)	
Safety Risk Score	89

Proposal Data:

Improved Route	2017 Base Year Existing	2045 Future Year Without Proposal	2045 Future Year With Proposal
Facility Type	Minor Thoroughfare	Minor Thoroughfare	Minor Thoroughfare
Travel Lanes	2	2	2
Volume (vpd)	2300	2900	2900
Capacity (vpd)	9200	9200	10200

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:
2A



Project Overview

Project History and Linkage to Other Plans
Airport Road (SR 1434) is classified as a minor collector on the Federal Functional Classification System.

Multi-modal Considerations
This modernizes the road to allow for improved access towards and from the airport.
Macon County Transit operates on a deviated-fixed route as well as demand response. The deviated-fixed route does not reach this section of the facility; however, it is within the demand-response area.

CTP Goal Analysis

Vision, Goals, & Objectives
This project helps connect drivers with the Macon County Airport. Improvements on this facility would help modernize this road making it safer and more accommodating to travel.

Goals & Objectives Survey
On the Goals & Objectives Survey, one comment mentioned the narrow road leading to the airport.

Public Input Survey
This proposal was rated by 86 participants. About 55% agreed with this proposal. Five comments were left on this project. Comments were mixed stating to put bike lanes instead, repave, maybe, or were not familiar with the area. The steering committee stated that improving this facility towards the airport was important to improve safer connectivity towards the airport and from an economic development standpoint.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, this project is within the Little Tennessee watershed. It is within 150 feet of the Iotla Creek, Jacob Branch and Pointdexter Branch which are all classified as class C waters. It also intersects with impaired waters and is within the proximity of the Little Tennessee River Aquatic Habitat.

Other Information

Crash data analysis shows a total of 15 crashes on this section of Airport Road (SR 1434). One crash involved fatalities, two had injuries and twelve had property damage only. Crash data covered incidents from January 2014 to December 2018.
One bridge along this facility is functionally obsolete: Bridge #205. Functionally obsolete bridges are bridges that were built with different standards used today.

Buck Creek Road (SR 1535)

From US 64 (Highlands Road) to Teague Estates Road

Local ID: **MACO40002-H**

Purpose: **Facility Deficiencies**

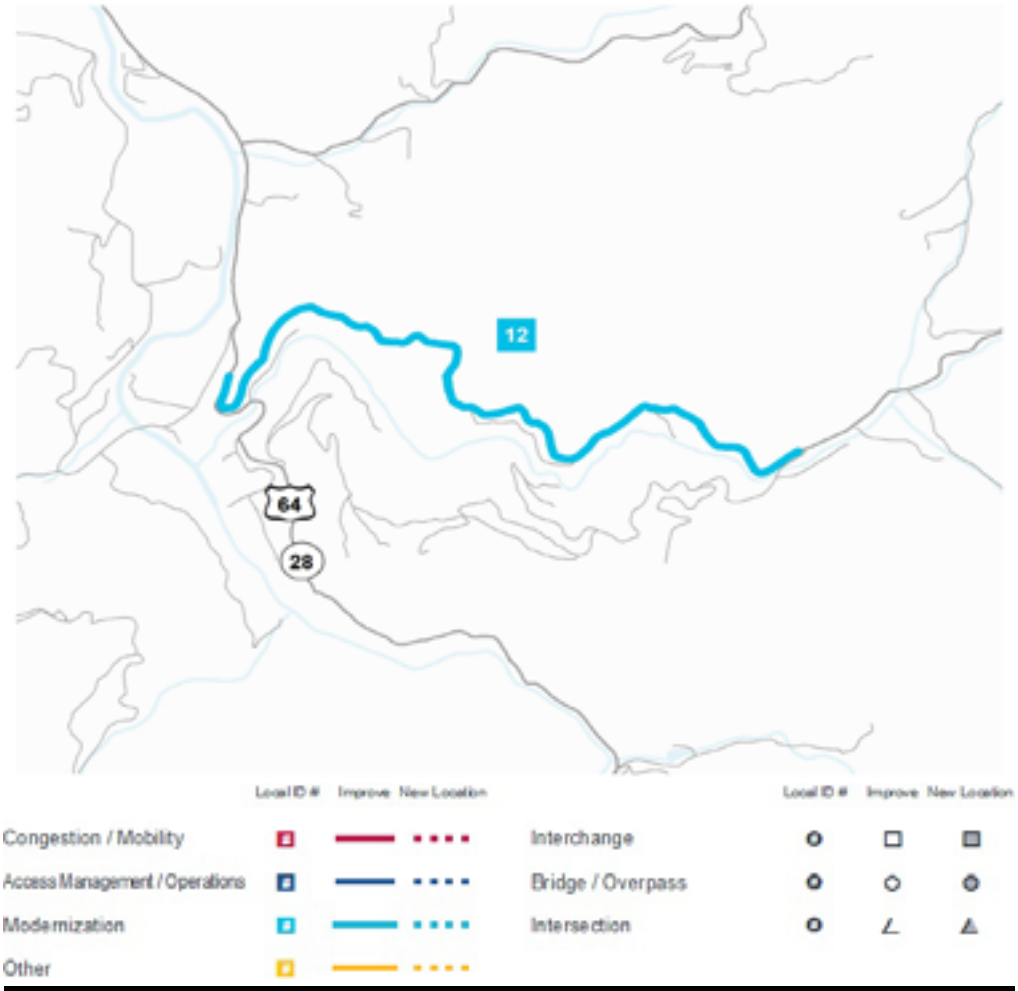
Improvement: **Improve Existing**

Identified Need

This section of Buck Creek Road is currently an 8-foot lane facility with no paved shoulders.

Recommendation

Modernize to 11-foot lanes with 4-foot paved shoulders.

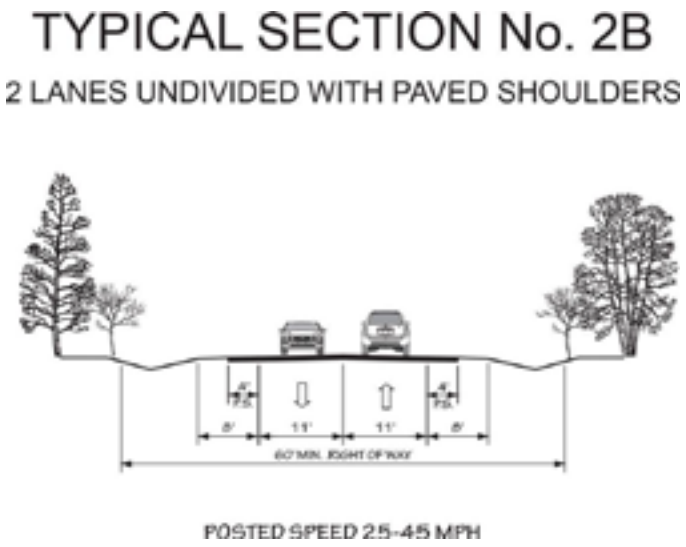


Proposal At A Glance	
Highway Class	Modernization
Facility Type	Minor Thoroughfare
Typical Section	02 B
Section Options	2A
Estimated Cost	-
Length (miles)	2.04
Existing ROW (feet)	60
Safety Risk Score	22

Proposal Data:	2017 Base Year	2045 Future Year	
Improved Route	Existing	Without Proposal	With Proposal
Facility Type	Minor Thoroughfare	Minor Thoroughfare	Minor Thoroughfare
Travel Lanes	2	2	2
Volume (vpd)	760	1300	1300
Capacity (vpd)	11000	11000	12000

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:
2A



Project Overview

US 64 is the primary route connecting Franklin to Highlands. Buck Creek Road (SR 1538) bypasses the US 64 section through the Cullasaja Gorge. There are truck prohibitions for US 64 which prevent trucks with a gross vehicle weight in excess of 20,000 pounds to be prohibited from using US 64 east of Franklin to Jackson County. No truck or trailer combinations with more than 4 axles can use US 64 between Walnut Creek Road (SR 1533) and NC 106 in Highlands. Buck Creek Road (SR 1538) acts as an alternative to travel through the gorge.

Project History and Linkage to Other Plans
The 1997 Macon Thoroughfare Plan analyzed Buck Creek Road (SR 1538) and found it adequate. The 2012 Macon County CTP recommends improvements Buck Creek Road (SR 1535) from NC 28 to US 64.

Multi-modal Considerations
Macon County Transit operates on a deviated-fixed route as well as demand response. The deviated-fixed route does not reach this section of the facility; however, it is within the demand-response area.

CTP Goal Analysis

Vision, Goals, & Objectives
This project improves mobility by modernizing this facility to provide easier travel. This facility acts as a bypass around US 64.

Public Input Survey
This proposal was rated by 99 participants. About 80% agreed with this proposal. Three comments were left on this facility. These comments varied from stating the road was dangerous, wanting the curves to be corrected, and to stop widening the roads.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, the project is within 50 feet of Natural Heritage Significant Areas which includes the Cullasaja River/Ellijay Creek Aquatic Habitats and Houston Knob. This project is within close proximity of the Nantahala National Forest and the Highlands Plateau. It is within the Little Tennessee watershed and close to the Scaly Mountains. Buck Creek is within 150 feet of this project which is classified as class C and trout waters.

Clarks Chapel Road (SR 1653)

From Wells Grove Road (SR 1667) to Hickory Knoll Road (SR 1643)

Local ID: **MACO40003-H**

Purpose: **Facility Deficiencies**

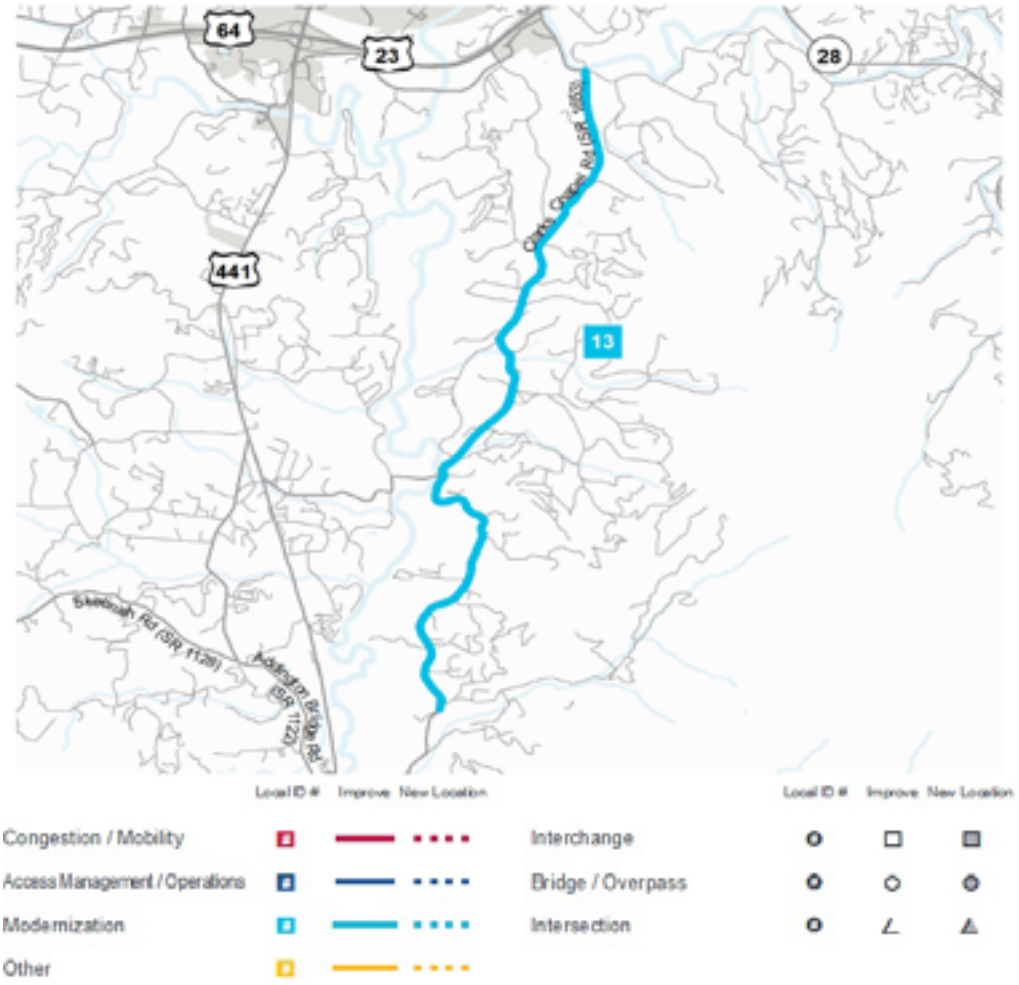
Improvement: **Improve Existing**

Identified Need

Clarks Chapel Road (SR 1653) currently has 9-foot lanes and no paved shoulders. It is an important route to Mountain View Intermediate and Macon County Middle schools and is used frequently by school buses.

Recommendation

Modernize to 11-foot lanes with 5-foot paved shoulders.

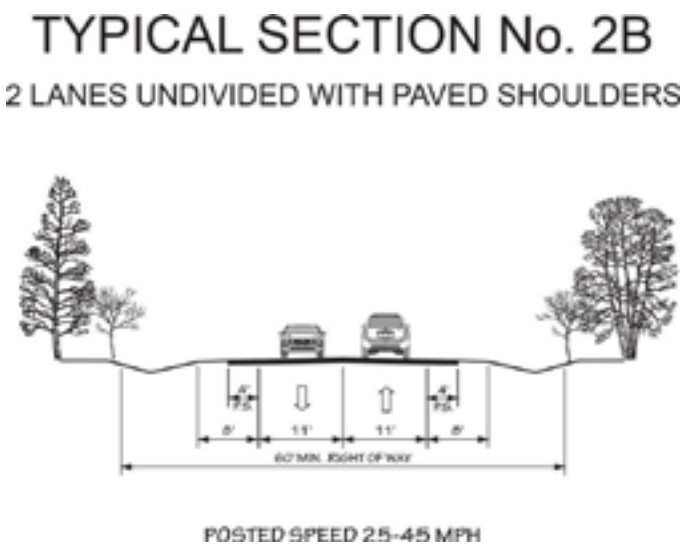


Proposal At A Glance	
Highway Class	Modernization
Facility Type	Minor Thoroughfare
Typical Section	02 B
Section Options	2A
Estimated Cost	-
Length (miles)	5.31
Existing ROW (feet)	100
Safety Risk Score	78

Proposal Data:	2017 Base Year	2045 Future Year	
Improved Route	Existing	Without Proposal	With Proposal
Facility Type	Minor Thoroughfare	Minor Thoroughfare	Minor Thoroughfare
Travel Lanes	2	2	2
Volume (vpd)	510-2300	700-3600	700-3600
Capacity (vpd)	8900-10600	8900-10600	10000-12000

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:
2A



Project Overview

Project History and Linkage to Other Plans
Clarks Chapel Road (SR 1653) is classified as a minor collector on the Federal Functional Classification System.

Multi-modal Considerations
This project accommodates bicycles by having five-foot paved shoulders. Macon County Transit operates on a deviated-fixed route as well as demand response. The deviated-fixed route does not reach this section of the facility; however, it is within the demand-response area.

CTP Goal Analysis

Vision, Goals, & Objectives
This project improves mobility by modernizing this facility to provide easier travel. This project improves access to Mountain View Intermediate and Macon County Middle schools as well as the Wells Groves Baptist Church from residential areas along this facility.

Goals & Objectives Survey
On the Goals & Objectives Survey, one comment mentioned the desire for sidewalks while another mentioned deterioration of the road.

Public Input Survey
This proposal was rated by 93 participants. About 67% agreed with this proposal. Two comments were left on this facility. One comment agrees with the need for improvements and the other states that the current road is too narrow for buses to pass safely.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, the project is within 120 feet of the Little Tennessee River which is home to the Natural Heritage Significant Area known as the Little Tennessee River Aquatic Habitat. This is home to the threatened species known as the Spotfin Chub (Erimonax monachus). Along the sides of this facility there are also a few churches and cemeteries.

Relationship to Land Use
This facility runs along Mountain View Intermediate and Macon County Middle schools which are also near the Wal-Mart Supercenter.

Other Information

Crash data analysis shows a total of 10 crashes on Clarks Chapel Road (SR 1653) near the Dowdle Mountain Road (SR 1659) Intersection. No crashes involved fatalities, five had injuries and five had property damage only. Crash data covered incidents from January 2014 to December 2018.

Ellijay Road (SR 1001)

From US 64 (Highlands Road) to Grayson Higdon Road

Local ID: **MACO40004-H**

Purpose: **Facility Deficiencies**

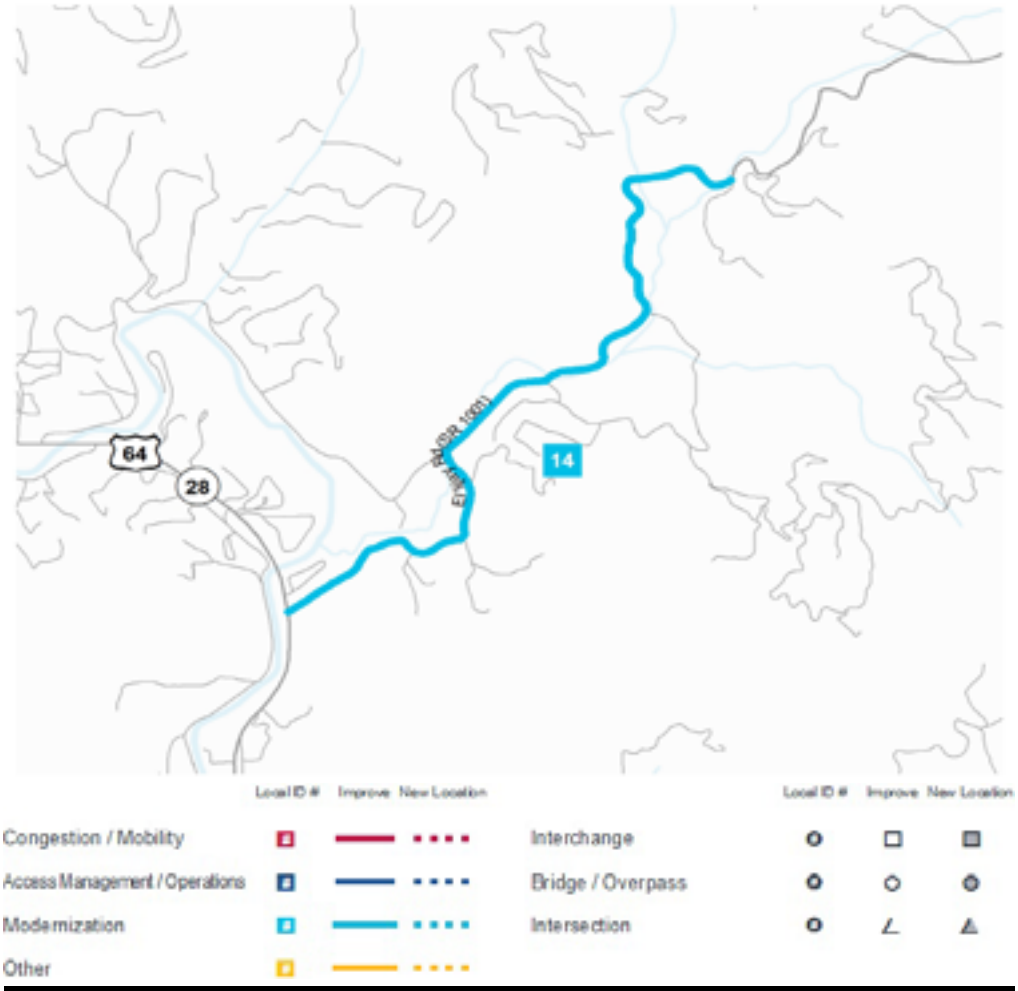
Improvement: **Improve Existing**

Identified Need

Ellijay Road (SR 1001) is currently an 8-foot lane facility with no paved shoulders. It acts as an important connector and alternate route to Cullowhee and Sylva.

Recommendation

Modernize to 11-foot lanes with 4-foot paved shoulders.

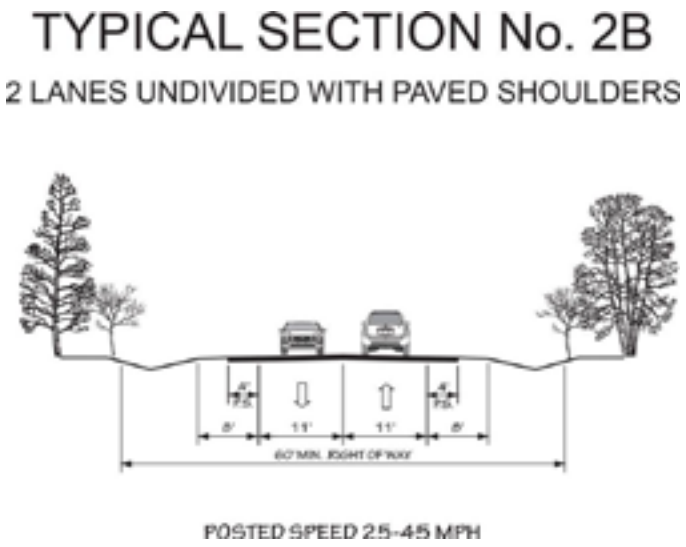


Proposal At A Glance	
Highway Class	Modernization
Facility Type	Minor Thoroughfare
Typical Section	02 B
Section Options	2A
Estimated Cost	-
Length (miles)	2.14
Existing ROW (feet)	
Safety Risk Score	78

Proposal Data:	2017 Base Year	2045 Future Year	
Improved Route	Existing	Without Proposal	With Proposal
Facility Type	Minor Thoroughfare	Minor Thoroughfare	Minor Thoroughfare
Travel Lanes	2	2	2
Volume (vpd)	1200	1500	1500
Capacity (vpd)	11000	11000	12000

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:
2A



Project Overview

Project History and Linkage to Other Plans
Ellijay Road (SR 1001) is classified as a minor collector on the Federal Functional Classification System.

Multi-modal Considerations
Macon County Transit operates on a deviated-fixed route as well as demand response. The deviated-fixed route does not reach this section of the facility; however, it is within the demand-response area.

CTP Goal Analysis

Vision, Goals, & Objectives
This project improves mobility by modernizing this facility to provide easier travel. This facility connects the town of Franklin to NC 107 in Jackson county, giving access to Cullowhee and Forest Hills. Improving this connection will improve the link between people and destinations. This acts as an important alternate connector to Jackson County in the event of Road Closures on US 23/441.

Goals & Objectives Survey
On the Goals & Objectives Survey, comments mentioned narrow lanes and truck traffic. One comment showed the concern of an existing one lane bridge (Bridge #004).

Public Input Survey
This proposal was rated by 87 participants. About 70% agreed with this proposal. Six comments were left on this facility. Three would like the bridge replaced with some disagreeing with the widening. One comment states the need for this to become a reliable travel option. Others commented to slow down speeds or that they were not familiar with this road.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, the project runs alongside the Ellijay Creek which is classified as class C and trout waters. It is also in the proximity of the Cullasaja River/Ellijay Creek Aquatic Habitat as well as the Pisgah Ridge, Great Balsam Mountains, and Highlands Plateau. Part of this project is within the Little Tennessee watershed.

Other Information

Crash data analysis shows a total of 5 crashes along this section of Ellijay Road (SR 1001) near Battle Branch Road which all had property damage only. Crash data covered incidents from January 2014 to December 2018.
Along Ellijay Road (SR 1001) there are four bridges defined functionally obsolete: #001, #002, #003, and #004. Functionally obsolete bridges are bridges that were built with different standards used today.

Old Murphy (SR 1442)

From Sloan Road (SR 1153) to W Main Street

Local ID: **MACO40005-H**

Purpose: **Facility Deficiencies**

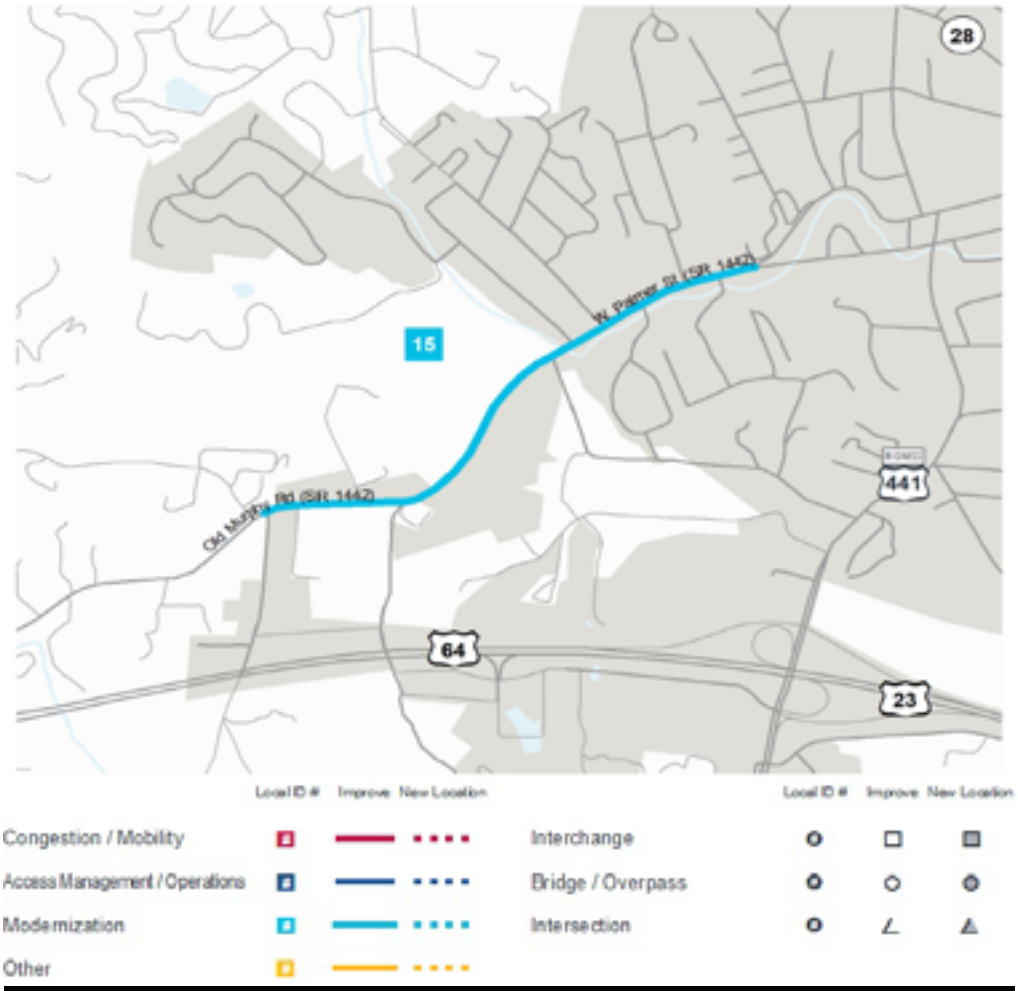
Improvement: **Improve Existing**

Identified Need

This facility is projected to be near capacity by 2045. It currently has 10-foot lanes and no paved shoulders. It connects downtown Franklin with businesses and schools.

Recommendation

Modernize to 11-foot lanes with 4-foot paved shoulders. Add a multi-use path that runs alongside this facility (see page 48 of the BikeWalk Franklin Plan).



Proposal At A Glance

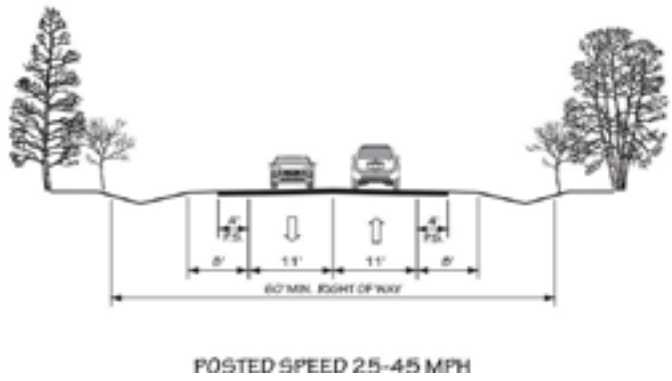
Highway Class	Modernization
Facility Type	Minor Thoroughfare
Typical Section	02 B
Section Options	2A
Estimated Cost	-
Length (miles)	1.06
Existing ROW (feet)	60
Safety Risk Score	89

Proposal Data: 2017 Base Year / 2045 Future Year

Improved Route	Existing	Without Proposal	With Proposal
Facility Type	Minor Thoroughfare	Minor Thoroughfare	Minor Thoroughfare
Travel Lanes	2	2	2
Volume (vpd)	5900	8400	8400
Capacity (vpd)	9800	9800	10200

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:
2A



Project Overview

Project History and Linkage to Other Plans
Old Murphy Road (SR 1442) is classified as a minor arterial on the Federal Functional Classification System. This project was identified in the 2012 Macon County CTP as the road was expected to be over capacity and proposed widening the facility.

Multi-modal Considerations
The 2017 BikeWalk Franklin Plan recommends a multi-use path labeled "The Southwest Loop Trail" that partially follows along this facility to connect with destinations in southwest Franklin. (See page 48 of the 2017 BikeWalk Franklin Plan).
Macon County Transit operates on a deviated-fixed route as well as demand response. The deviated-fixed route known as the Mountain Gem Route can deviate to this facility and the facility is also within the demand response area.

CTP Goal Analysis

Vision, Goals, & Objectives
This project improves mobility by modernizing this facility to provide easier travel. This facility provides access to downtown Franklin, helping connect the community with popular destinations. The multiuse path proposal related to this facility also aims to promote walking and biking.

Goals & Objectives Survey
On the Goals & Objectives Survey, many comments requested improvements to allow for safer walking on this facility.

Public Input Survey
This proposal was rated by 88 participants. About 76% agreed with this proposal. Two comments were left on this project. One comment wanted sidewalks and not bicycle paths. The other comment disagreed with the proposal.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, the project runs alongside the Ellijay Creek which is classified as class C and trout waters. It is also in the proximity of the Cullasaja River/Ellijay Creek Aquatic Habitat as well as the Pisgah Ridge, Great Balsam Mountains, and Highlands Plateau. Part of this project is within the Little Tennessee watershed.

Relationship to Land Use
Downtown Franklin is just east of this project, giving access to Ingels Market, multiple restaurants, the Angel Medical Center, and many other businesses. Along this facility lies the Franklin School as well as the churches and cemeteries.

Other Information

Crash data analysis shows approximately 47 crashes on this section of Old Murphy Road (SR 1442). No crashes involved fatalities, Seventeen had injuries and thirty had property damage only. Crash data covered incidents from January 2014 to December 2018.

Prentiss Bridge Road (SR 1649)

From US 441-23 (Georgia Road) to Clarks Chapel Road (SR 1653)

Local ID: **MACO40006-H**

Purpose: **Facility Deficiencies**

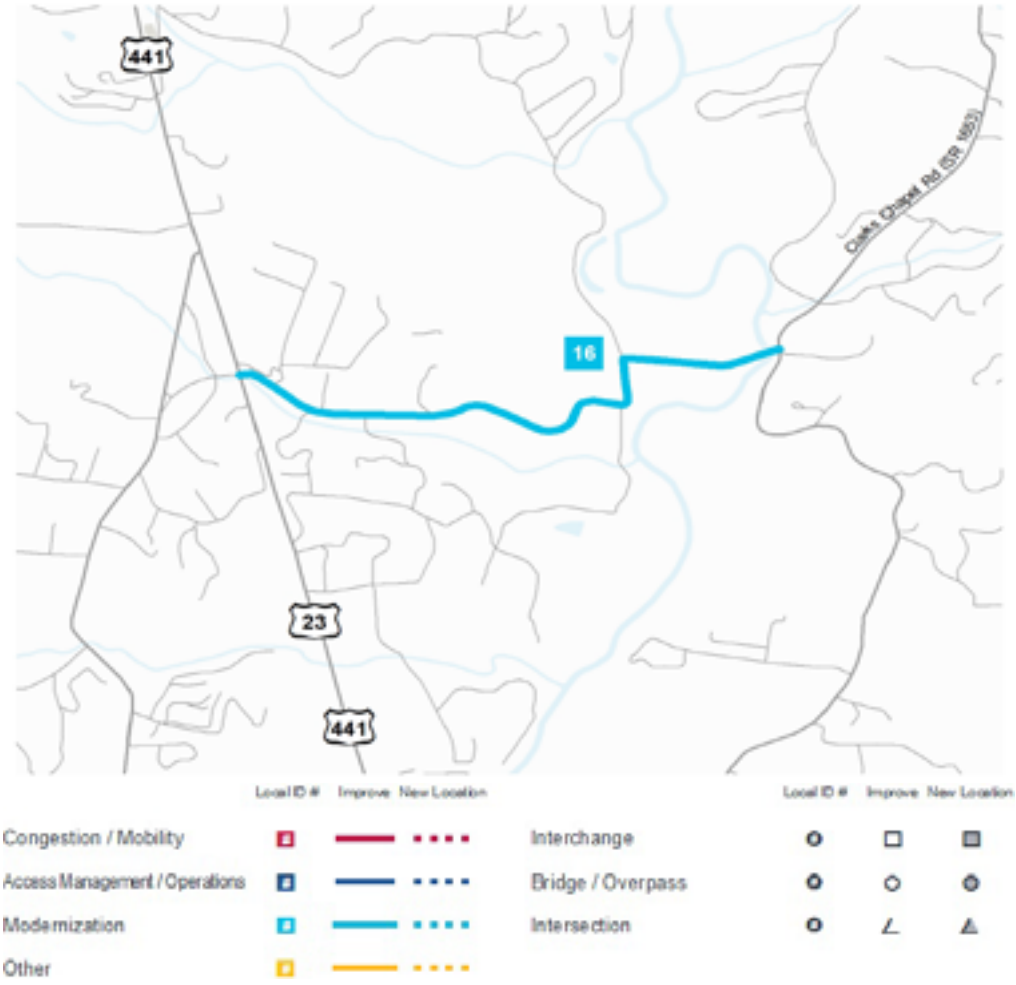
Improvement: **Improve Existing**

Identified Need

Prentiss Bridge Road currently has 8-foot lanes and no paved shoulders. It is often traveled by buses and helps to connect Clarks Chapel Road to the US 23/441 corridor. It is also identified as a high frequency crash section.

Recommendation

Modernize to 11-foot lanes with 5-foot paved shoulders.



Proposal At A Glance

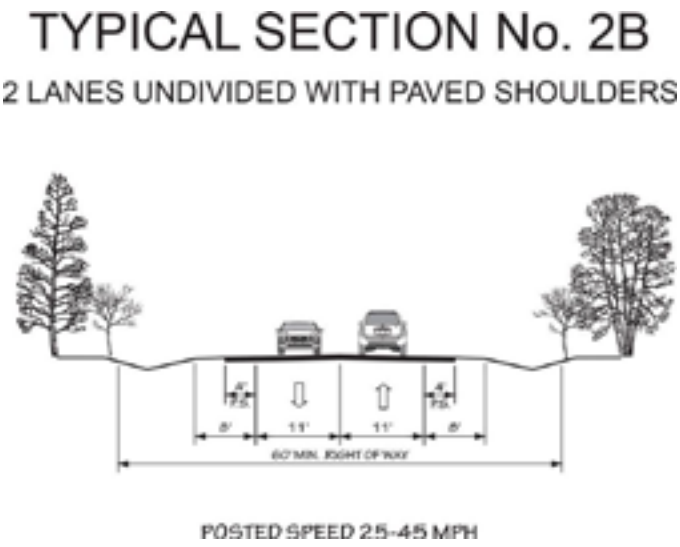
Highway Class	Modernization
Facility Type	Minor Thoroughfare
Typical Section	02 B
Section Options	2A
Estimated Cost	-
Length (miles)	1.3
Existing ROW (feet)	
Safety Risk Score	89

Proposal Data:

Improved Route	2017 Base Year Existing	2045 Future Year Without Proposal	2045 Future Year With Proposal
Facility Type	Minor Thoroughfare	Minor Thoroughfare	Minor Thoroughfare
Travel Lanes	2	2	2
Volume (vpd)	1400	1800	1800
Capacity (vpd)	8900	8900	10000

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:
2A



Project Overview

Project History and Linkage to Other Plans
Prentiss Bridge (SR 1649) is classified as a local road on the Federal Functional Classification System.

Multi-modal Considerations
Paved shoulders of 5-feet are recommended to accommodate bicycles. Macon County Transit operates on a deviated-fixed route as well as demand response. The deviated-fixed route does not reach this section of the facility; however, it is within the demand-response area.

CTP Goal Analysis

Vision, Goals, & Objectives
This project improves mobility by modernizing this facility to provide easier travel.

Public Input Survey
This proposal was rated by 97 participants. About 66% agreed with this proposal. One comment was left on this project stating that the road was too narrow.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, the project is within the Little Tennessee watershed. It intersects the Little Tennessee River and its aquatic habitat which contains the threatened Spotfin Chub (Erimonax monachus).

Other Information

Crash data analysis shows a total of 11 crashes on Prentiss Bridge Road with 37 more on the adjacent facility of US 23 near the intersection. The steering committee stated that this intersection is known to have many crashes. Crash data covered incidents from January 2014 to December 2018.

Rabbit Creek Road (SR 1504)

From US 441 (Sylva Road) to the bridge near Ferguson Road (SR 1507)

Local ID: **MACO40007-H**

Purpose: **Facility Deficiencies**

Improvement: **Improve Existing**

Identified Need

Rabbit Creek Road currently has 8-foot lanes and no paved shoulders.

Recommendation

Modernize to 11-foot lanes with 4-foot paved shoulders.

Proposal At A Glance

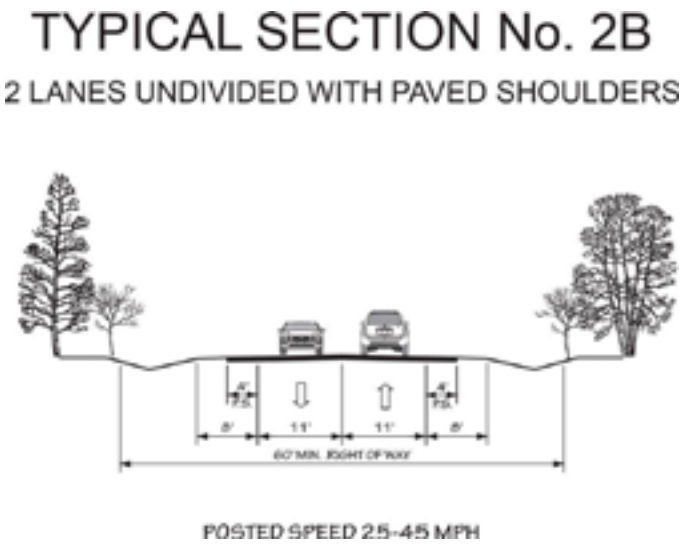
Highway Class	Modernization
Facility Type	Minor Thoroughfare
Typical Section	02 B
Section Options	2A
Estimated Cost	-
Length (miles)	1.16
Existing ROW (feet)	90
Safety Risk Score	-

Proposal Data:

Improved Route	2017 Base Year Existing	2045 Future Year Without Proposal	2045 Future Year With Proposal
Facility Type	Minor Thoroughfare	Minor Thoroughfare	Minor Thoroughfare
Travel Lanes	2	2	2
Volume (vpd)	820	1300	1300
Capacity (vpd)	9200	9200	11000

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:
2A



Project Overview

Project History and Linkage to Other Plans
Rabbit Creek Road (SR 1504) is classified as a minor collector on the Federal Functional Classification System.

Multi-modal Considerations
Macon County Transit operates on a deviated-fixed route as well as demand response. The deviated-fixed route does not reach this section of the facility; however, it is within the demand-response area.

CTP Goal Analysis

Vision, Goals, & Objectives
This project improves mobility by modernizing this facility to provide easier travel.

Goals & Objectives Survey
On the Goals & Objectives Survey, comments all stated that this road was too narrow and wanted widening.

Public Input Survey
This proposal was rated by 81 participants. About 51% agreed with this proposal. No comments were left on this project. The steering committee agreed that this project was a good long-range project due to a lot of big farmland and the potential for residential development. The road also is narrow, steep and has no paved shoulders.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, the project is within the Little Tennessee watershed. It intersects and runs beside Rabbit Creek which is a classified as class C and trout waters. The project also is in proximity of the Little Tennessee aquatic habitat and impaired waters. Landscape habitat indicator guilds nearby include Pisgah Ridge, Great Balsam Mountains and the Highlands Plateau.

Other Information

Bridge #066 along this facility is shown to be functionally obsolete. Bridge #067 is shown to be both structurally deficient and functionally obsolete. Structurally deficient bridges are bridges that must be monitored, inspected and replaced at the appropriate time. Functionally obsolete bridges are bridges that were built with different standards used today.

Roller Mill Road (SR 1154) /Belden Circle (SR 1152)

From Belden Circle (SR 1152) to Old Murphy Road (SR 1442)

Local ID: **MACO40008-H**

Purpose: **Facility Deficiencies**

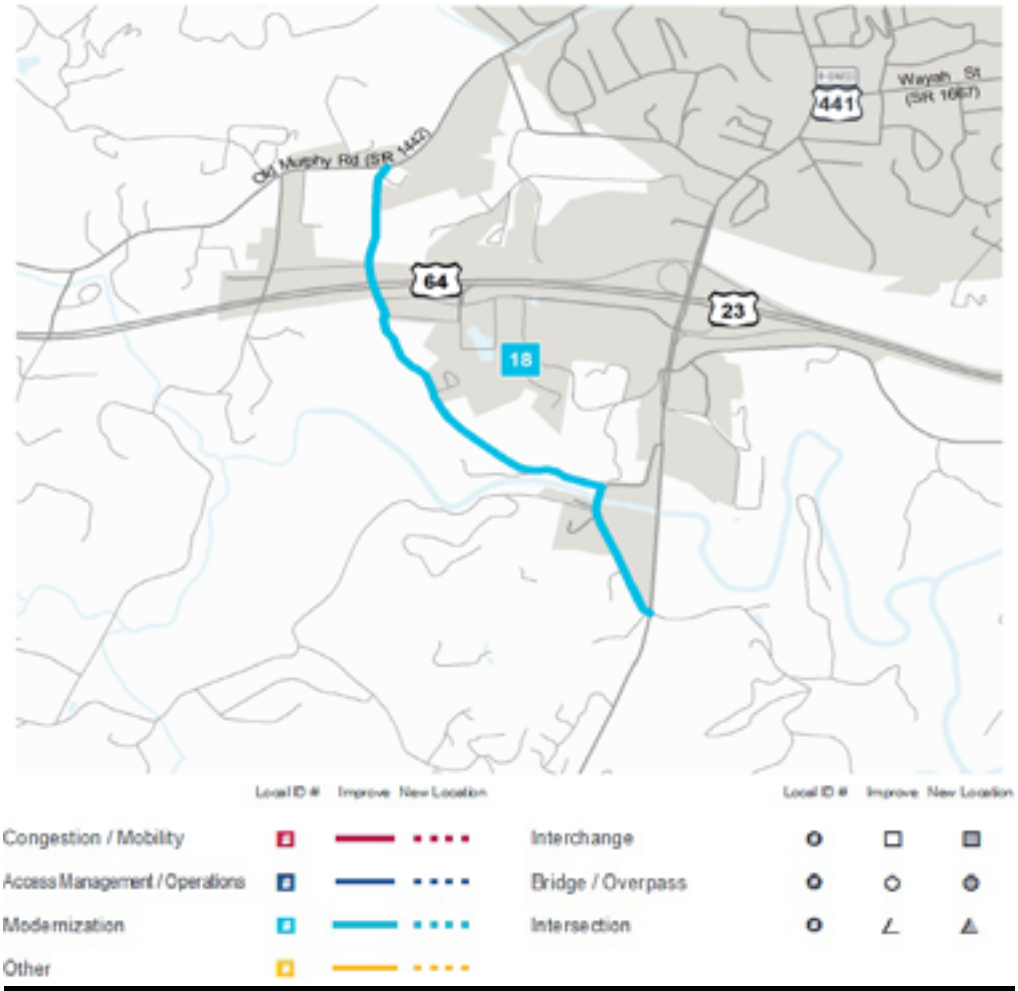
Improvement: **Improve Existing**

Identified Need

Roller Mill road has 8-foot lanes with no paved shoulders. Belden Circle has 10-foot lanes with no paved shoulders. They act as both a short-cut around parts of US 441 (Georgia Road) as well as access to apartments and businesses along the road.

Recommendation

Modernize to 11-foot lanes with 5-foot paved shoulders. Add sidewalk along this facility.

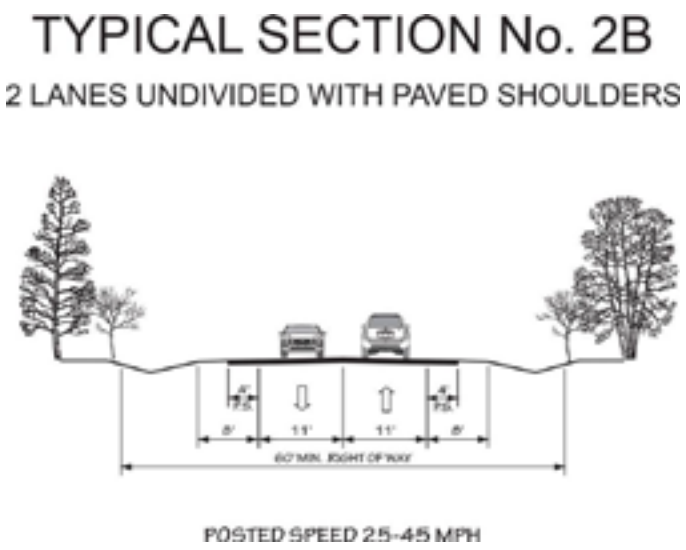


Proposal At A Glance	
Highway Class	Modernization
Facility Type	Minor Thoroughfare
Typical Section	02 B
Section Options	2A
Estimated Cost	-
Length (miles)	1.49
Existing ROW (feet)	
Safety Risk Score	56

Proposal Data:	2017 Base Year	2045 Future Year	
Improved Route	Existing	Without Proposal	With Proposal
Facility Type	Minor Thoroughfare	Minor Thoroughfare	Minor Thoroughfare
Travel Lanes	2	2	2
Volume (vpd)	1400-1800	1800-2300	1800-2300
Capacity (vpd)	9200	9200	10200

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:
2A



Project Overview

Project History and Linkage to Other Plans
Roller Mill Road (SR 1154) and Belden Circle (SR 1152) are classified as local roads on the Federal Functional Classification System.

Multi-modal Considerations
In order to accommodate bikes, 5-foot paved shoulders are recommended for this facility. Sidewalks are also proposed along these roads. This facility is also a part of the designated path of the NC Bartram Trail. These multi-modal considerations would help improve the safety of pedestrians and cyclists.
Macon County Transit operates on a deviated-fixed route as well as demand response. The deviated-fixed route, the mountain gem route, runs along parts of this facility and can deviate along it. It also has dedicated stops near these roads.

CTP Goal Analysis

Vision, Goals, & Objectives
This project improves mobility by modernizing this facility to provide easier travel. It also helps accommodate users without vehicles, especially those who live along this facility. The project aims to connect people to common destinations that these facilities give access to.

Goals & Objectives Survey
On the Goals & Objectives Survey, comments provided their concerns along this facility. These concerns included narrow lanes, deterioration, lack of sidewalks and bike lanes, limited sight distance, and speed concerns.

Public Input Survey
This proposal was rated by 96 participants. About 83% agreed with this proposal. Three comments were left on this project. Two comments mentioned limited visibility and blind spots along this facility. One agreed that sidewalks were needed due to low income housing in the area.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, the project is within the Little Tennessee watershed. The Cartoogechaye Creek and its aquatic habitat intersects this project. The Cartoogechaye Creek is classified as class B and trout waters.

Relationship to Land Use
Roller Mill Road (SR 1154) provides access to many businesses within the Westgate Plaza as well as access to or around the shopping centers including an Ingles that opened late 2017. It is also a direct connection to the Westgate Terrace apartments and multiple churches.

Other Information

Bridge #314 along Belden Circle (SR 1152) was categorized as functionally obsolete. Functionally obsolete bridges are bridges that were built with different standards used today. This one lane bridge was replaced in late 2019.

Wells Grove (SR 1667)

From Porter Street to Clarks Chapel Road (SR 1653)

Local ID: **MACO40009-H**

Purpose: **Facility Deficiencies**

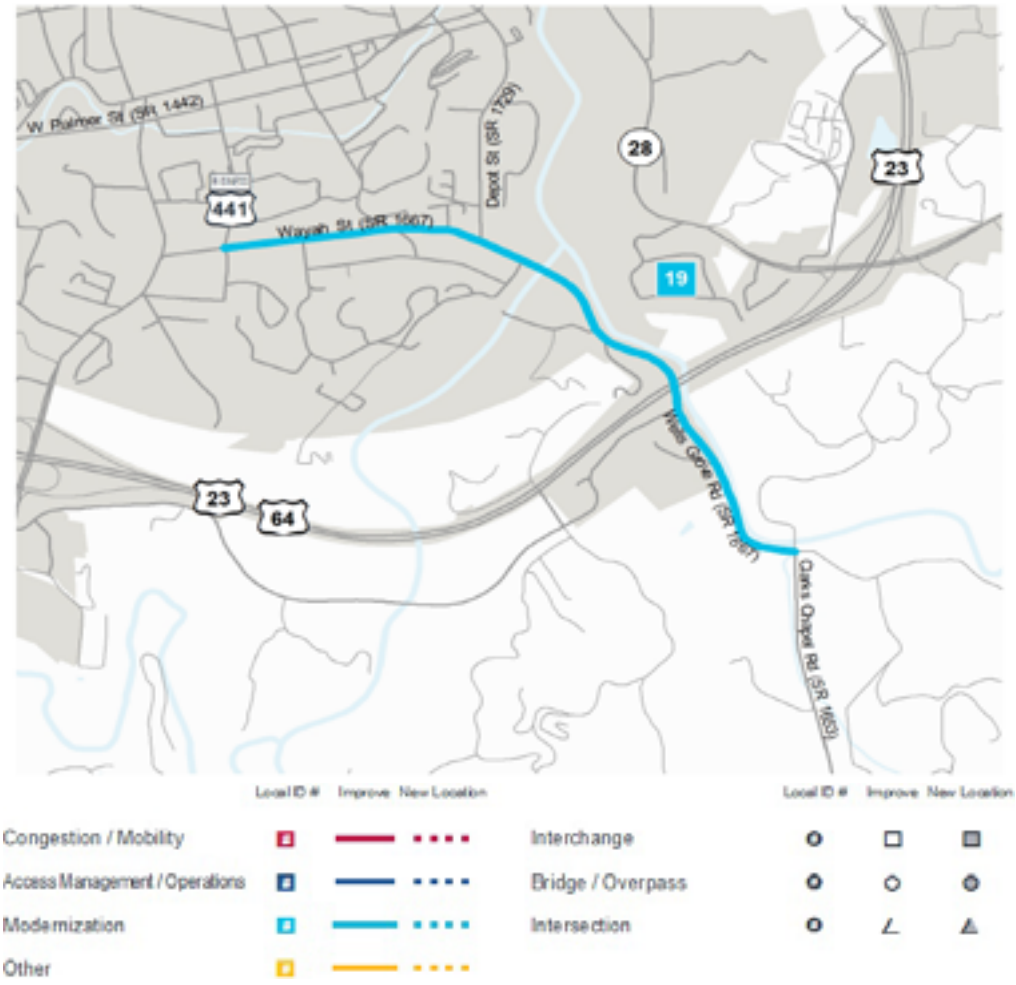
Improvement: **Improve Existing**

Identified Need

This facility acts as a connector from the businesses in downtown Franklin to the Walmart as well as the Mountain View Intermediate School and Macon County Middle School. Key intersections at the Wal-Mart and schools have peak hour issues. This facility has no paved shoulders.

Recommendation

Modernize to 12-foot lanes and 5-foot paved shoulders where feasible. Intersection improvements at Dowdle Mountain Rd (SR 1659) and Clarks Chapel Rd (SR 1653). Extend the existing sidewalk from Old Phillips Bridge Rd to Clarks Chapel Rd (SR 1653).



Proposal At A Glance

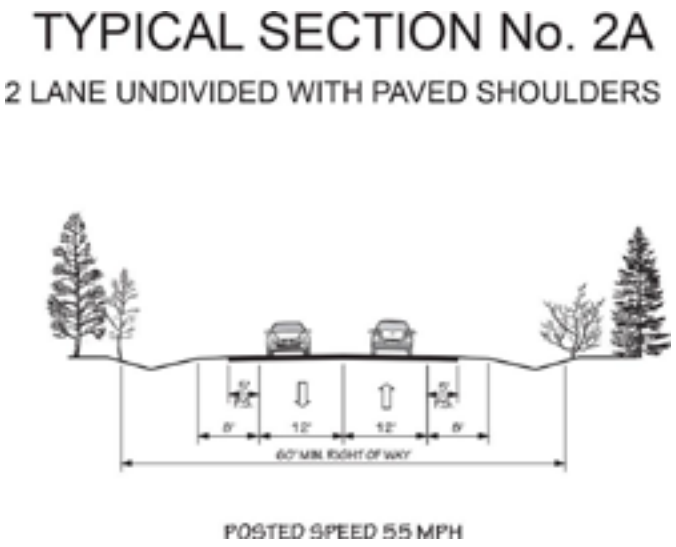
Highway Class	Modernization
Facility Type	Minor Thoroughfare
Typical Section	02 A
Section Options	-
Estimated Cost	-
Length (miles)	1.74
Existing ROW (feet)	60
Safety Risk Score	78

Proposal Data:

Improved Route	2017 Base Year Existing	2045 Future Year Without Proposal	2045 Future Year With Proposal
Facility Type	Minor Thoroughfare	Minor Thoroughfare	Minor Thoroughfare
Travel Lanes	2	2	2
Volume (vpd)	3800-6200	5900-8000	5900-8000
Capacity (vpd)	10200-12000	10200-12000	12000

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-

Typical Section Options:



Project Overview

The steering committee discussed the need for intersections improvements at Dowdle Mountain Road (1659) and Clarks Chapel Road (SR 1653). The intersection at Dowdle Mountain has limited sight distance and connects to Wells Grove Road (SR 1667) at an incline.
Physical constraints around certain parts of Wells Grove Road (SR 1667) could prevent widening in those areas. The constraints are more prominent as the Cullasaja River gets closer to this facility while there is a rocky hill on the opposite side.

Project History and Linkage to Other Plans
Wells Grove Road (SR 1667) is classified as a major collector west of US 23 and as a minor collector east of US 23 on the Federal Functional Classification System. This project was identified on the 2012 Macon County CTP as well as the 1995 Franklin Thoroughfare Plan. At those times, no capacity deficiency was identified, but the facility was recommended to widen to 12-foot lanes and bicycle accommodations.

Multi-modal Considerations
Wells Grove Road (SR 1667) is part of the State Bike Route 2, "Mountain to Sea". In order to accommodate bicycles, 5-foot paved shoulders are recommended on this facility where feasible. Continuing the sidewalk from Old Phillips Bridge Road to Clarks Chapel Road (SR 1653) is recommended; however, this portion of the road is outside of city limits. Macon County Transit operates on a deviated-fixed route as well as demand response. The deviated-fixed route does not reach this section of the facility; however, it is within the demand-response area.

CTP Goal Analysis

Vision, Goals, & Objectives
This project focuses on providing ease of travel and relieving conflicts on the intersections to allow for a reliable multimodal system that promotes walking and biking. The community has voiced concerns of peak hour traffic due to the two schools present on the intersection between Wells Grove Road (SR 1667) and Clarks Chapel Road (SR 1653). Traffic has been known to back up to the intersection at Dowdle Mountain Road (SR 1659) which leads to the Wal-Mart Supercenter.

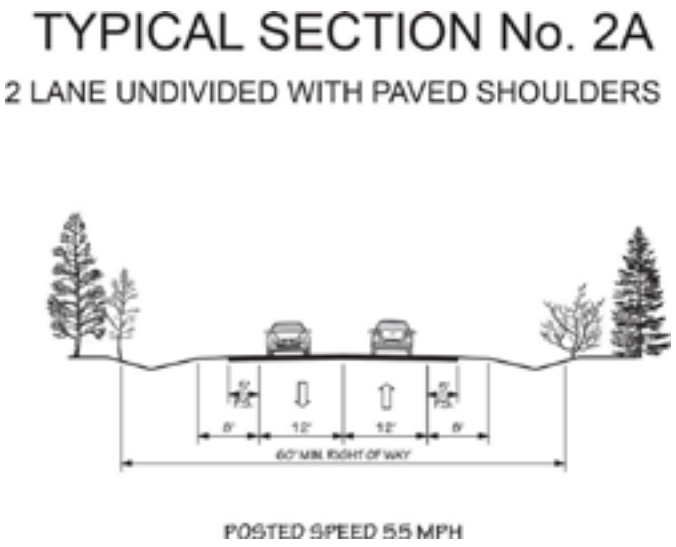
Goals & Objectives Survey
On the Goals & Objectives Survey, many respondents commented on this facility with the focus being around the intersections at Dowdle Mountain Road (SR 1659) and Clarks Chapel Road (SR 1653). The comments at the Dowdle Mountain Road (SR 1659) intersection showed concerns of traffic congestion, especially during school times. The comments at the Clarks Chapel Road (SR 1653) intersection showed concerns of traffic congestion between the schools and often requiring deputies to be on site for traffic control. Other comments along the facility mentioned the need for bike accommodations and sidewalks around the schools and towards the Walmart.

Public Input Survey
This proposal was rated by 95 participants. About 89% agreed with this proposal. Five comments were left on this project. Three agreed with intersection improvements while another comment stated that this is what is most important to them. One comment stated that the roads are currently too narrow to accommodate passing buses.

Potential Impacts

Natural & Human Environmental Context
Based on planning level environmental assessment using available GIS data, the project is within the Little Tennessee watershed. It intersects the Little Tennessee River which is classified as class C waters and is home to the threatened species called the Spotfin Chub (Erimonax Monachus). The Cartoogechaye Creek runs beside most of this facility, being very close to the

Typical Section Options:



roadway at some points. The Cartoogechaye Creek is classified as class B and trout waters and holds the Cullasaja River/Ellijay Creek Aquatic Habitat. Wells Grove Road (SR 1667) is also within 60 feet of the Franklin Power Company Hydroelectric PowerPlant.

Relationship to Land Use
Wells Grove Road (SR 1667) provides access to the Mountain View Intermediate School and Macon County Middle School. Walmart Supercenter has property along this facility which is accessed through Dowdle Mountain Road (SR 1659). The connection at Depot Street also leads to downtown Franklin.

Other Constraints
As the road approaches the two schools, the Road becomes very narrow with the Cartoogechaye Creek being near the road on the east and a small rock face on the west.

Other Information

Crash data analysis shows a total of 11 crashes on this section of Wells Grove Rd (SR 1667) with five being near the Depot Street intersection and six being near the Wells Grove Road intersection. No crashes involved fatalities, four had injuries and seven had property damage only. Crash data covered incidents from January 2014 to December 2018.
During the CTP Process, the Municipal School Transportation Assistance (MSTA) group performed a study of the intersection between Wells Grove Rd (SR 1667) and Clarks Chapel Rd (SR 1653). The study identified traffic delays and congestion at the intersection especially exiting from and entering Mountain View Intermediate and Macon County Middle Schools. The study provides evaluations and potential recommendations to help improve this intersection.

INVENTORY TABLE

The inventory table provides information on the segments studied roads and recommendations.

Assumptions/ Notes:

- **Local ID:** If a TIP project number exists, it is listed as the ID. Otherwise, the following system is used to create a code for each recommended improvement: the first four letters of the county name is combined with a four-digit unique numerical code followed by '-H' for highway, '-T' for public transportation, '-R' for rail, '-B' for bicycle, '-M' for multi-use paths, or '-P' for pedestrian modes. If a different code is used along a route, it indicates separate projects will probably be requested. Also, upper case alphabetic characters (i.e. 'A', 'B', or 'C') are included after the numeric portion of the code if it is anticipated that project segmentation or phasing will be recommended.
- **Jurisdiction:** Jurisdictions listed are based on municipal limits, county boundaries, and MPO Metropolitan Planning Area Boundaries (MAB), as applicable.
- **Existing Cross-Section:** Listed under 'Total Width (ft)' is the approximate width of the roadway from edge of pavement to edge of pavement and under 'Lane Width (ft)' is the approximate width of a single lane based on centerline/ edge line markings. Listed under 'Lanes' is the total number of lanes, with 'D' if the facility is divided, and 'OW' if it is a one-way facility.
- **Existing ROW:** The estimated existing right-of-way is based on GIS estimates. These right-of-way amounts are approximate and may vary.
- **Existing and Proposed Capacity:** The estimated capacities are given in vehicles per day (vpd) based on LOS D for existing facilities and LOS C for new facilities. These capacity estimates were developed based on the 2000 Highway Capacity Manual using the Transportation Planning Branch's LOS D Standards for Systems Level Planning .
- **Existing and Proposed Volumes,** given in vehicles per day (vpd), are estimates only based on a systems-level analysis. The '2045 Volume E+C' is an estimate of the volume in 2045 with only existing plus committed projects assumed to be in place, where committed is defined as projects programmed for construction in the 2020 – 2029 Transportation Improvement Program (TIP).
  The '2045 Volume with CTP' is an estimate of the volume in 2045 with all proposed CTP improvements assumed to be in place. The '2045 Volume with CTP' is shown in bold if it exceeds the proposed capacity, indicating an unmet need. For more information about the assumptions and techniques used to develop the AADT volume estimates, refer to the Multimodal Analysis Section of the Appendix.
- **Proposed Cross-section:** The CTP recommended cross-sections are listed by code; for depiction of the cross-section. An entry of 'ADQ' indicates the existing facility is adequate and there are no improvements recommended for the given mode as part of the CTP.
  *Proposed System Cross-Section column indicates that a capacity deficiency has been identified, but no future proposal or improvement to the cross-section has been recommended for the roadway segment. See the Unaddressed Deficiencies for more information.
- **CTP Classification:** The CTP classification is listed, as shown on the adopted CTP Maps. Abbreviations are F= freeway, E= expressway, B=boulevard, MJM= multi-lane major thoroughfare, MJ2= Two-lane major thoroughfare, MN=minor thoroughfare.
- **Proposals for Other Modes:** If there is an improvement recommended for another mode of transportation that relates to the given recommendation, it is indicated by an alphabetic code (H= highway, T= public transportation, R= rail, B= bicycle, P= pedestrian, and M= multi-use path).

CTP INVENTORY AND RECOMMENDATIONS

HIGHWAY																				
		Section				2017 Existing System							2045 Proposed System							
Local ID	Facility	From	To	Jurisdiction	Dist. (mi)	Total Width (ft)	Lanes	Lane Width (ft)	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2017 Volume	2045 Volume E + C	2045 Volume with CTP	Proposed Capacity (vpd)	Cross-Section	ROW (ft)	CTP Classification	Proposals for Other Modes
	US 19	Cherokee County Line	Wayah Rd (SR 1310)	Macon	2.15	20	2	10	60	45	11900	3500	5000	5000	11900	ADQ	60	MJ2	
	US 19	Wayah Rd (SR 1310)	Swain County Line	Macon	0.47	32	2	10	60	45	11900	4400	6200	6200	11900	ADQ	60	MJ2	
R-5734C	US 23	Georgia	Sam Seagle Rd (SR 1109)	Macon	3.53	60	4	12	100	55	31800	10000	13400	13400	43900	04B	130	MJM	B,T
R-5734C	US 23	Sam Seagle Rd (SR 1109)	Cheek Rd (SR 1174)	Macon	5.29	60	4	12	100	55	31800	13000	17400	17400	43900	04B	130	MJM	B,T
R-5734C	US 23	Cheek Rd (SR 1174)	Prentiss Bridge Rd (SR 1649)	Macon	0.18	64	4	12	100	55	31800	14000	18700	18700	43900	04B	130	MUM	B,T
	US 23	Prentiss Bridge Rd (SR 1649)	Jones Ridge Rd (SR 1150)	Macon	1.85	64	4	12	100	50	31800	19000	25400	25400	41200	04B	100	B	
	US 23	Jones Ridge Rd (SR 1150)	Belden Cir (SR 1152)	Macon	1.01	64	4	12	100	50	31800	23000	30700	30700	41200	04B	100	B	
	US 23	Belden Cir (SR 1152)	Allman Dr (SR 1687)	Franklin	0.09	68	4	12	100	45	38000	23000	30700	30700	41200	04B	100	B	
	US 23	Allman Dr (SR 1687)	Dryman Rd (SR 1660)	Franklin	0.1	68	4D	12	100-110	45	38000	23000	30700	30700	41200	04B	55	B	
	US 23	Dryman Rd (SR 1660)	Franklin Plaza	Franklin	0.11	36	4D	12	55	45	38000	23000	30700	30700	41200	04B	55	B	
	US 23	Franklin Plaza	US 64	Franklin	0.07	36	4D	12	55	45	38000	23000	30700	30700	41200	04B	55	B	
	US 23	US 64	NC 28	Franklin	2.16	23	4D	12	65	55	38500	26000	36900	36900	38500	ADQ	65	E	
	US 23	NC 28	Cat Creek Rd (SR 1513)	Franklin	0.93	23	4D	12	65-90	35	38500	17000	24400	24400	38500	ADQ	90	E	
	US 23	Cat Creek Rd (SR 1513)	US 441	Franklin	0.45	23	4D	12	65-90	35	38500	19000	27200	27200	38500	ADQ	90	E	
	US 23	US 441	Rabbit Creek Rd (SR 1513)	Macon	0.87	48	4D	12	180-250	55	38500	17000	24200	24200	38500	ADQ	125	E	
	US 23	Rabbit Creek Rd (SR 1513)	Sanderstown Rd (SR 1335)	Macon	1.45	24	4D	12	125	55	47400	15000	20200	20200	47400	ADQ	125	E	
	US 23	Sanderstown Rd (SR 1335)	End of Four Lane Section	Macon	0.31	30	4D	12	150	55	31800	15000	22400	22400	31800	ADQ	150	E	
MACO20002-H	US 23	End of Four Lane Section	Jackson County Line	Macon	3.45	30	4	12	150	55	31800	15000	22400	22400	47400	04B	150	E	
MACO20003-H	US 64	Clay County Line	W Old Murphy Rd (SR 1448)	Macon	8.11	24	2	12	75	55	14600	3000	4000	4000	15900	03A	80	MJ2	B
	US 64	W Old Murphy Rd (SR 1448)	Mashburn White Rd (SR 1153)	Macon	5.06	24	4D	12	25-75	55	47400	7300	9800	9800	47400	04A	75	E	B
	US 64	Mashburn White Rd (SR 1153)	US 23	Franklin	0.98	24	4D	12	25	35	38500	12000	16000	16000	38500	ADQ	25	E	
	US 64	Concurent with US 23 from the Jackson County Line to the Georgia State Line																	

HIGHWAY																				
		Section				2017 Existing System							2045 Proposed System							
Local ID	Facility	From	To	Jurisdiction	Dist. (mi)	Total Width (ft)	Lanes	Lane Width (ft)	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2017 Volume	2045 Volume E + C	2045 Volume with CTP	Proposed Capacity (vpd)	Cross-Section	ROW (ft)	CTP Classification	Proposals for Other Modes
MACO20004-H	US 64	US 23	Franklin Town Limits	Franklin	0.33	30	2	12	90	35	12000	11000	**14700**	**14700**	12000	02A	90	MJ2	
MACO20004-H	US 64	Franklin Town Limits	Fulton Rd (SR 1668)	Macon	2.1	24	2	12	100	55	12000	11000	**14700**	**14700**	12000	02A	100	MJ2	
MACO20004-H	US 64	Fulton Rd (SR 1668)	Ellijay Rd (SR 1001)	Macon	0.71	24	2	12	100	55	12000	6300	8400	8400	12000	02A	100	MJ2	
MACO20004-H	US 64	Ellijay Rd (SR 1001)	Lullwater Rd (SR 1566)	Macon	2.35	24	2	12	100	55	12000	2900	3900	3900	12000	02A	100	MJ2	
MACO20004-H	US 64	Lullwater Rd (SR 1566)	Walnut Creek Rd (SR 1533)	Macon	0.54	24	2	12	100	55	12000	2900	3900	3900	12000	02A	100	MJ2	
	US 64	Walnut Creek Rd (SR 1533)	Buck Creek Rd (SR 1538)	Macon	0.64	18	2	12	80	45	11400	2900	3900	3900	11400	ADQ	80	MJ2	
	US 64	Buck Creek Rd (SR 1538)	Turtle Pond Rd (SR 1620)	Macon	5.82	18	2	9	80	35	10500	2900	3300	3300	10500	ADQ	80	MJ2	
	US 64	Turtle Pond Rd (SR 1620)	Webbmont Rd (SR 1547)	Macon	2.67	18	2	9	80	35	10500	3900	4400	4400	10500	ADQ	80	MJ2	
	US 64	Webbmont Rd (SR 1547)	Mirror Lake Rd (SR 1551)	Highlands	0.89	18	2	9	80	35	10500	3900	5200	5200	10500	ADQ	80	MJ2	
	US 64	Mirror Lake Rd (SR 1551)	Will Henry Stevens Covered Bridge	Highlands	0.51	18	2	9	60-80	35	10500	3800	5100	5100	10500	ADQ	80	MJ2	
	US 64	Will Henry Stevens Covered Bridge	NC 106	Highlands	0.23	18	2	9	60-80	35	10500	3800	5100	5100	10500	ADQ	80	MJ2	
	US 64	NC 106	Main St (SR 1603)	Highlands	0.34	22	2	11	60-100	20	10600	5900	7900	7900	10600	ADQ	100	MJ2	
	US 64	Main St (SR 1603)	Pinecrest Rd	Highlands	0.64	22	2	11	60-80	25	10600	5300	7100	7100	10600	ADQ	80	MJ2	
	US 64	Pinecrest Rd	Highland Town Limits	Highlands	1.11	22	2	11	60-80	25	10600	5300	7100	7100	10600	ADQ	80	MJ2	
MACO20005-H	US 64	Highland Town Limits	Jackson County Line	Macon	3.74	22	2	11	80	40	12300	3800	5100	5100	12300	02B	80	MJ2	
	US 441 BUS	US 23	Golf View Dr (SR 1157)	Franklin	0.26	24	2	12	30-50	45	38000	15000	20000	20000	38000	ADQ	50	B	
	US 441 BUS	Golf View Dr (SR 1157)	Maple St	Franklin	0.73	48	2	11	60	35	10700	14000	**18700**	**18700**	10700	ADQ*	60	MJ2	
	US 441 BUS	Maple St	Porter St	Franklin	0.3	48	2	11	60	35	10700	14000	**18700**	**18700**	10700	ADQ*	60	MJ2	
	US 441 BUS	Porter St	US 441 BUS (E Palmer St)	Franklin	0.38	24	2	11	60	35	10700	6800	8700	8700	10700	ADQ	60	MJ2	
MACO20006-H	US 441 BUS	Palmer St (SR 1442)	Phillips St (SR 1699)	Franklin	0.21	38	2	10	80-120	45	9500	6100	7800	7800	9500	02G	85	MJ2	P
MACO20006-H	US 441 BUS	Phillips St (SR 1699)	E Rogers St	Franklin	0.35	19	2	10	60	45	9800	6400	8200	8200	9800	02G	85	MJ2	P
MACO20006-H	US 441 BUS	E Rogers St	Depot St (SR 1729)	Franklin	0.1	19	2	10	60	45	9800	6400	8200	8200	9800	02G	85	MJ2	P

HIGHWAY																				
		Section				2017 Existing System							2045 Proposed System							
Local ID	Facility	From	To	Jurisdiction	Dist. (mi)	Total Width (ft)	Lanes	Lane Width (ft)	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2017 Volume	2045 Volume E + C	2045 Volume with CTP	Proposed Capacity (vpd)	Cross-Section	ROW (ft)	CTP Classification	Proposals for Other Modes
MACO20006-H	US 441 BUS	Depot St (SR 1729)	Big Bear Ln (SR 1724)	Franklin	0.14	36	2	11	60-100	45	10700	9800	**12500**	**12500**	10700	02G	100	MJ2	P
	US 441 BUS	Big Bear Ln (SR 1724)	Lakeside Dr (SR 1324)	Franklin	0.13	36	2	11	60-100	45	10700	9800	**12500**	**12500**	10700	ADQ*	100	MJ2	
	US 441 BUS	NC 28	Lake Emory Rd (SR 1325)	Franklin	0.35	64	4	12	100	45	26800	12000	17500	17500	26800	ADQ	100	MJM	
	US 441 BUS	Lake Emory Rd (SR 1325)	Old Cat Creek Rd	Franklin	0.25	64	4	12	100	45	26800	12000	17500	17500	26800	ADQ	100	MJM	
	US 441 BUS	Old Cat Creek Rd	US 441	Franklin	0.15	64	4	12	100	45	26800	12000	17500	17500	26800	ADQ	100	MJM	
MACO20006-H	US 441 BUS	US 441 BUS (E Palmer St)	US 441 BUS (W Main St)	Franklin	0.07	12	2	11	30-60	35	9800	8800	**11300**	**11300**	9800	02G	85	MJ2	P
MACO20006-H	US 441 BUS	Big Bear Ln (SR 1724)	Depot St (SR 1729)	Franklin	0.17	33	2	12	60	35	10700	9200	**11800**	**11800**	10700	02G	85	MJ2	P
	US 441 BUS	Lakeside Dr (SR 1324)	Big Bear Ln (SR 1724)	Franklin	0.13	33	2	12	60	35	10700	9200	11800	11800	10700	ADQ	60	MJ2	
MACO20006-H	US 441 BUS	Depot St (SR 1729)	E Rogers St	Franklin	0.06	22	2	12	60	35	10700	6400	8200	8200	10700	02G	85	MJ2	P
MACO20006-H	US 441 BUS	E Rogers St	Riverview St (SR 1462)	Franklin	0.08	22	2	12	60	35	10700	6400	8200	8200	10700	02G	85	MJ2	P
MACO20006-H	US 441 BUS	Riverview St (SR 1462)	Harrison Ave	Franklin	0.37	94	2	11	120	35	9500	6100	7800	7800	9500	02G	85	MJ2	P
MACO20006-H	US 441 BUS	Harrison Ave	Porter St	Franklin	0.08	12	2	11	30-60	35	9800	8800	11300	11300	9800	02G	85	MJ2	P
	NC 28	Georgia State Line	Clear Creek Rd (SR 1613)	Macon	4.1	20	2	10	100	35	10800	640	900	900	10800	ADQ	100	MJ2	
	NC 28	Clear Creek Rd (SR 1613)	Cherokee Dr (SR 1614)	Highlands	0.81	20	2	10	100	45	11900	3500	4700	4700	11900	ADQ	100	MJ2	
	NC 28	Cherokee Dr (SR 1614)	Highlands Plaza	Highlands	0.9	20	2	10	100	35	10800	3500	4700	4700	10800	ADQ	100	MJ2	
	NC 28	Highlands Plaza	US 64	Highlands	0.41	20	2	10	100	35	10800	3500	4700	4700	10800	ADQ	100	MJ2	
MACO30001-H	NC 28	US 441	Thomas Heights Rd	Franklin	0.72	28	2	12	100	35	12300	11000	14100	14100	18500	02L	100	MJ2	B,P
MACO30001-H	NC 28	Thomas Heights Rd	Crane Cir (SR 1571)	Franklin	0.45	28	2	12	100	35	12300	11000	14100	14100	18500	02L	100	MJ2	B,P
MACO30001-H	NC 28	Crane Cir (SR 1571)	US 441	Franklin	0.16	52	4	12	100	35	22200	10000	12800	12800	22200	ADQ	100	MJ2	B,P
	NC 28	US 441	Iotla St (SR 1489)	Franklin	0.56	24	2	10	150	35	10200	6500	10100	10100	10200	ADQ	150	MJ2	
	NC 28	Iotla St (SR 1489)	Bryson City Rd	Franklin	0.85	32	2	10	100	35	11100	6200	9700	9700	11100	ADQ	100	MJ2	
	NC 28	Bryson City Rd	Airport Rd (SR 1434)	Macon	1.12	34	2	10	100-200	45	12700	8200	11600	11600	12700	ADQ	200	MJ2	
	NC 28	Airport Rd (SR 1434)	Sanderstown Rd (SR 1335)	Macon	1.7	32	2	10	100-200	45	12700	6600	9900	9900	12700	ADQ	200	MJ2	
MACO30002-H	NC 28	Sanderstown Rd (SR 1335)	Cowee Creek Rd	Macon	2.03	20	2	10	60	55	13600	4100	5500	5500	14600	02B	60	MJ2	B

HIGHWAY																				
		Section				2017 Existing System							2045 Proposed System							
Local ID	Facility	From	To	Jurisdiction	Dist. (mi)	Total Width (ft)	Lanes	Lane Width (ft)	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2017 Volume	2045 Volume E + C	2045 Volume with CTP	Proposed Capacity (vpd)	Cross-Section	ROW (ft)	CTP Classification	Proposals for Other Modes
	NC 28	Cowee Creek Rd	Swain County Line	Macon	7.25	20	2	10	60	55	13600	4100	5500	5500	13600	ADQ	60	MJ2	
MACO30003-H	NC 106	Georgia State Line	Holt Rd (SR 1617)	Macon	9.34	18	2	9	60	40	11400	3300	4400	4400	13100	02A	60	MJ2	P
MACO30003-H	NC 106	Holt Rd (SR 1617)	Hummingbird Ln	Highlands	0.78	18	2	9	60	35	10500	7000	9400	9400	11600	02A	60	MJ2	P
MACO30003-H	NC 106	Hummingbird Ln	Highlands Plaza	Highlands	0.9	18	2	9	60	35	10500	7000	9400	9400	11600	02A	60	MJ2	P
MACO30003-H	NC 106	Highlands Plaza	US 64	Highlands	0.12	18	2	9	60	35	10500	7000	9400	9400	11600	02A	60	MJ2	P
	Addington Bridge Rd (SR 1122)	Coweeta Church Rd (SR 1115)	Skeenah Rd (SR 1128)	Macon	1.16	18	2	9		45	11000	810	1200	1200	11000	ADQ		MN	
	Addington Bridge Rd (SR 1122)	Skeenah Rd (SR 1128)	US 23	Macon	1.65	18	2	9		45	11000	2900	4300	4300	11000	ADQ		MN	
MACO40001-H	Airport Rd (SR 1434)	NC 28	Upper Burningtown Rd (SR 1387)	Macon	2.3	18	2	9		35	9200	2300	2900	2900	10200	02B	60	MN	
MACO40008-H	Belden Cir (SR 1152)	US 23	Roller Mill Rd (SR 1154)	Franklin	0.36	18	2	9		35	9200	1400	1800	1800	10200	02E	60	MN	B,P
	Belden Cir (SR 1152)	Roller Mill Rd (SR 1154)	US 23	Franklin	0.22	18	2	9		35	9200	1400	1800	1800	9200	ADQ		MN	
MACO20006-H	Big Bear Ln (SR 1724)	US 441	US 441	Franklin	0.04	26	2	12	60	35						02G	85	MN	P
MACO40002-H	Buck Creek Rd (SR 1538)	US 64	Teague Estates Rd	Macon	2.04	16	2	8	60	55	11000	760	1300	1300	12000	02B	60	MN	
	Buck Creek Rd (SR 1538)	Teague Estates Rd	Cold Mountain Rd (SR 1535)	Macon	2.72	16	2	9	60	55	11000	760	1300	1300	11000	ADQ	60	MN	
	Buck Creek Rd (SR 1538)	Cold Mountain Rd (SR 1535)	US 64	Macon	6.66	18	2	9	60	55	11000	1600	2300	2300	11000	ADQ	60	MN	
	Burningtown Rd (SR 1372)	Middle Burningtown Rd (SR 1392)	Olive Hill Rd (SR 1387)	Macon	2.71	16	2	8		40	10600	1100	1600	1600	10600	ADQ		MN	
	Cat Creek Rd (SR 1513)	Onion Mountain Rd (SR 1521)	Ferguson Rd (SR 1507)	Macon	1.58	16	2	9		35	9200	640	900	900	9200	ADQ		MN	
	Cat Creek Rd (SR 1513)	Ferguson Rd (SR 1507)	Cunningham Rd (SR 1573)	Macon	0.98	16	2	9		35	9200	3200	4500	4500	9200	ADQ		MN	

HIGHWAY																				
		Section				2017 Existing System							2045 Proposed System							
Local ID	Facility	From	To	Jurisdiction	Dist. (mi)	Total Width (ft)	Lanes	Lane Width (ft)	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2017 Volume	2045 Volume E + C	2045 Volume with CTP	Proposed Capacity (vpd)	Cross-Section	ROW (ft)	CTP Classification	Proposals for Other Modes
	Cat Creek Rd (SR 1513)	Cunningham Rd (SR 1573)	John Justice Rd	Franklin	0.11	16	2	9		35	9200	3200	4500	4500	9200	ADQ		MN	
	Cat Creek Rd (SR 1513)	John Justice Rd	US 23	Franklin	0.09	16	2	9		35	9200	3200	4500	4500	9200	ADQ		MN	
MACO40003-H	Clarks Chapel Rd (SR 1653)	Hickory Knoll Rd (SR 1653)	Mcclure Rd (SR 1647)	Macon	1.42	16	2	9		45	10600	510	700	700	12000	02B	60	MN	B
MACO40003-H	Clarks Chapel Rd (SR 1653)	Mcclure Rd (SR 1647)	Prentiss Bridge Rd (SR 1649)	Macon	0.68	16	2	9		35	8900	790	1100	1100	10000	02B	60	MN	B
MACO40003-H	Clarks Chapel Rd (SR 1653)	Prentiss Bridge Rd (SR 1649)	Long Rd (SR 1663)	Macon	2.42	16	2	9		35	8900	2300	3600	3600	10000	02B	60	MN	B
MACO40003-H	Clarks Chapel Rd (SR 1653)	Long Rd (SR 1663)	Wells Grove Rd (SR 1667)	Macon	0.79	16	2	9	100	45	10600	1700	2400	2400	12000	02B	100	MN	B
	Coweeta Church Rd (SR 1115)	US 23	Addington Bridge Rd (SR 1122)	Macon	0.19	18	2	9	60	35	9200	2100	2700	2700	9200	ADQ	60	MN	
	Depot St (SR 1729)	US 441	Wells Grove Rd (SR 1667)	Franklin	0.64	20	2	10	60	35	10400	9800	12500	12500	10400	ADQ	60	MN	
	Depot St (SR 1729)	US 441	US 441	Franklin	0.08	36	2	10	60	35	10400				10400	ADQ	60	MN	
	Dowdle Mountain Rd (SR 1659)	Siler Rd (SR 1660)	Wells Grove Rd (SR 1667)	Franklin	0.44	56	2	12	125-160	35	10200	4800	6800	6800	10200	02A	160	MN	B,P
MACO40004-H	Ellijay Rd (SR 1001)	US 64	Grayson Higdon Rd	Jackson	2.14	16	2	8		55	11000	1200	1500	1500	12000	02B	60	MN	
	Ellijay Rd (SR 1001)	Grayson Higdon Rd	Jackson County Line	Jackson	7.76	16	2	8		55	11000	1200	1500	1500	11000	ADQ		MN	
	Harrison Ave	US 441	Sutton Pl	Franklin	0.42	30	2	10	60	45	11400	4300	5500	5500	11400	ADQ	60	MN	
	Harrison Ave	Sutton Pl	Windy Gap Rd (SR 1321)	Franklin	0.41	20	2	10	60	45	11400	4600	5900	5900	11400	ADQ	60	MN	
	Harrison Ave	Windy Gap Rd (SR 1321)	NC 28	Macon	0.73	20	2	10	60	45	11400	4600	5900	5900	11400	ADQ	60	MN	
	Hickory Knoll Rd (SR 1653)	Tessentee Rd (SR 1636)	Clarks Chapel Rd (SR 1653)	Macon	2.59	16	2	8		45	10600	510	700	700	12000	ADQ	60	MN	
	Hicks Rd (SR 1545)	Flat Mountain Rd (SR 1544)	Billy Cabin Rd (SR 1546)	Macon	1.34	12	2	9	60	25	8700	600	800	800	8700	ADQ	60	MN	
	Hicks Rd (SR 1545)	Billy Cabin Rd (SR 1546)	Mirror Lake Rd (SR 1551)	Highlands	0.19	16	2	9		35	8900	1900	2400	2400	8900	ADQ		MN	

HIGHWAY																				
		Section				2017 Existing System							2045 Proposed System							
Local ID	Facility	From	To	Jurisdiction	Dist. (mi)	Total Width (ft)	Lanes	Lane Width (ft)	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2017 Volume	2045 Volume E + C	2045 Volume with CTP	Proposed Capacity (vpd)	Cross-Section	ROW (ft)	CTP Classification	Proposals for Other Modes
	Iotla St (SR 1489)	US 441	Riverview St (SR 1462)	Franklin	0.63	18	2	9	60	35	10000	2300	2900	2900	10000	ADQ	60	MN	
	Iotla Church Rd (SR 1372)	Upper Burningtown Rd (SR 1387)	NC 28	Macon	2.16	16	2	9	60	35	9200	1800	2400	2400	9200	ADQ	60	MN	
	Junaluska Rd (SR 1401)	Wayah Rd (SR 1310)	Cherokee County Line	Macon	5.97	20	2	10	100	55	13600	580	600	600	13600	ADQ	100	MN	
	Lake Emory Rd (SR 1325)	US 23	Lakeside Dr (SR 1324)	Macon	1.84	18	2	9	60	45	10500	880	1100	1100	10500	ADQ	60	MN	
	Lake Emory Rd (SR 1325)	Lakeside Dr (SR 1324)	US 441	Franklin	0.2	18	2	9	60	35	9200	3600	4600	4600	9200	ADQ	60	MN	
	Lakeside Dr (SR 1324)	Lake Emory Rd (SR 1325)	Town Mountain Dr	Franklin	1.65	16	2	9	60	35	9200	1700	2200	2200	9200	ADQ	60	MN	
	Lakeside Dr (SR 1324)	Town Mountain Dr	US 441	Franklin	0.5	16	2	9	60	35	9200	1700	2200	2200	9200	ADQ	60	MN	
	Louisa Chapel Rd (SR 1148)	Palmer St (SR 1442)	US 64	Macon	0.19	18	2	11		35	9900	1100	1700	1700	9900	ADQ		MN	
	Lower Burningtown Rd (SR 1372)	Tellico Rd (SR 1369)	Middle Burningtown Rd (SR 1392)	Macon	4.61	12	2	9		30	9200	150	200	200	9200	ADQ		MN	
	Maple St	Wayah St	W Palmer St	Franklin	0.37	18	2	9		35						ADQ		MN	
	Maple St	W Palmer St	W Main St	Franklin	0.07	18	2	9		35						ADQ		MN	
	Mirror Lake Rd (SR 1551)	Hicks Rd (SR 1545)	US 64	Highlands	0.25	16	2	8	60-70	35	8900	1900	2400	2400	8900	ADQ	70	MN	
	North Jones Creek Rd (SR 1128)	Jones Creek Rd (SR 1130)	Maidens Chapel Rd (SR 1301)	Macon	1.94	18	2	9	60	45	9200	200	300	300	9200	ADQ	60	MN	
	Old Murphy Rd (SR 1442)	Wayah Rd (SR 1310)	Mill Creek Rd (SR 1311)	Macon	0.31	18	2	10	60	45	11400	3100	4000	4000	11400	ADQ	60	MN	
	Old Murphy Rd (SR 1442)	Mill Creek Rd (SR 1311)	Arrowwood Ln (SR 1147)	Macon	1.93	18	2	10	60	45	11000	3100	4000	4000	11000	ADQ	60	MN	
	Old Murphy Rd (SR 1442)	Arrowwood Ln (SR 1147)	Sloan Rd (SR 1175)	Macon	0.9	18	2	10	60	45	11000	3100	4400	4400	11000	ADQ	60	MN	
MACO40005-H	Old Murphy Rd (SR 1442)	Sloan Rd (SR 1175)	Roller Mill Rd (SR 1154)	Macon	0.25	18	2	10	60	35	9800	5900	8400	8400	10200	02N	90	MN	B,P

HIGHWAY																				
		Section				2017 Existing System							2045 Proposed System							
Local ID	Facility	From	To	Jurisdiction	Dist. (mi)	Total Width (ft)	Lanes	Lane Width (ft)	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2017 Volume	2045 Volume E + C	2045 Volume with CTP	Proposed Capacity (vpd)	Cross-Section	ROW (ft)	CTP Classification	Proposals for Other Modes
MACO40005-H	Old Murphy Rd (SR 1442)	Roller Mill Rd (SR 1154)	Palmer Dr (SR 1417)	Macon	0.45	18	2	10	60	35	9800	5900	8400	8400	10200	02N	90	MN	B,P
	Olive Hill Rd (SR 1387)	Lower Burningtown Rd (SR 1372)	Airport Rd (SR 1434)	Macon	0.76	18	2	9		30	9200	330	400	400	9200	ADQ		MN	
	Otter Creek Rd (SR 1365)	Wayah Rd (SR 1310)	Tellico Rd (SR 1369)	Macon	4.05	18	2	9		40	11000	210	500	500	11000	ADQ		MN	
	Patton Rd (SR 1442)	US 64	Wayah Rd (SR 1310)	Macon	0.25	18	2	10	60	45	11900	1500	1900	1900	11900	ADQ	60	MN	
	Phillips St (SR 1699)	US 441	US 441	Franklin	0.07	20	2	10	60	20	9500	2300	2900	2900	9500	ADQ	60	MN	
MACO40006-H	Prentiss Bridge Rd (SR 1649)	US 23	Clarks Chapel Rd (SR 1653)	Macon	1.3	16	2	8		35	8900	1400	1800	1800	10000	02B	60	MN	B
MACO40007-H	Rabbit Creek Rd (SR 1513)	US 23	Ferguson Rd (SR 1507)	Macon	1.16	16	2	9	90	55	9200	820	1300	1300	11000	02B	90	MN	
	Rabbit Creek Rd (SR 1513)	Ferguson Rd (SR 1507)	Onion Mountain Rd (SR 1521)	Macon	1.5	16	2	9	90	55	9200	820	1300	1300	9200	ADQ	90	MN	
	Riverside Rd (SR 1644)	US 23	Clarks Chapel Rd (SR 1653)	Macon	0.49	18	2	9		35	9200				9200	ADQ		MN	
	Riverview St (SR 1462)	US 441	Angel Medical Center	Franklin	0.24	20	2	10	50	35	9500	2500	3200	3200	9500	ADQ	50	MN	
	Riverview St (SR 1462)	Angel Medical Center	Iotla St (SR 1489)	Franklin	0.38	20	2	10	50	35	9500	2500	3200	3200	9500	ADQ	50	MN	
	Riverview St (SR 1489)	Riverview St (SR 1462)	NC 28	Franklin	0.04	22	2	11	60	35	10700	2300	2900	2900	10700	ADQ	60	MN	
MACO40008-H	Roller Mill Rd (SR 1154)	Belden Cir (SR 1152)	Harper Ln	Macon	0.48	18	2	9		35	9200	1800	2300	2300	10200	02E	60	MN	B,P
MACO40008-H	Roller Mill Rd (SR 1154)	Harper Ln	Westgate Plaza (SR 1170)	Macon	0.24	18	2	9		35	9200	1800	2300	2300	10200	02E	60	MN	B,P
MACO40008-H	Roller Mill Rd (SR 1154)	Westgate Plaza (SR 1170)	Westgate Plaza (SR 1170)	Macon	0.05	18	2	9		35	9200	1800	2300	2300	10200	02E	60	MN	B,P
MACO40008-H	Roller Mill Rd (SR 1154)	Westgate Plaza (SR 1170)	US 64	Macon	0.03	18	2	9		35	9200	1800	2300	2300	10200	02E	60	MN	B,P
MACO40008-H	Roller Mill Rd (SR 1154)	US 64	Carolina Dr (SR 1463)	Macon	0.06	18	2	9		35	9200	1800	2300	2300	10200	02E	60	MN	B,P

HIGHWAY																				
		Section				2017 Existing System							2045 Proposed System							
Local ID	Facility	From	To	Jurisdiction	Dist. (mi)	Total Width (ft)	Lanes	Lane Width (ft)	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2017 Volume	2045 Volume E + C	2045 Volume with CTP	Proposed Capacity (vpd)	Cross-Section	ROW (ft)	CTP Classification	Proposals for Other Modes
MACO40008-H	Roller Mill Rd (SR 1154)	Carolina Dr (SR 1463)	Palmer St (SR 1442)	Macon	0.27	18	2	9		35	9200	1800	2300	2300	10200	02E	60	MN	B,P
	Sanderstown Rd (SR 1335)	NC 28	Buster Cabe Rd (SR 1428)	Macon	0.62	18	2	10	40	35	11000	2100	2700	2700	11000	ADQ	40	MN	
	Sanderstown Rd (SR 1335)	Buster Cabe Rd (SR 1428)	Lyle Knob Rd (SR 1334)	Macon	1.07	18	2	10	40	45	11000	1900	2400	2400	11000	ADQ	40	MN	
	Sanderstown Rd (SR 1335)	Lyle Knob Rd (SR 1334)	US 23	Macon	1.55	18	2	10	40	45	11000	2400	3100	3100	11000	ADQ	40	MN	
	Saunders Rd (SR 1516)	Ferguson Rd (SR 1507)	US 64	Macon	1.18	20	2	10	60	40	11400	1400	1800	1800	11400	ADQ	60	MN	
	Siler Rd (SR 1660)	US 23	Dowdle Mountain Rd (SR 1659)	Macon	1.46	18	2	12	115-145	35	10200	5000	6700	6700	10200	02A	145	MN	B,P
	Siler Rd (SR 1701)	Dowdle Mountain Rd (SR 1659)	US 23	Macon	0.11	82	2	12	165	55	10200	4100	7600	7600	10200	ADQ	165	MN	
	Skeenah Rd (SR 1128)	Addington Bridge Rd (SR 1122)	Stamey Mountain Rd (SR 1134)	Macon	1.27	18	2	9		35	9200	830	1100	1100	9200	ADQ		MN	
	South Skeenah Rd (SR 1128)	Stamey Mountain Rd (SR 1134)	Jones Creek Rd (SR 1130)	Macon	2.65	16	2	9	60	35	9200	830	1100	1100	9200	ADQ	60	MN	
	Sloan Rd (SR 1175)	Palmer St (SR 1442)	Carolina Dr	Macon	0.26	18	2	10		35	9500	3800	4900	4900	9500	ADQ		MN	
	Sloan Rd (SR 1175)	Carolina Dr	US 64	Macon	0.08	18	2	10		35	9500	3800	4900	4900	9500	02C		MN	B
	Tellico Rd (SR 1369)	Otter Creek Rd (SR 1365)	Rinehart Creek Rd (SR 1368)	Macon	5.03	10	2	7		55	11200	170	200	200	11200	ADQ		MN	
	Tellico Rd (SR 1369)	Rinehart Creek Rd (SR 1368)	Tellico Rd (SR 1370)	Macon	2.28	18	2	9	60	35	9200	410	500	500	9200	ADQ	60	MN	
	Tellico Rd (SR 1370)	NC 28	Lower Burningtown Rd (SR 1372)	Macon	0.96	18	2	9	60	55	11000	480	600	600	11000	ADQ	60	MN	
	Tessentee Rd (SR 1636)	US 23	Hickory Knoll Road (SR 1653)	Macon	1.15	16	2	8	30	35	8900	1300	1700	1700	10000	ADQ	60	MN	
	Walnut Creek Rd (SR 1533)	US 64	Jackson County Line	Macon	5.98	16	2	9	60	55	11000	1300	1700	1700	11000	ADQ	60	MN	
	Wayah Rd (SR 1310)	Palmer St (SR 1442)	Crawford Rd (SR 1309)	Macon	2.2	18	2	9		45	11400	1300	1700	1700	11400	ADQ		MN	

HIGHWAY																				
		Section				2017 Existing System							2045 Proposed System							
Local ID	Facility	From	To	Jurisdiction	Dist. (mi)	Total Width (ft)	Lanes	Lane Width (ft)	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2017 Volume	2045 Volume E + C	2045 Volume with CTP	Proposed Capacity (vpd)	Cross-Section	ROW (ft)	CTP Classification	Proposals for Other Modes
	Wayah Rd (SR 1310)	Crawford Rd (SR 1309)	Junaluska Rd (SR 1401)	Macon	16.1	18	2	9	100	35	10500	1300	1400	1400	10500	ADQ	100	MN	
	Wayah Rd (SR 1310)	Junaluska Rd (SR 1401)	Otter Creek Rd (SR 1365)	Macon	4.74	18	2	9	100	45	11400	500	600	600	11400	ADQ	100	MN	
	Wayah Rd (SR 1310)	Otter Creek Rd (SR 1365)	Windingstairs Rd (SR 1412)	Macon	0.45	18	2	9	100	45	11400	560	700	700	11400	ADQ	100	MN	
	Wayah Rd (SR 1310)	Windingstairs Rd (SR 1412)	US 19	Macon	4.51	18	2	9	100	35	10500	560	600	600	10500	ADQ	100	MN	
MACO40009-H	Wayah St (SR 1667)	US 441 BUS	Phillips St	Franklin	0.39	20	2	10	60	35	10400	6200	7900	7900	12000	02E	60	MN	B,P
MACO40009-H	Wayah St (SR 1667)	Phillips St	Depot St (SR 1729)	Franklin	0.2	20	2	10	60	35	10400	6200	8000	8000	12000	02E	60	MN	B,P
MACO40009-H	Wells Grove Rd (SR 1667)	Depot St (SR 1729)	Ulco Dr	Franklin	0.1	24	2	12	60	35	11100	3800	5900	5900	12000	02E	60	MN	B,P
MACO40009-H	Wells Grove Rd (SR 1667)	Ulco Dr	Old Phillips Bridge Rd	Franklin	0.26	24	2	12	60	35	11100	3800	5900	5900	12000	02E	60	MN	B,P
MACO40009-H	Wells Grove Rd (SR 1667)	Old Phillips Bridge Rd	US 23	Franklin	0.24	24	2	12	60	35	11100	3800	5900	5900	12000	02E	60	MN	B,P
MACO40009-H	Wells Grove Rd (SR 1667)	US 23	Dowdle Mountain Rd (SR 1659)	Franklin	0.06	24	2	12		45	12000	4500	6400	6400	12000	02E	60	MN	B,P
MACO40009-H	Wells Grove Rd (SR 1667)	Dowdle Mountain Rd (SR 1659)	Franklin Town Limits	Franklin	0.17	24	2	11		45	12000	4500	6400	6400	12000	02E	60	MN	B,P
MACO40009-H	Wells Grove Rd (SR 1667)	Franklin Town Limits	Clarks Chapel Rd (SR 1653)	Macon	0.32	24	2	9	60	35	10200	4500	6400	6400	12000	02E	60	MN	B,P
	West Old Murphy Rd (SR 1448)	North Jones Creek Rd (SR 1128)	US 64	Macon	1.58	18	2	9	40	45	11000	1300	1700	1700	11000	ADQ	40	MN	
	W Main St			Franklin	0.31	24	2	12		35						ADQ		MN	
	W Main St	W Main St	Maple St	Franklin	0.12	24	2	12		35						ADQ		MN	
	W Main St	Maple St	W Main St	Franklin	0.15	24	2	12		35						ADQ		MN	
	Womack St (SR 1158)	Palmer St (SR 1442)	US 441	Macon	0.71	18	2	9		35	9200	910	1200	1200	9200	ADQ		MN	
MACO40005-H	W Palmer St (SR 1442)	Palmer Dr (SR 1417)	W Main St	Franklin	0.36	18	2	10	60	35	9800	5900	8400	8400	10200	02N	90	MN	B,P
	W Palmer St (SR 1442)	W Main St	Maple St	Franklin	0.32	18	2	10	60	35	10400	5900	8400	8400	10400	ADQ	60	MN	
	W Palmer St (SR 1442)	Maple St	Palmer Street Cir	Franklin	0.03	18	2	10	60	35	10400	5900	8400	8400	10400	ADQ	60	MN	
	W Palmer St (SR 1442)	Palmer Street Cir	US 441	Franklin	0.14	18	2	10	60	35	10400	5900	8400	8400	10400	ADQ	60	MN	

PUBLIC TRANSPORTATION AND RAIL

PUBLIC TRANSPORTATION							
			Speed		Existing	Proposed	
Local ID	Facility/Corridor	Section (From - To)/Location	Limit (mph)	Distance (mi)	Type	Type	Other Modes
R-5734C	US 23/441 (Georgia Road)	Coweeta Church Road (SR 1115)				Park and Ride	H,B
MACO30001-H	US 64 (Highlands Road)	Ellijay Road (SR 1001)				Park and Ride	H
MACO40009-H	NC 28 (Bryson City Road)	Cowee Creek Road (SR 1340)				Park and Ride	H,B

BICYCLE AND PEDESTRIAN

BICYCLE								
				Existing System		Proposed System		
				Cross-Section				
Local ID	Facility/Route	Section (From - To)	Distance (mi)	(ft)	lanes	Type	Cross-Section	Other Modes
R-5734C	US 23	Georgia - Sam Seagle Rd (SR 1109)	3.53	60	4	On Road	04B	H,T
R-5734C	US 23	Sam Seagle Rd (SR 1109) - Cheek Rd (SR 1174)	5.29	60	4	On Road	04B	H,T
R-5734C	US 23	Cheek Rd (SR 1174) - Prentiss Bridge Rd (SR 1649)	0.18	64	4	On Road	04B	H,T
MACO20003-H	US 64	Clay County Line - W Old Murphy Rd (SR 1448)	8.11	24	2	On Road	03A	H
MACO20001-B	US 64	W Old Murphy Rd (SR 1448) - Mashburn White Rd (SR 1153)	5.06	24	2	On Road	04A	P
MACO30001-H	NC 28	US 441 - Thomas Heights Rd	0.72	28	2	On Road	02L	H,P
MACO30001-H	NC 28	Thomas Heights Rd - Crane Cir (SR 1571)	0.45	28	2	On Road	02L	H,P
MACO30001-H	NC 28	Crane Cir (SR 1571) - US 441	0.16	52	4	On Road	02L	H,P
MACO30002-H	NC 28	Sanderstown Rd (SR 1335) - Cowee Creek Rd	2.03	20	2	On Road	02B	H
MACO40003-H	Clarks Chapel Rd (SR 1653)	Hickory Knoll Rd (SR 1653) - Mcclure Rd (SR 1647)	1.42	16	2	On Road	02B	H
MACO40003-H	Clarks Chapel Rd (SR 1653)	Mcclure Rd (SR 1647) - Prentiss Bridge Rd (SR 1649)	0.68	16	2	On Road	02B	H
MACO40003-H	Clarks Chapel Rd (SR 1653)	Prentiss Bridge Rd (SR 1649) - Long Rd (SR 1663)	2.42	16	2	On Road	02B	H
MACO40003-H	Clarks Chapel Rd (SR 1653)	Long Rd (SR 1663) - Wells Grove Rd (SR 1667)	0.79	16	2	On Road	02B	H
MACO40008-H	Belden Cir (SR 1152)	US 23 - Roller Mill Rd (SR 1154)	0.36	18	2	On Road	02E	H,P
MACO40008-H	Roller Mill Rd (SR 1154)	Belden Cir (SR 1152) - Harper Ln	0.48	18	2	On Road	02E	H,P
MACO40008-H	Roller Mill Rd (SR 1154)	Harper Ln - Westgate Plaza (SR 1170)	0.24	18	2	On Road	02E	H,P
MACO40008-H	Roller Mill Rd (SR 1154)	Westgate Plaza (SR 1170) - Westgate Plaza (SR 1170)	0.05	18	2	On Road	02E	H,P
MACO40008-H	Roller Mill Rd (SR 1154)	Westgate Plaza (SR 1170) - US 64	0.03	18	2	On Road	02E	H,P

BICYCLE								
				Existing System		Proposed System		
				Cross-Section				
Local ID	Facility/Route	Section (From - To)	Distance (mi)	(ft)	lanes	Type	Cross-Section	Other Modes
MACO40008-H	Roller Mill Rd (SR 1154)	US 64 - Carolina Dr (SR 1463)	0.06	18	2	On Road	02E	H,P
MACO40008-H	Roller Mill Rd (SR 1154)	Carolina Dr (SR 1463) - Palmer St (SR 1442)	0.27	18	2	On Road	02E	H,P
MACO20001-B	Sloan Rd (SR 1175)	Carolina Dr - US 64	0.08	18	2	On Road	02C	P
MACO40006-H	Prentiss Bridge Rd (SR 1649)	US 23 - Clarks Chapel Rd (SR 1653)	1.3	16	2	On Road	02B	H
MACO40001-BP	Dowdle Mountain Rd (SR 1659)	Siler Rd (SR 1660) - Wells Grove Rd (SR 1667)	0.44	56	2	On Road	02A	P
MACO40001-BP	Siler Rd (SR 1660)	US 23 - Dowdle Mountain Rd (SR 1659)	1.46	18	2	On Road	02A	P
MACO40009-H	Wayah St (SR 1667)	US 441 BUS - Phillips St	0.39	20	2	On Road	02E	H,P
MACO40009-H	Wayah St (SR 1667)	Phillips St - Depot St (SR 1729)	0.2	20	2	On Road	02E	H,P
MACO40009-H	Wells Grove Rd (SR 1667)	Depot St (SR 1729) - Ulco Dr	0.1	24	2	On Road	02E	H,P
MACO40009-H	Wells Grove Rd (SR 1667)	Ulco Dr - Old Phillips Bridge Rd	0.26	24	2	On Road	02E	H,P
MACO40009-H	Wells Grove Rd (SR 1667)	Old Phillips Bridge Rd - US 23	0.24	24	2	On Road	02E	H,P
MACO40009-H	Wells Grove Rd (SR 1667)	US 23 - Dowdle Mountain Rd (SR 1659)	0.06	24	2	On Road	02E	H,P
MACO40009-H	Wells Grove Rd (SR 1667)	Dowdle Mountain Rd (SR 1659) - Franklin Town Limits	0.17	24	2	On Road	02E	H,P
MACO40009-H	Wells Grove Rd (SR 1667)	Franklin Town Limits - Clarks Chapel Rd (SR 1653)	0.32	24	2	On Road	02E	H,P

BICYCLE AND PEDESTRIAN

PEDESTRIAN								
				Existing System		Proposed System		
Local ID	Facility/Route	Section (From - To)	Distance (mi)	Type	Side of Street	Type	Side of Street	Other Modes
MACO20001-P	US 64	Mirror Lake Rd (SR 1551) - Will Henry Stevens Covered Bridge	0.51			Sidewalk	North	
MACO20006-H	US 441 BUS	Palmer St (SR 1442) - Phillips St (SR 1699)	0.21	Sidewalk	Both	Sidewalk	Both	H
MACO20006-H	US 441 BUS	Phillips St (SR 1699) - E Rogers St	0.35	Sidewalk	South	Sidewalk	Both	H
MACO20006-H	US 441 BUS	E Rogers St - Depot St (SR 1729)	0.1	Sidewalk	North	Sidewalk	Both	
MACO20006-H	US 441 BUS	Depot St (SR 1729) - Big Bear Ln (SR 1724)	0.14	Sidewalk	North	Sidewalk	Both	H
MACO20006-H	US 441 BUS	US 441 BUS (E Palmer St) - US 441 BUS (W Main St)	0.07	Sidewalk	West	Sidewalk	Both	H
MACO20006-H	US 441 BUS	Big Bear Ln (SR 1724) - Depot St (SR 1729)	0.17	Sidewalk	North	Sidewalk	Both	H
MACO20006-H	US 441 BUS	Depot St (SR 1729) - E Rogers St	0.06	Sidewalk	North	Sidewalk	Both	H
MACO20006-H	US 441 BUS	E Rogers St - Riverview St (SR 1462)	0.08	Sidewalk	North	Sidewalk	Both	H
MACO20006-H	US 441 BUS	Riverview St (SR 1462) - Harrison Ave	0.37	Sidewalk	Both	Sidewalk	Both	H
MACO20006-H	US 441 BUS	Harrison Ave - Porter St	0.08	Sidewalk	Both	Sidewalk	Both	H
MACO20006-H	Big Bear Ln (SR 1724)	US 441 - US 441	0.04			Sidewalk	Both	H
EB-5964	US 441 BUS	NC 28 - Lake Emory Rd (SR 1325)	0.35	Sidewalk	North	Sidewalk	Both	
EB-5964	Old Cat Creek Rd (SR 1510)	US 441 - 1st Street	0.08			Sidewalk	Both	
EB-5964	First St	Old Cat Creek Rd (SR 1510) to NC 28	0.4			Sidewalk	Both	
MACO30001-H	NC 28	US 441 - Thomas Heights Rd	0.72			Sidewalk	Both	H
MACO30001-H	NC 28	Thomas Heights Rd - Crane Cir (SR 1571)	0.45	Sidewalk	Varies	Sidewalk	Both	H,B
MACO30001-H	NC 28	Crane Cir (SR 1571) - US 441	0.16	Sidewalk	Varies	Sidewalk	Both	H,B
MACO30003-H	NC 106	Hummingbird Ln - Highlands Plaza	0.9			Sidewalk	Both	H
MACO40001-P	Baird Cove Rd (SR 1319)	Palmer St (SR 1442) - Palmer Dr (SR 1417)	0.42			Sidewalk	Both	

PEDESTRIAN								
				Existing System		Proposed System		
Local ID	Facility/Route	Section (From - To)	Distance (mi)	Type	Side of Street	Type	Side of Street	Other Modes
MACO40001-P	Palmer Dr (SR 1417)	Palmer St (SR 1442) - Baird Cove Rd (SR 1319)	0.45			Sidewalk	Both	
EB-5756	Depot St (SR 1729)	US 441 - Wells Grove Rd (SR 1667)	0.64	Sidewalk	West	Sidewalk	Both	B
MACO50001-P	Green St	Wild Mint Road to Harrison Avenue	0.27			Sidewalk	West	
MACO40002-P	Phillips St	US 441 BUS (E Palmer Street) to Wayah Street (SR 1667)	0.37	Sidewalk	East	Sidewalk	Both	B
MACO40008-H	Belden Cir (SR 1152)	US 23 - Roller Mill Rd (SR 1154)	0.36			Sidewalk	Both	H,B
MACO40008-H	Roller Mill Rd (SR 1154)	Belden Cir (SR 1152) - Harper Ln	0.48			Sidewalk	Both	H,B
MACO40008-H	Roller Mill Rd (SR 1154)	Harper Ln - Westgate Plaza (SR 1170)	0.24			Sidewalk	Both	H,B
MACO40008-H	Roller Mill Rd (SR 1154)	Westgate Plaza (SR 1170) - Westgate Plaza (SR 1170)	0.05			Sidewalk	Both	H,B
MACO40008-H	Roller Mill Rd (SR 1154)	Westgate Plaza (SR 1170) - US 64	0.03			Sidewalk	Both	H,B
MACO40008-H	Roller Mill Rd (SR 1154)	US 64 - Carolina Dr (SR 1463)	0.06			Sidewalk	Both	H,B
MACO40008-H	Roller Mill Rd (SR 1154)	Carolina Dr (SR 1463) - Palmer St (SR 1442)	0.27			Sidewalk	Both	H,B
MACO40001-BP	Dowdle Mountain Rd (SR 1659)	Siler Rd (SR 1660) - Wells Grove Rd (SR 1667)	0.44			Sidewalk	Both	B
MACO40001-BP	Siler Rd (SR 1660)	US 23 - Dowdle Mountain Rd (SR 1659)	1.46			Sidewalk	Both	B
MACO40003-P	Womack St (SR 1158)	Palmer St (SR 1442) - US 441	0.71			Sidewalk	Both	
MACO40009-H	Wayah St (SR 1667)	US 441 BUS - Phillips St	0.39	Sidewalk	North	Sidewalk	Both	H,B
MACO40009-H	Wayah St (SR 1667)	Phillips St - Depot St (SR 1729)	0.2	Sidewalk	North	Sidewalk	Both	H,B
MACO40009-H	Wells Grove Rd (SR 1667)	Depot St (SR 1729) - Ulco Dr	0.1	Sidewalk	North	Sidewalk	Both	H,B
MACO40009-H	Wells Grove Rd (SR 1667)	Ulco Dr - Old Phillips Bridge Rd	0.26	Sidewalk	Both	Sidewalk	Both	H,B
MACO40009-H	Wells Grove Rd (SR 1667)	Old Phillips Bridge Rd - US 23	0.24	Sidewalk	Both	Sidewalk	Both	H,B
MACO40009-H	Wells Grove Rd (SR 1667)	US 23 - Dowdle Mountain Rd (SR 1659)	0.06			Sidewalk	Both	H,B
MACO40009-H	Wells Grove Rd (SR 1667)	Dowdle Mountain Rd (SR 1659) - Franklin Town Limits	0.17			Sidewalk	Both	H,B

PEDESTRIAN								
				Existing System		Proposed System		
Local ID	Facility/Route	Section (From - To)	Distance (mi)	Type	Side of Street	Type	Side of Street	Other Modes
MACO40009-H	Wells Grove Rd (SR 1667)	Franklin Town Limits - Clarks Chapel Rd (SR 1653)	0.32			Sidewalk	Both	H,B

BICYCLE AND PEDESTRIAN

MULTI-USE PATH								
				Existing System		Proposed System		
Local ID	Facility/Route	Section (From - To)	Distance (mi)	Location	Cross-Section	Location	Cross-Section	Other Modes
MACO00001-M	The Crawford Branch Greenway	Maple Street to the Little Tennessee Greenway	4.8					H,B,P
MACO00002-M	The Little Tennessee Greenway	Extension towards the Macon County Recreational Park	0.64					B,P
MACO00003-M	The Southwest Loop Trail	A loop around southwest Franklin	0.74					B,P

FISCAL REALISM

Fiscal Realism is an optional local dialogue initiated by the Rural Planning Organization to identify unrealistic CTP Proposals that might have a adverse financial affects on future local planning decisions, activities, or needs.

Fiscal Realism was not used in the Macon County CTP.

APPROVALS/RESOLUTIONS

Macon County

Resolution Adopting a Comprehensive Transportation Plan for Macon County, North Carolina

WHEREAS, Macon County, the towns of Franklin and Highlands, and the North Carolina Department of Transportation's Transportation Planning Division have actively worked to develop a Comprehensive Transportation Plan for Macon County; and

WHEREAS, the County and the Department of Transportation are directed by North Carolina General Statute 136-66.2 to reach agreement for a transportation system that will serve present and anticipated traffic volumes in the County; and

WHEREAS, it is recognized that the proper movement of traffic within and through Macon County is a highly desirable element of the comprehensive plan for the orderly growth and development of the County; and

WHEREAS, after full study of the plan, the Macon County Board of Commissioners feel it to be in the best interest of Macon County to adopt a plan pursuant to General Statute 136-66.2;

NOW THEREFORE, BE IT RESOLVED, that the Macon County Comprehensive Transportation Plan dated April 2021 be approved and adopted as a guide in the development of the transportation system in Macon County and the same is hereby recommended to the North Carolina Department of Transportation for its subsequent adoption.

ADOPTED, this the 13th day of April, 2021.

James P. Tate, Chairman

Derek Roland, Ex Officio Clerk to the Board

TOWN OF FRANKLIN

Post Office Box 1479
Franklin, North Carolina 28744
(828) 524-2516

Resolution Adopting A Comprehensive Transportation Plan for Macon County, North Carolina

WHEREAS, Macon County, the towns of Franklin and Highlands, and the North Carolina Department of Transportation have actively worked to develop a Comprehensive Transportation Plan for Macon County and the municipalities therein; and

WHEREAS, the county, towns, and the Department of Transportation are directed by North Carolina General Statute 136-66.2 to reach agreement for a transportation system that will serve present and anticipated travel demand in the county; and

WHEREAS, it is recognized that the proper movement of traffic within and through the county and town is a highly desirable element of the comprehensive plan for the orderly growth and development of the area; and

WHEREAS, after full study of the plan, the Franklin Town Council feels it to be in the best interest of the town to adopt the plan pursuant to General Statute 136-66.2;

NOW THEREFORE, BE IT RESOLVED, that the Macon County Comprehensive Transportation Plan dated April 2021 be approved and adopted as a guide in the development of the transportation system in Franklin and the same is hereby recommended to the North Carolina Department of Transportation for its subsequent adoption.

ADOPTED, this the 3rd day of May, 2021.

Robert S. Scott, Mayor

Travis Talient, Town Clerk

Appendix Contents

THE TOWN OF
HIGHLANDS

Resolution Adopting A Comprehensive Transportation Plan for Macon County, North Carolina
Resolution No. 2021-06-Res

WHEREAS, Macon County, the Towns of Franklin and Highlands, and the North Carolina Department of Transportation have actively worked to develop a Comprehensive Transportation Plan for Macon County and the municipalities therein; and

WHEREAS, the County, Towns, and the Department of Transportation are directed by North Carolina General Statute 136-66.2 to reach agreement for a transportation system that will serve present and anticipated travel demand in the county; and

WHEREAS, it is recognized that the proper movement of traffic within and through the county and town is a highly desirable element of the comprehensive plan for the orderly growth and development of the area; and

WHEREAS, after full study of the plan, the Highlands Town Board of Commissioners feels it to be in the best interest of Highlands to adopt the plan pursuant to General Statute 136-66.2;

NOW THEREFORE, BE IT RESOLVED, by the Board of Commissioners of the Town of Highlands that the Macon County Comprehensive Transportation Plan dated April 2021 be approved and adopted as a guide in the development of the transportation system in Highlands and the same is hereby recommended to the North Carolina Department of Transportation for its subsequent adoption.

Upon motion duly made and seconded, the Resolution was unanimously adopted by the Board of Commissioners at a regularly scheduled meeting held on the 27th day of May, 2021, in the Highlands Community Building, 71 Poplar Street, Highlands, North Carolina.

This the 27th day of May, 2021.

Patrick L. Taylor, Mayor

ATTEST:

Gilberta B. Shaheen

Gilberta B. Shaheen, Town Clerk

Appendix Contents

Agenda Item 8.

Southwestern Commission
125 Bonnie Lane, Sylva, NC 28779 | 828.586.1962
regiona.org

Resolution Endorsing a Comprehensive Transportation Plan for Macon County, North Carolina

WHEREAS, Macon County, the towns of Franklin and Highlands, and the North Carolina Department of Transportation have actively worked to develop a Comprehensive Transportation Plan for Macon County; and

WHEREAS, the County and the Department of Transportation are directed by North Carolina General Statutes 136-66.2 to reach agreement for a transportation system that will serve present and anticipated volumes of traffic in the County and region; and

WHEREAS, it is recognized that the proper movement of traffic within and through Macon County is a highly desirable element of the comprehensive plan for the orderly growth and development of the County and region; and

WHEREAS, after full study of the plan, and following multiple opportunities for public input, the Macon County Comprehensive Transportation has been adopted by the Macon County Board of Commissioners, the Town of Franklin, and the Town of Highlands, pursuant to General Statutes 136-66.2;

NOW THEREFORE, BE IT RESOLVED: that the Macon County Comprehensive Transportation Plan dated April 2021 be endorsed by the Southwestern RPO Transportation Advisory Committee as a guide in the development of the transportation system in Macon County and the same is hereby recommended to the North Carolina Department of Transportation for its subsequent adoption.

Adopted, this the 24th day of May, 2021.

Patrick Taylor, Chairman
Southwestern RPO TAC

Rose Bauguess, Secretary
Southwestern RPO

Cherokee County: Andrews, Murphy
Clay County: Hayesville
Graham County: Fontana Dam, Lake Santeetlah, Robbinsville
Jackson County: Dillsboro, Forest Hills, Sylva, Webster
Macon County: Franklin, Highlands
Swain County: Bryson City

CONTACT INFORMATION

Resources and Contacts

North Carolina Department of Transportation

Customer Service Office

Contact information for other units within the NCDOT that are not listed in this appendix is available by calling the Customer Service Office or by visiting the NCDOT homepage:

1-877-DOT-4YOU
(1-877-368-4968)
https://apps.dot.state.nc.us/dot/directory/authenticated/ToC.aspx

Secretary of Transportation

1501 Mail Service Center
(919) 707-2800 Raleigh, NC 27699-1501

Board of Transportation Member

1578 Mail Service Center
(828)735-1428 Raleigh, NC 27699-1578
ascody@ncdot.gov

Highway Division Engineer

Contact the Division Engineer with general questions concerning NCDOT activities within each Division and for information on Small Urban Funds.

253 Webster Rd
(828)586-2141 Sylva, 28779

Division Construction Engineer

Contact the Division Construction Engineer for information concerning major roadway improvements under construction.

253 Webster Rd
(828) 631-1155 Sylva, 28779

Division Traffic Engineer

Contact the Division Traffic Engineer for information concerning traffic signals, highway signs, pavement markings and crash history.

253 Webster Rd
(828) 631-1185 Sylva, 28779

Division Maintenance Engineer

Contact the Division Maintenance Engineer information regarding maintenance of all state roadways, improvement of secondary roads and other small improvement projects. The Division Maintenance Engineer also oversees the District Offices, the Bridge Maintenance Unit and the Equipment Unit.

(828) 631-1148
253 Webster Rd
Sylva, 28779

District Engineer

Contact the District Engineer for information on outdoor advertising, junkyard control, driveway permits, road additions, subdivision review and approval, Adopt-A-Highway program, encroachments on highway right of way, issuance of oversize/overwidth permits, paving priorities, secondary road construction program and road maintenance.

(828) 321-4105
191 Robbinsville Rd
Andrews, 28901

Transportation Planning Division (TPD)

Contact the Transportation Planning Division for information on long-range multi-modal planning services.

1554 Mail Service Center
Raleigh, NC 27699-1554
(919) 733-4705
http://www.ncdot.gov/doh/preconstruct/tpb/

Southwestern Rural Planning Organization (RPO)

Contact the RPO for information on long-range multi-modal planning services.

828-586-1962
125 Bonnie Lane
Sylva, NC 28779
http://www.regiona.org/

Strategic Prioritization Office

Contact the Strategic Planning Office for information concerning prioritization of transportation projects.

(919) 7107-2858
1501 Mail Service Center
Raleigh, NC 27699-1501
https://apps.dot.state.nc.us/dot/directory/authenticated/UnitPage.aspx?id=11054

Project Development & Environmental Branch (PDEA)

Contact PDEA for information on environmental studies for projects that are included in the TIP.

1548 Mail Service Center
Raleigh, NC 27699-1548

Program Development Branch

Contact the Program Development Branch for information concerning Roadway Official Corridor Maps, Feasibility Studies and the Transportation Improvement Program (TIP).

1534 Mail Service Center
Raleigh, NC 27699-1534
(919) 733-2039
http://www.ncdot.org/planning/development/

Public Transportation Division

Contact the Public Transportation Division for information public transit systems.

1550 Mail Service Center
Raleigh, NC 27699-1550
(919) 733-4713
http://www.ncdot.org/transit/nctransit/

Rail Division

Contact the Rail Division for rail information throughout the state.

1553 Mail Service Center
Raleigh, NC 27699-1553
(919) 733-7245
http://www.bytrain.org/

Division of Bicycle and Pedestrian Transportation

Contact this Division for bicycle and pedestrian transportation information throughout the state.

1552 Mail Service Center
Raleigh, NC 27699-1552
(919) 807-0777
http://www.ncdot.gov/transit/bicycle/

Bridge Maintenance Unit

Contact the Bridge Maintenance Unit for information on bridge management throughout the state.

1565 Mail Service Center
Raleigh, NC 27699-1565
(919) 733-4362
http://www.ncdot.gov/doh/operations/dp_chief_eng/maintenance/bridge/

Highway Design Branch

The Highway Design Branch consists of the Roadway Design, Structure Design, Photogrammetry, Location & Surveys, Geotechnical, and Hydraulics Units. Contact the Highway Design Branch for information regarding design plans and proposals for road and bridge projects throughout the state.

1584 Mail Service Center
Raleigh, NC 27699-1584
(919) 250-4001
http://www.ncdot.gov/doh/preconstruct/highway/

Other State Government Offices

Department of Commerce – Division of Community Assistance

Contact the Department of Commerce for resources and services to help realize economic prosperity, plan for new growth and address community needs.

http://www.nccommerce.com/en/CommunityServices/

DEFINITIONS AND RESOURCES

This section of the appendix provides definitions and resources used in the Comprehensive Transportation Plan and other parts of its appendix.

Resources covered in this section include:

- ☑ Acronyms and Definitions
- ☑ Additional Plans and Studies
- ☑ Facility Type and Level of Service
- ☑ Typical Sections

ACRONYMS

AADT - Average Annual Daily Traffic

AADTT - Average Annual Daily Truck Traffic

ACS - American Community Survey

ADT - Average Daily Traffic

AGR - Annual Growth Rate

BLS - Bureau of Labor Statistics

BOT - Board of Transportation

CIA - Community Impact Assessment

CMAQ - Congestion Mitigation and Air Quality

COE -Army Corps of Engineers

COG - Council of Government

CUR - Community Understanding Report

DAQ - Division of Air Quality

DOT - Department of Transportation

DWQ - Division of Water Quality

FHWA - Federal Highway Administration

FY - Fiscal Year begins July 1st

GIS - Global Positioning System

G&O - Goals and Objectives

HOV - High Occupancy Vehicle

IAG - Interagency Agreement

IMD - Integrated Mobility Division

IPD - Integrated Project Delivery

LEP - Limited English Proficiency

LOS - Level of Service

LPA - Lead Planning Agency

LPO - Local Planning Organization

LEDPA - Least Environmentally Damaging Practical Alternative

LRTP - Long-Range Transportation Plan

MPO - Metropolitan Planning Organization

MSTA - Municipal School Transportation Assistance

NCDOT - North Carolina Department of Transportation

NEPA - National Environmental Policy Act

OSBM - Office of State Budget and Management

PAB - Planning Area Boundary

PDE - Project Development Engineer

PDEA - Project Development and Environmental Analysis

PE - Project Engineer

PHFS - Primary Highway Freight System

PI - Public Involvement

PIP - Public Involvement Plan

RPO - Rural Planning Organization

ROW - Right of Way

SEPA - State Environmental Policy Act for North Carolina

STC - Strategic Transportation Corridors

STIP - Statewide Transportation Improvement Program

TAZ - Transportation Analysis Zone

TDM - Travel Demand Model

TIP - Transportation Improvement Program

TPD - Transportation Planning Division

VPD - Vehicles Per Day

For additional Acronyms please refer to the links section of the CTP planning website: https://connect.ncdot.gov/projects/planning/Pages/TransPlanManualCTP.aspx

GENERAL DEFINITIONS

CTP Recommendation Maps	
Existing	Facilities that are not recommended to be improved.
Improve	Facilities that need to be improved for capacity, safety, operations, or system continuity. These facilities have a project recommendation in the CTP.
New Location	Facilities on new locations that are needed in the future. These facilities have project recommendations in the CTP.
Highway Incidentals	Highway Incidentals are highway proposals that include a bicycle, pedestrian, or public transit recommendations within its project proposal scope. It is denoted on non-highway recommendation maps with a "star" ★ icon.

CTP Project Sheet	
Local ID	A project ID to help identify each proposals. If a TIP project number exists, it is listed as the ID. If a different code is used along a route it indicates separate projects will probably be requested. Also, upper case alphabetic characters (i.e. 'A', 'B', or 'C') are included after the numeric portion of the code if it is anticipated that project segmentation or phasing will be recommended.
Identified Need	Need describes the key problem(s) to be addressed and explains the underlying causes of those problems.
Purpose	Purpose states why the project is being proposed and articulates the positive outcomes that are intended.
Typical Section Options	Typical Sections are the selected "cross-sections" in long range planning that satisfy the purpose and "Identified need" for the project.
ROW	The real property (land and improvements) and rights therein acquired for public use to construct highways for the betterment and safety of the public.
Estimated Cost	A planning level estimate of the cost of the given project.
Safety Risk Score	Planning level safety value based on three components: 1) Class Density Ratio – The crash density of the study area versus the average crash density of similar facilities; 2) Severity Index; and 3) Critical Crash Rate Ratio – The actual crash rate for the study area versus the critical crash rate. Areas with the higher scores are considered to have the poorer highway safety performance.
Travel Lanes	Lanes that facilitates through movements.
Volume (AADT)	Annual Average Daily Traffic is an estimate of the average daily volume for all days of the year for all lanes of travel at a location.

Capacity	The number of vehicles that can pass a given point per day during ideal traffic conditions that can be attained. These are dependent on the target level of service.

Highway	
Facility Types	Facility types are a way to categorize the roadway. The definitions are primarily based on the function of the roadway, level of mobility and access, and whether the facility has traffic signals, driveways, and/or medians. For a more detailed explanation of each facility type, see the Facility Types & Control Access Definitions section.
Freeways	A facility with high mobility and low access. It is designated as either an Interstate or a Freeway. Freeways typically has a minimum of four lanes with a continuous median and no driveway connections.
Expressways	A facility with high mobility and low to moderate access. It is designated as an arterial and typically has a minimum of four lanes with a median.
Boulevards (Multilane Divided)	A facility with moderate mobility and low to moderate access. It is designated as either an arterial or a collector. Boulevards typically have a minimum of four lanes with a median.
Multilane Major (Undivided)	A facility with moderate to low mobility and high access. It is designated as either an arterial or a collector. Multilane Major Thoroughfares typically have a minimum of four lanes with no median. Some of them have two way left turn lanes.
Two Lane Major Thoroughfares	A facility with moderate to low mobility and high access. It is designated as a collector or a local road. Two Lane Major Thoroughfares typically have two to three lanes, with or without a median. Some of them have two way left turn lanes.
Minor Thoroughfare	A facility with moderate to low mobility and high access. It is designated as a collector or a local road. Minor Thoroughfares typically have a minimum of two lanes without a median. Some of them have two way left turn lanes.
Interchange	Through movement on intersecting roads is separated by a structure. Turning movement area accommodated by on/off ramps and loops.
Bridge/Overpass	A grade separation between two facilities. Through movement on intersecting roads is separated by a structure. There is no direct access between the facilities.
Intersection	A point of where two roads intersect. Intersection improvements improve traffic flow by modifying the existing intersection.
Congestion & Mobility	Congestion relates to an excess of vehicles on a portion of roadway at a particular time resulting in speeds that are slower than normal or "free flow" speeds; defined as the existing annual average daily traffic (AADT) divided by the capacity of the roadway. Mobility is the ability of people and goods to move freely and easily. Improvements include but are not limited to adding lanes, convert roadway to superstreet or identifying an alternative roadway on an existing or new location route.

Access Management & Operations	Enhancing capacity and safety through the regulation of interchanges, intersections, driveways, and median openings in a roadway. Operations include management of systems (roadways, transit, rail, etc.), daily use, safety, and maintenance.
Modernization	Improving a roadway to current design standards considered up to 12' wide lanes and 2' shoulders. Wider pay shoulders may be utilized for bicycle improvements.
Other Highway Improvements	Improving a roadway to provide a benefit not limited to, safety and/or economic development, etc.

Public Transportation and Rail	
Urban Fixed Bus Corridors	Transit services in urban areas that can provide local service. • Fixed Routes – Local: provides service to every stop along the route. • Fixed Routes – Express: Does not provide service every stop along the route. • Bus on Shoulder (BOSS): Specific routes designated to bypass congested traffic areas. • Bus Rapid Transit Busways that operate in rapid transit highway corridors
Rural Fixed Bus Corridors	Transit services in rural areas that can provide local service. • Deviated Fixed Routes – A hybrid between a fixed route and demand response. Bus stops at fixed points on a schedule but can deviate between spots to go to specific locations on request.
Regional Fixed Bus Corridors	Regional services between Local and regional providers and transportation authorities.
Fixed Guideway	Any transit service that uses exclusive or controlled right-of-way or rails, entirely or in part. The term includes heavy rail, commuter rail, light rail, monorail, trolleybus, aerial tramway, included plane, cable car, automated guideway, transit, and ferry boats.
Amtrak/Freight Route	A combined route that is used by passenger train traffic and freight train traffic.
Current railroad	Locations of railroad tracks that are either active or inactive tracks. These tracks were used for either freight or passenger service. • Active – rail service is currently provided in the corridor; may include freight and/or passenger service. • Inactive – right of way exists; however, there is no service currently provided; tracks may or may not exist. • Recommended – It is desirable for future rail to be considered to serve an area.
Transit Facility	A facility that denotes a junction utilized for transit services. This covers multi-modal passenger facilities as well as administrative/maintenance facilities.

Amtrak Station	A station for Amtrack passenger rail service.
Park and Ride Lot	A strategically located parking lot that provides commuters connections to transit or carpools.
Intermodal Terminal	A facility that allows more than one mode of transportation meet such as where light rail and a bus route come together in one location. (NOTE- intermodal refers to two or more modes that transfer the same cargo unit- like 40' shipping container from ship to train or truck); multimodal is the transfer of people/cargo between two or more modes and in NC is used in public transit settings i.e. Charlotte Multimodal Station).

Bicycle and Pedestrian	
Bicycle Lane or Buffered lane Facility (On-road)	A Bicycle Lane or Buffered lane is the portion of the roadway designated for preferential or exclusive use by bicyclists. Bicycle lanes are one-way facilities that typically carry bicycle traffic in the same direction as adjacent motor vehicle travel. Bicycle lanes may be enhanced with a longitudinal marked buffer area for more separation distance and are typically located in lower speed areas and/or within municipalities.
Separated Bicycle Facility (Off-road)	A facility for exclusive use by bicyclists that is located within or directly adjacent to the roadway and is physically separated from motor vehicle traffic with a vertical element. Separated bicycle facilities are typically in higher speed or rural areas both inside and outside of city and town municipal limits).
Shared Lane Marking (On-road)	Pavement marking symbol used to provide a higher level of guidance to bicyclists and alert motorists of the presence of bicyclists in the roadway. A shared lane marking is a bicycle accommodation and not a dedicated bicycle facility, typically within city and town municipal limits).
Paved Shoulders - for bicycles use (On-road)	Extension of pavement adjacent to the roadway. Paved shoulders are most often used on rural roadways. In addition to being used by bicyclists, paved shoulders provide temporary space for disabled vehicles. A paved shoulder is a bicycle accommodation and not a dedicated bicycle facility.
Multi-Use Path	A multi-use path is a multi-modal facility that can be used by bicyclists and pedestrians, located anywhere, functions independent of a roadway improvement, and physically separated from motorized vehicular traffic by an open space or barrier outside the roadway Right-of-way, but inside independent Rights-of-Way.
Side-Path	A side path is-modal facility that can be used by bicyclists and pedestrians constructed along a roadway, within the roadway right of way.
Sidewalk	A Sidewalk is a paved portion of the street between the curb lines or lateral lines of a roadway, and the adjacent property lines, intended for use by pedestrians.

ADDITIONAL PLANS AND STUDIES

Existing Transportation Plans

The following plans for areas within the county that were incorporated as a part of this plan is listed below and may be viewed on the web. Refer to them for detailed descriptions of recommendations that were not documented as a part of this report.

2012 Macon County Comprehensive Transportation Plan
The previous Macon County CTP was used to help inform projects and how conditions have changed. Recommendations made in the previous CTP were revisited as a part of the current one. (https://connect.ncdot.gov/projects/planning/TPBCTP/Macon%20County/MaconCTP_Report.pdf)

2019 Macon County Comprehensive Plan
The Macon County Comprehensive Plan was used to help inform the CTP of land use trends within the study area.
https://maconnc.org/planning-development-home.html

Bike Walk Franklin
BikeWalk Franklin is a local bicycle and pedestrian plan for the town of Franklin. This plan was referenced in the analysis of bicycle and pedestrian projects.
(http://franklinnc.com/pdf/planning/BikeWalk%20Franklin%20Approved%20March17.pdf)

Municipal Schools Transportation Assistance Report
During the early stages of the CTP study, feedback was given regarding a transportation issue in both the initial CTP survey and from the steering committee. Mobility and congestion concerns regarding travel near the intersection of Clarks Chapel Road and Wells Grove Road were identified. This intersection is near both the Macon County Middle and Mountain View Intermediate schools. MSTA was contacted to perform a study on this intersection. This study is not a mandate for action or a commitment by NCDOT to fund and/or construct any of the recommendations.

Issues discussed during early stages of the CTP included: peak hour congestion, the need of a policeman to direct traffic and traffic jams up to the Wal-Mart entrance along Wells Grove Road. MSTA recommended the implementation of a staggered start of minimum of 45 minutes between schools and the installation of traffic signals at the intersection. For the complete report of this study, see the link below.
(https://connect.ncdot.gov/projects/planning/TPBCTP/Macon%20County/Mountain%20View%20Int%20and%20Macon%20Middle%20MSTA%20Traffic%20Operations%20Report%209-3-20.pdf)

FACILITY TYPE AND LEVEL OF SERVICE

The NCDOT Facility Types, Control of Access, and Level of Service definitions provide descriptions for different types of roadways and how they can be categorized for ease of understanding.

Facility types and control of access definitions are primarily based on the function of the roadway, level of mobility and access, and whether the facility has traffic signals, driveways, and/or medians. Level of Service represents operating conditions and identifies desired design requirements for roadways to obtain practical capacity.

The following resources are available in this section:

- **Facility Types**
- **Control of Access**
- **Level of Service**

Summary of Facilities

- Full Access Control (A.C.)
- No driveways
- No signals
- No U-turn/left turn
- 4+ lanes w/ median
- 55+ mph

- Limited/Partial Access Control
- If Partial A.C.: Driveways must be limited and right in/out
- Signals OK if very rare (mostly rural areas)
- U-turn/Left turns limited
- 4+ lanes w/ median
- 45~60 mph

- Limited/Partial/ No Access Control
- If Partial A.C.: Driveways are right-in/right-out, limited curb cuts
- Signals OK
- U-turn/left turns limited
- 4+ lanes w/ median
- 30~55 mph

- Partial/No Access Control
- Driveways OK, recommended to limit curb cuts
- Signals OK
- Left turn/U-turn freely, but can be limited
- No Median
- Center Turn Lane (CTL) OK
- 25~55 mph

- No Access Control
- Driveways OK, recommended to limit curb cuts
- Signals OK
- Left turns freely
- Median OK
- CTL OK
- 2 lanes
- 25~55 mph

- No Access Control
- Driveways OK, recommended to limit curb cuts
- Signals OK
- Left turns freely
- Median OK
- CTL OK
- 2 lanes
- 25~55 mph

NORTH CAROLINA PLANNING FACILITY TYPES COMPARISON CHART

Criteria \ Class		Freeways	Expressways (Multilane Divided)	Boulevards (Multilane Divided)	Multilane Major (Undivided)	Major (2 Lanes)	Minor Thoroughfares
Functional Purpose	**Mobility**	High	High	Moderate	Moderate	Moderate to Low	Moderate to Low
	Access	Low	Low to Moderate	Low to Moderate	Low to Moderate	Moderate to High	Moderate to High
AASHTO Design Classification		• Interstate • Freeway	Arterial	• Arterial • Collector	• Arterial • Collector	• Collector • Local	• Collector • Local
Posted Speed Limit	**Min**	55 mph	45 mph	30 mph	30 mph	25 mph	25 mph
	Max	70 mph	60 mph	55 mph	55 mph	55 mph	55 mph
Control of Access		Full	Limited	Limited or Partial	Partial	None	None
Traffic Signals		Not Allowed	Not Allowed	Limited	Allowed	Allowed	Allowed
Driveways		Not Allowed	**Two Options:** ○ Limited Control of Access ▪ Not Allowed ○ Partial Control of Access ▪ One driveway connection per Parcel ▪ Consolidate and/or share driveways ▪ Limit access to connecting streets or service roads ▪ Right-in/Right-out	**Two Options:** ○ Limited Control of Access ▪ Not Allowed ○ Partial Control of Access ▪ One driveway connection per Parcel ▪ Consolidate and/or share driveways ▪ Limit access to connecting streets or service roads ▪ Right-in/Right-out	**Two Options:** ○ Partial Control of Access ▪ One driveway connection per Parcel ▪ Consolidate and/or share driveways ▪ Limit access to connecting streets or service roads ▪ Right-in/Right-out ○ No Control of Access ▪ Full movements ▪ Consolidate or share if possible	○ No Control of Access ▪ Full movements ▪ Consolidate or share if possible	○ No Control of Access ▪ Full movements ▪ Consolidate or share if possible
Cross-Section		• 4+ Lanes • Has Median	• 4+ Lanes • Has Median	• 4+ Lanes • Has Median	• 4+ Lanes • **No Median** • Two-way left turn lane OK	• 2-3 Lanes • **With or without Median** • Two-way left turn lane OK	• 2-3 Lanes • **No Median** • Two-way left turn lane OK
Intersection Types	**Interchange**	**Yes**	**Yes**	**Not Preferred**	**Not Preferred**	**Not Preferred**	**Not Preferred**
	LCI	**No**	**Yes**	**Preferred** (45+ MPH)	**Preferred**	**Not Preferred**	**Not Preferred**
	Grade Separation	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Listed in Order of Mobility Function

Full Control of Access	Connections to a facility provided only via ramps at interchanges. All cross-streets are grade-separated. No private driveway connections allowed. A control of access fence is placed along the entire length of the facility and at a minimum of 1000 feet beyond the ramp intersections on the Y lines (minor facility) at interchanges (if possible).
Limited Control of Access	Connections to a facility provided only via ramps at interchanges (major crossings) and at-grade intersections (minor crossings and service roads). No private driveway connections allowed. A control of access fence is placed along the entire length of the facility, except at intersections, and at a minimum of 1000 feet beyond the ramp intersections on the Y lines (minor facility) at interchanges (if possible).
Partial Control of Access	Connections to a facility provided via ramps at interchanges, at-grade intersections, and private driveways. Private driveway connections are normally defined as a maximum of one connection per parcel. One connection is defined as one ingress and one egress point. The use of shared or consolidated connections is highly encouraged. Connections may be restricted or prohibited if alternate access is available through other adjacent public facilities. A control of access fence is placed along the entire length of the facility, except at intersections and driveways, and at a minimum of 1000 feet beyond the ramp terminals on the minor facility at interchanges (if possible).
No Control of Access	Connections to a facility provided via ramps at interchanges, at-grade intersections, and private driveways. No physical restrictions, i.e., a control of access fence, exist. Normally, private driveway connections are defined as one connection per parcel. Additional connections may be considered if they are justified and if such connections do not negatively impact traffic operations and public safety.

Level of Service

The relationship of travel demand compared to the roadway capacity determines the level of service (LOS) of a roadway. Six levels of service identify the range of possible conditions. Designations range from LOS A, which represents the best operating conditions, to LOS F, which represents the worst operating conditions.

Design requirements for roadways vary according to the desired capacity and level of service. LOS D indicates "practical capacity" of a roadway, or the capacity at which the public begins to express dissatisfaction. Recommended improvements and overall design of the transportation plan were based upon achieving a minimum LOS D on existing facilities and a LOS C on new facilities. The six levels of service are described below and illustrated in the figures in this section.

- **LOS A**: Describes free-flow operations. Free Flow Speed (FFS) prevails and vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed.
- **LOS B**: Represents reasonably free-flow operations, and FFS is maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.
- **LOS C**: Provides for flow with speeds near the FFS. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service quality will be significant. Queues may be expected to form behind any significant blockages.
- **LOS D**: The level at which speeds begin to decline with increasing flows, with density increasing more quickly. Freedom to maneuver within the traffic stream is seriously limited and drivers experience reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.
- **LOS E**: Describes operation at capacity. Operations at this level are highly volatile because there are virtually no usable gaps within the traffic stream, leaving little room to maneuver within the traffic stream. Any disruption to the traffic stream, such as vehicles entering from a ramp or a vehicle changing lanes, can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown and substantial queuing. The physical and psychological comfort afforded to drivers is poor.
- **LOS F**: Describes breakdown, or unstable flow. Such conditions exist within queues forming behind bottlenecks.

Source: 2010 Highway Capacity Manual, Exhibit 11-4

TYPICAL SECTIONS

These typical sections were used when providing a project recommendation for recommended proposed solutions. Each typical section includes several data elements, such as the number of lanes, median type, and amount of right-of-way needed.

The typical sections were developed by a team from the Strategic Prioritization Office (SPOT), Roadway Design Unit, Preliminary Estimates Section, Transportation Planning Branch, Program Development Branch, and the Enterprise Visualization Section. Please contact the Strategic Prioritization Office with any questions.

For a full list of typical sections, go to the link below:
https://connect.ncdot.gov/projects/Roadway/RoadwayDesignAdministrativeDocuments/Highway%20Typical%20Sections%20for%20SPOT%20On!ine.pdf

Appendix Contents