



Comprehensive Transportation Plan



Cherokee County

July 2013

Comprehensive Transportation Plan

Cherokee County

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Transportation Planning Branch
N.C. Department of Transportation

In Cooperation with: Cherokee County
Town of Andrews
Town of Murphy
Southwestern Rural Planning Organization

July 2013



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Table of Contents

Executive Summary	i
I. Analysis of the Existing and Future Transportation System	I-1
Analysis Methodology and Data Requirements	I-1
Roadway System Analysis	I-1
Traffic Crash Analysis	I-3
Bridge Deficiency Assessment	I-3
Public Transportation and Rail	I-17
Public Transportation	I-17
Rail	I-18
Bicycles and Pedestrians	I-18
Land Use	I-19
Consideration of the Natural and Human Environment	I-25
Public Involvement	I-39
II. Recommendations	II-1
Implementation	II-1
Problem Statements	II-2
Highway	II-3
Public Transportation and Rail	II-11
Bicycle	II-11
Pedestrian	II-12

Appendices

Appendix A: Resources and Contacts	A-1
Appendix B: Comprehensive Transportation Plan Definitions	B-1
Appendix C: CTP Inventory and Recommendations	C-1
Appendix D: Typical Cross-Sections	D-1
Appendix E: Level of Service Definitions.....	E-1
Appendix F: Traffic Crash Analysis	F-1
Appendix G: Bridge Deficiency Assessment	G-1
Appendix H: Public Involvement	H-1

List of Figures

Figure 1	Comprehensive Transportation Plan	iii
Figure 2	Existing Roadway Deficiency	I-5
Figure 3	Future Roadway Deficiency	I-9
Figure 4	Crash Locations Map	I-13
Figure 5	Deficient Bridges	I-15
Figure 6	Existing Land Use Map	I-21
Figure 7	Future Land Use Map	I-23
Figure 8	Environmental Features	I-27
Figure 9	Typical Cross Sections	D-2
Figure 10	Level of Service Illustrations	E-2

List of Tables

Table 1	Environmental Features	I-25
Table 2	Restricted Environmental Features	I-26
Table 3	CTP Inventory and Recommendations	C-2
Table 4	Crash Locations	F-1
Table 5	Deficient Bridges	G-2

Executive Summary

In June of 2011, the Transportation Planning Branch of the North Carolina Department of Transportation and Cherokee County initiated a study to cooperatively develop the Cherokee County Comprehensive Transportation Plan (CTP), which includes the town of Andrews and town of Murphy. This is a long range multi-modal transportation plan that covers transportation needs through 2040. Modes of transportation evaluated as part of this plan include: highway, public transportation and rail, bicycle, and pedestrian. This plan does not cover routine maintenance or minor operations issues. Refer to Appendix A for contact information on these types of issues.

Findings of this CTP study were based on an analysis of the transportation system, environmental screening, and public input. Refer to Figure 1 for the CTP maps, which were mutually endorsed/adopted in 2013. Implementation of the plan is the responsibility of Cherokee County, the town of Andrews, the town of Murphy, and NCDOT. Refer to Chapter 2 for information on the implementation process.

This report documents the recommendations for improvements that are included in the Cherokee County CTP. The major recommendations for improvements are listed below. More detailed information about these and other recommendations can be found in Chapter 2.

- **US 19/64/74/129:** Convert the existing five land section from the end of the existing four lane section to Hiwassee Street to a four lane, divided section with a raised grass median as well as bicycle and pedestrian accommodations.
- **US 19/74/129:** Add climbing lanes for trucks from the end of the four lane divided section east of Andrews to Macon County.
- **A-9:** The A-9 project is being studied as part of a regional comprehensive plan. The CTP may be revised pending the outcome of the study.
- **Public Transit:** Create park-and-ride lots near Murphy and Andrews and provide regular fixed transit service.

Adopted by:

Cherokee County

Date: April 1, 2013

Town of Andrews

Date: April 9, 2013

Town of Murphy

Date: April 1, 2013

NCDOT

Date: July 11, 2013

Endorsed by:

Southwestern RPO

Date: May 9, 2013

Recommended by:

Transportation Planning Branch

Date: May 21, 2013

NOTES:

Future US 74 (TIP project A-0009) is currently being studied as part of a regional comprehensive plan and may be revised pending the outcome of the study.

TENNESSEE

Graham County

Macon County

Clay County

GEORGIA

- Sheet 1 Adoption Sheet
- Sheet 2 Highway Map
- Sheet 3 Public Transportation and Rail Map
- Sheet 4 Bicycle Map
- Sheet 5 Pedestrian Map

Legend

-  Roads
-  Airport
-  School
-  Railroad
-  Eastern Band of Cherokee Indians Boundary
-  County Boundary
-  Rivers and Streams
-  Bodies of Water
-  Municipal Boundary
-  National Forest



Figure 1

Sheet 1 of 5



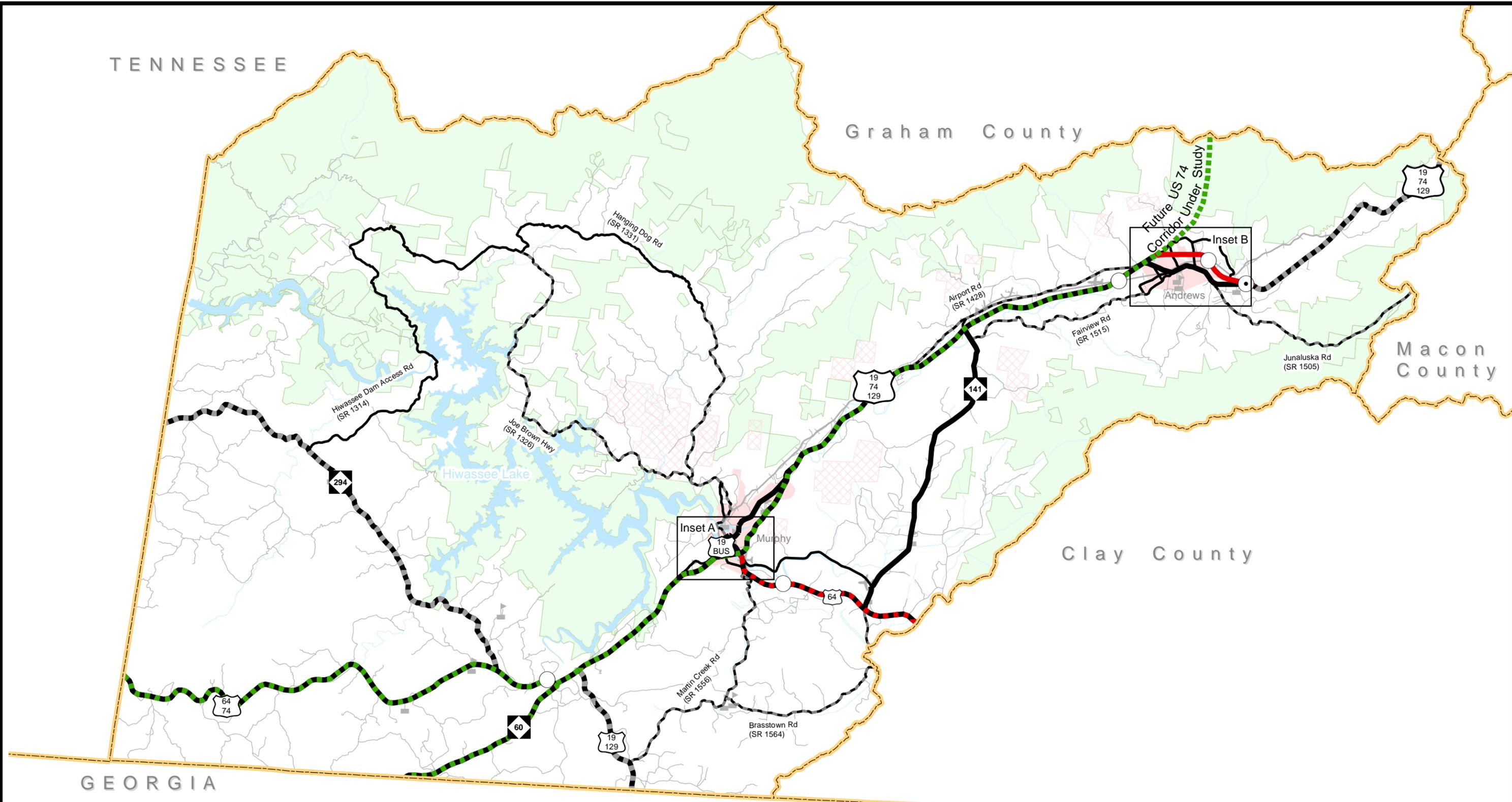
Base map date: March 1, 2012

Refer to CTP document for more details

Cherokee County
North Carolina

**Comprehensive
Transportation Plan**

Plan date: March 27, 2013



Freeways

- Existing
- - - Needs Improvement
- · · Recommended

Expressways

- Existing
- - - Needs Improvement
- · · Recommended

Boulevards

- Existing
- - - Needs Improvement
- · · Recommended

Other Major Thoroughfares

- Existing
- - - Needs Improvement
- · · Recommended

Minor Thoroughfares

- Existing
- - - Needs Improvement
- · · Recommended

- Existing Interchange
- Proposed Interchange
- Existing Grade Separation
- Proposed Grade Separation



Figure 1

Sheet 2 of 5



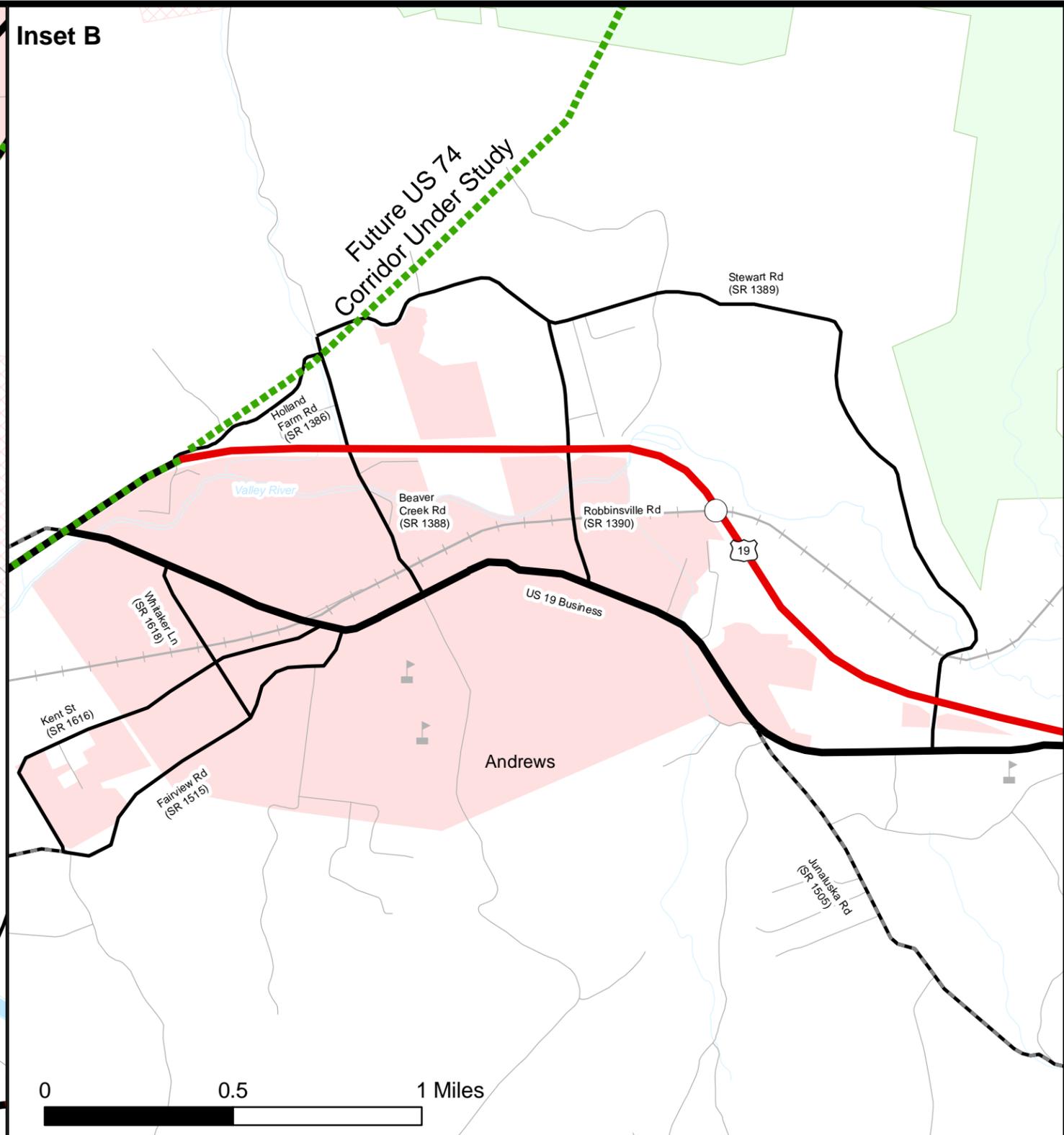
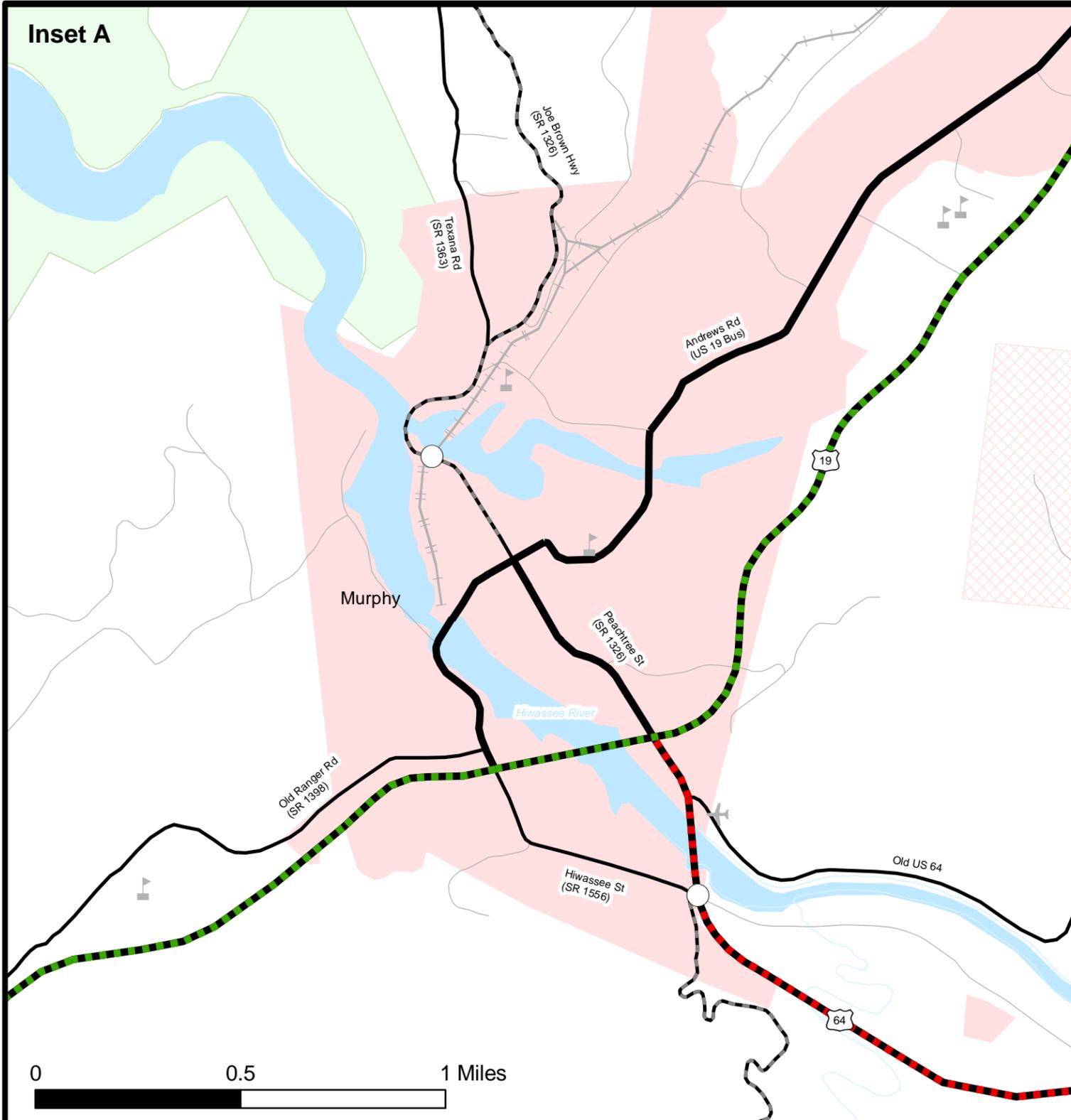
Base map date: March 1, 2012

Refer to CTP document for more details

**Highway Map
Cherokee County**

**Comprehensive
Transportation Plan**

Plan date: March 27, 2013



Freeways

- Existing
- Needs Improvement
- Recommended

Expressways

- Existing
- Needs Improvement
- Recommended

Boulevards

- Existing
- Needs Improvement
- Recommended

Other Major Thoroughfares

- Existing
- Needs Improvement
- Recommended

Minor Thoroughfares

- Existing
- Needs Improvement
- Recommended

- Existing Interchange
- Proposed Interchange
- Existing Grade Separation
- Proposed Grade Separation

Figure 1

Sheet 2A of 5



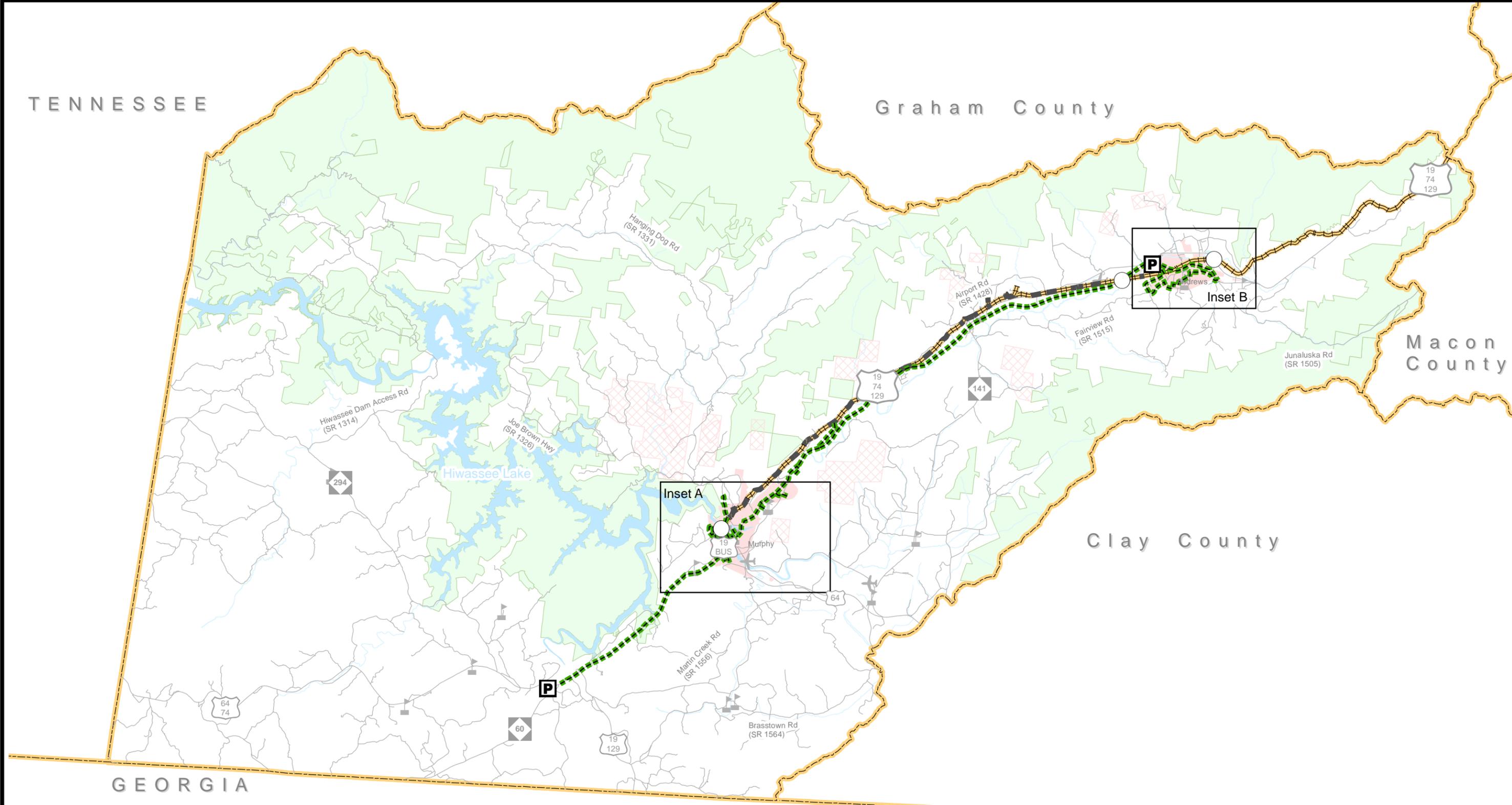
Base map date: March 1, 2012

Refer to CTP document for more details

**Highway Map
Cherokee County**

**Comprehensive
Transportation Plan**

Plan date: March 27, 2013



Bus Routes Existing Needs Improvement Recommended	Operational Strategies Existing Needs Improvement Recommended	High Speed Rail Corridor Existing Recommended	Rail Stops Existing Recommended
Fixed Guideway Existing Needs Improvement Recommended	Rail Corridor Active Inactive Recommended	Intermodal Connector Existing Recommended Existing Grade Separation Proposed Grade Separation	Park and Ride Lot Existing Recommended



Figure 1
Sheet 3 of 5



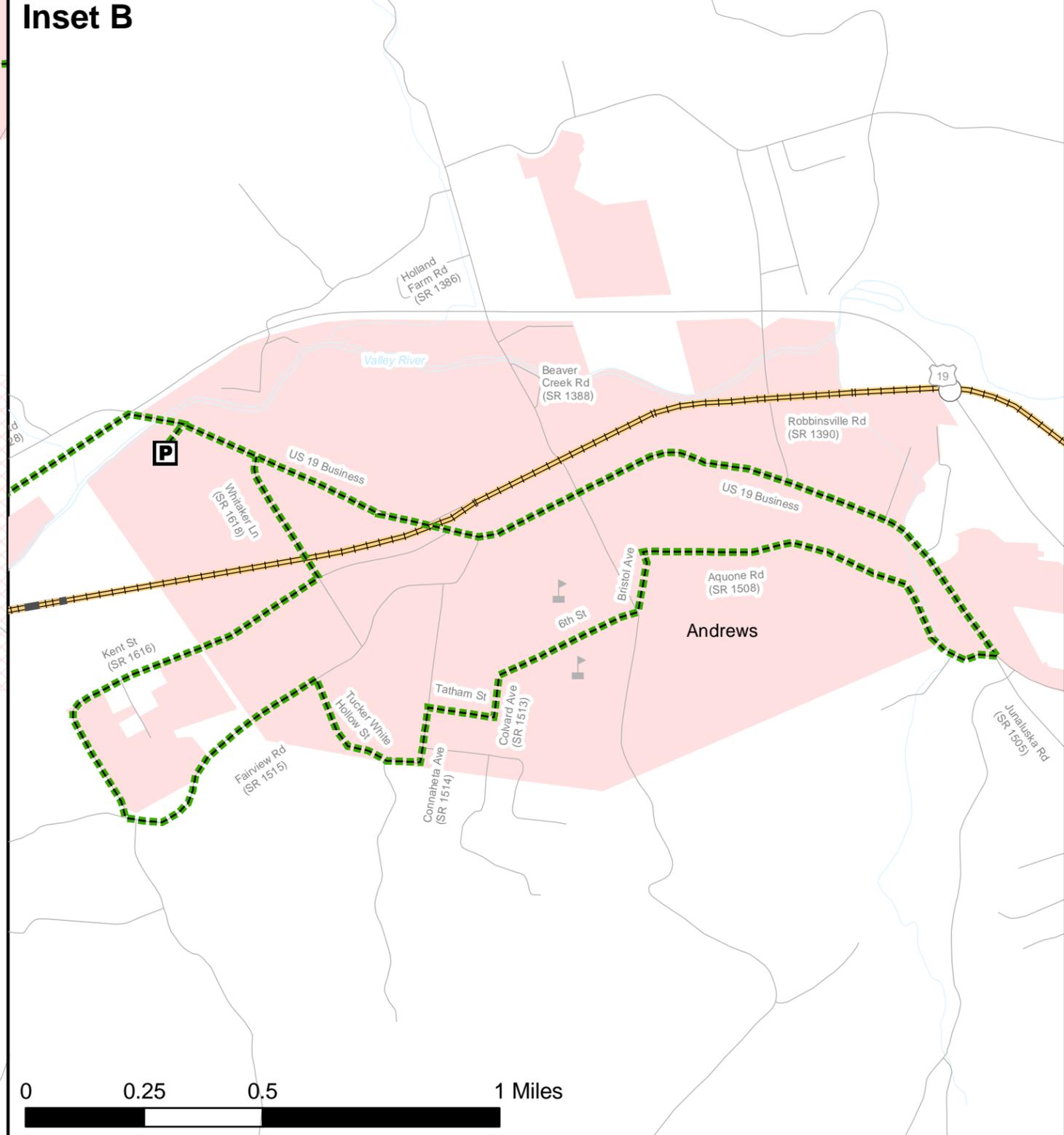
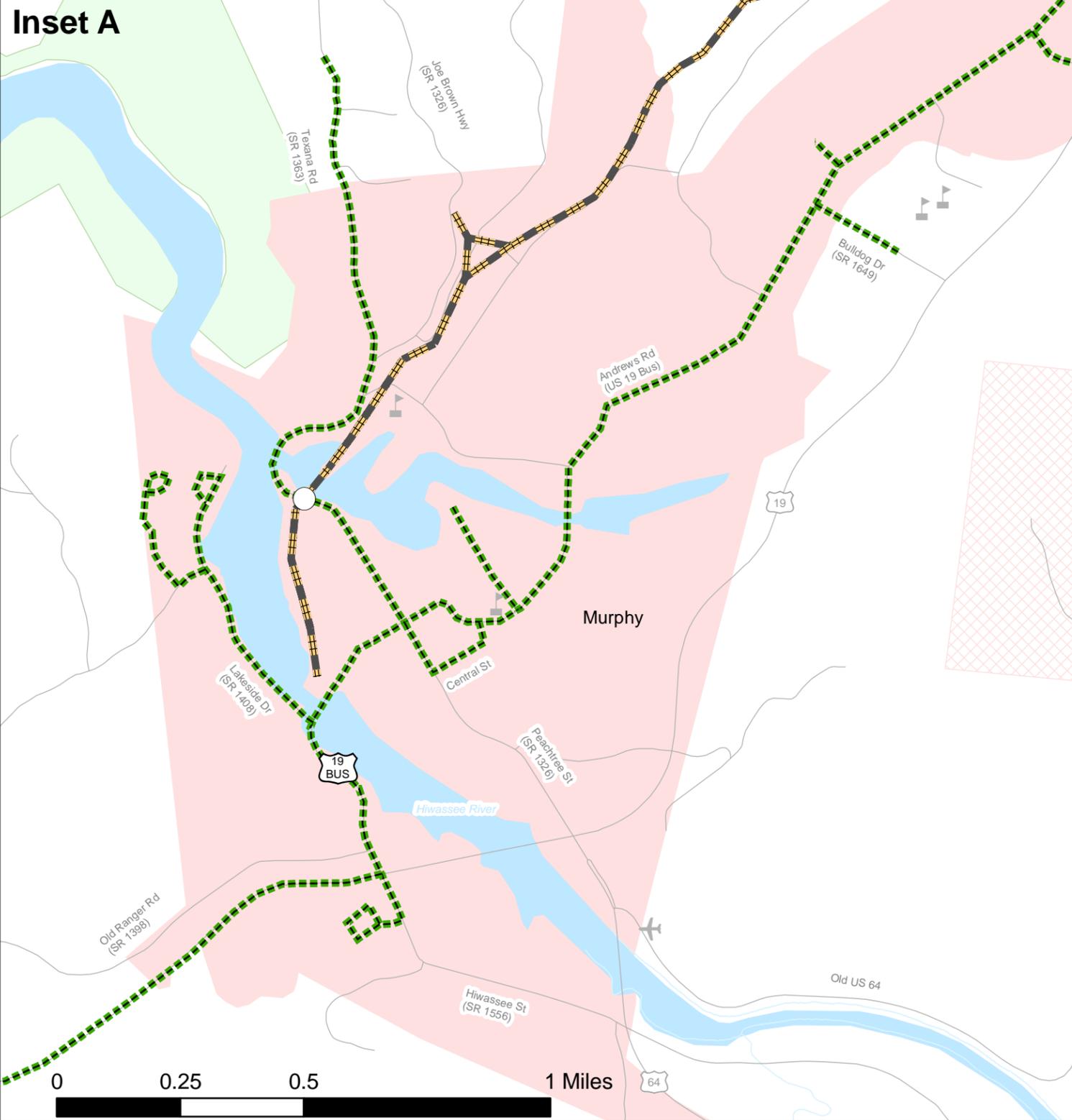
Base map date: March 1, 2012

Refer to CTP document for more details

Public Transportation and Rail Map Cherokee County

Comprehensive Transportation Plan

Plan date: March 27, 2013



Bus Routes

- Existing
- Needs Improvement
- Recommended

Fixed Guideway

- Existing
- Needs Improvement
- Recommended

Operational Strategies

- Existing
- Needs Improvement
- Recommended

Rail Corridor

- Active
- Inactive
- Recommended

High Speed Rail Corridor

- Existing
- Recommended

Intermodal Connector

- Existing
- Recommended
- Existing Grade Separation
- Proposed Grade Separation

Rail Stops

- Existing
- Recommended

Park and Ride Lot

- Existing
- Recommended

Figure 1

Sheet 3A of 5



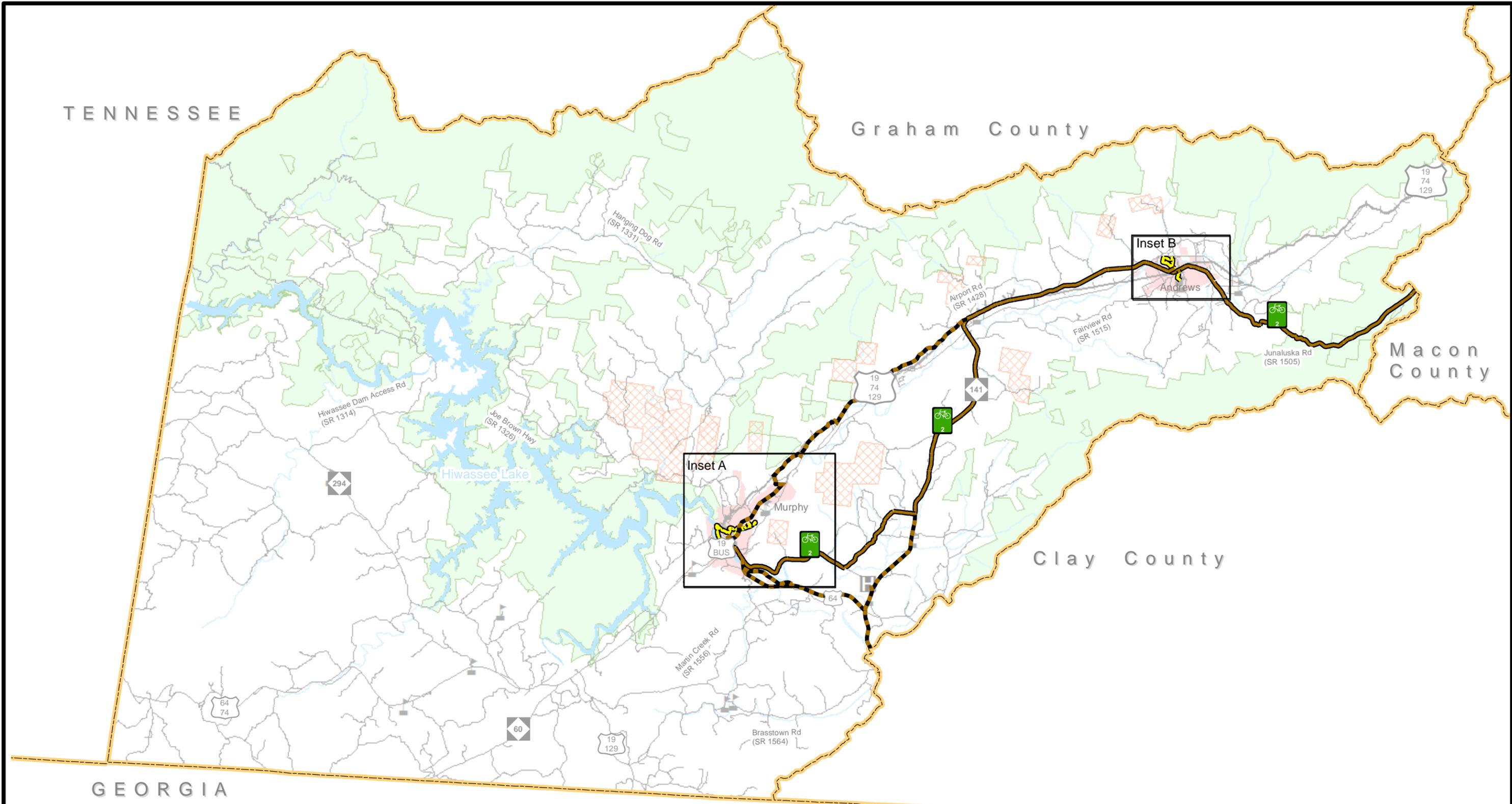
Base map date: March 1, 2012

Refer to CTP document for more details

**Public Transportation
and Rail Map
Cherokee County**

**Comprehensive
Transportation Plan**

Plan date: March 27, 2013



On Road

- Existing
- Needs Improvement
- Recommended

- Existing Grade Separation
- Proposed Grade Separation

Off Road

- Existing
- Needs Improvement
- Recommended

Multi-Use Paths

- Existing
- Needs Improvement
- Recommended



Figure 1

Sheet 4 of 5

Base map date: March 1, 2012

Refer to CTP document for more details

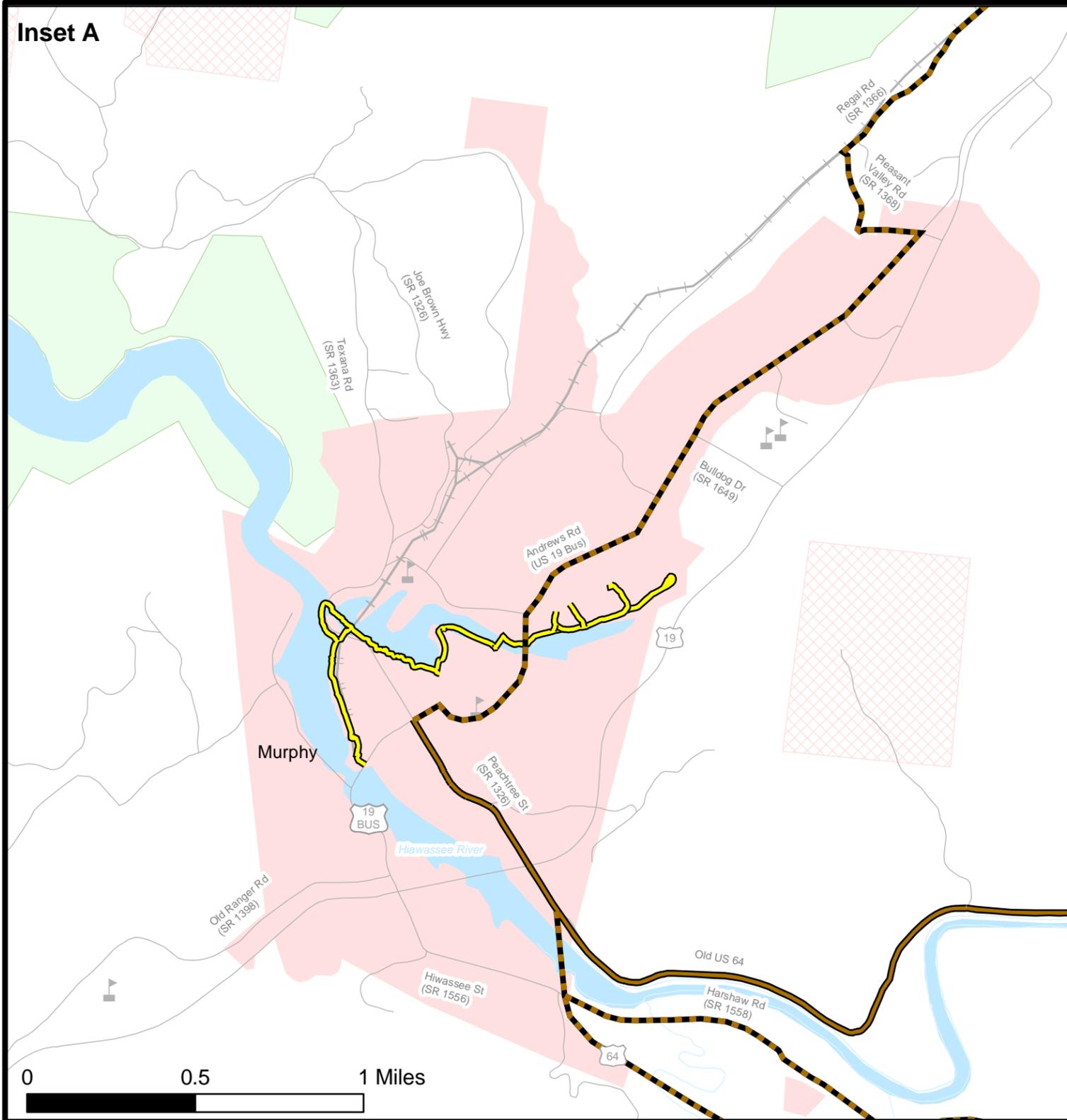


**Bicycle Map
Cherokee County**

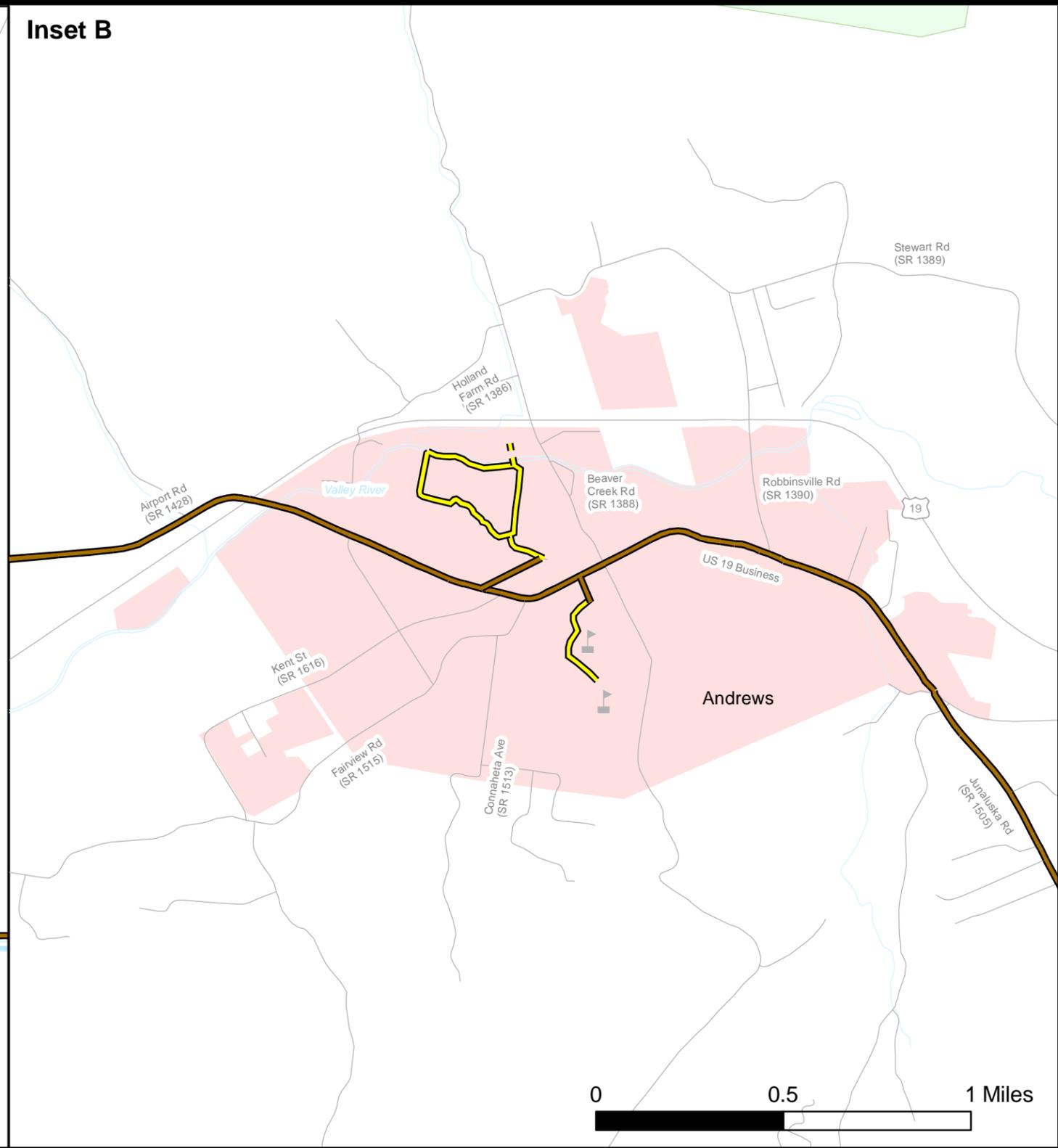
**Comprehensive
Transportation Plan**

Plan date: March 27, 2013

Inset A



Inset B



On Road

- Existing
- Needs Improvement
- Recommended

Off Road

- Existing
- Needs Improvement
- Recommended

Multi-Use Paths

- Existing
- Needs Improvement
- Recommended

- Existing Grade Separation
- Proposed Grade Separation

Figure 1

Sheet 4A of 5

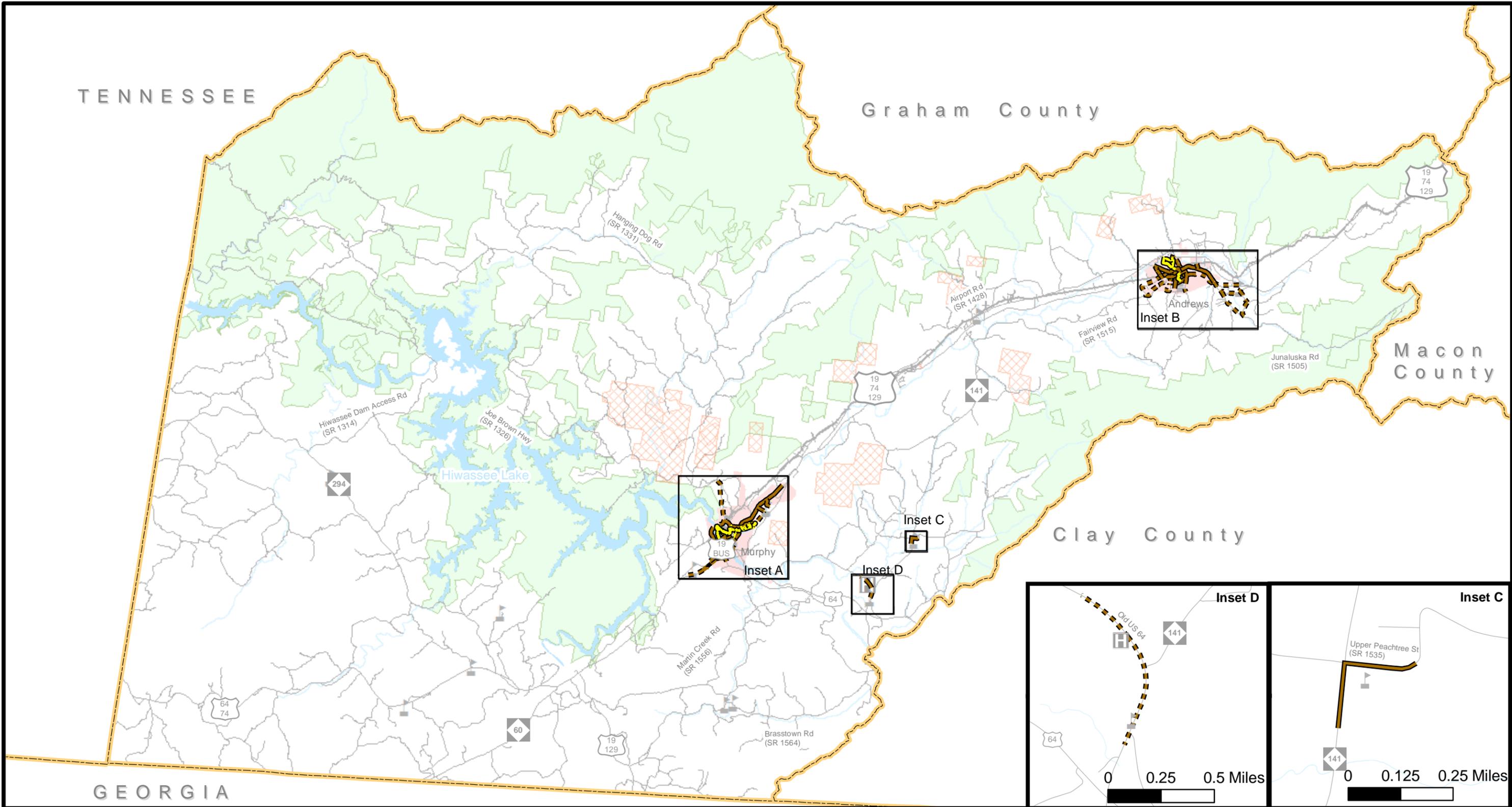


Base map date: March 1, 2012
Refer to CTP document for more details

**Bicycle Map
Cherokee County**

**Comprehensive
Transportation Plan**

Plan date: March 27, 2013



- | | | |
|---------------------------|-------------------|------------------------|
| Sidewalks | Off Road | Multi-Use Paths |
| Existing | Existing | Existing |
| Needs Improvement | Needs Improvement | Needs Improvement |
| Recommended | Recommended | Recommended |
| Existing Grade Separation | | |
| Proposed Grade Separation | | |

0 0.5 1 2 3 Miles

Figure 1

Sheet 5 of 5

Base map date: March 1, 2012

Refer to CTP document for more details

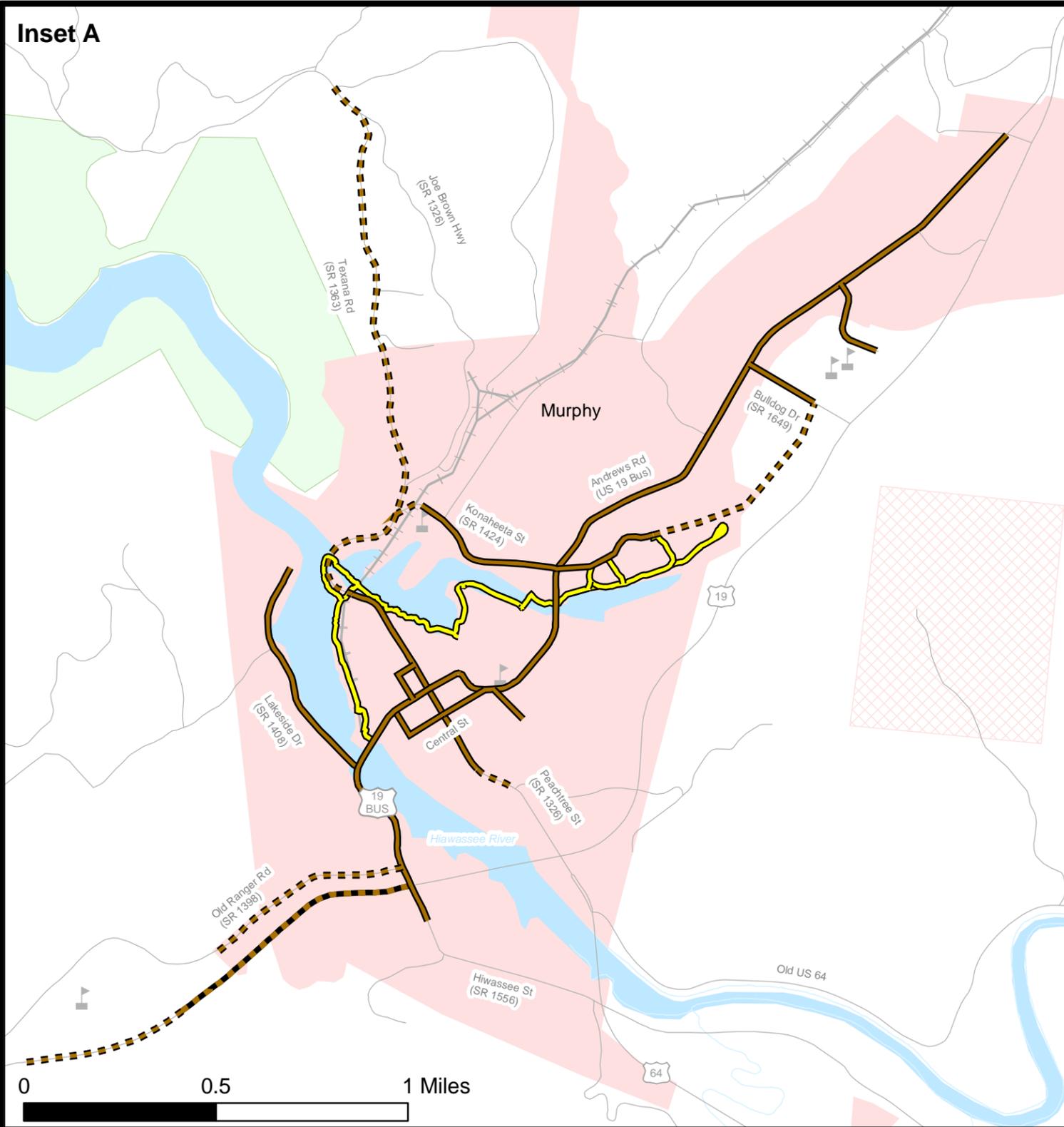


Pedestrian Map
Cherokee County

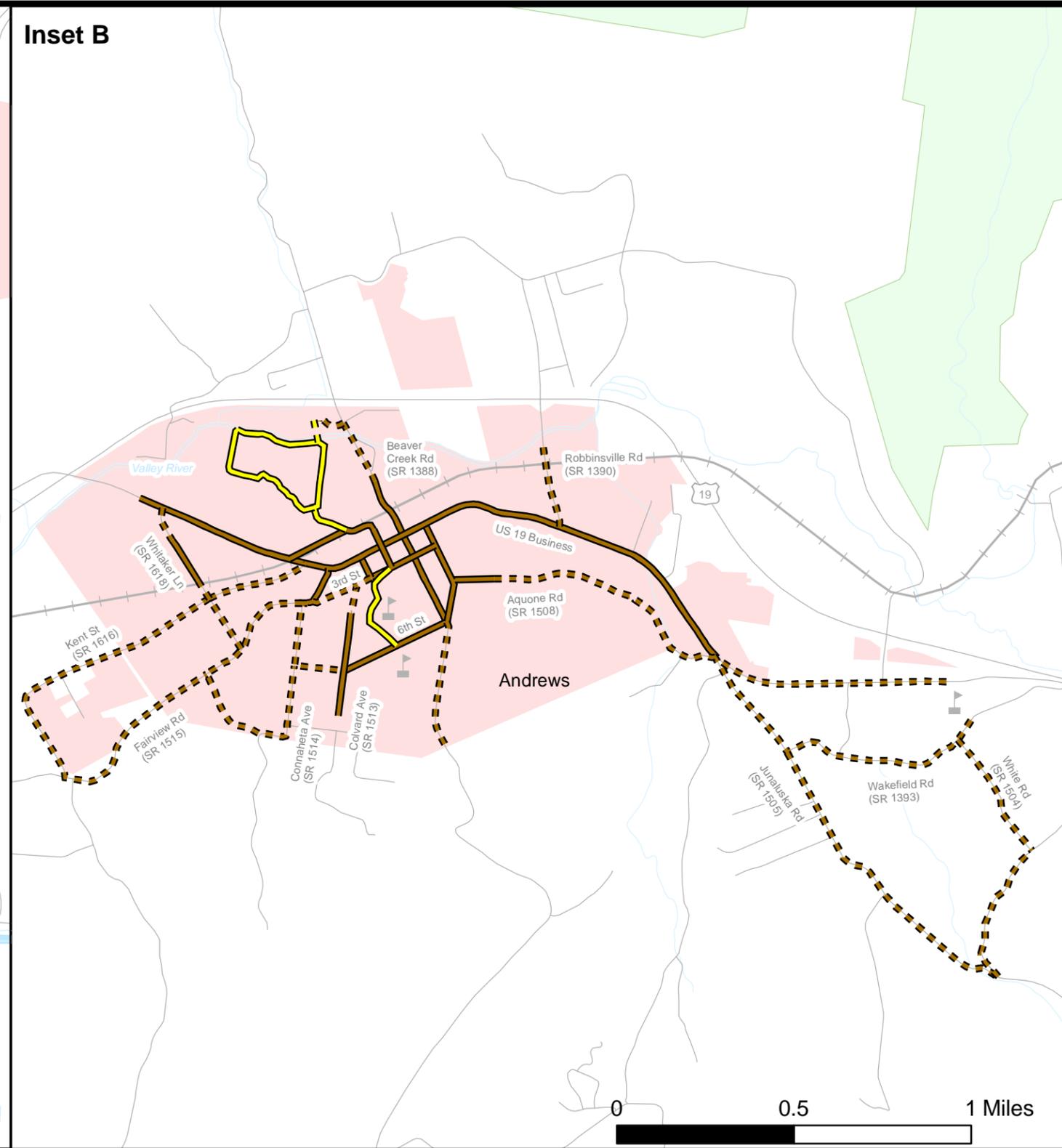
Comprehensive
Transportation Plan

Plan date: March 27, 2013

Inset A



Inset B



Sidewalks

- Existing
- Needs Improvement
- Recommended

Off Road

- Existing
- Needs Improvement
- Recommended

Multi-Use Paths

- Existing
- Needs Improvement
- Recommended

- Existing Grade Separation
- Proposed Grade Separation

Figure 1

Sheet 5A of 5



Base map date: March 1, 2012

Refer to CTP document for more details

**Pedestrian Map
Cherokee County**

**Comprehensive
Transportation Plan**
Plan date: March 27, 2013

I. Analysis of the Existing and Future Transportation System

A Comprehensive Transportation Plan (CTP) is developed to ensure that the progressively developed 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 utilized 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.

In order to develop a Comprehensive Transportation Plan (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 in order 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 desires. 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 such as pavement widths, intersection geometry, and intersection controls; or system problems, such as the need to construct missing travel links, bypass routes, loop facilities, additional radial routes or infrastructure improvements to meet statewide initiatives.

One of those statewide initiatives is the Strategic Highway Corridor (SHC) Vision Plan adopted by the Board of Transportation on September 2, 2004 and last revised on July 10, 2008. The SHC Vision Plan represents a timely initiative to protect and maximize the mobility and connectivity on a core set of highway corridors throughout North Carolina, while promoting environmental stewardship through maximizing the use of existing facilities to the extent possible, and fostering economic prosperity through the quick and efficient movement of people and goods.

The primary purpose of the SHC Vision Plan is to provide a network of high-speed, safe, reliable highways throughout North Carolina. The primary goal to support this purpose is to create a greater consensus towards the development of a genuine vision for each corridor – specifically towards the identification of a desired facility type (Freeway, Expressway, Boulevard, or Thoroughfare) for each corridor. Individual Comprehensive Transportation Plans shall incorporate the long-term vision of each corridor. Refer to Appendix A for contact information.

In the development of this plan, travel demand was projected from 2010 to 2040 using a trend line analysis based on Annual Average Daily Traffic (AADT) from 1991 to 2010. 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 Cherokee County, Andrews and Murphy in 2012.

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 eighty percent of the capacity. Refer to Figures 2 and 3 for existing and future capacity deficiencies.

Capacity is the maximum number of vehicles which have 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 following:

- 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 express dissatisfaction. The practical capacity for each roadway was developed based on the 2000 Highway Capacity Manual using the NC LOS Program. 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 Appendix E for detailed information on LOS.

Traffic Crash Analysis

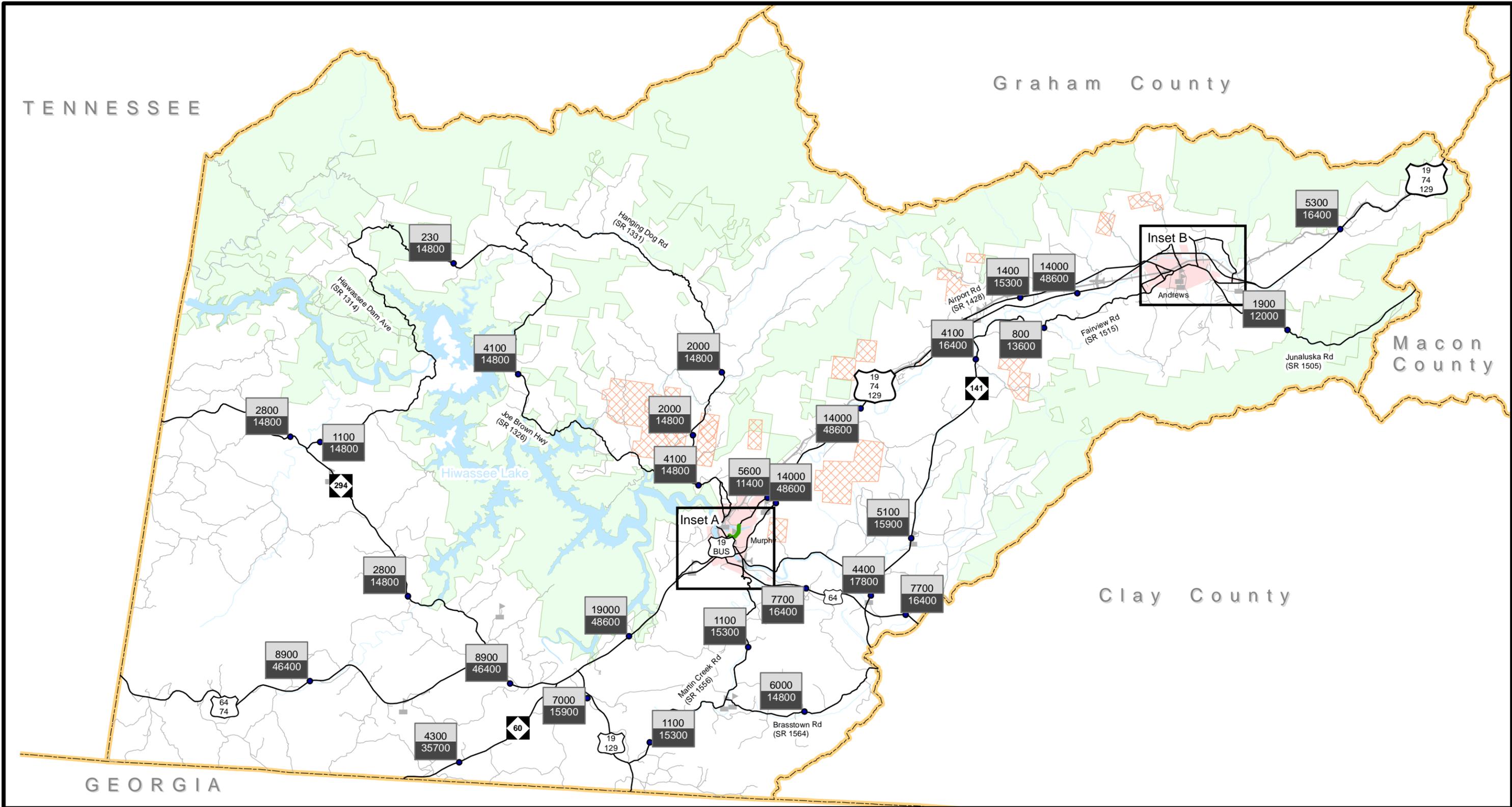
Traffic crashes are often used as an indicator for locating congestion and roadway problems. Crash patterns obtained from an analysis of crash data can lead to the identification of improvements that will reduce the number of crashes. A crash analysis was performed for the Cherokee County CTP for crashes occurring in the planning area between January 1, 2009 and December 31, 2011. During this period, a total of 7 intersections were identified as having a high number of crashes as illustrated in Figure 4. Refer to Appendix F for a detailed crash analysis.

Bridge Deficiency Assessment

Bridges are a vital and unique 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. Third, a bridge presents the greatest opportunity of all potential highway failures for disruption of community welfare. Finally, and most importantly, a bridge represents the greatest opportunity of all highway failures for loss of life. 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. Twenty-three (23) deficient bridges were identified within the planning area along routes evaluated for this CTP and are illustrated in Figure 5. Refer to Appendix G for more detailed information.

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Legend

Over Capacity	Airport	Municipal Boundary
Near Capacity	Railroad	Eastern Band of Cherokee Indians Boundary
Study Roads	School	National Forest
Roads	County Boundary	Bodies of Water
		Rivers and Streams

2010 Volumes (AADT)
2010 Capacity

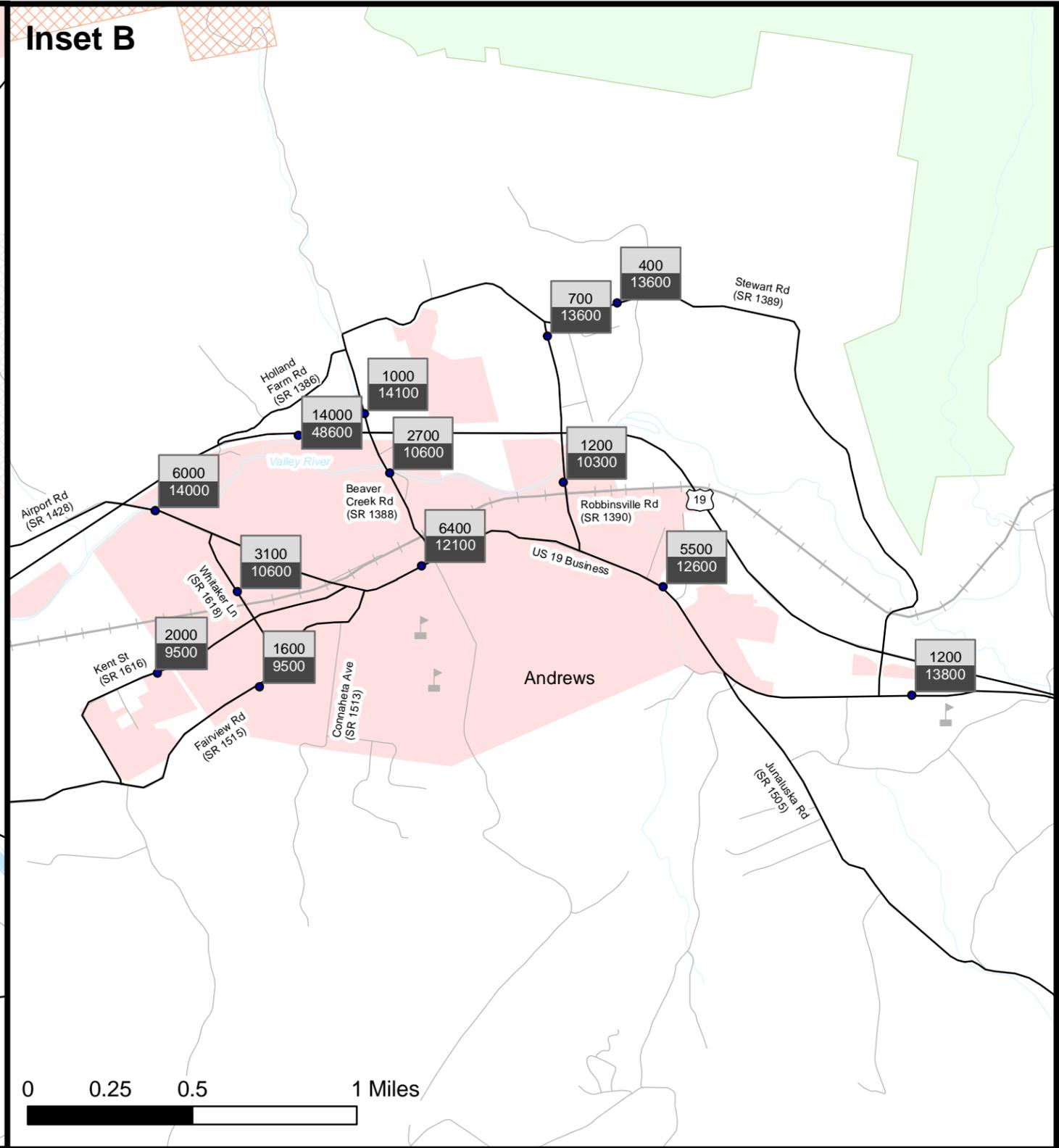
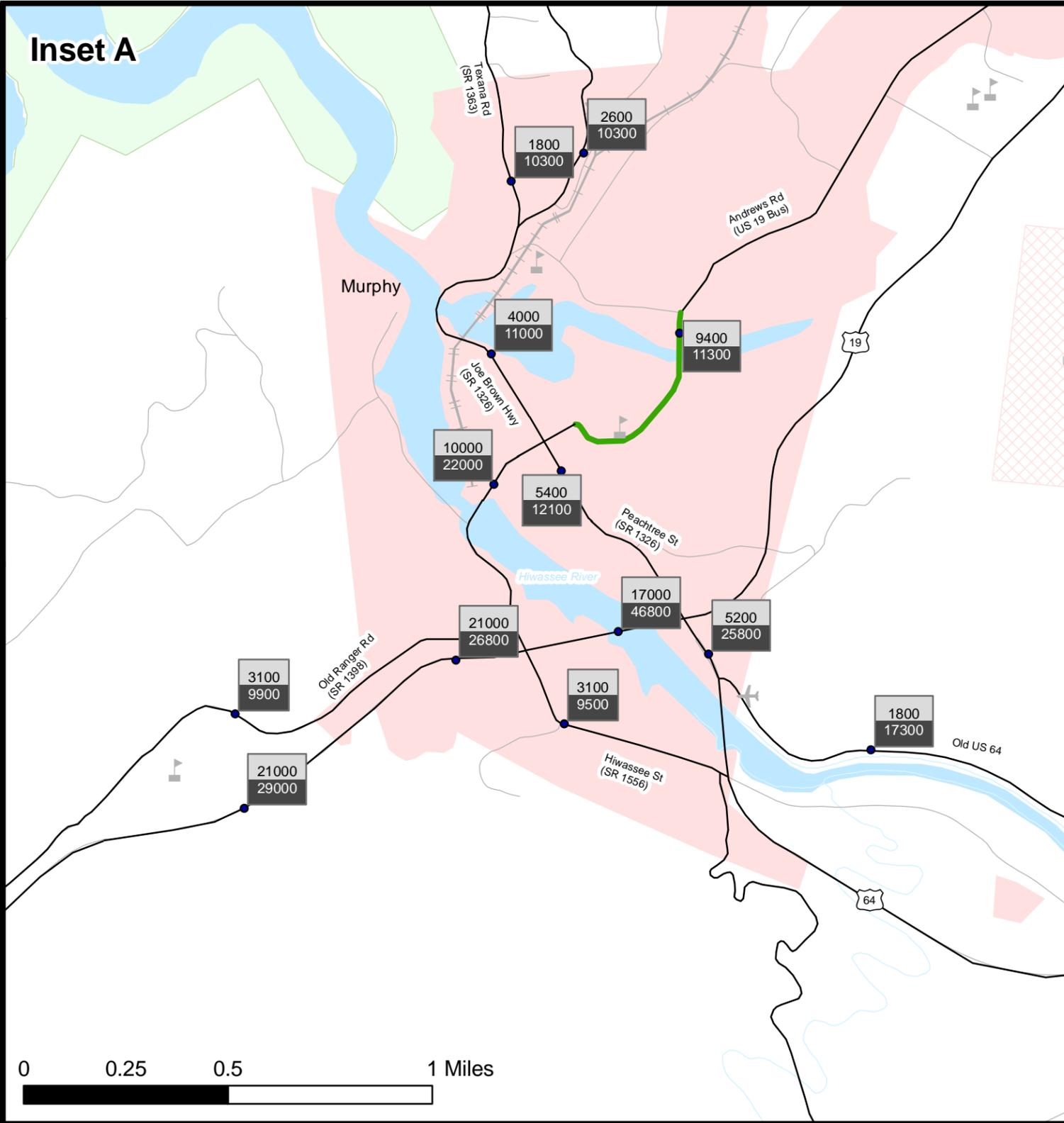
0 0.5 1 2 3 Miles

Figure 2
Sheet 1 of 2

Base map date: March 1, 2012

2010 Volumes and Capacity Deficiencies

Cherokee County Comprehensive Transportation Plan



Legend

	Over Capacity		Airport		Municipal Boundary
	Near Capacity		Railroad		Eastern Band of Cherokee Indians Boundary
			School		National Forest
			County Boundary		Bodies of Water
	Study Roads		Rivers and Streams		
	Roads				

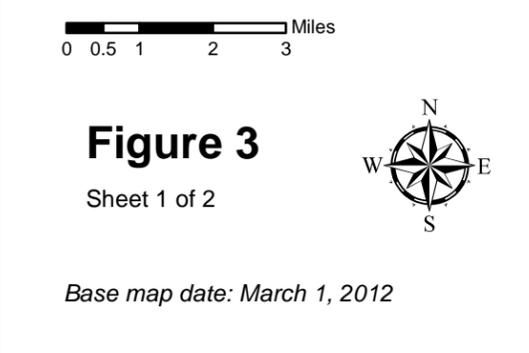
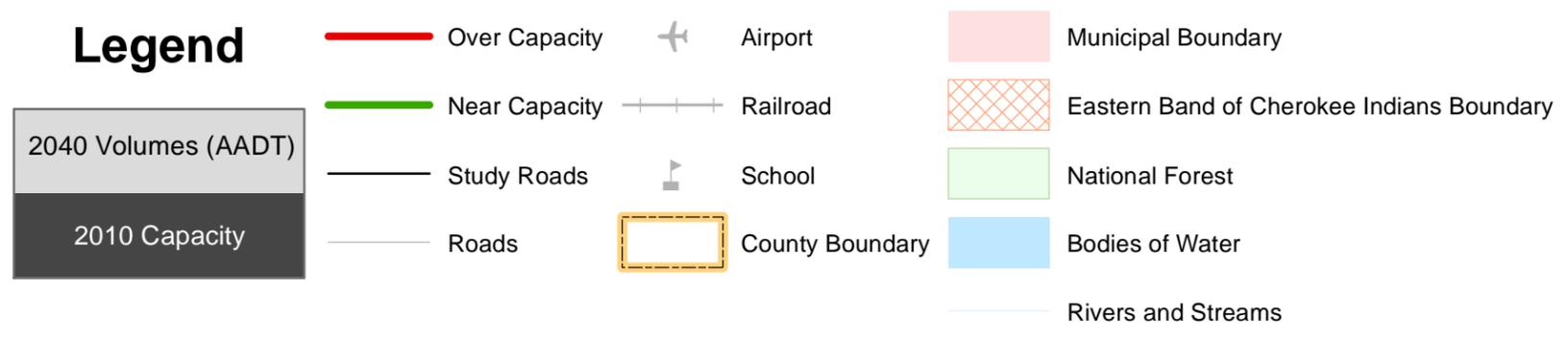
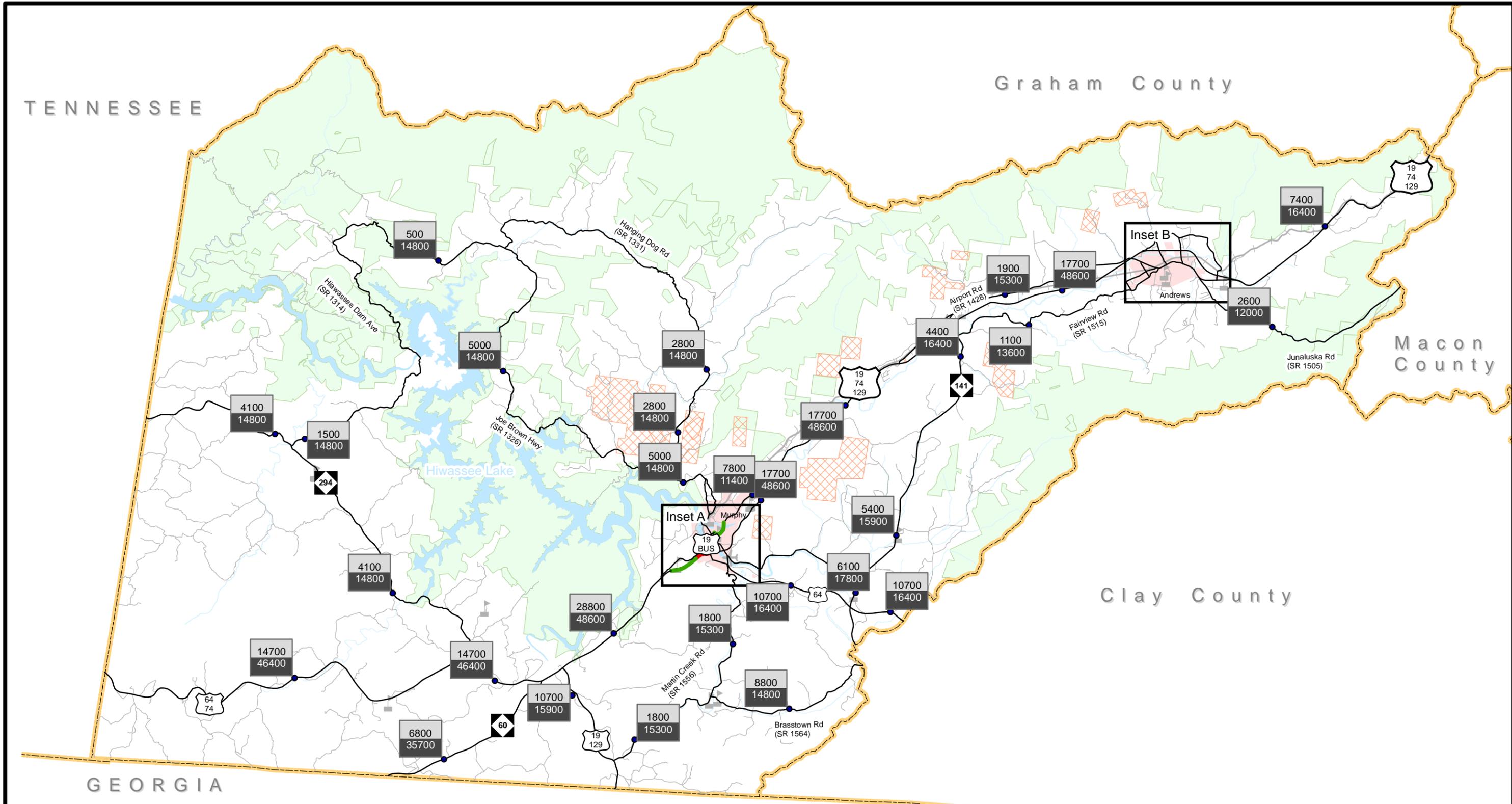
Figure 2

Sheet 2 of 2

Base map date: March 1, 2012

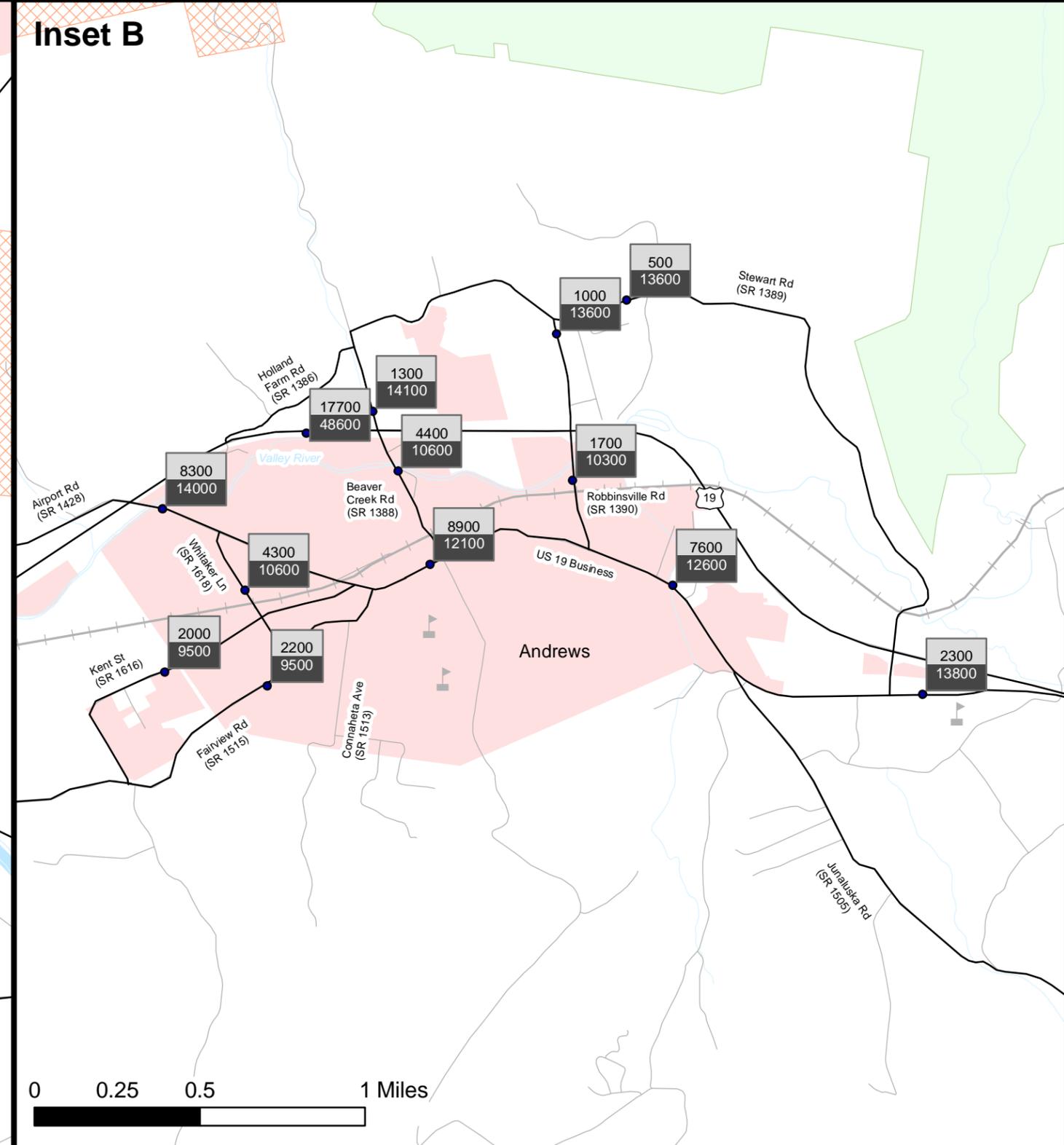
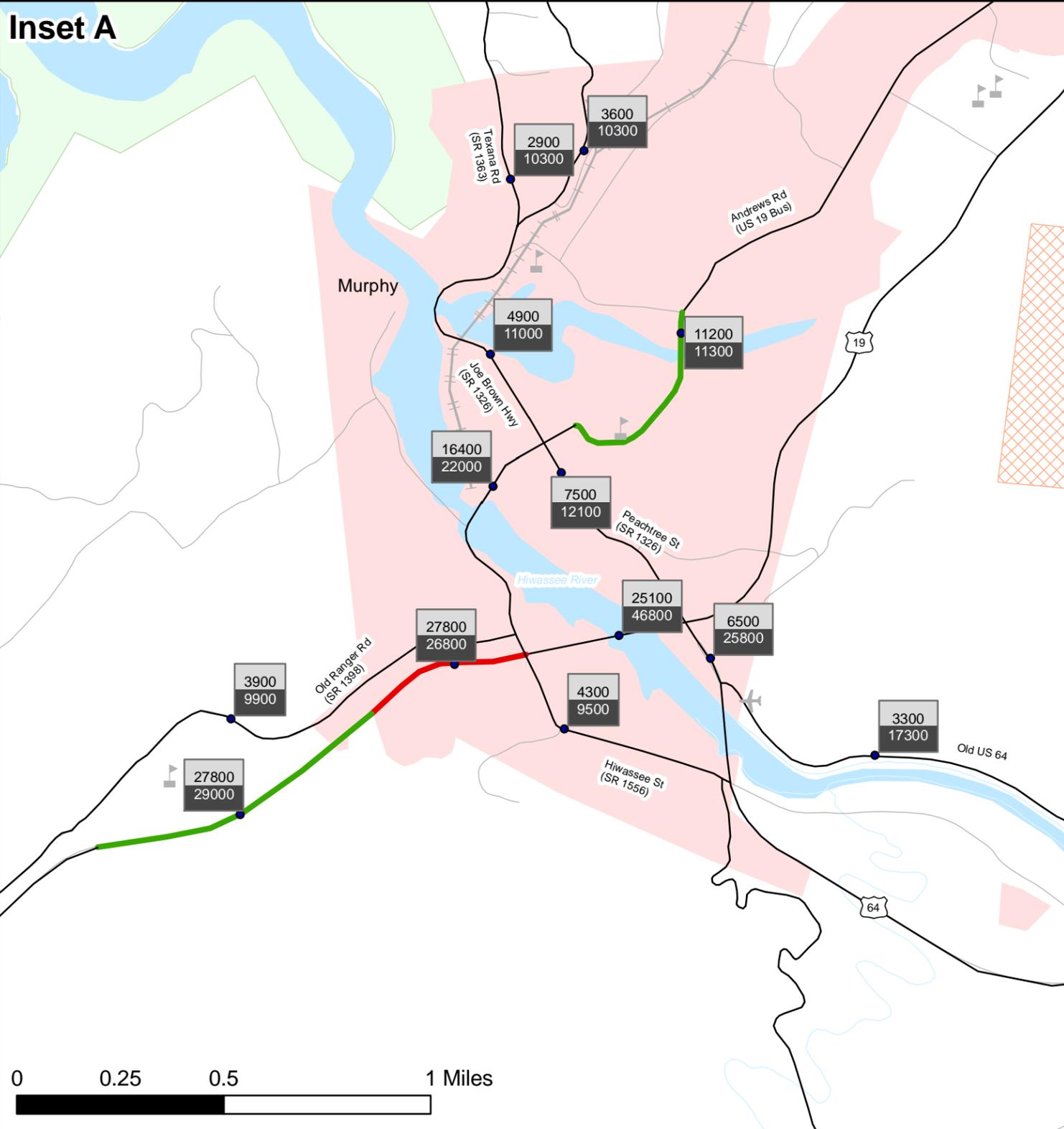
2010 Volumes and Capacity Deficiencies

Cherokee County Comprehensive Transportation Plan



2040 Volumes and Capacity Deficiencies

Cherokee County Comprehensive Transportation Plan



Legend

	Over Capacity		Airport		Municipal Boundary
	Near Capacity		Railroad		Eastern Band of Cherokee Indians Boundary
	2040 Volumes (AADT)		School		National Forest
	2010 Capacity		County Boundary		Bodies of Water
	Study Roads		Rivers and Streams		
	Roads				

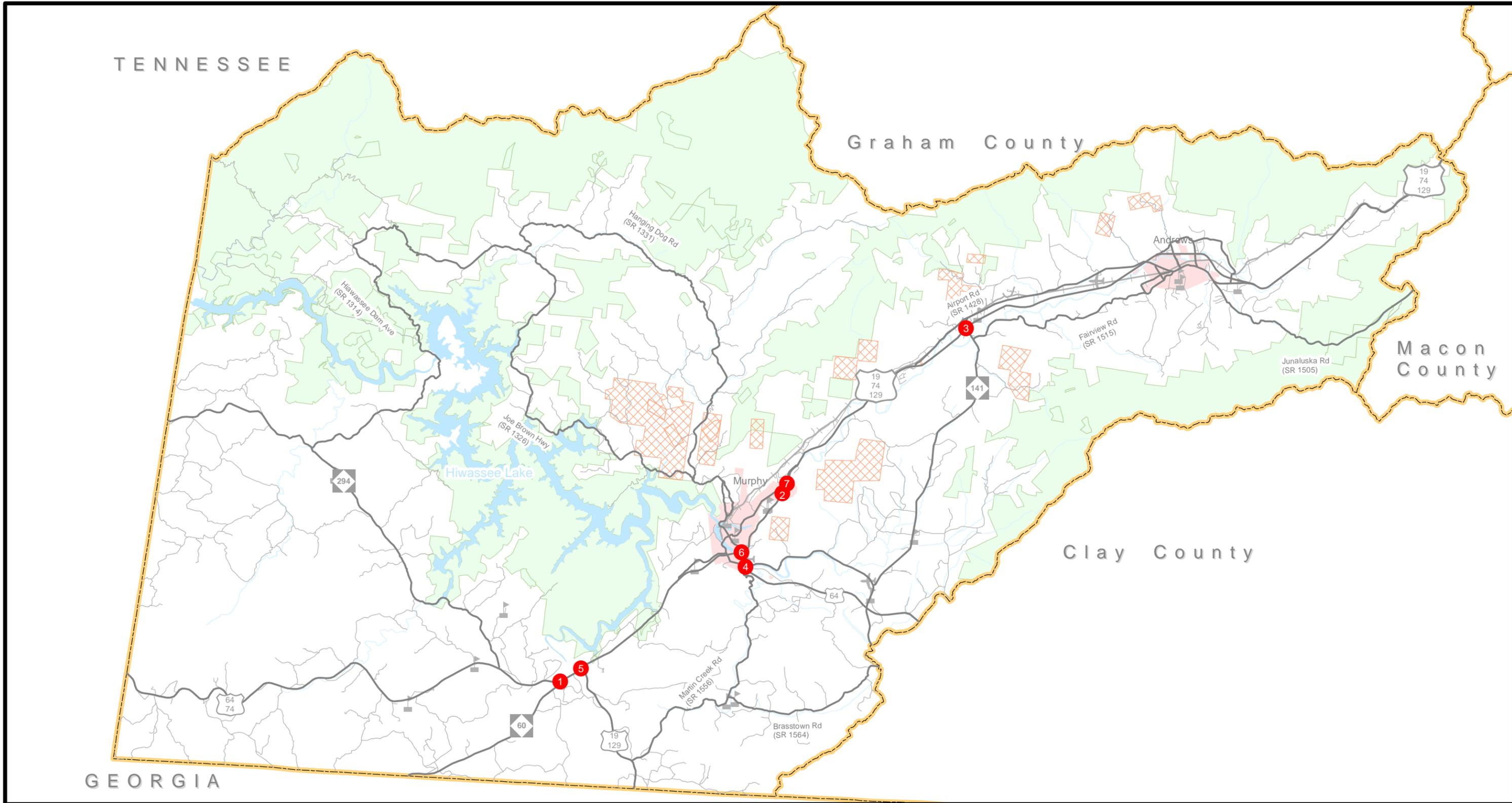
Figure 3

Sheet 2 of 2

Base map date: March 1, 2012

2040 Volumes and Capacity Deficiencies

Cherokee County Comprehensive Transportation Plan



Legend

Crash Location
(# Map Index)

- Roads
- ✈ Airport
- 🏫 School
- 🚊 Railroad
- River or Stream
- 🟦 Body of Water
- 🟪 Municipal Boundary
- 🟡 County Boundary
- 🟩 Eastern Band of Cherokee Indian Land

0 0.5 1 2 3 Miles

Figure 4



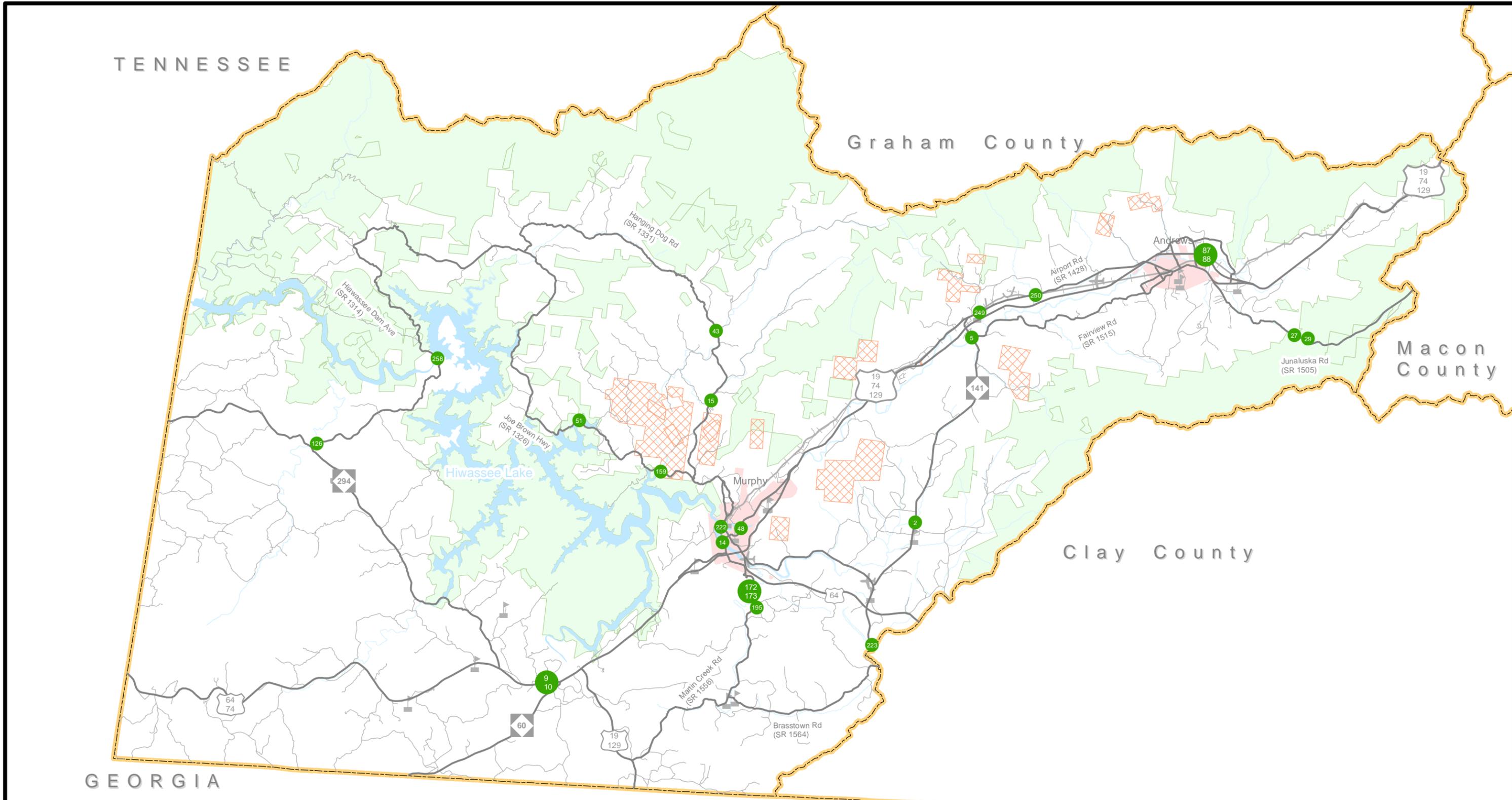
Base map date: March 1, 2012

Refer to Appendix F, Table 4

Crash Locations
January 1, 2009 to December 31, 2011

Cherokee County

**Comprehensive
Transportation Plan**



Legend

Deficient Bridge
(# Bridge Number)

- Roads
- ✈ Airport
- 🏫 School
- 🚂 Railroad
- River or Stream
- 🟦 Body of Water
- 🟪 Municipal Boundary
- 🟡 County Boundary
- 🟩 Eastern Band of Cherokee Indian Land

0 0.5 1 2 3 Miles

Figure 5



Base map date: March 1, 2012

Refer to Appendix G, Table 5

Deficient Bridges

Cherokee County

**Comprehensive
Transportation Plan**

Public Transportation and Rail

Public transportation and rail are vital modes of transportation that give alternative options for transporting people and goods from one place to another.

Public Transportation

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.

- Community Transportation - Local transportation efforts formerly centered on assisting clients of human service agencies. Today, the vast majority of rural systems serve the general public as well as those clients.
- Regional Community Transportation - Regional community transportation systems are composed of two or more contiguous counties providing coordinated / consolidated service. Although such systems are not new, the NCDOT Board of Transportation is encouraging single-county systems to consider mergers to form more regional systems.
- Urban Transportation – 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 are at work in three areas of the state. Consolidated urban-community transportation exists in five areas of the state. In those systems, one transportation system provides both urban and rural transportation within the county.
- Regional Urban Transportation - Regional urban transit systems currently operate in three areas of the state. These systems connect multiple municipalities and counties.
- Intercity Transportation - Intercity bus service is one of a few remaining examples of privately owned and operated public transportation in North Carolina. Intercity buses serve many cities and towns throughout the state and provide connections to locations in neighboring states and throughout the United States and Canada. Greyhound/Carolina Trailways operates in North Carolina. However, community, urban and regional transportation systems are providing increasing intercity service in North Carolina.

An inventory of existing and planned fixed public transportation routes for the planning area is presented on Sheet 3 of Figure 1. At the time of this plan, Cherokee County Transit offered community transportation with an on-demand service requiring scheduling in advance. Cherokee County Transit was currently working on a transit plan during the CTP process. At the time of the CTP development, Cherokee County Transit has planned a park and ride route from the Ranger Community Center west of Murphy to the Fred's parking lot in Andrews. Additionally, a fixed route will run from Beal Circle in Murphy to the Walmart a few miles east of the town. Deviated routes will also be offered. Refer to the 2011 Cherokee County Transit Plan for more details. All

recommendations for public transportation were coordinated with the local governments and the Public Transportation Division of NCDOT. Refer to Appendix A for contact information.

Rail

Today North Carolina has 3,684 miles of railroad tracks throughout the state. There are two types of trains that operate in the state, passenger trains and freight trains.

The North Carolina Department of Transportation sponsors two passenger trains, the Carolinian and Piedmont. The Carolinian runs between Charlotte and New York City, while the Piedmont train carries passengers from Raleigh to Charlotte and back everyday. Combined, the Carolinian and Piedmont carry more than 200,000 passengers each year.

There are two major freight railroad companies that operate in North Carolina, CSX Transportation and Norfolk Southern Corporation. Also, there are more than 20 smaller freight railroads, known as shortlines.

An inventory of existing and planned rail facilities for the planning area is presented on Sheet 3 of Figure 1. The existing railroad operating company in Cherokee County is the Great Smoky Mountains Railroad. Currently, the rail facility from Macon County to Andrews is active and used for both tourist and freight services. The seasonal tourist train operates on the weekends in September and sometimes in the spring. The year-round freight service operates once per week. The remainder of the track in Cherokee County (Andrews to downtown Murphy) is inactive. The NCDOT is preserving the rail line for future service that may include excursion trains and freight service. All recommendations for rail were coordinated with the local governments and the Rail Division of NCDOT. Refer to Appendix A for contact information.

Bicycles & Pedestrians

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

NCDOT's Bicycle Policy, updated in 1991, clarifies responsibilities regarding the provision of bicycle facilities upon and along the 77,000-mile state-maintained highway system. The policy details guidelines for planning, design, construction, maintenance, and operations pertaining to bicycle facilities and accommodations. All bicycle improvements undertaken by the NCDOT are based upon this policy.

The 2000 NCDOT Pedestrian Policy Guidelines specifies 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, adopted in 1994, ensure that greenways and greenway crossings are considered during the highway planning process. This policy was incorporated so that critical corridors which have been adopted by localities for future greenways will not be severed by highway construction.

Inventories of existing and planned bicycle and pedestrian facilities for the planning area are presented on Sheets 4 and 5 of Figure 1. There were no existing pedestrian or bicycle plans for consideration in this CTP. The North Carolina Mountains to Sea - NC Bike Route 2 western terminus is in downtown Murphy. The route roughly follows Alternate US 64 to NC 141, crossing US 19 to Airport Road then continuing along Main Street in Andrews until crossing into Macon County on Junaluska Road. All recommendations for bicycle and pedestrian facilities were coordinated with the local governments and the NCDOT Division of Bicycle and Pedestrian Transportation. Refer to Appendix A for contact information.

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. The basic existing and future land uses were developed during the Cherokee County CTP process. The Cherokee County Comprehensive Plan (land development plan) is scheduled to be completed as part of a regional comprehensive study. The CTP may need to be updated upon completion of the Comprehensive Plan if significant issues are identified. The existing land use and projected future land use maps are illustrated in Figures 6 and 7, respectively.

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 to determine the location and type of proposed transportation improvements.

Cherokee County anticipates growth in areas designated as 'mixed use' outside of the existing towns. The rural nature of the county lends itself to clusters of multiple services and living facilities. Continued protection for agricultural land and watersheds is expected. There is little restriction on commercial development along US 19/64/74. There is one agricultural easement along the corridor near Marble Plant Road which restricts development on 101 acres. The road frontage of this easement is 0.4 miles on the westbound side and 0.75 miles on the eastbound side. Additionally, lands lying in the 100-year floodplain of the Valley River are subject to the Floodplain Ordinance. Some land tracts are owned by the Eastern Band of Cherokee Indians (ECBI) and may be developed as commercial entertainment establishments.

Cherokee County Existing Land Use

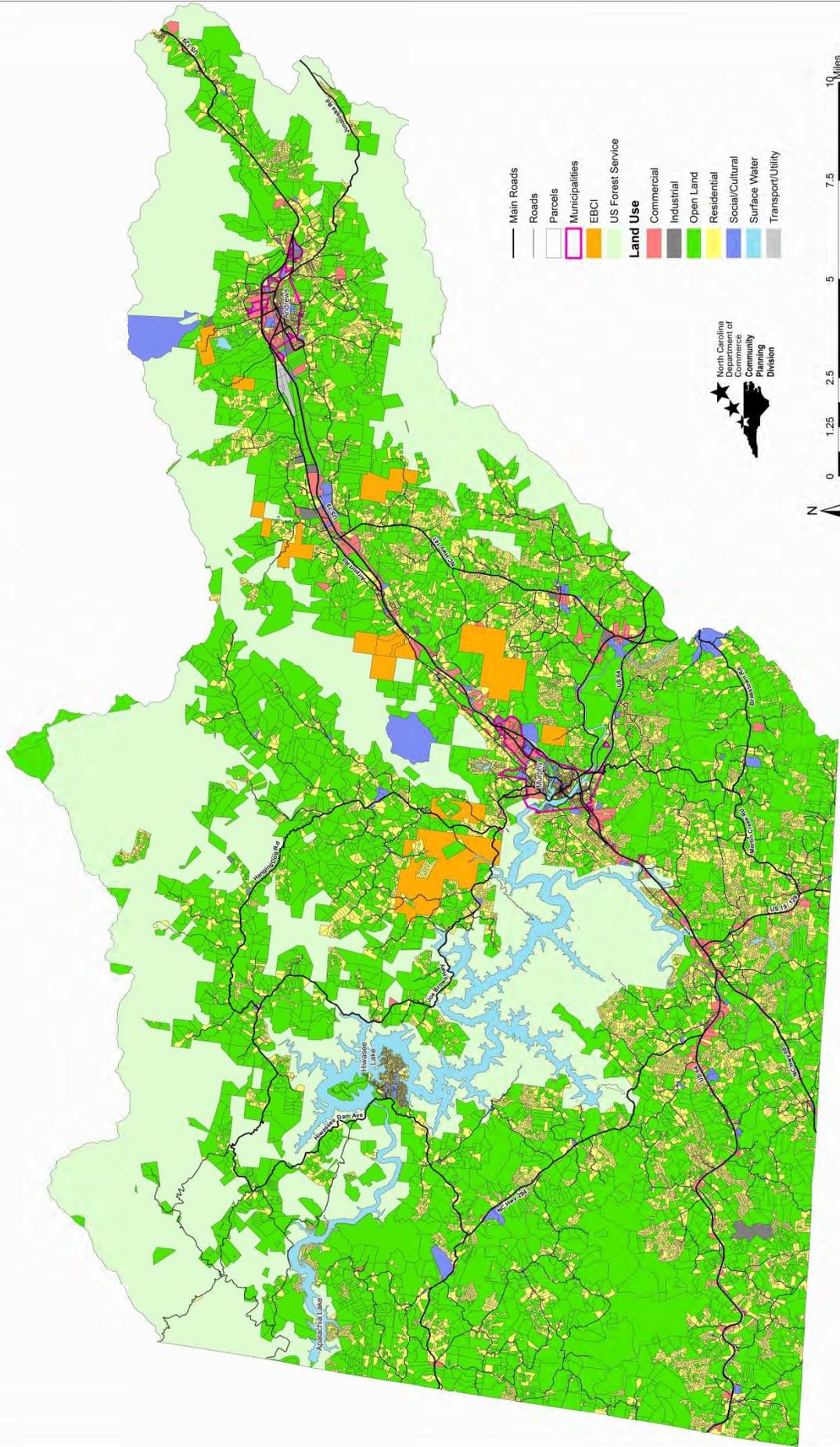


Figure 6

CHEROKEE COUNTY

2032 Future Land Use Map

Legend

-  Commercial Nodes
-  Community Service Node
-  Corridor K / A-9 Development Area
-  EBCL Development Area
-  Economic Development Areas
-  Neighborhood Node
-  Controlled Access Corridor Development Area
-  Primary Corridor Development Area
-  Secondary Corridor Development Area
-  Rural Land
-  Town Growth Boundary

-  EBCL Land
-  Towns, Bear Paw Service District
-  TW (Not including water)
-  Nantahala National Forest
-  Lakes
-  Roads
-  Highways

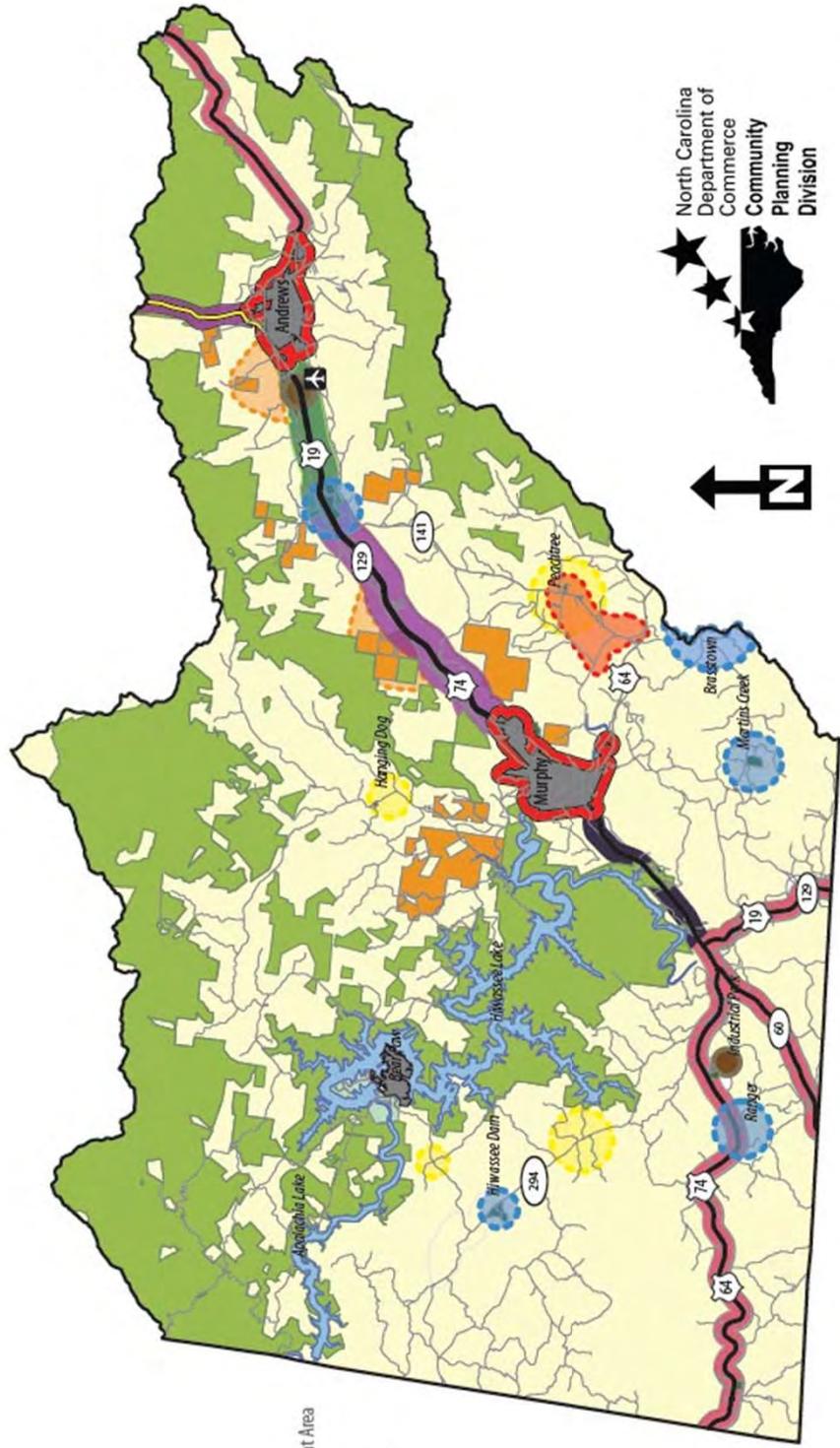


Figure 7

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, potential impacts to these resources were identified as a part of the project recommendations in Chapter 2 of this report. 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.

A full listing of environmental features that were examined as a part of this study is shown in the following tables utilizing the best available data. Environmental features occurring within Cherokee County are shown in Figure 8.

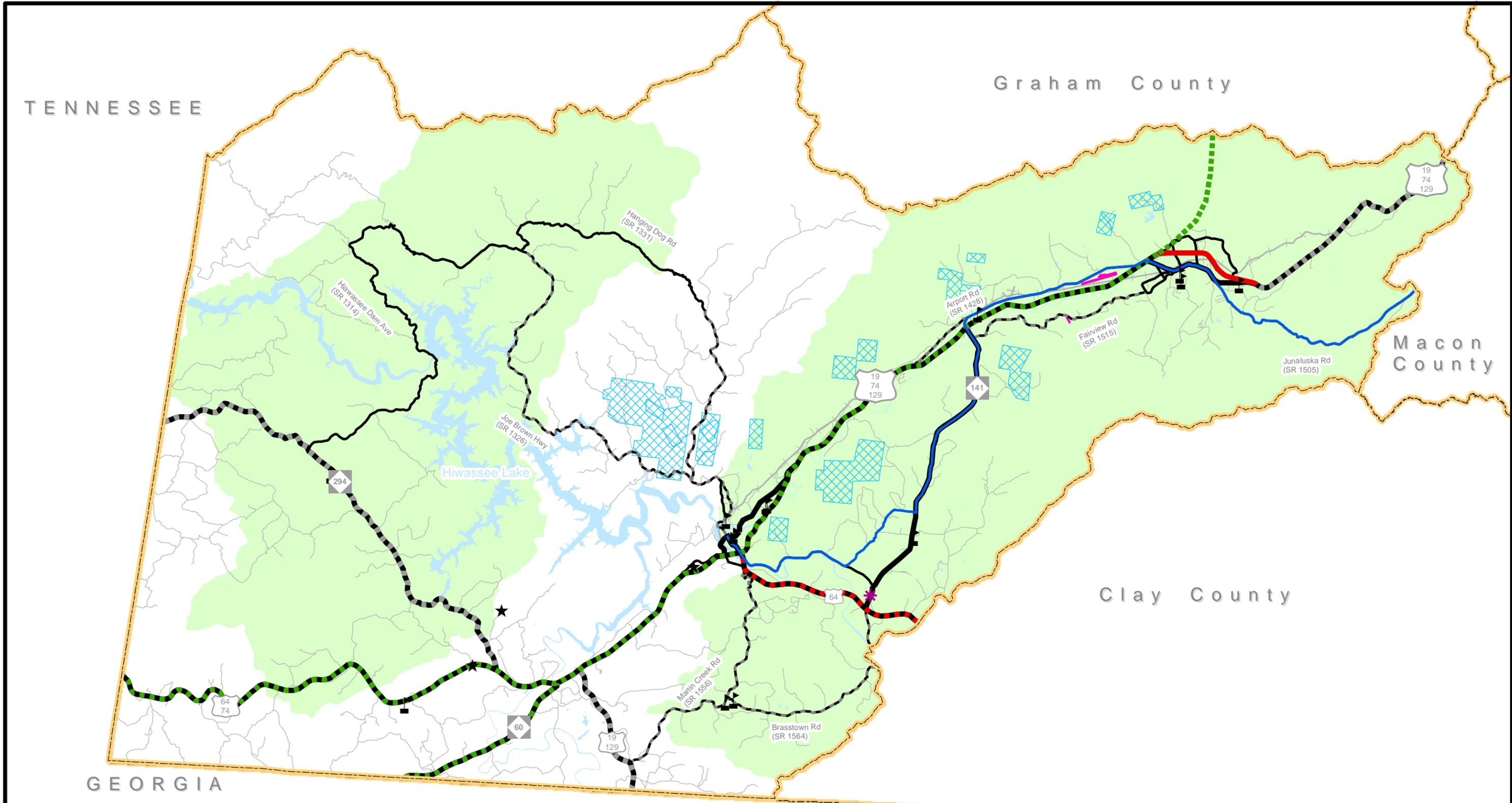
Table 1 – Environmental Features

- **Airport Boundaries**
- Anadromous Fish Spawning Areas
- Beach Access Sites
- **Bike Routes (NCDOT)**
- Coastal Marinas
- **Colleges and Universities**
- **Conservation Tax Credit Properties**
- **Emergency Operation Centers**
- **Federal Land Ownership**
- Fisheries Nursery Areas
- **Geology (including Dikes and Faults)**
- **Hazardous Substance Disposal Sites**
- **Hazardous Waste Facilities**
- **High Quality Water and Outstanding Resource Water Management Zones**
- **Hospital Locations**
- **Hydrography (1:24,000 scale)**
- Land Trust Priority Areas
- **National Heritage Element Occurrences**
- **National Wetlands Inventory**
- North Carolina Coastal Region Evaluation of Wetland Significance (NC-CREWS)
- Paddle Trails – Coastal Plain
- **Railroads (1:24,000 scale)**
- **Recreation Projects – Land and Water Conservation Fund**
- **Sanitary Sewer Systems – Discharges, Land Application Areas, Pipes, Pumps and Treatment Plants**
- **Schools – Public and Non-Public**
- Shellfish Strata
- **Significant Natural Heritage Areas**
- State Parks
- Submersed Rooted Vasculars
- **Target Local Watersheds - EEP**
- **Trout Streams (DWQ)**
- **Trout Waters (WRC)**
- **Water Distribution Systems – Pipes, Pumps, Tanks, Treatment Plants, and Wells**
- **Water Supply Watersheds**
- Wild and Scenic Rivers

Additionally, the following environmental features were considered but are not mapped due to restrictions associated with the sensitivity of the data.

Table 2 – Restricted Environmental Features

- **Archaeological Sites**
- **Historic National Register Districts**
- **Historic National Register Structures**
- **Macrosite Boundaries**
- **Managed Areas**
- **Megasite Boundaries**



Legend

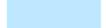
-  Public School
-  Colleges and Universities
-  Non-Public School
-  NCDOT Bike Route
-  Airport Boundaries
-  Target Local Watersheds - EEP
-  Eastern Band of Cherokee Indian Land
-  Railroad
-  Hydrography
-  County Boundary



Figure 8

Sheet 1 of 6

Base map date: March 1, 2012

Refer to CTP document for more details



Environmental Features Map

**Cherokee County
Comprehensive
Transportation Plan**

TENNESSEE

Graham County

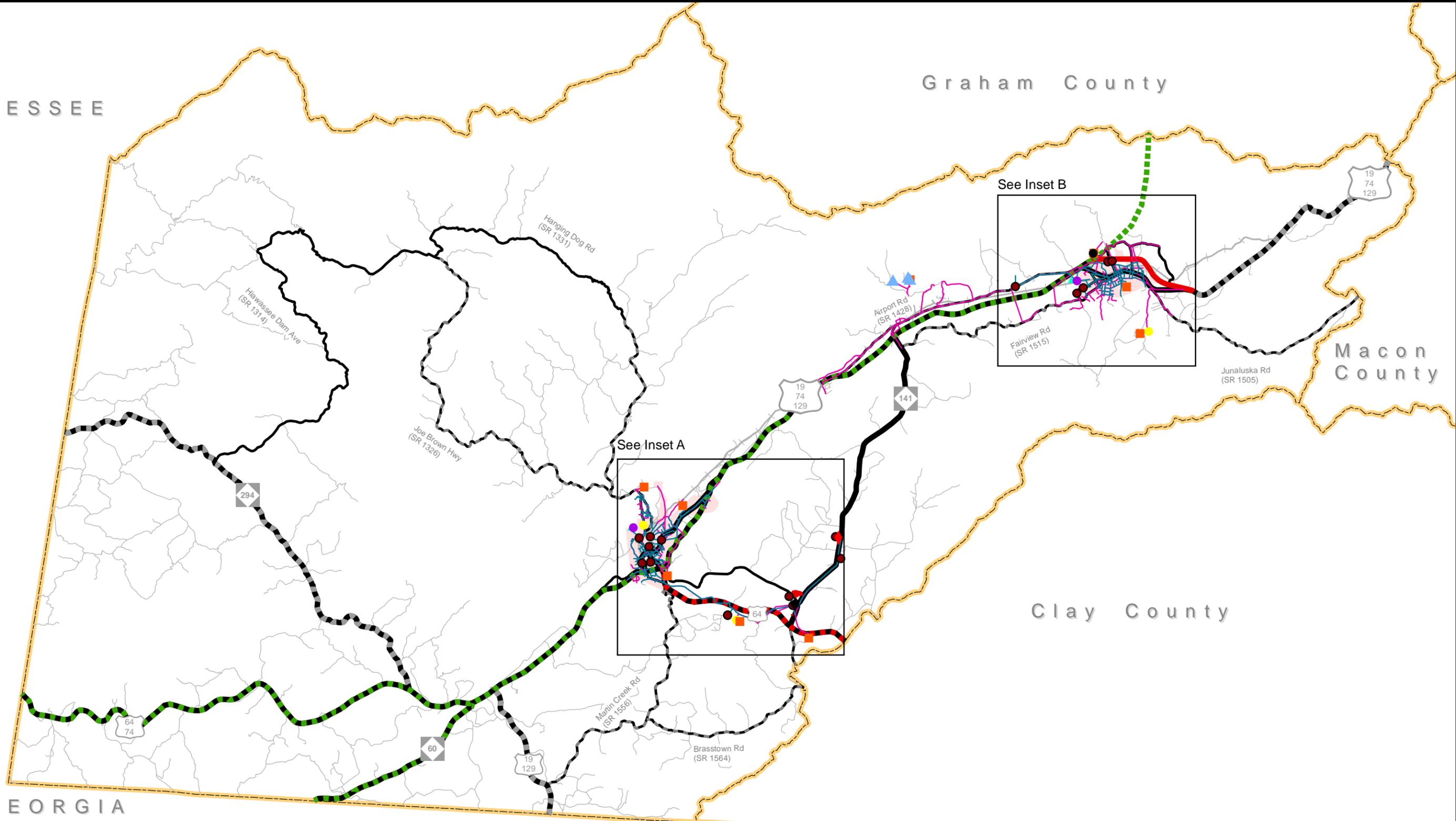
Macon County

See Inset B

See Inset A

Clay County

GEORGIA



Legend

- ▲ Water Distribution System - Well
- Water Distribution System - Treatment Plant
- Water Distribution System - Tank
- Water Distribution System - Pump
- Water Distribution System - Pipes
- Sanitary Sewer System - Treatment Plant
- Sanitary Sewer System - Pumps
- ▲ Sanitary Sewer System - Discharges
- Sanitary Sewer System - Pipes
- Hazardous Substance Disposal Sites
- ◆ Hazardous Waste Facility



Figure 8

Sheet 2 of 6



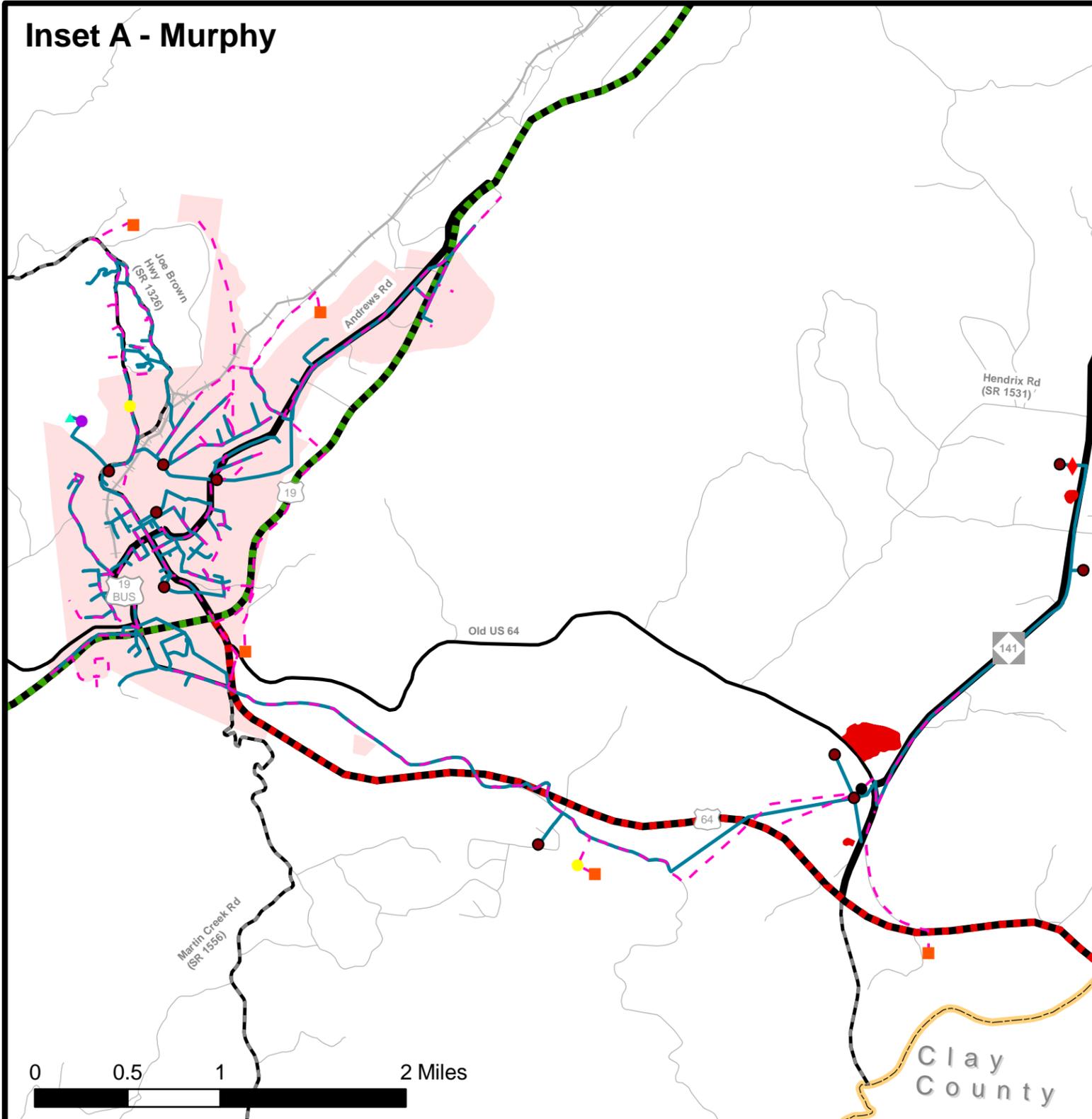
Base map date: March 1, 2012

Refer to CTP document for more details

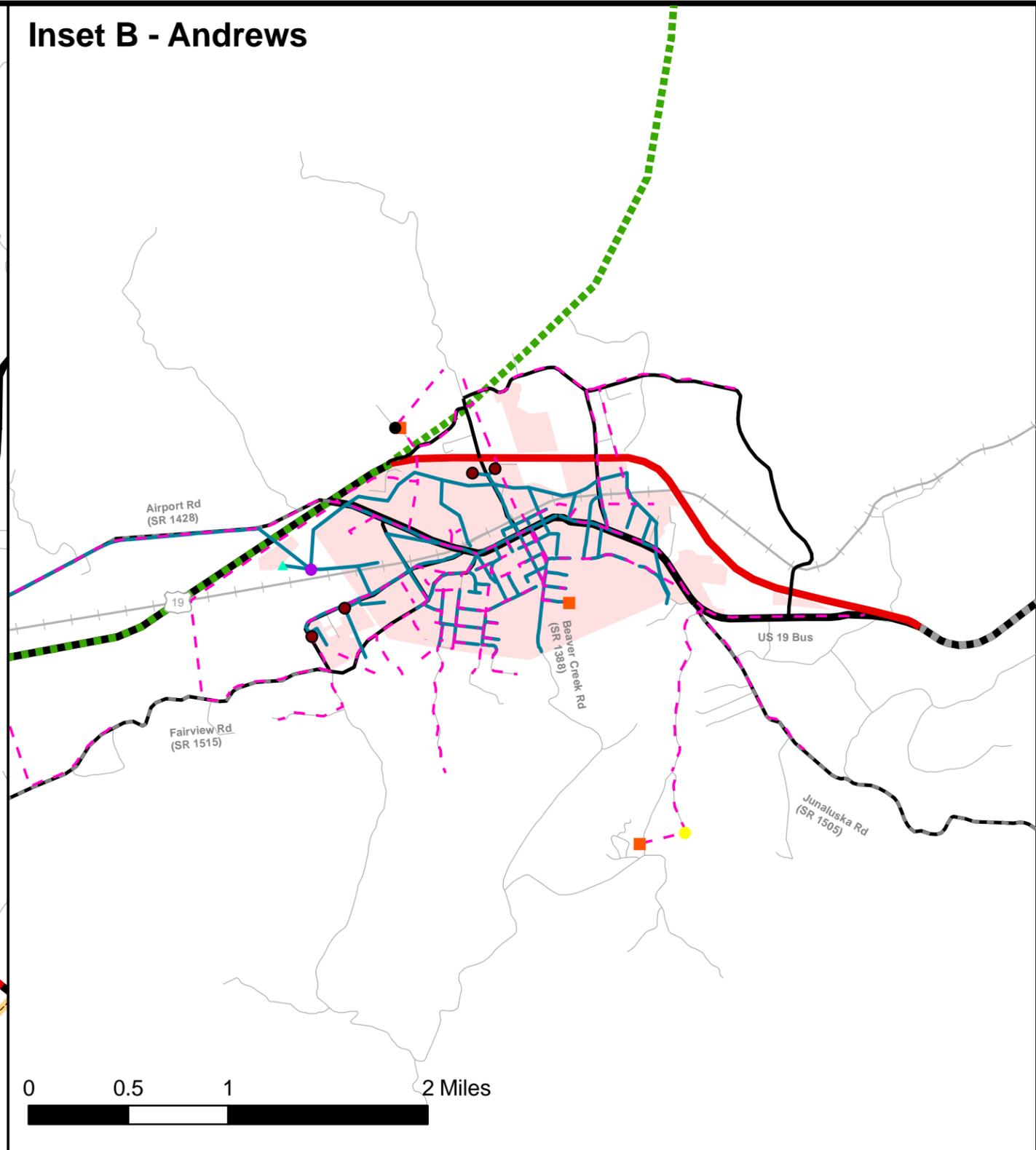
Environmental Features Map

**Cherokee County
Comprehensive
Transportation Plan**

Inset A - Murphy



Inset B - Andrews



Legend

- | | |
|---|---|
| ▲ Water Distribution System - Well | ● Sanitary Sewer System - Treatment Plant |
| ● Water Distribution System - Treatment Plant | ● Sanitary Sewer System - Pumps |
| ■ Water Distribution System - Tank | ▲ Sanitary Sewer System - Discharges |
| ● Water Distribution System - Pump | — Sanitary Sewer System - Pipes |
| — Water Distribution System - Pipes | ■ Hazardous Substance Disposal Sites |
| | ◆ Hazardous Waste Facility |

Figure 8

Sheet 3 of 6

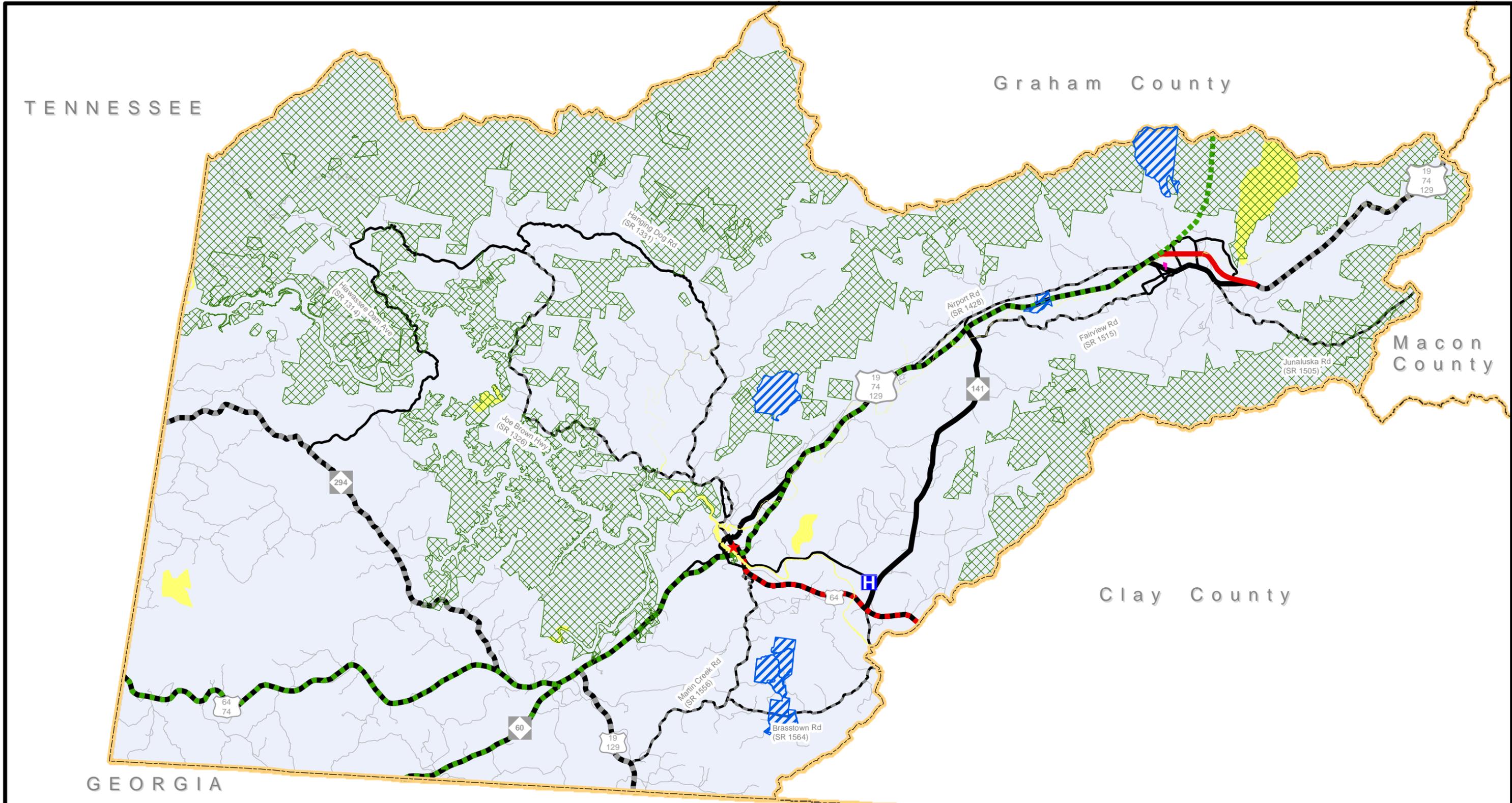


Base map date: March 1, 2012

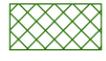
Refer to CTP document for more details

Environmental Features Map

**Cherokee County
Comprehensive
Transportation Plan**



Legend

-  Hospital Location
-  Emergency Operation Centers
-  Recreation Projects - Land and Water Conservation Fund
-  Federal Land Ownership
-  Significant Natural Heritage Area
-  Conservation Tax Credit Properties
-  Natural Heritage Element Occurrences

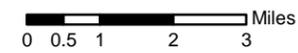


Figure 8

Sheet 4 of 6

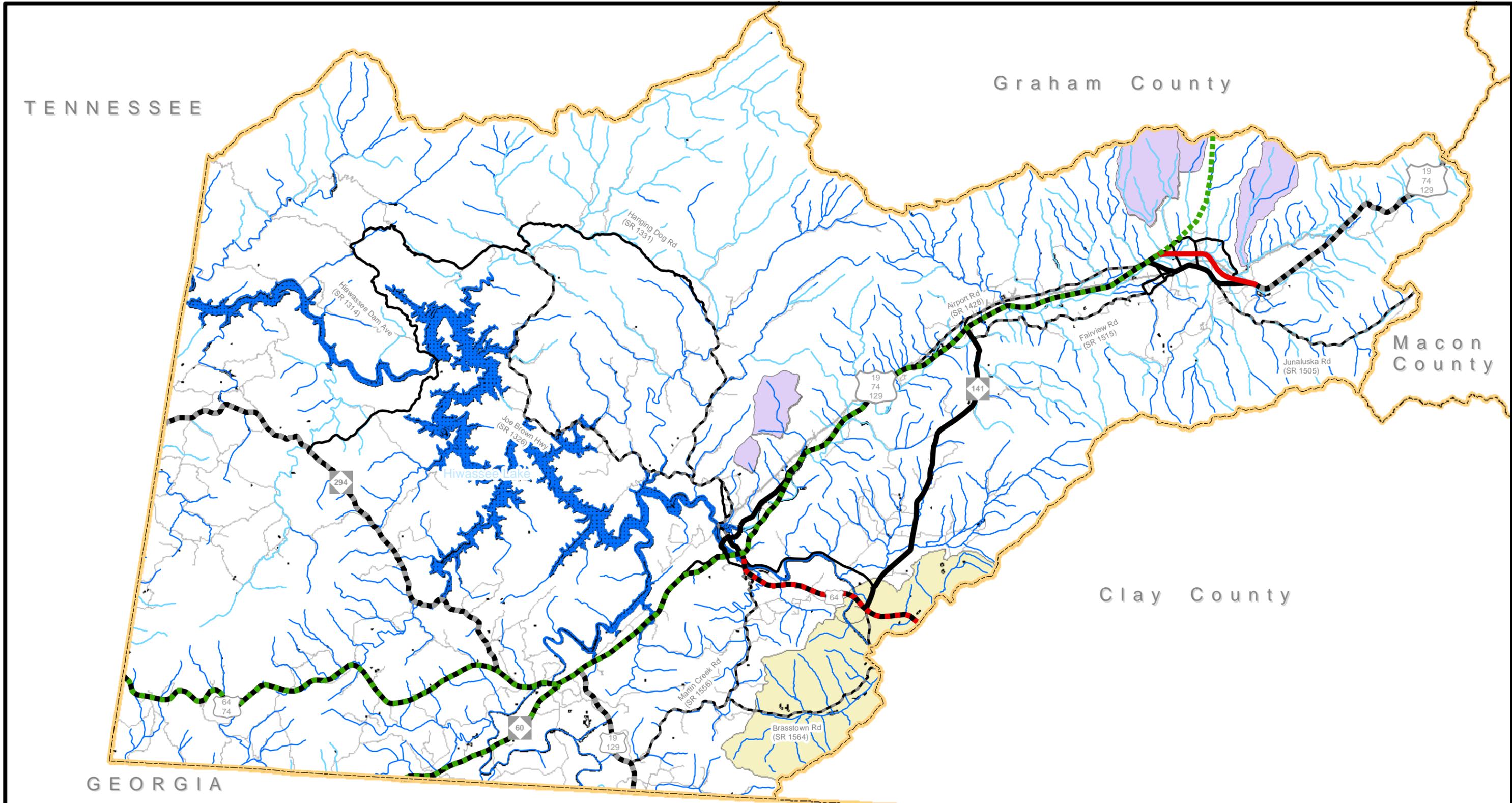


Base map date: March 1, 2012

Refer to CTP document for more details

Environmental Features Map

**Cherokee County
Comprehensive
Transportation Plan**



Legend

- Trout Streams (DWQ)
- Trout Waters (WRC)
- Trout Waters (WRC)
- High Quality Water and Outstanding Resource Water Management Zone
- National Wetlands Inventory
- Water Supply Watersheds



Figure 8

Sheet 5 of 6

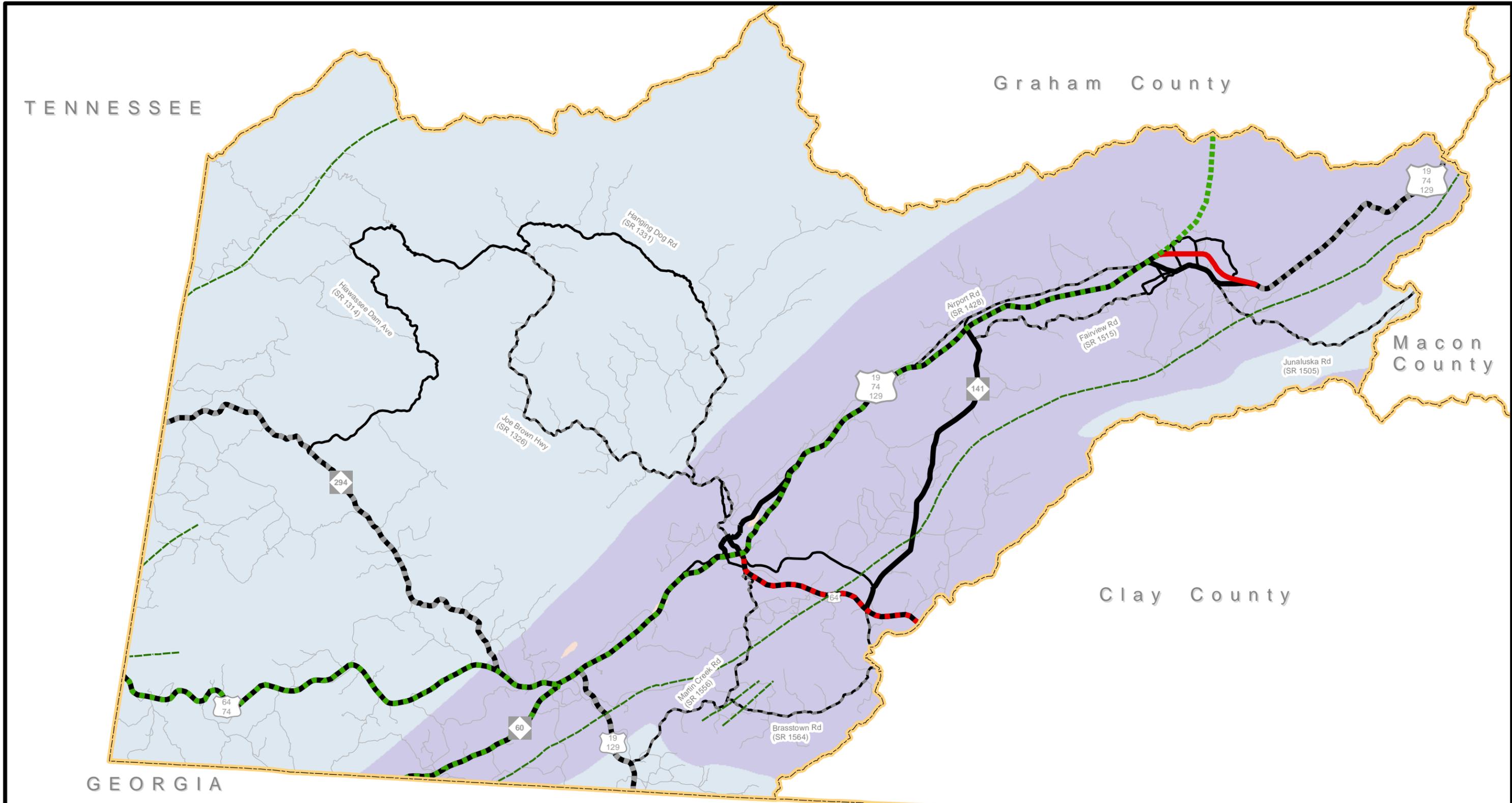


Base map date: March 1, 2012

Refer to CTP document for more details

Environmental Features Map

**Cherokee County
Comprehensive
Transportation Plan**



Legend

Geology

- Intrusive Rocks
- Metamorphic Rocks
- Sedimentary and Metamorphic Rocks

Geology Faults



Figure 8

Sheet 6 of 6



Base map date: March 1, 2012

Refer to CTP document for more details

Environmental Features Map

**Cherokee County
Comprehensive
Transportation Plan**

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.

The Southwestern RPO requested the development of a comprehensive transportation plan for Cherokee County through a prioritized list of regional needs. A meeting was held with the Cherokee County Board of Commissioners in June 2011 to formally initiate the study, provide an overview of the transportation planning process, and to gather input on area transportation needs.

Throughout the course of the study, the Transportation Planning Branch cooperatively worked with the Cherokee Transportation Committee, which included a representative from each municipality, county staff, the RPO and others, to provide information on current local plans, to develop transportation vision and goals, to discuss population and employment projections, and to develop proposed CTP recommendations. Refer to Appendix H for detailed information on the vision statement, the goals and objectives survey and a listing of committee members.

The public involvement process included holding three public drop-in sessions in Cherokee County to present the proposed Comprehensive Transportation Plan to the public and solicit comments. The first meeting was held on October 22, 2012 from 5pm to 7pm at the Andrews Fire Department; the second meeting was held on October 23, 2012 from 11:30 am to 2pm at the Cherokee County Courthouse; the third meeting was held on October 23, 2012 from 5pm to 7pm at the Hiwassee Dam Community Center. Each session was publicized in the local newspaper. Five comment forms were submitted during the session held on October 22, 2012. Three comment forms were submitted during the sessions held on October 23, 2012.

Two public hearings were held on April 1, 2013; one during the Cherokee County Commissioners meeting and one during the Murphy Town Board meeting. A third public hearing was held on April 9, 2013 during the Andrews Town Board meeting. The purpose of these meetings was to discuss the plan recommendations and to solicit further input from the public. The CTP was adopted during these meetings.

The Southwestern RPO endorsed the CTP on May 9, 2013. The North Carolina Board of Transportation voted to mutually adopt the Cherokee County CTP on July 11, 2013.

II. Recommendations

This chapter presents recommendations for each mode of transportation in the 2013 Cherokee County CTP as shown in Figure 1. More detailed information on each recommendation is tabulated in Appendix C.

The N.C. Department of Transportation adopted a "Complete Streets¹" policy in July 2009. 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 where they need to go;
- 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, context-based traffic speeds, and are well-integrated with surrounding land uses. The complete street policy and concepts were utilized in the development of the CTP. The CTP proposes projects that include multi-modal project recommendations as documented in the problem statements within this chapter. Refer to Appendix C for recommended cross sections for all project proposals and Appendix D for more detailed information on the typical cross sections.

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 within this plan. Some portions of the plan may require revisions in order 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 predominately with the policy boards and citizens of the county and its municipalities. 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 Appendix A for contact information on regional prioritization and funding. Local

¹ For more information on Complete Streets, go to: <http://www.nccompletestreets.org/>

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.

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 Act² (SEPA). This CTP may be used to provide information in the NEPA/SEPA process.

Problem Statements

The following pages contain problem statements 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. A full, minimum or reference problem statement is presented for each recommendation, with full problem statements occurring first in each section. Full problem statements are denoted by a gray shaded box containing project information. Minimum problem statements are more concise and less detailed than full problem statements, but include all known or readily available information. Reference problem statements are developed for TIP projects where the purpose and need for the project has already been established.

² For more information on SEPA, go to: <http://www.doa.nc.gov/clearing/faq.aspx>.

HIGHWAY

US 19/64/74/129 Proposed Improvements from Hiwassee Street (SR1556) West to the Existing Four Lanes

Local ID: FS0514-A
Last Updated: 9/5/12



Identified Problem

US 19/64/74/129 between Hiwassee Street (SR 1556) in Murphy west to the existing four lane section is projected to be near or over capacity by 2040. The purpose of improving US 19/64/74/129 is to maintain a Level of Service (LOS) D and to provide pedestrian facilities.

Justification of Need

US 19/64/74/129 is the major east-west route in Cherokee County. It connects Murphy and Andrews with Tennessee as well as Macon County in North Carolina. US 19/64/74/129 is a designated part of the North Carolina Truck Network and is on the statewide tier of the North Carolina Multimodal Investment Network³ (NCMIN). Statewide tier facilities serve long-distance trips, connect regional centers, have the highest usage, and mostly serve a mobility need.

This segment of US 19/64/74/129 has a five lane, undivided cross section with a continuous two way left turn lane. The speed limit varies from 45 mph to 35 mph. The 2010 Annual Average Daily Traffic (AADT) volume is 21,000 vehicles per day (vpd). LOS D capacities of this segment range from 26,800 to 29,000 vehicles per day (vpd). The 2040 projected traffic volume for this section of US 19/64/74/129 is 27,800 vpd.

Community Vision and Problem History

The vision and goals for the community identified during the development of the Cherokee County CTP include safe and reliable multi-modal transportation choices that effectively move locals and visitors. Objectives identified also include providing pedestrian and bicycle accommodations that connect town centers with important shopping and business hubs. This section of US 19/64/74/129 is adjacent to the Murphy town limits and is densely developed with fast food restaurants, shopping strips, and other service providers.

This problem has not been identified on any previous transportation plan.

CTP Project Proposal

Project Description and Overview

The CTP project FS0514-A consists of converting the current facility to a four lane median divided urban cross section with sidewalks. The feasibility study for this project, FS 0514-A, is available for reference from the Feasibility Studies Unit within NCDOT.

The new roadway capacity will be 44,200 vpd which will accommodate the 2040 traffic volume projection of 27,800 vpd. Additionally, the proposed project will improve both left and right turns into and out of businesses along this segment of US 19/64/74/129.

³ For more information on NCMIN, visit: <http://www.ncdot.gov/performance/reform/NCMINmaps/>

Natural & Human Environmental Context

Based on planning level environmental assessment using available GIS data, the proposed project lies within the vicinity of natural heritage element occurrences and trout waters. There are also water and sewer pipes located along the portion of the proposed project that is within the Murphy town limits. The Murphy Adventist Christian School is located in this area off of Old Ranger Road. The school serves students from pre-kindergarten through high school. The study report for FS0514-A indicates that the proposed project may result in three business relocations and no residence relocations.

Relationship to Land Use Plans

The existing development along the project area is high density retail. There are numerous fast food restaurants and service providers along the north side of the roadway. Access to US 19/64/74/129 at this location has not been restricted, resulting in multiple closely spaced driveways along the facility. There is some retail development along the south side of the roadway but development is restricted by the mountainous terrain.

Preliminary land use projections indicate this area will remain densely developed. The Cherokee County Comprehensive Plan (land development plan) is currently underway and is scheduled to be completed as part of the Southwestern North Carolina Regional Vision and Comprehensive Plan for Graham and Cherokee Counties, which is anticipated to be completed in 2014.

Linkages to Other Plans and Proposed Project History

This section of US 19/64/74/129 is designated as an expressway in NCDOT's Strategic Highway Corridor (SHC) Vision Plan.

There is no previous transportation plan for Murphy or Cherokee County.

Multi-modal Considerations

Sidewalks are recommended along the proposed project. There is also a proposed bus route along this facility. These improvements would accommodate the community vision of multi-modal accessibility to the businesses along the project route.

Public/ Stakeholder Involvement

This section of US 19/64/74/129 is referred to as 'Burger Alley' by the locals. Problems with congestion and safety concerns for turning vehicles were common comments received from the CTP Goals and Objectives Survey conducted at the beginning of the Cherokee County CTP study.

US 19/74/129, Local ID: CHER0001-H

US 19/74/129 between Macon County and the existing four lane cross section in Andrews has relatively steep grades and narrow lane widths. Improvements are needed to provide greater mobility between Cherokee County and surrounding counties, especially for trucks traveling through the Nantahala Gorge.

US 19/74/129 is the major east-west route in Cherokee County. It connects Murphy and Andrews with Tennessee as well as Macon County and counties eastward in North Carolina. US 19/74/129 is a designated part of the North Carolina Truck Network and is on the statewide tier of the North Carolina Multimodal Investment Network⁴ (NCMIN). Statewide tier facilities serve long-distance trips, connect regional centers, have the highest usage, and mostly serve a mobility need. This route is the only east-west trucking corridor in the county. This segment of US 19/74/129 has a two lane cross section with 11 foot lanes. The speed limit varies from 45 mph to 55 mph. This 6.5 mile portion of the highway serves as the main truck route in the eastern portion of Cherokee County and into the Nantahala Gorge. Truck volume information collected by the NCDOT Traffic Survey Group in 2010 shows 620 Annual Average Daily Truck Traffic (AADTT) on this section of US 19/74/129. This AADTT represents 11% truck traffic along this section of US 19/74/129.

The existing development along this corridor is low density residential with some small businesses. Preliminary land use projections indicate this area will be a secondary corridor development area. The Cherokee County Comprehensive Plan (land development plan) is currently underway and is scheduled to be completed as part of the Southwestern North Carolina Regional Vision and Comprehensive Plan for Graham and Cherokee Counties, which is anticipated to be completed in 2014.

There is no previous transportation plan for Cherokee County. However, NCDOT's Strategic Highway Corridor (SHC) Vision Plan includes project A-0009 (Corridor K) as an expressway on new alignment in Cherokee County to serve the truck traffic through western North Carolina, thus removing through truck traffic from this portion of US 19/74/129.

The CTP project CHER0001-H recommends providing climbing lanes for trucks along this segment, as appropriate. The proposed project will improve mobility through this part of the county. Any improvements to this section of US 19/74/129 as a result of TIP project A-0009 (also known as Corridor K) should be considered prior to implementation of the proposed project.

Concerns with roadway characteristics and geometry were noted by both the CTP committee during the CTP process and by several participants of the public workshop. Public comments received also mirrored the committee regarding this section of highway needing improvements to ease truck maneuverability and mobility. Many public comments noted a preference for improving this facility in lieu of building A-0009 (Corridor K).

⁴ For more information on NCMIN, visit: <http://www.ncdot.gov/performance/reform/NCMINmaps/>

Based on planning level environmental assessment using available GIS data, the proposed project lies within the vicinity of a target local watershed, natural heritage element occurrences, and significant natural heritage areas. There are also trout waters and streams in the proposed project area. An active railroad parallels a portion of the proposed project.

US 19/74/129, Local ID: CHER0002-H

US 19/74/129 from US 19 Business in west Andrews to Hiwassee Street (SR 1556) in Murphy does not meet the future mobility needs in western North Carolina based on the vision of the North Carolina Strategic Highway Corridor Vision Plan. This corridor is intended to provide connectivity between western North Carolina and Atlanta, Georgia, as well as Chattanooga Tennessee.

The existing facility has a four lane divided cross section with 12 foot lanes. There is partial control of access along this corridor as well as traffic signals. US 19/74/129 is designated as an expressway on NCDOT's SHC Vision Plan adopted on September 2, 2004. Additionally, during the most recent three year period, the following intersections experienced a high number of crashes: US 19/74/129 and Wells Connector (SR 1456) experienced 14 crashes with an average severity index of 8.53, which was higher than the state's 4.11 average for the same period; US 19/74/129 and NC 141 experienced 12 crashes with an average severity index of 4.08, which was below the state's 4.11 average; US 19/64/74/129 and Hiwassee Street (SR 1556) experienced 17 crashes with an average severity index of 2.74; US 64 and US 19/74/129 experienced 17 crashes with an average severity index of 2.31; and US 19/74/129 and the Walmart driveway experienced 22 crashes with an average severity index of 1.34. The CTP project proposal (CHER0002-H) includes US 19/74/129 as an expressway.

Based on a planning level environmental assessment using available GIS data, the proposed project crosses a Land Trust for the Little Tennessee conservation property, target local watershed, significant natural heritage areas, trout waters and is in the vicinity of natural heritage element occurrences.

There is no previous transportation plan for Cherokee County.

US 19/64/74/129, Local ID: CHER0003-H

US 19/64/74/129 from the existing five lane section just west of Murphy to Tennessee does not meet the future mobility needs in western North Carolina based on the vision of the North Carolina Strategic Highway Corridor Vision Plan. This corridor is intended to provide connectivity between western North Carolina and Atlanta, Georgia, as well as Chattanooga, Tennessee.

The existing facility has a four lane divided cross section with 12 foot lanes. There is no control of access along this corridor, and there is an existing traffic signal at the US 19/129 and US 64/74 intersection. US 19/64/74/129 is designated as an expressway on NCDOT's SHC Vision Plan. Additionally, during the most recent three year period, the following intersections experienced a high number of crashes: US 19/64/74/129 and

NC 60,10 crashes with an average severity index of 12.28, which was higher than the state's 4.11 average for the same period; US 19/129 and US 64/74, 14 crashes with an average severity index of 2.59, which was below the state's 4.11 average. The CTP project proposal (CHER0003-H) includes US 19/74/129 as an expressway.

Based on a planning level environmental assessment using available GIS data, the proposed project crosses a target local watershed, the Nottely River, Federally owned lands, trout waters and is in the vicinity of natural heritage element occurrences.

There is no previous transportation plan for Cherokee County.

US 19/129, Local ID: CHER0004-H

US 19/129 from US 64/74 to Georgia is a two lane highway that connects Cherokee County to Blairsville, Georgia. Improvements are needed to provide greater mobility between Cherokee County and cities in Georgia.

This segment of US 19/129 has a two lane cross section with 12 foot lanes. The speed limit is 45 mph. Truck volume information collected by NCDOT's Traffic Survey Group in 2010 shows 650 Annual Average Daily Truck Traffic (AADTT) on this section of US 19/129. This AADTT represents 9% truck traffic along this section of US 19/74/129.

The CTP project CHER0004-H consists of providing passing lanes along this section of US 19/129, as appropriate. Improvements to this section of US 19/129 were once listed under TIP number R-4747, which included widening to multi-lanes. TIP project R-4747 was removed from the TIP in 2008. The Georgia Department of Transportation (GDOT) has a project (PI-0004646) that includes widening US 19/129 from the Georgia border to Blairsville, GA. PI-0004646 is not currently in the Georgia TIP and has no money programmed for design, right-of-way, or construction. Any improvements to US19/129 should be coordinated with the GDOT.

Based on planning level environmental assessment using available GIS data, the proposed project lies within the vicinity of natural heritage element occurrences. There are also trout waters and streams in the proposed project area.

Future US 74 (Corridor K), TIP No. A-0009

The Strategic Highway Corridor (SHC) Vision Plan designates future US 74 as an expressway to improve mobility and connectivity within western North Carolina. The 2012 – 2018 TIP includes project A-0009 that will address this problem.

Section A of this project is within Cherokee County, from US 19 Business in Andrews to Graham County and is currently unfunded. Future US 74 will be studied after the completion of the Southwestern North Carolina Regional Vision Plan, which is anticipated to be complete in 2014.

For additional information about this project, including the Purpose and Need, contact NCDOT's Project Development and Environmental Analysis Branch (PDEA) or visit the project website⁵.

US 64, Local ID: CHER0005-H

US 64 in Cherokee County does not meet the future mobility needs in western North Carolina and into Tennessee based on the vision of the North Carolina Strategic Highway Corridor Vision Plan. This corridor is intended to provide connectivity between Chattanooga, Tennessee and Hendersonville, North Carolina.

The existing facility has a two lane cross section with 12 foot lanes. US 64 is designated as a boulevard on NCDOT's SHC Vision Plan. During the most recent three year period, the intersection of US 64 and Hiwassee Street (SR 1556) experienced 17 crashes with a severity index of 2.74, which was lower than the state's 4.11 average for the same period. Additionally, during this same period, the intersection of US 64 and US 129 experienced 17 crashes with a severity index of 2.31, which was also lower than the state average. Moving towards the SHC vision of US 64 as a boulevard, the CTP project proposal (CHER0005-H) includes widening the existing facility to a four lane divided boulevard as well as providing bicycle accommodations from Old US 64 to NC 141.

Based on planning level environmental assessment using available GIS data, the proposed project crosses target local watersheds and water supply watersheds, trout waters, significant natural heritage areas and is in the vicinity of natural heritage element occurrences and federally owned lands.

There is no previous transportation plan for Cherokee County.

NC 60, Local ID: CHER0006-H

NC 60 from Georgia to US 64/74 does not meet the future mobility needs in western North Carolina based on the vision of the North Carolina Strategic Highway Corridor Vision Plan. This corridor is intended to provide connectivity between Atlanta, Georgia and western North Carolina.

The existing facility has a five lane undivided cross section with 12 foot lanes. NC 60 is designated as an expressway on NCDOT's SHC Vision Plan. Additionally, during the most recent three year period, the intersection of US 64 and NC 60 experienced 10 crashes with an average severity index of 12.28, which was higher than the state's 4.11 average for the same period. Moving towards the SHC vision of NC 60 as an expressway, the CTP project proposal (CHER0006-H) includes converting the existing facility to a four lane divided boulevard.

⁵ The A-0009 project website can be viewed at: <http://www.ncdot.gov/projects/US74Relocation/>.

Based on a planning level environmental assessment using available GIS data, the proposed project crosses trout waters and is in the vicinity of natural heritage element occurrences.

There is no previous transportation plan for Cherokee County.

NC 294, Local ID: R-3622

NC 294 from US 64/74 to Tennessee is a two lane road with 9 foot lanes and a speed limit of 55 mph. Improvements are needed to increase mobility along this section of NC 294. The 2012 – 2018 TIP includes project R-3622 that is intended to address this problem.

TIP project R-3622 includes upgrading the existing roadway by to 12 foot lanes and making minor alignment improvements. Portions of the project have been completed. For more information about this project, contact the NCDOT Division 14 Office at (828) 586-2141.

Minor Widening Projects

- **Airport Road (SR 1428), Local ID CHER0007-H:** Widen from 9 foot lanes to 10 foot lanes with 2 foot paved shoulders from US 19/74/129 near Tomotla to US 19/74/129 in Andrews.
- **Brasstown Road (SR 1564), Local ID CHER0008-H:** Widen from 9 foot lanes to 10 foot lanes with 2 foot paved shoulders from Martins Creek Road (SR 1556) to Clay County.
- **Fairview Road (SR 1515), Local ID CHER0009-H:** Widen from 8 foot and 9 foot lanes to 10 foot lanes with 2 foot paved shoulders from NC 141 to US 19 Business in Andrews.
- **Hanging Dog Road (SR 1331), Local ID CHER0010-H:** Widen from 9 foot lanes to 10 foot lanes with 2 foot paved shoulders from Joe Brown Highway (SR 1326) to Davis Creek Road (SR 1337).
- **Joe Brown Highway (SR 1326), Local ID CHER0011-H:** Widen from 9 foot lanes to 10 foot lanes with 2 foot paved shoulders from existing 3 lane cross section in Murphy to Beaver Dam Road (SR 1331). Bridge No. 159 over Hanging Dog creek is scheduled for replacement in the 2012 – 2018 State Transportation Improvement Program in 2017 (B-4069).
- **Junaluska Road (SR 1505), Local ID CHER0012-H:** Widen from 8 foot lanes to 10 foot lanes with 2 foot paved shoulders from US 19 Business to Bridge No. 29 over Junaluska Creek. Add 2 foot paved shoulders from bridge to Macon County.
- **Martins Creek Road (SR 1556), Local ID CHER0013-H:** Widen from 9 foot lanes to 10 foot lanes with 2 foot paved shoulders from US 19/129 South to US 19/64/74/129 in Murphy.
- **Old US 64 (SR 1548), Local ID CHER0014-H:** Widen from 9 foot lanes to 10 foot lanes with 2 foot paved shoulders from US 64 to Clay County.

PUBLIC TRANSPORTATION & RAIL

The Public Transportation and Rail elements of the Cherokee County CTP are shown in Figure 1, Sheets 3 and 3A. The following recommendations were identified during the development of the CTP and will help achieve the CTP goals of creating a choice of transportation modes and coordinating multi-modal routes. Refer to the 2011 Cherokee County Transit Plan for more information.

- **CHER0001-T:** A fixed route service with passenger vans that run from Beal Circle in Murphy to the Walmart parking lot.
- **CHER0002-T:** A Park-and-Ride route between designated Park-and-Ride lots at the Ranger Community Center and Fred's Department Store in Andrews.
- **CHER0003-T:** A fixed route service with passenger vans that run from the Park-and-Ride lot at Fred's Department Store in Andrews, through downtown Andrews, and returns to the Park-and-Ride lot.

BICYCLE

The Bicycle element of the Cherokee County CTP is shown in Figure 1, Sheets 4 and 4A. The following routes identified by the committee will help achieve the CTP goals of creating a choice of transportation modes.

- **US 19 Business (Andrews Road)/Pleasant Valley Road (SR 1368)/Regal Road (SR 1366), Local ID CHER0001-B:** from Peachtree Street (SR 1326) to Airport Road (SR 1428)
- **US 64, Local ID CHER0005-H:** from Old US 64 to NC 141
- **NC 141, Local ID CHER0002-B:** from Old US 64 to Hendrix Road (SR 1531)
- **Harshaw Road (SR 1558), Local ID CHER0003-B:** from US 64 to US 64
- **Old US 64, Local ID CHER0004-B:** from Clay County to NC 141

In accordance with the American Association of State Highway and Transportation Official (AASHTO), roadways identified as bicycle routes should incorporate the following standards as roadway improvements are made and funding is available:

- Curb and gutter sections require, at minimum, 4 foot bike lanes or 14 foot outside lanes.
- Shoulder sections require a minimum 4 foot paved shoulder.

- All bridges along roadways where bike facilities are recommended shall be equipped with 54 inch railings.

Multi use paths are facilities physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way. Multi-use paths include bicycle paths, rail-trails, or other facilities built for bicycle and pedestrian traffic. The following multi-use path project was identified by the committee will help achieve the CTP goals of multi-modal connectivity and creating a choice of transportation modes.

- **CHER0001-M:** Extend the existing multi-use path less than 0.1miles from existing pathway in Andrews, across Valley River to the rest area.

PEDESTRIAN

The Pedestrian element of the Cherokee County CTP is shown in Figure 1, Sheets 5 and 5A. The following routes identified by the committee will help achieve the CTP goals of creating a choice of transportation modes and developing and maintaining a transportation system that runs smoothly and timely. The committee also expressed a desire to provide sidewalks within the vicinity of schools.

- **US 19, Local ID FS0514-A:** from Hiwassee Street (SR 1556) west to the existing four lane section – add sidewalk on both sides
- **US 19 Business (Main Street), Local ID CHER0001-P:** from Aquone Road (SR 1508) to Andrews Middle School – add sidewalk on both sides
- **3rd Street, Local ID CHER0002-P:** from Fairview Road (SR 1515) to Walnut Street – add sidewalk on north side
- **Aquone Road (SR 1508), Local ID CHER0003-P:** from the end of the existing sidewalk to US 19 Business (Main Street) – add sidewalk on north side
- **Beaver Creek Road (SR 1388), Local ID CHER0004-P:** from the end of the existing sidewalk to the rest area – add sidewalk to east side
- **Beaver Creek Road (SR 1388), Local ID CHER0005-P:** from 6th Street to the Andrews town limits – add sidewalk on west side
- **Colvard Avenue (SR 1513), Local ID CHER0006-P:** from the end of the existing sidewalk to 3rd Street – add sidewalk on west side
- **Connaheeta Avenue, Local ID CHER0007-P:** from Fairview Road (SR 1515) to Fairview Road (SR 1515) – add sidewalk on both sides
- **Fairview Road (SR 1515), Local ID CHER0008-P:** from Kent Street (SR 1616) to the existing sidewalk – add sidewalk on north side

- **Junaluska Road (SR 1505), Local ID CHER0009-P:** from US 19 Business (Main Street) to Robinson Road (SR 1502) – add sidewalk on both sides
- **Kent Street (SR 1616), Local ID CHER0010-P:** from Fairview Road (SR 1515) to US 19 Business (Main Street) – add sidewalk on the east/south side
- **Konaheeta Street (SR 1424), Local ID CHER0011-P:** from the end of the existing sidewalk to Texana Road (SR 1424) – add sidewalk on south side
- **Konaheeta Street (SR 1424), Local ID CHER0012-P:** from the end of the existing sidewalk to Bulldog Drive (SR 1649) – add sidewalk on south side
- **Old Ranger Road (SR 1398), Local ID CHER0013-P:** from US 19 Business (Andrews Street) to Murphy town limit – add sidewalk on south side
- **Old US 64, Local ID CHER0014-P:** from Peachtree Athletic & Rehabilitation Center (PARC) to 300 feet south of Family Church Road (SR 1685) – add sidewalks on both sides
- **Peachtree Street (SR 1326), Local ID CHER0015-P:** from the end of existing sidewalk to Thompson Hollow Street (SR 1552) – add sidewalk on east side
- **Robbinsville Road (SR 1390), Local ID CHER0016-P:** from US 19 Business (Main Street) to the town park – add sidewalk on east side
- **Robinson Road (SR 1502), Local ID CHER0017-P:** from Junaluska Road (SR 1505) to White Road (SR 1504) – add sidewalks on both sides
- **Texana Road (SR 1363), Local ID CHER0018-P:** from the end of the existing sidewalk to Reservoir Road (SR 1365) – add sidewalks on both sides
- **Wakefield Road (SR 1394), Local ID CHER0019-P:** from Junaluska Road (SR 1505) to Andrews Middle School – add sidewalks on both sides
- **Walker Street, Local ID CHER0020-P:** from Connaheeta Avenue to Colvard Avenue (SR 1513) – add sidewalk on north side
- **Whitaker Lane (SR 1618), Local ID CHER0021-P:** from US 19 Business (Main Street) to the existing sidewalk – add sidewalk on west side
- **Whitaker Lane (SR 1618), Local ID CHER0022-P:** from the end of the existing sidewalk to Fairview Road (SR 1515) – add sidewalk on west side
- **White Road (SR 1504), Local ID CHER0023-P:** from Robinson Road (SR 1502) to Wakefield Road (SR 1394) – add sidewalks on both sides

APPENDICES

Appendix A 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 directory:

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 Raleigh, NC 27699-1501 (919) 707-2800

<http://www.ncdot.org/about/leadership/secretary.html>

Board of Transportation

1501 Mail Service Center Raleigh, NC 27699-1501 (919) 707-2820

<http://www.ncdot.gov/about/board/>

Highway Division

253 Webster Road Sylva, NC 28779 (828) 586-2141

https://connect.ncdot.gov/letting/Pages/Letting-List.aspx?let_type=14

Contact the:

- Division Engineer with general questions concerning NCDOT activities within each Division and for information on Small Urban Funds.
- Division Construction Engineer for information concerning major roadway improvements under construction.
- Division Traffic Engineer for information concerning traffic signals, highway signs, pavement markings, and crash history.
- Division Operations Engineer for information concerning facility operations.
- 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.
- 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.

191 Robbinsville Road Andrews, NC 28901 (828) 321-4105

Transportation Planning Branch (TPB)

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

1554 Mail Service Center Raleigh, NC 27699-1554 (919) 707-0900
<http://www.ncdot.gov/doh/preconstruct/tpb/>

Southwestern Rural Planning Organization (RPO)

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

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

Strategic Planning Office

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

1501 Mail Service Center Raleigh, NC 27699-1501 (919) 707-4740
<http://www.ncdot.gov/performance/reform/prioritization/>

Project Development & Environmental Analysis (PDEA)

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

1548 Mail Service Center Raleigh, NC 27699-1548 (919) 707-6000
<https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>

Secondary Roads Unit

Contact the Secondary Roads Unit for information regarding the status for unpaved roads to be paved, additions and deletions of roads to the State maintained system and the Industrial Access Funds program.

1535 Mail Service Center Raleigh, NC 27699-1535 (919) 707-2500
<https://connect.ncdot.gov/resources/stateroads/Pages/default.aspx>

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) 707-4610
<https://connect.ncdot.gov/projects/planning/Pages/default.aspx>

Public Transportation Division

Contact the Public Transportation Division for information public transit systems.

1550 Mail Service Center Raleigh, NC 27699-1550 (919) 707-4670
<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) 707-4700
<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) 707-2600
<http://www.ncdot.gov/bikeped/>

Structures Management Unit

Contact the Structures Management Unit for information on bridge management throughout the state.

1581 Mail Service Center Raleigh, NC 27699-1581 (919) 707-6400
http://www.ncdot.gov/doh/operations/dp_chief_eng/maintenance/bridge/

Roadway Design Unit

Contact the Roadway Design Unit for information regarding design plans and proposals for road and bridge projects throughout the state.

1582 Mail Service Center Raleigh, NC 27699-1582 (919) 707-6200
<https://connect.ncdot.gov/projects/Roadway/Pages/default.aspx>

Transportation Mobility and Safety Division

Contact the Traffic Safety Unit for information regarding crash data throughout the state.

1561 Mail Service Center Raleigh, NC 27699-1561 (919) 773-2800
<https://connect.ncdot.gov/resources/safety/Pages/default.aspx>

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/cd>

Appendix B Comprehensive Transportation Plan Definitions

Highway Map

For visual depiction of facility types for the following CTP classification, visit <http://www.ncdot.gov/doh/preconstruct/tpb/SHC/facility/>.

Facility Type Definitions

- **Freeways**

- Functional purpose – high mobility, high volume, high speed
- Posted speed – 55 mph or greater
- Cross section – minimum four lanes with continuous median
- Multi-modal elements – High Occupancy Vehicles (HOV)/High Occupancy Transit (HOT) lanes, busways, truck lanes, park-and-ride facilities at/near interchanges, adjacent shared use paths (separate from roadway and outside ROW)
- Type of access control – full control of access
- Access management – interchange spacing (urban – one mile; non-urban – three miles); at interchanges on the intersecting roadway, full control of access for 1,000ft or for 350ft plus 650ft island or median; use of frontage roads, rear service roads
- Intersecting facilities – interchange or grade separation (no signals or at-grade intersections)
- Driveways – not allowed

- **Expressways**

- Functional purpose – high mobility, high volume, medium-high speed
- Posted speed – 45 to 60 mph
- Cross section – minimum four lanes with median
- Multi-modal elements – HOV lanes, busways, very wide paved shoulders (rural), shared use paths (separate from roadway but within ROW)
- Type of access control – limited or partial control of access;
- Access management – minimum interchange/intersection spacing 2,000ft; median breaks only at intersections with minor roadways or to permit U-turns; use of frontage roads, rear service roads; driveways limited in location and number; use of acceleration/deceleration or right turning lanes
- Intersecting facilities – interchange; at-grade intersection for minor roadways; right-in/right-out and/or left-over or grade separation (no signalization for through traffic)
- Driveways – right-in/right-out only; direct driveway access via service roads or other alternate connections

- **Boulevards**

- Functional purpose – moderate mobility; moderate access, moderate volume, medium speed
- Posted speed – 30 to 55 mph
- Cross section – two or more lanes with median (median breaks allowed for U-turns per current NCDOT *Driveway Manual*)
- Multi-modal elements – bus stops, bike lanes (urban) or wide paved shoulders (rural), sidewalks (urban - local government option)
- Type of access control – limited control of access, partial control of access, or no control of access
- Access management – two lane facilities may have medians with crossovers, medians with turning pockets or turning lanes; use of acceleration/deceleration or right turning lanes is optional; for abutting properties, use of shared driveways, internal out parcel access and cross-connectivity between adjacent properties is strongly encouraged
- Intersecting facilities – at grade intersections and driveways; interchanges at special locations with high volumes
- Driveways – primarily right-in/right-out, some right-in/right-out in combination with median leftovers; major driveways may be full movement when access is not possible using an alternate roadway

- **Other Major Thoroughfares**

- Functional purpose – balanced mobility and access, moderate volume, low to medium speed
- Posted speed – 25 to 55 mph
- Cross section – four or more lanes without median (*US and NC routes may have less than four lanes*)
- Multi-modal elements – bus stops, bike lanes/wide outer lane (urban) or wide paved shoulder (rural), sidewalks (urban)
- Type of access control – no control of access
- Access management – continuous left turn lanes; for abutting properties, use of shared driveways, internal out parcel access and cross-connectivity between adjacent properties is strongly encouraged
- Intersecting facilities – intersections and driveways
- Driveways – full movement on two lane roadway with center turn lane as permitted by the current NCDOT *Driveway Manual*

- **Minor Thoroughfares**

- Functional purpose – balanced mobility and access, moderate volume, low to medium speed
- Posted speed – 25 to 55 mph
- Cross section – ultimately three lanes (no more than one lane per direction) or less without median
- Multi-modal elements – bus stops, bike lanes/wide outer lane (urban) or wide paved shoulder (rural), sidewalks (urban)
- ROW – no control of access

- Access management – continuous left turn lanes; for abutting properties, use of shared driveways, internal out parcel access and cross-connectivity between adjacent properties is strongly encouraged
- Intersecting facilities – intersections and driveways
- Driveways – full movement on two lane with center turn lane as permitted by the current NCDOT *Driveway Manual*

Other Highway Map Definitions

- **Existing** – Roadway facilities that are not recommended to be improved.
- **Needs Improvement** – Roadway facilities that need to be improved for capacity, safety, or system continuity. The improvement to the facility may be widening, other operational strategies, increasing the level of access control along the facility, or a combination of improvements and strategies. “Needs improvement” does not refer to the maintenance needs of existing facilities.
- **Recommended** – Roadway facilities on new location that are needed in the future.
- **Interchange** – Through movement on intersecting roads is separated by a structure. Turning movement area accommodated by on/off ramps and loops.
- **Grade Separation** – Through movement on intersecting roads is separated by a structure. There is no direct access between the facilities.
- **Full Control of Access** – Connections to a facility provided only via ramps at interchanges. No private driveway connections allowed.
- **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.
- **Partial Control of Access** – Connections to a facility provided via ramps at interchanges, at-grade intersections, and private driveways. Private driveway connections shall be defined as a maximum of one connection per parcel. One connection is defined as one ingress and one egress point. These may be combined to form a two-way driveway (most common) or separated to allow for better traffic flow through the parcel. The use of shared or consolidated connections is highly encouraged.
- **No Control of Access** – Connections to a facility provided via ramps at interchanges, at-grade intersections, and private driveways.

Public Transportation and Rail Map

- **Bus Routes** – The primary fixed route bus system for the area. Does not include demand response systems.
- **Fixed Guideway** – Any transit service that uses exclusive or controlled rights-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 ferryboats.

- **Operational Strategies** – Plans geared toward the non-single occupant vehicle. This includes but is not limited to HOV lanes or express bus service.
- **Rail Corridor** – 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.
- **High Speed Rail Corridor** – Corridor designated by the U.S. Department of Transportation as a potential high speed rail corridor.
 - Existing – Corridor where high speed rail service is provided (there are currently no existing high speed corridor in North Carolina).
 - Recommended – Proposed corridor for high speed rail service.
- **Rail Stop** – A railroad station or stop along the railroad tracks.
- **Intermodal Connector** – A location where more than one mode of transportation meet such as where light rail and a bus route come together in one location or a bus station.
- **Park and Ride Lot** – A strategically located parking lot that is free of charge to anyone who parks a vehicle and commutes by transit or in a carpool.
- **Existing Grade Separation** – Locations where existing rail facilities and are physically separated from existing highways or other transportation facilities. These may be bridges, culverts, or other structures.
- **Proposed Grade Separation** – Locations where rail facilities are recommended to be physically separated from existing or recommended highways or other transportation facilities. These may be bridges, culverts, or other structures.

Bicycle Map

- **On Road-Existing** – Conditions for bicycling on the highway facility are adequate to safely accommodate cyclists.
- **On Road-Needs Improvement** – At the systems level, it is desirable for **an existing** highway facility to accommodate bicycle transportation; however, highway improvements are necessary to create safe travel conditions for the cyclists.
- **On Road-Recommended** – At the systems level, it is desirable for **a recommended** highway facility to accommodate bicycle transportation. The highway should be designed and built to safely accommodate cyclists.

- **Off Road-Existing** – A facility that accommodates only bicycle transportation and is physically separated from a highway facility either within the right-of-way or within an independent right-of-way.
- **Off Road-Needs Improvement** – A facility that accommodates only bicycle transportation and is physically separated from a highway facility either within the right-of-way or within an independent right-of-way that will not adequately serve future bicycle needs. Improvements may include but are not limited to, widening, paving (not re-paving or other maintenance activities), and improved horizontal or vertical alignment.
- **Off Road-Recommended** – A facility needed to accommodate only bicycle transportation and is physically separated from a highway facility either within the right-of-way or within an independent right-of-way.
- **Multi-use Path-Existing** – An existing facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that serves bicycle and pedestrian traffic. Sidewalks should not be designated as a multi-use path.
- **Multi-use Path-Needs Improvement** – An existing facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that serves bicycle and pedestrian traffic that will not adequately serve future needs. Improvements may include but are not limited to, widening, paving (not re-paving or other maintenance activities), and improved horizontal or vertical alignment. Sidewalks should not be designated as a multi-use path.
- **Multi-use Path-Recommended** – A facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that is needed to serve bicycle and pedestrian traffic. Sidewalks should not be designated as a multi-use path.
- **Existing Grade Separation** – Locations where existing “Off Road” facilities and “Multi-use Paths” are physically separated from existing highways, railroads, or other transportation facilities. These may be bridges, culverts, or other structures.
- **Proposed Grade Separation** – Locations where “Off Road” facilities and “Multi-use Paths” are recommended to be physically separated from existing or recommended highways, railroads, or other transportation facilities. These may be bridges, culverts, or other structures.

Pedestrian Map

- **Sidewalk-Existing** – Paved paths (including but not limited to concrete, asphalt, brick, stone, or wood) on both sides of a highway facility and within the highway right-of-way that are adequate to safely accommodate pedestrian traffic.

- **Sidewalk-Needs Improvement** – Improvements are needed to provide paved paths on both sides of a highway facility. The highway facility may or may not need improvements. Improvements do not include re-paving or other maintenance activities but may include: filling in gaps, widening sidewalks, or meeting ADA (Americans with Disabilities Act) requirements.
- **Sidewalk-Recommended** – At the systems level, it is desirable for a recommended highway facility to accommodate pedestrian transportation **or** to add sidewalks on an existing facility where no sidewalks currently exist. The highway should be designed and built to safely accommodate pedestrian traffic.
- **Off Road-Existing** – A facility that accommodates only pedestrian traffic and is physically separated from a highway facility usually within an independent right-of-way.
- **Off Road-Needs Improvement** – A facility that accommodates only pedestrian traffic and is physically separated from a highway facility usually within an independent right-of-way that will not adequately serve future pedestrian needs. Improvements may include but are not limited to, widening, paving (not re-paving or other maintenance activities), improved horizontal or vertical alignment, and meeting ADA requirements.
- **Off Road-Recommended** – A facility needed to accommodate only pedestrian traffic and is physically separated from a highway facility usually within an independent right-of-way.
- **Multi-use Path-Existing** – An existing facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that serves bicycle and pedestrian traffic. Sidewalks should not be designated as a multi-use path.
- **Multi-use Path-Needs Improvement** – An existing facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that serves bicycle and pedestrian traffic that will not adequately serve future needs. Improvements may include but are not limited to, widening, paving (not re-paving or other maintenance activities), and improved horizontal or vertical alignment. Sidewalks should not be designated as a multi-use path.
- **Multi-use Path-Recommended** – A facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that is needed to serve bicycle and pedestrian traffic. Sidewalks should not be designated as a multi-use path.
- **Existing Grade Separation** – Locations where existing “Off Road” facilities and “Multi-use Paths” are physically separated from existing highways, railroads, or other transportation facilities. These may be bridges, culverts, or other structures.

- **Proposed Grade Separation** – Locations where “Off Road” facilities and “Multi-use Paths” are recommended to be physically separated from existing or recommended highways, railroads, or other transportation facilities. These may be bridges, culverts, or other structures.

Appendix C

CTP Inventory and Recommendations

Assumptions/ Notes:

- **Local ID:** This Local ID is the same as the one used for the Prioritization Project Submittal Tool. 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 4 letters of the county name is combined with a 4 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 '(ft)' is the approximate width of the roadway from edge of pavement to edge of pavement. Listed under 'lanes' is the total number of lanes, with the letter 'D' if the facility is divided.
- **Existing ROW:** The estimated existing right-of-way is based on NCDOT inventory and aerial photography. 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 using the Mountains Methodology, as documented in Chapter I.
- **Existing and Proposed AADT** (Annual Average Daily Traffic) volumes, given in vehicles per day (vpd), are estimates only based on a systems-level analysis. The '2040 AADT E+C' is an estimate of the volume in 2040 with only existing plus committed projects assumed to be in place, where committed is defined as projects programmed for construction in the 2012 - 2018 Transportation Improvement Program (TIP). The '2040 AADT with CTP' is an estimate of the volume in 2040 with all proposed CTP improvements assumed to be in place. The '2040 AADT with CTP' is shown in bold if it exceeds the proposed capacity, indicating an unmet need. For additional information about the assumptions and techniques used to develop the AADT volume estimates, refer to Chapter I.
- **Proposed Cross-section:** The CTP recommended cross-sections are listed by code; for depiction of the cross-section, refer to Appendix D. An entry of 'ADQ' indicates the existing facility is adequate and there are no improvements recommended as part of the CTP.
- **CTP Classification:** The CTP classification is listed, as shown on the adopted CTP Maps (see Figure 1). Abbreviations are F= freeway, E= expressway, B= boulevard, Maj= other major thoroughfare, Min= minor thoroughfare.
- **Tier:** Tiers are defined as part of the North Carolina Multimodal Investment Network (NCMIN). Abbreviations are Sta= statewide tier, Reg= regional tier, Sub= subregional tier.
- **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, and P= pedestrian).

Table 3 - CTP INVENTORY AND RECOMMENDATIONS

HIGHWAY																		
Local ID	Facility	Section (From - To)	Jurisdiction	Dist. (mi)	2010 Existing System					2040 Proposed System					CTP Classification	Tier	Other Modes	
					Cross-Section (ft) lanes	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2010 AADT	2040 AADT E+C	2040 AADT with CTP	Proposed Capacity (vpd)	Cross-Section	ROW (ft)				
CHER0004-H	US 19	Georgia - US 64/US 74	Cherokee County	3.8	24	2	100	45	14600	7000	10700	10700	14600	2A ¹	ADQ	Maj	Reg	-
CHER0003-H	US 19	US 64/US 74 - 1800 ft east of Old Ranger Rd (SR 1398)	Cherokee County	3.9	116	4D	130	55	47400	19000	28800	28800	47400	4A	ADQ	E	Sta	T
FS-0514A	US 19	1800 ft east of Old Ranger Rd (SR 1398) - 2200 ft west of Hiwassee St (SR 1556)	Cherokee County	0.8	58	5	70	45	29000	21000	27800	27800	44200	4C	130	E	Sta	P, T
FS-0514A	US 19	2200 ft west of Hiwassee St (SR 1556) - Hiwassee St (SR 1556)	Murphy	0.4	52	5	70	35	26800	21000	27800	27800	44200	4C	130	E	Sta	P, T
CHER0002-H	US 19	Hiwassee St (SR 1556) - US 64 split	Murphy	0.4	108	4D	140	45	42900	17000	25100	25100	57400	4A	ADQ	E	Sta	-
CHER0002-H	US 19	US 64 split - Bulldog Dr (SR 1694)	Cherokee County/Murphy	1.4	108	4D	140	45	42900	17000	25100	25100	57400	4A	ADQ	E	Sta	-
CHER0002-H	US 19	Bulldog Dr (SR 1694) - Holland Farm Rd (SR 1368)	Cherokee County	9.5	var	4D	var.	55	44500	14000	17700	17700	57400	4A	ADQ	E	Sta	T
	US 19	Holland Farm Rd (SR 1368) - end of four lane divided	Andrews	2.5	var	4D	var.	35	41500	5300	7400	7400	ADQ	ADQ	B	Reg	-	
CHER0001-H	US 19	End of four lane divided - Macon County	Cherokee County	6.5	22	2	45	45	15900	5300	5500	5500	ADQ	2A ²	ADQ	Maj	Reg	-
	US 19 Business (Main Street)	US 19/US 74/US 129 - 500 ft east of Fairview Rd (SR 1515)	Andrews	0.9	36	3	60	35	14000	6000	8300	8300	ADQ	ADQ	Maj	Reg	T	
	US 19 Business (Main Street)³	500 ft east of Fairview Rd (SR 1515) - 730 ft east of Beaver Creek Rd (SR 1388)	Andrews	0.27	36	2	60	25	12100	6400	8900	8900	ADQ	ADQ	Maj	Reg	-	
	US 19 Business (Main Street)	730 ft east of Beaver Creek Rd (SR 1388) - Junaluska Rd (SR 1505)	Andrews	0.94	24	2	50	35	12600	5500	7600	7600	ADQ	ADQ	Maj	Reg	-	
	US 19 Business (Main Street)	Junaluska Rd (SR 1505) - US 19	Andrews	1.1	24	2	40	45	13800	1200	2300	2300	ADQ	ADQ	Maj	Reg	P	

Notes: ¹ two lane roadway with intermittent passing lane, as appropriate; ² two lane roadway with intermittent truck climbing lane, as appropriate; ³ On-street parking

HIGHWAY																		
Local ID	Facility	Section (From - To)	Jurisdiction	Dist. (mi)	2010 Existing System				2040 Proposed System					CTP Classification	Tier	Other Modes		
					Cross-Section (ft) lanes	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2010 AADT	2040 AADT E+C	2040 AADT with CTP	Proposed Capacity (vpd)	Cross-Section				ROW (ft)	
	US 19 Business (Andrews Rd)	Section (From - To) US 19/64/74/129 - 300 ft east of Lakeside Dr (SR 1408)	Murphy	0.4	52	5	80	45	29900	10000	16400	16400	ADQ	ADQ	ADQ	Maj	Reg	T
	US 19 Business (Andrews Rd)³	300 ft east of Lakeside Dr (SR 1408) - 400 ft west of Joe Brown Hwy (SR 1326)	Murphy	0.1	70	5	110	35	25000	10000	16400	16400	ADQ	ADQ	ADQ	Maj	Reg	T
	US 19 Business (Andrews Rd)³	400 ft west of Joe Brown Hwy (SR 1326) - 500 ft east of Joe Brown Hwy (SR 1326)	Murphy	0.2	74	4	110	20	22000	10000	16400	16400	ADQ	ADQ	ADQ	Maj	Reg	B,T
	US 19 Business (Andrews Rd)	500 ft east of Joe Brown Hwy (SR 1326) - 1000 ft west of Konaheeta St (SR 1424)	Murphy	0.3	var	2	var	20	12100	9400	11200	11200	ADQ	ADQ	ADQ	Maj	Reg	B,T
	US 19 Business (Andrews Rd)	1000 ft west of Konaheeta St (SR 1424) - Konaheeta St (SR 1424)	Murphy	0.2	20	2	30	35	11300	9400	11200	11200	ADQ	ADQ	ADQ	Maj	Reg	B,T
	US 19 Business (Andrews Rd)	Konaheeta St (SR 1424) - US 19/74/129	Murphy	2.3	25	2	45	35	11400	5600	7800	7800	ADQ	ADQ	ADQ	Maj	Reg	B,T
CHERO003-H	US 64	Tennessee - US 19/129	Cherokee County	14.8	var	4D	150	55	47400	8900	14700	14700	ADQ	ADQ	ADQ	E	Sta	-
CHERO003-H	US 64	US 64/74 - 1800 ft east of Old Ranger Rd (SR 1398)																
FS-0514A	US 64	1800 ft east of Old Ranger Rd (SR 1398) - 2200 ft west of Hiwassee St (SR 1556)																
FS-0514A	US 64	2200 ft west of Hiwassee St (SR 1556) - Hiwassee St (SR 1556)																
CHERO002-H	US 64	Hiwassee St (SR 1556) - US 64 split																
CHERO005-H	US 64	US 19/74/129 - Old US 64	Murphy	0.1	70	4	130	45	25800	5200	6500	6500	42900	4B	150	B	Sta	-
CHERO005-H	US 64	Old US 64 - Clay County	Cherokee County	5.5	40	2	130	55	16400	7700	10700	10700	44500	4B	150	B	Sta	B

Concurrent with US 19

Notes: ³On-street parking

HIGHWAY															
Local ID	Facility	Section (From - To)	Jurisdiction	Dist. (mi)	2010 Existing System				2040 Proposed System				Other Modes		
					Cross-Section (ft) lanes	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2010 AADT	2040 AADT E+C	2040 AADT with CTP	Proposed Capacity (vpd)		Cross-Section	ROW (ft)
CHER0003-H	US 74	Tennessee - US 19/129													
CHER0003-H	US 74	US 64/74 - 1800 ft east of Old Ranger Rd (SR 1398)													
FS-0514A	US 74	1800 ft east of Old Ranger Rd (SR 1398) - 2200 ft west of Hiwassee St (SR 1556)													
FS-0514A	US 74	2200 ft west of Hiwassee St (SR 1556) - Hiwassee St (SR 1556)													
CHER0002-H	US 74	Hiwassee St (SR 1556) - US 64 split													
CHER0002-H	US 74	US 64 split - Bulldog Dr (SR 1694)													
CHER0002-H	US 74	Bulldog Dr (SR 1694) - Holland Farm Rd (SR 1368)													
CHER0002-H	US 74	Holland Farm Rd (SR 1368) - end of four lane divided													
CHER0001-H	US 74	End of four lane divided - Macon County													
CHER0004-H	US 129	Georgia - US 64/74													
CHER0003-H	US 129	US 64/74 - 1800 ft east of Old Ranger Rd (SR 1398)													
FS-0514A	US 129	1800 ft east of Old Ranger Rd (SR 1398) - 2200 ft west of Hiwassee St (SR 1556)													
FS-0514A	US 129	2200 ft west of Hiwassee St (SR 1556) - Hiwassee St (SR 1556)													
CHER0002-H	US 129	Hiwassee St (SR 1556) - US 64 split													
CHER0002-H	US 129	US 64 split - Bulldog Dr (SR 1694)													
CHER0002-H	US 129	Bulldog Dr (SR 1694) - Holland Farm Rd (SR 1368)													
CHER0001-H	US 129	Holland Farm Rd (SR 1368) - end of four lane divided													
CHER0001-H	US 129	End of four lane divided - Macon County													

Concurrent with US 64

Concurrent with US 19

Concurrent with US 19

HIGHWAY																		
Local ID	Facility	Section (From - To)	Jurisdiction	Dist. (mi)	2010 Existing System				2040 Proposed System					Other Modes				
					Cross-Section (ft) lanes	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2010 AADT	2040 AADT E+C	2040 AADT with CTP	Proposed Capacity (vpd)	Cross-Section		ROW (ft)	CTP Classification	Tier	
CHER0006-H	NC 60	Georgia - US 64/US 74	Cherokee County	5	70	5	150	55	35700	4300	6800	6800	46400	4B	150	E	Sta	-
	NC 141	Old US 64 - Hendrix Rd (SR 1531)	Cherokee County	2.4	20	2	55	45	15900	5100	5400	5400	ADQ	ADQ	ADQ	Maj	Reg	B
	NC 141	Hendrix Rd (SR 1531) - US 19/US 74/US 129	Cherokee County	5.7	20	2	55	55	16400	4100	4400	4400	ADQ	ADQ	ADQ	Maj	Reg	-
R-3622	NC 294	Tennessee - US 64/US 74	Cherokee County	13.6	18	2	55	55	13600	2800	4100	4100	15100	2A	60	Maj	Reg	-
CHER0007-H	Airport Rd (SR 1428)	US 19/US 74/ US 129 - US 19/US 19B/US 74/US 129	Cherokee County	7.1	18	2	50	55	13600	1400	1900	1900	14100	2A	60	Min	Sub	B
	Beaver Creek Rd (SR 1388)	US 19/US 74/US 129 - US 19B (Main St)	Andrews	0.4	24	2	60	35	10600	2700	4400	4400	ADQ	ADQ	ADQ	Min	Sub	P
CHER0008-H	Brasstown Rd (SR 1564)	Martin Creek Rd (SR 1556) - Clay County	Cherokee County	4.9	18	2	45	55	13600	6000	8800	8800	14100	2A	60	Min	Sub	-
CHER0009-H	Fairview Rd (SR 1515)	NC 141 - US 19B (Main St)	Andrews	1.0	16	2	30	35	9200	1600	2200	2200	9500	2A	60	Min	Sub	P
CHER0010-H	Hanging Dog Rd (SR 1331)	Joe Brown Hwy (SR 1326) - Davis Creek Rd (SR 1337)	Cherokee County	5.0	18	2	40	55	13600	2000	2800	2800	14100	2A	60	Min	Sub	-
	Hanging Dog Rd (SR 1331)	Davis Creek Rd (SR 1337) - Joe Brown Hwy (SR 1326)	Cherokee County	7.0	18	2	40	55	13600	2000	2800	2800	ADQ	ADQ	ADQ	Min	Sub	-
	Hiwassee St (SR 1556)	US 19/64/74/129 - US 64	Murphy	0.6	18	2	40	35	9500	3100	4300	4300	ADQ	ADQ	ADQ	Min	Sub	-
	Hiwassee Dam Access Rd (SR 1314)	NC 294 - Joe Brown Hwy (SR 1326)	Cherokee County	9.7	18	2	40	55	14800	1100	1500	1500	ADQ	ADQ	ADQ	Min	Sub	-
	Joe Brown Hwy (SR 1326)	Hiwassee Dam Access Rd (SR 1314) - Hanging Dog Rd (SR 1331)	Cherokee County	6.2	18	2	30	55	13600	230	500	500	ADQ	ADQ	ADQ	Min	Sub	-
CHER0011-H	Joe Brown Hwy (SR 1326)	Hanging Dog Rd (SR 1331) - Texana Rd (SR 1363)	Cherokee County	12.8	18	2	40	55	13600	4100	5000	5000	14100	2A	60	Min	Sub	-
CHER0011-H	Joe Brown Hwy (SR 1326)	Texana Rd (SR 1363) - Texana Rd (SR 1363)	Cherokee County/Murphy	1.2	18	2	40	35	9200	2600	3600	3600	9500	2A	60	Min	Sub	-
CHER0011-H	Joe Brown Hwy (SR 1326)	Texana Rd (SR 1363) - US 19B (Andrews Rd)	Murphy	0.7	18	2	80	35	9200	4000	4900	4900	9500	2A	ADQ	Min	Sub	P,T

HIGHWAY																		
Local ID	Facility	Section (From - To)	Jurisdiction	Dist. (mi)	2010 Existing System				2040 Proposed System					Other Modes				
					Cross-Section (ft) lanes	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2010 AADT	2040 AADT with CTP	2040 AADT E+C	Proposed Capacity (vpd)	Cross-Section		ROW (ft)	CTP Classification	Tier	
CHER0012-H	Junaluska Rd (SR 1505)	US 19B (Main St) - Macon County	Cherokee County	6.8	16	2	30	45	12000	1900	2600	2600	13600	2A	60	Min	Sub	P
	Kent St (SR 1616)	Fairview Rd (SR 1515) - US 19B (Main St)	Andrews	1.1	16	2	45	35	9500	2000	2200	2200	ADQ	ADQ	ADQ	Min	Sub	P
CHER0013-H	Martin Creek Rd (SR 1556)	US 19/129 - Hiwassee St (SR 1556)	Cherokee County/Murphy	8.5	18	2	45	55	13600	1100	1800	1800	14100	2A	60	Min	Sub	-
	Old Ranger Rd (SR 1398)	US 19/US 64/US 74/US 129 - US 19B (Andrews Rd)	Cherokee County/Murphy	1.6	18	2	30	35	9200	3100	3900	3900	ADQ	ADQ	ADQ	Min	Sub	P
CHER0014-H	Old US 64 (SR 1548)	US 64 - Wilscott Rd (SR 1551)	Cherokee County/Murphy	1.6	18	2	50	45	13100	1800	3300	3300	13600	2B	60	Min	Sub	-
CHER0014-H	Old US 64 (SR 1548)	Wilscott Rd (SR 1551) - Clay County	Cherokee County	4.3	18	2	50	55	13600	4400	6100	6100	14100	2A	60	Min	Sub	P
	Peachtree St (SR 1326) ³	400 ft north of US 19B (Andrews Rd) - Central St	Murphy	0.1	80	4	100	25	24400	5400	7500	7500	ADQ	ADQ	ADQ	Maj	Sub	T
	Peachtree St (SR 1326) ³	Central St - 650 ft north of Thompson Hollow St (SR 1552)	Murphy	0.1	44	2	80	25	12100	5400	7500	7500	ADQ	ADQ	ADQ	Maj	Sub	-
	Peachtree St (SR 1326)	650 ft north of Thompson Hollow St (SR 1552) - US 19/64/74/129	Murphy	0.3	44	4	90	45	25800	5200	6500	6500	ADQ	ADQ	ADQ	Maj	Sub	P
	Robbinsville Rd (SR 1390)	US 19/74/129 - US 19B (Main St)	Andrews	0.4	20	2	40	35	10300	1200	1700	1700	ADQ	ADQ	ADQ	Min	Sub	P
	Texana Rd (SR 1363)	Joe Brown Hwy (SR 1326) - Joe Brown Hwy (SR 1326)	Cherokee County/Murphy	1.0	20	2	40	35	10300	1800	2900	2900	ADQ	ADQ	ADQ	Min	Sub	P, T
	Whitaker Ln (SR 1618)	US 19B (Main St) - Fairview Rd (1515)	Andrews	0.5	22	2	40	35	10600	3100	4300	4300	ADQ	ADQ	ADQ	Min	Sub	P

Notes: ³On-street parking

PUBLIC TRANSPORTATION AND RAIL

PUBLIC TRANSPORTATION ¹								
Local ID	Facility/ Route	Section (From - To)	Speed Limit (mph)	Distance (mi)	Existing System		Proposed System	
					Type	Type	Type	Other Modes
CHER0001-T	US 19 Bus (Andrews St)	Beal Circle - Walmart	25-45	4	-	-	Van	-
CHER0002-T ²	US 19/19 Bus (Andrews St)/US 64/74/129	Ranger Community Center - Fred's store	25-55	21.4	-	-	Van	-
CHER0003-T ²	Various	Fred's Store Park-and-Ride, through downtown Andrews, return to Fred's	25-45	5	-	-	Van	-

¹ Only major public transportation routes and proposals are shown here. For further documentation of the public transportation system, refer to the Cherokee County Transit Plan.

² New Park and Ride lot designations at Ranger Community Center and Fred's store in Andrews. Number of designated spaces to be determined.

RAIL											
Local ID	Facility/ Route	Section (From - To)	Class	Speed Limit (mph)	Distance (mi)	Existing System			Proposed System		
						Type	ROW (ft)	Trains per day	Type	ROW (ft)	Trains per day
	Great Smoky Mountain Railroad	Murphy - Andrews	I	5-10	14.7	Inactive Rail	5-100	0	-	-	-
	Great Smoky Mountain Railroad	Andrews - Macon County	I	5-10	9.1	Rail	5-100	<1	-	-	-

BICYCLE AND PEDESTRIAN

BICYCLE									
Local ID	Facility/ Route	Section (From - To)	Distance (mi)	Existing System		Proposed System		Other Modes	
				Cross-Section (ft)	lanes	Type	Cross-Section		
CHER0001-B	US 19 Bus (Andrews St)/Regal Rd (SR 1366)	Peachtree St (SR 1326) - Airport Rd (SR 1428)	9.6	18-24	2	On Road	2A	T	
CHER0005-H	US 64	Old US 64 - NC 141	3.9	30	2	On Road	4B	H	
CHER0002-B	NC 141	Old US 64 - Hendrix Rd (SR 1531)	2.5	20	2	On Road	2A	-	
CHER0003-B	Harshaw Rd (SR 1558)	US 64 - US 64	1.5	20	2	On Road	2B	-	
CHER0004-B	Old US 64	Clay County - NC 141	1.7	20	2	On Road	2A	-	

PEDESTRIAN									
Local ID	Facility/ Route	Section (From - To)	Distance (mi)	Existing System		Proposed System		Other Modes	
				Type	Side of Street	Type	Side of Street		
FS-0514A	US 19/64/74/129	End of 4 lane divided cross section - US 19 Bus (Andrews St)	1.1	Concurrent with US 19/US64/US74/US129 - See Highway Table				H	
CHER0001-P	US 19 Bus (Main St)	Aquone Rd (SR 1508) - Andrews Middle School	0.6	-	-	Sidewalk	Both	-	
CHER0002-P	3rd St	Fairview Rd (SR 1515) - Walnut St	0.1	-	-	Sidewalk	North	-	
CHER0003-P	Aquone Rd (SR 1508)	End of existing sidewalk - US 19 Bus (Main St)	0.7	-	-	Sidewalk	North	-	
CHER0004-P	Beaver Creek Rd (SR 1388)	End of existing sidewalk - Rest Area	0.2	-	-	Sidewalk	East	-	
CHER0005-P	Beaver Creek Rd (SR 1388)	6th St - Andrews City Limit	0.4	-	-	Sidewalk	West	-	
CHER0006-P	Colvard Ave (SR 1513)	End of existing sidewalk - 3rd St	<0.1	-	-	Sidewalk	West	-	
CHER0007-P	Connaheeta Ave	Fairview Rd (SR 1515) - FairviewRd (SR 1515)	0.7	-	-	Sidewalk	Both	-	
CHER0008-P	Fairview Rd (SR 1515)	Kent St (SR 1616) - existing sidewalk	0.9	-	-	Sidewalk	North	-	
CHER0009-P	Junaluska Rd (SR 1505)	US 19 Bus (Main St) - Robinson Rd (SR 1502)	1.2	-	-	Sidewalk	Both	-	
CHER0010-P	Kent St (SR 1616)	Fairview Rd (SR 1515) - US 19 Bus (Main St)	1.1	-	-	Sidewalk	East/South	-	

PEDESTRIAN									
Local ID	Facility/ Route	Section (From - To)	Distance (mi)	Existing System		Proposed System		Other	
				Type	Side of Street	Type	Side of Street	Modes	Modes
CHER0011-P	Konaheeta St (SR 1424)	End of existing sidewalk - Texana Rd (SR 1424)	<0.1	-	-	Sidewalk	South	-	-
CHER0012-P	Konaheeta St (SR 1424)	End of existing sidewalk - Bulldog Dr (SR 1649)	0.5	-	-	Sidewalk	South	-	-
CHER0013-P	Old Ranger Rd (SR 1398)	US 19 Bus (Andrews St) - Cardinal Rd	0.5	-	-	Sidewalk	South	-	-
CHER0014-P	Old US 64	Murphy Medical Center Hospital - 300 ft south of Family Church Rd (SR 1685)	0.5	-	-	Sidewalk	Both	-	-
CHER0015-P	Peachtree St (SR 1326)	Existing sidewalk - Thomas Hollow St (SR 1552)	0.1	-	-	Sidewalk	East	-	-
CHER0016-P	Robbinsville Rd (SR 1390)	US 19 Bus (Main St) - city park	0.2	-	-	Sidewalk	East	-	-
CHER0017-P	Robinson Rd (SR 1502)	Junaluska Rd (SR 1505) - White Rd (SR 1504)	0.4	-	-	Sidewalk	Both	-	-
CHER0018-P	Texana Rd (SR 1363)	End of existing sidewalk - Reservoir Rd (SR 1365)	1.5	-	-	Sidewalk	Both	-	-
CHER0019-P	Wakefield Rd (SR 1394)	Junaluska Rd (SR 1505) - Andrews Middle School	0.6	-	-	Sidewalk	Both	-	-
CHER0020-P	Walker St	Connaheeta Ave - Colvard Ave (SR 1513)	0.1	-	-	Sidewalk	North	-	-
CHER0021-P	Whitaker Ln (SR 1618)	US 19 Bus (Main St) - Railroad crossing	0.2	Sidewalk	West	Sidewalk	West	-	-
CHER0022-P	Whitaker Ln (SR 1618)	Railroad crossing - Fairview Rd (SR 1515)	0.3	-	-	Sidewalk	West	-	-
CHER0023-P	White Rd (SR 1504)	Robinson Rd (SR 1502) - Wakefield Rd (SR 1394)	0.3	-	-	Sidewalk	Both	-	-

MULTI-USE PATH									
Local ID	Facility/ Route	Section (From - To)	Distance (mi)	Existing System		Proposed System		Other	
				Side of Street	Cross-Section	Side of Street	Cross-Section	Modes	Modes
CHER0001-M	Off road	Existing Multi-use path in Andrews - Rest Area across Valley River	<0.1	-	-	n/a	n/a	-	-

Appendix D

Typical Cross Sections

Cross section requirements for roadways vary according to the capacity and level of service to be provided. Universal standards in the design of roadways are not practical. Each roadway section must be individually analyzed and its cross section determined based on the volume and type of projected traffic, existing capacity, desired level of service, and available right-of-way. These cross sections are typical for facilities on new location and where right-of-way constraints are not critical. For widening projects and urban projects with limited right-of-way, special cross sections should be developed that meet the needs of the project.

The typical cross sections were updated on December 7, 2010 to support the Department's "Complete Streets" policy that was adopted in July 2009. This guidance established design elements that emphasize safety, mobility, and accessibility for multiple modes of travel. These "typical" cross sections should be used as preliminary guidelines for comprehensive transportation planning, project planning and project design activities. The specific and final cross section details and right of way limits for projects will be established through the preparation of the National Environmental Policy Act (NEPA) documentation and through final plan preparation.

On all existing and proposed roadways delineated on the CTP, adequate right-of-way should be protected or acquired for the recommended cross sections. In addition to cross section and right-of-way recommendations for improvements, Appendix C may recommend ultimate needed right-of-way for the following situations:

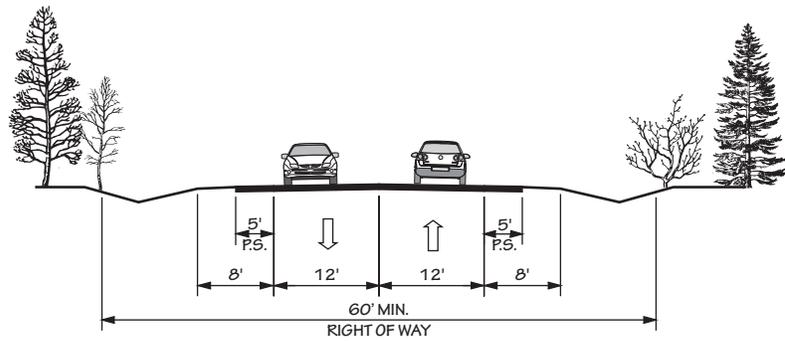
- roadways which may require widening after the current planning period,
- roadways which are borderline adequate and accelerated traffic growth could render them deficient, and
- roadways where an urban curb and gutter cross section may be locally desirable because of urban development or redevelopment.
- roadways which may need to accommodate an additional transportation mode

FIGURE 9

TYPICAL HIGHWAY CROSS SECTIONS 2 LANES

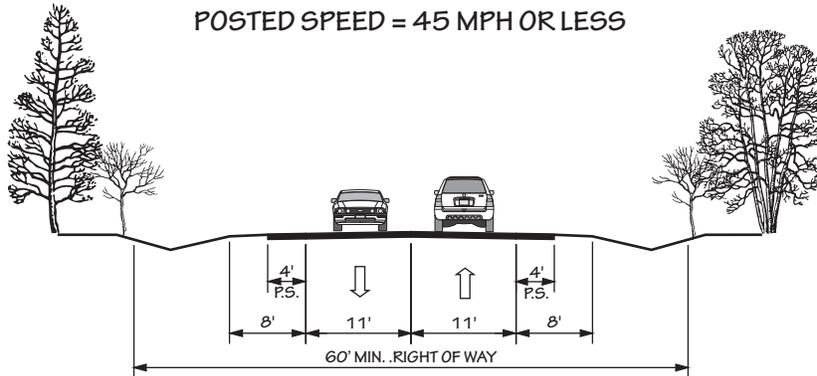
2 A

WIDE PAVED SHOULDERS
POSTED SPEED = 55 MPH



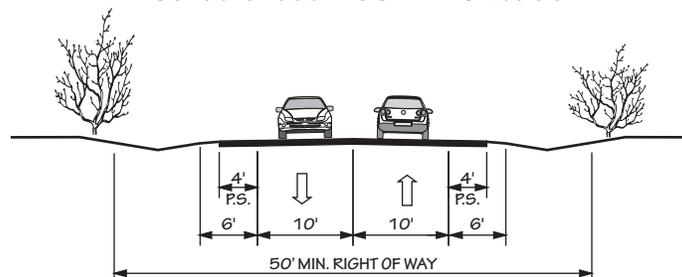
2 B

WIDE PAVED SHOULDERS
POSTED SPEED = 45 MPH OR LESS



2 C

WIDE PAVED SHOULDERS
POSTED SPEED = 35 MPH OR LESS

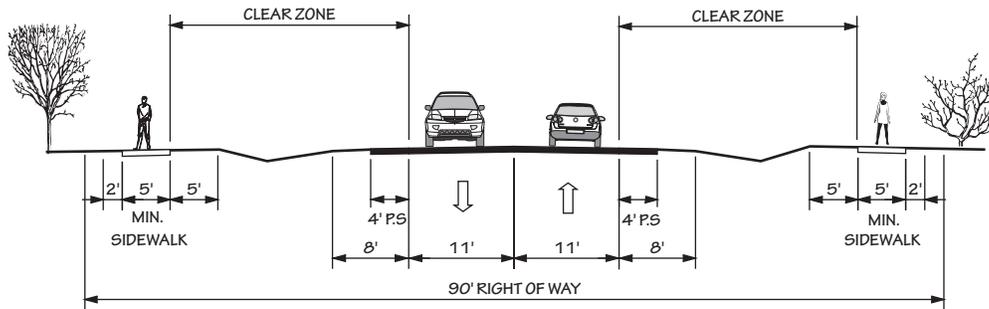


TYPICAL HIGHWAY CROSS SECTIONS

2 LANES

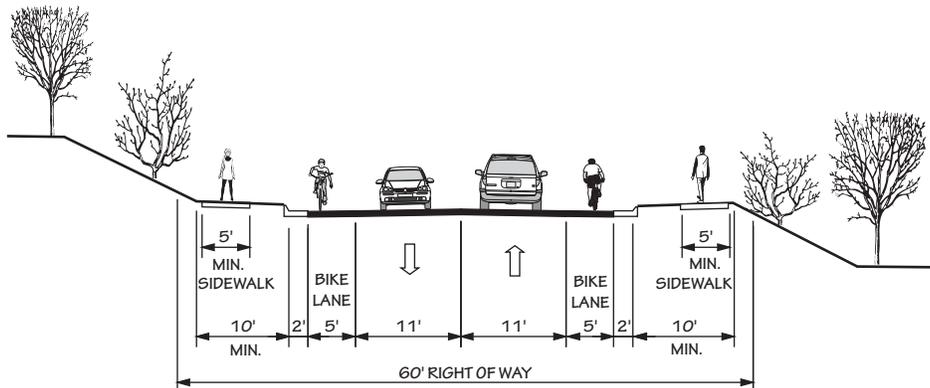
2 D

SIDEWALK PLACEMENT BEHIND A ROADWAY DITCH



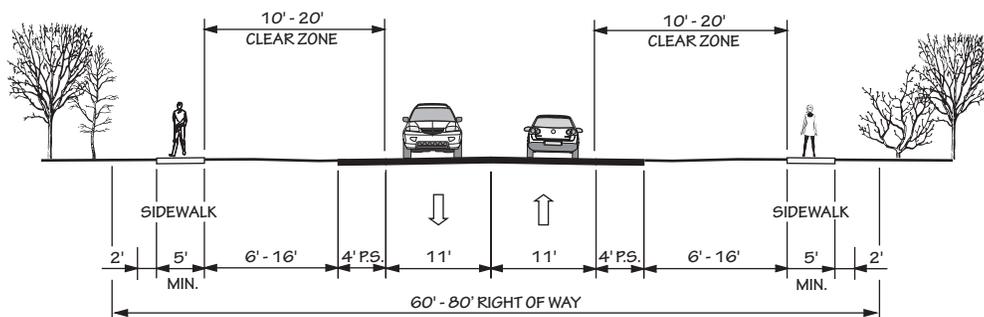
2 E

CURB AND GUTTER WITH BIKE LANES AND SIDEWALKS



2 F

BUFFERS AND SIDEWALKS WITHOUT A ROADWAY DITCH
(20 MPH TO 45 MPH)
(TYPICALLY COASTAL AREA MANAGEMENT ACT COUNTIES)

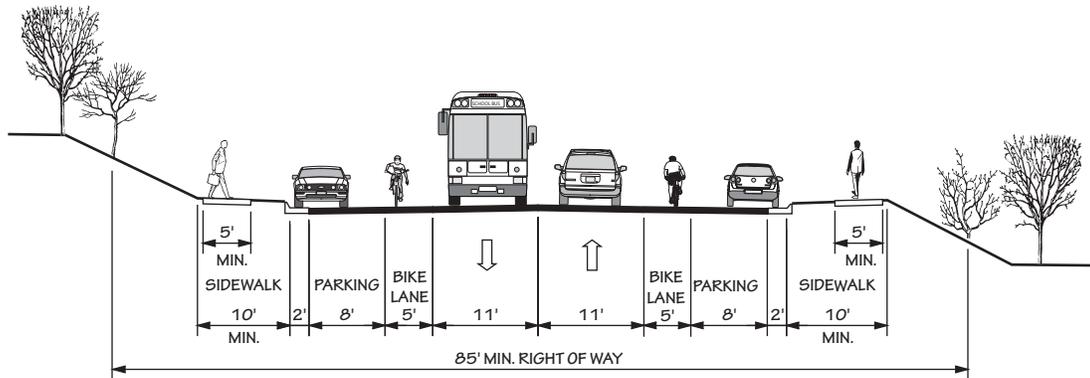


TYPICAL HIGHWAY CROSS SECTIONS

2 LANES

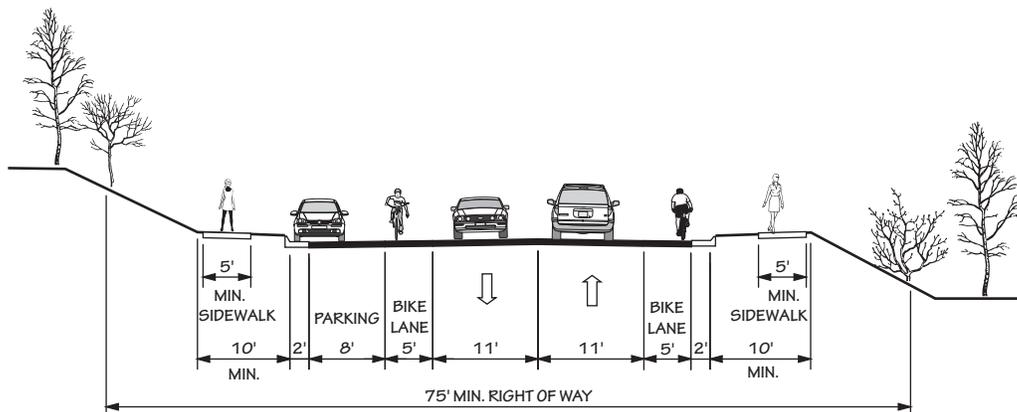
2 G

CURB & GUTTER - PARKING ON EACH SIDE



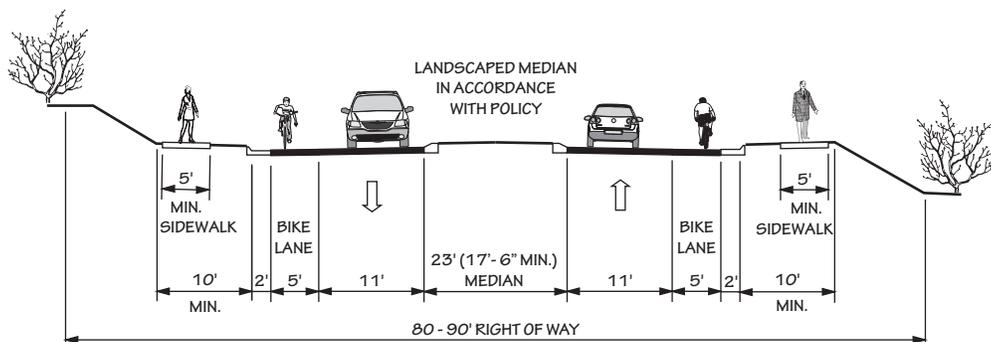
2 H

CURB & GUTTER - PARKING ON ONE SIDE



2 I

RAISED MEDIAN WITH CURB & GUTTER

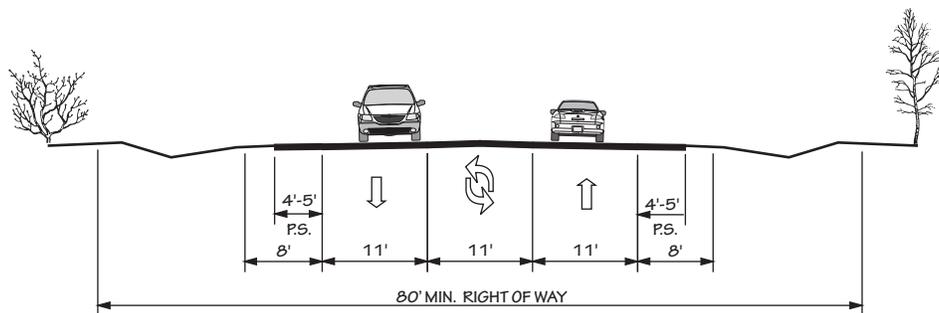


TYPICAL HIGHWAY CROSS SECTIONS

3 LANES

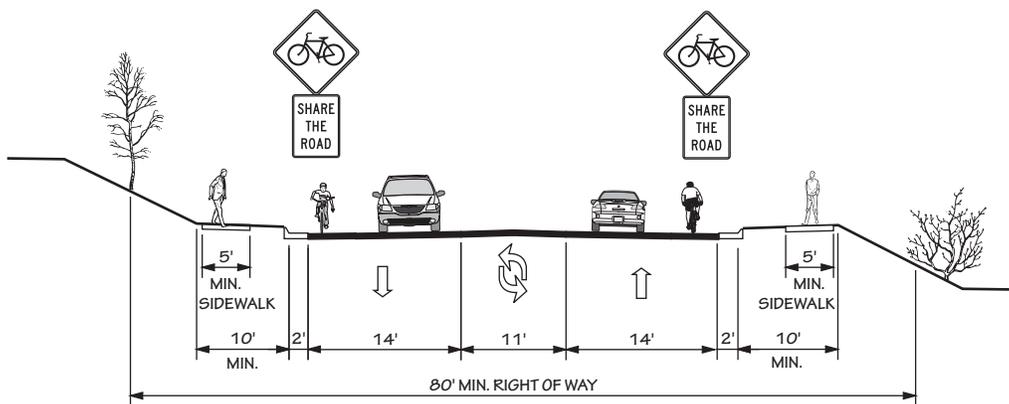
3 A

WIDE PAVED SHOULDERS



3 B

CURB & GUTTER WITH WIDE OUTSIDE LANES AND SIDEWALKS

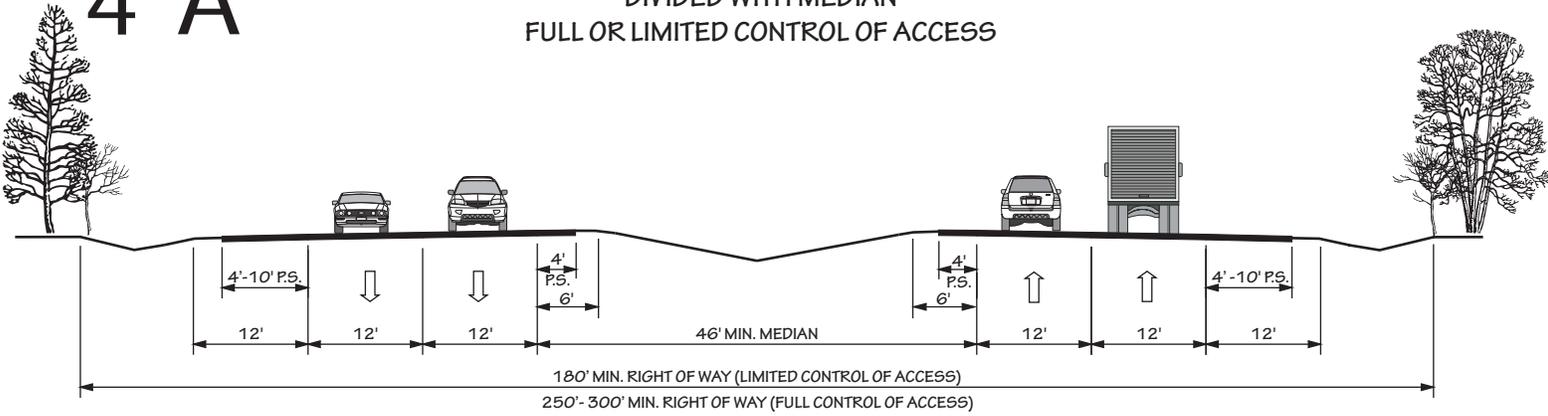


TYPICAL HIGHWAY CROSS SECTIONS

4 LANES

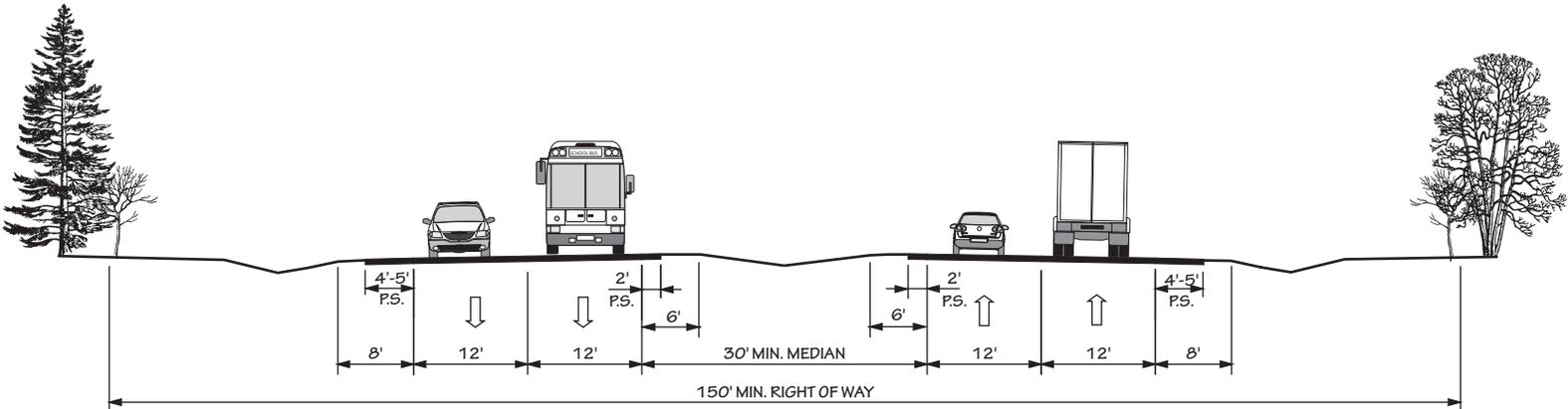
4 A

DIVIDED WITH MEDIAN
FULL OR LIMITED CONTROL OF ACCESS



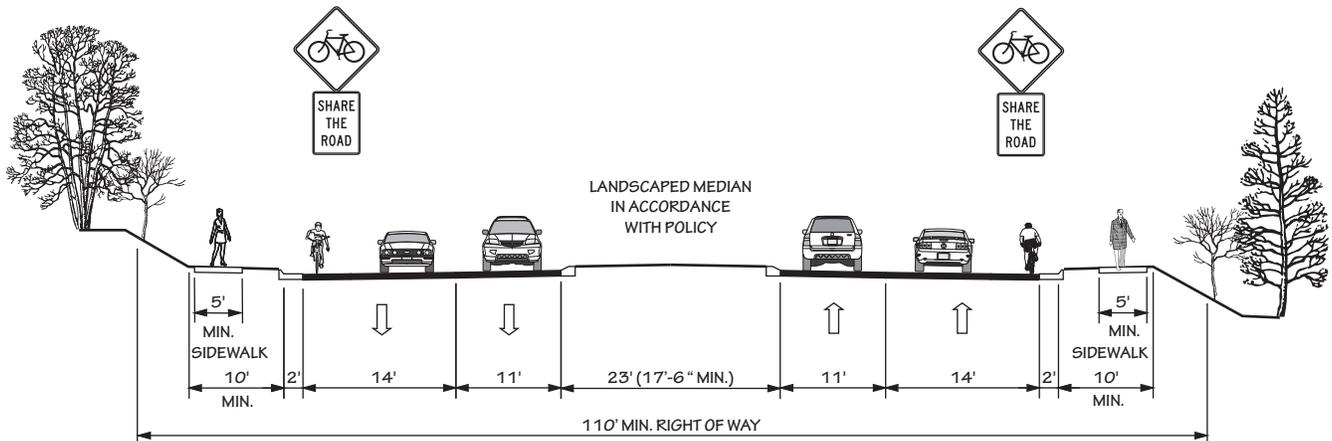
4 B

DIVIDED WITH MEDIAN - NO CURB & GUTTER
PARTIAL CONTROL OF ACCESS



4 C

RAISED MEDIAN WITH WIDE OUTSIDE LANES AND SIDEWALKS

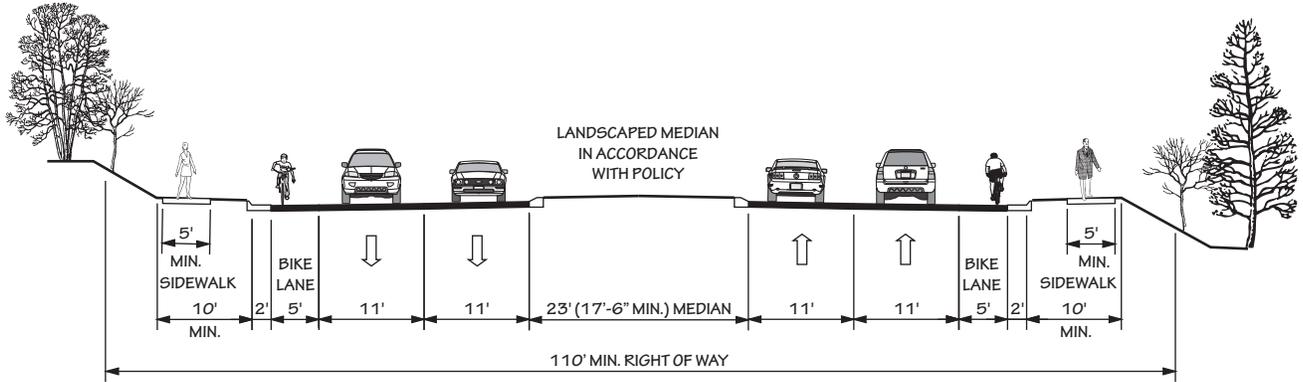


TYPICAL HIGHWAY CROSS SECTIONS

4 LANES

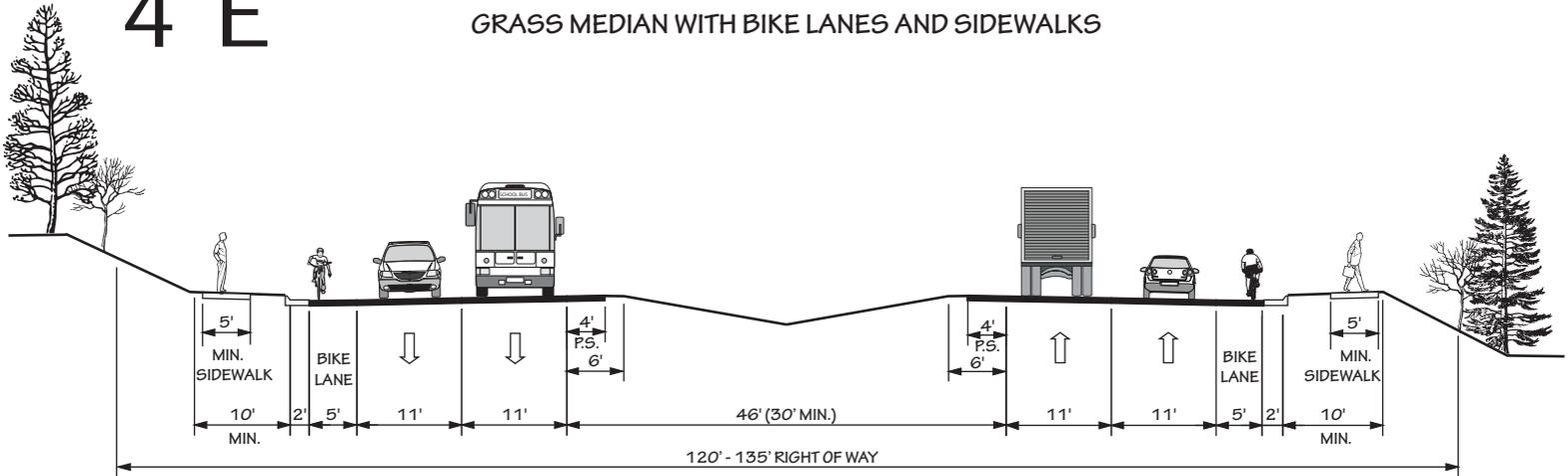
4 D

RAISED MEDIAN - CURB & GUTTER WITH BIKE LANES AND SIDEWALKS



4 E

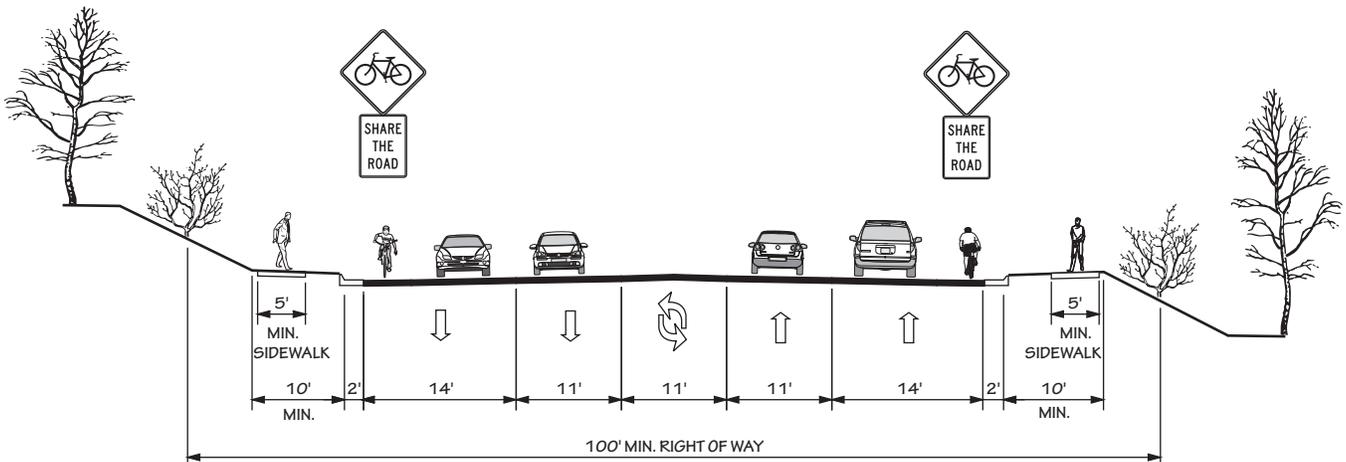
GRASS MEDIAN WITH BIKE LANES AND SIDEWALKS



5 LANES

5 A

WIDE OUTSIDE LANES

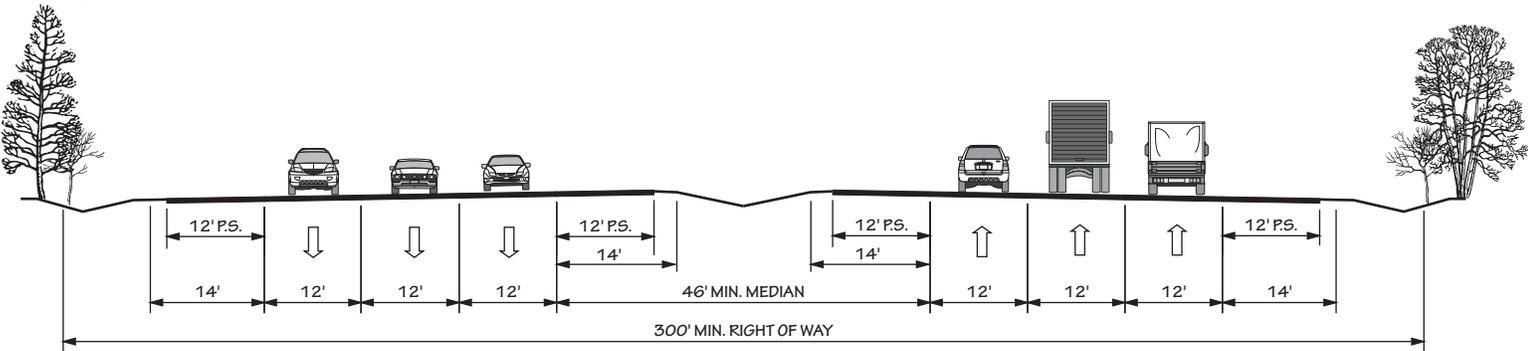


TYPICAL HIGHWAY CROSS SECTIONS

6 LANES

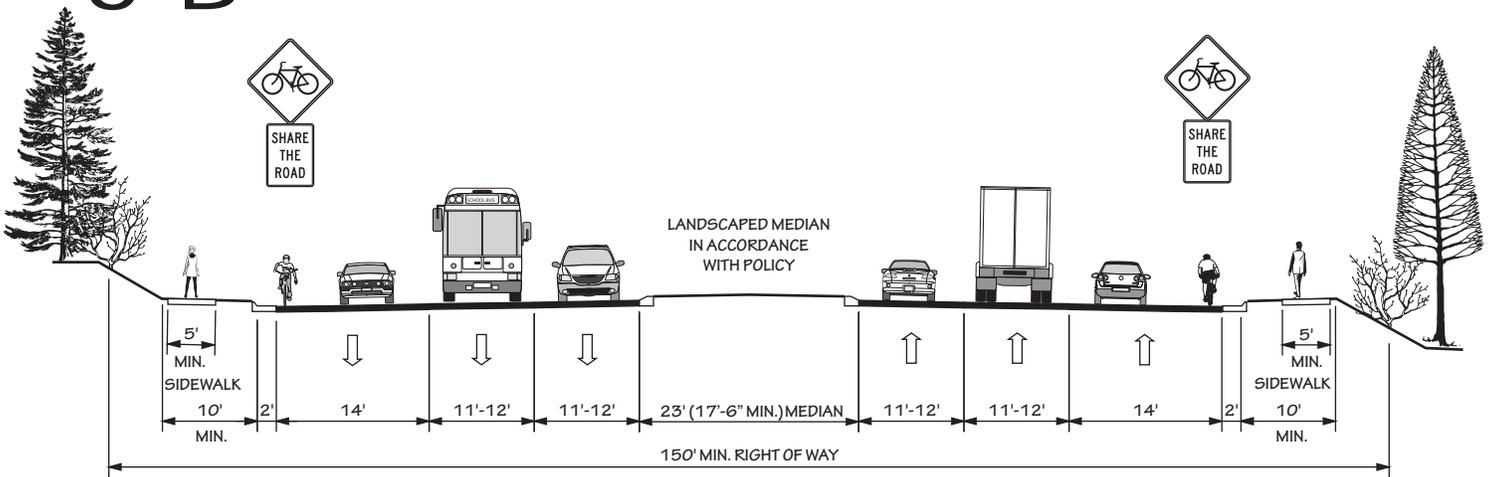
6 A

DIVIDED WITH GRASS MEDIAN



6 B

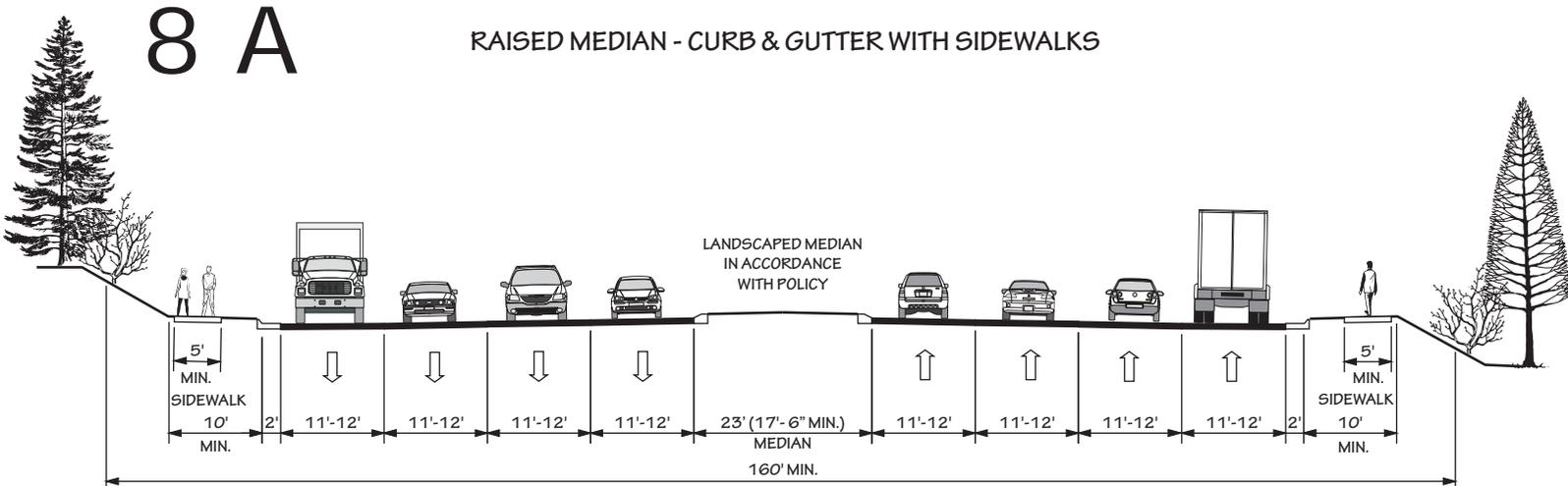
RAISED MEDIAN - CURB & GUTTER WITH WIDE OUTSIDE LANES AND SIDEWALKS



8 LANES

8 A

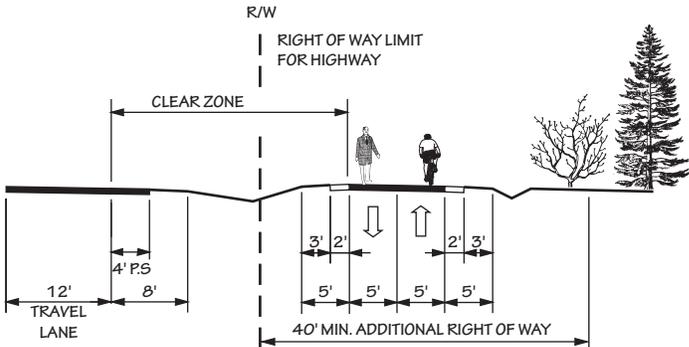
RAISED MEDIAN - CURB & GUTTER WITH SIDEWALKS



TYPICAL MULTI - USE PATH

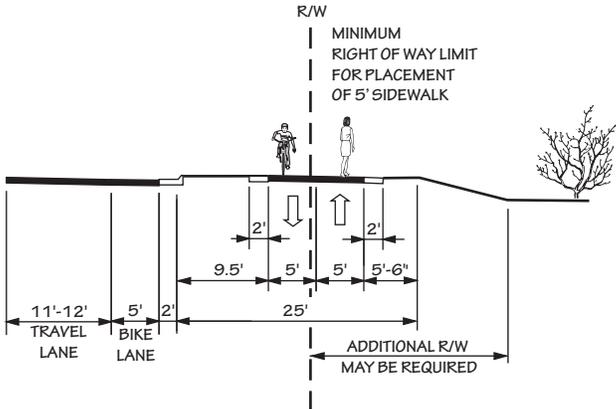
MULTI - USE PATH
ADJACENT TO RIGHT OF WAY OR SEPARATE PATHWAY

M A



MULTI - USE PATH ADJACENT TO CURB AND GUTTER

M B



Appendix E

Level of Service Definitions

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 Figure 10.

- ❖ **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.

Figure 10 - Level of Service Illustrations



LOS A



LOS B



LOS C



LOS D



LOS E



LOS F

Source: 2010 Highway Capacity Manual, Exhibit 11-4

Appendix F Traffic Crash Analysis

A crash analysis performed for the Cherokee County CTP factored crash frequency, crash type, and crash severity. Crash frequency is the total number of reported crashes and contributes to the ranking of the most problematic intersections. Crash type provides a general description of the crash and allows the identification of any trends that may be correctable through roadway or intersection improvements. Crash severity is the crash rate based upon injuries and property damage incurred.

The severity of every crash is measured with a series of weighting factors developed by the NCDOT Division of Highways (DOH). These factors define a fatal or incapacitating crash as 47.7 times more severe than one involving only property damage and a crash resulting in minor injury is 11.8 times more severe than one with only property damage. In general, a higher severity index indicates more severe accidents. Listed below are levels of severity for various severity index ranges.

<u>Severity</u>	<u>Severity Index</u>
low	< 6.0
average	6.0 to 7.0
moderate	7.0 to 14.0
high	14.0 to 20.0
very high	> 20.0

Table 4 depicts a summary of the crashes occurring in the planning area between January 1, 2009 and December 31, 2011. The data represents locations with 10 or more crashes and/or a severity average greater than that of the state's 4.11 index. The "Total" column indicates the total number of crashes reported within 150-ft of the intersection during the study period. The severity listed is the average crash severity for that location.

Table 4 - Crash Locations

Map Index	Intersection	Average Severity	Total Crashes
1	US 64 and NC 60	12.28	10
2	US 19 and SR 1456 (Wells Connector)	8.53	14
3	US 19 and NC 141	4.08	12
4	US 64 and Hiwassee Street	2.74	17
5	US 19 and US 64	2.59	14
6	US 64 and US 129	2.31	17
7	US 19 and Walmart Driveway	1.34	22

The NCDOT is actively involved with investigating and improving many of these locations. To request a more detailed analysis for any of the locations listed in Table 4, or other intersections of concern, contact the Division Traffic Engineer. Contact information for the Division Traffic Engineer is included in Appendix A.

Appendix G

Bridge Deficiency Assessment

The Transportation Improvement Program (TIP) development process for bridge projects involves consideration of several evaluation methods in order to prioritize needed improvements. A sufficiency index is used to determine whether a bridge is sufficient to remain in service, or to what extent it is deficient. The index is a percentage in which 100 percent represents an entirely sufficient bridge and zero represents an entirely insufficient or deficient bridge. Factors evaluated in calculating the index are listed below.

- structural adequacy and safety
- serviceability and functional obsolescence
- essentiality for public use
- type of structure
- traffic safety features

The NCDOT Structures Management Unit inspects all bridges in North Carolina at least once every two years. A sufficiency rating for each bridge is calculated and establishes the eligibility and priority for replacement. Bridges having 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, or those that may be occasionally flooded.

A bridge must be classified as deficient in order to qualify for Federal replacement funds. Additionally, the sufficiency rating must be less than 50% to qualify for replacement or less than 80% to qualify for rehabilitation under federal funding. Deficient bridges within the planning area are listed in Table 5.

Table 5 - Deficient Bridges

Bridge Number	Facility	Feature	Condition	Local ID
2	NC 141	Slow Creek	Functionally Obsolete	
5	NC 141	Valley River	Functionally Obsolete	
9	US 64 (EBL)	Nottely River, Gravel Road	Functionally Obsolete	CHER0003-H
10	US 64 (WBL)	Nottely River, Non-system Road	Functionally Obsolete	CHER0003-H
14	US 19B	Hiwassee River	Functionally Obsolete	
15	SR 1331	Owl Creek	Functionally Obsolete	CHER0010-H
27	SR 1505	Junaluska Creek	Functionally Obsolete	CHER0012-H
29	SR 1505	Junaluska Creek	Functionally Obsolete	CHER0012-H
43	SR 1331	Hanging Dog Creek	Functionally Obsolete	B-3430 ²
48	US 19B	Valley River	Functionally Obsolete	
51	SR 1326	Grape Creek	Functionally Obsolete	CHER0011-H
87	US 19/74/129 (EBL)	Valley River, Private Road	Functionally Obsolete	
88	US 19/74/129 (WBL)	Valley River, Private Road	Functionally Obsolete	
126	SR 1314	Shoal Creek	Structurally Deficient	
159	SR 1326	Hanging Dog Creek	Structurally Deficient, Functionally Obsolete	B-4069
172	SR 1556	Martin Creek	Functionally Obsolete	CHER0013-H
173	SR 1556	Martin Creek	Structurally Deficient	CHER0013-H
195	SR 1556	Creek	Structurally Deficient	CHER0013-H
222	SR 1326	Louisville, Nashville Railroad	Functionally Obsolete	CHER0011-H
223	SR 1548	Hiwassee River	Functionally Obsolete	CHER0014-H
249	SR 1428	Hyatt Creek	Functionally Obsolete	CHER0007-H
250	SR 1428	Welsh Creek	Functionally Obsolete	CHER0007-H
258	SR 1314	Hiwassee Dam Spillway	Functionally Obsolete	

² TIP project B-3430 was completed in 2011.

Appendix H Public Involvement

CTP Committee Members

Silas Allen	Cherokee County, Director of Building Inspections
Johnny Brown	Mayor, Town of Andrews
Randy Cantor	Director, Cherokee County Transit
Josh Carpenter	Cherokee County, Economic Development Director
Donna Crawford	Director, Cherokee County DSS
Sarah Graham	Regional Planner, SWRPO
Bill Green	Manager, Town of Andrews
Wesley Grindstaff	NCDOT, Division 14, District 3 Engineer
Maria Hass	Assistant Manager, Cherokee County
Bill Hughes	Mayor, Town of Murphy
Steven Lane	Superintendent, Cherokee County Schools
Trevor Lovin	Cherokee County GIS
Callie Moore	Executive Director, Hiwassee River Watershed Coalition
David Ritz	Owner, Re/Max Mountain Properties
Will Roberts	Cherokee County, Tax Administrator
Bonnie Smith	President, Mountain and Lakes Board of Realtors
Randy Wiggins	Manager, Cherokee County
David Wood	Chairman, Board of Commissioners

Vision Statement

Cherokee County desires a safe and reliable multi-modal transportation system that provides internal and external connectivity, efficient movement of people, and support for economic development.

Goal: Effectively moves local residents and visitors.

Objectives:

- ❖ Support downtown merchants using off street parking for employees.
- ❖ Consider the aesthetics and characteristics of downtowns during the development of all new transportation projects and upgrades by 2040.
- ❖ Achieve a LOS C or better on major thoroughfares by 2040.
- ❖ Achieve a volume/capacity <1.0 in the central business districts (CBDs) of Murphy and Andrews by 2040.
- ❖ Provide three or more Park and Ride lots by 2015 (transit to CBD, designated bus stops in CBD)

Goal: Provide connectivity to surrounding states and counties.

Objectives:

- ❖ Provide connectivity from the Cherokee County airport to surrounding US and NC routes and major thoroughfares by 2040.

Goal: Provide connectivity amongst communities, towns, and points of interest within county.

Objectives:

- ❖ Provide transit service between Andrews and Murphy two days a week by 2015.
- ❖ Provide bicycle accommodations between town centers (Murphy and Andrews) and points of interest (i.e. Valley River, Hayesville, Tri-County Community College, Folk School/Brasstown) by 2025.
- ❖ Provide pedestrian accommodations within one mile of schools by 2040.
- ❖ Provide pedestrian accommodations from new retail developments and shopping centers to existing infrastructure by 2040.
- ❖ Connect all greenways to sidewalks by 2040.

Goal: Develop transportation infrastructure and facilities to aid tourism and development.

Objectives:

- ❖ Provide signage for tourist destinations and major attractors from main thoroughfares by 2040.
- ❖ Provide multi-modal (bike, pedestrian, and transit) connections between tourist destinations (i.e. Tellico River , Nantahala River, Valley Rivers; Dragon tail; Cherochala Skyway; Hiwassee Lake) and the downtowns of Murphy and Andrews by 2040.
- ❖ Provide multi-modal (bike, pedestrian, and transit) connections directly among tourist destinations by 2040.

Goals and Objectives Survey and Results

1. Select which most closely matches your residency status:

Response	Percentage
I live in Cherokee County year-round.	91.3
I live in Cherokee County for part of the year, and another location for part of the year.	3.7
I do not live in Cherokee County.	5.0

2. Which area/community do you consider your residence to be in or closest to?

Response	Percentage
Andrews	21.7
Murphy	17.5
Marble	8.0
Hiwassee Dam	15.1
Peachtree	13.2
Martin's Creek	7.5
Unaka/Beaver Dam	1.9
Hanging Dog	4.2
Brasstown	1.4
Bellview	5.2
Culberson	2.8
Wolf Creek	1.4
Texana	0.0
Topton	0.0

3. On a typical day, does the majority of your travel take place within Cherokee County?

Response	Percentage
Yes	94.4
No	5.6

4. Which area/community do you work in and/or commute to most often?

Response	Percentage
Murphy, NC	84.4
Andrews, NC	12.6
Swain County	0.0
Clay County	2.5
Polk, NC	0.0
Bradley, NC	0.0
Towns Union	0.5

Other:

- Marble
- Peachtree
- Graham County

5. For the following transportation goals, please indicate how important you feel each one is.

Response	Most Important	Very Important	Neutral	Not Very Important	Least Important
(1) Safety	71.4	23.8	4.0	0.5	0.5
(2) Public/Community Services	19.5	58.0	16.0	4.5	2.0
(3) Consistent Travel Times	14.9	54.2	24.9	4.0	2.0
(4) Faster Travel Times	10.2	38.8	37.8	8.2	5.1
(5) Transportation mode choice (walking, cycling, transit, personal vehicle)	13.6	46.7	29.6	6.5	3.5
(6) Economic Growth	51.8	40.7	6.0	0.5	1.0
(7) Environmental Protection	29.2	47.0	19.3	3.5	1.0
(8) Community and cultural preservation	23.9	45.3	26.4	2.5	2.0
(9) Integration with regional community	18.3	40.6	33.2	4.0	4.0
(10) Public transit options	20.0	44.0	21.5	6.5	8.0
(11) Emergency Response times	69.7	23.7	4.5	2.0	0.0

6. Which of the above issues are single Most Important to you, and the Least Important to you? (Please select the number that corresponds to your answer)

Response	1	2	3	4	5	6	7	8	9	10	11
Most Important to you	41.2	3.6	3.6	1.5	3.6	18.6	3.1	1.5	1.5	5.7	15.5
Least important to you	1.6	1.6	4.8	29.6	10.6	1.6	7.9	7.9	11.6	19.6	1.6

7. What roads in Cherokee County do you most commonly use?

- US-64
- US-74
- US-19
- NC-129
- NC-141
- NC-294
- Joe Brown Highway
- Martins Creek

8. Where do you think transportation is a problem in Cherokee County?

- US-64
- NC-294
- More public transit options

9. To address any traffic problems in the area, which improvements should be considered? (Select all that apply)?

Response	Percentage
(1) Widen existing roads	64.2
(2) Add turn lanes at specific intersections	48.4
(3) Improve pavement and bridges	52.1
(4) Build new roads	17.4
(5) Increase the number of one-way streets	4.7
(6) Expand, improve, or build new sidewalks	22.1
(7) Add on-road bike lanes	17.9
(8) Greenways and off-road paths	16.3
(9) Provide or increase public transit	36.8
(10) Access control (limited driveways, right turn only facilities)	11.1
(11) Improve intersection design (add stoplights, improve signal timing, create roundabouts)	48.4

Other:

- Guardrail on 294
- More park and ride locations

10. Please list your top two choices from the options in the previous Question and beside each one indicate where you would like to see it implemented. (Example: "1, through downtown on Main Street" would mean 'widen Main Street through downtown')

- 1, US-294
- 1, US-64 past Murphy
- 11, downtown Murphy

11. When traveling in your area, do you often go out of your way to get to your destination because the most direct route is too congested? If you answered YES above, please list specific locations of problems and alternate routes taken.

Response	Percentage
No	82.9
Yes	17.1

- Downtown Murphy

12. For the following potential Rail Road uses, please indicate how important you feel each one is.

Response	Most Important	Neutral	Least Important
(1) Industrial Movement of Goods and/or Materials	72.4	21.0	6.6
(2) Tourist Train	47.3	37.4	15.4
(3) Bike Path	19.5	39.6	40.8
(4) Rail transportation between Murphy and Andrews	24.7	50.0	25.3
(5) Attracting Industry	85.3	11.3	3.4

13. For the above uses which is most important? (Please select the number the corresponds to your answer)

Response	1	2	3	4	5
Most Important Use	18.1	12.3	8.8	1.2	55.6

14. For the following potential Airport uses, please indicate how important you feel each one is.

Response	Most Important	Neutral	Least Important
(1) Industrial Movement of Goods and/or Materials	52.6	32.0	15.4
(2) Business Related Travel	63.6	29.5	6.9
(3) Leisure Travel	31.8	47.6	20.6
(4) Attracting Industry	83.1	12.4	4.5

15. For the above uses which is most important? (Please select the number that corresponds to your answer)

Response	1	2	3	4
Most Important Use	9.1	13.4	6.1	67.1

16. Given the limited funding available for addressing transportation issues, please indicate the level of importance you feel is appropriate for each of the following approaches.

Response	High Importance	More Importance	Neutral	Less Importance	Low Importance
Maintaining existing residential streets	43.3	38.2	15.7	2.8	0.0
Build new major roads	16.8	17.9	32.9	15.6	16.8
Maintaining major streets and highways	58.7	36.3	3.4	6	1.1
Expanding transit service	26.0	21.5	27.1	12.4	13.0
Creating or expanding carpool programs	10.7	19.8	41.2	13.6	14.7
Building new sidewalks	8.0	16.0	38.9	17.7	19.4
Building new greenways	4.5	20.1	33.5	19.6	22.3
Building bike lanes	7.3	14.5	30.7	15.6	31.8
Creating interconnected transit routes between tourist areas and Cherokee County	28.8	27.1	23.2	9.6	11.3

17. Which three choices from the previous question are of Highest Importance to you?

Response (%)	Maintaining existing residential streets	Building new major roads	Maintaining major streets and highways	Expanding transit service	Creating or expanding carpooling programs	Building new sidewalks	Building new greenways	Building bike lanes	Creating interconnected transit routes between tourist areas and Cherokee County
Approach 1	35.8	10.2	32.4	9.7	.6	.6	.6	2.3	8.0
Approach 2	19.6	11.3	35.1	8.3	3.0	2.4	4.8	2.4	13.1
Approach 3	14.7	7.1	14.1	15.4	6.4	6.4	7.1	4.5	24.4

18. Many transportation projects are funded by the State as well as Federal programs. If additional money was needed to fund transportation projects, which of the following would you support? (Select all that apply)

Response	Percentage
Charging transportation fees to develop properties	45.6
Gasoline tax increase	22.1
Local bond referendum (loans requiring approval by voters)	57.0

Other:

- Vehicle Miles Traveled Tax
- Sales Tax

Public Workshop Opportunities

In addition to receiving local feedback through the Goals and Objectives Survey, the public involvement process included holding three public drop-in sessions in Cherokee County to present the proposed CTP to the public and solicit comments. The first meeting was held on October 22, 2012 from 5pm to 7pm at the Andrews Fire Department; the second meeting was held on October 23, 2012 from 11:30 am to 2pm at the Cherokee County Courthouse; the third meeting was held on October 23, 2012 from 5pm to 7pm at the Hiwassee Dam Community Center. Each session was publicized in the local newspaper. Five comment forms were submitted during the session held on October 22, 2012. Three comment forms were submitted during the sessions held on October 23, 2012.

Two public hearings were held on April 1, 2013; one during the Cherokee County Commissioners meeting and one during the Murphy Town Board meeting. A third public hearing was held on April 9, 2013 during the Andrews Town Board meeting. The purpose of these meetings was to discuss the plan recommendations and to solicit further input from the public.

Several recurring themes were identified including increasing biking facilities and safety, secondary road maintenance, and Corridor K. Secondary road issues are not part of the CTP and interested parties were referred to the District Engineer for resolution. Project A-0009, also known as Corridor K, was and is a polarizing project. Both support and opposition for the recommended expressway were encountered during CTP committee meetings and public workshops. Corridor K is under further study in a regional study for the Southwestern RPO.