



# **Comprehensive Transportation Plan**



# Person County & Roxboro

July 2011

# **Comprehensive Transportation Plan**

# Person County & Roxboro

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In Cooperation with: Person County City of Roxboro Kerr-Tar Rural Planning Organization

### July 2011



Travis K. Marshall, PE Eastern Planning Unit Head In November 2008, the Transportation Planning Branch of the North Carolina Department of Transportation, Person County, and the City of Roxboro initiated a study to cooperatively develop the Person County & Roxboro Comprehensive Transportation Plan (CTP). This is a long range multi-modal transportation plan that covers transportation needs through 2035. Modes of transportation evaluated as part of this plan include: highway, public transportation and rail, bicycle, and pedestrian. This plan does not cover standard bridge replacements, 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 2011. Implementation of the plan is the responsibility of Person County, the City of Roxboro, and NCDOT. Refer to Chapter 2 for information on the implementation process.

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

- **R-2241 (US 501)**: Construct a new location 4-lane divided boulevard and widen parts of the existing 2-lane facility to a 4-lane divided boulevard from N. Main St. (SR 1601) to the Virginia line.
- **R-2585 (US 158):** Widen the existing 2-lane facility to a 4-lane divided expressway from the Granville County line to Thee Hester Rd. (SR 1159). Part of this project is on new location.
- **R-2575 (US 158):** Widen the existing 2-lane facility to a 4-lane divided expressway from Thee Hester Rd. (SR 1159) to the Caswell County line.
- **PER0001-H (US 501):** Improve the existing 4-lane divided boulevard facility to a 4-lane divided expressway from the Durham County line to Roby Barton Rd. (SR 1218).
- **PER0002-H (US 501):** Improve the existing 5-lane major thoroughfare to a 4-lane divided boulevard from Roby Barton Rd. (SR 1218) to N. Main St. (SR 1601).
- **PER0003-H (NC 57):** Improve the existing 2-lane major thoroughfare to a 4-lane divided boulevard from US 158 (Leasburg Rd.) to Morton Pulliam Rd. (SR 1342).

- **PER0004-H (Memorial Dr. Extension):** Construct a new location extension of Memorial Dr. (SR 1416) from the current end-of-road location to Chub-Lake Rd. (SR 1333)
- **PER0005-H (Halifax-Allensville Rd. Connector):** Improve Halifax Rd. (SR 1521) and Allensville Rd. (SR 1542) from existing US 158 to US 501 by widening existing pavement to 24-ft. A new location connector is recommended from Allensville Rd. (SR 1542) to Mountain Rd. (SR 1536).
- **PER0006-H (Chub-Lake / Carver Drive Connector):** Construct a new location connector from Chub-Lake Rd. (SR 1333) to Carver Dr. (SR 1364).



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Pers	Son County Son County
N	lorth Carolina
Сог	mprehensive
Irans	portation Plan
Plan da	te: 10/8/10
Sheet 1	Adoption Sheet
Sheet 2	Highway Map
Sheet 3	Public Transportation and Rail Map
Sheet 4	Bicycle Map
Sheet 5	Pedestrian Map
Legend	
	County Boundary
	Railroads
	Municipal Boundaries
	Water Bodies
	Rivers / Streams
	Schools
+	Airports
0 0.5 1	2 3 Miles
Figure 1 - Sh <i>Base map c</i> Refer to CT	heet 1 of 5 $W \xrightarrow{N}_{S} E$ date: 7/11/2009 P document for more details.



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Highway Map
Comprehensive
Transportation Plan
Plan date: 10/8/10
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
0 0.5 1 2 3 Miles Figure 1 - Sheet 2 of 5 W S E Base map date: 12/16/08 S
Refer to CTP document for more details.



### Highway Map Inset 2A & 2B COUNT **Person County** Comprehensive **Transportation Plan** Plan date: 10/8/10 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 $(\bullet)$ Existing Interchange Proposed Interchange $( \bullet )$ Existing Grade Separation $\bigcirc$ Proposed Grade Separation Figure 1 - Sheet 2A of 5 Base map date: 12/16/08 Refer to CTP document for more details.



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Cha	mbers	Loop

Bus Route	es
	Existing
-8-8-8-8	Needs Improvement
	Recommended
Fixed Gui	deway
	Existing
	Needs improvement
====	Recommended
Operation	al Strategies
	Existing
	Needs Improvement
	Recommended
Rail Corri	dor
	Active
	Inactive
≠== ≠=	Recommended
High Spee	ed Rail Corridor
	Existing
	Recommended
Rail Sto	DDS
	Existing
<u> </u>	Recommended
Intermo	dal Connector
	Existing
$\triangle$	Recommended
Park an	d Ride Lot
Ρ	Existing
Ρ	Recommended
	Cheet 2A of 5
Figure 1	- Sheet 3A OF 5
ase map c	late: 12/16/2008 🛛 📉



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### 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.

### A. 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.

#### 1. 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 concept 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 concept 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 2007 to 2035 using a trend line analysis based on Annual Average Daily Traffic (AADT) from 1991 to 2007. In addition, local land use plans and growth expectations were used to further refine future growth rates and patterns. The established future growth rates were endorsed by the Person County Board of Commissioners (October 19, 2009) and the City of Roxboro (November 9, 2009).

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 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 Level of Service (NCLOS) developed by the Institute of Transportation Research and Education (ITRE). 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 Person County & Roxboro CTP for crashes occurring in the planning area between January 1, 2007 and December 31, 2009. During this period, a total of 17 intersections were identified as high crash locations as illustrated in Figure 3. 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 Bridge Maintenance 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 two deficient bridges were identified within the planning area and are illustrated in Figure 4. Refer to Appendix A for more detailed information.







 Figure 4 Person County Deficient Bridges
Plan Date: 3/12/10 Legend
<ul> <li>Deficient Bridges</li> <li>Roads</li> <li>Rivers and Streams</li> <li>Water Areas</li> <li>Municipal Boundary</li> <li>County Boundary</li> </ul>
PERSON COUNTY NORTH CAROLINA
PREPARED BY THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRANSPORTATION PLANNING BRANCH IN COOPERATIONS WITH THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
Miles 0 0.5 1 2 3 Niles
Base map date: 12/16/08 S

#### 2. 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: 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. Person County currently operates the Person Area Transit System (PATS) which provides, by appointment only, transit services to citizens within the City of Roxboro and throughout Person County. For more information regarding the PATS transit services, please go to http://www.personcounty.net/Government/Departments/Transportation.aspx or call at 336-597-1771. 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. Currently, there are no commuting rail services offered in Person County. Existing rail lines used for freight transport are operated by Norfolk Southern and serve mainly the two Progress Energy power plants located at Hyco Lake and Mayo Lake in the northern part of the County. Some minor freight rail service extends from VA to the City of Roxboro Area which serves local industry in the area. All recommendations for rail were coordinated with the local governments and the Rail Division of NCDOT. Refer to Appendix A for contact information.

#### 3. 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. The 2008 City of Roxboro Pedestrian Plan was utilized in the development of these elements of the CTP. NC Bike Route 4 travels east to west through Person County and was recommended for improvement in this CTP (please see NC Bike Route 4 recommendations in the Chapter 2 – Bicycle recommendations section). 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.

#### 4. Land Use

G.S. §136-66.2 requires that local areas have a current (less than five years old) land development plan prior to adoption of the CTP. For this CTP, the Person County Land Use Plan was used to meet this requirement and is illustrated in Figures 5 and 6, 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 day and the day of the week. For transportation planning purposes, land use is divided into the following categories:

- <u>Residential</u>: Land devoted to the housing of people, with the exception of hotels and motels which are considered commercial.
- <u>Commercial</u>: 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.
- <u>Industrial</u>: Land devoted to the manufacturing, storage, warehousing, and transportation of products.
- <u>Public</u>: Land devoted to social, religious, educational, cultural, and political activities; this would include the office and service employment establishments.
- <u>Agricultural</u>: 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.

• <u>Mixed Use:</u> 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.

Person County primarily anticipates most of its growth in areas south of Roxboro. Figure 6 depicts residential, commercial and industrial land uses planned in this area along the US 501 corridor south of Roxboro. Most of the future commercial development is planned along US 501. The Durham Metropolitan area is expected to impact growth in southern Person County as northern Durham County becomes more suburban. Some residential development is planned east and west of Roxboro. Future industrial and residential is also planned north of Roxboro.

Person County has two major bodies of water, Hyco Lake and Mayo Lake, which are anticipated to have future residential developments near these bodies of water. Each lake caters to a Progress Energy power plant which provides electricity throughout the region. However, no future major industrial developments are expected near the lake.





### B. Consideration of Natural and Human Environment

In recent years, the environmental considerations have come to the forefront of 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 Tables 1 and 2 utilizing the best available data. Environmental features occurring within Person County & Roxboro are shown in Figures 7, 8, and 9.

#### **Table 1 – Environmental Features** Ecosystem Enhancement Program (EEP) Targeted Local Watersheds, Air Quality Pollution Discharge 2004 Points Ambient Water Quality Monitoring Federal Land Ownership Sites Fish Community Sampling Sites Anadromous Fish Spawning Areas • Fisheries Nursery Areas **Animal Operation Permits** • Game Lands – Wildlife Resources • Artificial Marine Reefs Commission **Beach Access Sites** Groundwater Incidents, unverified • **Benthic Monitoring Results** Groundwater Recharge/Discharge **Bottom Sediment Sampling Sites** Hazardous Substance Disposal Sites • Cemeteries Hazardous Waste Facilities Churches Heavy Metal & Organic-Rich Mud • Pollutant Sample Sites Citizen Water Quality Monitoring • High Quality Water and Outstanding Sites Resource Water Management Zones Closed Shellfish Harvesting Areas Hurricane Storm Surge Inundation Coastal Reserves • Conditionally Approved Shellfish Areas • Land Trust Conservation Properties Harvesting Areas Land Trust Priority Areas Conservation Easements, US Fish & • Lands Managed for Conservation & Wildlife Service **Open Space** Conservation Tax Credit Properties Macrosite Boundaries Discharger Coalitions' Monitoring • Sites Megasite Boundaries

- Ecosystem Enhancement Program (EEP) Local Watershed Plans, 2004
- National Pollutant Discharge Elimination System Sites (NPDES) – Major and Minor

#### Table 1 – Environmental Features (cont.)

- National Wetlands Inventory
- North Carolina Coastal Region Evaluation of Wetland Significance (NC-CREWS)Public Water Supply Water Sources
- Recreation Projects Land and Water
- Conservation Fund
- Shellfish Strata
- Significant Aquatic Endangered
   Species Habitats

- Solid Waste Facilities
- State Parks
- Submersed Rooted Vasculars
- Surface Water Intakes
- Trout Streams (DWQ)
- Water Distribution Systems Water Treatment Plants
- Water Supply Watersheds
- Well Ground Water Intakes

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
- Dedicated Nature Preserves and Registered Heritage Areas
- Historic National Register Districts
- Historic National Register Structures
- Historic Study List Districts Historic Study List Structures
- Managed Areas National Heritage
   Element Occurrences
- Significant Natural Heritage Areas



**Environmental Map 1** 



# Person County Comprehensive Transportation Plan

Plan date: 2/19/10

LEGEND



(May, 1999)

Critical Watershed, WS-II (August, 1992)

Protected Watershed, WS II (August, 1992)

Protected Watershed, WS-II NSW (August, 1992)

Protected Watershed, WS-III NSW (August, 1992)

Protected Watershed, WS-IV NSW (August, 1992)

**Municipal Limits** 

Gamelands

(July, 2003)

Lands Managed Conservation Open Space

(February, 2002)



Base map date: 11/09/09 Refer to CTP document for more details



**Environmental Map 2** 



# Person County Comprehensive Transportation Plan

Plan date: 2/19/10

### LEGEND

- Roads
  - Significant Aquatic Endangered Species Habitats
- Surface Water Intakes
- Stream Gaging Stations USGS
- Stream Gaging Stations Unverified
- Solid Waste Facilities
- Public Water Supply Water Sources
- County Boundary
  - Groundwater Recharge Discharge
  - Recreation Projects Land Water Conservation Fund
  - Hazardous Substance Disposal Sites

## **Municipal Limits**



Base map date: 11/09/09 Refer to CTP document for more details



**Environmental Map 3** 



# Person County Comprehensive Transportation Plan

Plan date: 2/19/10

### LEGEND

- Roads
- County Boundary
- NPDESMinor
- ▲ NPDESMajor
- Hazardous Substance Disposal Sites
- ★ Fish Community Sampling Sites
- Benthic Monitoring Results
- ★ Animal Operation Permits
- Ambient Water Quality Monitoring Sites
- \* Air Quality Pollution Discharge Points
- Groundwater Incidents Unverified
- Municipal Limits



### C. 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 City of Roxboro and Person County, with the assistance of the Kerr-Tar RPO, requested the development of a comprehensive transportation plan for Person County prior to the development of the current prioritized list of regional needs. A meeting was held with the Person County Board of Commissioners in November 2008 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 Person County & Roxboro CTP Steering Committee, which included representatives from county staff, city staff, the Kerr-Tar 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 one public drop-in session in Person County to present the proposed Comprehensive Transportation Plan to the public and solicit comments. This meeting was held on August 5, 2010 at the City Council Chambers in Roxboro. This public drop-in session was publicized in the local newspaper and was held from 4 to 6PM. No comment forms were submitted during this session.

A public hearing was held on October 11, 2010 during the Person County Commissioners and City Council of Roxboro joint meeting. The purpose of this meeting was to discuss the plan recommendations and to solicit further input from the public. The CTP was adopted during this meeting.

The Kerr-Tar RPO endorsed the CTP on November 9, 2010. The North Carolina Board of Transportation voted to adopt the Person County & Roxboro CTP on January 6<sup>th</sup>, 2011.

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 the environment.

This report documents the development of the 2011 Person County & Roxboro CTP as shown in Figure 1. This chapter presents recommendations for each mode of transportation in Person County and Roxboro. These recommendations are organized, by mode, on the following pages as problem statements.

#### A. 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 Person County and the City of Roxboro. 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 Kerr-Tar RPO for regional prioritization and submittal to NCDOT. Refer to Appendix A for contact information on funding. Local governments may use the CTP to guide development and protect corridors for the recommended projects. It is critical that NCDOT and local government coordinate on relevant land development reviews and all transportation projects to ensure proper implementation of the CTP. Local governments and the NC Department of Transportation share the responsibility for access management and the planning, design and construction of the recommended projects.

#### B. Problem Statements

#### 1. HIGHWAY

#### US 501 / NC 57 Expressway

#### Local ID: PER0001-H Last Update: 6/9/11

#### Problem Statement

Existing US 501 / NC 57 from the Durham County line to Roby Barton Rd. (SR 1218) is expected to be near and over capacity (LOS D – section dependent) by the year 2035.

#### **Justification of Need**

US 501 / NC 57 is a major north-south corridor through Person County connecting the Triangle Region of NC to southern Virginia. The current capacities along this corridor range from 32,000 to 35,000 vehicles-perday (vpd). Future travel demand is



forecasted to be from 32,000 to 34,000 vpd. By improving the current boulevard, the project is intended to provide future congestion relief in southern Person County. Signals and driveway access to homes and businesses exist along this section of US 501.

#### **Community Vision and Problem History**

The Person County 2001 Person County Land Use plan recognizes US 501 as a vital corridor in Person County. The land use plan identifies US 501 as a "gateway" into Person County and desires enhanced mobility, while preserving aesthetic quality and being accommodating to future development.

#### Comprehensive Transportation Plan (CTP) Project Proposal

#### **Project Description and Overview**

In an effort to relieve projected capacity deficiencies along US 501 / NC 57, the CTP project proposal for PER0001-H (US 501 / NC 57 – expressway) recommends that the existing 4-lane divided boulevard be upgraded to a 4-lane divided expressway. The majority of this project's recommendation occurs within the existing Right-of-Way (ROW). The future expressway facility will require limiting access more effectively, thus future coordination with NCDOT - Division 5 is needed in the future. Interchanges are
recommended on this section of US 501 at NC 57, Dick Holeman Rd. (SR 1123) and Roby Barton Rd. (SR 1218). See *Appendix C* for detailed CTP recommendation information.

## Linkages to Other Plans and Proposed Project History

This project has not been identified in any previous transportations plan. This project is currently not funded in the DRAFT 2012-2018 NCDOT Statewide Transportation Improvement Program (STIP) and is not identified by the Strategic Highway Corridor's (SHC) Plan as a strategic corridor. Future coordination is required with the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC – MPO). Public Transportation facilities are recommended along this corridor (for more information see *Appendix C* and PER00001-T and PER00006-T).

## Land Use Patterns

The 2001 Person County Land Use plan identifies existing land uses along the corridor as residential and agricultural. Future land use from the 2001 plan identifies that areas near the corridor be designated suburban residential, Office and Institutional (O&I) / Commercial in anticipation of growth from the Triangle Region expanding into southern Person County.

## Natural & Human Environmental Context

Currently, homes and businesses exist adjacent to US 501. Future access to the corridor should be limited as the CTP is recommended a limited access expressway (PER0001-H). This project is contained within the Flat River Watershed but is not expected to have any major impacts to the watershed. Future environmental study should be done as the project may affect the following identified environmental features:

- Significant Aquatic Endangered Species Habitats
- Public Water Supply Sources
- Groundwater Incidents (unverified)

# Multi-modal Considerations

Multiple modes of transportation were considered in the development of recommendations for this section of US 501 / NC 57. For increased connectivity to the Triangle Region, bus routes are recommended along the corridor as well as fixed guideway improvements along an existing rail corridor parallel to US 501 / NC 57. See PER0001-T, PER0006-T, Appendix C, and CTP mapping for further detail on multimodal recommendations along the corridor.

#### Public/ Stakeholder Involvement

This project was displayed, in conjunction with other projects in the 2011 Person County & Roxboro CTP, at a public workshop intended to seek the public's feedback on August 5, 2010. Positive feedback was given regarding increased mobility of US 501 in the future. For further information regarding public involvement, see *Appendix H*.

#### Local ID: PER0002-H Last Update: 6/9/11

#### **Problem Statement**

Existing US 501 (Madison Blvd.) from Roby Barton Rd. (SR 1218) to N. Main St. (SR 1601) expected to be over capacity (LOS D) by the year 2035.

#### **Justification of Need**

US 501 is a major north-south corridor through Person County that connects the Triangle Region of NC to southern Virginia. Current capacities along this corridor range from roughly 29,000 to 39,000 vehicles-per-day (vpd) (source: NC Level-of-Service (NCLOS) program). Future travel demand is forecasted to be from 29,000 to 52,000 vpd. By improving the current major thoroughfare, the project is intended to



provide future congestion relief and improved safety conditions. Thirteen intersections along US 501 were identified in this CTP as high crash locations. While the crash severity at these locations was lower than NC's average severity, each location had more than 10 crashes (data sourced from TEAAS from a period of January 1, 2007 to December 31, 2009). Refer to Appendix F for further information on traffic crash analysis.

#### **Community Vision and Problem History**

The 2001 Person County Land Use Plan identifies US 501 as a vital corridor to Person County. Throughout the development of this plan, local planning staff from Roxboro also identified this section of US 501 as important to Roxboro. Many commercial, residential, and industrial developments occur along this section of US 501. As stated in the 2001 plan, the community's vision for the corridor is to preserve aesthetic quality, enhance mobility, and appropriately accommodate future development.

#### Comprehensive Transportation Plan (CTP) Project Proposal

#### **Project Description and Overview**

In an effort to relieve projected capacity deficiencies along US 501, the CTP project proposal for PER0002-H (US 501 – boulevard) recommends that the existing 5-lane major thoroughfare be upgraded to a 4-lane divided boulevard with a median. The majority of this recommendation occurs within the existing Right-of-Way (ROW) and

may improve safety along the corridor by limiting access. Depending on future access control measures, the proposed boulevard facility will increase current capacity. Improvements along this section of US 501, in conjunction with CTP project PER0005-H, are expected to replace the function served by TIP project R-3609 – Eastern Roxboro Bypass. See *Appendix C* for detailed CTP recommendations information.

#### Linkages to Other Plans and Proposed Project History

Improvements for this portion of US 501 were initially identified in the 1999 City of Roxboro Thoroughfare Plan. This project is currently not funded in the DRAFT 2012 - 2018 NCDOT Statewide Transportation Improvement Program (STIP) and is not identified by the Strategic Highway Corridor's (SHC) Plan as a strategic corridor. Increased north-south mobility through Roxboro along US 501 was identified by locals as a top priority in the 2001 Person County Land Use plan. Pedestrian projects (from the 2008 City of Roxboro Pedestrian Plan) and Bicycle projects are recommended along this corridor (for more information see below in *Multi-Modal Considerations*).

#### Land Use Patterns

As identified in the 2001 Person County Land Use plan, land uses along the existing corridor are rural, residential, commercial, and some industrial. Future land use designations recommended are suburban residential, Office and Institutional (O&I) / commercial, and industrial. Future development of these land uses are expected along this section of US 501.

#### Natural & Human Environmental Context

This project is mostly contained within the Flat River Watershed, with portions in the Dan River Basin but is not expected to have any major impacts. Future environmental study should be done as the project may affect the following environmental features:

- Groundwater Incidents (unverified)
- Hazardous Substance Disposal Sites
- National Pollutant Discharge Elimination System (NPDES) minor

#### Multi-modal Considerations

Multiple modes of transportation were considered in the development this recommendation. Bus routes are recommended along the corridor as well as bicycle and pedestrian improvements. The Triangle Transit (TT) Short-Range Transit Plan identifies bus service recommended to southern Person County by 2012. Pedestrian recommendations along this corridor were first identified by the *2008 City of Roxboro Pedestrian Plan.* Local planning staff and the CTP steering committee recommended extending this service to Roxboro (see PER0001-T). Currently, NC Bike Route 4 uses a portion of US 501 as the route travels east to west through Person County. See PER0002-P, PER0018-B, and PER0001-T, PER0004-T, Appendix C, and CTP mapping for further detail on multi-modal recommendations along the corridor.

### Public/ Stakeholder Involvement

This project was displayed at a public workshop on August 5, 2010. Positive comments were received regarding multi-modal improvements for US 501 (Madison Blvd.). For further information regarding public involvement, see *Appendix H*.

#### NC 57 Boulevard

Local ID: PER0003-H Last Update: 6/9/11

#### Problem Statement

Existing NC 57 from US 158 (Leasburg Rd.) to the Caswell County line is expected to be near or over capacity (LOS D) by the year 2035.

#### **Justification of Need**

NC 57 is a major north-south corridor through Person County that connects the Triangle Region to Caswell County and Virginia. The current capacities along this corridor range from roughly 11,400 to 12,300 vehicles-per-day (vpd) (source: NC Level-of-Service (NCLOS) program). Future travel demand is forecasted to be from 9,200 to 16,000 vpd. The facility is expected to operate near or over capacity (LOS



D) by the year 2035 (section dependant). Please refer to Figure 2 and Appendix C for more information on capacity deficiencies along NC 57.

#### **Community Vision and Problem History**

The CTP steering committee recommended improvements to NC 57 in anticipation of future capacity deficiencies. NC 57 also carries freight traffic due to heavy industry located in the northwestern portion of Person County. Locals want to improve NC 57 to meet future freight and travel demand. This project was not identified in the 2001 Person County Land Use Plan for improvement as this plan only recognized TIP projects at the time of its development.

#### Comprehensive Transportation Plan (CTP) Project Proposal

#### **Project Description and Overview**

In an effort to relieve projected capacity deficiencies along NC 57, the CTP project proposal for PER0003-H (NC 57 – boulevard) recommends that the existing 2-lane major thoroughfare be upgraded to a 4-lane divided boulevard with a median from US 158 (Leasburg Rd.) to Morton Pulliam Rd. (SR 1342). Additional Right-of-Way (ROW) will need to be purchased to allow construction of a 4-lane divided facility. The proposed boulevard facility will add an adequate amount of capacity to meet projected travel demand. See *Appendix C* for detailed CTP recommendations information.

## Linkages to Other Plans and Proposed Project History

This project has not been identified on a previous transportation plan prior to the 2011 Person County & Roxboro CTP. This project is currently not funded in the DRAFT 2012 - 2018 NCDOT Statewide Transportation Improvement Program (STIP) and is not identified by the Strategic Highway Corridor's (SHC) Plan as a strategic corridor. Pedestrian recommendations are recommended along this corridor (for more information, see below in the *Multi-Modal Considerations*). Pedestrian recommendations were first recommended in the 2008 City of Roxboro Pedestrian Plan.

#### Land Use Patterns

As identified in the 2001 Person County Land Use Plan, current land uses along the existing corridor are rural, residential, and agricultural. The 2001 plan recommends future land use along the corridor to be designated as rural residential. Some industry is located near and within Roxboro as well as heavy industry located near Hyco Lake. According to local planning staff, future residential development is expected adjacent to the corridor.

#### Natural & Human Environmental Context

This project is mostly contained within the Stories Creek Watershed and the Dan River Basin but is not expected to have any major impacts. Future environmental study should be done as the project may affect the following environmental features:

- Unverified Groundwater Incidents
- Wetlands

#### Multi-modal Considerations

NC Bike Route 4 uses a portion of NC 57 but not on this section. Some pedestrian facilities are planned on NC 57 within Roxboro. Original pedestrian recommendations are from the *2008 Roxboro Pedestrian* Plan. See PER0024-P, Appendix C, and CTP mapping for further detail on multi-modal recommendations along the corridor.

#### Public/ Stakeholder Involvement

This project was displayed at a public workshop on August 5, 2010. No comment was received regarding this specific project. For further information regarding public involvement, see *Appendix H*.

#### Local ID: PER0004-H Last Update: 6/9/11

#### **Problem Statement**

Chub-Lake Rd. (SR 1333) is expected to be over capacity (LOS D) in the year 2035 partly due to lack of roadway connectivity in northwestern Roxboro.

#### **Justification of Need**

Capacity deficiencies are expected along Chub-Lake Rd. (SR 1333) by the year 2035. Chub-Lake Rd. (SR 1333) is a major connector to northwestern Person County from the City of Roxboro. Another connection to Chub-Lake Rd. (SR 1333) in the northern part of Roxboro was first identified in the 1999 Roxboro Thoroughfare Plan. Currently,



Memorial Dr. (SR 1416) provides access to residential areas, Piedmont Community College, and Northern Middle School. The 1999 Roxboro Thoroughfare Plan forecasted future travel demand on this new location in the year 2025 to be 6,500 vpd. This model was developed using TRANPLAN and was not used in the development of the 2011 Person County & Roxboro CTP in anticipation of the Triangle Regional Travel Demand Model (TRTDM) incorporating Roxboro into its modeled area.

#### **Community Vision and Problem History**

Better connectivity to this area from north-eastern Person County is desired by the citizens in Person County and Roxboro. The 1999 Roxboro Thoroughfare Plan identified that this improvement would provide better connectivity in northwestern Roxboro with better access to local schools, medical facilities, and residential areas. Currently, this section of Roxboro is accessible via Ridge Rd. (SR 1363) / Carver Dr. (SR 1364) or the existing terminus of Memorial Dr. (SR 1416) at US 501.

#### Comprehensive Transportation Plan (CTP) Project Proposal

#### **Project Description and Overview**

Currently, there is no east-west connection between Chub-Lake Rd. (SR 1333) and northern Roxboro. Memorial Dr. (SR 1416) currently is a 2-lane minor thoroughfare and is proposed to be extended to Chub-Lake Rd. (SR 1333) following an existing utility easement. Further coordination needs to be conducted as this project will affect the

Right-of-Way (ROW) of the above mentioned utility line. A multi-use path is also recommended adjacent to the proposed corridor. See *Appendix C* for detailed CTP recommendations information.

# Linkages to Other Plans and Proposed Project History

This project was initially identified in the 1999 City of Roxboro Thoroughfare Plan. This project is currently not funded in the DRAFT 2012 - 2018 NCDOT Statewide Transportation Improvement Program (STIP) and is not identified by the Strategic Highway Corridor's (SHC) Plan as a strategic corridor. A multi-use path is recommended along this corridor (for more information, see *Appendix C* and PER0028-B. This project was not identified in the 2001 Person County Land Use Plan as this plan only referenced existing TIP projects recognized by NCDOT in 2001.

# Land Use Patterns

Current land use along the proposed new location facility is mainly utility and undeveloped privately own property. Future land use designations form 2001 Person County Land Use plan designate this area as suburban residential. Local Roxboro planning staff informed the CTP steering committee that in recent years residential developers have expressed interest in developing this area.

# Natural & Human Environmental Context

This project is in the Dan River Basin and is expected to have minor impacts to the watershed. Future environmental study should be done as the project may affect the following environmental features:

- Wetlands

# Multi-modal Considerations

Multiple modes of transportation were considered in the development of the Memorial Dr. (SR 1416) extension. This project is intended to cater to both the bicycle and pedestrian modes with a proposed multi-use path recommended adjacent to the extension (recommended in the *2008 City of Roxboro Pedestrian Plan*). See PER0028-B, Appendix C, and CTP mapping for further detail on multi-modal recommendations along the corridor.

# Public/ Stakeholder Involvement

This project was displayed at a public workshop on August 5, 2010. No comment was received regarding this specific project. For further information regarding public involvement, see *Appendix H*.

## Problem Statement

Existing US 501 from the Durham County line to the Virginia line is expected to be over capacity (LOS D) by the year 2035.

## **Justification of Need**

US 501 is a major north-south corridor through Person County that connects the Triangle Region of NC to southern Virginia. By improving Halifax Rd. (SR 1521) and Allensville Rd. (SR 1542), an alternate parallel route to US 501 will be provided. Current capacities along Halifax Rd. (SR 1521) and Allensville Rd. (SR 1542) range from 8,500 vpd to 11,400 vpd. Future travel demand was not estimated in the 2011



Person County & Roxboro CTP. Future forecasts should be performed using an updated version of the Triangle Regional Model that incorporates this project into its study area. The 1999 Roxboro Thoroughfare plan and the 2001 Person County Land Use plan identified an eastern Roxboro bypass (TIP R-3609) to provide an alternate route to US 501.

# **Community Vision and Problem History**

According to the 1999 Roxboro Thoroughfare Plan and the 2001 Person County Land Use plan, the community wants to preserve existing US 501 by providing an alternate route. The *2008 Roxboro Pedestrian* Plan and the 2011 CTP steering committee recommended including bicycle and pedestrian facilities along existing US 501. By creating this alternate north-south route, some traffic is expected to use the proposed route (PER0005-H). This would help in improving safety at 13 intersections identified by this study as high crash locations by reducing projected traffic volumes at these intersections (refer to Appendix F for more information).

# Comprehensive Transportation Plan (CTP) Project Proposal

# **Project Description and Overview**

In an effort to relieve projected capacity deficiencies along US 501, the CTP project proposal for PER0005-H (Halifax-Allensville Connector) recommends that the existing 2-lane roads Allensville Rd. (SR 1542) and Halifax Rd. (SR 1521) be widened to 24-ft

with turns lanes at major intersections (where needed). These two roads are not connected; therefore it is recommended that a new location facility be constructed to provide better connectivity. Halifax Rd. (SR 1521) and Allensville Rd. (SR 1542) currently do not have capacity deficiencies but once better connectivity is established, the routes are anticipated to carry higher traffic volumes. Refer to CTP mapping and *Appendix C* for detailed CTP recommendation information.

#### Linkages to Other Plans and Proposed Project History

This project has not been recommended in any previous transportation plan. However, R-3609 (Roxboro eastern Bypass) which intended to serve a similar purpose as the Halifax-Allensville Rd. connector was identified in the 1999 City of Roxboro Thoroughfare plan and the 2001 Person County Land Use plan, but was not chosen to be included in the 2011 Person County & Roxboro CTP. This project is currently not funded on the DRAFT 2012 - 2018 NCDOT Statewide Transportation Improvement Program (STIP) and is not identified by the Strategic Highway Corridor's (SHC) Plan.

#### Land Use Patterns

From the 2001 Person County Land Use plan, current land use designations adjacent to the corridor are comprised of rural and residential. Future land use designations recommended from the 2001 plan are suburban residential and rural residential.

#### Natural & Human Environmental Context

This project is contained within the Flat River Watershed and the Dan River Basin and is expected to have minor impacts to the natural and human environment. New location associated with this project will affect the Flat River Watershed as well as some local streams. Future environmental study should be done as the project may affect the following environmental features:

- Significant Aquatic Endangered Species Habitats
- Hazardous Substance Disposal Sites
- Unverified Groundwater Incidents
- Wetlands

#### Multi-modal Considerations

No other modes of transportation were recommended for this project as vehicular traffic will mainly use this route. This project has not been recognized in any previous transportation plan.

#### Public/ Stakeholder Involvement

This project was displayed at a public workshop on August 5, 2010. Positive feedback was received on creating an alternate north-south route to US 501 to the east of Roxboro. For further information regarding public involvement, see *Appendix H*.

#### Problem Statement

Chub-lake Rd. (SR 1333) and Ridge Rd. (SR 1363) are expected to be near capacity or over capacity (LOS D) by the year 2035.

#### **Justification of Need**

Currently, the intersection at Chub-Lake St. (SR 1333) and Ridge Rd. (SR 1363) is a highly trafficked area within the City of Roxboro. Chub-Lake Rd. / Chub Lake St. (SR 1333) connects the City of Roxboro to north-western Person County and is the main route utilized by locals to get to this part of the County (**note:** Chub Lake Rd. is the portion of SR 1333 within the County's jurisdiction while Chub Lake



St. is the portion of SR 1333 within the City of Roxboro's jurisdiction). Roxboro High School, Person Memorial Hospital, other commercial, and medical developments are on Ridge Rd (SR 1363). Better connectivity between Carver Dr. (SR 1364) and Chub Lake Rd. (SR 1333) would provide better access to northern Roxboro while relieving anticipated congestion on Ridge Rd. (SR 1363) and Chub Lake St. within the City of Roxboro's municipal limits.

The 1999 Roxboro Thoroughfare plan identified another project, Younger Rd. extension that serves a similar purpose to PER0006-H. A TRANPLAN travel demand model used in the 1999 Roxboro Thoroughfare plan estimates future travel demand for the year 2025 on the Younger Rd. extension at 7,900 vpd. Future forecasting of the Chub-Lake / Carver Drive Connector should be modeled using the Triangle Regional Model.

#### **Community Vision and Problem History**

The 1999 Roxboro Thoroughfare plan originally identified this project for improving system connectivity and mobility in northwestern Roxboro. Locals recommended this project be included in the 2011 Person County & Roxboro CTP. However, based on local engineering work done in the vicinity of PER0006-H, the CTP steering committee modified this recommendation to minimize impacts to the Stories Creek Watershed.

# Comprehensive Transportation Plan (CTP) Project Proposal

## Project Description and Overview

In an effort to relieve projected capacity deficiencies along Chub-Lake Rd. (SR 1333) and Ridge Rd. (SR 1363), the CTP project PER0006-H (Chub-Lake / Carver Dr. Connector) recommends that new location be constructed connecting Chub-Lake Rd. (SR 1333) and Carver Dr. (SR 1364). In the future, Chub-Lake Rd. (SR 1333) is forecasted (No Build) to carry 11,000 vehicles-per-day (vpd) and Ridge Rd. (SR 1363) is forecasted to carry 15,700 vpd. The capacity (LOS D) on Chub-Lake Rd. (SR 1333) currently is 14,200 vpd and for Ridge Rd. (SR 1363) is 12,300 vpd (source: NC Level-of-Service (NCLOS) Program).

## Linkages to Other Plans and Proposed Project History

This project was initially identified in the 1999 City of Roxboro Thoroughfare Plan as the Younger Rd. (SR 1346) extension but was modified based on recommendation from the CTP Steering Committee. This project is currently not funded on the DRAFT 2012 - 2018 NCDOT Statewide Transportation Improvement Program (STIP) and is not identified by the Strategic Highway Corridor's (SHC) Plan as a strategic corridor. Pedestrian accommodations were not recommended by the 2008 Roxboro Pedestrian Plan and bicycle recommendations are not recommended along the new location facility but are proposed near the route. The CTP steering committee wanted to improve primarily vehicular mobility along this new location connector. For more information see Appendix C and NC Bike Route 4 improvements, PER0008-P, PER0009-P, PER0020-B, and PER0022-B.

# Land Use Patterns

The 2001 Person County Land Use plan recognizes existing land use near this project as residential and rural. Future land use designation recommended from the 2001 plan is suburban residential. Local planning anticipates future residential development in this area in the future. The northern portion of this project's is located near medical facilities, commercial development, and local schools.

#### Natural & Human Environmental Context

This project is contained within the Dan River Basin and is expected to have minor impacts. The proposed new location would affect local streams feeding into the Dan River Basin and requires further environmental study to minimize impacts. No other environmental features were identified nearby in the area of this project.

#### Multi-modal Considerations

No other modes of transportation were identified by the CTP Steering Committee in the development of this recommendation as this connector is intended to cater to mainly vehicular traffic. No pedestrian recommendations were made as well in the 2008 *Roxboro Pedestrian Plan*.

#### Public/ Stakeholder Involvement

This project was displayed at a public workshop on August 5, 2010. No comment was received regarding this specific project. For further information regarding public involvement, see *Appendix H*.

#### US 501, TIP No. R-2241

Existing US 501 from N. Main St. (SR 1601) to the Virginia line is a two and three lane major thoroughfare and is expected to be over capacity (Level-of-Service (LOS) D) by the year 2035. Current capacities along this section of US 501 range 10,500 to 14,500 vpd. Future travel demand is expected to be from 8,200 to 18,500 vpd.

The City of Roxboro and Person County's vision for this corridor is to improve existing US 501 between Roxboro and Virginia. US 501 south of Roxboro is currently a boulevard facility and US 501 in southern Halifax County, Virginia is a boulevard facility. By completing R-2241, a multi-lane corridor will extend north-south through Person County into Virginia. An Environmental Assessment (EA) was completed on October 6, 1997 and a Finding of No Significant Impact (FONSI) was completed on April 28, 2000. The DRAFT Statewide Transportation Improvement Program (STIP) has scheduled section A of this project for construction in 2013, and the remaining B and C sections are currently unfunded. For additional information about this project, including the Purpose and Need, contact the NCDOT – Project Development and Environmental Analysis (PDEA) Branch.

#### US 158, TIP No. R-2575

US 158 (R-2575) is recognized by the Strategic Highway Corridors (SHC) Plan as a project recommended for improvement in order to improve regional mobility, connectivity, and capacity through Person County. The CTP proposal for R-2575 (US 158 - expressway) recommends that the existing 2-lane major thoroughfare be upgraded to a 4-lane divided expressway with a median from NC 86 West of Yanceyville to Thee Hester Rd. (SR 1159) in Person County. This project proposal is intended to meet the minimum standard for this corridor outlined in the SHC Plan. There are no capacity deficiencies along this section of R-2575. Current capacity is 8,600 vpd (source: NC Level-of-Service (NCLOS) program) while current volumes are 2,500 vpd. Projected future volume is anticipated to be near 3,300 vpd. This project was initially identified in the 1999 City of Roxboro Thoroughfare Plan and in the 1996 Person County Thoroughfare Plan. R-2575 is also recognized in the 2001 Person County Land Use Plan as a vital corridor and is recommended for improvement in Person County. This project is currently not funded in the DRAFT 2012 - 2018 NCDOT Statewide Transportation Improvement Program (STIP). No other modes of transportation were recommended for this corridor and no comments were received at a CTP public workshop on August 5, 2010. Refer to Appendix C for detailed CTP recommendations information.

#### US 158, TIP No. R-2585

US 158 (R-2585) is recognized by the Strategic Highway Corridors (SHC) Plan as a project recommended for improvement in order to improve regional mobility, connectivity, and capacity through Person County. The CTP proposal for R-2585 (US 158 - expressway) recommends that the existing 2-lane major thoroughfare be upgraded to a 4-lane divided expressway with a median from the Granville County line to Thee Hester Rd. (SR 1159). This project proposal is intended to meet the minimum standard for this corridor outlined in the SHC Plan. New location is recommended south of Roxboro as part of R-2585 identified in the DRAFT 2012 - 2018 STIP. US 158 is a major east-west corridor through Person County that connects Caswell County to Granville County. Current US 158 capacities from range from 8,600 vpd to 14,500 vpd (source: NC Level-of-Service (NCLOS) program). Future travel demand along this section of US 158 is expected to range from 3,500 vpd to 21,800 vpd, depending on the section. A portion of US 158 follows US 501, NC 49, and NC 57. Capacities along this section range from 12,300 vpd to 39,100 vpd; this large range of capacity is due to US 158 traversing parts of both Roxboro and rural Person County. This section of US 158 is expected to be near and over capacity (section dependant). Refer to Figure 2 -Person County & Roxboro CTP Capacity Deficiencies Map and Appendix C for further detail.

This project was initially identified in the 1999 City of Roxboro Thoroughfare Plan and in the 1996 Person County Thoroughfare Plan. R-2585 is also recognized in the 2001 Person County Land Use Plan as a vital corridor and is recommended for improvement in Person County. This project is currently not funded in the DRAFT 2012 - 2018 NCDOT Statewide Transportation Improvement Program (STIP). Bus routes were recommended by the Person County & Roxboro CTP steering committee connecting Roxboro to destinations regionally in Granville County. Positive comments were received regarding bus service to Granville County at a CTP public workshop on August 5, 2010. Refer to *Appendix C* for detailed CTP recommendations information.

#### US 158, Local ID: PER0007-H

US 158 (Leasburg Rd.) from Thee Hester Rd. (SR 1159) to US 501 (Madison Blvd.) is expected to be near and over capacity (LOS D) (section dependant) by the year 2035. US 158 (Leasburg Rd.) is recommended to be widened from 30-foot to 36-foot for an additional middle turn lane. One section of this road is proposed to be widened to a 4-lane divided boulevard (this should coordinate with NC 57 boulevard PER0003-H). The road currently serves as a major route within the City of Roxboro and widening the existing roadway and improving shoulder widths will result in a safer facility. The current capacity of this facility is 12,300 vehicles-per-day (vpd) and the future volume for the year 2035 is projected to be in the range of 9,500 to 10,200 vpd. One section between NC 57 and Long Ave. is expected to be significantly over capacity (LOS D) by the year 2035 with a projected volume of 21,800 vpd. Some of the anticipated traffic along US 158 (Leasburg Rd.) is expected to be carried by R-2585 (US 158 expressway). Currently, R-2585 is unfunded in the DRAFT 2012 - 2018 Statewide

Transportation Improvement Program (STIP), therefore locals wanted to recommend this project to help alleviate possible capacities deficiencies in the future. No comments were received regarding this project at a public workshop held on August 5, 2010.

# Main St. (SR 1601), Local ID: PER0008-H

Main St. (SR 1601) is expected to be over capacity (LOS D) by the year 2035 from N. Lamar St. to NC 49. Main St. (SR 1601) is recommended to be improved due to anticipated capacity deficiencies and potential safety problems. The current capacity of Main St. (SR 1601) from N. Lamar St. to NC 49 is 15,300 vpd while the 2035 projected traffic volume is expected to be near 15,200 vpd putting the facility right at capacity. Portions of Main St. currently have sidewalk facilities and the 2011 Person County & Roxboro CTP is recommending that all of Main St. (SR 1601) include pedestrian facilities in the future. It is also recommended that turn-lanes be added at major intersections where needed. No comments were received regarding this recommendation at a public workshop held on August 5, 2010.

## Mountain Rd. (SR 1536), Local ID: PER0009-H

Mountain Rd. (SR 1536) from the Roxboro City Limits to Allensville Rd. (SR 1536) is expected to be operating near capacity by the year 2035 and is expected to have increased safety issues. Mountain Rd. (SR 1536) is expected to be operating at near capacity by the year 2035. The existing capacity for this facility is 9,600 vpd while the 2035 projected volume for this road is 8,200 vpd. In conjunction with potential capacity deficiencies, the route is also carries NC Bike Route 4. The 2011 Person County & Roxboro CTP is recommending that NC Bike Route 4 be improved by widening shoulder to increase safety for bicyclists. See NC Bike Route 4 for more information regarding bicycle improvements. No comments were received regarding this recommendation at a public workshop held on August 5, 2010.

# Allensville Rd. (SR 1536), Local ID: PER0010-H

Allensville Rd. (SR 1536) from Mountain Rd. (SR 1536) to Dirgie Mine Rd. (SR 1542) is expected to be operating near capacity by the year 2035 and is expected to have increased safety issues. Allensville Rd. (SR 1536) is expected to be operating at near capacity by the year 2035. Currently, the capacity on this facility is 8,500 vpd while the 2035 projected volume for this road is 7,000 vpd. In conjunction with potential for possible capacity deficiencies, the route also carries NC Bike Route 4. The 2011 Person County & Roxboro CTP is recommending that NC Bike Route 4 be improved by widening lanes and shoulder widths to increase safety for bicyclists. See NC Bike Route 4 for more information regarding bicycle improvements. No comments were received regarding this recommendation at a public workshop held on August 5, 2010.

#### Robert Norris Rd. (SR 1308), Local ID: PER0011-H

Robert Norris Rd. (SR 1308) is from US 158 to NC 57 is expected to carry higher volumes in the future because of its association with US 158 (R-2585). It is recommended that Robert Norris Rd. (SR 1308) be widened to a 5-lane major thoroughfare and relocated at its southern terminus (new location required) in coordination with a future proposed interchange for R-2585. This route is recommended to be improved because it would provide better connectivity to NC 57 from the proposed US 158 – expressway. See CTP projects R-2585, R-2585 (new location), and PER0003-H for further detail on US 158 and NC 57. No comments were received regarding this recommendation at a public workshop held on August 5, 2010.

#### Patterson Dr. (SR 1148), Local ID: PER0012-H

Patterson Dr. (SR 1148) from NC 157 to US 501 is expected to be operating near capacity (LOS D) by the year 2035. Currently, the capacity on this facility is 8,500 vpd while the 2035 projected volume for this road is 8,200 vehicles-per-day (vpd). The CTP recommends that Patterson Dr. (SR 1148) be widened to 24-foot with turn lanes at major intersections (where needed). The facility is also recommended to have sidewalks which would increase pedestrian safety. See PER0062-P for more information regarding pedestrian improvements. No comments were received regarding this recommendation at a public workshop held on August 5, 2010.

#### Chub Lake Rd. (SR 1333), Local ID: PER0013-H

Chub Lake Rd. (SR 1333) from the Roxboro City Limits to County Club Rd. (SR 1333) is expected to be operating over and near capacity by the year 2035. Currently, the capacity on this road from the Roxboro City limits to City Lake Rd. (SR 1333) is 10,500 vehicles-per-day (vpd) while the 2035 projected volume for this road is 11,800 vpd. The existing capacity on this road from City Lake Rd. (SR 1333) to Country Club Rd. (SR 1333) is 8,500 vpd while the 2035 projected volume for this road is 6,900 vpd. While the whole road is not expected to experience capacity deficiencies, it is recommended by the 2011 Person County & Roxboro CTP that Chub Lake Rd. (SR 1333) be widened to 24-foot with turn lanes at major intersections where needed due to some anticipated congestion and improving safety related with future bicycle and pedestrian facilities. See PER0020-B and PER0008-P for more information regarding bicycle and pedestrian improvements. No comments were received regarding this recommendation at a public workshop held on August 5, 2010.

#### Mayo Lake Rd. (SR 1501), Local ID: PER0014-H

Mayo Lake Rd. (SR 1501) currently is an unpaved facility from NC 49 to High Plains Rd. (SR 1504). Mayo Lake Rd. (SR 1501) is an unpaved facility that connects US 501 to NC 49. The facility is heavily used by trucks associated with local industry. The 2011 Person County & Roxboro CTP is recommending that this facility be paved to 24-foot to better handle current and future through and truck traffic. Positive comments where received on this recommendation at a public workshop held on August 5, 2010

regarding paving the facility to help provide better connectivity for all vehicle types between US 501 and NC 49.

## Minor Widening Improvements

The following routes do not have capacity issues, but are recommended to be upgraded to two 12-foot lanes with 2-foot paved shoulders to improve safety or to correspond to proposed bicycle improvements. Some of the following routes will require turn lanes at major intersections (coordinate with local DOT staff on future project specifications/need). Refer to CTP mapping (Figure 2) for recommendation details.

- **PER0015-H:** NC 49 from US 158 (Leasburg Rd.) to the Caswell Co. line.
- PER0016-H: NC 49 from US 501 (R-2241) to the Granville Co. line.
- **PER0017-H:** NC 57 from Morton-Pulliam Rd. (SR 1342) to the Caswell Co. line.
- **PER0018-H:** NC 157 from US 501 to Industrial Dr. (SR 1195).
- **PER0019-H:** Cunningham Rd. (SR 1318) from the Virginia State line to the Caswell Co. line.
- **PER0020-H:** Dirgie Mine Rd. (SR 1542) from Denny's Store Rd. (SR 1536) to the Granville Co. line.
- **PER0021-H:** Prixley-Pritchard Rd. (SR 1567) from Thomas Store Rd. (SR 1568) to the Granville Co. line.
- **PER0022-H:** Thomas Store Rd. (SR 1568) from US 158 to Prixley-Pritchard Rd. (SR 1567).
- **PER0023-H:** Glen Fogleman Rd. (SR 1723) from Mount Harmony Church Rd. (SR 1721) to US 158.
- **PER0024-H:** Jim Latta Rd. (SR 1723) from Surl-Mt. Tirzah Rd. (SR 1717) to Mount Harmony Church Rd. (SR 1721).
- PER0025-H: Surl-Mt. Tirzah Rd. (SR 1717) from Helena-Moriah Rd. (SR 1715) to US 158. Part is on new location realignment (Refer to Figure 1 Sheet 2A: Insert 2B for detailed mapping).
- **PER0026-H:** Moore's Mill Rd. (SR 1737) from the Durham Co. line to Helena-Moriah Rd. (SR 1715).
- **PER0027-H**: Helena-Moriah Rd. (SR 1715) from the Surl-Mt. Tirzah Rd. (SR 1717) to Mount Harmony Church Rd. (SR 1721).
- **PERÓ028-H:** Bethany Church Rd. (SR 1715) from Moriah Rd. (SR 1721) to the Granville Co. line.
- **PER0029-H:** Bowen Rd. (SR 1735) from Helena-Moriah Rd. (SR 1715) to the Durham Co. line.
- **PER0030-H:** Cothran Hicks Rd. (SR 1733) from Helena-Moriah Rd. (SR 1715) to the Durham Co. line.
- **PER0031-H:** Rougemont Rd. (SR 1729) from Moriah Rd. (SR 1721) to the Durham Co. line.
- **PER0032-H:** Moriah Rd. (SR 1721) from Helena-Moriah Rd. (SR 1721) to the Durham Co. line.
- **PER0033-H:** Range Rd. (SR 1728) from Bethany Church Rd. (SR 1715) to the Durham Co. line.

- **PER0034-H:** Chub Lake St. (SR 1333) from the Roxboro City limits to Leasburg Rd.
- **PER0035-H:** Depot St. (SR 1536) from Foushee St. (SR 1601) to the Roxboro City limits.
- **PER0036-H:** Ridge Rd. (SR 1363) from Chub Lake St. (SR 1333) to US 501 (N. Main St.).
- **PER0037-H:** Reams St. (SR 1363) from Ridge Rd. (SR 1363) to Morgan St. (SR 1409).
- **PER0038-H:** Morgan St. (SR 1409) from Reams St. (SR 1363) to Morehead St. (SR 1596).
- **PER0039-H:** Morehead St. (SR 1596) from Morgan St. (SR 1409) to Foushee St. (SR 1601).
- **PER0040-H:** Foushee St. (SR 1601) from Morehead St. (SR 1596) to Depot St. (SR 1536).
- **PER0041-H:** Johnnie Jones Rd. (SR 1719) from Mount Harmony Church Rd. (SR 1721) to Surl-Mt. Tirzah Rd. (SR 1717).
- PER0042-H: Kelly Brewer Rd. (SR 1313) from NC 57 to the Caswell Co. line.
- **PER0043-H:** Concord Ceffo Rd. (SR 1340) from NC 57 to Morton Pulliam Rd. (SR 1342).
- **PER0044-H:** Morton Pulliam Rd. (SR 1342) from concord Ceffo Rd. (SR 1340) to City Lake Rd. (SR 1336).
- **PER0045-H:** City Lake Rd. (SR 1336) from Morton Pulliam Rd. (SR 1342) to Chub Lake Rd. (SR 1333).
- **PER0046-H:** Molly Moony Rd. (SR 1717) from Old Allensville Rd. (SR 1542) to US 158.
- **PER0047-H:** Old Allensville Rd. (SR 1542) from Molly Mooney Rd. (SR 1717) to Denny's Store Rd. (SR 1536).
- **PER0048-H:** Johnson St. (SR 1152) from US 501 (Madison Blvd.) to Winhaven St. (SR 1156).
- **PER0049-H:** Mount Harmony Church Rd. (SR 1721) from Helena-Moriah Rd. (SR 1715) to Johnnie Jones Rd. (SR 1719).

# 2. PUBLIC TRANSPORTATION AND RAIL

### US 501 – Bus Route, Local ID: PER0001-T

US 501 is expected to be over-capacity by the year 2035. In an effort to reduce anticipated deficiencies, US 501 is recommended to have bus service that connects the Roxboro and southern Person County to the Triangle Region. The 2012 Triangle Transit (TT) Short-Range Transit Plan recommends extending bus service to southern Person County. The 2011 Person County & Roxboro CTP is recommending extending this service to Roxboro in order to obtain larger ridership. Two Park-and-Ride lots are recommended along this corridor (for more information on these lots see PER0004-T and PER0005-T). In addition to increasing mobility and safety, the proposed bus route may have a positive impact on the natural environment by providing an alternate mode of transportation that would improve air quality issues in the County. Person County is in maintenance status for air quality due to its close proximity to the Triangle Region. Positive comments where received on this recommendation at a public workshop held on August 5, 2010 regarding providing bus services along US 501 to the Triangle Region. See CTP Mapping and Appendix C for more information on PER0001-T.

#### US 158 – Bus Route, Local ID: PER0002-T

As part of the Strategic Highway Corridors (SHC) Plan's for this corridor (See US 158 expressway - R-2585), multi-modal accommodations are encouraged for increased mobility and safety. US 158 carries a high amount of regional traffic between the northern counties of the Triangle Region. It is anticipated that regional bus service will be encouraged along this corridor in the future. This service is anticipated to include such destinations as Roxboro, Oxford, and Henderson. In addition to increasing mobility and safety, the proposed bus route may have a positive impact on the natural environment by providing an alternate mode of transportation that would help air quality issues in the County. Person County is in maintenance status for air quality due to its close proximity to the Triangle Region. No comments were received on this recommendation at a public workshop held on August 5, 2010. See CTP Mapping and Appendix C for more information on PER0002-T.

## <u>Depot St. (SR 1536) and Foushee St. (SR 1601) – Intermodal Connector, Local ID:</u> <u>PER0003-T</u>

Multiple modes of transportation exist and are proposed in downtown Roxboro. In an effort to encourage the use of multiple modes of transportation within Roxboro, the CTP recommends that an intermodal connector be constructed to help facilitate the connection between these modes. Public transportation, pedestrian, and bicycle improvements are all recommended in a central area near downtown Roxboro and this site should be coordinated with future local planning in order to maximize use of the proposed facility. No comments where received on this recommendation at a public workshop held on August 5, 2010.

# US 501 (Roxboro) - Park-and-Ride Lot, Local ID: PER0004-T

PER0001-T is proposing bus service along US 501. US 501 is proposed to have bus service and a Park-and-Ride lot is recommended near the corridor. Future location of this Park-and-Ride lot should be coordinated with future local planning. This Park-and-Ride lot is recommended to be on the southern side of US 158 (R-2585) in southern Roxboro. Positive comments where received on this recommendation at a public workshop held on August 5, 2010 in regards to providing a Park-and-Ride lot for proposed US 501 bus service. See CTP Mapping and Appendix C for more information on PER0004-T.

#### US 501 (Timberlake) - Park-and-Ride Lot, Local ID: PER0005-T

PER0001-T is proposing bus service along US 501. US 501 is proposed to have bus service and a Park-and-Ride lot is recommended near US 501 in the unincorporated community of Timberlake. Future location of this Park-and-Ride lot should be coordinated with future local planning. This Park-and-Ride lot is recommended to be near US 501 / NC 57 and Ashley Ave. (SR 1745). Positive comments where received on this recommendation at a public workshop held on August 5, 2010 in regards to providing a park and ride lot for proposed US 501 bus service in Timberlake. See CTP Mapping and Appendix C for more information on PER0005-T.

# US 501 (Parallel) - Fixed Guide-way, Local ID: PER0006-T

US 501 is expected to be over-capacity by the year 2035. The 2011 Person County & Roxboro CTP recommends that fixed guide-way rail service be constructed from the Durham Co. line to the unincorporated community of Timberlake. This service is anticipated to help anticipated congestion on US 501. Further coordination with the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC – MPO) and Norfolk Southern Corporation will be needed. This corridor is currently inactive. See CTP Mapping and Appendix C for more information on PER0006-T.

# Timberlake Rail Stop, Local ID: PER0007-T

Access to proposed fixed guide-way service (PER0006-T) is needed. A rail stop is recommended in the unincorporated community of Timberlake in southern Person County. This rail stop is intended to provide access to proposed rail service adjacent to US 501. A park and ride lot is recommended in the vicinity of this proposed rail stop (see PER0005-T for more information) and would cater to both bus service on US 501 (PER0001-T) and this proposed rail stop. See CTP Mapping and Appendix C for more information on PER0007-T.

# 3. BICYCLE

Increased bicycle safety and connectivity within Person County is needed. Currently, the only existing bicycle facility in Person County is NC Bike Route 4, which travels from Caswell County to Granville County. NC Bike Route 4 is recommended for improvement in some areas (refer to CTP Mapping – Figure 1 for details) and follows Brewer Rd. (SR 1313), NC 57, Concord Ceffo Rd. (SR 1340), Morton Pulliam Rd. (SR 1342), City Lake Rd. (SR 1336), Chub Lake Rd. (SR 1333), Chub Lake St., Court St., US 501, Reams Ave., Depot St. (SR 1536), Mountain Rd. (SR 1536), Allensville Rd. (SR 1536), and Denny's Store Rd. (SR 1536).

Other routes are recommended for bicycle improvements within Person County. The primary purpose of recommending additional bicycle route improvements is to better connect destinations within Roxboro and Person County to other regionally planned bicycle routes. For other planned regional bicycle routes see the Granville County CTP, Durham-Chapel Hill-Carrboro Metropolitan Planning Organization's (DCHC - MPO) Long Range Transportation Plan (LRTP), and the Caswell County CTP. Website links to each plan can be found at http://ncdot.gov/doh/preconstruct/tpb/).

The following off-road bicycle facilities have been identified for improvement in the Person County & Roxboro CTP:

- **PER0001-B:** Tar River Bicycle Route from the Granville County line to US 158 – coordinate with Granville County

The following on-road bicycle facilities have been identified for improvement in the Person County & Roxboro CTP. Refer to CTP mapping (Figure 1 – Sheets 4 and 4A), Appendix C, and Appendix D for more information.

- **PER0002-B:** Cunningham Rd. (SR 1318) from the Virginia State line to the Caswell County line.
- **PER0003-B:** Dirgie Mine Rd. (SR 1542) from Allensville Rd. (SR 1536) to the Granville County line.
- **PER0004-B:** Prixley-Pritchard Rd. (SR 1567) from the Granville County line to the Thomas Store Rd. (SR 1568).
- **PER0005-B:** Thomas Store Rd. (SR 1568) from Prixley-Pritchard Rd. (SR 1567) to Glen Fogleman Rd. (SR 1723).
- **PER0006-B**: Glen Fogleman Rd. (SR 1723) from Thomas Store Rd. (SR 1568) to Jim Latta Rd. (SR 1723).
- **PER0007-B:** Jim Latta Rd. (SR 1723) from Glen Fogelman Rd. (SR 1723) to Surl-Mt. Tirzah Rd. (SR 1717).
- **PER0008-B:** Surl-Mt. Tirzah Rd. (SR 1717) from Jim Latta Rd. (SR 1721) to Helena-Moriah Rd. (SR 1715).
- **PER0009-B:** Moore's Mill Rd. (SR 1737) from the Durham County line to Helena-Moriah Rd. (SR 1715).

- **PER0010-B:** Helena-Moriah Rd. (SR 1715) from Moriah Rd. (SR 1721) to Moore's Mill Rd. (SR 1737).
- **PER0011-B:** Bethany Church Rd. (SR 1715) from the Granville County line to Moriah Rd. (SR 1731).
- **PER0012-B**: Bowen Rd. (SR 1735) from the Durham County line to Helena-Moriah Rd. (SR 1715).
- **PER0013-B**: Cothran Hicks Rd. (SR 1733) from Durham County line to Helena-Moriah Rd. (SR 1715).
- **PER0014-B:** Rougemont Rd. (SR 1729) from Durham County line to Moriah Rd. (SR 1721).
- **PER0015-B:** Moriah Rd. (SR 1721) from the Durham County line to Helena-Moriah Rd. (SR 1715).
- **PER0016-B**: Range Rd. (SR 1728) from the Durham County line to Bethany Church Rd. (SR 1715).
- PER0017-B: NC 157 from US 501 (Madison Blvd.) to Industrial Dr. (SR 1195).
- **PER0018-B:** US 501 from NC 157 to Main St.
- **PER0019-B:** Main St. / Main St. (SR 1601) from US 501 (Madison Blvd.) to NC 49.
- **PER0020-B:** Chub Lake St. / Chub Lake Rd. (SR 1333) from the proposed Memorial Dr. Extension to existing US 158 (Leasburg Rd.).
- **PER0021-B:** Depot St. (SR 1536) from Foushee St. (SR 1601) to the Roxboro City Limits.
- **PER0022-B:** Ridge Rd. (SR 1363) from Chub Lake St. to Reams St.
- **PER0023-B:** Reams St. (SR 1363) from Ridge Rd. (SR 1363) to Morgan St. (SR 1409).
- **PER0024-B:** Morgan St. (SR 1409) from Reams St. (SR 1363) to Morehead St. (SR 1596).
- **PER0025-B:** Morehead St. (SR 1596) from Morgan St. (SR 1409) to Foushee St. (SR 1601).
- **PER0026-B:** Foushee St. (SR 1601) from Morehead St. (SR 1596) to Depot St. (SR 1536).
- PER0027-B: NC 49 from the Granville County line to the Caswell County line.
  Portion of this recommended facility is diverted to PER0019-B instead of following NC 49 / US 501 (Madison Blvd.).

Multi-use path facilities were originally recommended in the 2008 City of Roxboro Pedestrian Plan. Please refer to that plan for more details.

## 4. PEDESTRIAN

The pedestrian network in Roxboro needs to be improved for better safety and connectivity. Refer to CTP mapping for project locations, beginning and ending terminuses, and specific recommendation. For more information on pedestrian recommendations, refer to the *2008 Roxboro Pedestrian Transportation Plan*.

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# 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 homepage:

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

<u>Secretary of Transportation</u> Eugene A. Conti, Jr., Ph.D. 1501 Mail Service Center Raleigh, NC 27699-1501 (919) 733-2520 gconti@ncdot.gov http://www.ncdot.org/about/leadership/secretary.html

Board of Transportation Member

Mr. Chuck Watts 2612 N. Duke Street Durham, NC 27704 (919) 220-4600 <u>cwatts@ncdot.gov</u> <u>http://www.ncdot.gov/about/board/default.html</u>

# Highway Division Engineer

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

Mr. J. Wally Bowman, PE 2612 N. Duke Street Durham, 27704 (919) 220-4600 wbowman@ncdot.gov http://www.ncdot.gov/doh/operations/division5/

#### **Division Project Manager**

Contact the Division Project Manager with questions concerning transportation projects within each Division.

Mr. Michael J. Kneis, PE 2612 N. Duke Street Durham, 27704 (919) 220-4600 mkneis@ncdot.gov

#### **Division Construction Engineer**

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

Mr. Dennis Jernigan, PE 2612 N. Duke Street Durham, 27704 (919) 220-4600 dwjernigan@ncdot.gov

#### Division Traffic Engineer

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

Mr. Alfred Grandy 2612 N. Duke Street Durham, 27704 (919) 220-4600 agrandy@ncdot.gov

#### **Division Operations Engineer**

Contact the Division Operations Engineer for information concerning facility operations.

Mr. A. Battle Whitley, IV, PE 2612 N. Duke Street Durham, 27704 (919) 220-4600 <u>bwhitley@ncdot.gov</u>

#### Division Maintenance Engineer

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

Mr. Brandon Jones, PE 2612 N. Duke Street Durham, 27704 (919) 220-4600 bhjones@ncdot.gov

## District Engineer

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

Ms. Tasha N. Johnson, PE 815 Stadium Drive Durham, 27704-2713 (919) 220-4750 tnjohnson@ncdot.gov

#### 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) 733-4705 http://www.ncdot.gov/doh/preconstruct/tpb/

#### Kerr-Tar Rural Planning Organization (RPO)

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

Mr. Mike Ciriello 1724 Graham Avenue / P.O. Box 709 Henderson , NC 27536 (252) 436-2048 <u>mciriello@kerrtarcog.org</u> <u>http://www.kerrtarcog.org/rpo/</u>

#### Strategic Planning Office

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

Mr. Don Voelker 1501 Mail Service Center Raleigh, NC 27699-1501 (919) 715-0951 <u>djvoelker@ncdot.gov</u> <u>https://apps.dot.state.nc.us/dot/directory/authenticated/UnitPage.aspx?id=11054</u>

#### Project Development & Environmental Branch (PDEA)

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

1548 Mail Service Center Raleigh, NC 27699-1548 (919) 733-3141 http://www.ncdot.gov/doh/preconstruct/pe/

#### Secondary Roads Office

Contact the Secondary Roads Office 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) 733-3250 http://www.ncdot.gov/doh/operations/secondaryroads/

#### Program Development Branch

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

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

#### Public Transportation Division

Contact the Public Transportation Division for information public transit systems.

1550 Mail Service Center Raleigh, NC 27699-1550 (919) 733-4713 <u>http://www.ncdot.org/transit/nctransit/</u> <u>Rail Division</u> Contact the Rail Division for rail information throughout the state.

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

#### Division of Bicycle and Pedestrian Transportation

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

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

#### Bridge Maintenance Unit

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

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

#### Highway Design Branch

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

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

# Other State Government Offices

Department of Commerce – Division of Community Assistance

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

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

# Appendix B Comprehensive Transportation Plan Definitions

# Highway Map

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

## 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 Uturns 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.

# 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-ofway.
- 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 the NCDOT Road Condition GIS layer as well as estimates using GIS software in conjunction with current 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 NC Level of Service software (NCLOS), as documented in Chapter II.
- 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 '2035 AADT E+C' is an estimate of the volume in 2035 with only existing plus committed projects assumed to be in place, where committed is defined as projects programmed for construction in the Transportation Improvement Program (TIP). The '2035 AADT with CTP s an estimate of the volume in 2035 with all proposed CTP improvements assumed to be in place. The '2035 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 Mulitmodal 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

				Т		VAY										
						200	7 Existing	System		203	5 Propose	d System	-			
					Cros	-s	Speed	Existing		2035	Proposed			СТР		
l ocal ID	Eacility	Section (From - To)	Inrisoliction	Dist.	Section (#)	on R(	DW Limit	Capacity	2007 4 ANT	AADT No Build	Capacity	Cross-	ROW	Classifi-	Tior T	Other
	Allensville Rd.	Old Allensville Rd. (SR 1542) - New Location Connector	Person Co	0 4	20 20		55 0	0 600	1 700	3 400	11 900	2A	60	Min		1
	(SR 1541)	(PER0005-H)		-	1	1	8	0000	2021	5	000	ì	8		2	
	Allensville Rd. (SR 1541)	New Location Connector (PER0005-H) - Mountain Rd. (SR 1536)	Person Co.	1.4	22	7	22	9,600	1,700	3,400	ł	ADQ	I	Min	qng	I
PER0010-H	Allensville Rd. (SR 1536)	Mountain Rd. (SR 1541) - Gentry Ridge Rd.	Person Co.	2.5	20	2 6	0 55	8,500	3,500	7,000	11,900	2A	60	Min	qng	В
PER0010-H	Allensville Rd. (SR 1536)	Gentry Ridge Rd Dirgie Mine Rd. (SR 1542)	Person Co.	0.9	20	2 6	0 45	11,350	2,800	6,400	11,900	2A	60	Min	qng	В
I	Antioch Church Rd. (SR 1708)	Surl-Mount Tirzah Rd. (SR 1717)- US 501	Person Co.	4.5	22	2 6	0 55	9,500	1,500	3,400	I	ADQ	I	Min	qng	I
PER0028-H	Bethany Church Rd. (SR 1715)	Granville Co. Line - Moriah Rd. (SR 1731)	Person Co.	1.7	20	2 6	0 55	8,500	ł	ł	11,900	2A	60	Min	gub	В
PER0029-H	Bowen Rd. (SR 1735)	Durham Co. Line - Helena- Moriah Rd. (SR 1715)	Person Co.	2.6	20	2 6	0 55	8,500	ł	1	11,900	2A	60	Min	gub	В
1	Broad Rd. (SR 1534)	NC 49 - Henderson Rd. (SR 1586)	Person Co.	0.9	22	2	0 55	9,600	1,600	2,400	I	ADQ	I	Min	qng	I
I	Broad Rd. (SR 1534)	Henderson Rd. (SR 1586) - Roxboro CL	Person Co.	0.3	22	2	0 45	11,900	800	1,100	-	ADQ	I	Min	qng	I
I	Broad Rd. (SR 1534)	Roxboro CL - Mt. Bethel Church St. (SR 1534)	Roxboro	0.2	24	2 4	0 35	14,200	800	1,100	I	ADQ	I	Min	gub	I
I	Burch Ave. (SR 1534)	Main St. (SR 1601) - Broad St. (SR 1534)	Roxboro	0.3	24	2	0 35	14,200	1,600	2,800	I	ADQ	I	Min	qng	I
1	Carver Dr. (SR 1364)	Memorial Drive (SR 1416) - Speed Limit Change	Person Co.	0.2	24	2 6	0 35	14,300	3,900	5,900	I	ADQ	I	Min	qng	I
1	Carver Dr. (SR 1364)	Speed Limit Change - Roxboro CL	Person Co.	1.1	20	2 6	0 45	14,100	3,900	5,900	1	ADQ	I	Min	duS	I
I	Carver Dr. (SR 1364)	Roxboro CL - Ridge Rd. (SR 1363)	Roxboro	0.2	24	2 6	0 35	14,300	4,900	8,500	I	ADQ	I	Min	gub	I
I	Carver Dr. (SR 1364)	Ridge Rd. (SR 1363) - US 501	Roxboro	0.4	24	2 6	0 35	14,100	5,500	9,600	I	ADQ	I	Min	gub	I
I	Carver Dr. (SR 1364) Extension	Chub Lake Rd. (SR 1333) - Carver Dr. (SR 1364)	Roxboro	1.0	1			I	1	6,600		ADQ	ł	Min	qng	I
-	Cates Mill Rd. (SR 1131)	Frank Timberlake Rd. (SR 1129) - US 501	Person Co.	1.3	24	2 6	0 55	12,000	200	1,200	-	ADQ	-	Min	qng	I
I	Cavel-Chub Lake Rd. (SR 1351)	Chub Lake St. (SR 1333) - Kelly Carver Rd. (SR 1350)	Person Co.	0.3	20	2 6	0 45	11,350	2,100	4,200		ADQ	ł	Min	qng	I

				Ξ	GHW	AΥ										
				H		2007	Existing	System		203	5 Proposed	System	Π			
				Diet	Cross		Speed	Existing	2002	2035 44.NT	Proposed	Croce-	MOa	CTP Classifi		Othar
Local ID	Facility	Section (From - To)	Jurisdiction	(mi) (	ft) Ian	es (ft)	(mph)	(vpd)	AADT	No Build	(vpd)	Section	(ft)	cation	Tier	Modes
I	Cavel-Chub Lake Rd. (SR 1351)	Kelly Carver Rd. (SR 1350) - Perkins Dr.	Person Co.	0.8	20 2	60	35	14,200	2,100	4,200	I	ADQ	ı	Min	Sub	I
1	Cavel-Chub Lake Rd. (SR 1351)	Perkins Dr US 501	Person Co.	0.5	22 2	60	35	14,200	2,600	3,400	ł	ADQ	1	Min	Sub	1
1	Charlie Long Rd. (SR 1112)	Union Grove Church Rd. (SR 1107) - NC 49	Person Co.	3.1	20 2	60	55	8,500	700	1,400	I	ADQ	1	Min	Sub	1
PER0013-H	Chub Lake Rd. (SR 1333)	Roxboro NCL - Younger Rd. (SR 1346)	Person Co.	0.5	28 2	40	35	14,200	4,800	11,000	14,900	2F	60	Min	Sub	В
PER0013-H	Chub Lake Rd. (SR 1333)	Younger Rd. (SR 1346) - City Lake Rd. (SR 1336)	Person Co.	1.5	20 2	60	45	10,500	5,900	11,800	14,900	2F	60	Min	Sub	В
PER0013-H	Chub Lake Rd. (SR 1333)	City Lake Rd. (SR 1336) - Memorial Dr. Extension (PER0004-H)	Person Co.	0.3	20 2	60	45	10,500	5,900	11,800	14,900	2F	60	Min	Sub	В
PER0013-H	Chub Lake Rd. (SR 1333)	Memorial Dr. Extension (PER0004-H) - Cavel-Chub Lake Rd. (SR 1351)	Person Co.	0.8	20 2	60	45	10,500	5,900	11,800	14,900	2F	60	Min	Sub	В
PER0013-H	Chub Lake Rd. (SR 1333)	Cavel-Chub Lake Rd. (SR 1351) - Country Club Rd. (SR 1333)	Person Co.	0.3	20 2	60	55	8,500	3,200	7,300	14,900	2A	60	Min	Sub	В
PER0034-H	Chub Lake St. (SR 1333)	US 158 - Roxboro NCL	Roxboro	0.5	28	60	35	14,200	4,800	9,600	15,200	2F	60	Min	Sub	В
PER0045-H	City Lake Rd. (SR 1336)	Morton Pulliam Rd. (SR 1342) - Chub Lake Rd. (SR 1333)	Person Co.	1.3	22 2	60	55	9,600	2,700	4,100	14,900	2A	60	Min	Sub	В
ł	Concord Church Rd. (SR 1300)	NC 57 - Ralph Winstead Rd. (SR 1102)	Person Co.	2.9	20 2	60	55	8,500	200	1,200	I	ADQ	I	Min	Sub	I
PER0043-H	Concord-Ceffo Rd. (SR 1340)	NC 57 - McGhees Mill Rd. (SR 1336)	Person Co.	1.3	24 2	60	55	10,500	1,600	3,200	14,900	2A	60	Min	Sub	В
PER0030-H	Cothran Hicks Rd. (SR 1733)	Durham Co. Line - Helena- Moriah Rd. (SR 1715)	Person Co.	2.1	20 2	60	55	8,500	1	1	11,900	2A	60	Min	Sub	В
ł	Country Club Rd. (SR 1333)	Chub Lake Rd. (SR 1371) - Edwin Robertson Rd. (SR 1322)	Person Co.	2.4	20 2	60	55	8,500	2,200	4,400	ł	ADQ	ł	Min	Sub	I
PER0019-H	Cunningham Rd. (SR 1318)	Caswell Co VA SL	Person Co.	5.0	18 2	60	55	7,200	700	1,400	14,900	2A	60	Min	Sub	В
PER0035-H	Depot St. (SR 1536)	Foushee St. (SR 1601) - Begin Curb and Gutter	Roxboro	0.2	30 2	60	20	15,000	4,800	6,300	13,800	2F	80	Min	Sub	В
PER0035-H	Depot St. (SR 1536)	Begin Curb and Gutter - Roxboro ECL	Roxboro	0.3	20 2	60	35	15,200	4,800	6,300	13,800	2F	80	Min	Sub	В
ł	Denny's Store Rd. (SR 1536)	Dirgie Mine Rd. (SR 1542)- Speed Limit Change	Person Co.	1.0	20 2	60	45	11,350	1,400	2,800	11,900	2A	60	Min	Sub	В

				Т		VAY										
						200	7 Existing	System		203	5 Proposed	d System			-	
				Dict	Cros	s- BC	Speed	Existing	2007	2035 44 NT	Proposed	Croce-	MOa	CTP Classifi-		Othar
Local ID	Facility	Section (From - To)	Jurisdiction	(mi)	(ft) la	nes (	ft) (mph	(pd) (	AADT	No Build	(vpd)	Section	(ft)	cation	Tier	Modes
ł	Denny's Store Rd. (SR 1536)	Speed Limit Change - Gill Rd. (SR 1587)	Person Co.	1.9	18	2 6	0 55	7,200	1,400	2,800	11,900	2A	60	Min	Sub	В
1	Denny's Store Rd. (SR 1536)	Gill Rd. (SR 1587) - Granville Co.	Person Co.	2.8	18	2	0 55	7,200	600	1,400	11,900	2A	60	Min	Sub	В
-	Dick Holeman Rd. (SR 1123)	Satterfield Rd. (SR 1131) - Speed Limit Change	Person Co.	0.6	22	5	0 55	9,600	2,200	4,400	I	ADQ	I	Min	Sub	В
1	Dick Holeman Rd. (SR 1123)	Speed Limit Change - Ned Moore Rd. (SR 1125)	Person Co.	9.0	22	2	0 45	11,850	2,200	4,400	1	ADQ	1	Min	Sub	1
1	Dick Holeman Rd. (SR 1123)	Ned Moore Rd. (SR 1125) - US 501	Person Co.	0.9	22	2 6	0 55	9,600	2,200	4,400	I	ADQ	1	Min	Sub	1
PER0020-H	Dirgie Mine Rd. (SR 1542)	Allensville Rd. (SR 1536) - Carl Adcock Rd. (SR 1574)	Person Co.	2.2	20	2 6	0 55	8,500	400	800	14,900	2A	60	Min	Sub	В
PER0020-H	Dirgie Mine Rd. (SR 1542)	Carl Adcock Rd. (SR 1574) - Saint Paul Church Rd. (SR 1555)	Person Co.	1.6	20	5	0 55	8,500	400	800	14,900	2A	60	Min	gub	В
PER0020-H	Dirgie Mine Rd. (SR 1542)	Saint Paul Church Rd. (SR 1555) - Murette Poole Rd. (SR 1559)	Person Co.	1.5	20	5	0 22	8,500	500	006	14,900	2A	60	Min	gng	В
PER0020-H	Dirgie Mine Rd. (SR 1542)	Murette Poole Rd. (SR 1559) - Dirgie Mine Rd. (SR 1542)	Person Co.	0.5	20	2 6	0 55	8,500	500	006	14,900	2A	60	Min	Sub	В
PER0020-H	Dirgie Mine Rd. (SR 1542)	Dirgie Mine Rd. (SR 1556) - Olive Branch Rd. (SR 1512)	Person Co.	1.9	18	2 6	0 55	7,200	500	1,000	14,900	2A	60	Min	Sub	В
PER0020-H	Dirgie Mine Rd. (SR 1542)	Olive Branch Rd. (SR 1512) - Granville Co.	Person Co.	3.2	18	2	0 55	7,200	500	1,000	14,900	2A	60	Min	Sub	В
I	Edwin Robertson Rd. (SR 1322)	Woodsdale Rd. (SR 1326) - Chub Lake Rd (SR 1333)	Person Co.	1.9	18	2 6	0 55	7,200	600	1,200	I	ADQ	I	Min	Sub	I
I	Edwin Robertson Rd. (SR 1322)	Chub Lake Rd. (SR 1333) - Oak Grove Rd. (SR 1334)	Person Co.	1.4	20	2	0 55	8,500	800	1,400	I	ADQ	I	Min	Sub	I
1	Edwin Robertson Rd. (SR 1322)	Oak Grove Rd. (SR 1334) - McGhees Mill Rd. (SR 1336)	Person Co.	1.5	20	2 6	0 55	8,500	1,100	1,700	I	ADQ	I	Min	Sub	I
ł	Foushee St. (SR 1601)	US 501 - Academy St.	Roxboro	0.7	24	2	0 35	14,500	2,000	2,600	I	ADQ	I	Min	Sub	В
ł	Foushee St. (SR 1601)	Academy St Morehead St. (SR 1596)	Roxboro	0.3	40	2 6	0 35	14,500	2,000	3,000	-	ADQ	I	Min	Sub	В
1	Frank Timberlake Rd. (SR 1129)	Satterfield Rd. (SR 1134) - Cates Mill Rd. (SR 1131)	Person Co.	1.6	20	2 6	0 55	8,500	200	1,100		ADQ	I	Min	Sub	I
I	Gentry Ridge Rd. (SR 1520)	NC 49 - Allensville Rd. (SR 1536)	Person Co.	2.8	18	2 6	0 55	7,200	1,300	2,600	ł	ADQ	1	Min	Sub	I
PER0023-H	Glen Fogleman Rd. (SR 1723)	Thomas Store Rd. (SR 1568) - Jim Latta Rd. (SR 1723)	Person Co.	2.4	20	2 6	0 55	8,500	1	1	11,900	2A	60	Min	Sub	В

				Ξ	IGHV	ΙAΥ										
						2007	Existing	System		203	5 Propose	d System				
					Cros		Speed	Existing		2035	Proposed			СТР		
al ID	Facility	Section (From - To)	Jurisdiction	(mi) (	Secti (ft) la	on RO (ft	W Limit (mph)	Capacity (vpd)	2007 AADT	AADT No Build	Capacity (vpd)	Cross- Section	ROW (ft)	Classifi- cation	Tier	Other Modes
R0005-H	Halifax Rd. (SR 1521)	US 501 - NC 49	Person Co.	2.7	18	2 6(	) 55	7,200	1,300	1,700	14,900	2A	60	Min	Sub	I
R0005-H	Halifax Rd. (SR 1521)	NC 49 - Mountain Rd. (SR 1536)	Person Co.	2.0	50	2 6(	) 45	11,350	1,200	2,400	14,900	2A	60	Min	Sub	1
R0005-H	Halifax Rd. (SR 1521) Connector	Allensville Rd. (SR 1542) - Mountain Rd. (SR 1536)	Person Co.	2.0	:		1	1	:	:	14,900	2A	60	Min	Sub	
1	Helena Moriah Rd. (SR 1715)	US 501 - Speed Limit Change	Person Co.	0.8	53	2 6(	35	14,200	2,500	5,000	1	ADQ	1	Min	Sub	1
I	Helena Moriah Rd. (SR 1715)	Speed Limit Change - Surl- Mount Tizrah Rd. (SR 1717)	Person Co.	2.4	22	2 6(	0 45	11,850	3,500	6,100	ı	ADQ	I	Min	Sub	ı
R0027-H	Helena Moriah Rd. (SR 1715)	Surl-Mount Tirzah Rd. (SR 1717) - Cothran Hicks Rd. (SR 1733)	Person Co.	2.3	22	00 N	) 55	9,500	1,300	2,000	14,900	2A	60	Min	Sub	ш
R0027-H	Helena Moriah Rd. (SR 1715)	Cothran Hicks Rd. (SR 1733) - Moriah Rd. (SR 1721)	Person Co.	2.5	20	2 6(	55	8,500	1,300	2,000	14,900	2A	60	Min	Sub	в
I	Hester Store Rd. (SR 1162)	NC 49 - Thee Hester Rd. (SR 1159)	Person Co.	0.2	18	2 6(	55	7,200	1,300	2,600	I	ADQ	1	Min	Sub	I
I	High Plains Rd. (SR 1504)	Lake Mayo Rd. (SR 1501) - NC 49	Person Co.	2.6	20	2 00	) 55	8,500	400	800	I	ADQ	I	Min	Sub	I
I	Hurdle Mills Rd. (SR 1103)	Walnut Grove Church Rd. (SR 1001) - Union Grove Church Rd. (SR 1107)	Person Co.	1.7	22	2 6(	) 55	9,600	1,100	1,700		ADQ	l	Min	Sub	ł
I	Hurdle Mills Rd. (SR 1103)	Union Grove Church Rd. (SR 1107) - NC 157	Person Co.	0.2	22	2 00	) 55	9,600	1,400	2,400	I	ADQ	I	Min	Sub	I
R0024-H	Jim Latta Rd. (SR 1723)	Glen Fogleman Rd. (SR 1723) to Surl-Mt. Tirzah Rd. (SR 1717)	Person Co.	2.9	50	90	) 55	8,500	:	ł	11,900	2A	60	Min	Sub	В
ł	Jim Morton Rd. (SR 1109)	Union Grove Church Rd. (SR 1107) - NC 49	Person Co.	2.2	20	2 6(	) 55	8,500	400	800		ADQ	I	Min	Sub	I
R0041-H	Johnnie Jones Rd. (SR 1719)	Mount Harmony Church Rd. (SR 1721) - Surl-Mt. Tirzah Rd. (SR 1717)	Person Co.	1.6	20	2 60	) 55	8,500	1	ł	11,900	2A	60	Min	Sub	В
R0048-H	Johnson St. (SR 1152)	Winhaven St. (SR 1156) - US 501	Roxboro	0.2	20	2 6(	) 35	12,500	4,800	11,000	13,800	2F	80	Min	Sub	ł
R0042-H	Kelly Brewer Rd. (SR 1313)	Caswell Co. Line - NC 57	Person Co.	1.9	20	2 6(	) 35	8,500	:	1	11,900	2A	60	Min	Sub	В
R0014-H	Mayo Lake Rd. (SR 1501)	US 501 - High Plains Rd. (SR 1504)	Person Co.	2.6 1	٩	2 6(	) 55	N/A	100	100	14,900	2A	60	Min	Sub	ł
I	Lawson Chapel Church Rd. (SR 1556)	NC 49 - Dirgie Mine Rd. (SR 1542)	Person Co.	3.2	20	2 60	) 55	8,500	1,300	2,600	-	ADQ	ł	Min	Sub	ł

				T		VAY										
						200	7 Existing	g System		203	5 Propose	d System				
				Ĭ	Cros		Speed	d Existing	2000	2035	Proposed			CTP		
Local ID	Facility	Section (From - To)	Jurisdiction	(mi)	(ft) la		t) (mph	(vpd)		No Build	Capacity (vpd)	Section	(ft)	cation	Tier	Modes
PER0007-H	Leasburg Rd. (US 158)	US 158 (Long Ave.) - US 501/49	Roxboro	0.3	20	2 6	0 35	12,300	6,100	10,600	13,800	2F	80	Maj	Sub	В
1	Long Ave.	Morgan St. (SR 1409) - Leasburg Rd.	Roxboro	0.1	26	2 6	0 35	12,500	4,500	7,800	I	ADQ	1	ı	Sub	1
1	Long Ave.	Leasburg Rd US 501					SEE U	S 158 FOF	REURTH	ER INFOR	MATION					
PER0008-H	Main St. (SR 1601)	US 501 - Academy St.	Roxboro	0.4	30	2 6	0 20	15,100	4,900	7,400	16,000	3B	ł	Min	Sub	В
PER0008-H	Main St. (SR 1601)	Academy St Depot St. (SR 1536)	Roxboro	0.2	40 2	9 4+	0 20	15,100	6,100	9,300	14,900	2E	I	Min	Sub	В
PER0008-H	Main St. (SR 1601)	Depot St. (SR 1536) - Morehead St. (SR 1596)	Roxboro	0.2	30	2 6	0 20	15,100	4,900	7,400	16,000	3B	I	Min	Sub	В
PER0008-H	Main St. (SR 1601)	Morehead St. (SR 1596) - Barnette Ave.	Roxboro	0.1	30	2 6	0 20	15,100	7,700	10,200	16,000	3B	I	Min	Sub	В
PER0008-H	Main St. (SR 1601)	Barnette Ave Lamar St.	Roxboro	0.1	30	2 6	0 35	15,300	7,700	10,200	16,000	3B	I	Min	Sub	В
PER0008-H	Main St. (SR 1601)	Lamar St US 501	Roxboro	0.8	38	3 6	0 35	15,300	7,600	15,200	16,000	3B	ł	Min	Sub	В
I	McGhees Mill Rd. (SR 1322)	VA SL - Edwin Robertson Rd. (SR 1322)	Person Co.	3.7	22	2 6	0 55	9,600	600	1,000	I	ADQ	I	Min	Sub	1
1	McGhees Mill Rd. (SR 1322)	Edwin Robertson Rd. (SR 1322) - Speed Limit Change	Person Co.	0.5	24	2 6	0 55	10,500	600	1,000	I	ADQ	I	Min	Sub	I
-	McGhees Mill Rd. (SR 1322)	Speed Limit Change - Speed Limit Change	Person Co.	1.3	24	2 6	0 45	12,350	1,800	2,400		ADQ	I	Min	Sub	I
I	McGhees Mill Rd. (SR 1322)	Concord-Ceffo Rd. (SR 1340) - Speed Limit Change	Person Co.	2.3	24	2 6	0 55	10,500	1,800	2,400	I	ADQ	ł	Min	Sub	I
I	McGhees Mill Rd. (SR 1322)	Concord-Ceffo Rd. (SR 1340) - Jack Hambrick Rd. (SR 1339)	Person Co.	1.0	20	2 6	0 55	8,500	1,400	2,400	I	ADQ	I	Min	Sub	I
-	McGhees Mill Rd. (SR 1322)	Jack Hambrick Rd. (SR 1339) - Chub Lake Rd. (SR 1337)	Person Co.	1.3	20	2 6	0 45	11,350	2,600	4,500		ADQ	I	Min	Sub	ł
	Memorial Drive (SR 1416)	US 501 - Roxboro CL	Roxboro	0.4	22	2 8	0 35	14,600	1,600	2,100	12,700	2F, MA	80	Min	Sub	В
1	Memorial Drive (SR 1416)	Roxboro CL - Carver Dr. (SR 1364)	Roxboro	0.1	22	2	0 35	14,600	1,600	2,100	12,700	2F, MA	80	Min	Sub	В
PER0004-H	Memorial Drive (SR 1416) Extension	Carver Dr. (SR 1364) - Chub Lake Rd. (SR 1333)	Person Co.	1.0			-	I	:		12,700	2F, MA	80	Min	Sub	В
I	Mill Creek Rd. (SR 1520)	US 501 - Streets Store Rd. (SR 1519)	Person Co.	1.0	18	2 6	0 55	7,200	800	1,600		ADQ	I	Min	Sub	I
1	Mill Creek Rd. (SR 1520)	l Streets Store Rd. (SR 1519) - NC 49	Person Co.	1.5	18	2 6	0 55	7,200	800	1,400	I	ADQ	I	Min	Sub	I

		, c t c	Modes	В	В	۵	۵	۵	I	I	В	۵	В	В	۵	ш	I	ı	I	I	
			Tier	gng	Sub	gng	Sub	Sub	Sub	gng	gng	gng	gng	gng	Sub	Sub	Reg	Reg	Reg	Reg	ſ
		CTP	cation	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Maj	Maj	Maj	Maj	
		/vi\C	(ft)	60	60	60	80	80	ł	1	1	60	60	60	60	60	I	I	ł		
	System		Section	2A	2A	2A	3B	3B	ADQ	ADQ	ADQ	2A	2A	2A	2A	2A	ADQ	ADQ	ADQ	ADQ	
	5 Proposed	Proposed	(vpd)	14,900	14,900	14,900	13,800	13,800	I	1	1	14,900	14,900	14,900	14,900	14,900	I	I	I	ł	
	203	2035 ^ ^ DT	No Build	3,200	3,200	2,100	3,500	3,200	5,000	6, 700	11,800	1,800	1,500	1,500	8,200	1,600	3,000	5,600	3,600	3,500	
		2006	AADT	1,600	1,600	1,200	2,000	1,600	3,800	4,400	5,900	1,400	1,000	1,000	3,600	1,200	1,700	2,800	2,400	2,000	
	ystem	Existing	(vpd)	9,600	9,600	8,500	14,600	29,300	14,200	14,200	14,500	8,500	8,500	8,500	9,600	8,500	8,500	8,500	8,500	8,500	000
	isting S	Speed	(mph)	55	55	55	35	35	35	35	35	55	55	55	55	55	55	55	55	55	ļ
	007 Ex	NO A	(ft)	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	00
łway		0SS-	lanes	2	2	2	2	4	ю	2	2	2	2	2	2	7	2	N	2	2	¢
ЩGF		ΰ	(ft)	22	22	20	22	36	36	26	40	20	20	20	22	20	20	20	20	20	Ċ
-		+ciC	(mi)	1.0	1.7	2.9	0.1	0.1	0.6	0.3	0.3	1.5	1.2	1.1	1.8	6.8	2.5	3.0	1.0	1.3	~ ~
			Jurisdiction	Person Co.	Person Co.	Person Co.	Roxboro	Roxboro	Roxboro	Roxboro	Roxboro	Person Co.	Person Co.	Person Co.	Person Co.	Person Co.	Person Co.	Person Co.	Person Co.	Person Co.	
			Section (From - To)	US 158 - Bridge	Bridge - Old Allensville Rd. (SR 1542)	Helena Moriah Rd. (SR 1715) - Durham Co.	Foushee St. (SR 1601) - Main St.	Main St. (SR 1601) - US 501	US 158 - NC 57	NC 57 - Chumb Lake St. (SR 1333)	Chub Lake St. (SR 1333) - US 501	Helena-Moriah Rd. (SR 1715) - Durham Co	Concord-Ceffo Rd. (SR 1340) - Jack Hambrick Rd. (SR 1339)	Jack Hambrick Rd. (SR 1339) - City Lake Rd. (SR 1336)	Roxboro CL - Allenville Rd. (SR 1541)	US 158 - Helena Moriah Rd. (SR 1715)	Orange Co Union Grove Church Rd. (SR 1107)	Union Grove Church Rd. (SR 1107) - Cates Mill Rd. (SR 1131)	Cates Mill Rd. (SR 1131) - Noah Davis Rd. (SR 1141)	Noah Davis Rd. (SR 1141) - Paynes Tavern Rd. (SR 1142)	Paynes Tavern Rd. (SR 1142) -
			Facility	Molly Mooney Rd. (SR 1717)	Molly Mooney Rd. (SR 1717)	Moore's Mill Rd. (SR 1737)	Morehead St. (SR 1596)	Morehead St. (SR 1596)	Morgan St. (SR 1409)	Morgan St. (SR 1409)	Morgan St. (SR 1409)	Moriah Rd. (SR 1731)	Morton-Pulliam Rd. (SR 1336)	Morton-Pulliam Rd. (SR 1336)	Mountain Rd. (SR 1536)	Mt. Harmony Church Rd. (SR 1721)	NC 157	NC 157	NC 157	NC 157	
			Local ID	PER0046-H	PER0046-H	PER0026-H	PER0039-H	PER0039-H	PER0039-H	PER0039-H	PER0038-H	PER0032-H	PER0044-H	PER0044-H	PER0009-H	PER0049-H	I	I	I	I	

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				1		8	07 Exis	sting S	ystem		203	5 Propose	d Systen				
				Dist	Cros	ss-	S MOX	peed E	Existing	2007	2035 AADT	Proposed	Cross-	ROW	CTP Classifi-		Othe
Facility Section (From - T	Section (From - T	0)	Jurisdiction	(mi)	(ft) 1a	anes	(ft) (	(hdm	(pd)	AADT	No Build	(pd)	Section	(ft)	cation	Tier	Mode
NC 157 Industrial Dr. (SR Roxboro CL	Industrial Dr. (SR Roxboro CL	: 1195) -	Person Co.	0.3	20	2	60	45	11,350	3,300	5,700	14,900	2A	60	Maj	Reg	В
NC 157 Roxboro CL - So	Roxboro CL - So	uth St.	Roxboro	0.9	20	2	60	35	14,200	5,200	10,400	14,200	2A	60	Maj	Reg	в
NC 157 South St US 1	South St US 1	58	Roxboro	0.1	48	4	60	35	14,200	5,200	10,400	14,200	2A	60	Maj	Reg	в
NC 49 Caswell Co Sa Rd. (SR 1172)	Caswell Co Sa Rd. (SR 1172)	llem Church	Person Co.	3.2	24	2	100	55	10,500	2,500	5,000	14,900	2A	60	Maj	Reg	В
NC 49 Salem Church R Paynes Tavern R	Salem Church R Paynes Tavern R	d. (SR 1172) - td. (SR 1142)	Person Co.	3.6	24	2	100	55	10,500	2,900	5,800	14,900	2A	60	Maj	Reg	В
NC 49 Paynes Tavern F Hester Store Rd.	Paynes Tavern F Hester Store Rd.	td. (SR 1142) - (SR 1162)	Person Co.	2.0	24	2	100	55	10,500	4,100	8,200	14,900	2A	60	Maj	Reg	В
NC 49 Hester Store Rd Lake Shore Dr. (	Hester Store Rd Lake Shore Dr. (	. (SR 1162) - (SR 1194)	Person Co.	2.4	24	4	100	55	10,500	5,600	11,200	13,800	3B	80	Maj	Reg	В
NC 49 Lake Shore Dr. ( Roxboro CL	Lake Shore Dr. ( Roxboro CL	SR 1194) -	Roxboro	0.5	44	4	100	45	11,350	5,600	9,700	13,800	3B	80	[eM	Reg	В
NC 49 Roxboro CL - US	Roxboro CL - US	S 158	Roxboro	0.5	44	4	100	35	14,200	6,200	9,400	13,800	3B	80	Maj	Reg	в
NC 49 US 158 - Winha 1156)	US 158 - Winha 1156)	ven St. (SR					SE	E US 1	58 FOR	FURTH	ER INFOF	RMATION					
NC 49 VVinhaven St. (S	Winhaven St. (S 57	R 1156) - NC					SE	E US 1	58 FOR	FURTHI	ER INFOF	RMATION					
NC 49 NC 57 - Long A	NC 57 - Long A	ve.					SE	E US 1	58 FOR	FURTH	ER INFOF	RMATION					
NC 49   Long Ave US	Long Ave US	501					U S U U		58 FOR	FURTH		MATION					
Leasburg Rd	Leasburg Rd	Morehead St.															
NC 49 (SR 1596)	(SR 1596)						SE	E US 5	01 FOR	FURTH	ER INFOF	RMATION					
NC 49 Morehead St. (501	Morehead St. ( 501	SR 1596) - US					SE	E US 5	01 FOR	FURTH	ER INFOF	RMATION					
NC 49 US 501 - Roxb	US 501 - Roxb	oro CL	Roxboro	0.5	24	2	100	35	14,200	6,700	8,900	39,800	4C	110	В	Reg	в
NC 49 Roxboro CL - H 1521)	Roxboro CL - H 1521)	lalifax Rd. (SR	Person Co.	1.4	24	2	60	55	9,600	5,000	6,600	14,900	2A	ł	Maj	Reg	В
NC 49 Halifax Rd. (SR 1547) Rd. (SR 1547)	Halifax Rd. (SR Rd. (SR 1547)	. 1521) - Todd	Person Co.	0.4	24	2	60	55	9,600	5,100	7,700	14,900	2A	I	Maj	Reg	В
NC 49 Todd Rd. (SR Branch Rd. (SI	Todd Rd. (SR Branch Rd. (SI	1547) - Olive R 1512)	Person Co.	7.1	24	2	60	55	9,600	2,400	4,800	14,900	2A	ł	Maj	Reg	В
NC 49 Olive Branch F Granville Co.	Olive Branch F Granville Co.	kd. (SR 1512) -	Person Co.	4.3	20	7	60	55	8,500	006	1,200	14,900	2A	ł	Maj	Reg	В
NC 57 Orange Co	Orange Co	US 501	Person Co.	0.9	20	2	60	55	8,500	2,200	3,800	1	ADQ	I	Maj	Reg	ł
NC 57 US 501 - Brid River)	US 501 - Brid River)	ge (South Flat					SE	E US 5	01 FOR	FURTH	ER INFOF	RMATION					
NC 57 Bridge - Begin	Bridge - Begin	Curb and Gutter					SE	E US 5	01 FOR	FURTH	ER INFOF	RMATION					
-																	

		Other	Modes											В	В	в	В	в	В	В	ı	I	I	I
			Tier											Reg	Reg	Reg	Reg	Reg	Reg	Reg	Sub	Sub	gnS	Sub
		CTP Classifi-	cation											В	В	В	Maj	Maj	Maj	Maj	Min	Min	Min	Min
		ROW	(ft)											110	110	110	60	60	60	60	I	I	I	I
	d System	Cross-	Section											4C	4C	4C	2A	2A	2A	2A	ADQ	ADQ	ADQ	ADQ
	5 Proposed	Proposed Capacity	(pdv)	MATION	MATION	MATION	MATION	MATION	MATION	MATION	MATION	MATION	MATION	34,700	34,700	34,700	14,900	14,900	14,900	14,900	ı	I	I	I
	2035	2035 AADT	No Build	er infori	er infori	er infori	ER INFORI	ER INFORI	ER INFORI	ER INFORI	ER INFORI	ER INFORI	ER INFORI	10,400	16,000	12,400	10,300	11,400	9,200	5,700	6,000	6,000	ł	7,100
		2007	AADT	FURTHE	FURTHE	FURTHE	FURTHE	FURTHE	FURTHE	FURTHE	FURTHE	FURTHE	FURTHE	6,000	7,000	6,200	5,900	5,700	4,600	3,300	3,000	3,000	ł	3,100
	ystem	Existing Capacity	(pdv)	501 FOR I	501 FOR I	501 FOR I	501 FOR I	501 FOR I	501 FOR I	501 FOR I	501 FOR I	158 FOR I	158 FOR I	12,300	11,400	11,400	11,400	12,000	12,000	11,400	14,200	8,500	8,500	14,200
	kisting S	Speed Limit	(hdm)	EE US (	EE US (	EE US (	EE US (	EE US (	EE US	EE US (	EE US (	EE US	EE US	35	55	55	55	55	55	55	35	55	55	35
	2007 E>	ROW	(ft)	S	S	S	S	S	S	S	S	S	S	60	09	09	60	09	100	60	60	60	09	60
HWA)		oss-	lanes											2	2	2	2	2	2	5	5	2	2	2
HG		ပ်မှိ	(ft)											19	20	20	20	24	24	24	22	20	20	24
-		Dist.	(mi)											0.7	2.6	1.0	1.8	1.9	1.7	1.9	0.2	0.5	0.7	2.0
			Jurisdiction											Roxboro	Person Co.	Person Co.	Person Co.	Person Co.	Person Co.	Person Co.		Person Co.	Person Co.	Roxboro
			Section (From - To)	Begin Curb and Gutter - End Curb and Gutter	End Curb and Gutter - Cash Rd. (SR 1714)	Cash Rd. (SR 1714) - Crown Blvd. (SR 1770)	Crown Blvd. (SR 1770) - Roxboro CL	Roxboro CL - (SR 1703)	(SR 1703) - US 158 (Oxford Rd.)	US 158 (Oxford Rd.) - NC 157	NC 157 - US 158 (Long Ave.)	US 158 (Long Ave.) - US 158 (Leasburg Rd.)	Leasburg Rd NC 57 (Concord Rd.)	US 158 (Leasburg Rd.) - Roxboro WCL	Roxboro WCL - Clayton Rd. (SR 1343)	Clayton Rd. (SR 1343) - Morton Pulliam Rd. (SR 1342)	Morton Pulliam Rd. (SR 1342) - Concord Rd. (SR 1340)	Concord Rd. (SR 1340) - Pavement Change	Pavement Change - Brewer Rd. (SR 1313)	Brewer Rd. (SR 1313) - Caswell Co.	US 158 - Roxboro CL	Roxboro CL - Allensville Rd. (SR 1541)	Molly Moonie Rd. (SR 1717) - Denny's Store Rd. (SR 1536)	US 501 - US 158
			Facility	NC 57	NC 57	NC 57	NC 57	NC 57	NC 57	NC 57	NC 57	NC 57	NC 57	NC 57	NC 57	NC 57	NC 57	NC 57	NC 57	NC 57	Old Allensville Rd. (SR 1542)	Old Allensville Rd. (SR 1542)	Old Allensville Rd. (SR 1542)	Old Durham Rd. (SR 1700)
			Local ID	-			I	1	I	I	1	L	-	PER0003-H	PER0003-H	PER0003-H	I	I	I	I	PER0005-H	PER0005-H	PER0047-H	I

				Ξ	IGHV	VAY										
				H		200	7 Existing	System		203	5 Propose	d System				
				Dist.	Cros Secti	s- DN RC	Speed DW Limit	Existing Capacity	2007	2035 AADT	Proposed Capacity	Cross-	ROW	CTP Classifi-		Other
Local ID	Facility	Section (From - To)	Jurisdiction	(imi)	(ft) la	nes (i	t) (mph	(pdv)	AADT	No Build	(pdv)	Section	(ft)	cation	Tier	Modes
ł	Olive Branch Rd. (SR 1512)	Dirgie Mine Rd. (SR 1542)- NC 49	Person Co.	1.8	18	2 6	0 55	7,200	400	500	1	ADQ	1	Min	Sub	I
PER0012-H	Patterson Dr. (SR 1148)	NC 157 - Roxboro WCL	Person Co.	0.8	20	2 6	0 55	8,500	4,100	8,200	13,300	2F	80	Min	Sub	В
PER0012-H	Patterson Dr. (SR 1148)	Roxboro WCL - US 501	Roxboro	0.3	20	2	0 35	14,200	4,100	8,200	13,300	2F	80	Min	Sub	В
PER0021-H	Prixley-Pritchard Rd. (SR 1567)	Granviille Co. Line - Thomas Store Rd. (SR 1568)	Person Co.	1.2	18	26	0 55	7,600	ł	1	11,900	2A	60	Min	Sub	В
I	Providence- Longhurst Rd. (SR 1531)	US 501 - Roxboro CL	Roxboro	0.7	20	2 6	0 35	14,200	1,600	2,100	I	ADQ	I	Min	Sub	I
ł	Providence- Longhurst Rd. (SR 1531)	Roxboro CL - NC 49	Roxboro	0.7	52	5	0 45	11,350	1,200	1,800	I	ADQ	I	Min	Sub	I
I	Ralph Winstead Rd. (SR 1102)	US 158 - Dixon Rd. (SR 1302)	Person Co.	1.2	18	2	0 55	7,200	600	1,000	I	ADQ	I	Min	Sub	I
I	Ralph Winstead Rd. (SR 1102)	Dixon Rd. (SR 1302) - John Brewer Rd. (SR 1343)	Person Co.	1.4	18	5	0 55	7,200	600	1,000	I	ADQ	I	Min	Sub	I
I	Ralph Win <del>st</del> ead Rd. (SR 1102)	John Brewer Rd. (SR 1343) - Concord Church Rd. (SR 1300)	Person Co.	1.6	18	2 6	0 55	7,200	009	1,000	I	ADQ	I	Min	Sub	I
PER0033-H	Range Rd. (SR 1728)	Durham Co. Line - Bethany Church Rd. (SR 1715)	Person Co.	1.4	20	2 6	0 55	8,500	:	:	11,900	2A	60	Min	Sub	В
PER0037-H	Reams St. (SR 1363)	Ridge Rd. (SR 1363) - US 501	Roxboro	0.4	28	2 6	0 35	12,300	2,900	4,400	13,900	2E	60	Min	Sub	В
I	Reams St. (SR 1363)	US 501 - Depot St.	Roxboro	0.3	36	3 6	0 35	14,600	2,400	4,200	13,900	2F	60	Min	Sub	I
PER0036-H	Ridge Rd. (SR 1363)	US 501 - Width Change	Roxboro	0.7	20	2	0 35	12,300	2,800	4,200	13,900	2F	60	Min	Sub	I
PER0036-H	Ridge Rd. (SR 1363)	Width Change - Carver Dr. (SR 1364)	Roxboro	0.4	36	3	0 35	14,600	6,600	11,500	13,900	2F	60	Min	Sub	I
PER0036-H	Ridge Rd. (SR 1363)	Carver Dr. (SR 1364) - Chub Lake St. (SR 1333)	Roxboro	0.7	20	26	0 35	12,300	9,000	15,700	13,900	2F	60	Min	Sub	В
PER0011-H	Robert Norris Rd. (SR 1308)	US 158 (R-2585) - NC 57	Person Co.	0.4	20	2 6	0 55	12,300	1,300	ł	36,700	5A	100	Maj	Sub	-
PER0011-H	Robert Norris Rd. (SR 1308) (New Location)	US 158 (R-2585) - NC 57	Person Co.	0.3	1		-	I		ł	36,700	5A	100	Maj	Sub	
PER0031-H	Rougemont Rd. (SR 1729)	Durham Co. Line - Moriah Rd. (SR 1721)	Person Co.	1.9	20	2	0 40	8,500	1	:	11,900	2A	60	Min	Sub	В

Bradsher Rd. (SR 1108)       Valuation (SR 1159)       Second (SR 1159)       Second (SR 1159)       Second (SR 1157)       Second (SC 11100)       Second (SC 1100)	1107)       Bradsher Rd. (SR 1108)       Forson Co.       1.8       18       2       60       55       7,200         Union Grove       Lee Bradsher Rd. (SR 1108)       Person Co.       1.8       18       2       60       55       7,200         107)       1001)       Caswell Co Thee Hester Rd.       Person Co.       4.3       24       2       60       55       8,600         107)       Us 158       Thee Hester Rd. (SR 1157)       Person Co.       2.8       24       2       60       55       8,600         Us 158       Dee Long Rd. (SR 1157)       Person Co.       1.1       24       2       60       55       8,600         Us 158       Dee Long Rd. (SR 1157)       Person Co.       1.1       24       2       60       55       8,600         Us 158       Dee Long Rd. (SR 1157)       Person Co.       1.1       24       2       60       55       8,600         Us 158       Roxboro CL       NC 49       Winhawen St. (SR       Roxboro       0.5       24       2       60       35       12,300         Us 158       NC 49       Winhawen St. (SR 1156)       Roxboro       0.5       24       2       60       35       <
Bradsher Rd. (SR 1108)       ************************************	1107       Description       Descripron       Description <t< td=""></t<>
Bradsher Rd. (SR 1108)	1107)       Indofferve       Bradsher Rd. (SR 1108)       Indofferve       Indoff
Bradsher Rd. (SR 1108)       TOTAL       TOTAL <thtotal< th="">       TOTAL       <thtotal< td=""><td>1107)       Dadsher Rd. (SR 1108)       Control       Contro       Contro       Contro       Contr</td></thtotal<></thtotal<>	1107)       Dadsher Rd. (SR 1108)       Control       Contro       Contro       Contro       Contr
Bradsher Rd. (SR 1108)       • • • • • • • • • • • • • • • • • • •	1107)       Eadsher Rd. (SR 1108)       Eason Co.       1.8       2       0.0       55       7,200         Union Grove       Lee Bradsher Rd. (SR 1108)-       Person Co.       1.8       18       2       60       55       8,600         107)       Usinit Grove Church Rd. (SR 1159)-       Person Co.       4.3       24       2       60       55       8,600         Us 158       Caswell Co Thee Hester Rd. (SR 1157)-       Person Co.       2.8       24       2       60       55       8,600         Us 158       Dee Long Rd. (SR 1157)-       Person Co.       2.8       24       2       60       55       8,600         Us 158       Dee Long Rd. (SR 1157)-       Person Co.       1.1       24       2       60       55       8,600         Us 158       Roxboro CL       Roxboro CL       Roxboro CL       1.1       24       2       60       35       12,300         Us 158       No 49       Ninhaven St. (SR       Roxboro CL       1.1       24       2       60       35       12,300         Us 158       No 40       No 49       Roxboro CL       No 49       2       60       35       12,300         Us 158       No 49
Bradsher Rd. (SR 1108)       • • • • • • • • • • • • • • • • • • •	1107)       Bradsher Rd. (SR 1108)       Event Corr       C <thc< th="">       C       C</thc<>
Bradsher Rd. (SR 1108)       • • • • • • • • • • • • • • • • • • •	1107)       Bradsher Rd. (SR 1108)       0.0 <td< td=""></td<>
Bradsher Rd. (SR 1108)       Construction (SR 1159)       Construction (SR 1159)       Construction (SR 1159)       Construction (SR 1157)       Construction (SR 1155)       Construction (SR 1155)       Construction (SR 1155)       Construction (SR 1155)       Construction (SR 1156)       C	1107)       Bradsher Rd. (SR 1108)       0.0000 <t< td=""></t<>
Bradsher Rd. (SR 1108)       0.1       0.1       0.1         Lee Bradsher Rd. (SR 1108)       Nahut Grove Church Rd. (SR       108       1.8       18         Valnut Grove Church Rd. (SR       Person Co.       1.8       18         1001)       Caswell Co Thee Hester Rd.       Person Co.       4.3       24         1001)       Thee Hester Rd. (SR 1159)       Person Co.       2.8       24         Dee Long Rd. (SR 1157)       Person Co.       2.8       24         Roxboro CL       Roxboro CL       Person Co.       1.1       24         Roxboro CL       NC 49       Roxboro C.       1.1       24         NC 49 - Winhaven St. (SR 1157)       Person Co.       1.1       24         NC 49 - Winhaven St. (SR 1156)       Roxboro       0.5       24         NC 49 - Winhaven St. (SR 1156)       NC 49       0.3       30         Vinhaven St. (SR 1156)       NC 7       Roxboro       0.2       30         Vinhaven St. (SR 1156)       NC 57       Roxboro       0.2       30         Vinhaven St. (SR 1156)       NC 7       Roxboro       0.2       30         Vinhaven St. (SR 1156)       NC 7       Roxboro       0.2       30         Vinhaven St. (SR	1107)       Bradsher Rd. (SR 1108)       ••••••••••••••••••••••••••••••••••••
Bradsher Rd. (SR 1108)       Lee Bradsher Rd. (SR 1108) -       U. 1.8         Valnut Grove Church Rd. (SR 1108)       Person Co.       1.8         Valnut Grove Church Rd. (SR 1159)       Person Co.       4.3         Caswell Co Thee Hester Rd.       Person Co.       2.8         Thee Hester Rd. (SR 1157)       Person Co.       2.8         Dee Long Rd. (SR 1157)       Person Co.       2.8         Dee Long Rd. (SR 1157)       Person Co.       1.1         Roxboro CL       Person Co.       1.1         Roxboro CL       Person Co.       0.5         Nu day a Winhaven St. (SR 1157) -       Person Co.       1.1         Roxboro CL       Person Co.       0.5         Nordoro CL       Roxboro CL       Roxboro       0.5         Nunhaven St. (SR 1156) - NC       Roxboro       0.2         Vinhaven St. (SR 1156) - NC       Roxboro       0.2         VC 57 - Long Ave.	1107)       Bradsher Rd. (SR 1108)
Bradsher Rd. (SR 1108)       Lee Bradsher Rd. (SR 1108) -         Valnut Grove Church Rd. (SR       Person Co.         Valnut Grove Church Rd. (SR       Person Co.         1001)       Caswell Co Thee Hester Rd.       Person Co.         (SR 1159)       Person Co.       Person Co.         Dee Long Rd. (SR 1157)       Person Co.       Person Co.         Dee Long Rd. (SR 1157)       Person Co.       Person Co.         Dee Long Rd. (SR 1157)       Person Co.       Person Co.         Nozboro CL       Roxboro CL       Person Co.         Roxboro CL       Roxboro CL       Roxboro         NC 49 - Winhaven St. (SR       Roxboro         Vinhaven St. (SR 1156) - NC       Roxboro         VI 57 - Long Ave US 501       Roxboro         <	Intory         Bradsher Rd. (SR 1108)         Person Co.           Union Grove         Lee Bradsher Rd. (SR 1108) -         Person Co.           Union Grove         Lee Bradsher Rd. (SR 1108) -         Person Co.           1107)         1001)         Person Co.           Us 158         Caswell Co Thee Hester Rd.         Person Co.           US 158         Caswell Co Thee Hester Rd.         Person Co.           US 158         Dee Long Rd. (SR 1157) -         Person Co.           US 158         Dee Long Rd. (SR 1157) -         Person Co.           US 158         Dee Long Rd. (SR 1157) -         Person Co.           US 158         Roxboro CL         Roxboro CL           US 158         Roxboro CL         Person Co.           US 158         Roxboro CL         Roxboro CL           US 158         NC 49 - Winhaven St. (SR         Roxboro CO.           US 158         NC 57 - Long Ave.         Roxboro CL           US 158         NC 57 - Long Ave.         Roxboro CO.           US 158         UN inhaven St. (SR 1156) - NC         Roxboro CO.
Bradsher Rd. (SR 1108) Lee Bradsher Rd. (SR 1108) - Walnut Grove Church Rd. (SR 1001) Caswell Co Thee Hester Rd. (SR 1159) Thee Hester Rd. (SR 1157) - Dee Long Rd. (SR 1157) - Pee Long Rd. (SR 1157) - Roxboro CL Pee Long Rd. (SR 1157) - Roxboro CL Roxboro CL NC 49 - Winhaven St. (SR 1156) NC 49 - Winhaven St. (SR 1156) - NC 57 NC 57 - Long Ave. Long Ave US 501 US 501 - NC 157 NC 157 - US 158 (Oxford Rd.)	Intory         Bradsher Rd. (SR 1108)           Union Grove         Lee Bradsher Rd. (SR 1108) -           Union Grove         Lee Bradsher Rd. (SR 1108) -           Church Rd. (SR         Walnut Grove Church Rd. (SR 1107)           US 158         (SR 1159)           US 158         (SR 1159)           US 158         Dee Long Rd. (SR 1157) -           US 158         Dee Long Rd. (SR 1157) -           US 158         Roxboro CL           US 158         NC 49 - Winhaven St. (SR 1157) -           US 158         NC 49 - Winhaven St. (SR 1157) -           US 158         NC 49 - Winhaven St. (SR 1156) - NC           US 158         NC 57 - Long Ave.           US 158         US 501 - NC           US 158         US 501 - NC 157
	1107) Union Grove Church Rd. (SR 1107) US 158 US 158

		i	Other Modes	⊢	⊢	⊢	⊢	⊢	⊢	I	μ	⊢	⊢	⊢	⊢	⊢	⊢	⊢	Т	в	I	ł	-	ł	ı
			Tier	Sta	Sta	Sta	Sta	Sta	Sta	Sta	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg
		CTP	Classifi- cation	ш	ш	ш	ш	ш	ш	ш	Ш	ш	ш	ш	ш	В	В	В	В	В	В	В	В	В	в
			(ft)	I	1	I	ı	I	I	I	250	250	250	250	250	110	110	110	110	110	110	110	110	I	I
	System		Cross- Section	ADQ	ADQ	ADQ	4A	4A	4A	4A	4A	4A	4A	4A	4A	4C	4C	4C	4C	4C	4C	4C	4C	ADQ	ADQ
	5 Proposed	Proposed	Capacity (vpd)	:	1	47,500	47,500	47,500	47,500	47,500	47,500	47,500	47,500	47,500	47,500	44,300	44,300	44,300	44,300	44,300	44,300	44,300	44,300	-	I
	203	2035	AADT No Build	10,200	8,900	9,800	6,400	7,000	3,500	ł	31,900	36,600	34,300	34,300	33,600	41,200	43,500	45,500	51,900	38,300	27,700	30,400	28,800	18,500	17,200
			2007 AADT	6,700	6,700	4,900	3,700	4,000	2,000	:	16,000	16,000	15,000	15,000	14,700	18,000	19,000	21,000	26,000	22,000	21,000	23,000	19,000	14,000	13,000
	ystem	Existing	Capacity (vpd)	12,300	9,400	8,600	8,600	8,600	10,500	I	32,300	34,500	31,300	34,100	34,700	34,200	39,100	39,100	39,100	28,900	28,900	28,900	28,900	14,500	14,500
	cisting S	Speed	Limit ( (mph)	35	55	55	55	55	55	I	55	55	55	55	55	55	45	45	35	35	35	35	35	35	35
	007 Ex		(ft)	60	60	60	60	60	60	I	240	240	240	240	240	240	100	100	90	06	60	06	100	60	60
НМАҮ		-SSO	ection Ianes	2	2	2	2	2	2	I	4	4	5	4	4	4	5	5	5	5	5	5	5	3	с
HG		Ū	(ft)	24	24	24	24	24	24	1	48	48	64	48	48	48	60	60	60	09	60	60	60	36	36
-		i	Dist. (mi)	0.4	0.4	1.5	3.6	1.1	4.7	3.6	1.4	1.3	0.6	0.8	1.7	2.1	0.9	1.8	0.4	0.6	0.2	0.2	1.1	0.6	1.1
			Jurisdiction	Roxboro	Roxboro	Person Co.	Person Co.	Person Co.	Person Co.	Roxboro / Person Co.	Person Co.	Person Co.	Person Co.	Person Co.	Person Co.	Person Co.	Roxboro	Roxboro	Roxboro	Roxboro	Roxboro	Roxboro	Roxboro	Roxboro	Roxboro
			Section (From - To)	US 158 (Oxford Rd.) - Old Allenville Rd. (SR 1542)	Old Allenville Rd. (SR 1542) - Roxboro CL	Roxboro CL - Billy Hicks Rd. (SR 1704)	Billy Hicks Rd. (SR 1704) - Mollie Mooney Rd. (SR 1717)	Mollie Mooney Rd. (SR 1717) - Moriah Rd. (SR 1721)	Moriah Rd. (SR 1721) - Granville Co.	US 158 (Existing) - US 158 Existing	Durham Co - Bridge (South Flat River)	Bridge (South Flat River) - Begin Curb and Gutter	Begin Curb and Gutter - End Curb and Gutter	End Curb and Gutter - Cash Rd. (SR 1714)	Cash Rd. (SR 1714) - Crown Blvd. (SR 1770)	Crown Blvd. (SR 1770) - Roxboro CL	Roxboro CL - Patterson Dr. (SR 1148)	Patterson Dr. (SR 1148) - US 158	US 158 - NC 157	NC 157 - US 158 (Long Ave.)	US 158 - Leasburg Rd.	Leasburg Rd Morehead St. (SR 1596)	Morehead St. (SR 1596) - NC 49 (Virgilina Rd.)	NC 49 (Virgilina Rd.) - Thaxton Rd. (SR 1532)	Thaxton Rd. (SR 1532) - Allie Clay Rd. (SR 1524)
			Facility	US 158	US 158	US 158	US 158	US 158	US 158	US 158 (New Location	I US 501	I US 501	I US 501	I US 501	I US 501	I US 501	I US 501	I US 501	I US 501	I US 501	I US 501	I US 501	I US 501	US 501	US 501
			Local ID	ı	ı	1	R-2585	R-2585	R-2585	R-2585	PER0001-H	PER0001-H	PER0001-H	PER0001-H	PER0001-H	PER0002-H	PER0002-H	PER0002-H	PER0002-H	PER0002-H	PER0002-H	PER0002-H	PER0002-H		I

			Other Modes	:	1	1	ı	I	I	ı	ł	I	I	1	I	ı	I	I	I	ł	I	1
			Tier	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Sub	Sub	Sub	Sub	Sub	Sub	Sub	Sub	Sub	Sub
		СТР	Classifi- cation	в	в	ш	в	В	В	в	В	В	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
	Π		ROW (ft)	. 1	-	-	ł	150	150	150	150	150	I		I	I	I	ł	I	ł	I	I
	System		Cross- Section	ADQ	ADQ	ADQ	ADQ	4B	4B	4B	4B	4B	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ
	5 Propose	Proposed	Capacity (vpd)	1	I	I	I	45,900	45,900	45,900	45,900	45,900	I		I	I	I	I	I	ł	I	I
	203	2035	AADT No Build	17,200	14,500	13,800	13,700	12,100	10,300	8,200	1	ł	2,000	1,400	3,000	3,000	1,400	1,600	5,700	1,200	7,000	3,100
			2007 AADT	10,000	8,300	6,900	6,000	5,300	4,500	3,600	ł	1	1,000	700	1,300	1,300	800	800	4,300	700	3,500	1,800
	system	Existing	Capacity (vpd)	12,000	12,000	10,500	10,500	10,500	10,500	10,500	I	I	7,200	9,600	9,600	17,700	7,200	7,200	14,600	8,500	9,600	11,350
	kisting S	Speed	Limit (mph)	35	55	55	55	55	55	55	I	I	55	55	55	35	55	55	35	55	55	45
	2007 E		ROW (ft)	60	100	100	100	100	100	100	ł	ł	60	60	60	60	60	60	60	60	60	60
IWA		-SSO	ction	2	2	2	2	2	2	2	I	I	2	2	2	7	2	2	2	2	2	2
흐		δ	(ft) (ft)	24	24	24	24	24	24	24	ł	1	18	22	22	20	18	18	20	20	20	22
-			Dist.	0.2	0.6	0.9	1.0	3.0	3.4	0.1	3.6	2.4	1.0	1.7	0.3	0.3	1.9	1.0	0.5	7.4	1.7	1.2
			Jurisdiction	Roxboro	Person Co.	Person Co.	Person Co.	Person Co.	Person Co.	Person Co.	Roxboro / Person Co.	Person Co.	Person Co.	Person Co.	Person Co.	Roxboro	Person Co.	Person Co.	Roxboro	Person Co.	Roxboro	Person Co.
			Section (From - To)	Allie Clay Rd. (SR 1524) - Roxboro CL	Roxboro CL - Woodsdale Rd. (SR 1326)	Woodsdale Rd. (SR 1326) - Tingen Rd. ( SR 1522)	Tingen Rd. (SR 1522) - Halifax Rd. (SR 1521)	Halifax Rd. (SR 1521) - Shiloh Church Rd. (SR 1322)	Shiloh Church Rd. (SR 1322)- (SR 1501)	(SR 1501) - VA SL	NC 49 (Virgilina Rd.) - US 501 (Existing)	US 501 (Existing) - US 501 (Existing)	Hurdle Mills Rd. (SR 1103)- Orange Co.	NC 49 - Critcher Wilkerson Rd. (SR 1153)	Critcher Wilkerson Rd. (SR 1153) - Roxboro CL	Roxboro CL - Winhaven St. (SR 1156)	Orange Co Union Grove Church Rd. (SR 1107)	Union Grove Church Rd. (SR 1107) - NC 49	US 158 - Johnson St. (SR 1152)	VA SL - US 501	NC 49 - NC 157	WCL Roxboro - Chub Lake St. (SR 1333)
			Facility	US 501	US 501	US 501	US 501	US 501	US 501	US 501	US 501 (New Location)	US 501 (New Location)	Walnut Grove Church Rd. (SR 1001)	Wesleyan Rd. (SR 1152)	Wesleyan-Heights Rd. (SR 1152)	Wesleyan-Heights Rd. (SR 1152)	Wheelers Church Rd. (SR 1102)	Wheelers Church Rd. (SR 1102)	Winhaven St. (SR 1156)	Woodsdale Rd. (SR 1326)	Wrenn-Crumpton- Brooks Rd. (SR 1150)	Younger Rd. (SR 1346)
			Local ID	-	ł	I	I	R-2241	R-2241	R-2241	R-2241	R-2241	I	-	I	I	I	I	I	ł	I	I

		PUBLIC TRAN	SPORTA	TION			
			Speed		Existing System	Proposed System	
			Limit	Distance			Other
Local ID	Facility/ Route	Section (From - To)	(mph)	(mi)	Type	Type	Modes
PER0001-T	Roxboro - Durham Bus Route	Downtown Roxboro - Durham Co. Line (to Durham)	20-55	11.6	I	Bus	1
PER0002-T	Roxboro - Oxford Bus Route	Downtown Roxboro - Granville Co. Line (to Oxford)	20-55	12.7		Bus	ł
PER0003T	Roxboro Intermodal Connector	Downtown Roxboro near Depot St. (SR 1536) and Foushee St. (SR 1601)	ł	ł	I	Intermodal Connector	ł
PER0004-T	Roxboro Park and Ride Lot	Near US 501 and Inustrial Dr. (SR 1195)	1	1	1	Park and Ride Lot	:
PER0005-T	Timberlake Park and Ride Lot	Near US 501 and Ashley Ave. (SR 1745)	ł	ł	ł	Park and Ride Lot	ł
PER0002-T	US 501 - Fixed Guideway	Parallel to US 501 from the Durham Co. Line - near Ashley Ave. (SR 1745) in Timberlake	ł	3.2	ł	Fixed Guideway	1
PER0007-T	Timberlake Rail Stop	Near Ashley Ave. (SR 1745) in Timberlake	1	1	1	Rail Stop	ł

			Local	₽	ł	I	ł	:
				Facility/ Route	Inactive Norfolk Southern Railroad	Norfolk Southern Railroad	Norfolk Southern Railroad - Eastern Progress Energy Rail Spur	Norfolk Southern Railroad - Western Progress Energy Rail Spur
				Section (From - To)	Durham Co. Line - Bessie Daniel Rd. (SR 1147)	Bessie Daneil Rd. (SR 1147) to VA State Line	Norfolk Sourthern Railroad - Progress Energy Plant (end- of-line)	Norfolk Sourthern Railroad - Progress Energy Plant (end- of-line)
		Speed		Class		_	Ι	_
RAIL	R		Limit	(hdm)	1	5-30	5-30	5-30
	AIL		Distance	(mi)		14.9	4.1	8.6
		EX		Type	1	Freight	Freight	Freight
		sting Syste	ROW	(H)	ł	25-100	25-100	25-100
		m	Trains	per day	1	< 5	< 5	ត ភូ
		Pro		Type	ł	I	-	1
		posed Sys	ROW	(ft)	-	I	1	:
		stem	Trains	per day	1	I	ł	1
			Moder	NIUUES	1	ł	ł	:

		BICYCLE			
				Existing System Proposed System	
Local ID	Facility/ Route	Section (From - To)	Distance (mi)	Cross-Section (ft) lanes Type Cross-Section	Other Modes
PER0011-B	Bethany Church Rd. (SR 1715)	Granville Co. Line - Moriah Rd. (SR 1731)	1.7	Concurrent with Bethany Church Rd. (SR 1715) - see Highway Table	т
PER0012-B	Bowen Rd. (SR 1735)	Durham Co. Line - Helena-Moriah Rd. (SR 1715)	2.6	Concurrent with Bowen Rd. (SR 1735) - see Highway Table	т
PER0020-B	Chub Lake St. / Chub Lake Rd. (SR 1333)	US 158 (Leasburg Rd.) - Proposed Memorial Dr. Extension	2.8	Concurrent with Chub Lake St. / Chub Lake Rd. (SR 1333) - see Highway Table	т
PER0013-B	Cothran Hicks Rd. (SR 1733)	Durham Co. Line - Helena-Moriah Rd. (SR 1715)	2.1	Concurrent with Cothran Hicks Rd, (SR 1733) - see Highway Table	н
PER0002-B	Cunningham Rd. (SR 1318)	VA State Line - Caswell Co. Line	5.0	Concurrent with Cunningham Rd. (SR 1318) - see Highway Table	т
PER0021-B	Depot St. (SR 1536)	Foushee St. (SR 1601) - Roxboro CL	0.4	Concurrent with Depot St. (SR 1536) - see Highway Table	т
PER0003-B	Dirgie Mine Rd. (SR 1542)	Allensivlle Rd. (SR 1536) - Granville Co. Line	10.9	Concurrent with Dirgie Mine Rd. (SR 1542) - see Highway Table	т
PER0026-B	Foushee St. (SR 1601)	Morehead St. (SR 1596) - Depot St. (SR 1536)	0.1	Concurrent with Foushee St. (SR 1601) - see Highway Table	т
PER0006-B	Glen Fogleman Rd. (SR 1723)	Thomas Store Rd. (SR 1568) - Jim Latta Rd. (SR 1723)	2.4	Concurrent with Glen Fogleman Rd. (SR 1723) - see Highway Table	н
PER0010-B	Helena Moriah Rd. (SR 1715)	Moriah Rd. (SR 1721) - Moore's Mill Rd. (SR 1737)	4.8	Concurrent with Helena Moriah Rd. (SR 1715) - see Highway Table	т
PER0007-B	Jim Latta Rd. (SR 1723)	Glen Fogleman Rd. (SR 1723) to Surl-Mt. Tirzah Rd. (SR 1717)	2.9	Concurrent with Jim Latta Rd. (SR 1723) - see Highway Table	т
PER0019-B	Main St. / Main St. (SR 1601)	US 501 (Madison Blvd.) - NC 49	2.0	Concurrent with Main St. / Main St. (SR 1601) - see Highway Table	н
PER0009-B	Moore's Mill Rd. (SR 1737)	Durham Co. Line - Helena-Moriah Rd. (SR 1715)	3.0	Concurrent with Moore's Mill Rd. (SR 1737) - see Highway Table	т
PER0025-B	Morehead St. (SR 1596)	Morgan St. (SR 1409) - Foushee St. (SR 1601)	0.3	Concurrent with Morehead St. (SR 1596) - see Highway Table	Н
PER0024-B	Morgan St. (SR 1409)	Reams St. (SR 1363) - Morehead St. (SR 1596)	0.1	Concurrent with Morgan St. (SR 1409) - see Highway Table	Н
PER0015-B	Moriah Rd. (SR 1721)	Durham Co. Line - Helena-Moriah Rd. (SR 1715)	1.5	Concurrent with Moriah Rd. (SR 1721) - see Highway Table	н
PER0017-B	NC 157	US 501 (Madison Blvd.) - Industrial Dr. (SR 1195)	1.3	Concurrent with NC 157 - see Highway Table	н
PER0027-B	NC 49	Caswell Co. Line - Granville Co. Line	27.4	Concurrent with NC 49 - Part of route follows NC Bike Route 4 and Main St. (SR 1601)	т
NC Bike Route 4	NC Bike Route 4	Caswell Co. Line - Granville Co. Line	25.0	Concurrent with NC Bike Route 4 - see Highway Table	т

		BICYCLE					
				Existing System	Proposed Sy:	stem	
			Distance	Cross-Section			
Local ID	Facility/ Route	Section (From - To)	(mi)	(ft) lanes	Type Cro	ss-Section Ot	ther Modes
PER0004-B	Prixley-Pritchard Rd. (SR 1567)	Granviille Co. Line - Thomas Store Rd. (SR 1568)	1.2	Concurrent with 1567) - (	Prixley-Pritchard see Highway Table	Rd. (SR	т
PER0016-B	Range Rd. (SR 1728)	Durham Co. Line - Bethany Church Rd. (SR 1715)	1.4	Concurrent with Hi	Range Rd. (SR 17 ghway Table	28) - see	т
PER0023-B	Reams St. (SR 1363)	Ridge Rd. (SR 1363) - Morgan St. (SR 1409)	0.3	Concurrent with Hi	Reams St. (SR 13 ighway Table	63) - see	н
PER0022-B	Ridge Rd. (SR 1363)	Chub Lake St Reams St. (SR 1363)	0.1	Concurrent with Hi	Ridge Rd. (SR 136 ghway Table	33) - see	т
PER0014-B	Rougemont Rd. (SR 1729)	Durham Co. Line - Moriah Rd. (SR 1721)	1.9	Concurrent with F see	Rougemont Rd. (S Highway Table	R 1729) -	т
PER0008-B	Surl-Mt. Tirzah Rd. (SR 1717)	Jim Latta Rd. (SR 1721) to Helena-Moriah Rd. (SR 1715)	4.8	Concurrent with S	url-Mt. Tirzah Rd. ( Highway Table	(SR 1717) -	н
PER0001-B	Tar River Bicycle Route	Granville Co. Line - US 158	4.7	1	Off Road	1	н
PER0005-B	Thomas Store Rd. (SR 1568)	Prixley-Pritchard Rd. (SR 1567) - Glen Fogleman Rd. (SR 1723)	1.7	Concurrent with The see	nomas Store Rd. (; Highway Table	SR 1568) -	т
PER0018-B	US 501	NC 157 - Main St.	0.1	Concurrent with L	JS 501 - see Highv	vay Table	н
		PEDESTRIAN & MULTI-USE PA	ATH				

		PEDESTRIAN & MULTI-USE P/	HIH					
				Existing	System	Propose	d System	Other
			Distance		Side of			
-ocal ID	Facility/ Route	Section (From - To)	(mi)	Type	Street	Type	Side of Street	Modes
Fc	<pre>&gt;r Pedestrian and Multi-Use Path recor</pre>	nmendations and inventory, please see the 2008 City	y of Roxbo	ro Pedes	strian Plar	developed by	/ Greenway, Inc.	

## 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 10 TYPICAL HIGHWAY CROSS SECTIONS 2 LANES







# TYPICAL HIGHWAY CROSS SECTIONS 2 LANES

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 I

### RAISED MEDIAN WITH CURB & GUTTER



# TYPICAL HIGHWAY CROSS SECTIONS 3 LANES





~

80' MIN. RIGHT OF WAY

# TYPICAL HIGHWAY CROSS SECTIONS 4 LANES



4 B DIVIDED WITH MEDIAN - NO CURB & GUTTER PARTIAL CONTROL OF ACCESS 4'-5' P.S. 4'-5' P.S. 2' . P.S. () P.S Û Ũ IJ 6' 6 12' 8' 12' 30' MIN. MEDIAN 12' 12' 8' 150' MIN. RIGHT OF WAY



# TYPICAL HIGHWAY CROSS SECTIONS 4 LANES



**5 LANES** 



# TYPICAL HIGHWAY CROSS SECTIONS 6 LANES





## 8 LANES



## **TYPICAL MULTI - USE PATH**

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



MΒ

MULTI - USE PATH ADJACENT TO CURB AND GUTTER



## 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 11.

- <u>LOS A</u>: Describes primarily free flow conditions. The motorist experiences a high level of physical and psychological comfort. The effects of minor incidents of breakdown are easily absorbed. Even at the maximum density, the average spacing between vehicles is about 528 ft, or 26 car lengths.
- LOS B: Represents reasonably free flow conditions. The ability to maneuver within the traffic stream is only slightly restricted. The lowest average spacing between vehicles is about 330 ft, or 18 car lengths.
- <u>LOS C</u>: Provides for stable operations, but flows approach the range in which small increases will cause substantial deterioration in service. Freedom to maneuver is noticeably restricted. Minor incidents may still be absorbed, but the local decline in service will be great. Queues may be expected to form behind any significant blockage. Minimum average spacing is in the range of 220 ft, or 11 car lengths.
- <u>LOS D</u>: Borders on unstable flow. Density begins to deteriorate somewhat more quickly with increasing flow. Small increases in flow can cause substantial deterioration in service. Freedom to maneuver is severely limited, and the driver experiences drastically reduced comfort levels. Minor incidents can be expected to create substantial queuing. At the limit, vehicles are spaced at about 165 ft, or 9 car lengths.
- LOS E: Describes operation at capacity. Operations at this level are extremely unstable, because there are virtually no usable gaps in the traffic stream. Any disruption to the traffic stream, such as a vehicle entering from a ramp, or changing lanes, requires the following vehicles to give way to admit the vehicle. This can establish a disruption wave that propagates through the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate any disruption. Any incident can be expected to produce a serious breakdown with extensive queuing. Vehicles are spaced at approximately 6 car lengths, leaving little room to maneuver.

• **LOS F**: Describes forced or breakdown flow. Such conditions generally exist within queues forming behind breakdown points.

Figure 11 - Level Of Service Illustrations

### Level of Service A



Driver Comfort: High Maximum Density: 12 passenger cars per mile per lane

### Level of Service D



Driver Comfort: Poor Maximum Density:

42 passenger cars per mile per lane

### Level of Service B



Driver Comfort: High Maximum Density: 20 passenger cars per mile per lane

### Level of Service E



Driver Comfort: Extremely Poor Maximum Density:

67 passenger cars per mile per lane

Level of Service C



Driver Comfort: Some Tension Maximum Density: 30 passenger cars per mile per lane

### Level of Service F



Driver Comfort:The lowest Maximum Density:

More than 67 passenger cars per mile per lane

Source: 2000 Highway Capacity Manual

### Appendix F Traffic Crash Analysis

A crash analysis performed for the Person County & Roxboro CTP factored crash frequency and crash severity. Crash frequency is the total number of reported collisions and contributes to the ranking of the most problematic intersections. 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 Index</u>
< 6.0
6.0 to 7.0
7.0 to 14.0
14.0 to 20.0
> 20.0

Table 4 depicts a summary of the crashes occurring in the planning area between January 1, 2007 and December 31, 2009. The data represents locations with 10 or more crashes. None of the crash locations that had 10 or more total collisions were greater than that of the state's average Severity Index Number of 4.86. The average Crash Severity rating for the whole county in this time period was 3.38, which is below the state's average Severity Index Number. This average for the counties takes into account all crashes, regardless of frequency. The "Total Collisions" column indicates the total number of accidents 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 Collisions			
1	US 501 and Main St.	2.00	39			
2	Carver Dr. and Madison Blvd.	3.16	33			
3	US 501 and Long Ave.	1.99	28			
4	US 501 and Oak St.	1.99	25			
5	US 501 and Old Durham St.	2.35	22			
6	Madison Blvd. and Morehead St.	3.06	18			
7	Gordon St. and Madison Blvd.	2.39	16			

Map Index	Intersection	Average Severity	Total Collisions
8	Clayton St. and Madison Blvd.	2.48	15
9	Barden St. and Madison Blvd.	1.53	14
10	US 501 and Wal Mart	1.53	14
11	Long Ave. and Morgan St.	2.85	12
12	Ivy St. and Madison Blvd.	2.23	12
13	Carver Dr. and Ridge Rd.	1.62	12
14	US 501 and Foushee St.	3.02	11
15	Chub Lake St. and Morgan St.	2.35	11
16	US 501 and Weeks St.	2.35	11
17	Madison Blvd. and Reams St.	1.67	11

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 Bridge Maintenance 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 quality 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 on the next page.

## Table 5 - Deficient Bridges

Bridge Number	Facility	Feature	Condition	CTP Project
720002	SR1519	MILL CREEK	Functionally Obsolete	
720011	US158	SOUTH HYCO CREEK	Functionally Obsolete	
720015	SR1715	DEEP CREEK	Functionally Obsolete	PER0027- H
720021	SR1715	NORTH FLAT RIVER	Functionally Obsolete	
720024	SR1142	N.FLAT RIVER	Structurally Deficient	
720025	SR1144	N.FLAT RIVER	Structurally Deficient	
720027	SR1138	CREEK	Structurally Deficient	
720031	SR1134	ALDRIDGE CREEK	Functionally Obsolete	
720035	SR1120 (CLOSED)	SOUTH FLAT RIVER	Structurally Deficient	
720036	SR1123	SOUTH FLAT RIVER	Structurally Deficient	
720043	SR1112	SOUTH FLAT RIVER	Structurally Deficient	
720044	SR1111	SOUTH FLAT RIVER	Structurally Deficient	
720045	SR1102	HYCO RIVER	Functionally Obsolete	
720049	SR1300	SOUTH HYCO CREEK	Structurally Deficient	
720050	SR1343	SOUTH HYCO CREEK	Structurally Deficient	
720051	SR1343	RICHLAND CREEK	Structurally Deficient	
720053	SR1336	ROXBORO LAKE	Functionally Obsolete	PER0045- H
720093	SR1536	TAR RIVER	Structurally Deficient	
720094	SR1565	CREEK	Functionally Obsolete	
720098	SR1565	CREEK	Functionally Obsolete	
720184	SR1532	MARLOWE'S CREEK	Structurally Deficient	
720216	SR1100	BRANCH	Functionally Obsolete	

## Appendix H Public Involvement

- The Person County & Roxboro CTP's steering committee was comprised of:
  - Andy Oakley, Person County Public Services Director
  - Ernie Wood, Summit Engineering
  - Jon Barlow, City of Roxboro Manager
  - Julie Maybee, City of Roxboro Planning & Development Director
  - Leigh Woodall, Chair of the Person County Thoroughfare Advisory Committee
  - Mike Brandon, Summit Engineering
  - Mike Ciriello, Kerr-Tar Rural Planning Organization Planner
  - Paul Bailey, Person County Assistant Manager
  - Paula Murphy, Person County Planner
  - Scott Walston, NC DOT TPB Triangle Group Supervisor
- The Person County & Roxboro CTP steering committee developed a Vision Statement for the CTP, outlined below:

### Person County & Roxboro Community Vision and CTP Goals and Objectives Statement

#### Vision:

Provide a safe, reliable, efficient, and sustainable multi-modal transportation network that supports economic development and efficient movement of people and products while being compatible with environmental and land use patterns.

#### <u>Goals:</u>

- 1. Complete a study of transportation facilities and develop a plan, with improvements, that address traffic congestion and consider economic impacts.
- 2. Identify and prioritize improvements that would enhance quality of life through multimodal CTP implementation.
- 3. Coordinate Person County's transportation and land use plans with the City of Roxboro, Kerr-Tar Rural Planning Organization, NCDOT, and other relevant local and state organizations.
- 4. Complete a study of capacity, connectivity, crashes, access management techniques, and adequacy of traffic control signalization/devices; make recommendations needed to improve safety, traffic flow and reduce congestion.
- 5. Coordinate with Person County Emergency Management and relevant organizations to ensure that emergency plans are considered in plan development.
- 6. Show the economic and strategic benefit of completing TIP project R-2241 (multi-laning of US 501 from Roxboro to the Virginia State Line) along with other feasible projects from previous transportation plans.

- The Person County & Roxboro CTP steering committee decided not to complete a Goals and Objectives survey for the purpose of surveying the public on transportation needs and interests. The committee felt that an inadequate number of responses would have been surveyed to effectively gauge public opinion on local transportation planning efforts.
- A public Drop-In session (workshop) was held on August 5<sup>th</sup>, 2010 at the City of Roxboro Council Chambers. This session was publicized in the local newspaper (The Courier Times Person County Life) two weeks prior to the meeting. The session was held from 6PM to 8PM. The Drop-In session presented CTP maps for all the modes required by the CTP. These maps were presented on easels for public viewing. In addition to the maps, a presentation was created to be showed if there were a high number of attendees. Attendee's to the session would receive one comment form, one information sheet (outlining the goal of the CTP and major recommendations), a set of 11"X17" maps (quantity was limited to 10 sets of maps).

Over the course of the session, three citizens attended and one completed a comment form. A blank copy of the comment form and the information sheet provided to potential attendees are shown on the following pages.

The Person County Board of Commissioners and the City Council of Roxboro adopted the 2011 Person County & Roxboro CTP at a joint meeting on October 11<sup>th</sup>, 2010. The Kerr-Tar RPO endorsed the plan at a joint Transportation Coordinating Committee (TCC) / Transportation Advisory Committee (TAC) meeting on November 9<sup>th</sup>, 2010. These adoptions and RPO endorsement can be found on the following pages.

On January 6<sup>th</sup>, 2010, the NCDOT – BOT adopted the 2011 Person County & Roxboro CTP. For more information regarding the meeting minutes from this BOT session, please go to http://www.ncdot.org/about/board/.





#### PLEASE PRINT:

NAME:

ADDRESS:

CITY/TOWN: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

E-MAIL:

\*\*All personal information will be kept confidential and will only be used to inform you of any future public participation opportunities. \*\*

1. Broadly speaking, how do you feel about the recommendations shown on each map of the Comprehensive Transportation Plan, using the scale below

	Strongly	Somewhat	Somewhat	Strongly
	Support	Support	Against	Against
Highway Map	1	2	3	4
Public Transportation & Rail Map	1	2	3	4
Bicycle Map	1	2	3	4
Pedestrian Map	1	2	3	4
Pedestrian Map	1	2	3	4

2. What specific recommendations do you have comments, questions, or concerns about?

3. Are there any recommendations that you would like to add to the plan? If, yes, what are they and why would you like to see them on the plan?

4. Concerning the format of the Public Workshop, do you have any positive or negative comments or suggestions for improvements to the way information was presented to the public?

Feel free to attach other pages of comments / suggestions/ questions.

## Person County Comprehensive Transportation Plan Public Workshop COMMENT SHEET

All suggestions, questions, or comments may be submitted in writing by completing this form and leaving it at this public workshop. You may also mail, call, or email in your comments/questions to the mailing address, phone number, and email address provided below. PLEASE SUBMIT COMMENT SHEET IN MAIL BY 8/26/10.

Mark R. Eatman, E.I. NC DOT – Transportation Planning Branch 1554 Mail Service Center Raleigh, NC 27699 Phone: 919-733-4705 Fax to 919-733-2417, or Email: mreatman@ncdot.gov

THANK YOU FOR YOUR PARTICIPATION!

(Fold Here to Mail)

Please Place Stamp Here

Mark R. Eatman NC DOT – Transportation Planning Branch 1554 Mail Service Center Raleigh, NC 27699

#### Person County Comprehensive Transportation Plan (CTP) Information Sheet

#### What is a Comprehensive Transportation Plan (CTP)

The CTP is a multi-modal (Highway, Public Transportation, Rail, Bicycle, and Pedestrian) transportation plan that recognizes a <u>need</u> for FUTURE transportation improvements and recommends projects to help solve future transportation problems.

#### Purpose of a Drop-in Session

To provide you the opportunity to understand and comment on transportation planning that's happening in your area.

#### What is done with your input?

Your input will help us (the NCDOT, the Kerr-Tar Rural Planning Organization (RPO), Person County, and the City of Roxboro) develop the final CTP.

Once the final CTP is developed it will be presented to the City of Roxboro and Person County for adoption. After the local governments have adopted the CTP, it is then submitted to the Kerr-Tar Rural Planning Organization for endorsement and the NCDOT Board of Transportation for their adoption.

A CTP DOES	A CTP does NOT
Aim to reduce environmental impact	Promise to build roads
Provide a safe multi-modal	Make final calls on recommended
transportation plan for your area	alignments
Aim to minimize negative economic	Fund projects recommended in the
impact	proposed plan
Coordinates with your local land-use	
plans	

#### Contacts:

Mark Eatman, El Transportation Engineer II NCDOT – Transportation Planning Branch 919-733-4705 <u>mreatman@ncdot.gov</u>

Scott Walston, PE Triangle Planning Group Supervisor NCDOT – Transportation Planning Branch 919-733-4705 swalston@ncdot.gov

Mike Ciriello Kerr-Tar RPO Planner Kerr-Tar Council of Governments 252-436-2048 mciriello@kerrtarcog.org Wally Bowman, PE Division Engineer NCDOT – Division 5 919-220-4600 wbowman@ncdot.gov

Joey Hopkins, PE Deputy Division Engineer NCDOT – Division 5 919-220-4600 jhopkins@ncdot.gov

Tasha Johnson, PE District Engineer NCDOT – Division 5 – District 2 919-220-4750 tnjohnson@ncdot.gov

Route	Designation	Recommendation
US 501 (R-2241)	Boulevard – Recommended / Needs Improvement	US 501 is recommended to be improved to a Boulevard from NC 49 to the VA state line. Parts on new location.
US 158 (R-2585 / R-2575)	Expressway – Recommended / Needs Improvement	US 158 is recommended to be improved to an Expressway from Caswell County to Granville County. Part on new location bypass of Roxboro.
US 501 / NC 57	Boulevard – Needs Improvement	US 501 and part of NC 57 in Roxboro are recommended to be improved to a Boulevard. This section proposes a 4-lane facility with a boulevard and some access control.
US 501 / NC 57	Expressway – Needs Improvement	US 501 and part of NC 57 south of Roxboro are recommended to be improved to an Expressway. This section recommends more access control than is currently in place and several interchanges to replace current intersections.
NC 49	Major Thoroughfare – Needs Improvement	NC 49 is recommended to be widened to a 24- foot 2-lane facility with wider paved shoulders from Caswell County to Granville County.
NC 57	Boulevard / Major Thoroughfare – Needs Improvement	NC 57 is recommended to be widened to a 24- foot 2-lane facility with wider paved shoulders from Caswell County to Morton-Pulliam Rd. NC 57 is also recommended to be improved to a Boulevard from Morton Pulliam Rd. to Long Ave. (Part on existing US 158)

#### Highlighted DRAFT CTP Highway Recommendations

#### Other Recommendations

- There are many roads that are recommended to be widened to a "good two-lane road" width
  of 24 ft, with turn lanes at major intersections (where needed). Some of the roads will carry
  Bike traffic which could include bike route signage, wider paved shoulders, and/or wider
  outside lanes. (SEE the DRAFT CTP Highway and Bicycle Map for further details)
- The CTP is recommending future bus routes along US 501 and US 158. These bus routes would connect to major regional destinations such as Durham, Chapel Hill, Raleigh, and RTP. Future regional planning is required. Two future Park-and-Ride lots are also recommended near Wal-Mart on US 501 and in Timberlake (near US 501). The Timberlake area has a recommended rail stop at this location for proposed commuter rail service in southern Person County. (SEE the DRAFT CTP Public Transportation and Rail Map for further details)
- Pedestrian improvements are recommended for roads inside the City of Roxboro. The recommendations made for the pedestrian element of the CTP are from the 2008 Roxboro Pedestrian Plan developed by Greenways Inc. (SEE the DRAFT CTP Pedestrian Map for further details)

http://ncdot.gov/doh/preconstruct/tpb/planning/PersonCTP.html
## RESOLUTION ADOPTING A COMPREHENSIVE TRANSPORTATION PLAN FOR PERSON COUNTY, NORTH CAROLINA

The following resolution was offered by Commissioner Kyle Puryear, seconded by Commissioner Ray Jeffers and, upon being put to a vote, was carried by a vote of 5-0 on the 11th day of October, 2010.

Whereas, the Joint Roxboro / Person County Thoroughfare Advisory Committee, the Person County Comprehensive Transportation Plan Work Group, the City of Roxboro Planning Board, the Person County Zoning and Planning Board, the Kerr-Tar Rural Planning Organization, and the Transportation Planning Branch of the North Carolina Department of Transportation have actively worked to develop a Comprehensive Transportation Plan for Person County, North Carolina; and

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

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

**Whereas**, after full study of the plan, and following a public workshop on August 5, 2010 in Roxboro City Hall, the Roxboro City Council and Person County Board of Commissioners feels it to be in the best interests of the City of Roxboro and Person County Government to adopt a plan pursuant to General Statutes 136-66.2;

**NOW THEREFORE, BE IT RESOLVED** the Person County Board of Commissioners hereby adopts the Person County Comprehensive Transportation Plan dated October 8, 2010 that is within its planning jurisdiction. This plan should be approved and adopted as a guide in the development of the transportation system in the City of Roxboro and Person County and the same is hereby recommended to the North Carolina Department of Transportation for its subsequent adoption.

Adopted this, the 11th day of October, 2010.

Johnny Myrl Lunsford, Chairman Person County Board of Commissioners

Attest: Brenda B. Reaves

Clerk to the Board



## RESOLUTION ADOPTING A COMPREHENSIVE TRANSPORTATION PLAN FOR PERSON COUNTY, NORTH CAROLINA

The following resolution was offered by Council Member <u>Merilup Nevell</u>, seconded by Council Member <u>James Allen</u> and, upon being put to a vote, was carried by a vote of <u>5-0</u> on the <u>115</u> day of <u>October</u>, 2010

Whereas, the Joint Roxboro/Person County Thoroughfare Advisory Committee, the Person County Comprehensive Transportation Plan Work Group, the City of Roxboro Planning Board, the Person County Zoning and Planning Board, the Kerr-Tar Rural Planning Organization, and the Transportation Planning Branch of the North Carolina Department of Transportation have actively worked to develop a Comprehensive Transportation Plan for Person County, North Carolina; and

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

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

Whereas, after full study of the plan, and following a public workshop on August 5, 2010 in Roxboro City Hall, the Roxboro City Council feels it to be in the best interests of the City of Roxboro to adopt a plan pursuant to General Statutes 136-66.2;

**NOW THEREFORE, BE IT RESOLVED:** That the Roxboro City Council hereby adopts the Person County Comprehensive Transportation Plan dated October 11 2010 that is within its planning jurisdiction. This plan should be approved and adopted as a guide in the development of the transportation system in the City of Roxboro and the same is hereby recommended to the North Carolina Department of Transportation for its subsequent adoption.

OF RO Mayor Pro Tem Samuel Spender ATTEST: EAL revie Adams, City Clerk CARO

105 S. LAMAR STREET • P. O. BOX 128 • RONBORO, NORTH CAROLINA 27573 • (336) 599-3116 • FAX (336) 599-3774 www.cityofroxboro.com



## **RESOLUTION ENDORSING A COMPREHENSIVE TRANSPORTATION PLAN** FOR PERSON COUNTY, NORTH CAROLINA

WHEREAS, the City of Roxboro, Person County, and the Transportation Planning Branch, North Carolina Department of Transportation, have actively worked to develop a joint Comprehensive Transportation Plan for the Person County; and

WHEREAS, the City of Roxboro, and Person County fall within the planning area of the Kerr-Tar Rural Planning Organization; and

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

WHEREAS, it is recognized that the Person County Comprehensive Transportation Plan will replace the existing Thoroughfare Plans governing transportation planning in Person County and the City of Roxboro, and;

WHEREAS, after full study of the Comprehensive Transportation Plan and the supporting documents presented, the Kerr-Tar RPO feels it to be in the best interests of the Kerr-Tar RPO region to adopt a plan pursuant to General Statutes 136-66.2;

NOW THEREFORE, BE IT RESOLVED: That the Kerr-Tar Rural Planning Organization Rural Transportation Advisory Committee hereby endorses the Person County Comprehensive Transportation Plan and recommends the adoption of the Person County Comprehensive Transportation Plan by the NCDOT Board of Transportation.

O'Leary

James D. O'Geary, Chair Kerr-Tar RPO RTAC

ATTEST:

Michael Ciriello, Secretary Kerr-Tar RPO RTAC

## Appendix I Existing Transportation Plans

The following Thoroughfare Plans for areas within the County that are not included as a part of this plan are listed below and depicted in this appendix.



• 1996 Person County Thoroughfare Plan



• 1999 City of Roxboro Thoroughfare Plan