

# Comprehensive Transportation Plan



Study Report for Transylvania County  
May 2007



# Comprehensive Transportation Plan

## Study Report For Transylvania County

Prepared by the:       Transportation Planning Branch  
                                  North Carolina Department of Transportation

In Cooperation with:   Transylvania County  
                                  City of Brevard  
                                  Town of Rosman  
                                  Federal Highway Administration  
                                  U.S. Department of Transportation

May 2007





## Acknowledgements

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City of Brevard Planning Director:	Josh Freeman, AICP
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Land of Sky RPO Coordinator:	Carrie Runser-Turner
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Transylvania County Planner:	Mike Thomas
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## Executive Summary

In April of 2005, the Transportation Planning Branch of the North Carolina Department of Transportation and Transylvania County agreed to begin work on the Transylvania County Comprehensive Transportation Plan. The resulting Transylvania County Comprehensive Transportation Plan, as shown in Figure 1 of this report, is the end product of this planning process—the recommendations shown on this plan are based on a technical analysis of transportation needs, application of standard transportation planning principles, and public input.

It is important to note that the recommended transportation plan is based upon anticipated growth and development within the planning area over the next 25 years. Prior to the construction of specific recommended projects, a more detailed study will be required to reconsider development trends, determine specific design requirements, and further evaluate environmental impacts. Over time, as development patterns change, it may also become necessary to update this Comprehensive Transportation Plan.

The Comprehensive Transportation Plan for Transylvania County currently includes recommendations for three transportation elements: the highway map, public transportation and rail map, and bicycle map. The format for the pedestrian map has not been finalized, so it is not included as part of the adopted Comprehensive Transportation Plan. A map showing recommended pedestrian facilities, based on the *Brevard Comprehensive Pedestrian Plan (2006)* and public comments, is included as a figure in this study report but is not part of the officially adopted plan.

The projected population and employment growth within the planning area is based on the regional economic analysis that was performed during the development of the French Broad River MPO Travel Demand Model. Zone and subarea-level population and employment data for Transylvania County were approved for use by the Transylvania County Board of Commissioners in January 2006. Technical analysis for the highway element was performed using the French Broad River Metropolitan Planning Organization (MPO) Travel Demand Model, adopted in June 2006, in the urbanized portion of Transylvania County and a trendline analysis in the rural areas. Recommendations in all transportation elements were developed to reflect the overall goals of the area, based on discussions with local planners, elected officials and the public.

This report documents the findings of this study as well as the resulting recommendations for improvements. In addition, this report presents transportation cross-section recommendations, cost estimates for the recommended highway improvements, and an analysis of environmental features in the planning area.

After ongoing coordination with the Transylvania County Transportation Advisory Committee and the planning departments for Transylvania County and the City of Brevard, and three public involvement sessions in the Summer of 2006, the Transylvania County Comprehensive Transportation Plan was adopted by the Brevard City Council on February 19, 2007 and the Transylvania County Board of Commissioners on February 26, 2007. Implementation of this plan rests largely with the policy boards and citizens of Brevard and Transylvania County. Transportation needs throughout the state exceed the available funding for transportation projects; therefore, local areas, in conjunction with Rural Planning Organizations (RPO), must take an active role in pursuing funding for desired projects.



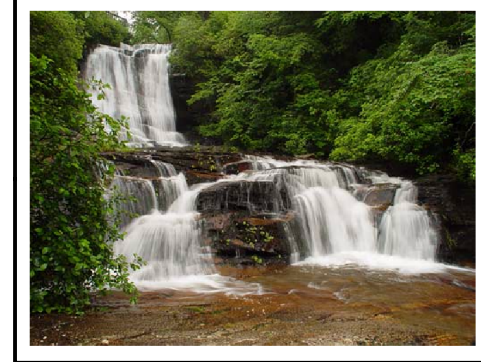
**Adopted by:**  
 Transylvania County  
 Date: February 26, 2007  
 City of Brevard  
 Date: February 19, 2007

**NCDOT**  
 Date: May 3, 2007

**Endorsed by:**  
 Land-Of-Sky RPO  
 Date: March 23, 2007

**Recommended by:**  
 Transportation Planning Branch  
 Date: April 2, 2007

**Notes:**  
 Format for Sheet 5 - Pedestrian Map is Pending.



# Transylvania County

North Carolina

## Comprehensive Transportation Plan

Plan date: January 18, 2007

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

### Legend

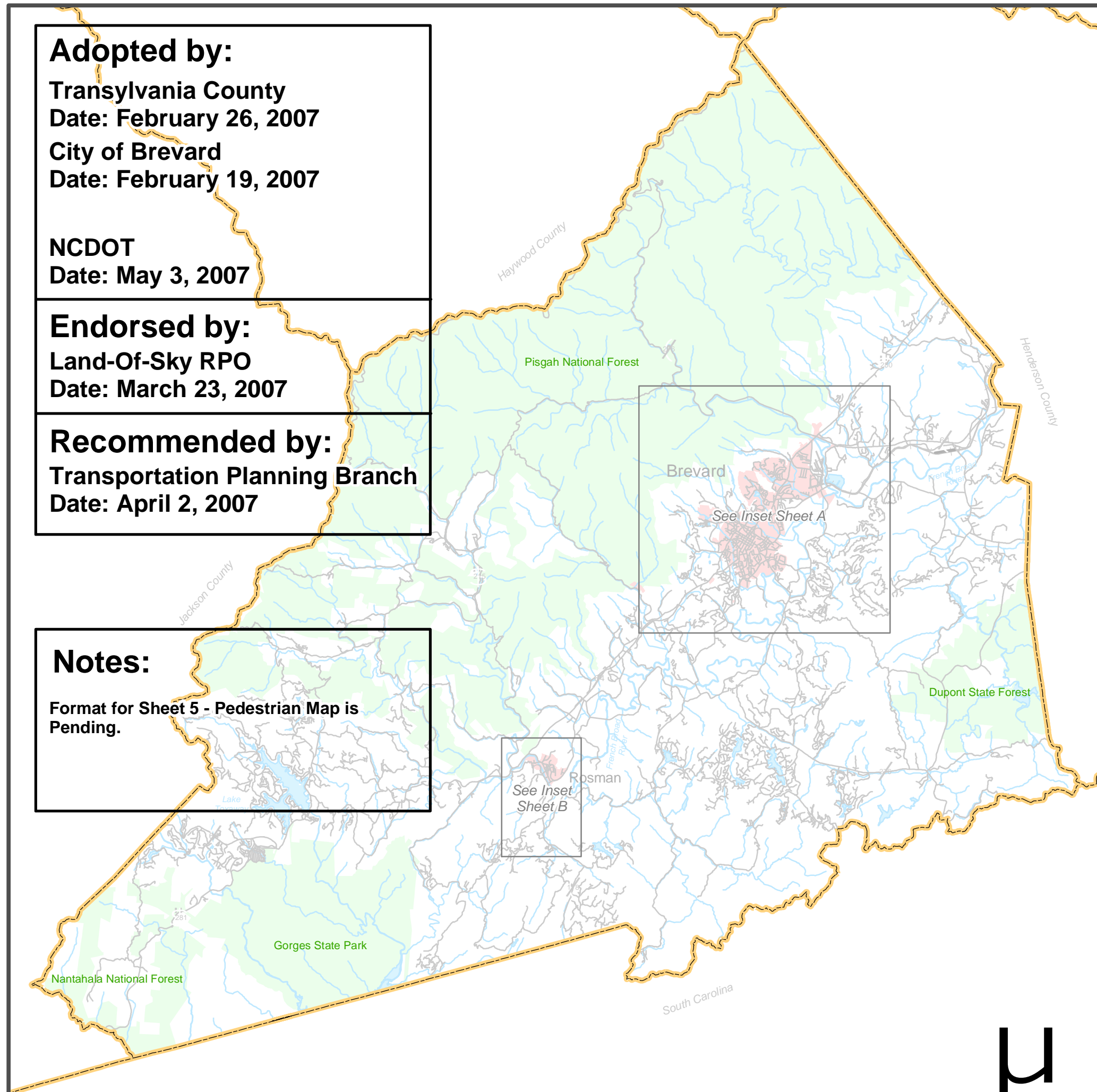
- Schools
- Roads
- Rivers and Streams
- Airports
- Railroads
- County Boundary
- Water Bodies
- Cities
- Forests and Parks

0 0.5 1 2 3 Miles

Figure 1 - Sheet 1 of 5

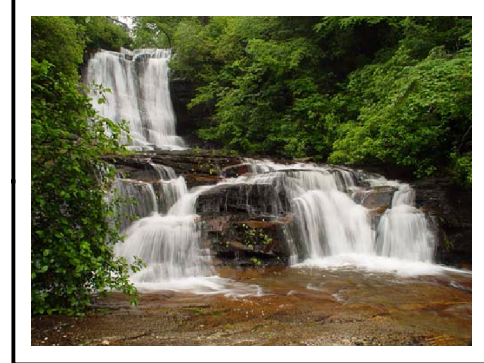
Base map date: December 1, 2005

Refer to CTP document for more details





# Highway Map



## Transylvania County North Carolina

### Comprehensive Transportation Plan

Plan date: January 18, 2007

#### Freeways

- Existing
- Needs Improvement
- Recommended

#### Expressways

- Existing
- Needs Improvement
- Recommended

#### Boulevards

- Existing
- Needs Improvement
- Recommended

#### Other Major Thoroughfares

- Existing
- Needs Improvement
- Recommended

#### Minor Thoroughfares

- Existing
- Needs Improvement
- Recommended

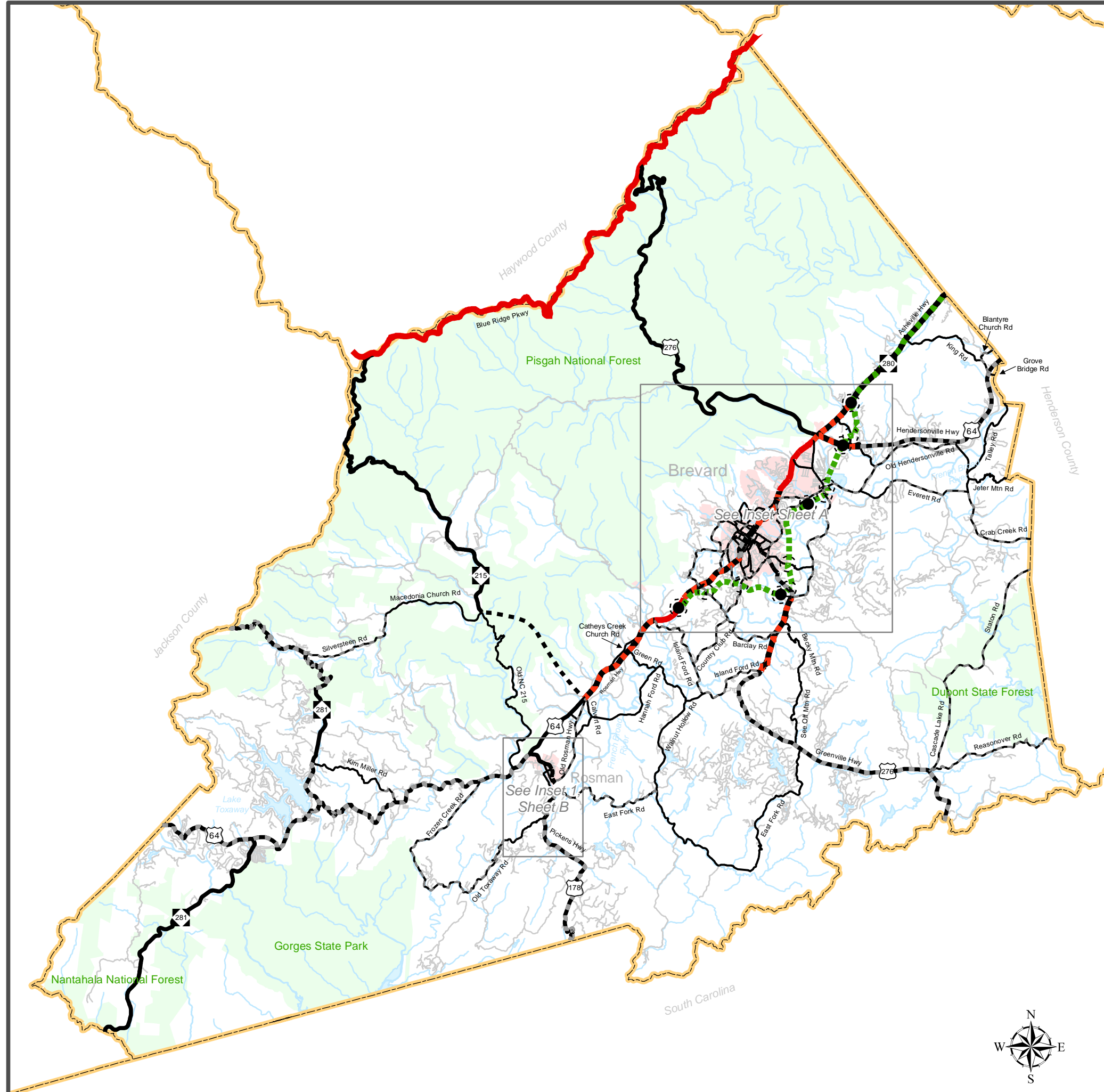
- Existing Interchange
- Proposed Interchange
- Existing Grade Separation
- Proposed Grade Separation



Figure 1 - Sheet 2 of 5

Base map date: December 1, 2005

Refer to CTP document for more details







# Highway Map



## Transylvania County North Carolina

### Comprehensive Transportation Plan

Plan date: January 18, 2007

#### Freeways

- Existing
- Needs Improvement
- Recommended

#### Expressways

- Existing
- Needs Improvement
- Recommended

#### Boulevards

- Existing
- Needs Improvement
- Recommended

#### Other Major Thoroughfares

- Existing
- Needs Improvement
- Recommended

#### Minor Thoroughfares

- Existing
- Needs Improvement
- Recommended

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

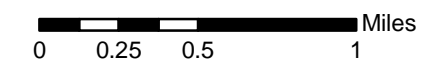
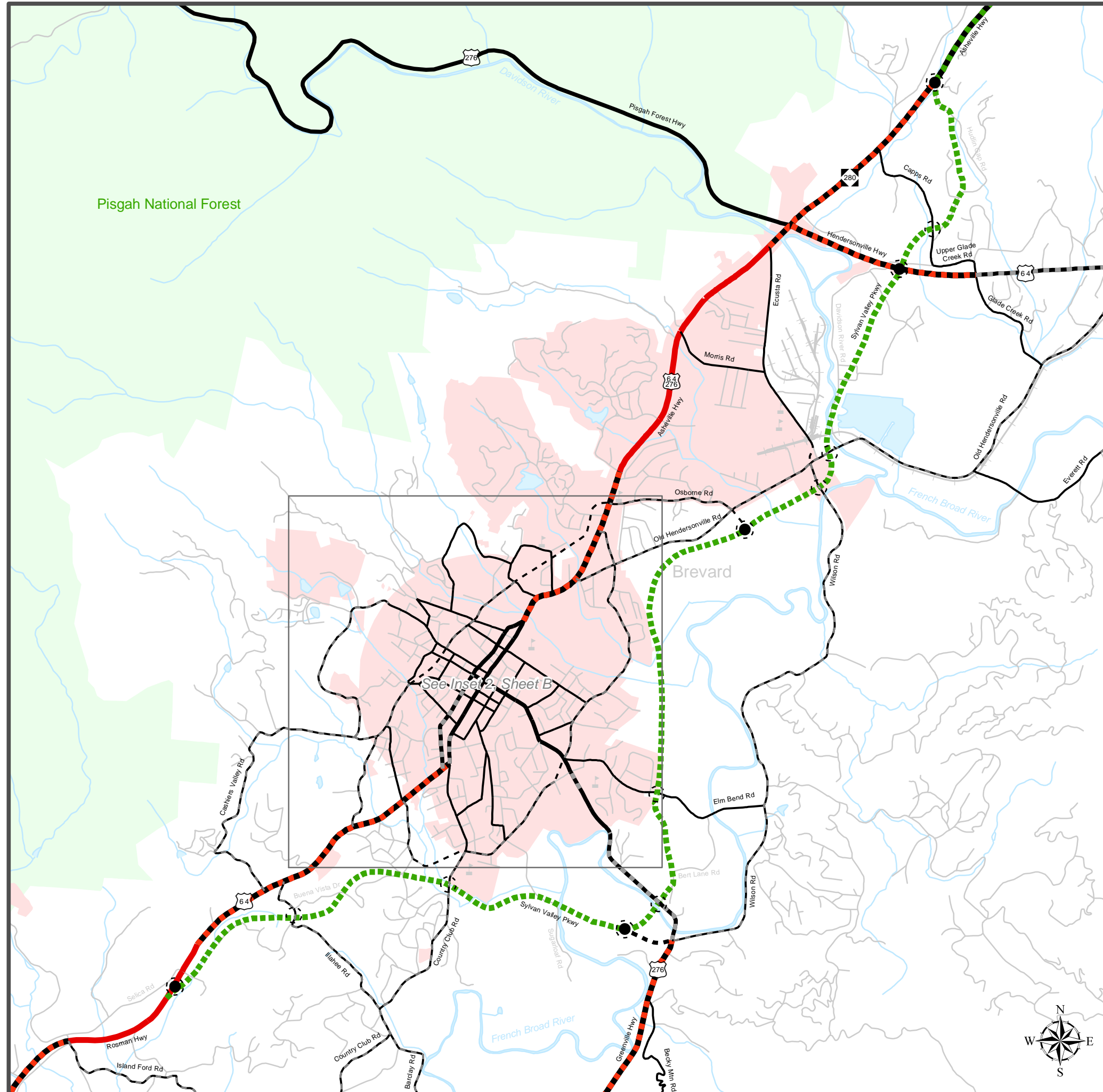


Figure 1 - Sheet 2 - Inset Sheet A

Base map date: December 1, 2005

Refer to CTP document for more details





# Highway Map

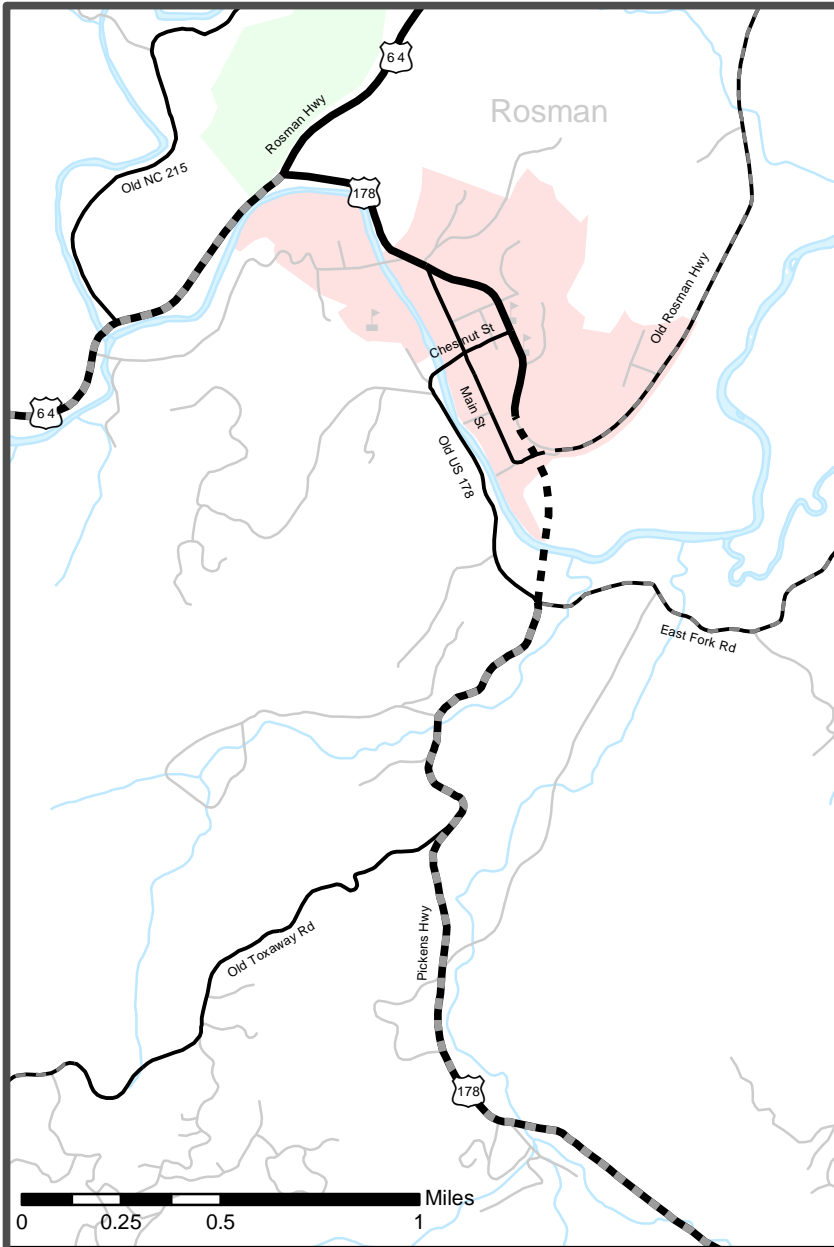


## Transylvania County North Carolina

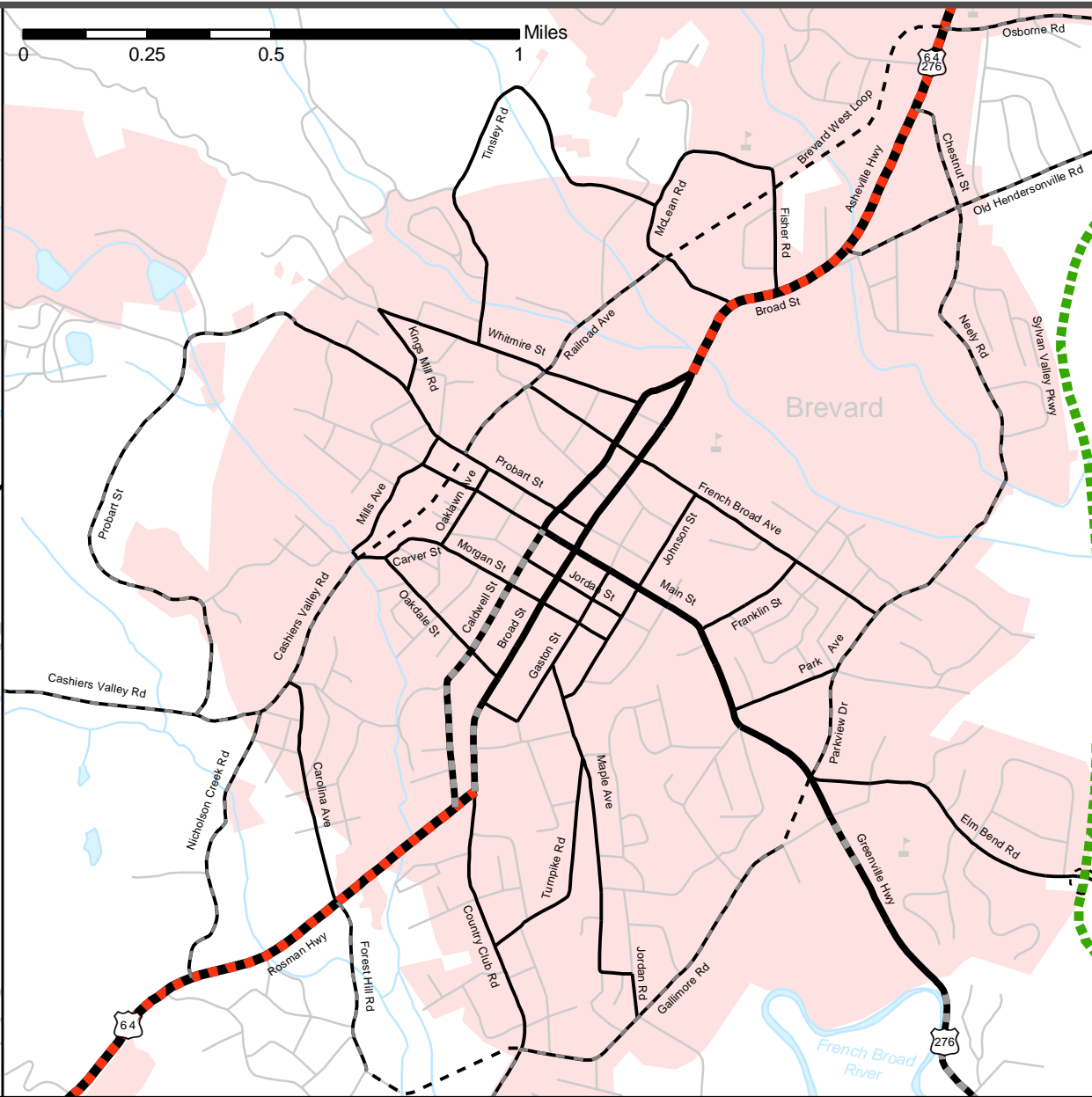
### Comprehensive Transportation Plan

Plan date: January 18, 2007

- 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
- Interchanges**
  - Existing Interchange
  - Proposed Interchange
- Grade Separations**
  - Existing Grade Separation
  - Proposed Grade Separation



Inset 1



Inset 2

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Figure 1 - Sheet 2 - Inset Sheet B

Base map date: December 1, 2005

Refer to CTP document for more details





**Public Transportation  
& Rail Map**



**Transylvania  
County**  
North Carolina

**Comprehensive  
Transportation Plan**

Plan date: January 18, 2007

- Bus Routes**
- Existing
  - Needs Improvement
  - Recommended
- Fixed Guideway**
- Existing
  - Needs Improvement
  - Recommended
- Operational Strategies**
- Existing
  - Needs Improvement
  - Recommended
- Rail Corridor**
- Active
  - Inactive
  - Recommended
- High Speed Rail Corridor**
- Existing
  - Recommended

- Rail Stops**
- Existing
  - Recommended
- Intermodal Connector**
- Existing
  - Recommended
- Park and Ride Lot**
- Existing
  - Recommended

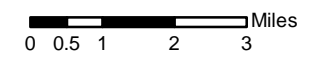
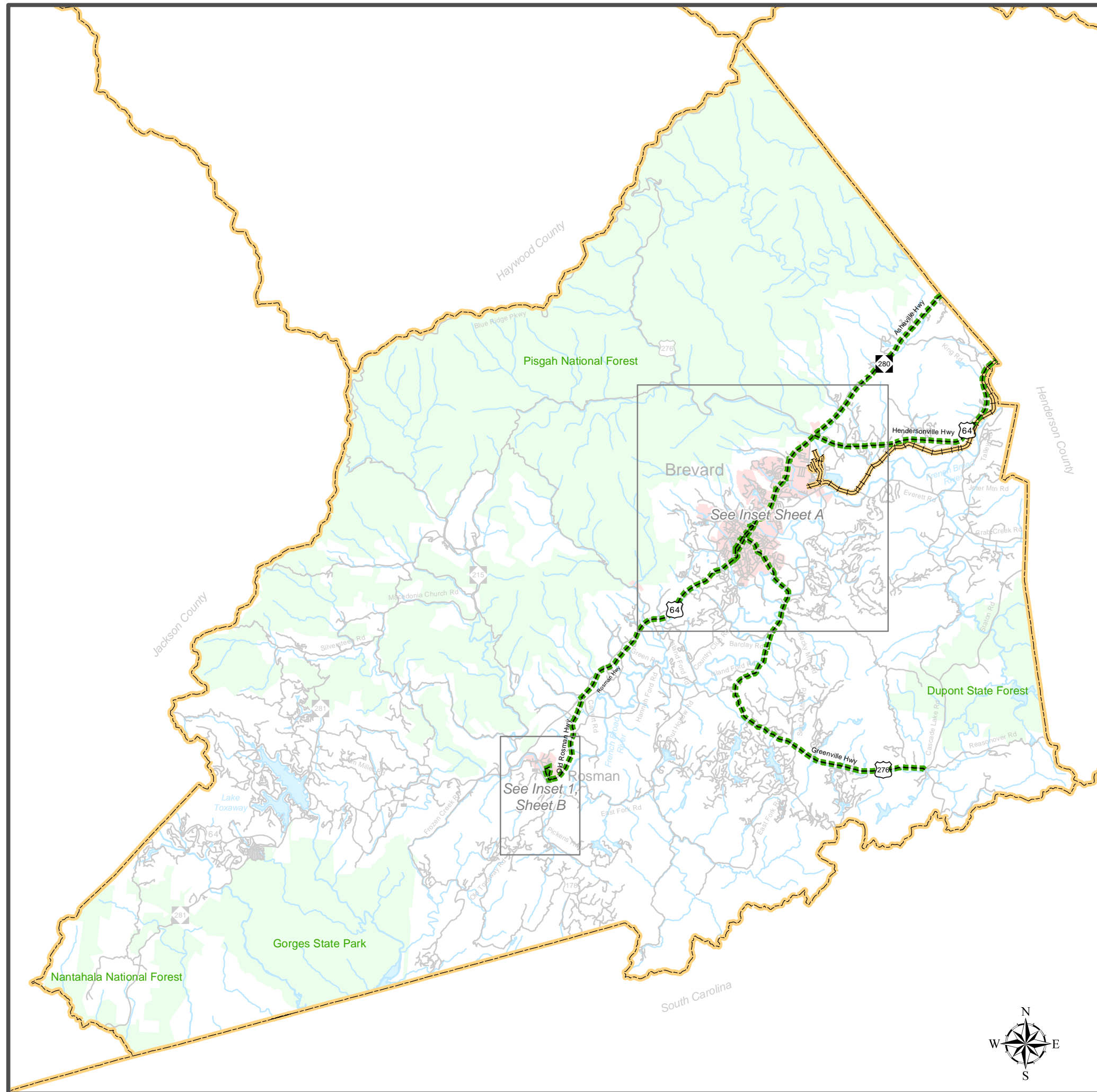


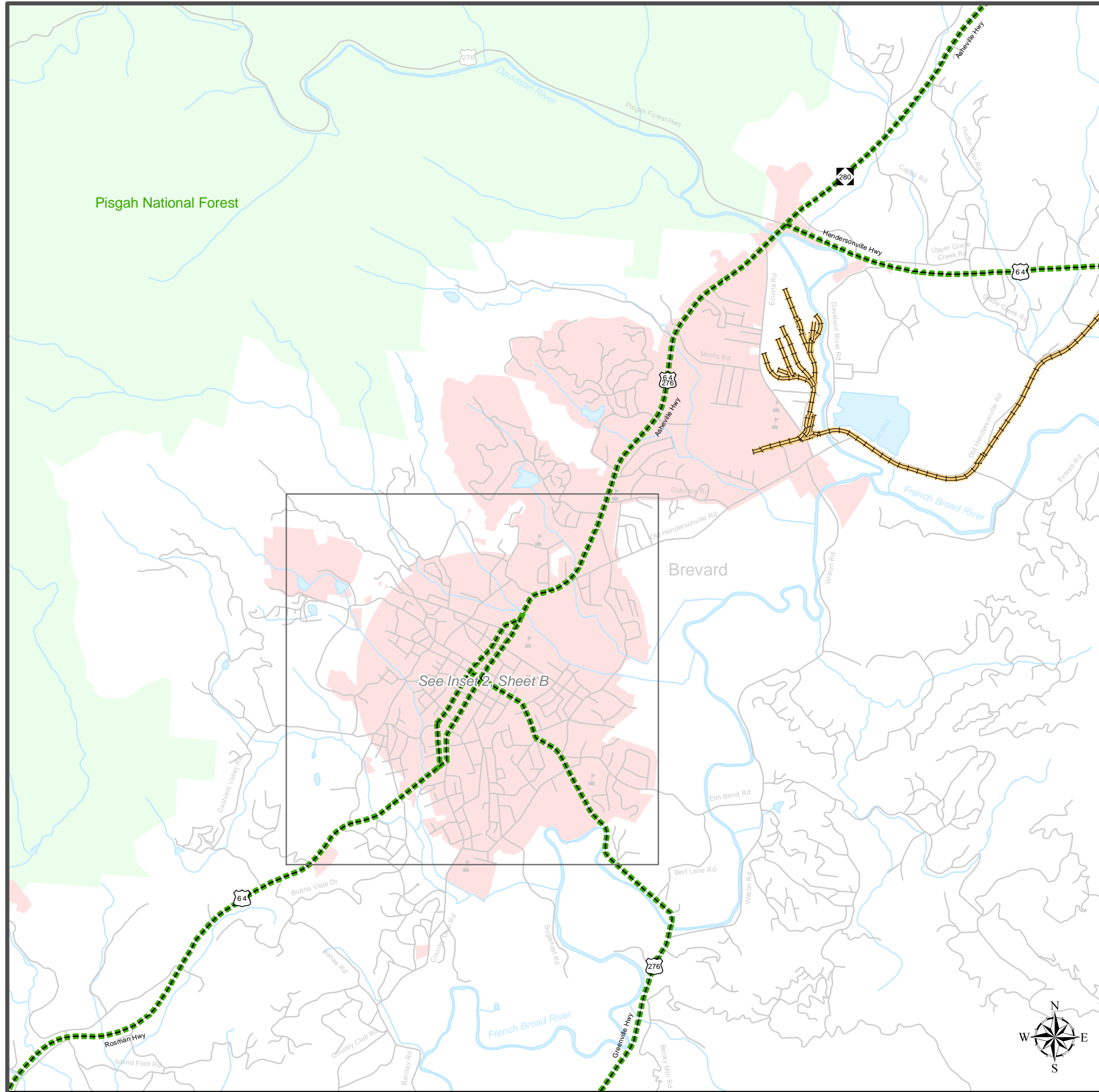
Figure 1 - Sheet 3 of 5

Base map date: December 1, 2005

Refer to CTP document for more details







# Transylvania County

North Carolina

## Comprehensive Transportation Plan

Plan date: January 18, 2007

- Bus Routes**
  - Existing
  - Needs Improvement
  - Recommended
- Fixed Guideway**
  - Existing
  - Needs Improvement
  - Recommended
- Operational Strategies**
  - Existing
  - Needs Improvement
  - Recommended
- Rail Corridor**
  - Active
  - Inactive
  - Recommended
- High Speed Rail Corridor**
  - Existing
  - Recommended

- Rail Stops**
  - Existing
  - Recommended
- Intermodal Connector**
  - Existing
  - Recommended
- Park and Ride Lot**
  - Existing
  - Recommended

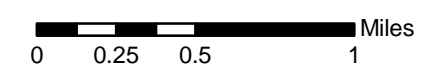


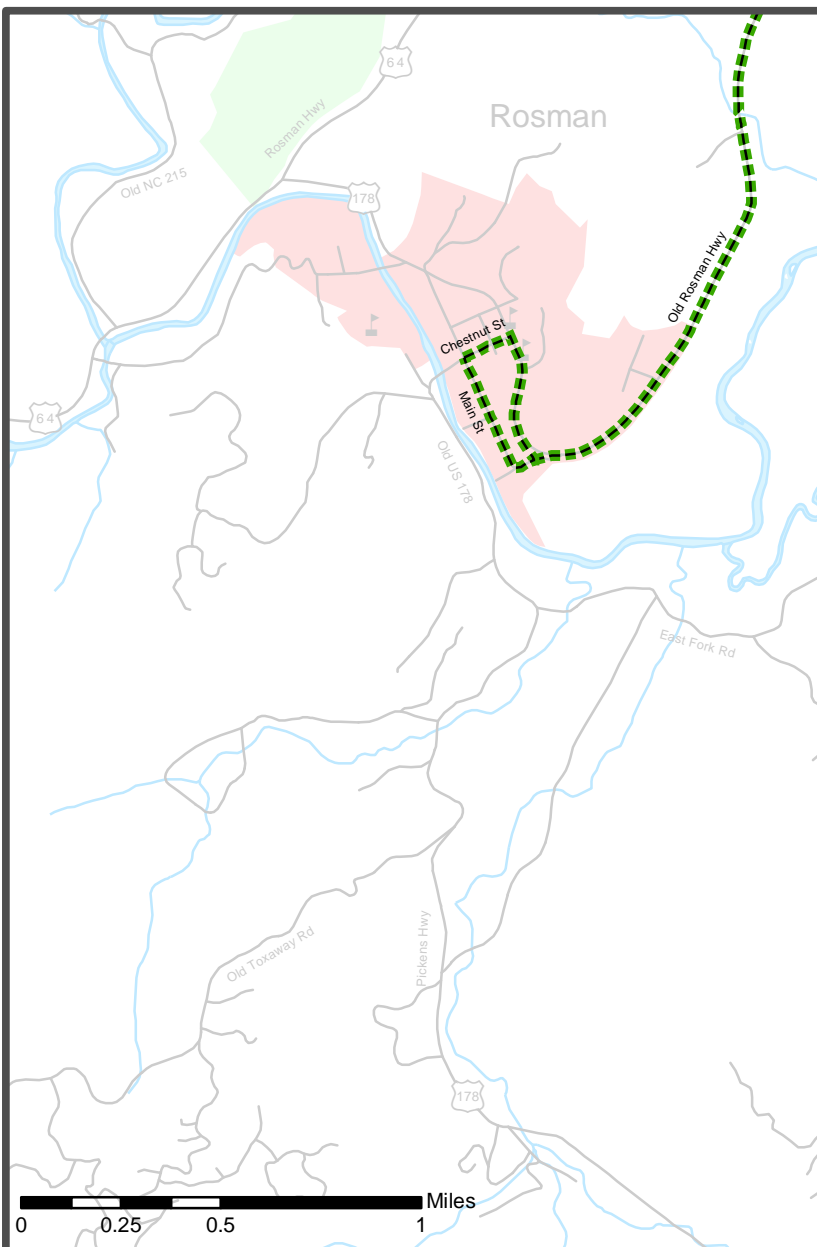
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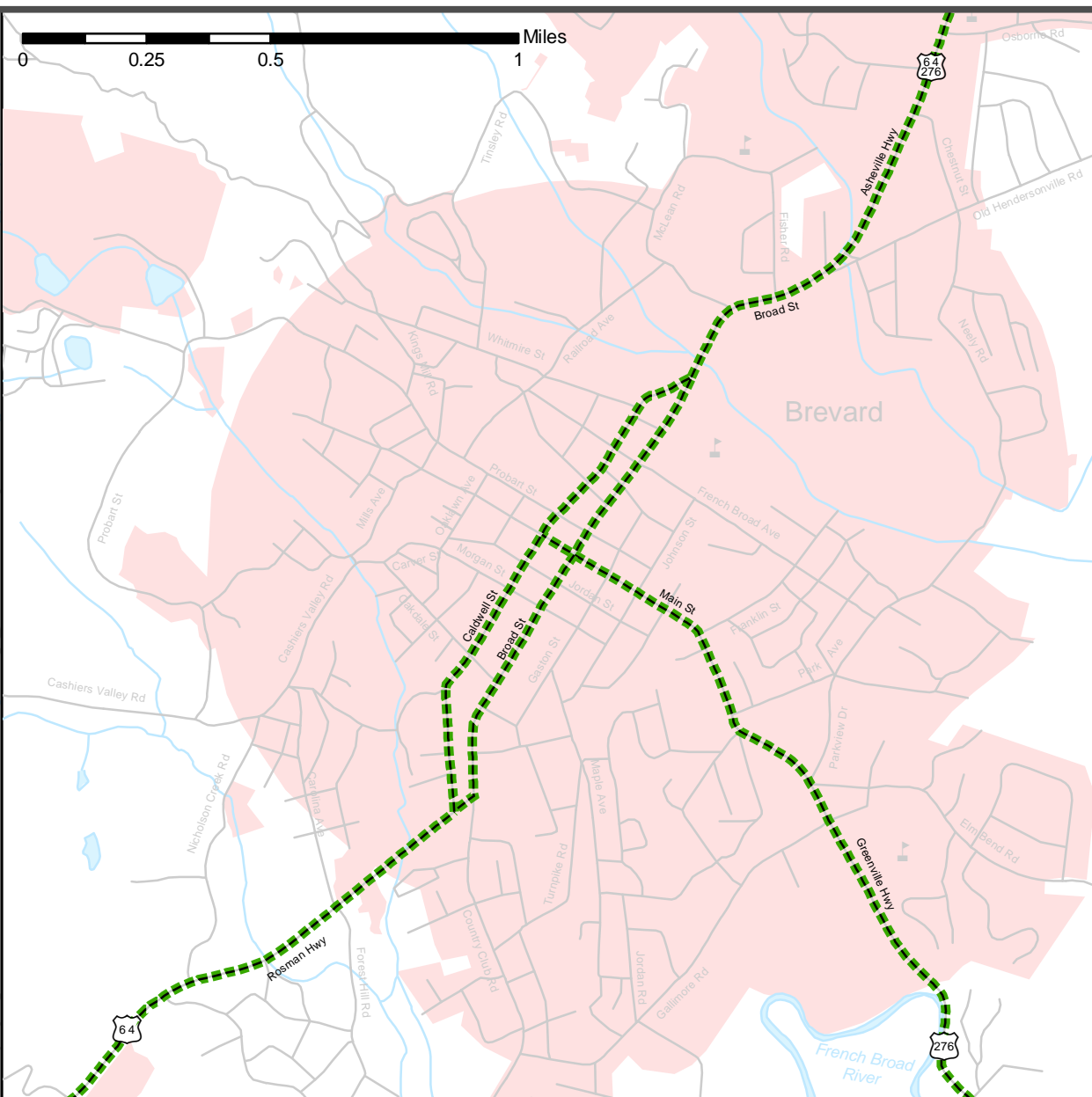
Refer to CTP document for more details







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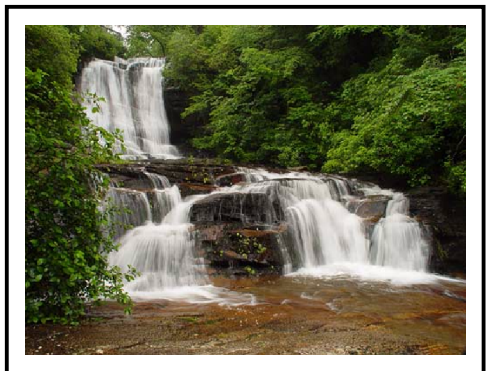


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**Public Transportation & Rail Map**



**Transylvania County**  
North Carolina

**Comprehensive Transportation Plan**

Plan date: January 18, 2007

**Bus Routes**

- Existing
- Needs Improvement
- Recommended

**Fixed Guideway**

- Existing
- Needs Improvement
- Recommended

**Operational Strategies**

- Existing
- Needs Improvement
- Recommended

**Rail Corridor**

- Active
- Inactive
- Recommended

**High Speed Rail Corridor**

- Existing
- Recommended

**Rail Stops**

- Existing
- Recommended

**Intermodal Connector**

- Existing
- Recommended

**Park and Ride Lot**

- Existing
- Recommended

Figure 1 - Sheet 3 - Inset Sheet B

Base map date: December 1, 2005

Refer to CTP document for more details



# Bicycle Map



## Transylvania County North Carolina

North Carolina

### Comprehensive Transportation Plan

Plan date: January 18, 2007

#### Bicycle Facilities

##### On-Road

- Existing (solid brown line)
- Needs Improvement (dashed brown line)
- Recommended (dotted brown line)

##### Off-Road

- Existing (solid green line)
- Needs Improvement (dashed green line)
- Recommended (dotted green line)

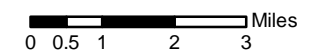
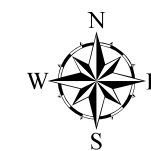
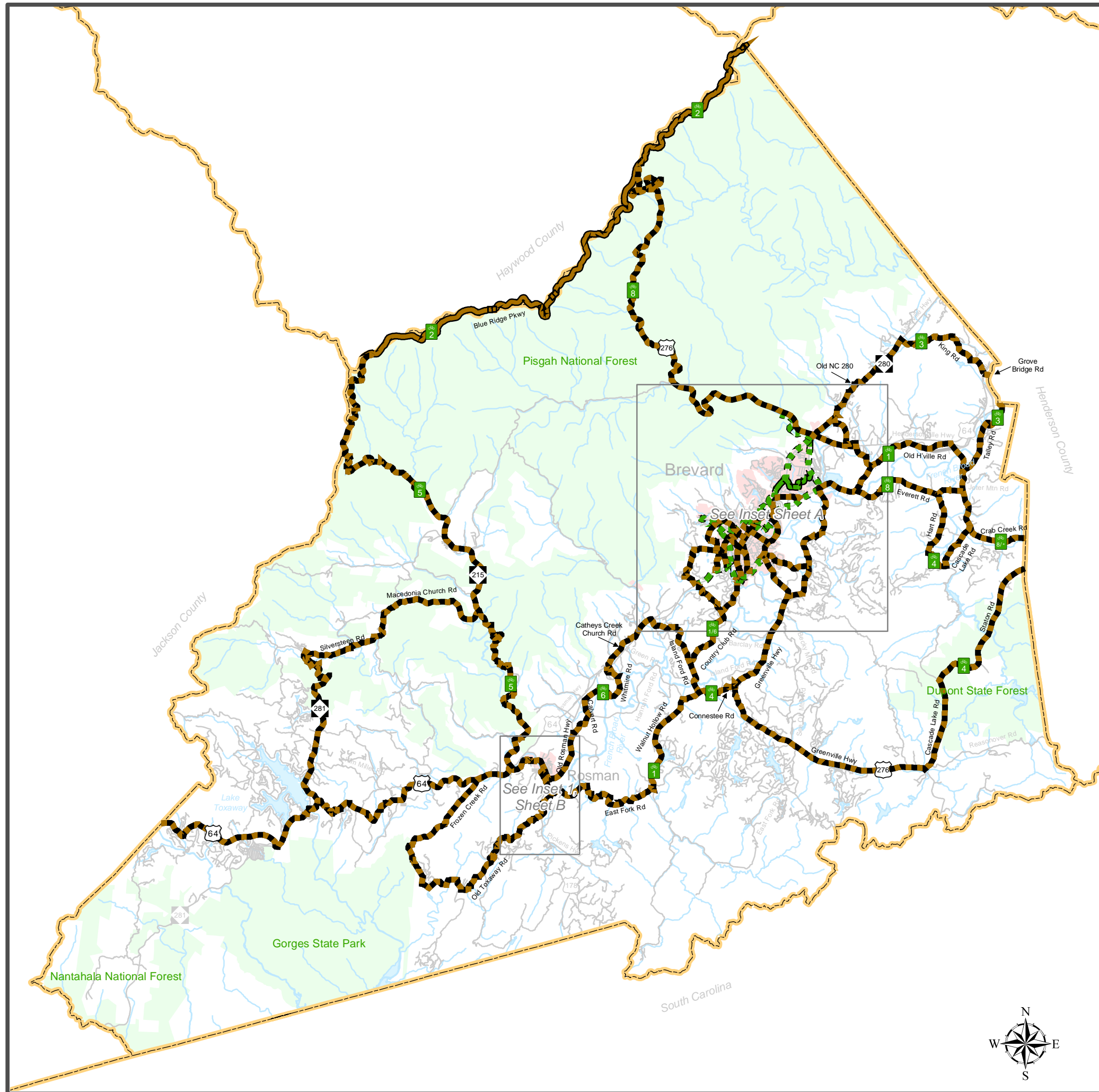


Figure 1 - Sheet 4 of 5

Base map date: December 1, 2005

Refer to CTP document for more details







# Bicycle Map



## Transylvania County North Carolina

### Comprehensive Transportation Plan

Plan date: January 18, 2007

#### Bicycle Facilities

- On-Road**
- Existing (solid black line)
  - Needs Improvement (dashed black line)
  - Recommended (dotted black line)
- Off-Road**
- Existing (solid green line)
  - Needs Improvement (dashed green line)
  - Recommended (dotted green line)

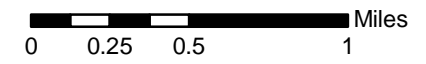
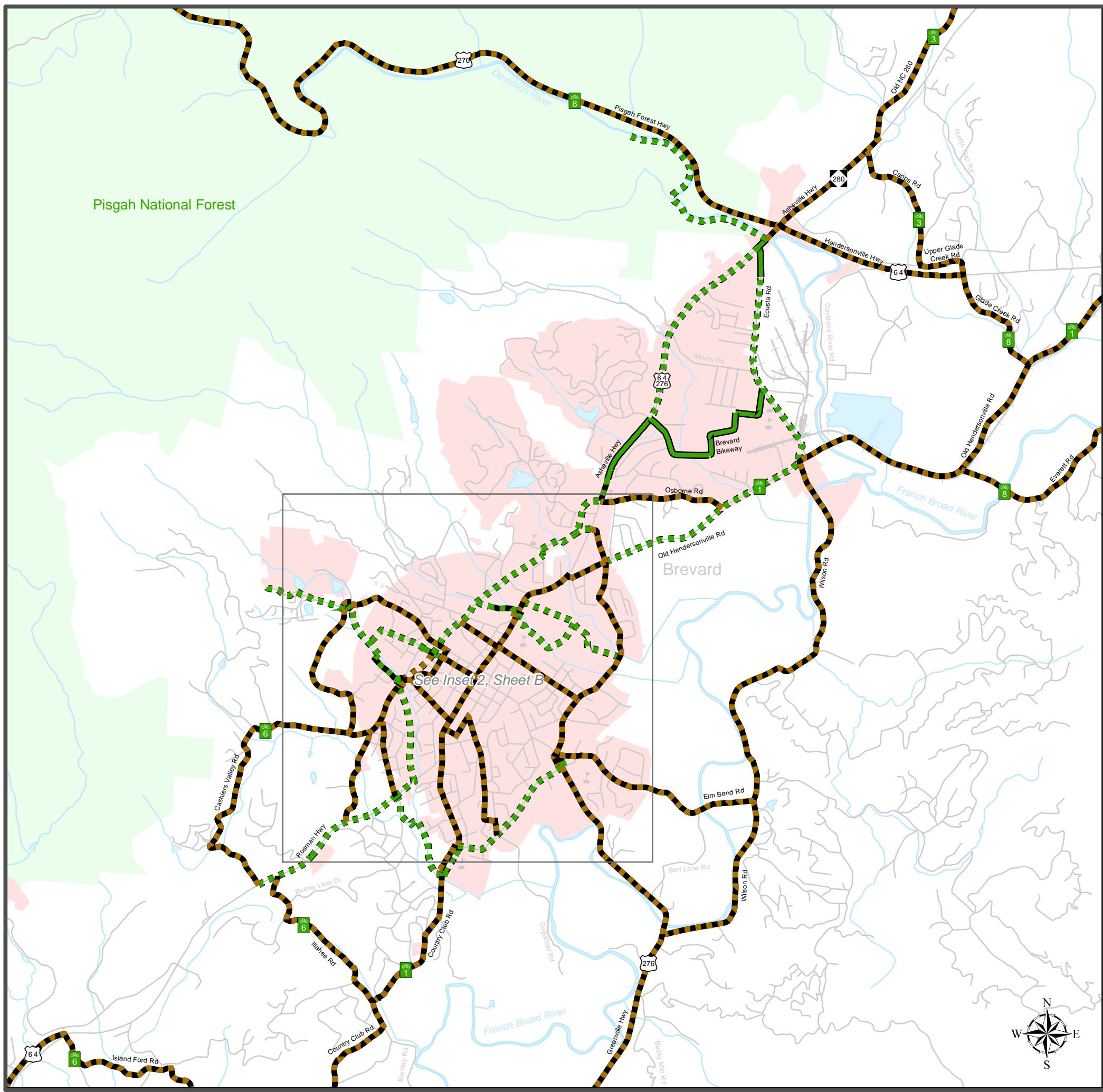


Figure 1 - Sheet 4 - Inset Sheet A

Base map date: December 1, 2005

Refer to CTP document for more details





# Bicycle Map



## Transylvania County

### North Carolina

North Carolina

## Comprehensive Transportation Plan

Plan date: January 18, 2007

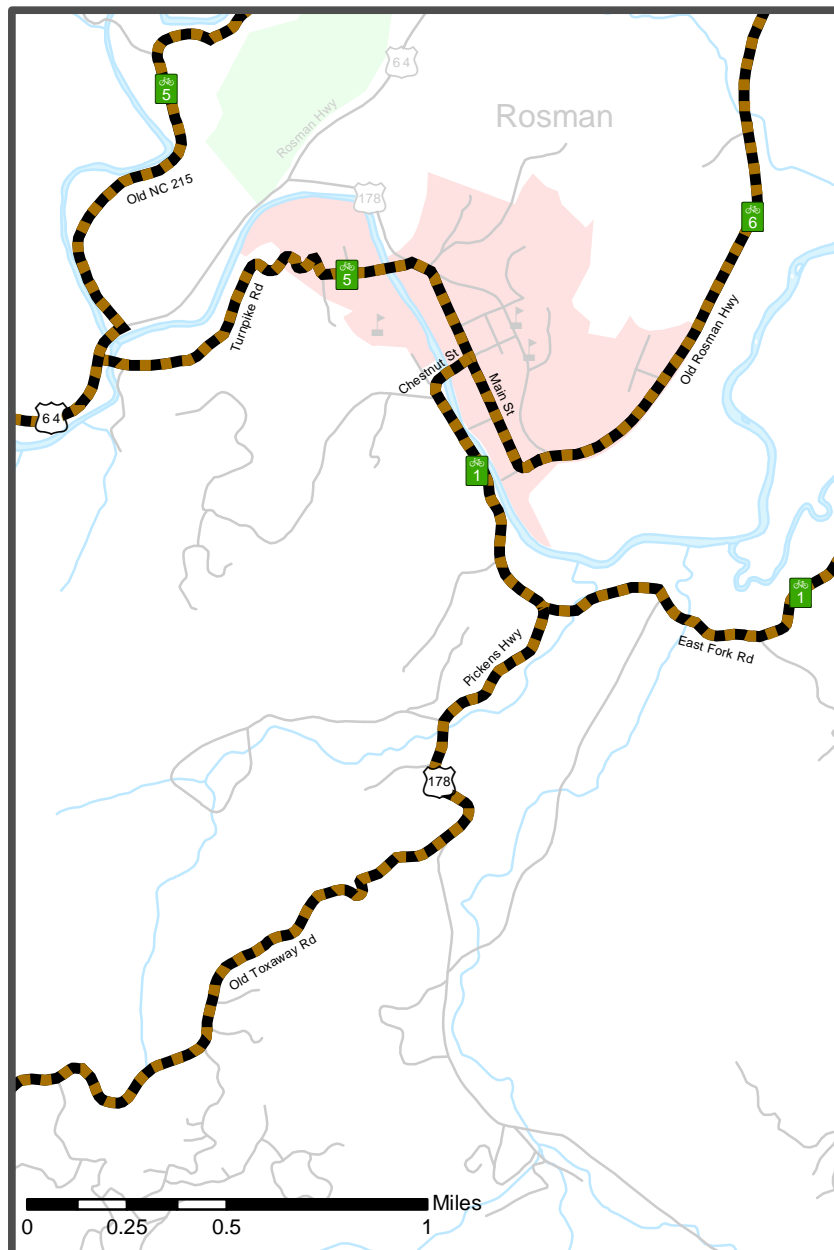
### Bicycle Facilities

#### On-Road

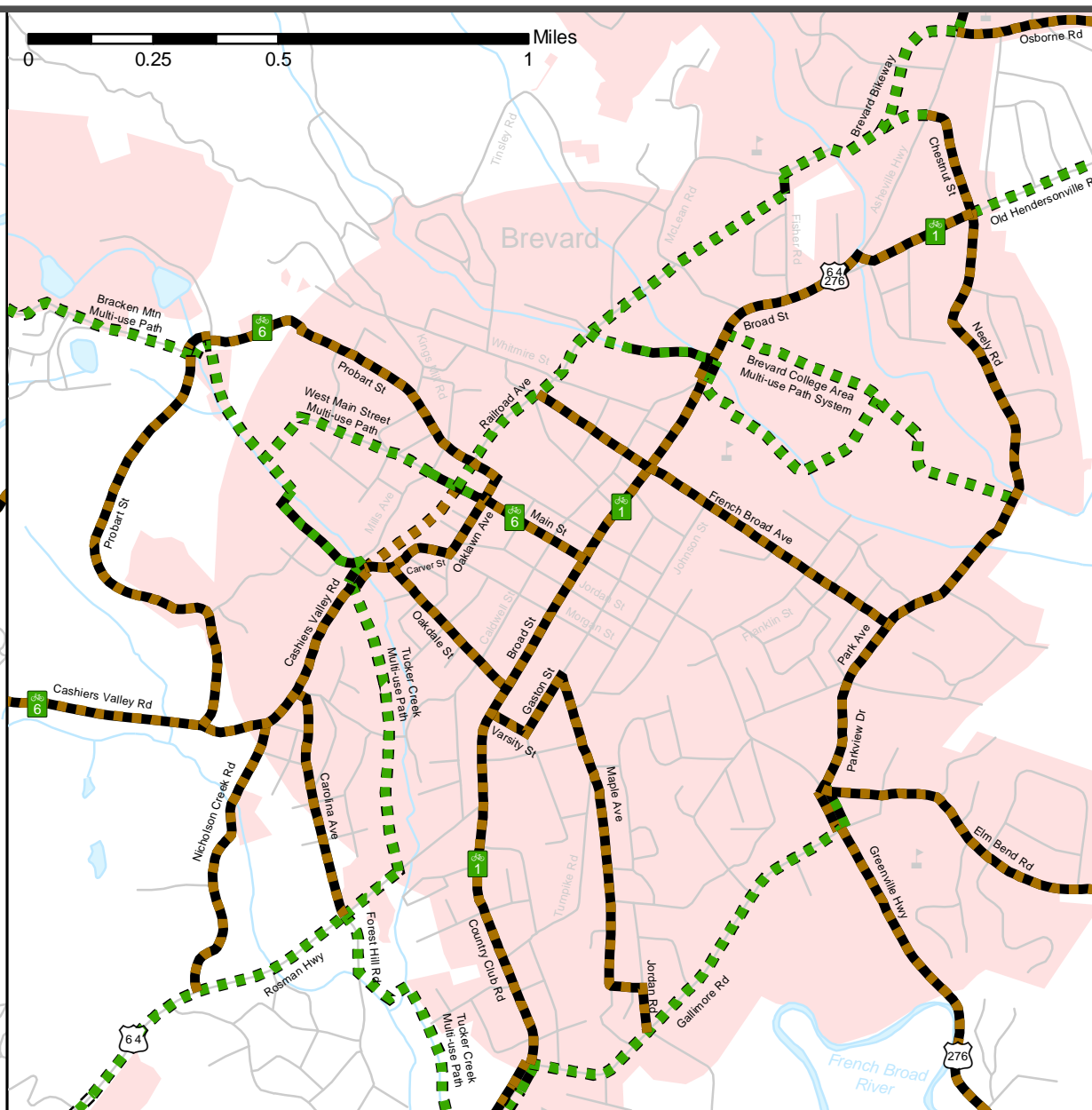
- Existing
- Needs Improvement
- Recommended

#### Off-Road

- Existing
- Needs Improvement
- Recommended



Inset 1



Inset 2

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Figure 1 - Sheet 4 - Inset Sheet B

Base map date: December 1, 2005

Refer to CTP document for more details





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## I. Introduction

An area's transportation system is its lifeline, contributing to its economic prosperity and social well being. The importance of a safe and efficient transportation infrastructure cannot be overstated. This system must provide a means of transporting people and goods quickly, conveniently, and safely. A well-planned system will meet existing travel demands and keep pace with the growth of the region. Officials in Transylvania County and the City of Brevard recognized the importance of the transportation planning process, and worked cooperatively with the North Carolina Department of Transportation (NCDOT) to complete this Comprehensive Transportation Plan.

Transylvania County is located in the western part of North Carolina. It is bordered by Henderson, Buncombe, Haywood, and Jackson Counties in North Carolina, and Greenville, Pickens, and Oconee Counties in South Carolina. The area is approximately 35 miles southwest of Downtown Asheville. The planning area for this Comprehensive Transportation Plan (CTP) covers all of Transylvania County, including the Town of Rosman and the City of Brevard. The geographic location of the planning area is shown in Figure 2.

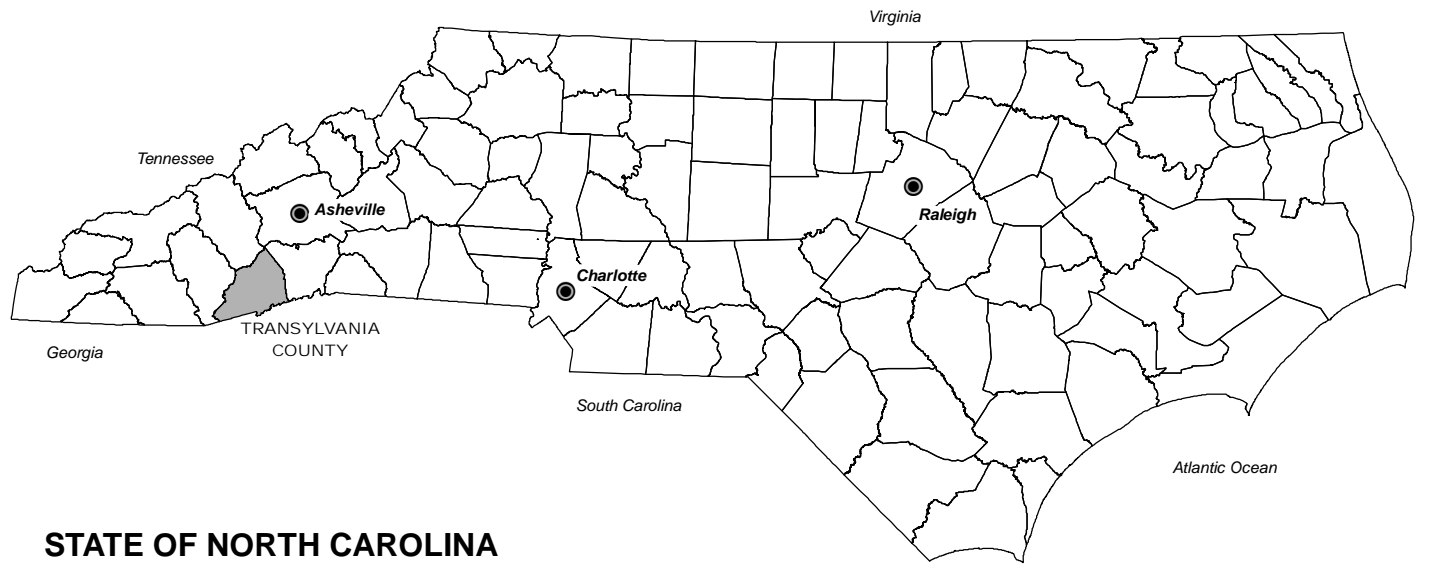
This report documents the development of the 2007 Transylvania County Comprehensive Transportation Plan, shown in Figure 1. In addition, this report presents recommendations for each mode of transportation included in the plan. A CTP is developed to ensure that the transportation system will be progressively developed to meet the needs of the communities in the planning area. It will serve as an official guide to providing a well-coordinated, efficient, and economical transportation system utilizing all modes of transportation. This document will be used by local officials and the NCDOT to ensure that planned transportation facilities reflect the needs of the public while minimizing the negative impacts on local residents, businesses, and the natural environment.

The purpose of this study is to examine present and future transportation needs within the planning area and develop a CTP to meet these needs. The plan recommends those improvements that are necessary to provide an efficient and effective transportation system within the 2004-2030 planning period. The recommended cross-sections for these improvements, outlined in Appendix D, are based on existing conditions and projected traffic volumes.

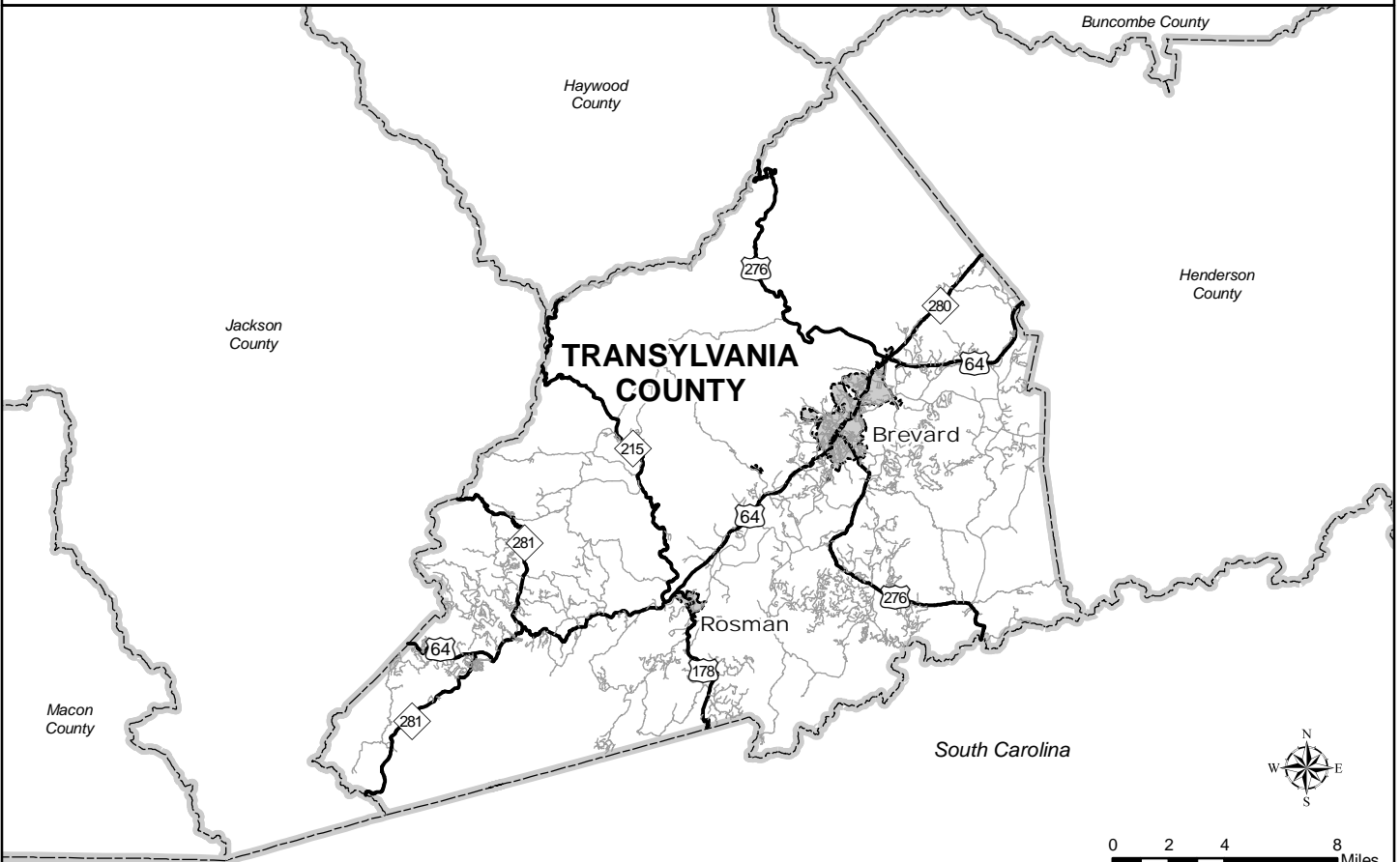
The initiative for implementing the CTP rests predominantly with the policy boards and citizens of the planning area. Local municipal governments and the NCDOT share the responsibility for proposed construction. As transportation needs throughout the state exceed available funding, it is imperative that local areas aggressively pursue funding for desired projects.

The proposed CTP is based on the projected growth in population and employment through the year 2030, as coordinated with local planning staff members. It is possible that actual growth patterns will differ from those logically anticipated in this study. As a result, it may be necessary to accelerate or delay the development of some recommendations found on the plan. Some portions of the plan may require revisions in order to accommodate unexpected changes in urban development. Any changes that are made to one element of the CTP in the future should remain consistent with the other elements.









**STATE OF NORTH CAROLINA**



**FIGURE 2**  
**GEOGRAPHIC**  
**LOCATION MAP**  
**TRANSYLVANIA**  
**COUNTY**  
 NORTH CAROLINA

**LEGEND**

-  County Boundary
-  Municipal Boundary
-  US & NC Highways
-  SR & Local Highways

PREPARED BY THE  
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION PLANNING BRANCH

IN COOPERATION WITH THE  
 U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION

BASE MAP DATE: DECEMBER 1, 2005





## II. Recommendations

One of the most important steps in identifying the transportation recommendations associated with the CTP is making an assessment of the transportation needs. This assessment helps identify what actions should be pursued and the implications involved if a project is not implemented. The problem statements resulting from this assessment help to justify recommended actions and help to define practical alternatives. This chapter presents the recommended improvements and associated problem statements resulting from the transportation needs assessment conducted during the development of the CTP for Transylvania County. These improvements are needed to enable the transportation system in Transylvania County to serve anticipated travel demand as this area continues to grow. Some recommendations will require further study to ensure that they accommodate the need, minimize environmental impacts, and are feasible.

### Highway Map

The highway plan for Transylvania County is shown on Sheet 2 of Figure 1. This sheet classifies the major highways into five categories, based on the type of service each roadway provides. These classifications—freeways, expressways, boulevards, other major thoroughfares, and minor thoroughfares—are described in detail in Appendix B. The recommended improvements are also inventoried in Appendix C.

The highway map includes several improvements needed to meet future travel demand. These recommendations were developed based on a transportation needs assessment and safety analysis, which considers known natural and human environmental features and the goals and objectives of the area. The following problem statements document the purpose and need for each of the recommended improvements.

For informational purposes, and to assist in the development of future Priority Needs Lists for Transportation Improvement Program (TIP) Projects, the projects have been sorted into a prioritized list. This list does not imply that projects will be funded in a specified order, and is only intended for planning purposes. The priorities were developed by the Transylvania County Transportation Advisory Committee, a citizen committee charged with developing recommendations for the County Board of Commissioners on transportation-related issues. This list is presented below:

#### High Priority:

US 64 West - US 178 near Rosman to Jackson County Line; Major Thoroughfare  
US 64/276 (Asheville Highway/North Broad Street) - Caldwell Street to Allison Road; Boulevard  
NC 215 - US 64 to Macedonia Church Road; Major Thoroughfare  
NC 280 (Asheville Highway); Boulevard/Expressway  
NC 281 - Shelton Road to Jackson County Line; Major Thoroughfare  
Brevard West Loop; Minor Thoroughfare  
US 64 Unbalanced Couplet (South Caldwell Street and South Broad Street); Major Thoroughfare  
Ecusta Road (SR 1512)/Old Hendersonville Road (SR 1504) Intersection; Minor Thoroughfare  
Sylvan Valley Parkway (Brevard Bypass); Expressway\*

*\* The Sylvan Valley Parkway is a high priority, but is seen as a long-term project. For this reason, local officials have requested that improvements to US 64/276, the Brevard West Loop, and the Downtown Brevard Unbalanced Couplet be completed to ease through traffic in town before construction of the Sylvan Valley Parkway occurs.*

#### Medium Priority:

US 64 West (Rosman Highway) – South Broad Street to Selica Road; Boulevard  
US 64 (Rosman Highway) - Clement Road to Old Rosman Highway; Boulevard  
Brevard East Loop; Minor Thoroughfare

**Low Priority:**

US 64 East (Hendersonville Highway) - NC 280 to Henderson County Line; Major Thoroughfare/Boulevard

US 276 (Greenville Highway) - (Wilson Road to East Fork Road; Major Thoroughfare/Boulevard

US 178 (Pickens Highway) - Old Rosman Highway to East Fork Road; Major Thoroughfare

**Recommended Highway Projects:**

**US 64 East (Hendersonville Highway)**

- **Summary of Need**

There is a need to improve US 64 East (Hendersonville Highway) within the planning area to accommodate projected traffic volumes and to improve safety. Additionally, there is a need to improve connectivity between the existing NC 280-US 64 corridor through Brevard and the proposed Sylvan Valley Parkway (Brevard Bypass).

- **Summary of Purpose**

Improving US 64 East (Hendersonville Highway) should enable the roadway to accommodate projected traffic volumes by providing additional roadway capacity and improve safety. Improving US 64 East should also ensure adequate connectivity between NC 280 and the proposed Sylvan Valley Parkway in the Pisgah Forest area.

- **Roadway Conditions**

**Existing Characteristics**

US 64 East runs east-west through the eastern part of Transylvania County, linking the Pisgah Forest area with Etowah in Henderson County. This is a section of the main route between the Brevard area and the Hendersonville area. Between NC 280 and Davidson River Road, the roadway has three lanes (including a center left-turn lane), and a posted speed limit of 35 miles per hour. From Davidson River Road to the Henderson County Line, the roadway has two lanes (undivided), and a posted speed limit of 50-55 miles per hour.

**Existing Conditions**

2004 annual average daily traffic (AADT) volumes along US 64 East range from 7,300 vehicles per day (vpd) near the Henderson County Line to 11,000 vpd between NC 280 and Davidson River Road. Current practical capacities along this corridor range from 15,800 vpd in the eastern, rural portion of the corridor to 13,900 vpd in the western, urban portion. The volume-to-capacity ratio along the highest-volume portion of the corridor (between NC 280 and Davidson River Road) is 0.79, meaning that US 64 East is currently operating at levels satisfactory to users.

**Projected Conditions**

2030 projected traffic volumes on US 64 East range from 11,300 vpd to 14,300 vpd on the section of US 64 between Glade Creek Road and the Henderson County Line. PM Peak Hour directional volume-to-capacity on this section is between 0.51 and 0.72 with the existing cross-section, meaning this section of US 64 East is projected to operate at levels satisfactory to users. 2030 projected traffic volumes on US 64 East between Davidson River Road and Glade Creek Road are 13,800 vpd. PM Peak Hour directional volume-to-capacity on this section is 0.80 with the existing cross-section, meaning that this section of US 64 East is beginning to approach capacity. 2030 projected traffic volumes on US 64 East between NC 280 and 0.1 mile west of the proposed Sylvan Valley Parkway interchange drop to 8,500 vpd. This drop in traffic is projected to occur regardless of whether the proposed Sylvan Valley Parkway is built—with the Sylvan Valley Parkway in place, traffic volumes drop on this section as traffic that previously used this connection is diverted to the new road; without the Sylvan Valley Parkway, traffic congestion on the existing US 64/276 corridor through Brevard is projected to make traffic shift from US 64 onto Old Hendersonville Road to avoid the congested Pisgah Forest Gateway area. PM Peak Hour directional volume-to-capacity on this section is 0.60 with the existing cross section, meaning that this section of US 64 East is projected to operate at levels satisfactory to users.

- **Safety Analysis**

For the period from January 1, 2001 to December 31, 2003 (three year period), there were 107 crashes reported along US 64 East (Hendersonville Highway). Of these crashes, 17 were at the intersection of US 64 and NC 280, 9 were at the intersection of US 64 and Crab Creek Road, 7 were at the intersection of US 64 and Enon Road, 6 were at the intersection of US 64 and King Road, and 5 were at the intersection of US 64 and Davidson River Road. Intersection crash rates were higher than the county average for similar facilities at the Crab Creek Road, Enon Road, and King Road intersections. Crash rates along US 64 East were higher than the statewide average crash rate for similar facilities from NC 280 to Crab Creek Road and from King Road to the Henderson County Line. A traffic signal was installed at the intersection of US 64 and Crab Creek Road in 2004 (after the time period of this safety analysis).

- **System Linkages**

- **Existing Road Networks**

- US 64 East (Hendersonville Highway) provides direct connectivity between Brevard and Hendersonville, with intermediate destinations of Pisgah Forest, Penrose, Etowah, and Horseshoe. It is used mostly for local travel within the region, while most through-traffic east of Brevard uses the faster NC 280 route to access I-26 and points beyond. This section of US 64 is not part of a Strategic Highway Corridor.

- **Transportation Plans**

- US 64 East (Hendersonville Highway) is designated as a Boulevard on the CTP from NC 280 to Glade Creek Road. The existing roadway will need to be widened to 4 lanes, divided, in order to achieve this type of facility in the future and improve connectivity between NC 280 and the proposed Sylvan Valley Parkway. US 64 East is designated as an Other Major Thoroughfare on the CTP from Glade Creek Road to the Henderson County Line. The existing 2-lane roadway will need minor improvements, including left and right turn lanes at major intersections, to help maintain mobility on this corridor and improve safety as traffic volumes grow. Suggested locations for turn lanes include King Road, Grove Bridge Road, Old Hendersonville Road/Vineyard Loop, Crab Creek Road, and Enon Road.

- **Social, Economic, and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Along the western half of the US 64 East corridor, from NC 280 to Enon Road, there is a higher concentration of minority population than this county-wide average. Along the remainder of the corridor (east of Enon Road), the concentration of minority populations is much lower. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the two block groups adjacent to US 64 East is slightly lower than the county average, at \$43,667 to \$43,781.

- **Economic Data**

- US 64 East passes through a largely rural area, dotted with residential and commercial development. The Transylvania County Comprehensive Plan designates US 64 from Pisgah Forest to Penrose as an Economic Development Corridor—the county plans to focus future industrial development in this corridor. The potential for large-scale development along the US 64 East corridor is hampered somewhat by the floodplain of the French Broad River to the southeast and the rugged terrain to the northwest.

- **Environmental Data**

- The most notable environmental feature in this area is the floodplain—the section of US 64 between NC 280 and Davidson River Road is adjacent to the Davidson River floodplain, and the section of US 64 between Old Hendersonville Road and the Henderson County Line is partially within the French Broad River floodplain. This section of US 64 crosses two National Wetland Inventory wetlands, at Turkey Creek and Gash Creek. There is also a Hazardous Substance Disposal Site located near US 64, on an island in the Davidson River. There is a Natural Heritage Element Occurrence in the

vicinity of King Road. There are several churches in the corridor, as well as a large cemetery and the Pisgah Forest Community Center.

- **Cost Estimate**

The cost estimate for the proposed improvements is based on widening the existing facility to a 4-lane Boulevard facility from NC 280 to Glade Creek Road, including right-of-way (ROW) costs and utility relocation costs. The cost estimate for this recommended improvement is \$11,200,000. A cost estimate was not developed for the addition of turn lanes on the remainder of the facility due to the necessary flexibility in determining turn lane locations and designs as traffic engineering considerations merit.

### **US 64/276 (Asheville Highway/North Broad Street) – Caldwell Street to Allison Road**

- **Summary of Need**

There is a need to improve US 64/276 from Caldwell Street to 0.2 miles north of Osborne Road to accommodate existing and projected traffic volumes and improve safety along this facility.

- **Summary of Purpose**

Improving US 64/276 between Caldwell Street and Allison Road should enable the roadway to accommodate existing and projected traffic volumes by reducing the impact that development and curb cuts in the corridor will have on facility capacity. Improving this facility should also improve safety by reducing the potential for left-turn conflicts and head-on crashes.

- **Roadway Conditions**

- **Existing Characteristics**

US 64/276 (Asheville Highway/North Broad Street) runs southwest-to-northeast in the central part of Transylvania County, connecting Downtown Brevard to the Pisgah Forest area. This is part of the main travel corridor across Transylvania County, connecting Rosman, Lake Toxaway, and Cedar Mountain (to the south and west) to Hendersonville and Asheville (to the north and east). Between Caldwell Street and Allison Road, US 64/276 has five lanes (including a center left-turn lane) and a posted speed limit of 35-40 miles per hour.

- **Existing Conditions**

2004 average annual daily traffic (AADT) volumes along the 5-lane section of US 64/276 range from 25,000 vpd north of Old Hendersonville Road to 30,000 vpd south of Old Hendersonville Road. Current practical capacities along this corridor range from 26,300 vpd south of Osborne Road to 29,100 vpd north of Osborne Road. The volume-to-capacity ratio of the section of US 64/276 between Caldwell Street and Old Hendersonville Road is 1.14, meaning that this section is currently exceeding its practical capacity. The volume-to-capacity ratio of the section of US 64/276 between Old Hendersonville Road and Osborne Road is 0.95, meaning that this section is currently approaching its practical capacity and is operating at levels unsatisfactory to users.

- **Projected Conditions**

2030 projected traffic volumes on US 64/276, if only existing and committed projects are built, range from 26,200 vpd to 31,700 vpd on the section from Caldwell Street to Allison Road. However, assuming all highway projects recommended in this CTP are built, the traffic volumes range from 12,400 vpd to 24,300 vpd on this same section. The decrease in projected traffic along this corridor is due to diversion of trips onto the proposed Brevard West Loop and the proposed Sylvan Valley Parkway. PM Peak Hour directional volume-to-capacity is projected to be between 0.35 and 0.67, meaning that this roadway is projected to operate at satisfactory levels with a 4-lane cross-section.

- **Safety Analysis**

For the period from January 1, 2001 to December 31, 2003 (3 year period), there were 163 crashes reported along US 64/276 (Asheville Highway/North Broad Street) between Caldwell Street and Allison Road. Of these crashes, 27 were at the intersection of US 64/276 and Chestnut Street, 23 were at the intersection of US 64/276 and Caldwell Street, 18 were at the intersection of US 64/276 and McLean Road, 17 were at the intersection of US 64/276 and Osborne Road, 14 were at the intersection of US 64/276 and Fisher Road, 6 were at the

intersection of US 64/276 and Old Hendersonville Road, and 5 were at the intersection of US 64/276 and Deerlake Road. Intersection crash rates were higher than the county average for similar facilities at the Caldwell Street and Chestnut Street intersections. Crash rates along US 64/276 were higher than the statewide average crash rate for similar facilities from Caldwell Street to Osborne Road. The intersection at Caldwell Street was reconfigured in 2005 (after the time period of this safety analysis).

- **System Linkages**

- **Existing Road Networks**

- US 64/276 provides one of only two links, the other being Old Hendersonville Road, between the center of Brevard and the Pisgah Forest area. This roadway also serves as a link in a major east-west travel corridor across Transylvania County that continues west via US 64 and east via NC 280. US 64/276 is part of a Strategic Highway Corridor (Corridor 2 – Chattanooga to Hendersonville).

- **Transportation Plans**

- US 64/276 is designated as a Boulevard on the CTP from North Caldwell Street to NC 280. The section of US 64/276 north of Allison Road already meets this vision—the section south of Allison Road will need to be upgraded, replacing the existing center left-turn lane with a median.

- **Social, Economic, and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Most of the areas surrounding the US 64/276 corridor have lower concentrations of minority population than this county-wide average, although there are pockets with larger minority populations (notably in the vicinity of Chestnut Street). An area with a large Hispanic population is located near Fisher Road. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the three block groups adjacent to US 64/276 ranges from \$40,000 to \$48,750, with the lower-income areas concentrated west of US 64/276 in the vicinity of McLean Road and North Caldwell Street.

- **Economic Data**

- US 64/276 passes through a major commercial area in Transylvania County. The section south of Osborne Road is surrounded by typical suburban strip-development. The section north of Osborne Road is less developed, but is seeing substantial development occur (Straus Park). Behind the commercial areas adjacent to US 64/276 are large residential developments and the Transylvania Community Hospital/medical complex.

- **Environmental Data**

- US 64/276 crosses one National Wetland Inventory wetland, at King Creek. The Brevard College stone wall and gateway near the intersection with Caldwell Street is a National Register historic structure. There are several churches in the corridor, a rescue squad facility, and Brevard College. Transylvania Community Hospital is one block east of US 64/276, on Hospital Drive (just north of Allison Road), and Brevard Middle School is one block west of US 64/276, on Fisher Road.

- **Cost Estimate**

- A cost estimate was not developed for this project, due to the variability of potential median designs and their associated costs.

### **US 64 Unbalanced Couplet (South Caldwell Street and South Broad Street)**

- **Summary of Need**

- There is a need to improve South Caldwell Street (US 64 westbound) from Main Street to Rosman Highway to accommodate existing and projected traffic volumes and to relieve growing congestion along these facilities. There is a need to improve South Broad Street (US 64 eastbound) at its intersection with Rosman Highway to accommodate projected traffic volumes and to relieve growing congestion along this facility. These two facilities represent a missing link between two sections of US 64 that provide four travel lanes (two lanes each way).

- **Summary of Purpose**

Improving South Caldwell Street and South Broad Street should enable the roadway to accommodate existing and projected traffic volumes by providing additional roadway capacity. This improvement will also provide a continuous multi-lane facility for US 64 through the City of Brevard.

- **Roadway Conditions**

- **Existing Characteristics**

US 64 travels southwest-to-northeast through the center of Brevard. Westbound US 64 utilizes Caldwell Street, which has three lanes (two westbound and one eastbound) north of Main Street and two lanes (one in each direction) south of Main Street. The speed limit on Caldwell Street is 25 miles per hour north of Oakdale Street and 35 miles per hour south of Oakdale Street. Eastbound US 64 utilizes Broad Street, which has three lanes (two eastbound and one westbound) from Miner Street to Main Street and four lanes (two eastbound, one westbound, and one center left-turn lane) from Main Street to North Caldwell Street. The one block of Broad Street between Rosman Highway and Miner Street has two westbound lanes and one eastbound lane. The speed limit on Broad Street is 25 miles per hour between Rosman Highway and Morgan Street, 20 miles per hour between Morgan Street and Probart Street, and 35 miles per hour between Probart Street and North Caldwell Street.

- **Existing Conditions**

2004 annual average daily traffic (AADT) volumes along South Caldwell Street range from 7,300 vpd near Rosman Highway to 11,000 vpd near Main Street. Current practical capacity along this road is 9,300 vpd. The volume-to-capacity ratio on South Caldwell Street ranges from 0.78 at the south end of the street to 1.18 near Main Street, meaning that portions of this facility are currently exceeding their practical capacity. The 2004 AADT volume along South Broad Street near the Rosman Highway intersection is 12,000 vpd. The current practical capacity along this road is 13,500 vpd. The volume-to-capacity ratio on South Broad Street at Rosman Highway is 0.89, meaning that the road is approaching capacity and is operating at levels unsatisfactory to users.

- **Projected Conditions**

2030 projected traffic volumes on South Caldwell Street, if only existing and committed projects are built, range from 7,400 vpd to 8,700 vpd. However, assuming all highway projects recommended in this CTP are built, the traffic volumes range from 5,400 vpd to 7,300 vpd. The 2030 projected traffic volume on South Broad Street at Rosman Highway, if only existing and committed projects are built is 10,000 vpd. The decrease in projected traffic along this corridor is due to diversion of trips onto the proposed Brevard West Loop and the proposed Sylvan Valley Parkway. PM Peak Hour directional volume-to-capacity is projected to range from 0.79 to 0.90 on South Caldwell Street with the current 2-lane cross-section, meaning that this roadway is projected to approach capacity and operate at an unsatisfactory level to users. PM Peak Hour directional volume-to-capacity is projected to be 0.37 on South Broad Street at Rosman Highway (AM Peak Hour directional volume-to-capacity is 0.71 – the eastbound peak at this location would be in the morning) with the existing cross-section, meaning that this roadway is projected to operate at a satisfactory level to users.

- **Safety Analysis**

For the period from January 1, 2001 to December 31, 2003 (3 year period), there were 46 crashes reported along South Caldwell Street between Rosman Highway and Main Street. For the same period, there were 16 crashes reported along South Broad Street between Rosman Highway and Miner Street. Of these crashes, 18 were at the intersection of Caldwell Street and Morgan Street, 12 were at the intersection of Caldwell Street and Oakdale Street, 6 were at the intersection of Broad Street and Rosman Highway, 6 were at the intersection of Caldwell Street and Main Street, and 5 were at the intersection of Caldwell Street and Jordan Street. Intersection crash rates were higher than the county average for similar facilities at the Morgan Street and Oakdale Street intersections. Crash rates along South Caldwell Street and South Broad Street were higher than the statewide average crash rates for similar facilities.

- **System Linkages**

- **Existing Road Networks**

- US 64, along with NC 280, is the main transportation artery through Transylvania County. Caldwell Street and Broad Street provide the path for US 64 through the center of Brevard. Almost all traffic entering Brevard from the west uses one of these two facilities. US 64 is along a Strategic Highway Corridor (Corridor 2 – Chattanooga to Hendersonville).

- **Transportation Plans**

- South Caldwell Street and South Broad Street are designated as Other Major Thoroughfares on the CTP. The existing roadway on South Caldwell Street will need to be widened to 3 lanes (2 lanes westbound and 1 lane eastbound) from Main Street to Rosman Highway to meet the vision of an “unbalanced couplet” through Downtown Brevard. The existing pavement at the intersection of South Broad Street and Rosman Highway will need to be re-stripped to accommodate a double left-turn from Rosman Highway and 2 eastbound lanes/1 westbound lane on South Broad Street.

- **Social, Economic, and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County’s population in 2000 was non-white, and 1% of the county’s population was Hispanic. In the neighborhoods on the west side of South Caldwell Street, there is a higher concentration of minority populations than this county-wide average. There is a higher concentration of Hispanic populations than the county-wide average in the areas west of South Caldwell Street and near the intersection of South Broad Street and Rosman Highway. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the two block groups adjacent to South Caldwell Street and South Broad Street is significantly lower than the county average, at \$37,250 to \$40,000.

- **Economic Data**

- Most of the land use along South Caldwell Street and South Broad Street is commercial, although there are some residential structures along both streets. The surrounding area is largely residential, except the central business district to the north. Most of the land in this area is already developed—the Brevard Land Use Plan does call for redevelopment of property in the central part of town, however, and the Brevard Future Land Use Map shows the entire Caldwell and Broad corridor as commercial, except two small areas of residential use (west side of Caldwell Street between Oakdale and Silversteen and east side of Broad Street near Miner Street).

- **Environmental Data**

- The Godfrey-Barnette House, on South Broad Street between Rosman Highway and Miner Street, is a National Register historic structure. There are no other known natural or human environmental features in this area.

- **Cost Estimate**

- The cost estimate for the proposed improvements to South Caldwell Street is based on widening the existing facility to a 3-lane cross-section from Main Street to Rosman Highway, including costs for right-of-way (ROW), utility relocation, and sidewalks. The cost estimate for this recommended improvement is \$3,800,000. A cost estimate was not developed for the improvements to South Broad Street at the Rosman Highway intersection, but the cost for this improvement should be relatively low since it does not involve new location construction or widening.

### **US 64 West (Rosman Highway) – South Broad Street to Selica Road**

- **Summary of Need**

- There is a need to improve US 64 (Rosman Highway) from South Broad Street to Selica Road, which is 0.5 miles south of Cashiers Valley Road, to accommodate existing and projected traffic volumes and improve safety along this facility.

- **Summary of Purpose**

- Improving US 64 (Rosman Highway) between South Broad Street and Selica Road should enable the roadway to accommodate existing and projected traffic volumes by reducing the

impact that development and curb cuts in the corridor will have on facility capacity. Improving this facility should also improve safety by reducing the potential for left-turn conflicts and head-on crashes.

- **Roadway Conditions**

- **Existing Characteristics**

- US 64 (Rosman Highway) runs southwest-to-northeast across the central portion of Transylvania County, linking Rosman and Lake Toxaway in the west with Brevard and points east. This is the main corridor for movement across the county. Between Caldwell Street and Selica Road, US 64 has five lanes (with a center left-turn lane). The one-block section of US 64 between Caldwell Street and South Broad Street is striped with three lanes (two eastbound and one westbound). The posted speed limit on US 64 is 35 miles per hour between South Broad Street and Carolina Avenue, and 45 miles per hour between Carolina Avenue and Selica Road.

- **Existing Conditions**

- 2004 annual average daily traffic (AADT) volumes along this section of US 64 (Rosman Highway) range from 16,000 vpd east of Nicholson Creek Road to 23,000 vpd west of Nicholson Creek Road. Current practical capacities along this section of US 64 are 29,100 vpd from Selica Road to Carolina Avenue, 26,300 vpd from Carolina Avenue to Caldwell Street, and 20,100 vpd from Caldwell Street to South Broad Street. The volume-to-capacity ratio along this facility ranges from 0.55 to 0.79, meaning that this section of US 64 is currently operating at levels satisfactory to users.

- **Projected Conditions**

- 2030 projected traffic volumes on US 64 (Rosman Highway), assuming all highway projects recommended in the CTP are built, range from 5,000 vpd to 9,000 vpd on the section from South Broad Street to Nicholson Creek Road. 2030 projected volumes on the section of US 64 from Nicholson Creek Road to Selica Road range from 12,800 vpd to 14,400 vpd. The decrease in projected traffic along this corridor is due to diversion of trips onto the proposed Brevard West Loop and the proposed Sylvan Valley Parkway. PM Peak Hour directional volume-to-capacity is projected to be between 0.30 and 0.56, meaning that this roadway is projected to operate at satisfactory levels with a 4-lane cross-section.

- **Safety Analysis**

- For the period from January 1, 2001 to December 31, 2003 (3 year period), there were 50 crashes reported along US 64 (Rosman Highway) between South Broad Street and Selica Road. Of these crashes, 6 were at the intersection of Rosman Highway and South Broad Street. No intersections along this facility had crash rates higher than the county average for similar facilities. Crash rates along US 64 were higher than the statewide average crash rate for similar facilities from South Broad Street to Carolina Avenue.

- **System Linkages**

- **Existing Road Networks**

- US 64 (Rosman Highway) provides a connection between communities in western Transylvania and southern Jackson Counties and the Brevard area. From Brevard, travelers can continue on to Asheville and Hendersonville on US 64 or NC 280. This is the major through-traffic corridor in central Transylvania County, and is along a designated Strategic Highway Corridor (Corridor 2 – Chattanooga to Hendersonville).

- **Transportation Plans**

- US 64 (Rosman Highway) is designated as a Boulevard on the CTP from Caldwell Street to Selica Road. The existing roadway will need to be upgraded, replacing the existing center left-turn lane with a median. The section of Rosman Highway between Caldwell Street and South Broad Street will need to be re-striped to accommodate a double left-turn onto South Broad Street (as part of the downtown Brevard “unbalanced couplet”). Improvements may also be necessary at the intersection of Rosman Highway and Caldwell Street to accommodate a double right-turn along westbound US 64.



- **Social, Economic, and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Along this section of the US 64 (Rosman Highway) corridor, there is a higher concentration of non-white population than the county average in the area between Carolina Avenue and South Broad Street, as well as in a small area near Selica Road. An area with a higher than average Hispanic population is located on the north side of US 64 between Nicholson Creek Road and Illahee Road. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the five block groups adjacent to this section of US 64 ranges from \$37,250 to \$47,431, with the areas of lower income located primarily on the north side of the road.

- **Economic Data**

- The section of US 64 (Rosman Highway) between South Broad Street and Selica Road is transitional—the east end of the corridor is surrounded by commercial development, but the west end is more rural. The Brevard Land Use Plan designates this entire corridor as a location for commercial development. The Transylvania County Comprehensive Plan also designates this area as an Economic Development Corridor and suggests the extension of water and sewer services in this area.

- **Environmental Data**

- US 64 (Rosman Highway) crosses two areas of floodplain between South Broad Street and Selica Road, at Norton Creek and at Nicholson Creek. The section of US 64 between Illahee Road and Selica Road passes through the Catheys Creek watershed, which is a High Quality Outstanding Resource Watershed. There are no known human environmental features along this corridor.

- **Cost Estimate**

- A cost estimate was not developed for this project, due to the variability of potential median designs and their associated costs.

### **US 64 (Rosman Highway) – Clement Road to Old Rosman Highway**

- **Summary of Need**

- There is a need to improve US 64 (Rosman Highway) between Clement Road, which is 0.1 miles west of Island Ford Road, and Old Rosman Highway to accommodate projected traffic volumes and to relieve growing congestion along this facility.

- **Summary of Purpose**

- Improving US 64 (Rosman Highway) between Clement Road and Old Rosman Highway should enable the roadway to accommodate projected traffic volumes by providing additional roadway capacity.

- **Roadway Conditions**

- **Existing Characteristics**

- US 64 (Rosman Highway) runs southwest-to-northeast across the central part of Transylvania County, linking Rosman and Lake Toxaway in the west with Brevard and points east. This is the main corridor for movement across the county. Between Clement Road and Old Rosman Highway, the roadway has two lanes and a posted speed limit of 55 miles per hour. To the east of Clement Road, US 64 has four lanes divided by a grass median. There is no direct driveway access to this section of US 64, and left-turn lanes are provided along US 64 at all intersections in this area.

- **Existing Conditions**

- The 2004 annual average daily traffic (AADT) volume along US 64 between Clement Road and Old Rosman Highway is 11,000 vpd. The current practical capacity along this corridor is 15,800 vpd. The volume-to-capacity ratio along this section of US 64 is 0.70, meaning that this facility is currently operating at levels satisfactory to users.

- **Projected Conditions**

- 2030 projected volumes on this section of US 64 if only existing and committed projects are built, range from 14,900 to 20,300 vpd, which is greater than the current capacity, meaning that this facility is projected to be over its practical capacity.

- **Safety Analysis**  
For the period from January 1, 2001 to December 31, 2003 (3 year period), there were 15 crashes reported along US 64 (Rosman Highway) between Clement Road and Old Rosman Highway. There were no high-crash intersections (5 or more crashes) located along this section of US 64. Crash rates on US 64 were higher than the statewide average crash rate for similar facilities between Catheys Creek Church Road (eastern intersection) and Clement Road.
- **System Linkages**
  - Existing Road Networks**  
US 64 (Rosman Highway) provides a connection between communities in western Transylvania and southern Jackson Counties and the Brevard area. From Brevard, travelers can continue on to Asheville and Hendersonville on US 64 or NC 280. This is the major through-traffic corridor in central Transylvania County, and is along a designated Strategic Highway Corridor (Corridor 2 – Chattanooga to Hendersonville).
  - Transportation Plans**  
US 64 (Rosman Highway) is designated as a Boulevard on the CTP from Clement Road to Old Rosman Highway. The existing roadway will need to be widened to 4 lanes, divided, in order to achieve this type of facility in the future.
- **Social, Economic, and Environmental Conditions**
  - Demographic Data**  
Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Along most of the US 64 corridor, between Clement Road and Old Rosman Highway, the percentages of minority and Hispanic populations are lower than these countywide averages. There is a small area near the intersection of US 64 and Old Rosman Highway that has a higher concentration of non-white residents. There are two small areas with higher concentrations of Hispanic residents—near the Old Rosman Highway intersection and near the eastern intersection with Catheys Creek Church Road. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the block group on the north side of US 64 in this area is much lower than average, at \$32,969. The median family income in the block group on the south side of US 64 in this area is slightly higher than average, at \$48,942.
  - Economic Data**  
This section of US 64 passes through a relatively rural area, with scattered residential and commercial areas and a few small residential subdivisions. The Transylvania County Comprehensive Plan designates this area as an Economic Development Corridor, where future industrial development should be encouraged. The comprehensive plan also recommends the extension of water and sewer services in this area. This section of US 64 currently has partial access control, with no direct driveway access permitted.
  - Environmental Data**  
US 64 (Rosman Highway) crosses three areas of floodplain between Clement Road and Old Rosman Highway: at Limekiln Branch, at Patterson Creek, and at Cherryfield Creek. The section of US 64 between Clement Road and the eastern intersection with Catheys Creek Church Road passes through the Catheys Creek Watershed, which is a High Quality Outstanding Resource Watershed. There is a Natural Heritage Element Occurrence in the vicinity of Cherryfield Loop Road. There are no known critical human environmental features along this corridor.
- **Cost Estimate**  
The cost estimate for the proposed improvements is based on widening the existing 2-lane facility to a 4-lane Boulevard facility. This cost estimate assumes the widening will occur within the existing 250-300' right-of-way. The cost estimate for this recommended improvement is \$21,100,000.

### **US 64 West – US 178 near Rosman to Jackson County Line**

- **Summary of Need**  
There is a need to improve US 64 from US 178 to the Jackson County Line to accommodate existing and projected traffic volumes and improve safety along this facility.

- **Summary of Purpose**

Improving US 64 between US 178 and the Jackson County Line should enable the roadway to accommodate existing and projected traffic volumes by increasing roadway capacity. Improving the geometrics of this section of US 64 should also improve safety in the corridor.

- **Roadway Conditions**

- **Existing Characteristics**

- US 64 runs east-west across the western portion of Transylvania County, connecting Brevard and Rosman in the east to Lake Toxaway and Cashiers in the west. This is the main travel corridor through the western part of Transylvania County. This section of Transylvania County is very mountainous—this portion of US 64 is characterized by steep grades and sharp curves. Between US 178 and the eastern intersection with NC 281, US 64 has two 10' travel lanes and a posted speed limit of 45-55 miles per hour. Between the eastern intersection with NC 281 and the Jackson County Line, US 64 has two 9' travel lanes and a posted speed of 45 miles per hour. A short section of US 64 east of the Quebec community has an additional climbing lane for westbound traffic.

- **Existing Conditions**

- 2004 average annual daily traffic (AADT) volumes along this section of US 64 range from 3,900 vpd near the Jackson County Line to 8,000 vpd between NC 215 and US 178. Current practical capacities along this corridor range from 11,700 vpd in the mountainous areas to 15,800 vpd in the flatter areas east of Frozen Creek Road. The volume-to-capacity ratio along this section of US 64 ranges from 0.33 to 0.51, meaning that US 64 West is currently operating at levels satisfactory to users.

- **Projected Conditions**

- 2030 projected traffic volumes on US 64 between US 178 and the Jackson County Line range from 8,700 vpd near the county line to 13,500 vpd between NC 215 and US 178. Daily 2030 volume-to-capacity ratios along this section of US 64 range from 0.74 to 0.95 with the existing 2-lane cross-section, meaning that portions of this corridor are projected to approach capacity and operate at an unsatisfactory level of service. The road segments that are projected to approach capacity are between the eastern and western intersections with NC 281 and between Kim Miller Road and Frozen Creek Road. The remainder of this corridor is projected to operate at a satisfactory level to users.

- **Safety Analysis**

For the period from January 1, 2001 to December 31, 2003 (3 year period), there were 98 crashes reported along US 64 between US 178 and the Jackson County Line. Of these crashes, 6 were at the eastern intersection of US 64 and NC 281 and 6 were at the intersection of US 64 and US 178. The intersection crash rate was higher than the county average for similar facilities at the eastern intersection of US 64 and NC 281. Crash rates along US 64 were higher than the statewide average crash rate for similar facilities from US 178 to Kim Miller Road.

- **System Linkages**

- **Existing Road Networks**

- US 64 provides a connection between communities in western Transylvania and southern Jackson Counties and the Brevard area. From Brevard, travelers can continue on to Asheville and Hendersonville on US 64 or NC 280. This is the only major road leading west out of Transylvania County, and is along a designated Strategic Highway Corridor (Corridor 2 – Chattanooga to Hendersonville).

- **Transportation Plans**

- US 64 is designated as an Other Major Thoroughfare from US 178 to the Jackson County Line. The existing 2-lane roadway will need to be upgraded by straightening curves (where possible), adding climbing lanes on extended uphill grades, and widening the roadway to provide two 12' travel lanes. The eastern intersection of US 64 and NC 281 should also be improved, as this is a high-crash location.

- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Areas along US 64 where the non-white population is

higher than this countywide average are between NC 215 and Frozen Creek Road, near Flat Creek Valley Road, and near the eastern intersection with NC 281. Areas along US 64 where the Hispanic population is higher than the countywide average are between Upper Whitewater Road and the western intersection with NC 281, near the eastern intersection with NC 281, and near Kim Miller Road. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the six block groups adjacent to this section of US 64 range from \$32,969 to \$55,417. The areas south of US 64, as well as the areas east of Silversteen Road, have incomes lower than the county median, with the lowest incomes in the areas along US 64 east of Frozen Creek Road.

#### **Economic Data**

The section of US 64 between US 178 and the Jackson County Line travels through a rugged, rural area. However, a significant amount of residential development (especially second homes) is present in the area, and this residential growth is expected to continue in the future. There is limited commercial development in the corridor, mostly in the Quebec community and the Sapphire community, as well as in the area near Toxaway Falls. Gorges State Park, which is located south of US 64 near Sapphire, was in the process of completing its master plan for development at the time of this CTP study, and could have a major impact on traffic in the area.

#### **Environmental Data**

US 64 passes through many sensitive environments between Rosman and the Jackson County Line. Between NC 215 and Silversteen Road, US 64 passes through the watershed of the West Fork French Broad River, which is a High Quality Outstanding Resource Watershed—between NC 215 and Frozen Creek Road, US 64 also passes through sections of the floodplain for this river. West of the western intersection with NC 215, US 64 passes through the watershed of the Horsepasture River, which is designated as a National Wild and Scenic River south of NC 281. US 64 crosses seven National Wetland Inventory wetlands between US 178 and the county line: at North Fork French Broad River, West Fork French Broad River, South Fork Flat Creek, Morton Creek, Indian Creek, Toxaway River, and Bearwallow Creek. Two portions of US 64 between the western intersection with NC 281 and Toxaway Falls are adjacent to Gorges State Park, which lies to the south of US 64. At the Jackson County Line, a large parcel on the north side of US 64 is conserved for open space by a land trust. Natural Heritage Element Occurrences are found near Rock Creek, near Toxaway Falls, near Flat Creek Valley Road, near Frozen Creek Road, near West Fork Loop Road, and near NC 215. There are several churches in this corridor, as well as the Quebec Community Center and the T.C. Henderson Elementary School.

- **Cost Estimate**

The cost estimate for the proposed improvements is based on widening the existing facility to 24' pavement width, including right-of-way (ROW) and utility relocation costs, and the provision of paved shoulders for bicycles and emergency use. The cost estimate for this proposed facility is \$46,400,000.

### **US 178 (Pickens Highway) – Old Rosman Highway to East Fork Road**

- **Summary of Need**

There is a need to improve US 178 from Old Rosman Highway to East Fork Road to accommodate projected traffic volumes, improve connectivity, improve safety, and reduce the potential for roadway flooding along this corridor.

- **Summary of Purpose**

Improving US 178 between Old Rosman Highway and East Fork Road should enable the roadway to accommodate projected traffic volumes by providing additional roadway capacity. This improvement should improve safety by realigning intersections and removing confusing turns. Improving US 178 should improve connectivity between areas south of Rosman and the rest of the county, and would allow traffic to bypass the section of US 178 that currently experiences flooding.

- **Roadway Conditions**

- **Existing Characteristics**

- US 178 travels north-south through the Rosman and Eastatooe communities in Transylvania County, connecting with US 64 on the north side of Rosman and continuing south into South Carolina. US 178 begins at US 64 and travels south into the Town of Rosman along Old Rosman Highway (Old US 64). At Rosman High School, US 178 turns west onto Chestnut Street, proceeding through the central business district of Rosman and crossing the French Broad River. West of the bridge, US 178 turns south again at an irregular intersection with the Rosman Elementary School access road, closely paralleling the river to the East Fork Road intersection. At East Fork Road (another irregular intersection), US 178 turns southwest, heading up into mountainous terrain that continues to the South Carolina border. Between Old Rosman Highway and the French Broad River bridge, US 178 has two 10' travel lanes and a posted speed limit of 20 miles per hour. Between the French Broad River bridge and East Fork Road, US 178 has two 9' travel lanes and a posted speed limit of 45 miles per hour.

- **Existing Conditions**

- 2004 average annual daily traffic (AADT) volumes along this section of US 178 range from 5,500 vpd between East Fork Road and Main Street to 1,300 vpd between Main Street and Old Rosman Highway. The significant difference in traffic is due to drivers using Main Street as a shortcut through Rosman, as it provides a more direct route than the existing route of US 178. The current practical capacity of US 178 is 10,400 vpd between East Fork Road and Main Street and 9,300 vpd between Main Street and Old Rosman Highway. The volume-to-capacity ratio on US 178 between East Fork Road and Main Street is 0.53, while the volume-to-capacity ratio between Main Street and Old Rosman Highway is 0.14; therefore, the facility is currently operating at a level that is satisfactory to users.

- **Projected Conditions**

- 2030 projected traffic volumes on the existing alignment of US 178, assuming all highway projects recommended in the CTP (other than this project) are built, range from 8,300 vpd between East Fork Road and Main Street to 300 vpd between Main Street and Old Rosman Highway. The PM Peak Hour directional volume-to-capacity ratio for the section of existing US 178 south of Main Street is projected to be 0.93, which is approaching capacity. Assuming the realignment of US 178 described in the "Transportation Plans" section below is in place, the 2030 projected traffic volume on US 178 between Old Rosman Highway and East Fork Road is 7,800 vpd—this new alignment roadway would have a practical capacity of 15,900 vpd, and the PM Peak Hour directional volume-to-capacity ratio is projected to be 0.58, meaning the roadway would operate at a level acceptable to users.

- **Safety Analysis**

- For the period from January 1, 2001 to December 31, 2003 (3 year period), there were 19 crashes reported along US 178 (Pickens Highway) between Old Rosman Highway and East Fork Road. There were no high-crash intersections (5 or more crashes) located along this section of US 178. Crash rates on US 178 were higher than the statewide average crash rate for similar facilities along this entire section of the road.

- **System Linkages**

- **Existing Road Networks**

- US 178 provides a connection between the Rosman and Eastatooe communities and the US 64 corridor, which is the main travel corridor across Transylvania County. US 178 also connects to Old Rosman Highway, which provides a connection between Rosman and Cherryfield (where Old Rosman Highway intersects with US 64).

- **Transportation Plans**

- US 178 (Pickens Highway) is designated as an Other Major Thoroughfare on the CTP. US 178 is proposed to leave its current route through the Town of Rosman at the Chestnut Street/Old Rosman Highway intersection and proceed south along Old Rosman Highway to the vicinity of South Main Street. A new 4-leg intersection is proposed at South Main Street/Old Rosman Highway, with US 178 continuing straight across the

floodplain and the French Broad River on new alignment. This new alignment roadway is proposed to tie directly back into US 178 at a new 4-leg intersection with East Fork Road and the existing US 178 alignment. This new location roadway is proposed as a 2-lane thoroughfare with turn lanes as necessary at intersections, and includes a new bridge over the French Broad River. This improved roadway would simplify the route of US 178 through Rosman, improve several confusing intersections, and provide a shorter, more direct connection between points south and east of Rosman (via US 178 and Old Rosman Highway).

- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Along the proposed new alignment of US 178 through Rosman, the population of residents that are non-white and/or Hispanic is lower than the countywide average. Along the existing US 178 alignment, however, there is a small area near the French Broad River bridge that has a higher-than-average concentration of non-white residents. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the three block groups adjacent to this section of US 178 ranges from \$32,969 to \$48,942. The block groups with median family incomes lower than the countywide median are located on the south side of the French Broad River and on the north side of Old Rosman Highway.

- **Economic Data**

- This section of US 178 passes through the small community of Rosman. There is some limited potential for growth to occur in the area, but the terrain is rugged, making development difficult. Between Chestnut Street and South Main Street, the new US 178 will utilize existing Old Rosman Highway, where there is currently only a high school and some playing fields, but there could be future development. Between South Main Street and East Fork Road, the new US 178 will pass through a floodplain area on new location—this land is currently used for agriculture, and is not likely to be developed.

- **Environmental Data**

- A realigned US 178 would cross the floodplain of the French Broad River, as well as the river itself—the French Broad River is listed as a National Wetland Inventory wetland. The new roadway would pass near the water and wastewater treatment facility for the Town of Rosman. Rosman High School and Rosman Middle School are located at the intersection of Chestnut Street and Old Rosman Highway, just north of where the new location portion of US 178 would tie into Old Rosman Highway. Some of the playing fields south of the school complex could be affected by the new road and the reconfiguration of the intersection with South Main Street.

- **Cost Estimate**

- The cost estimate for the proposed improvements is based on the construction of a 2-lane facility on new location, including structure costs (for a French Broad River bridge), right-of-way (ROW) costs, and utility relocation costs. The cost estimate for this recommended improvement is \$13,900,000.

### **US 276 (Greenville Highway) – Wilson Road to East Fork Road**

- **Summary of Need**

- There is a need to improve US 276 from Wilson Road to East Fork Road to accommodate projected traffic volumes along this facility.

- **Summary of Purpose**

- Improving US 276 from Wilson Road to East Fork Road should enable the roadway to accommodate projected traffic volumes by providing additional roadway capacity.

- **Roadway Conditions**

- **Existing Characteristics**

- US 276 (Greenville Highway) runs north-south through Transylvania County, linking Brevard with Connestee and Cedar Mountain in the south and the Blue Ridge Parkway in the north. US 276 continues south out of Transylvania County toward Greenville, South Carolina. Between Wilson Road and Island Ford Road, where US 276 runs parallel to

the French Broad River, the roadway has two 9' travel lanes and a posted speed limit of 55 miles per hour. Between Island Ford Road and East Fork Road, where US 276 climbs toward the Connestee area, the roadway has two 9' travel lanes, several sharp curves, and a posted speed limit of 40 miles per hour.

**Existing Conditions**

2004 annual average daily traffic (AADT) volumes along US 276 range from 6,700 vpd between Wilson Road and Island Ford Road to 4,900 vpd between Island Ford Road and East Fork Road. Current practical capacities along this corridor range from 15,800 vpd north of Island Ford Road to 11,700 vpd south of Island Ford Road. The volume-to-capacity ratio along this corridor is 0.42, meaning that the facility operates at a level that is satisfactory to users.

**Projected Conditions**

2030 projected traffic volumes on this section of US 276 range from 10,300 vpd near East Fork Road to 14,200 vpd near Wilson Road. PM Peak Hour directional volume-to-capacity is projected to range from 0.82 to 0.90 on the section of US 276 between Wilson Road and Island Ford Road, meaning that this road will begin to approach capacity, and portions are projected to operate at levels unacceptable to users unless improvements are made. PM Peak Hour directional volume-to-capacity is projected to range from 0.87 to 1.02 on the section of US 276 between Island Ford Road and East Fork Road, meaning that this road will begin to exceed its capacity unless improvements are made.

- **Safety Analysis**

For the period from January 1, 2001 to December 31, 2003 (3 year period), there were 61 crashes reported along US 276 between Wilson Road and East Fork Road. Of these crashes, 7 were at the intersection of US 276 and Wilson Road. The crash rate at the Wilson Road intersection was higher than the county average for similar facilities. Crash rates along US 276 were higher than the statewide average crash rate for similar facilities between Island Ford Road and East Fork Road.

- **System Linkages**

**Existing Road Networks**

US 276 provides the main link between the communities of Connestee and Cedar Mountain and the county seat of Brevard. This road also serves an important role as a scenic route, connecting with Dupont State Forest and Connestee Falls in the southeastern part of Transylvania County and Caesar's Head State Park in South Carolina.

**Transportation Plans**

US 276 is designated as a Boulevard on the CTP from Wilson Road to Island Ford Road. The existing roadway will need to be widened to 4 lanes, divided, in order to achieve this type of facility in the future. Wilson Road is shown as the northern end of this Boulevard designation because this is also the location of the proposed access point between US 276 and the Sylvan Valley Parkway—if this access point moves further north during the design phase of the Sylvan Valley Parkway, the Boulevard should be extended to the proposed access point. US 276 is designated as an Other Major Thoroughfare on the CTP from Island Ford Road to East Fork Road. The existing roadway will need to be widened to 3 lanes, allowing for a continuous truck climbing lane up the hill—this improvement will allow passing on this long uphill grade and provide additional capacity with less impact than a 4-lane widening would have.

- **Social, Economic and Environmental Conditions**

**Demographic Data**

Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Along the northeast side of US 276, between Island Ford Road and East Fork Road, there is a higher percentage of Hispanic residents than the countywide average. There are no locations along this corridor with higher-than-average non-white populations. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the three block groups adjacent to this section of US 276 ranges from \$43,264 to \$56,780. The areas with very high

median family income are located near Wilson Road and in the Connestee Falls area—the rest of the area has a median income slightly lower than the county median.

**Economic Data**

The land use in this area is mainly residential and agricultural, with some scattered small commercial areas. The area between Wilson Road and Island Ford Road is largely in the floodplain, and is likely to remain in agricultural use (especially on the west side of US 276, closer to the river). The area between Island Ford Road and East Fork Road has very rugged terrain, and several large subdivisions have been constructed in this area—this trend is likely to continue in the future. Large-scale commercial and industrial development is unlikely in this corridor, although small-scale commercial development could occur in the Connestee area.

**Environmental Data**

The most notable environmental feature in this area is the floodplain—much of the section of US 276 between Wilson Road and Island Ford Road is either in or directly adjacent to the floodplain of the French Broad River. Portions of US 276 are directly adjacent to the French Broad River itself, which is a National Wetland Inventory wetland. There is a Natural Heritage Element Occurrence near Connestee Falls. Several campgrounds are located along this road, including Camp Rockbrook and Gwynn Valley (which is also subject to a conservation easement). Connestee Falls, located behind a realty office on US 276, is a tourist attraction viewable from a publicly-accessible platform.

- **Cost Estimate**

The cost estimate for the proposed improvements is based on widening the existing facility to a 4-lane Boulevard between Wilson Road and Island Ford Road and widening the existing facility to a 3-lane Major Thoroughfare between Island Ford Road and East Fork Road. The cost estimate includes costs for right-of-way (ROW), utility relocation, and paved bicycle shoulders. The cost estimate for this recommended improvement is \$38,500,000. Of this total, \$20,000,000 is for the 4-lane widening between Wilson Road and Island Ford Road, and \$18,500,000 is for the 3-lane widening between Island Ford Road and East Fork Road.

**NC 215 – US 64 to Macedonia Church Road**

- **Summary of Need**

There is a need to improve NC 215 between US 64 and Macedonia Church Road to improve safety along this facility and to improve connectivity between the US 64 corridor and northwestern Transylvania County.

- **Summary of Purpose**

Improving NC 215 between US 64 and Macedonia Church Road should improve safety by providing wider travel lanes and improving roadway geometry. Improving NC 215 should also provide better connectivity between US 64 and the Balsam Grove community and beyond to Jackson County (via Macedonia Church Road).

- **Roadway Conditions**

**Existing Characteristics**

NC 215 travels north-south through north-central Transylvania County, connecting the Balsam Grove community with the Blue Ridge Parkway to the north and US 64 to the south. NC 215 intersects with US 64 just west of the US 178/US 64 junction near Rosman. Between US 64 and Macedonia Church Road, NC 215 roughly follows the course of the North Fork French Broad River through Pisgah National Forest—this section of the road has many sharp curves and few places to safely pull off the road. On the west side of the road there is a sharp drop toward the river, and on the east side of the road there is a rock cliff, with some rocks actually hanging over the roadway. Between US 64 and Macedonia Church Road, NC 215 has two 8' travel lanes and a posted speed limit of 55 miles per hour (although it is generally not practical to travel at this speed). North of Macedonia Church Road, NC 215 has two 11' travel lanes, and the mountainous landscape opens up into the valley where the Balsam Grove community is located.



### **Existing Conditions**

The 2004 annual average daily traffic (AADT) volume along this section of NC 215 is 1,200 vpd. The current practical capacity of NC 215 is 11,700 vpd. The volume-to-capacity ratio of NC 215 between US 64 and Macedonia Church Road is 0.10, meaning that this road does not currently have any capacity-related deficiencies.

### **Projected Conditions**

The 2030 projected traffic volume on NC 215 between US 64 and Macedonia Church Road is 3,400 vpd. PM Peak Hour directional volume-to-capacity on this section of NC 215 is projected to be 0.27 with the existing cross-section, meaning that this road is not projected to have any capacity-related deficiencies.

- **Safety Analysis**

For the period from January 1, 2001 to December 31, 2003 (3 year period), there were 17 crashes reported along NC 215 between US 64 and Macedonia Church Road. There were no high-crash intersections (5 or more crashes) located along this section of NC 215. Crash rates on NC 215 were higher than the statewide average crash rate for similar facilities along this entire section of the road.

- **System Linkages**

#### **Existing Road Networks**

NC 215 provides a north-south connection between US 64 and the Blue Ridge Parkway, and passes through the community of Balsam Grove. In connection with Macedonia Church Road and Tanassee Gap Road, NC 215 also provides a connection between the central and northwestern sections of Transylvania County.

#### **Transportation Plans**

NC 215 is designated as an Other Major Thoroughfare on the CTP. NC 215 is proposed to leave its current alignment at Macedonia Church Road and proceed southeast on new location to intersect US 64 near Old Rosman Highway and Morgan Mill Road. This new location roadway is proposed as a 2-lane thoroughfare. This project is currently listed in the 2007-2013 TIP as project R-2594. From a system-wide perspective, this project is also a part of a larger conceptual proposal to improve the connection between central Transylvania County and central Jackson County via NC 215, Macedonia Church Road, Silversteen Road, and NC 281.

- **Social, Economic and Environmental Conditions**

#### **Demographic Data**

Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Most of NC 215 travels through Pisgah National Forest, which is an unpopulated area, but there are patches of development—the area near the intersection of US 64 and Old Rosman Highway/Morgan Mill Road has a higher-than-average non-white population and there is a small area on the existing alignment of NC 215 between US 64 and Macedonia Church Road with a high percentage of Hispanic residents. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the two block groups adjacent to NC 215 ranges from \$32,969 to \$34,531, which is significantly lower than the county average.

#### **Economic Data**

Most of this section of NC 215 passes through land that is part of Pisgah National Forest. The remaining land is very mountainous, and not likely to be extensively developed. A significant amount of residential development is expected to occur in the Balsam Grove community. Small pockets of commercial development are likely in Balsam Grove (north of Macedonia Church Road) and near the intersection of US 64 and NC 215.

#### **Environmental Data**

NC 215 passes through a large section of Pisgah National Forest. The existing alignment of NC 215 is adjacent to the North Fork French Broad River, which is a National Wetlands Inventory wetland, and passes near several Natural Heritage Element Occurrences. The existing alignment also travels under several overhanging rocks, and is adjacent to several intermittent waterfalls that appear after a rainfall. The new alignment of NC 215 would also pass through Pisgah National Forest, and would pass near a Natural Heritage Element Occurrence in the vicinity of Macedonia Church Road.

The new roadway would also pass near the Morgan Mill, which is a National Register historic structure, and the Morgan Mill Trout Farm.

- **Cost Estimate**

The cost estimate for the proposed improvements is based on the cost estimate listed in the 2007-2013 TIP for project R-2594. The cost estimate for this recommended improvement is \$46,400,000.

### **NC 280 (Asheville Highway)**

- **Summary of Need**

There is a need to improve NC 280 within Transylvania County to improve safety along this facility and to improve mobility for through-traffic on this busy corridor.

- **Summary of Purpose**

Improving NC 280 in Transylvania County should improve safety along this facility by reducing the potential for head-on collisions and reducing the number of conflict points with turning traffic. Improving this facility should also allow NC 280 to maintain a high capacity for through-traffic by limiting driveways and turning movements and disallowing signals.

- **Roadway Conditions**

**Existing Characteristics**

NC 280 runs southwest-to-northeast in the eastern part of Transylvania County, connecting Brevard and Pisgah Forest with Mills River, Asheville, and the I-26 corridor. This is the main corridor for through-traffic between Brevard and points to the east. Between US 64 and the top of Little Mountain, NC 280 has four travel lanes, no median or center lane, and a posted speed limit of 40-45 miles per hour. Between the top of Little Mountain and the Henderson County Line, NC 280 has five lanes, with a center left-turn lane, and a posted speed limit of 55 miles per hour.

**Existing Conditions**

2004 average annual daily traffic (AADT) volumes along NC 280 range from 12,000 vpd near the county line to 16,000 vpd near the US 64 intersection. Current practical capacities along this corridor range from 26,300 vpd in the developed area near US 64 to 60,700 vpd on the 5-lane, rural section of NC 280. The volume-to-capacity ratio on NC 280 ranges from 0.20 to 0.61, meaning that this road is currently operating at a level of service that is acceptable to users.

**Projected Conditions**

2030 projected traffic volumes on NC 280, assuming all projects recommended in the CTP are built, range from 30,600 vpd to 32,700 vpd on the section of NC 280 between Hudlin Gap Road and the Henderson County Line and 18,800 vpd to 24,600 vpd on the section of NC 280 between US 64 and Hudlin Gap Road. The lower traffic west of Hudlin Gap Road is due to the projected diversion of traffic onto the proposed Sylvan Valley Parkway. PM Peak Hour directional volume-to-capacity is projected to range from 0.40 to 0.65, meaning that this roadway should operate at a satisfactory level of service with 4 travel lanes. Without the Sylvan Valley Parkway, projected volumes on NC 280 would range from 28,200 vpd to 34,000 vpd between US 64 and Hudlin Gap Road—the PM Peak Hour directional volume-to-capacity ratio on this section would range from 0.76 to 1.11, meaning this facility would be over capacity.

- **Safety Analysis**

For the period from January 1, 2001 to December 31, 2003 (3 year period), there were 93 crashes reported along NC 280 (Asheville Highway) in Transylvania County. Of these crashes, 17 were at the intersection of NC 280 and US 64, and 7 were at the intersection of NC 280 and Capps Road. Neither of these high-crash intersections had a crash rate higher than the county average for similar facilities. Crash rates along NC 280 were higher than the statewide average crash rate for similar facilities between US 64 and Capps Road.

- **System Linkages**

**Existing Road Networks**

NC 280 is the main route connecting Brevard and Transylvania County to the rest of the Asheville region. It also provides the most direct route between Brevard and the I-26 corridor. Between Brevard and Hendersonville, NC 280 and I-26 provide a route for

through-traffic to bypass the congested and heavily-developed US 64 corridor. At the Pisgah Forest Gateway intersection, where NC 280, US 64, and US 276 converge, NC 280 becomes US 64/276 (Asheville Highway), which connects to downtown Brevard. NC 280 is part of a Strategic Highway Corridor (Corridor 2 – Chattanooga to Hendersonville).

#### **Transportation Plans**

NC 280 (Asheville Highway) is designated as a Boulevard on the CTP from US 64 to the proposed Sylvan Valley Parkway. NC 280 is designated as an Expressway on the CTP from the proposed Sylvan Valley Parkway to the Henderson County Line. The existing roadway will need to be upgraded by adding medians to the entire facility. On the proposed Expressway sections, driveway access will need to be limited and consolidated as much as possible. Traffic signals will not be allowed on the Expressway portion of NC 280, and any high-volume intersections will need to utilize other traffic control techniques such as interchanges, grade separations, right-in-right-out intersections, left-over intersections, and median U-turns.

- **Social, Economic and Environmental Conditions**

#### **Demographic Data**

Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Areas along the southeast side of NC 280, between Capps Road and King Road, have a higher percentage of non-white residents than this countywide average. The area along NC 280 between Capps Road and the eastern intersection with Old Route 280 has a higher percentage of Hispanic residents than the countywide average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the block group on the northwest side of NC 280 is \$50,000, which is well above the county median—the median family income in the block group on the southeast side of NC 280 is \$43,781, which is slightly lower than the county median.

#### **Economic Data**

West of Hudlin Gap Road, NC 280 travels through the developed community of Pisgah Forest. Much of the development on this section of NC 280 is residential, although there is a large area of commercial development (including Wal-Mart, Bi-Lo, Belk, Eckerd, and Lowe's) at the Pisgah Forest Gateway intersection. This western section of NC 280 is likely to experience continued residential and commercial development in the future. Hudlin Gap Road marks the practical limit for water and sewer service eastward on NC 280, as this is the point where NC 280 begins its way up Little Mountain. Between Little Mountain and the county line, large-lot residential development is more likely to occur, especially as suburban growth begins to stretch westward from Asheville and Mills River.

#### **Environmental Data**

NC 280 crosses one National Wetland Inventory wetland, at Turkey Creek, and passes very close to a second near the Henderson County Line. The Allison-Deaver House, the oldest existing wood-frame farmhouse in Western North Carolina and a National Register historic structure, is located on the north side of NC 280 near the Wal-Mart shopping center. Several churches are located on the NC 280 corridor, as well as the North Transylvania Volunteer Fire Department.

- **Cost Estimate**

A cost estimate was not developed for this project, due to the variability of potential median designs and their associated costs.

### **NC 281 – Shelton Road to Jackson County Line**

- **Summary of Need**

There is a need to improve NC 281 between Shelton Road and the Jackson County Line to improve access to the northwestern corner of Transylvania County and improve connectivity between Transylvania and Jackson Counties.

- **Summary of Purpose**  
Improving NC 281 between Shelton Road and the Jackson County Line should improve access to northwestern Transylvania County by providing a paved road connecting southeast to US 64 at Lake Toxaway and northwest to NC 107 in Jackson County. As part of an improved corridor along NC 215, Macedonia Church Road, Silversteen Road, and NC 281, this improvement would also provide an alternate route between central Transylvania County and central Jackson County.
- **Roadway Conditions**
  - Existing Characteristics**  
NC 281 provides a north-south route through the northwestern corner of Transylvania County. To the south, NC 281 intersects with US 64 at Lake Toxaway before continuing south toward Gorges State Park and South Carolina. To the north, NC 281 turns west at its intersection with Silversteen Road, crosses the Tamassee Ridge into Jackson County, and intersects with NC 107 at Tuckaseegee. Between Shelton Road and the Jackson County Line, NC 281 is currently a narrow, unpaved mountain road.
  - Existing Conditions**  
2004 annual average daily traffic (AADT) volumes along NC 281 between Shelton Road and the Jackson County Line range from 200 vpd to 300 vpd. The current practical capacity along this road is 8,000 vpd. The volume-to-capacity ratio on this section of NC 281 is 0.04, meaning that this road does not currently have any capacity-related deficiencies.
  - Projected Conditions**  
2030 projected traffic volumes along this section of NC 281 range from 1,300 vpd to 1,500 vpd. The volume-to-capacity ratio on this section of NC 281 is projected to range from 0.16 to 0.19 with the existing roadway capacity, meaning that this road is not projected to have any capacity-related deficiencies.
- **Safety Analysis**  
For the period from January 1, 2001 to December 31, 2003 (3 year period), there were 7 crashes reported along NC 281 between Shelton Road and the Jackson County Line. There were no high-crash intersections (5 or more crashes) located along this section of NC 281. Crash rates on NC 281 were higher than the statewide average crash rate for similar facilities from Shelton Road to Silversteen Road and from Slick Fisher Road to the Jackson County Line.
- **System Linkages**
  - Existing Road Networks**  
NC 281 provides a connection between the US 64 corridor and the NC 107 corridor. It serves as the main local artery in the remote northwestern section of Transylvania County. NC 281 intersects with Silversteen Road/Macedonia Church Road, which provides an east-west connection to NC 215 and the Balsam Grove community.
  - Transportation Plans**  
NC 281 is designated as an Other Major Thoroughfare on the CTP from Shelton Road to the Jackson County Line. The existing roadway will need to be paved with two travel lanes in order to meet this vision. Several sharp curves should also be straightened on NC 281 as part of this improvement. The improved NC 281, along with improvements to Silversteen Road, Macedonia Church Road, and NC 215, will provide an improved alternative route between Transylvania and Jackson Counties. There is a project listed in the 2007-2013 TIP, project R-619, that proposes to pave the unpaved portions of NC 281 in Transylvania and Jackson Counties to secondary road standards—the Jackson County portion of this project has already been completed.
- **Social, Economic and Environmental Conditions**
  - Demographic Data**  
Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. No areas along NC 281 between Shelton Road and the Jackson County Line have higher percentages of non-white or Hispanic residents than the countywide average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the three block groups adjacent

to this section of NC 281 ranges from \$34,531 to \$55,417. The areas with lower-than-average income are located on the north side of Silversteen Road and NC 281.

**Economic Data**

Most of this section of NC 281 passes through land that is part of Pisgah National Forest. Aside from a small parcel near the Jackson County Line, all the privately held land along this corridor is subject to a conservation easement, and cannot be developed. The existing agricultural and rural residential uses along this road should continue to exist in the future.

**Environmental Data**

This section of NC 281 crosses one National Wetland Inventory wetland, at the West Fork French Broad River, and passes very close to another in the vicinity of Silversteen Road. There is a High Quality Outstanding Resource Watershed designated on a downstream section of the West Fork French Broad River. Much of NC 281 between Shelton Road and the Jackson County Line is surrounded by land that is part of Pisgah National Forest. The remaining land along this section of NC 281 (aside from one parcel near the county line) is subject to a permanent conservation easement. There is a Natural Heritage Element Occurrence near NC 281 in the vicinity of Slick Fisher Road. There are no known critical human environmental features along this corridor.

- **Cost Estimate**

The cost estimate for the proposed improvements is based on the cost estimate listed in the 2007-2013 TIP for project R-619, which includes improvements already completed in Jackson County. The cost estimate for this recommended improvement is \$18,900,000.

**Brevard East Loop**

- **Summary of Need**

There is a need to upgrade the minor thoroughfare system in the City of Brevard to improve connectivity between neighborhoods and schools on the eastern side of the city.

- **Summary of Purpose**

Improving and linking-together a series of roads on the east side of Brevard (collectively known as the East Loop) should improve connectivity in the area by providing an alternative route for intra-city traffic. New linkages provided by the East Loop should also improve access between the neighborhoods and schools in southeastern Brevard and the US 64 West (Rosman Highway) corridor.

- **Roadway Conditions**

**Existing Characteristics**

Currently, Chestnut Street, Neely Road, Park Avenue, Parkview Drive, and Gallimore Road provide a de-facto partial loop around the east side of Downtown Brevard. Chestnut Street, Neely Road, Park Avenue, and Parkview Drive provide a continuous 2-lane facility between US 64/276 (Asheville Highway) on the north side of downtown and US 276 (Greenville Highway) on the east side of downtown. The intersection of Parkview Drive, Elm Bend Road, and Greenville Highway is a complex 4-leg intersection. Gallimore Road intersects with Greenville Highway just southeast of the Parkview/Elm Bend intersection, and provides a 2-lane connection between Greenville Highway and Country Club Road. Gallimore also connects Brevard Elementary School (near the Greenville Highway intersection) with Brevard High School (at the Country Club Road intersection). Forest Hill Road is a 2-lane collector street that connects the residential areas south of US 64 and west of Country Club Road with the US 64 corridor. The posted speed limit on Gallimore Road is 35 miles per hour. The posted speed limit on Chestnut Street, Neely Road, Park Avenue, Parkview Drive, and Forest Hill Road is 25 miles per hour.

**Existing Conditions**

2004 annual average daily traffic (AADT) volumes on Chestnut Street, Neely Road, Park Avenue, and Parkview Drive range from 5,500 to 5,600 vehicles per day (vpd). The current practical capacity of these roadways is 10,400 vpd. The volume-to-capacity ratio on this facility is 0.54, meaning that these roadways currently operate at a level that is acceptable to users. 2004 AADT volumes on Gallimore Road range from 3,000 vpd to

3,500 vpd. The current practical capacity of Gallimore Road is 10,400 vpd. The volume-to-capacity ratio on this facility ranges from 0.29 to 0.34, meaning that this roadway currently operates at a level that is acceptable to users. The 2004 AADT volume on Forest Hill Road is 900 vpd, and the current practical capacity of this facility is 8,200 vpd. The volume-to-capacity ratio on Forest Hill Road is 0.10, meaning that this road currently operates at a level that is acceptable to users.

#### **Projected Conditions**

2030 projected traffic volumes on the Brevard East Loop, assuming all highway projects recommended in this CTP are built, range from 1,400 vpd to 3,700 vpd. The decrease in projected traffic on parts of this corridor is due to diversion of long-distance trips, currently using this corridor as a shortcut, onto the proposed Sylvan Valley Parkway. PM Peak Hour directional volume-to-capacity is projected to be between 0.09 and 0.40, meaning that this facility is projected to operate at a satisfactory level of service with a 2-lane cross-section.

- **Safety Analysis**

For the period from January 1, 2001 to December 31, 2003 (3 year period), there were 6 crashes reported along Gallimore Road, and 9 crashes reported along Neely Road. Additionally, 27 crashes were reported at the intersection of Chestnut Street and US 64—the crash rate at this intersection was higher than the county average for similar facilities. Crash rates along Gallimore Road were higher than the statewide average crash rate for similar facilities between Country Club Road and Jordan Road.

- **System Linkages**

#### **Existing Road Networks**

Chestnut Street, Neely Road, Park Avenue, and Parkview Drive serve an important function as an in-town partial loop around the northeast side of Downtown Brevard. A substantial amount of through-traffic between US 276 South (Greenville Highway) and US 64 (Asheville Highway), that does not have a destination in downtown, uses either this facility or Wilson Road/Ecusta Road as a shortcut. Gallimore Road connects US 276 with Brevard High School and the neighborhoods in southern Brevard (along Country Club Road).

#### **Transportation Plans**

The Brevard East Loop is designated as a Minor Thoroughfare on the CTP. Two new connections are shown on the CTP map: one is a Gallimore Road extension that involves a 2-lane facility on new location to connect Gallimore Road to Forest Hill Road; the other is a realignment of the eastern end of Gallimore Road to connect with Greenville Highway at the existing Parkview Drive/Elm Bend Road intersection. These connections will allow the East Loop to serve as one continuous facility from US 64 at Forest Hill Road to US 64/276 at Chestnut Street. Improvements are also required to ensure that an adequate flow of traffic can be accommodated by this facility in the near-term, as traffic volumes continue to grow—these improvements could include left turn lanes, roundabouts, or other traffic control measures. Any improvements made to this facility should be context-sensitive: this road travels through a residential area and should not be designed in a way that makes it attractive to high-speed through-traffic. At the south end of this facility, Forest Hill Road, which has 9' lanes, will need to be widened to provide 10' travel lanes between the new location connector and Rosman Highway (US 64).

- **Social, Economic and Environmental Conditions**

#### **Demographic Data**

Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Several areas along the Brevard East Loop have a higher percentage of non-white residents than the countywide average, including the vicinity of the US 64/Forest Hill Road intersection, the vicinity of the Gallimore Road/Jordan Road intersection, the vicinity of the Parkview Drive/US 276 intersection, and the east side of Neely Road/Chestnut Street north of Brevard College. Areas with higher-than-average Hispanic populations are located in the vicinity of the Neely Road/French Broad Avenue intersection and along the east side of Chestnut Street. Median family income in Transylvania County, from the 2000 census, is \$45,579. The

median family income in the five block groups adjacent to the Brevard East Loop ranges from \$37,250 to \$48,563. Only the area in the vicinity of Country Club Road has a median income lower than the county average.

**Economic Data**

Most of the developed land in the Brevard East Loop corridor is characterized by residential subdivisions. There is a shopping center at the intersection of Chestnut Street and US 64, and there are scattered commercial uses elsewhere along the corridor, especially along Gallimore Road. Most of the undeveloped land in the area is zoned for residential use, but is not likely to become highly developed because it is in the floodplain. The most likely areas of future development in this corridor are along Gallimore Road and the proposed Gallimore Road Extension, and the redevelopment of the old Food Lion shopping center on Chestnut Street.

**Environmental Data**

Parts of the Brevard East Loop (notably along Gallimore Road and the proposed Gallimore Road Extension, Forest Hill Road, and the section of Neely Road near Brevard College) lie within or adjacent to the floodplain of the French Broad River. The Brevard East Loop crosses one National Wetland Inventory wetland, at King Creek. The back side of the Brevard College property lies adjacent to the Brevard East Loop, and the Brevard High School has an entrance off this road. Several community facilities, including churches and a Boys and Girls Club, are located along this facility. Particular attention will need to be paid to the location of the church at the corner of Gallimore Road and Greenville Highway in the design of the relocated intersection in this area.

- **Cost Estimate**

The cost estimate for the proposed improvements to the Brevard East Loop is based on building a 2-lane connection between Forest Hill Road and Gallimore Road and relocating Gallimore Road at its intersection with Greenville Highway, including costs for right-of-way, utility relocation, and bicycle/pedestrian improvements. The cost estimate does not include the cost of any traffic control measures or intersection improvements that may be installed on existing portions of the roadway. The cost estimate for this recommended improvement is \$6,500,000.

**Brevard West Loop**

- **Summary of Need**

There is a need to upgrade the minor thoroughfare system in the City of Brevard to improve connectivity between neighborhoods and schools on the western side of the city, and to accommodate projected traffic volumes through the city.

- **Summary of Purpose**

Improving and linking-together a series of roads on the west side of Brevard (collectively known as the West Loop) should improve connectivity in the area by providing an alternative route for intra-city traffic. New linkages provided by the West Loop should also improve access between the neighborhoods and schools in western Brevard and the US 64 corridor. By providing a new connection to the west side of downtown, the West Loop should also help to alleviate traffic congestion on US 64 through downtown caused by traffic headed to and from the western neighborhoods.

- **Roadway Conditions**

**Existing Characteristics**

Currently, Railroad Avenue, Cashiers Valley Road, and Nicholson Creek Road provide a function as local collector streets in the western neighborhoods of Brevard, but they do not form any cohesive single facility. Railroad Avenue is a city-maintained street with two 10' travel lanes and a posted speed limit of 25 miles per hour. Railroad Avenue runs from McLean Road to Probart Street. East of Nicholson Creek Road, Cashiers Valley Road is a city-maintained street with two 8' travel lanes and a posted speed limit of 25 miles per hour. Cashiers Valley Road connects Nicholson Creek Road to Mills Avenue—east of Mills Avenue, the road becomes Carver Street and turns southeast toward Downtown Brevard, and west of Nicholson Creek Road, the road serves as a minor thoroughfare through the Wolf Pen Cove and Lake Sega areas. Nicholson Creek Road

connects Cashiers Valley Road and US 64 (Rosman Highway)—this state-maintained road has two 10' travel lanes and a posted speed limit of 35 miles per hour.

#### **Existing Conditions**

The 2004 annual average daily traffic (AADT) volume on Railroad Avenue is 2,800 vehicles per day (vpd). The 2004 AADT volume on Cashiers Valley Road between Nicholson Creek Road and Mills Avenue is 2,100 vpd. The 2004 AADT volume on Nicholson Creek Road is 900 vpd. The current practical capacity on these three roads is 10,400 vpd. The volume-to-capacity ratios on these facilities range from 0.09 to 0.27, meaning that these facilities currently operate at a level that is satisfactory to users.

#### **Projected Conditions**

2030 projected volumes on the Brevard West Loop, assuming all highway projects recommended in the CTP are built, range from 4,700 vpd near US 64 West (Rosman Highway) to 11,500 vpd near US 64/276 (Asheville Highway). The 2030 projected volume on the Railroad Avenue section of the West Loop ranges from 9,900 vpd to 10,400 vpd. The 2030 projected volume on the Cashiers Valley Road section of the West Loop ranges from 6,800 vpd to 9,400 vpd. The 2030 projected volume on the Nicholson Creek Road section of the West Loop ranges from 4,700 vpd to 5,800 vpd. PM Peak Hour directional volume-to-capacity on the Brevard West Loop is projected to range from 0.44 to 0.88 on the existing sections of roadway, with the existing cross-section, meaning that some sections of this road would be approaching capacity without a capacity improvement.

- **Safety Analysis**

For the period from January 1, 2001 to December 31, 2003 (3 year period), there were no crashes reported along Nicholson Creek Road. Crash information is not available for Railroad Avenue or Cashiers Valley Road, as these are not state-maintained roads. 17 crashes were reported during this period at the intersection of US 64/276 and Osborne Road, which is the proposed northern terminus of the Brevard West Loop—the crash rate at this intersection was not higher than the county average for similar facilities.

- **System Linkages**

#### **Existing Road Networks**

Railroad Avenue, Cashiers Valley Road, and Nicholson Creek Road serve as local routes through the neighborhoods on the west side of Brevard. Railroad Avenue provides access to an industrial area and is an important alternate route to US 64 for local traffic in western Brevard. Cashiers Valley Road provides an alternate route to Probart Street between Downtown Brevard and the Brevard Music Center.

#### **Transportation Plans**

The Brevard West Loop is designated as a Minor Thoroughfare on the CTP. Two new connections are shown on the CTP map: one is a connection between Cashiers Valley Road and Railroad Avenue (from the Cashiers Valley/Mills/Carver intersection to the Railroad/Probart intersection); the other is a connection between Railroad Avenue and Asheville Highway (from the Railroad/McLean intersection to the Asheville/Osborne intersection). These connections will allow the West Loop to serve as one continuous facility from US 64 at Nicholson Creek Road to US 64/276 at Osborne Road. An alternative route for the new connector between Cashiers Valley Road and Probart Street would utilize a section of Carver Street and lie slightly east of the alignment shown on the CTP Highway Map; this alternative alignment could help mitigate the impact of the roadway on a community center in the area. Although this alternative was not the route selected on the mutually adopted CTP, it is an option that may warrant further consideration during the more detailed environmental study and design of this project. The entire West Loop, including the sections using existing roadways, should have two 12' travel lanes and left turn lanes at intersections. The intersection of Cashiers Valley Road and Nicholson Creek Road will need to be realigned to allow free through-movement on the West Loop. Any improvements made to this facility should be context-sensitive: this road travels through a residential area and should not be designed in a way that makes it attractive to high-speed through-traffic (35 mile per hour maximum recommended design speed).



- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Areas along the Brevard West Loop with a higher percentage of non-white residents than the county average include the area between the Cashiers Valley Road/Nicholson Creek Road intersection and the Railroad Avenue/French Broad Avenue intersection, as well as a small area near the Railroad Avenue/McLean Road intersection. The section of the West Loop between US 64 West (Rosman Highway) and Fisher Road is surrounded by many small areas with higher percentages of Hispanic residents than the county average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the three block groups adjacent to the Brevard West Loop ranges from \$37,500 to \$48,750 – areas below the countywide median are generally south of Probart Street.

- **Economic Data**

- The Brevard West Loop passes through an area with dense residential and industrial development, but there is also potential for future development along this corridor. The area along Railroad Avenue is mostly industrial, as this used to be the location of the railroad line through town. The areas south of Probart Street and north of McLean Road are more residential—there is definite potential for further residential development in these areas, especially along Nicholson Creek Road. The intersection of Asheville Highway and Osborne Road (future northern terminus of West Loop) is characterized by strip commercial development.

- **Environmental Data**

- The Brevard West Loop crosses one National Wetland Inventory wetland, at King Creek. Potential areas of groundwater contamination are located near the Brevard Public Works Department on Cashiers Valley Road and near the intersection of Asheville Highway and Osborne Road. Multiple community facilities, including Brevard Middle School, the Brevard Public Works Department, and several churches are adjacent to this facility. A public housing complex is located along this corridor, near the Cashiers Valley Road/Mills Avenue/Carver Street intersection. Citizens have also reported the presence of a small family cemetery along this corridor, near the Deerlake Road intersection.

- **Cost Estimate**

- The cost estimate for the proposed improvements is based on widening the existing facilities to 24' pavement width and building the new connections with 2-lane cross-sections, including the costs of right-of-way (ROW), utility relocation, on-road bicycle lanes (south of Cashiers Valley/Mills/Carver intersection) and sidewalk construction. The cost estimate for this proposed improvement is \$14,700,000.

### **Ecusta Road (SR 1512)/Old Hendersonville Road (SR 1504) Intersection**

- **Summary of Need**

- There is a need to improve the offset intersections of Ecusta Road/Old Hendersonville Road and Wilson Road/Old Hendersonville Road to improve traffic flow in this congested area.

- **Summary of Purpose**

- Improving these intersections by realigning the roads to form one 4-way intersection should improve traffic flow by removing the unnecessary turn movements for north-south traffic. This improvement should relieve the spot congestion on the section of Old Hendersonville Road between Ecusta Road and Wilson Road.

- **Roadway Conditions**

- **Existing Characteristics**

- Old Hendersonville Road provides an east-west route parallel to US 64 through eastern Transylvania County. Wilson Road and Ecusta Road provide a north-south route between US 276 south of Brevard and US 64/276 northeast of Brevard—this route serves as a partial de-facto loop around the east side of Brevard. Wilson Road and Ecusta Road intersect with Old Hendersonville Road about 100 yards apart—the Ecusta intersection is controlled by a signal, while the Wilson intersection is stop-sign controlled. All three roads are 2-lane facilities, with no turn lanes.

### **Existing Conditions**

The 2004 annual average daily traffic (AADT) volume along Ecusta Road near Old Hendersonville Road is 5,500 vehicles per day (vpd). The 2004 AADT volume along Wilson Road near Old Hendersonville Road is 3,700 vpd. The 2004 AADT volume along Old Hendersonville Road near Wilson Road and Ecusta Road is 7,500 vpd. The current practical capacities on these facilities range from 10,400 vpd to 11,400 vpd. The volume-to-capacity ratio for these facilities ranges from 0.32 to 0.72, meaning that these roads currently operate without capacity-related deficiencies. At peak hours, however, congestion can be observed that is caused by turning traffic at the two intersections.

### **Projected Conditions**

The 2030 projected traffic volume on Ecusta Road near Old Hendersonville Road is 3,400 vpd. The 2030 projected traffic volume on Wilson Road near Old Hendersonville Road is 3,200 vpd. 2030 projected traffic volumes on Old Hendersonville Road range from 5,500 vpd west of Wilson Road to 4,400 vpd east of Ecusta Road. PM Peak Hour directional volume-to-capacity on these facilities is projected to range from 0.33 to 0.39, meaning that these roadways will operate at an acceptable level of service without capacity improvements. The drop in traffic on these facilities is directly attributable to traffic diverting onto the proposed Sylvan Valley Parkway—without the Sylvan Valley Parkway, 8,200 vpd would be projected on Wilson Road, 5,700 vpd would be projected on Ecusta Road, 7,100 vpd would be projected on Old Hendersonville Road west of Wilson Road, and 10,000 vpd would be projected on Old Hendersonville Road east of Ecusta Road.

- **Safety Analysis**

For the period from January 1, 2001 to December 31, 2003 (3 year period), there were 2 crashes reported at the intersection of Old Hendersonville Road and Wilson Road and there were no crashes reported at the intersection of Old Hendersonville Road and Ecusta Road. None of the three roads entering these intersections have crash rates higher than the statewide average crash rate for similar facilities.

- **System Linkages**

#### **Existing Road Networks**

Old Hendersonville Road provides a major east-west route between Brevard and the community of Penrose, passing through the Pisgah Forest community on the way, and serves as an alternate route to US 64. Wilson Road is a loop facility around the east side of Brevard—it connects US 276 South to Old Hendersonville Road in the Pisgah Forest community, providing access to several large subdivisions along the way. Ecusta Road provides a connection between Old Hendersonville Road and the US 64 corridor in the Pisgah Forest community, and provides access to a large industrial area along the Davidson River. Together, Wilson Road and Ecusta Road form a partial de-facto loop around the eastern edge of Brevard.

#### **Transportation Plans**

Wilson Road, Ecusta Road, and Old Hendersonville Road are designated as Minor Thoroughfares on the CTP. The CTP calls for the realignment of the south end of Ecusta Road to intersect with Old Hendersonville Road at the Wilson Road intersection (about 100 yards west of the existing south end of Ecusta Road). This would create one 4-leg intersection to replace the two existing 3-leg intersections. The alignment shown on the mutually adopted CTP map relocates the south end of Ecusta Road, although the same ultimate goal of aligning the two intersections could be achieved by realigning the north end of Wilson Road to intersect with Old Hendersonville Road at the existing Ecusta Road intersection. Both of these alternatives would have an effect on homes and businesses (realigning Ecusta Road would likely affect a post office and a lumber yard; realigning Wilson Road would likely affect several homes and a mobile home park). Any further environmental study or final design at this intersection should study both of these alternatives.

- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. The southeast quadrant of this intersection has a higher percentage of non-white residents than the county average—no locations near this intersection have a high percentage of Hispanic residents. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the block group where this intersection is located is \$36,328, which is well below the county average.

- **Economic Data**

- The area around this intersection is generally characterized by residential development on the south side of Old Hendersonville Road and industrial development on the north side of Old Hendersonville Road (this area is adjacent to the Norfolk Southern railroad tracks). There is some potential for industrial growth in the area, as there is a small industrial park located to the west of this intersection with some vacant space and the county is pursuing tenants to locate in the abandoned Ecusta facility to the north of this intersection. Development in the area is limited, however, by the floodplain of the French Broad River, especially on the south side of Old Hendersonville Road.

- **Environmental Data**

- The intersections of Old Hendersonville Road with Ecusta Road and Wilson Road lie on the edge of the floodplain for the French Broad River. The post office for the Pisgah Forest community is located on Old Hendersonville Road between the Wilson Road and Ecusta Road intersections. Pisgah Forest Elementary school is located just north of this area, along Ecusta Road.

- **Cost Estimate**

- The cost estimate for the proposed improvements is based on the construction of a 2-lane facility on new location (Ecusta Road realignment), including right-of-way (ROW) and utility relocation costs. The cost estimate for this recommended improvement is \$1,200,000.

### **Sylvan Valley Parkway (Brevard Bypass)**

- **Summary of Need**

- There is a need to provide additional capacity for east-west travel through the Brevard and Pisgah Forest areas in Transylvania County, to accommodate projected traffic volumes and relieve congestion on the existing NC 280-US 64 corridor.

- **Summary of Purpose**

- Construction of the Sylvan Valley Parkway should enable east-west traffic through the Brevard area to experience an adequate level of service by providing additional capacity for east-west travel. The Sylvan Valley Parkway should reduce congestion on the existing NC 280-US 64 facility through Brevard by providing an alternate route and separating through traffic from local traffic.

- **Roadway Conditions**

- **Existing Characteristics**

- NC 280 (Asheville Highway) and US 64 (Asheville Highway, Broad Street, Caldwell Street, and Rosman Highway) provide the current major east-west facility through central Transylvania County. NC 280 is a 4 to 5-lane facility connecting US 64 in Pisgah Forest to the Asheville area. US 64 is a 4 to 5-lane facility between Downtown Brevard and NC 280, and between Downtown Brevard and Calvert Road (west of Brevard). In Downtown Brevard, US 64 Westbound uses Caldwell Street, which has 2-3 lanes, and US 64 Eastbound uses Broad Street, which has 3-4 lanes. The posted speed limit on the existing facility ranges from 55 miles per hour outside the urban area to 20 miles per hour in the central business district.

- **Existing Conditions**

- 2004 annual average daily traffic (AADT) volumes on the existing NC 280-US 64 corridor through Brevard range from 7,300 vehicles per day (vpd) on South Caldwell Street to 30,000 vpd on North Broad Street. The current volume-to-capacity ratio on this facility

ranges from 0.28 to 1.18, with several sections of Broad Street, Caldwell Street, and Asheville Highway approaching or exceeding practical capacity.

#### **Projected Conditions**

2030 projected traffic volumes along US 64, if only existing plus committed projects are built, range from 10,000 vpd in downtown Brevard to 34,000 vpd near the intersection with NC 280. 2030 projected traffic volumes along NC 280, if only existing plus committed projects are built range from 25,500 – 31,300 vpd. 2030 projected traffic volumes on the Sylvan Valley Parkway, assuming all projects in the CTP are built, range from 10,200 vpd to 17,600 vpd. The highest volumes (16,400-17,600 vpd) are on the segment between US 276 South and US 64 East, with lower volumes (10,200-10,900 vpd) on the two ends of the facility. Practical daily capacity on the Sylvan Valley Parkway will be 25,500 vpd. PM Peak Hour directional volume-to-capacity on the Sylvan Valley Parkway is projected to range from 0.40 to 0.73 with the proposed 2-lane Expressway cross-section, meaning that the proposed cross-section should adequately accommodate the projected traffic. 2030 projected traffic volumes on the existing NC 280-US 64 corridor through Brevard and Pisgah Forest range from 5,000 vpd (on South Broad Street) to 25,800 vpd (on Asheville Highway). PM Peak Hour directional volume-to-capacity on the existing NC 280-US 64 corridor is projected to range from 0.30 to 0.75, meaning that the existing facility should operate at a level of service that is satisfactory to users.

- **Safety Analysis**

For the period from January 1, 2001 to December 31, 2003 (3 year period), there were 511 crashes reported along the existing NC 280-US 64 corridor between the eastern and western termini of the proposed Sylvan Valley Parkway. Twenty-three intersections along this corridor had more than 5 crashes—intersection crash rates were higher than the county average for similar facilities at the Broad/Main, Broad/Caldwell, Caldwell/Morgan, Broad/French Broad, Broad/Jordan, Broad/Probart, Caldwell/Oakdale, Asheville/Chestnut, and Asheville/Ecusta intersections. Crash rates along the NC 280-US 64 corridor were higher than the statewide average crash rate for similar facilities on: Rosman Highway between Carolina Avenue and Broad Street; Broad Street between Rosman Highway and Old Hendersonville Road; Caldwell Street between Rosman Highway and French Broad Avenue; Asheville Highway between Old Hendersonville Road and Osborne Road; and Asheville Highway between Ecusta Road and Capps Road.

- **System Linkages**

#### **Existing Road Networks**

Currently, NC 280 and US 64 provide the main path for through-traffic between Transylvania County and points east. This same corridor also serves as a major local roadway, connecting the central portion of Brevard with the commercial areas northeast of Downtown and in Pisgah Forest. US 276, which is the major corridor through southeastern Transylvania County, connects with the US 64 corridor in Downtown Brevard. The majority of trips between southern/western Transylvania County and the commercial areas east of Brevard must either use US 64 through town or use minor thoroughfares to travel around the city on the northeast side (Wilson Road and Neely Road corridors).

#### **Transportation Plans**

The Sylvan Valley Parkway is designated as an Expressway on the CTP. The proposed route begins with a new interchange at the existing intersection of NC 280 and Hudlin Gap Road. The roadway then crosses through Hudlin Gap and generally runs parallel to the existing road from the gap to Capps Road. The proposed roadway crosses Capps Road with a grade separation, then proceeds across a field to a new interchange with US 64 in the vicinity of the existing US 64/Davidson River Road intersection. South of US 64, the Sylvan Valley Parkway generally runs parallel to, and east of, Davidson River Road to a point near the northwest corner of the Ecusta lagoon. At this point, the roadway overtakes the existing alignment of Davidson River Road between the lagoon and the Davidson River—the new roadway must then cross the Davidson River and the Norfolk Southern Railroad (possibly with one bridge crossing both, or with a lower bridge

if the railroad is abandoned in the future). At this point, the Sylvan Valley Parkway crosses Old Hendersonville Road with a grade separation, turns southwest to run parallel to the French Broad River, and crosses Wilson Road with a grade separation. A new interchange, to provide access to Pisgah Forest and central Brevard, is provided at a short 2-lane connector road to the existing Old Hendersonville Road/Osborne Road intersection. The Sylvan Valley Parkway continues south along the western edge of the French Broad River floodplain, crossing Elm Bend Road with a grade separation. South of Elm Bend Road, the roadway crosses a hill, then overtakes the existing alignment of Bert Lane Road to a grade-separated crossing of Greenville Highway (US 276). After crossing US 276, the roadway crosses the French Broad River and reaches a new interchange that provides access to US 276 and Wilson Road via a short 2-lane connector road. At this point, the Sylvan Valley parkway turns west and follows a ridge to a narrow area in the floodplain, where the roadway once again crosses the French Broad River. On the west side of the river, the roadway skirts around the northern edge of Sugarloaf Mountain, passing south of Brevard High School, and crosses Country Club Road with a grade separation. The Parkway then proceeds southwest, generally parallel to Buena Vista Drive, crossing a ridge, then crossing Illahee Road with a grade separation. The final segment in the roadway follows a valley southwest from Illahee Road to a new interchange at a point near the existing intersection of US 64 and Selica Road. This new facility is recommended as a 2-lane facility on a 4-lane right-of-way, to allow easy future expansion of the roadway when the need arises. It is envisioned that most access to the Sylvan Valley Parkway will be at the five proposed interchanges, but that there may be other roads where it is more cost-effective to provide an at-grade intersection than to provide alternative access (due to access being cut off by the new roadway)—locations where this may be considered include Hudlin Gap Road, Cemetery Road, Bert Lane Road, Sugarloaf Road, and Buena Vista Drive. All major roads that do not have access via interchanges or alternative means should have grade-separated crossings of the Sylvan Valley Parkway to maintain the high-speed flow of traffic on the facility. No driveways or signals should be permitted on the Parkway. For details on the Alternatives Analysis conducted for this recommended facility, please see Chapter 3. A feasibility study is currently underway on this project (TIP number R-2702). It is also recommended that an environmental study be conducted to help determine the most feasible solution from an environmental perspective and aid in right-of-way preservation on the least environmentally damaging practicable alternative.

- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Along the proposed Sylvan Valley Parkway, the following areas have a higher percentage of non-white residents than the county average: the area between NC 280 and US 64 East, the vicinity of Cemetery Road, the vicinity of Old Hendersonville Road and Wilson Road, the area adjacent to neighborhoods along Neely Road, and the vicinity of the US 64 West interchange. Along the proposed Sylvan Valley Parkway, the following areas have a higher percentage of Hispanic residents than the county average: the vicinity of the NC 280 interchange, the area between US 64 East and Cemetery Road, the vicinity of the proposed Osborne Road Extension and interchange, and the vicinity of Bert Lane Road and US 276. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the eight block groups adjacent to the proposed Sylvan Valley Parkway ranges from \$36,328 to \$56,313. The areas with median incomes lower than the county median are between NC 280 and the proposed Osborne Road Extension interchange, and on the north side of the proposed road in the vicinity of Brevard High School.

- **Economic Data**

- Residential land uses are currently predominant in the corridor of the proposed Sylvan Valley Parkway. There are some small commercial uses in the vicinity of the proposed US 64 East interchange and in the vicinity of the proposed US 64 West interchange.

Much of the proposed roadway is either in or adjacent to floodplain lands, which are generally used for agricultural purposes. There is potential for future commercial growth near the five interchanges along the proposed Parkway—the County Comprehensive Plan calls for future commercial and industrial growth in the US 64 and NC 280 corridors, as well as the extension of water and sewer service in these areas. Concerns have been raised by citizens and local officials about suburban sprawl-type development around these interchanges—city and county officials will need to work together to ensure their land use plans and zoning ordinances enable any potential growth to occur in a way that meets the local community vision.

#### **Environmental Data**

The proposed Sylvan Valley Parkway would cross five National Wetland Inventory wetlands—at the Davidson River, Lambs Creek, Kings Creek, and the French Broad River (two times)—and would pass near another wetland (near Capps Road). Much of the road would be either in or adjacent to the floodplain of the Davidson and French Broad Rivers, especially between US 64 East and Country Club Road. The western end of the proposed roadway, between Illahee Road and US 64 West, lies within the Catheys Creek watershed, which is a High Quality Outstanding Resource Watershed. There are two hazardous waste disposal sites near the proposed road (the Ecusta lagoon and a location near Hudlin Gap Road). Three cemeteries (on Hudlin Gap Road, US 64 East, and Buena Vista Drive) were identified that may be impacted by the proposed corridor. The roadway could also impact several churches (including two at the US 64 East interchange, one on Cemetery Road, and one on Bert Lane Road), as well as the Pisgah Forest Community Center (at the US 64 East interchange). With the proposed corridor, the roadway may pass through what is now the auxiliary parking lot for Brevard High School, and would pass near the school itself. The proposed Parkway would also pass close to the water/wastewater facilities along Wilson Road and the garbage collection site along Old Hendersonville Road.

- **Cost Estimate**

The cost estimate for the proposed Sylvan Valley Parkway is based on building a 2-lane facility on new location, including costs for bridges, grade separations, interchanges, 4-lane right-of-way (ROW), and utility relocation. The cost estimate also includes the cost of the short connector roads for two interchanges (Osborne Road/Old Hendersonville Road and Wilson Road/US 276). The cost estimate for this recommended improvement is \$213,300,000.

#### **Minor Intersection Improvements**

- **US 276 (Greenville Highway) & Gallimore Road**

This intersection experiences significant congestion due to school traffic. It is recommended that left-turn lanes be improved at this intersection (for northbound US 276 at Gallimore Road and southbound US 276 at the Brevard Elementary School driveway) to allow better traffic flow. This improvement is considered to have a high priority, and work has already begun by NCDOT's District office to implement this recommendation. Any improvement at this intersection should take pedestrian crossings into account, as this is an important connection between the Elementary and High Schools and is part of Brevard's recommended network of multi-use paths.

- **Old Hendersonville Road (SR 1504) & Neely Road (SR 1546)/Chestnut Street (SR 1610)**

This intersection experiences significant congestion caused by left-turning vehicles, especially from westbound Old Hendersonville Road to southbound Neely Road. It is recommended that a left-turn lane be provided on westbound Old Hendersonville Road to accommodate this movement and improve the flow of traffic through the intersection. A left-turn lane would also allow the provision of a protected left-turn phase at this signal, reducing the danger caused by limited sight-distance at this intersection. Right-of-way at this intersection is limited, and three of the four corners have stone retaining walls close to the roadway—it should be possible to make this improvement by widening on the corner that does not have a wall (southeast quadrant). This improvement is considered to have a high priority.

- Macedonia Church Road (SR 1326) & Kitchen Loop Road (SR 1310)**  
 This intersection is currently configured such that through-traffic using Macedonia Church Road must stop and make a turn. This facility is projected to see growth in future traffic, as part of a new connection between Transylvania and Jackson Counties (connecting with NC 215 and NC 281). 2030 projected traffic volumes on this section of Macedonia Church Road range from 1,300 to 1,600 vehicles per day. It is recommended that this intersection be realigned or otherwise improved to allow free-flowing movement on Macedonia Church Road. This improvement is considered to have a medium priority.
- Macedonia Church Road (SR 1326) & Silversteen Road (SR 1309)**  
 This intersection is currently configured such that through-traffic using Macedonia Church Road and the western leg of Silversteen Road must stop and make a turn. This facility is projected to see growth in future traffic, as part of a new connection between Transylvania and Jackson Counties (connecting with NC 215 and NC 281). The 2030 projected traffic volume on this section of Macedonia Church Road and Silversteen Road is 1,300 vehicles per day. It is recommended that this intersection be realigned or otherwise improved to allow free-flowing movement between Macedonia Church Road and the western leg of Silversteen Road. This improvement is considered to have a medium priority.
- Old Rosman Highway (SR 1388) & Calvert Road (SR 1195)(southern intersection)**  
 This intersection currently has limited sight-distance (caused by a vertical curve), close proximity of driveways (including the driveway to the NCDOT maintenance yard), and high speed traffic on Old Rosman Highway (around 45-55 miles per hour). The intersection had a crash rate of 126 crashes per 100 million entering vehicles, which is almost twice the countywide average of 65 crashes per 100 million entering vehicles at intersections with 5 or more crashes between 2001 and 2003. By 2030, traffic volumes on Old Rosman Highway are projected to range from 8,900 to 9,200 vehicles per day (vpd)—the 2004 volume on this road is only 3,400 vpd. It is recommended that improvements be made at this intersection to improve safety—improvements could include reconstruction of the intersection to improve sight-distance, Intelligent Transportation Systems (ITS), and/or access management improvements. This improvement is considered to have a medium priority.

**Other Minor Spot Improvements**

- Wilson Road (SR 1540)**  
 Wilson Road crosses the floodplain of the French Broad River between Old Hendersonville Road and Glen Cannon Drive. South of Glen Cannon Drive, the roadway follows the edge of the floodplain to the US 276 intersection. During flood events, the roadway is flooded in places—this has a severe impact on access to the Glen Cannon area and surrounding subdivisions, as Wilson Road is the only access route to these areas. In 2030, Wilson Road is projected to carry 700 to 3,200 vehicles per day. It is recommended that the section of Wilson Road lying in the floodplain be raised above the 100-year flood elevation. This improvement should be designed in a way that minimizes the effect on the flow of floodwater in this area. This improvement is considered to have a medium priority.
- Island Ford Road (SR 1110)**  
 Island Ford Road crosses the floodplain of the French Broad River between Country Club Road and Walnut Hollow Road. During flood events, this section of the roadway is often flooded—this has a major impact on access to the western portions of the Connetsee Falls neighborhood and other areas along Walnut Hollow Road and East Fork Road. During major floods, there is often not an open river crossing between US 178 at Rosman and US 276 at Brevard. In 2030, this section of Island Ford Road is projected to carry 1,200 vehicles per day. It is recommended that the section of Island Ford Road lying in the floodplain be raised above the 100-year flood elevation. This improvement should be designed in a way that minimizes the effect on the flow of floodwater in this area. This improvement is considered to have a low priority.

**Minor Widening Improvements**

For driver convenience, ease of operation, and safety, it would be desirable to widen all existing roads and highways to provide a minimum lane width of 12 feet. However, when considering overall statewide needs and available highway revenues, implementation of this standard statewide would be impractical. Therefore, to develop economically feasible recommendations, it is necessary to establish minimum tolerable widths for existing roadways, based on functional classification and projected traffic volumes. The table below presents the minimum lane widths used in this analysis:

**Table 2.1 – Minimum Tolerable Lane Widths**

<b>FUNCTIONAL CLASSIFICATION</b>	<b>US &amp; NC Routes (Minor Arterial or Collector)</b>	<b>Other Collectors</b>	<b>Routes that are not functionally classified</b>
Less than 2,000 vpd	10 feet	10 feet	9 feet
2,000 to 5,000 vpd	12 feet	11 feet	10 feet
Over 5,000 vpd	12 feet	12 feet	--

The prioritization for each minor widening project is related to the priority for bicycle improvements on the facility—if a roadway does not have recommended bicycle improvements, the minor widening project is given a low priority. For more information on the prioritization process for bicycle recommendations, see the Bicycle Recommendations section later in this chapter.

- **US 178 (Pickens Highway) – East Fork Road to South Carolina State Line**  
 This section of US 178 currently has 9’ lanes. 2004 annual average daily traffic (AADT) volumes on this road range from 600 to 3,100 vehicles per day (vpd). 2030 projected traffic volumes on this road range from 2,200 vpd to 8,100 vpd. The crash rate along this section of US 178, between 2001 and 2003, was higher than the statewide average crash rate for similar facilities. It is recommended that this section of US 178 be widened to provide two 12’ travel lanes. This improvement is considered to have a high priority.
- **US 276 (Greenville Highway) – East Fork Road to South Carolina State Line**  
 This section of US 276 currently has 9’ lanes. 2004 annual average daily traffic (AADT) volumes on this road range from 1,000 to 2,300 vehicles per day (vpd). 2030 projected traffic volumes on this road range from 4,000 vpd to 8,900 vpd. The crash rate along this section of US 276, between 2001 and 2003, was higher than the statewide average crash rate for similar facilities. It is recommended that this section of US 276 be widened to provide two 12’ travel lanes. This improvement is considered to have a high priority.
- **NC 281 North – US 64 to Kim Miller Road**  
 This section of NC 281 currently has 10’ lanes. The 2004 annual average daily traffic (AADT) volume on this road is 2,500 vehicles per day (vpd). The 2030 traffic volume is projected to be 5,600 vpd. It is recommended that this section of NC 281 be widened to provide two 12’ travel lanes. This improvement is considered to have a high priority.
- **Old Hendersonville Road (SR 1504) – US 64/276 to Crab Creek Road**  
 This section of Old Hendersonville Road currently has 9’-10’ lanes. 2004 annual average daily traffic (AADT) volumes on this road range from 2,400 to 7,500 vehicles per day (vpd). 2030 projected traffic volumes on this road range from 1,000 vpd to 6,900 vpd. The crash rate along Old Hendersonville Road from Everett Road to Glade Creek Road, between 2001 and 2003, was higher than the statewide average crash rate for similar facilities. It is recommended that the section of Old Hendersonville Road between US 64/276 and Everett Road be widened to provide two 12’ travel lanes. It is also recommended that the section of Old Hendersonville Road between Everett Road and Crab Creek Road be widened to provide two 11’ travel lanes. This improvement is considered to have a high priority.
- **Old Toxaway Road (SR 1139) – Frozen Creek Road to Landfill Entrance**  
 This section of Old Toxaway Road currently has 9’ lanes. The 2004 annual average daily traffic (AADT) volume on this road is 1,100 vehicles per day (vpd). The 2030 projected traffic



volume on this road is 3,300 vpd. It is recommended that this section of Old Toxaway Road be widened to provide two 10' travel lanes. This improvement is considered to have a high priority.

- **Cascade Lake Road (SR 1536) – US 276 to Staton Road**  
This section of Cascade Lake Road currently has 10' lanes. The 2004 annual average daily traffic (AADT) volume on this road is 800 vehicles per day (vpd). The 2030 projected traffic volume on this road is 4,100 vpd. The crash rate along this section of Cascade Lake Road, between 2001 and 2003, was higher than the statewide average crash rate for similar facilities. It is recommended that this section of Cascade Lake Road be widened to provide two 11' travel lanes. This improvement is considered to have a medium priority.
- **Cashiers Valley Road (SR 1344) – US 64 to Nicholson Creek Road**  
This section of Cashiers Valley Road currently has 8' lanes. 2004 annual average daily traffic (AADT) volumes on this road range from 500 to 800 vehicles per day (vpd). 2030 projected traffic volumes on this road range from 600 vpd to 2,100 vpd. The crash rate along this section of Cashiers Valley Road, between 2001 and 2003, was higher than the statewide average crash rate for similar facilities. It is recommended that this section of Cashiers Valley Road be widened to provide two 10' travel lanes. This improvement is considered to have a medium priority.
- **Country Club Road (SR 1113/1116) – Island Ford Road to Gallimore Road**  
This section of Country Club Road currently has 9'-10' lanes. 2004 annual average daily traffic (AADT) volumes on this road range from 1,200 to 3,300 vehicles per day (vpd). 2030 projected traffic volumes on this road range from 1,100 vpd to 2,300 vpd. The crash rate along Country Club Road from Barclay Road to Deerwoode Lane, between 2001 and 2003, was higher than the statewide average crash rate for similar facilities. It is recommended that the section of Country Club Road between Island Ford Road and Barclay Road be widened to provide two 10' travel lanes. It is also recommended that the section of Country Club Road between Barclay Road and Gallimore Road be widened to provide two 11' travel lanes. This improvement is considered to have a medium priority.
- **East Fork Road (SR 1107) – US 178 to Walnut Hollow Road**  
This section of East Fork Road currently has 9' lanes. 2004 annual average daily traffic (AADT) volumes on this road range from 400 to 1000 vehicles per day (vpd). 2030 projected traffic volumes on this road range from 1,000 vpd to 1,300 vpd. The crash rate along this section of East Fork Road, between 2001 and 2003, was higher than the statewide average crash rate for similar facilities. It is recommended that this section of East Fork Road be widened to provide two 10' travel lanes. This improvement is considered to have a medium priority.
- **Everett Road (SR 1533) – Friendship Lane to Crab Creek Road**  
This section of Everett Road currently has 9' lanes. 2004 annual average daily traffic (AADT) volumes on this road range from 1,700 to 3,000 vehicles per day (vpd). 2030 projected traffic volumes on this road range from 2,900 vpd to 3,500 vpd. The crash rate along Everett Road from Hart Road to Crab Creek Road, between 2001 and 2003, was higher than the statewide average crash rate for similar facilities. It is recommended that this section of Everett Road be widened to provide two 11' travel lanes. This improvement is considered to have a medium priority.
- **Frozen Creek Road (SR 1143)**  
Frozen Creek Road currently has 8'-9' lanes. The 2004 annual average daily traffic (AADT) volume on this road is 500 vehicles per day (vpd). The 2030 projected traffic volume on this road is 1,900 vpd. The crash rate along this road, between 2001 and 2003, was higher than the statewide average crash rate for similar facilities. It is recommended that Frozen Creek Road be widened to provide two 10' travel lanes. This improvement is considered to have a medium priority.
- **Illahee Road (SR 1114)**  
Illahee Road currently has 9' lanes. The 2004 annual average daily traffic (AADT) volume on this road is 800 vehicles per day (vpd). 2030 projected traffic volumes on this road range from 700 vpd to 3,700 vpd. The crash rate along this road, between 2001 and 2003, was

higher than the statewide average crash rate for similar facilities. It is recommended that Illahee Road be widened to provide two 11' travel lanes. This improvement is considered to have a medium priority.

- **Island Ford Road (SR 1110)**

Island Ford Road currently has 9' lanes. 2004 annual average daily traffic (AADT) volumes on this road range from 930 to 1,400 vehicles per day (vpd). 2030 projected traffic volumes on this road range from 1,200 vpd to 1,800 vpd. The crash rates along Island Ford Road from US 64 to Pole Miller Road and from Country Club Road to Walnut Hollow Road, between 2001 and 2003, were higher than the statewide average crash rate for similar facilities. It is recommended that Island Ford Road be widened to provide two 10' travel lanes. This improvement is considered to have a medium priority. This improvement could be made in conjunction with the Island Ford Road minor spot improvement listed above.

- **King Road (SR 1502) – US 64 to Blantyre Church Road**

This section of King Road currently has 9' lanes. The 2004 annual average daily traffic (AADT) volume on this road is 1,200 vehicles per day (vpd). The 2030 projected traffic volume on this road is 1,700 vpd. The crash rate along this section of King Road, between 2001 and 2003, was higher than the statewide average crash rate for similar facilities. It is recommended that this section of King Road be widened to provide two 10' travel lanes. This improvement is considered to have a medium priority.

- **Macedonia Church Road (SR 1326) – Kitchen Loop Road to Silversteen Road**

This section of Macedonia Church Road currently has 9' lanes. The 2004 annual average daily traffic (AADT) volume on this road is 300 vehicles per day (vpd). The 2030 projected traffic volume on this road is 1,300 vpd. It is recommended that this section of Macedonia Church Road be widened to provide two 10' travel lanes. This improvement is considered to have a medium priority. This improvement could be made in conjunction with the Macedonia Church Road/Kitchen Loop Road and Macedonia Church Road/Silversteen Road minor intersection improvements listed above and the Silversteen Road minor widening improvement listed below.

- **Old Rosman Highway (SR 1388) – US 64 to South Main Street (Rosman)**

This section of Old Rosman Highway currently has 10' lanes. The 2004 annual average daily traffic (AADT) volume on this road is 3,400 vehicles per day (vpd). 2030 projected traffic volumes on this road range from 7,700 vpd to 9,200 vpd. It is recommended that this section of Old Rosman Highway be widened to provide two 12' travel lanes. This improvement is considered to have a medium priority. This improvement could be made in conjunction with the Old Rosman Highway/Calvert Road minor intersection improvement listed above.

- **Osborne Road (SR 1556)**

Osborne Road currently has 8' lanes. The 2004 annual average daily traffic (AADT) volume on this road is 1,900 vehicles per day (vpd). The 2030 projected traffic volume on this road is 4,300 vpd. The crash rate along this road, between 2001 and 2003, was higher than the statewide average crash rate for similar facilities. It is recommended that Osborne Road be widened to provide two 10' travel lanes. This improvement is considered to have a medium priority.

- **Silversteen Road (SR 1309) – NC 281 to Macedonia Church Road**

This section of Silversteen Road currently has 9' lanes. The 2004 annual average daily traffic (AADT) volume on this road is 300 vehicles per day (vpd). The 2030 projected traffic volume on this road is 1,300 vpd. It is recommended that this section of Silversteen Road be widened to provide two 10' travel lanes. This improvement is considered to have a medium priority. This improvement could be made in conjunction with the Silversteen Road/Macedonia Church Road minor intersection improvement and the Macedonia Church Road minor widening improvement listed above.

- **Wilson Road (SR 1540)**

Wilson Road currently has 9'-10' lanes. 2004 annual average daily traffic (AADT) volumes on this road range from 1,700 to 3,700 vehicles per day (vpd). 2030 projected traffic volumes on this road range from 700 vpd to 3,200 vpd. The crash rate along Wilson Road from US 276 to Elm Bend Road, between 2001 and 2003, was higher than the statewide average crash

rate for similar facilities. It is recommended that Wilson Road be widened to provide two 11' travel lanes. This improvement is considered to have a medium priority. This improvement could be made in conjunction with the Wilson Road minor spot improvement listed above.

- **Barclay Road (SR 1207)**  
Barclay Road currently has 9' lanes. The 2004 annual average daily traffic (AADT) volume on this road is 500 vehicles per day (vpd). The 2030 projected traffic volume on this road is 1,400 vpd. It is recommended that Barclay Road be widened to provide two 10' travel lanes. This improvement is considered to have a low priority.
- **Blantyre Church Road (SR 1501)**  
Blantyre Church Road currently has 9' lanes. The 2004 annual average daily traffic (AADT) volume on this road is 700 vehicles per day (vpd). The 2030 projected traffic volume on this road is 1,200 vpd. The crash rate along this road, between 2001 and 2003, was higher than the statewide average crash rate for similar facilities. It is recommended that Blantyre Church Road be widened to provide two 10' travel lanes. This improvement is considered to have a low priority.
- **Kim Miller Road (SR 1304) – US 64 to Reid Road**  
This section of Kim Miller Road currently has 9' lanes. The 2004 annual average daily traffic (AADT) volume on this road is 1,300 vehicles per day (vpd). The 2030 projected traffic volume on this road is 3,900 vpd. The crash rate along this section of Kim Miller Road, between 2001 and 2003, was higher than the statewide average crash rate for similar facilities. It is recommended that this section of Kim Miller Road be widened to provide two 10' travel lanes. This improvement is considered to have a low priority.
- **Probart Street (SR 1348) – Brevard City Limit to Cashiers Valley Road**  
This section of Probart Street currently has 8'-9' lanes. 2004 annual average daily traffic (AADT) volumes on this road range from 930 to 1,500 vehicles per day (vpd). 2030 projected traffic volumes on this road range from 200 vpd to 700 vpd. It is recommended that this section of Probart Street be widened to provide two 10' travel lanes. This improvement is considered to have a low priority.
- **Reasonover Road (SR 1560)**  
Reasonover Road currently has 8' lanes. The 2004 annual average daily traffic (AADT) volume on this road is 400 vehicles per day (vpd). The 2030 projected traffic volume on this road is 1,200 vpd. The crash rate along this road, between 2001 and 2003, was higher than the statewide average crash rate for similar facilities. It is recommended that Reasonover Road be widened to provide two 10' travel lanes. This improvement is considered to have a low priority.

## Public Transportation and Rail Map

The Public Transportation and Rail Map of the CTP considers other modes of transportation and gives the public other options of traveling from one place to another. Today, the emphasis is on obtaining a balance between a walking society and a riding society. The recommended public transportation and rail map for Transylvania County is presented in Sheet 3 of Figure 1. The classifications for this map are described in detail in Appendix B. The recommended improvements are also inventoried in Appendix C.

### Recommended Public Transportation Projects:

Currently, there is no fixed-route transit service available in Transylvania County. The county has a demand-responsive transit service, with an emphasis on medical transportation. There is no passenger rail service available in Transylvania County. Inter-city bus service is not available in Transylvania County, with the nearest Greyhound/Trailways stations located in Hendersonville and Asheville. Fixed-route, scheduled bus service is available in Henderson and Buncombe Counties, which border Transylvania County to the east.

### **Bus Service between Brevard and Asheville Regional Airport**

A fixed-route bus service is proposed that would connect Brevard with the Asheville Regional Airport via NC 280. At Asheville Regional Airport, it would be possible for passengers to connect with Asheville Transit and Apple Country Transit (Henderson County). This service could be operated by Transylvania County, Henderson County, Asheville Transit, a private contractor, or any combination of the above. The goal of this service would be to provide a dependable transit service that connects with services already provided in other communities—it is envisioned as an Express route between Brevard and the airport, although it may also be feasible to make stops along the way in northeastern Transylvania County and Mills River. If possible, a park and ride lot should be provided in Brevard for the use of transit patrons.

### **Bus Service between Brevard and Hendersonville**

A fixed-route bus service is proposed that would connect Brevard with Hendersonville via US 64. At Hendersonville, it would be possible for passengers to connect with Apple Country Transit (Henderson County). This service could be operated by Transylvania County, Henderson County, a private contractor, or any combination of the above. The goal of this service would be to provide a dependable transit service that connects with Brevard's nearest neighboring city—it is envisioned as an Express route between Brevard and Hendersonville, although it may also be feasible to make stops along the way in Penrose, Etowah, and Horseshoe. If possible, a park and ride lot should be provided in Brevard for the use of transit patrons.

### **Feeder Shuttle Service**

A feeder shuttle service is proposed that would connect the Rosman area with Brevard via US 64. A second proposed feeder shuttle service would connect the Cedar Mountain/Connestee area with Brevard via US 276. At Brevard, it would be possible for passengers to transfer to proposed fixed-route buses serving Asheville Regional Airport and Hendersonville. These feeder shuttle services could be on fixed routes or use demand-responsive route deviation. The goal of this service would be to provide a fixed-schedule transit option to serve some of the small communities outside the central urban core of Transylvania County.

### **Recommended Rail Projects:**

Currently, there is an active Norfolk Southern rail line running through the eastern portion of Transylvania County, connecting Pisgah Forest and Penrose with Henderson County. This line is all that remains of a long-abandoned line that once served Lake Toxaway, Rosman, and Brevard as well. With the recent closure of the Ecusta plant in Pisgah Forest, traffic on this existing rail line has all but ceased—this has raised concerns that this line could be abandoned in the future, leaving Transylvania County without any rail service. It is recommended that the existing rail line be maintained as an active line for freight service, to assist in local economic development efforts. If, however, the rail line is abandoned in the future, then the rail corridor should be preserved, and the right of way should be used for construction of a multi-use path. This action would create a pedestrian/bicycle connection between the proposed multi-use path system in the City of Brevard and proposed system in Henderson County, and would preserve the rail corridor for future service (should the need for freight or passenger rail service arise in the future).

### **Bicycle Map**

The NCDOT envisions that all citizens of North Carolina and visitors to the state should be able to walk and bicycle safely and conveniently to their chosen destinations with reasonable access to roadways. Information on events, funding, maps, policies, projects, and processes dealing with these modes of transportation is available by contacting the NCDOT Division of Bicycle and Pedestrian Transportation.

The recommended bicycle map for Transylvania County is presented in Sheet 4 of Figure 1. This map classifies the bicycle routes into two categories depending on the type of service each route provides. These classifications—on-road bicycle facility and off-road bicycle facility—are

described in detail in Appendix B. The recommended improvements are also inventoried in Appendix C.

For the period from 1997 to 2004, there were 12 crashes reported in Transylvania County that involved bicycles. Of these crashes, 5 occurred on city-maintained streets, 3 occurred on US routes, 2 occurred on state-maintained secondary roads, 1 occurred on an NC route, and 1 occurred on private property.

The recommended bicycle map includes several improvements needed to provide adequate, safe, and desirable facilities for use by bicyclists. These recommendations were developed based on a needs assessment using the Federal Highway Administration's Bicycle Compatibility Index (BCI), the goals and objectives of the study area, comments received from the public, and the known environmental limitations of the study area. All roads that carry a signed or mapped state or county bicycle route (as shown on the *Transylvania County Bicycle Map (1998)*) are assumed to be in need of on-road bicycle improvements unless directly adjacent to an existing or proposed multi-use path. Several other roadways that were noted by local officials and citizens as popular bicycling routes are also shown to be in need of on-road improvements. The multi-use paths shown on the recommended CTP bicycle map come directly from the recently-adopted *Brevard Comprehensive Pedestrian Plan (2006)*.

The BCI is a tool that uses information about roadway characteristics and vehicle traffic to determine a letter score describing the compatibility of the roadway with bicycle traffic. Scores range from A (meaning that a roadway is very well-suited to use by bicyclists) to F (meaning that a roadway is very poorly-suited to use by bicyclists). For this analysis, scores of A, B, and C were considered to denote roadways that serve bicycle travel reasonably well, and should have a low priority for on-road bicycle facility improvements. A score of D was considered to denote roadways that serve bicycle travel adequately, but could serve bicyclists better, and should have a medium priority for on-road bicycle facility improvements. Scores of E and F were considered to denote roadways that do not adequately serve bicycle travel, and should have a high priority for on-road bicycle facility improvements. The BCI scores for each roadway with bicycle recommendations are provided below and inventoried in Appendix C.

It should be noted that the recommended improvements to on-road bicycle facilities can include a wide array of potential solutions. These improvements could range from minor projects (such as installing "Share the Road" signs or adding some extra pavement in blind curves) to major improvements (such as constructing bicycle lanes or wide shoulders). An improvement could involve the creation of a designated space for bicycles (such as a bicycle lane), but it could also involve a measure that increases driver awareness of bicyclists. In the recommendations outlined below, it is assumed that major improvements are more applicable on facilities denoted as high or medium priority—minor improvements are more likely on facilities denoted as medium or low priority.

### **Recommended On-road Bicycle Projects:**

#### **Transylvania County Bicycle Route 1**

- **Summary of Need**

There is a need to improve the facilities along Transylvania County Bicycle Route 1 to provide a safer bicycle facility.
- **Summary of Purpose**

Improving the facilities along this bicycle route should enable the roadways to accommodate automobiles and bicycles, while providing a safer facility for bicyclists.
- **Roadway Conditions**
  - Existing Characteristics**

Bicycle Route 1 begins at the intersection of US 178 and Main Street in downtown Rosman, where it intersects with Bicycle Routes 5 and 6. From this point, the route follows US 178 south to East Fork Road, where Bicycle Route 1 intersects with the

Rosman Loop Bicycle Route. Bicycle Route 1 then proceeds east along East Fork Road, then north along Walnut Hollow Road to Island Ford Road, where Route 1 intersects with Bicycle Route 4. Bicycle Route 1 follows Island Ford Road north to Country Club Road, where there is an intersection with Bicycle Route 6. Bicycle Routes 1 and 6 both proceed east on Country Club Road to Illahee Road, where Route 6 diverges. Bicycle Route 1 continues along Country Club Road into Brevard, then proceeds straight on Broad Street to Main Street, where Route 1 intersects with Bicycle Route 6 once again. Bicycle Route 1 continues north along Broad Street, then east along Old Hendersonville Road to Davidson River Road, where Route 1 intersects with NC Bicycle Route 8 (Southern Highlands). Bicycle Route 1 and NC Bicycle Route 8 both continue east along Old Hendersonville Road to Everett Road, where Route 8 diverges. From this point, Bicycle Route 1 continues east along Old Hendersonville Road, then south along Crab Creek Road to Talley Road, where Route 1 intersects with Bicycle Route 3. Bicycle Route 1 then follows Crab Creek Road south to Everett Road, where Route 1 terminates at an intersection with NC Bicycle Route 8 (Southern Highlands). Most of the roads along this route are 2-lane facilities, with the exception of Broad Street through the City of Brevard, which has 3 to 5 lanes. Speed limits on this route range from 20 miles per hour in Downtown Brevard to 55 miles per hour in rural areas.

#### **Existing Conditions**

2004 AADT volumes along Transylvania County Bicycle Route 1 range from 500 vehicles per day (vpd) on East Fork Road to 30,000 vpd on North Broad Street (US 64). Current practical capacities of the roadways along this route range from 8,000 vpd to 26,300 vpd. 2004 automobile volume-to-capacity ratios are higher than 1.0 (over capacity) along Broad Street (US 64) between French Broad Avenue and Old Hendersonville Road. 2004 automobile volume-to-capacity ratios are between 0.85 and 1.0 (approaching capacity) along Broad Street between Rosman Highway and Varsity Street and between Main Street and French Broad Avenue.

#### **Projected Conditions**

With the highway projects recommended in the CTP in place, 2030 projected traffic volumes along Transylvania County Bicycle Route 1 range from 900 vpd on US 178 to 20,400 vpd on North Broad Street. Practical capacities of the roadways along this route are projected to range from 8,000 vpd to 26,300 vpd. No sections of roadway along Route 1 are projected to be approaching or exceeding capacity in 2030. BCI scores along this route are projected to range from C to E, with the section of Broad Street between Caldwell Street and Old Hendersonville Road receiving high priority (BCI score of E).

- **System Linkages**

#### **Existing Bicycle Networks**

Transylvania County Bicycle Route 1 is part of a network of bicycle routes that have been mapped and signed by NCDOT in Transylvania County. This route connects the Town of Rosman with the Little River community, by way of the City of Brevard. Route 1 intersects with several other mapped bicycle routes in the county, including: Route 3 (in Little River), Route 4 (near Conneestee), Route 5 (in Rosman), Route 6 (in Rosman, near Selica, and in Brevard), Route 8 (in Little River and near Pisgah Forest), and the Rosman Loop Route (in Rosman).

#### **Transportation Plans**

The majority of Transylvania County Bicycle Route 1 is designated as an on-road bicycle facility on the CTP—a small section, between the Old Hendersonville Road/Neely Road intersection and the Old Hendersonville Road/Wilson Road intersection, is designated as an off-road bicycle facility on the CTP. Most of the highways along Route 1 are designated as Other Major Thoroughfares (US 178 and US 64) or Minor Thoroughfares on the CTP—a short section of Broad Street (US 64) between Caldwell Street and Old Hendersonville Road is designated as a Boulevard. Several highway improvements are recommended along this route, including: minor widening on East Fork Road to provide 10' travel lanes; minor widening on Island Ford Road to provide 10' travel lanes; minor widening on Country Club Road to provide 10' travel lanes from Island Ford Road to

Barclay Road and 11' travel lanes from Barclay Road to Gallimore Road; re-striping on Broad Street from Rosman Highway to Miner Street to provide two eastbound lanes and one westbound lane; addition of a median on North Broad Street from Caldwell Street to Old Hendersonville Road; and minor widening on Old Hendersonville Road to provide 12' travel lanes from Broad Street to Everett Road and 11' travel lanes from Everett Road to Crab Creek Road. As part of the design process for each of these highway projects, shoulders and/or bicycle lanes should be considered for feasibility as incidental projects. On the remaining on-road portions of Bicycle Route 1, smaller spot safety improvements and driver awareness improvements are recommended. Part of Bicycle Route 1, in northeastern Brevard, will be able to utilize a section of the proposed Old Hendersonville Road/Ecusta Road Multi-use Path, described in detail below.

- **Social, Economic, and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Along Bicycle Route 1, areas with a higher-than-average non-white population include: downtown Rosman, the area near the Connetsee Falls rear entrance, the area near the Barclay Road intersection, the area near the Turnpike Road intersection, downtown Brevard, the area around Brevard College, the area near the Neely Road intersection, the area near the Ecusta Road intersection, and the area between Glade Creek Road and Enon Road. Areas with a higher-than-average Hispanic population include: the area along East Fork Road, the area around the Walnut Hollow Road/Island Ford Road intersection, the area around the Rosman Highway intersection, the area around the Fisher Road intersection, the area between Neely Road and Osborne Road, and the area around the Old Hendersonville Road/Everett Road intersection. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the block groups adjacent to Bicycle Route 1 ranges from \$32,969 to \$56,780. The areas that are significantly lower than the county average are: the area between downtown Rosman and Walnut Hollow Road, the area between Brevard High School and McLean Road, and the area between Osborne Road and Davidson River Road.

- **Economic Data**

- Much of Bicycle Route 1 passes through rural areas, although the route also passes through the central business districts of Rosman and Brevard. The section of Route 1 passing through Brevard, between Brevard High School and the Davidson River, is especially built-up. Future scattered residential development is likely on all sections of this route, although higher growth is likely in the City of Brevard and northeast of Brevard along Old Hendersonville Road.

- **Environmental Data**

- Transylvania County Bicycle Route 1 crosses 11 National Wetland Inventory wetlands, at the French Broad River (3 times), the Middle Fork French Broad River, the East Fork French Broad River (3 times), Kings Creek, Lambs Creek, the Davidson River, and an un-named creek near Penrose. The route comes very close to several wetlands along Walnut Hollow Road and Old Hendersonville Road. Along East Fork Road and Walnut Hollow Road, Route 1 passes through the East Fork French Broad River watershed, which is a High Quality Outstanding Resource watershed. Several sections of Route 1 lie in floodplains, including the section along US 178, sections along East Fork Road, the section on Island Ford Road, sections along Old Hendersonville Road, and the section on Crab Creek Road. There is a Natural Heritage Element Occurrence site near East Fork Road, about ½ mile west of Walnut Hollow Road, and another along Walnut Hollow Road between Hannah Ford Road and Island Ford Road. Several National Register historic structures are located along Route 1 in the City of Brevard, including the Godfrey-Barnette House, the McMinn Building, the Transylvania County Courthouse, and the Brevard College Stone Wall/Gate. Hazardous substance disposal sites are located near the intersection of Old Hendersonville Road and Osborne Road, and near the Ecusta Pond on Old Hendersonville Road. Human environmental features along Route 1 include many churches, the Penrose and Pisgah Forest post offices, a park and library along

South Broad Street in Brevard, the county courthouse complex, Rosman Elementary School, Brevard High School, Brevard College, and the Brevard Rescue Squad.

### **Transylvania County Bicycle Route 3**

- **Summary of Need**

There is a need to improve the facilities along Transylvania County Bicycle Route 3 to provide a safer bicycle facility.

- **Summary of Purpose**

Improving the facilities along this bicycle route should enable the roadways to accommodate automobiles and bicycles, while providing a safer facility for bicyclists.

- **Roadway Conditions**

#### **Existing Characteristics**

Bicycle Route 3 begins at the intersection of Crab Creek Road and Talley Road in the Little River community, where it intersects with Bicycle Route 1. From this point, the route follows Talley Road north into Henderson County—the route then re-enters Transylvania County, following westbound Grove Bridge Road to US 64. Bicycle Route 3 then follows US 64 east a short distance to King Road. Route 3 follows King Road west to NC 280. From this point, Route 3 follows NC 280 west to Hudlin Gap Road, then Hudlin Gap Road south to Capps Road. The route follows Capps Road south to Upper Glade Creek Road, then Upper Glade Creek Road west to US 64, where Route 3 terminates at an intersection with NC Bicycle Route 8 near the Pisgah Forest community. Most of the roads along this route are 2-lane facilities, with the exception of NC 280, which has 4 to 5 lanes. Only the short section of Route 3 on US 64 has paved shoulders for use by bicycles. Speed limits on this route range from 25 miles per hour in the Pisgah Forest area to 55 miles per hour on major roads and in rural areas.

#### **Existing Conditions**

2004 AADT volumes along Transylvania County Bicycle Route 3 range from 600 vpd on Talley Road to 13,000 vpd on NC 280. Current practical capacities of the roadways along this route range from 8,000 vpd to 66,300 vpd. No sections of roadway along Route 3 are currently approaching or exceeding capacity.

#### **Projected Conditions**

With the highway projects recommended in the CTP in place, 2030 projected traffic volumes along Transylvania County Bicycle Route 3 range from 700 vpd on Talley Road to 31,300 vpd on NC 280. Practical capacities of the roadways along this route are projected to range from 8,000 vpd to 66,300 vpd. No sections of roadway along Route 3 are projected to be approaching or exceeding capacity in 2030. BCI scores along this route are projected to range from C to F, with the section along NC 280 receiving high priority for improvements (BCI score of E/F).

- **System Linkages**

#### **Existing Bicycle Networks**

Transylvania County Bicycle Route 3 is part of a network of bicycle routes that have been mapped and signed by NCDOT in Transylvania County. This route connects the Little River community with the Pisgah Forest community, by way of the Blantyre and Boylston communities. Route 3 intersects with two other mapped bicycle routes in the county: Route 1 (in Little River) and Route 8 (in Pisgah Forest).

#### **Transportation Plans**

Bicycle Route 3 is designated as an on-road bicycle facility on the CTP. The Sylvan Valley Parkway, a proposed highway improvement, will likely force the closure of sections of Hudlin Gap Road and Upper Glade Creek Road and will add a new interchange along NC 280 at Hudlin Gap Road—due to this, it is recommended that the alignment of Bicycle Route 3 in this area be changed. The proposed new route would follow NC 280 west from King Road to Old NC 280, then follow Old NC 280 down Little Mountain to avoid the new interchange on NC 280. The route would turn west onto NC 280 again, then follow Capps Road south to Upper Glade Creek Road. Finally, Route 3 would turn east on Upper Glade Creek Road and terminate at US 64, where it would intersect with a realigned NC Bicycle Route 8. Most of the highways along the proposed alignment of



Route 3 are designated as Other Major Thoroughfares (US 64) or Minor Thoroughfares on the CTP—the section of NC 280 between King Road and Old NC 280 (east) is designated as an Expressway, and the section of NC 280 between Old NC 280 (west) and Capps Road is designated as a Boulevard. Several highway improvements are recommended along this route, including: minor widening on King Road to provide 10' travel lanes from US 64 to Blantyre Church Road; addition of a median and partial control of access on NC 280 from King Road to Old NC 280 (east); and addition of a median on NC 280 from Old NC 280 (west) to Capps Road. As part of the design process for each of these highway projects, shoulders and/or bicycle lanes should be considered for feasibility as incidental projects. On the remaining portions of Bicycle Route 3, smaller spot safety improvements and driver awareness improvements are recommended.

- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Along Bicycle Route 3, areas between Little River and the King Road area generally have a lower percentage of non-white residents than the county average, whereas areas between King Road and Pisgah Forest have a higher percentage. Areas with a higher percentage of Hispanic residents than the county average are found along Old NC 280 and King Road. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the four block groups adjacent to Bicycle Route 3 ranges from \$43,667 to \$50,000, with the areas between the French Broad River and NC 280 having median incomes slightly lower than the county median.

- **Economic Data**

- Most of the area traversed by Bicycle Route 3 is rural, although there are some small pockets of development along US 64 and NC 280. The area around Pisgah Forest is generally characterized by suburban/rural residential development. Future residential growth is likely throughout the area, with the heaviest development in the Pisgah Forest area and along NC 280. Commercial development is most likely to occur along US 64 and NC 280 in the Pisgah Forest area.

- **Environmental Data**

- Bicycle Route 3 crosses three National Wetland Inventory wetlands, at the French Broad River and Turkey Creek (2 times), and passes close-by other wetlands on Capps Road and Talley Road. Most of the Talley Road section and all of the Grove Bridge Road and US 64 sections of Route 3 lie in the floodplain of the French Broad River. There is a Natural Heritage Occurrence site near the intersection of King Road and US 64. Several churches and cemeteries are located along this route, as well as the North Transylvania Fire Station.

#### **Transylvania County Bicycle Route 4**

- **Summary of Need**

- There is a need to improve the facilities along Transylvania County Bicycle Route 4 to provide a safer bicycle facility.

- **Summary of Purpose**

- Improving the facilities along this bicycle route should enable the roadways to accommodate automobiles and bicycles, while providing a safer facility for bicyclists.

- **Roadway Conditions**

- **Existing Characteristics**

- Bicycle Route 4 begins at the intersection of Island Ford Road and Walnut Hollow Road, near the Connestee community, where it intersects with Bicycle Route 1. From this point, the route follows Island Ford Road east to Connestee Road, then Connestee Road east to US 276. Route 4 follows US 276 south to Cascade Lake Road in the Cedar Mountain community. The route then follows Cascade Lake Road north to Staton Road, and Staton Road east through Dupont State Forest to the Henderson County Line. Route 4 re-enters Transylvania County along westbound Crab Creek Road, together with NC Bicycle Route 8—the route follows Crab Creek Road to Cascade Lake Road, where

Route 8 diverges, then follows Cascade Lake Road south to Hart Road. The route follows Hart Road north to its terminus at Everett Road near the Little River community, where Bicycle Route 4 intersects with NC Bicycle Route 8 again. All of the roads along this route are 2-lane facilities. Speed limits on this route range from 35 miles per hour to 55 miles per hour.

#### **Existing Conditions**

2004 AADT volumes along Transylvania County Bicycle Route 4 range from 600 vpd on Cascade Lake Road to 4,900 vpd on US 276. Current practical capacities of the roadways along this route range from 8,000 vpd to 15,800 vpd. No sections of roadway along Route 4 are currently approaching or exceeding capacity.

#### **Projected Conditions**

With the highway projects recommended in the CTP in place, 2030 projected traffic volumes along Transylvania County Bicycle Route 4 range from 1,800 vpd on Island Ford Road to 11,900 vpd on US 276. Projected traffic volumes are not available for Hart Road, Connestee Road, and portions of Cascade Lake Road, as these facilities are not on the CTP highway network—volumes on these roads are currently low and are expected to remain low. Practical capacities of the roadways along this route are projected to range from 8,000 vpd to 15,800 vpd. No sections of roadway along Route 4 are projected to be approaching or exceeding capacity in 2030. BCI scores along this route are projected to range from D to E, with US 276, Staton Road, and Crab Creek Road receiving high priority for improvements (BCI score of E)—BCI scores are not available for Hart Road, Connestee Road, and portions of Cascade Lake Road.

- **System Linkages**

#### **Existing Bicycle Networks**

Transylvania County Bicycle Route 4 is part of a network of bicycle routes that have been mapped and signed by NCDOT in Transylvania County. This route connects the Connestee community with the Little River community, by way of Cedar Mountain and Dupont State Forest. Route 4 intersects with two other mapped bicycle routes in the county: Route 1 (near Connestee) and Route 8 (twice, in Little River).

#### **Transportation Plans**

Bicycle Route 4 is designated as an on-road bicycle facility on the CTP. Most of the highways along Route 4 are designated as Other Major Thoroughfares (US 276) or Minor Thoroughfares on the CTP—Connestee Road, Hart Road, and the northern portion of Cascade Lake Road are minor roads and are not shown on the CTP highway map. Several highway improvements are recommended along this route, including: minor widening on Island Ford Road to provide 10' travel lanes; widening on US 276 to provide a climbing lane between Connestee Road and East Fork Road; minor widening on US 276 to provide 12' travel lanes from East Fork Road to Cascade Lake Road; and minor widening on Cascade Lake Road to provide 11' travel lanes from US 276 to Staton Road. As part of the design process for each of these highway projects, shoulders and/or bicycle lanes should be considered for feasibility as incidental projects. Additionally, shoulders and/or bicycle lanes are recommended on Staton Road and Crab Creek Road due to the high traffic projected on these highways. On the remaining portions of Bicycle Route 4, smaller spot safety improvements or driver awareness improvements are recommended.

- **Social, Economic and Environmental Conditions**

#### **Demographic Data**

Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Along Bicycle Route 4, the area near the Cascade Lake Road/US 276 intersection and the area near the Cascade Lake Road/Crab Creek Road intersection have a higher percentage of non-white residents than the county average. The area near the intersection of Island Ford Road and Walnut Hollow Road, the area along US 276 between Connestee Road and East Fork Road, and the area along Crab Creek Road between Henderson County and Cascade Lake Road have a higher percentage of Hispanic residents than the county average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in

the four block groups adjacent to Route 4 ranges from \$43,264 to \$56,780. The areas that fall below the county median are along Connestee Road, US 276, Cascade Lake Road (southern portion), and Staton Road.

#### **Economic Data**

Most of the areas Bicycle Route 4 passes through are rural. This route passes by the large Connestee Falls residential development and goes through Dupont State Forest. Future residential development along this route is likely to be concentrated along the US 276 corridor, in the Connestee Falls and Cedar Mountain areas. Some residential development can also be expected on the slopes surrounding the Little River valley. Only scattered, service-based commercial growth is expected in this area.

#### **Environmental Data**

Transylvania County Bicycle Route 4 crosses five National Wetlands Inventory wetlands, at Carson Creek, Buckhorn Creek, Little River (2 times), and Crab Creek, and passes close-by several wetlands along Hart Road, Cascade Lake Road, and US 276. Route 4 passes through Dupont State Forest, and passes the former Dupont/AGFA X-ray film facility at the center of the forest. Two properties along the route are preserved for conservation purposes—the Gwynn Valley camp property along Island Ford Road and US 276, and an agricultural property on Hart Road. Many Natural Heritage Element Occurrences are found along this route, with locations including: the vicinity of Connestee Falls, the vicinity of the Sherwood Forest subdivision, the vicinity of US 276 and Rich Mountain Road, Dupont State Forest, the vicinity of Cascade Lake Road and Hart Road, and the vicinity of Hart Road and Everett Road. Two High Quality Outstanding Resource watersheds are crossed by Route 4: the Williamson Creek watershed (along Staton Road) and the Crab Creek watershed (along Staton Road, Crab Creek Road, and Cascade Lake Road). Several waterfalls are within close proximity to Route 4, including Connestee Falls (behind the Connestee Falls Realty on US 276) and Hooker Falls, Triple Falls, and High Falls (in Dupont State Forest, near Staton Road). Human environmental features along this route include several campgrounds, the Little River Community Center, and churches.

### **Transylvania County Bicycle Route 5**

- **Summary of Need**

There is a need to improve the facilities along Transylvania County Bicycle Route 5 to provide a safer bicycle facility.

- **Summary of Purpose**

Improving the facilities along this bicycle route should enable the roadways to accommodate automobiles and bicycles, while providing a safer facility for bicyclists.

- **Roadway Conditions**

#### **Existing Characteristics**

Bicycle Route 5 begins at the intersection of US 178 (Chestnut Street) and Main Street in Rosman, where it intersects with Bicycle Route 1 and Bicycle Route 6. From this point, the route proceeds north on Main Street to US 178, then north on US 178 for one block, to Turnpike Road. Route 5 follows Turnpike Road west to US 64, where it intersects with the Rosman Loop Bicycle Route. The route proceeds east on US 64 to NC 215, then north on NC 215 to Macedonia Church Road, where it intersects with the Lake Toxaway Connection Bicycle Route. The route continues north on NC 215 to the Blue Ridge Parkway, where Bicycle Route 5 terminates at an intersection with NC Bicycle Route 2 (Mountains to Sea). All of the roads along this route are 2-lane facilities. Speed limits on this route range from 20 miles per hour in downtown Rosman to 55 miles per hour in rural areas.

#### **Existing Conditions**

2004 AADT volumes along Transylvania County Bicycle Route 5 range from 200 vpd on portions of NC 215 to 7,500 vpd on US 64. Current practical capacities of the roadways along this route range from 8,000 vpd to 15,800 vpd. No sections of roadway along Route 5 are currently approaching or exceeding capacity.

#### **Projected Conditions**

With the highway projects recommended in the CTP in place, 2030 projected traffic volumes along Transylvania County Bicycle Route 5 range from 100 vpd on the existing alignment of NC 215 to 13,400 vpd on US 64. Projected traffic volumes are not available for Turnpike Road, as this facility is not on the CTP highway network—the volume of traffic on this road is currently low, and is expected to remain low. Practical capacities of the roadways along this route are projected to range from 8,000 vpd to 15,800 vpd. With a projected PM Peak Hour directional volume-to-capacity ratio of 0.80, the section of US 64 used by Bicycle Route 5 will be starting to approach capacity in 2030. No other sections of roadway along Route 5 are projected to be approaching or exceeding capacity in 2030. BCI scores along this route are projected to range from C to F, with US 64 receiving a high priority for improvements (BCI score of F)—a BCI score is not available for Turnpike Road.

- **System Linkages**

- **Existing Bicycle Networks**

- Transylvania County Bicycle Route 5 is part of a network of bicycle routes that have been mapped and signed by NCDOT in Transylvania County. This route connects the Town of Rosman with the Blue Ridge Parkway, by way of the Balsam Grove community. Route 5 intersects with several mapped bicycle routes in the county: Route 1 (in Rosman), Route 2 (at the Blue Ridge Parkway), Route 6 (in Rosman), the Rosman Loop (near Rosman), and the Lake Toxaway Connection (near Balsam Grove).

- **Transportation Plans**

- Bicycle Route 5 is designated as an on-road bicycle facility on the CTP. Most of the highways along Route 5 are designated as Other Major Thoroughfares (US 64, US 178, and NC 215) or Minor Thoroughfares on the CTP—Turnpike Road is a minor road and is not shown on the CTP highway map. Only one highway improvement is recommended along this route: minor widening/straightening on US 64 to provide 12' travel lanes. Depending on the build alternative selected for TIP project R-2594 (NC 215 realignment) as part of the NEPA process, improvements could also be made on NC 215 between US 64 and Macedonia Church Road (instead of a new-location roadway). As part of the design process for each of these projects, shoulders and/or bicycle lanes should be considered for feasibility as incidental projects. On the remaining portions of Bicycle Route 5, smaller spot safety improvements or driver awareness improvements are recommended.

- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. The areas surrounding Route 5 in the Town of Rosman have a higher percentage of non-white residents than the county average. Small areas along US 178 in Rosman and NC 215 south of Balsam Grove have a higher percentage of Hispanic residents than the county average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the three block groups adjacent to Bicycle Route 5 ranges from \$32,969 to \$41,033—the entire route passes through areas with incomes lower than the county median.

- **Economic Data**

- Much of Bicycle Route 5 passes through Pisgah National Forest, and is thus protected from development. Commercial development along Route 5 is mainly located in downtown Rosman, with small commercial pockets at the US 64/NC 215 intersection and in Balsam Grove. Residential development is clustered in the Town of Rosman, along Turnpike Road, and in Balsam Grove. Future residential growth is especially likely to occur in Balsam Grove, with the construction of improvements to NC 215.

- **Environmental Data**

- Bicycle Route 5 crosses six National Wetland Inventory wetlands, including the French Broad River, the West Fork French Broad River, the North Fork French Broad River (3 times), and Shoal Creek. The section of Route 5 north of Balsam Grove travels through the Upper North Fork French Broad River watershed, which is a High Quality Outstanding Resource watershed. Much of Route 5 crosses land owned by the U.S. Forest Service

(Pisgah National Forest) or National Park Service (Blue Ridge Parkway). Natural Heritage Element Occurrences are found at the following locations along this route: throughout Pisgah National Forest, near NC 215 and the Blue Ridge Parkway, near NC 215 and Tanssee Gap Road, near NC 215 and Macedonia Church Road, near NC 215 and Diamond Creek Road, and near NC 215 and US 64. Human environmental features along this route include several churches, the Town of Rosman municipal park, Rosman Town Hall, and the Balsam Grove Community Center.

### **Transylvania County Bicycle Route 6**

- **Summary of Need**

There is a need to improve the facilities along Transylvania County Bicycle Route 6 to provide a safer bicycle facility.

- **Summary of Purpose**

Improving the facilities along this bicycle route should enable the roadways to accommodate automobiles and bicycles, while providing a safer facility for bicyclists.

- **Roadway Conditions**

#### **Existing Characteristics**

Bicycle Route 6 begins at the intersection of US 178 (Chestnut Street) and Main Street in Rosman, where it intersects with Bicycle Route 1 and Bicycle Route 5. From this point, the route follows Main Street south to Old Rosman Highway, then Old Rosman Highway northeast to the first intersection with Calvert Road. The route follows Calvert Road northeast to Whitmire Road, and Whitmire Road east to Pharaoh Drive. Route 6 passes through a subdivision on Pharaoh Drive, Little Egypt Road, and Garland Court to reach US 64. The route crosses US 64 onto Catheys Creek Church Road, which it follows northeast to another intersection with US 64. The route continues northeast along US 64 to Island Ford Road, then south on Island Ford Road to Country Club Road, where Route 6 intersects with Route 1 again. Both routes follow Country Club Road east to Illahee Road, where Route 1 diverges. Route 6 follows Illahee Road north to US 64, then US 64 west one block to Cashiers Valley Road. The route then follows Cashiers Valley Road northeast to Probart Street, then Probart Street northeast to Oaklawn Avenue. Finally, Route 6 follows Oaklawn Avenue one block south to Main Street and Main Street east to Broad Street, where Route 6 terminates at a final intersection with Route 1 in downtown Brevard. Most of the roads along this route are 2-lane facilities—the section along US 64 between Clement Road and Island Ford Road has 4 lanes, and the section along US 64 between Illahee Road and Cashiers Valley Road has 5 lanes. Speed limits on this route range from 20 miles per hour in downtown Rosman and downtown Brevard to 55 miles per hour in rural areas.

#### **Existing Conditions**

2004 AADT volumes along Transylvania County Bicycle Route 6 range from 500 vpd on Calvert Road to 23,000 vpd on US 64. Current practical capacities of the roadways along this route range from 8,000 vpd to 66,300 vpd. No sections of roadway along Route 6 are currently approaching or exceeding capacity.

#### **Projected Conditions**

With the highway projects recommended in the CTP in place, 2030 projected traffic volumes along Transylvania County Bicycle Route 6 range from 100 vpd on sections of Calvert Road to 23,500 vpd on sections of US 64. Projected traffic volumes are not available for Whitmire Road, Pharaoh Drive, Little Egypt Road, or Garland Court, as these facilities are not on the CTP highway network—the volume of traffic on these roads is currently low, and is expected to remain low. Practical capacities of the roadways along this route are projected to range from 8,000 vpd to 66,300 vpd. No sections of roadway along Route 6 are projected to be approaching or exceeding capacity in 2030. BCI scores along this route are projected to range from C to F, with Old Rosman Highway and US 64, between Catheys Creek Church Road and Island Ford Road, receiving a high priority for improvements (BCI score of E or F)—BCI scores are not available for Whitmire Road, Pharaoh Drive, Little Egypt Road, or Garland Court.

- **System Linkages**

- **Existing Bicycle Networks**

- Transylvania County Bicycle Route 6 is part of a network of bicycle routes that have been mapped and signed by NCDOT in Transylvania County. This route connects the Town of Rosman and the City of Brevard, by way of the Calvert, Cherryfield, and Selica communities. Route 6 intersects with two other mapped bicycle routes in the county: Route 1 (in Rosman, near Selica, and in Brevard) and Route 5 (in Rosman).

- **Transportation Plans**

- The majority of Transylvania County Bicycle Route 6 is designated as an on-road bicycle facility on the CTP—a small section, between the Illahee Road/US 64 intersection and the Cashiers Valley Road/US 64 intersection, is designated as an off-road bicycle facility on the CTP. Most of the highways along Route 6 are designated as Minor Thoroughfares on the CTP—the two short sections along US 64 are designated as Boulevards. Several highway improvements are recommended along this route, including: minor widening on Old Rosman Highway to provide 12' travel lanes; widening on US 64 to provide a 4-lane, divided facility from Clement Road to Island Ford Road; minor widening on Island Ford Road to provide 10' travel lanes; minor widening on Country Club Road to provide 10' travel lanes from Island Ford Road to Barclay Road and 11' travel lanes from Barclay Road to Illahee Road; minor widening on Illahee Road to provide 11' travel lanes; addition of a median to US 64 between Illahee Road and Cashiers Valley Road; minor widening on Cashiers Valley Road to provide 10' travel lanes; and minor widening on Probart Street to provide 10' travel lanes from Cashiers Valley Road to the Brevard City Limit. As part of the design process for each of these highway projects, shoulders and/or bicycle lanes should be considered for feasibility as incidental projects. On the remaining on-road portions of Bicycle Route 6, smaller spot safety improvements and driver awareness improvements are recommended. Part of Bicycle Route 6, in southwestern Brevard, will be able to utilize a section of the proposed Rosman Highway Multi-use Path, described in detail below.

- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Areas along Bicycle Route 6 with a higher percentage of non-white residents than the county average include: downtown Rosman; the vicinity of the Calvert Road/Whitmire Road intersection; the vicinity of the Country Club Road/Barclay Road intersection; the vicinity of the Cashiers Valley Road/Wolf Pen Cove Road intersection; and the sections of Route 6 along Probart Street, Oaklawn Avenue, and Main Street in Brevard. Areas along Route 6 with a higher percentage of Hispanic residents than the county average include: the vicinity of the Calvert Road/Whitmire Road intersection; the vicinity of the eastern US 64/Catheys Creek Church Road intersection; the vicinity of the US 64/Island Ford Road intersection; and areas along Probart Street in the City of Brevard. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the block groups adjacent to Bicycle Route 6 ranges from \$32,969 to \$48,942—the areas with incomes below the county median are primarily located to the north of US 64 and Old Rosman Highway, with higher-income areas to the south.

- **Economic Data**

- Bicycle Route 6 passes through a mixture of urban, suburban, and rural areas. This route generally parallels the US 64 corridor between Rosman and Brevard—this corridor is expected to see significant commercial and residential growth in the future. The Transylvania County Comprehensive Plan designates US 64 between Rosman and Brevard as an Economic Development corridor, and proposes the extension of water and sewer service to this area. Significant residential development is also likely in the area around Probart Street in western Brevard.

- **Environmental Data**

- Bicycle Route 6 crosses one National Wetlands Inventory wetland, at Catheys Creek. Parts of US 64, Cashiers Valley Road, Illahee Road, and Island Ford Road along Route 6

cross through the Catheys Creek watershed, which is a High Quality Outstanding Resource watershed. The Flem Galloway House, on Old Rosman Highway, is a National Register historic structure. There is a Natural Heritage Element Occurrence near the intersection of Calvert Road and Hannah Ford Road. Human environmental features along this route include several churches, campgrounds, and the Brevard Music Center.

### **North Carolina Bicycle Route 8 (Southern Highlands)**

- **Summary of Need**

There is a need to improve the facilities along North Carolina Bicycle Route 8 in Transylvania County to provide a safer bicycle facility.

- **Summary of Purpose**

Improving the facilities along this bicycle route should enable the roadways to accommodate automobiles and bicycles, while providing a safer facility for bicyclists.

- **Roadway Conditions**

#### **Existing Characteristics**

Bicycle Route 8 begins at the intersection of US 276 and the Blue Ridge Parkway in northern Transylvania County, where Route 8 splits off from the Mountains to Sea Bicycle Route (NC Route 2). From this point, the route follows US 276 south to US 64/NC 280 in Pisgah Forest. The route continues straight onto US 64 east to Davidson River Road, where it intersects with Bicycle Route 3. Route 8 proceeds south on Davidson River Road to Old Hendersonville Road, where it intersects with Bicycle Route 1. Route 1 and Route 8 both follow Old Hendersonville Road east to Everett Road, where Route 1 diverges. Route 8 follows Everett Road east to Hart Road, where it intersects with Bicycle Route 4. The route then continues east on Everett Road to Crab Creek Road, where it intersects with Route 1 once again. Route 8 follows Crab Creek Road south to Cascade Lake Road, where it intersects with Route 4 again, and both routes continue east on Crab Creek Road to the Henderson County Line. Most of the roads along this route are 2-lane facilities—the section of US 64 on Bicycle Route 8 is a 3-lane facility. Speed limits on this route range from 35 miles per hour in the Pisgah Forest area to 55 miles per hour.

#### **Existing Conditions**

2004 AADT volumes along North Carolina Bicycle Route 8 range from 500 vpd on the northernmost sections of US 276 to 11,000 vpd on the US 64 segment of the route. Current practical capacities of the roadways along this route range from 8,000 vpd to 15,800 vpd. No sections of roadway along Route 8 are currently approaching or exceeding capacity.

#### **Projected Conditions**

With the highway projects recommended in the CTP in place, 2030 projected traffic volumes along North Carolina Bicycle Route 8 range from 600 vpd on Glade Creek Road to 13,800 vpd on US 64. Practical capacities of the roadways along this route are projected to range from 8,000 vpd to 29,100 vpd. No sections of roadway along Route 8 are projected to be approaching or exceeding capacity in 2030. BCI scores along this route are projected to range from D to E, with Crab Creek Road receiving a high priority for improvements (BCI score of E).

- **System Linkages**

#### **Existing Bicycle Networks**

North Carolina Bicycle Route 8 is part of a network of bicycle routes that have been mapped and signed by NCDOT statewide. This route connects NC Bicycle Route 2 (Mountains to Sea) in northern Transylvania County with NC Bicycle Route 6 (Piedmont Spur) in Lincoln County. In Transylvania County, this route serves the communities of Pisgah Forest and Little River. Route 8 intersects with several mapped bicycle routes in Transylvania County, including: Route 1 (near Pisgah Forest and in Little River), Route 2 (at the Blue Ridge Parkway), Route 3 (in Pisgah Forest), and Route 4 (twice in Little River).

### **Transportation Plans**

Bicycle Route 8 is designated as an on-road bicycle facility on the CTP. The Sylvan Valley Parkway, a proposed highway improvement, will likely force the closure of sections of Davidson River Road—due to this, it is recommended that the alignment of Bicycle Route 8 in this area be changed. The proposed new route would continue east on US 64 past Davidson River Road to Glade Creek Road, where it would intersect with a realigned Bicycle Route 3. The route would then turn south on Glade Creek Road, then west on Old Hendersonville Road to rejoin the existing routing at Everett Road. Most of the highways along the proposed alignment of Route 8 are designated as Other Major Thoroughfares (US 276) or Minor Thoroughfares on the CTP—the section on US 64 is designated as a Boulevard. Several highway improvements are recommended along this route, including: widening of US 64 to provide a 4-lane, divided cross-section; minor widening on Old Hendersonville Road to provide 11' travel lanes; and minor widening on Everett Road to provide 11' travel lanes from Friendship Lane to Crab Creek Road. As part of the design process for each of these highway projects, shoulders and/or bicycle lanes should be considered for feasibility as incidental projects. Additionally, shoulders and/or bicycle lanes are recommended on Crab Creek Road due to the high traffic projected on this highway. On the remaining portions of Bicycle Route 8, smaller spot safety improvements and driver awareness improvements are recommended.

- **Social, Economic and Environmental Conditions**

#### **Demographic Data**

Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Along Route 8, the US 64 area, the Glade Creek Road area, the Everett Road area, and the vicinity of Crab Creek Road and Cascade Lake Road, all have a higher percentage of non-white residents than the county average. The US 64 area, the Glade Creek Road area, the Crab Creek Road area, and the vicinity of Old Hendersonville Road and Everett Road have a higher percentage of Hispanic residents than the county average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the four block groups adjacent to Route 8 ranges from \$43,781 to \$50,000—the areas with incomes lower than the county median are generally in the Pisgah Forest area (between the NC 280 intersection and the French Broad River).

#### **Economic Data**

The section of Bicycle Route 8 between the Blue Ridge Parkway and the US 64/US 276/NC 280 intersection passes through Pisgah National Forest, and is largely undeveloped (save Davidson River Campground, Schenck Job Corps Center, Looking Glass Falls, Sliding Rock, and the Cradle of Forestry in America). The section of Route 8 along US 64 passes through a commercial area with strip development. East of this commercial area, Route 8 passes through rural areas characterized by farms and scattered residential development. Commercial growth is likely along US 64, and some significant residential growth can be expected in the highlands surrounding Everett Road and Crab Creek Road.

#### **Environmental Data**

Bicycle Route 8 crosses eight National Wetland Inventory wetlands, at Looking Glass Creek (four times), Avery Creek, Turkey Creek, the French Broad River, and the Little River. The route passes through the South Fork Mills River, Upper Davidson River, and Crab Creek watersheds, all of which are High Quality Outstanding Resource watersheds—the South Fork Mills River watershed is also a water supply watershed. Much of this route passes through land owned by the U.S. Forest Service (Pisgah National Forest) or National Park Service (Blue Ridge Parkway). A property on the south side of Everett Road is part of an Agricultural Preservation district. The Biltmore Forest School, near US 276, is a National Register historic structure. Several Natural Heritage Element Occurrences are found along this route, in the following general locations: throughout Pisgah National Forest; near the US 64/US 276/NC 280 intersection; near the French Broad River bridge on Everett Road; and near the Little River bridge on Everett Road. There is a hazardous substance disposal area near the US 64/US 276/NC 280



intersection in Pisgah Forest. Several notable natural features are located along this route, including Sliding Rock, Looking Glass Rock, and Looking Glass Falls. Human environmental features along this route include several churches, campgrounds, the Little River and Pisgah Forest community centers, and the remains of the old “Pisgah Forest Gateway” on US 276.

### **Lake Toxaway Connection – County Bicycle Route**

- **Summary of Need**

There is a need to improve the facilities along the Lake Toxaway Connection Bicycle Route in Transylvania County to provide a safer bicycle facility.

- **Summary of Purpose**

Improving the facilities along this bicycle route should enable the roadways to accommodate automobiles and bicycles, while providing a safer facility for bicyclists.

- **Roadway Conditions**

  - **Existing Characteristics**

The Lake Toxaway Connection Bicycle Route begins at the intersection of NC 215 and Macedonia Church Road near Balsam Grove, where the route intersects with Bicycle Route 5. From this point, the route follows Macedonia Church Road west to Silversteen Road, then Silversteen Road west to NC 281. The bicycle route then turns south and follows NC 281 to US 64 in the Lake Toxaway community, where the route ends. Most of the roads along this route are 2-lane facilities—the section of NC 281 between Silversteen Road and Shelton Road is an unpaved facility. Speed limits on this route range from 45 miles per hour to 55 miles per hour.

  - **Existing Conditions**

2004 AADT volumes along the Lake Toxaway Connection Bicycle Route range from 300 vpd on sections of Macedonia Church Road to 2,500 vpd on sections of NC 281. Current practical capacities of the roadways along this route range from 8,000 vpd to 11,700 vpd. No sections of roadway along this route are currently approaching or exceeding capacity.

  - **Projected Conditions**

With the highway projects recommended in the CTP in place, 2030 projected traffic volumes along the Lake Toxaway Connection Bicycle Route range from 1,300 vpd (on sections of Macedonia Church Road, Silversteen Road, and NC 281) to 5,600 vpd on sections of NC 281. No sections of roadway along this route are projected to be approaching or exceeding capacity in 2030. All facilities along this route are projected to have BCI scores of D.

- **System Linkages**

  - **Existing Bicycle Networks**

The Lake Toxaway Connection Bicycle Route is part of a network of bicycle routes that have been mapped by NCDOT in Transylvania County. This route connects Bicycle Route 5 near Balsam Grove with the Lake Toxaway community.

  - **Transportation Plans**

The Lake Toxaway Connection Bicycle Route is designated as an on-road bicycle facility in the CTP. All of the highways along this route are designated as Other Major Thoroughfares (NC 215) or Minor Thoroughfares on the CTP. Several highway improvements are recommended along this route, including: minor widening on Macedonia Church Road to provide 10' travel lanes from Kitchen Loop Road to Silversteen Road; minor widening on Silversteen Road to provide 10' travel lanes; paving on NC 281 to provide 10' travel lanes from Silversteen Road to Shelton Road; minor widening on NC 281 to provide 12' travel lanes from Kim Miller Road to US 64; realignment of intersection at Macedonia Church Road and Kitchen Loop Road; and realignment of intersection at Macedonia Church Road and Silversteen Road. As part of the design process for each of these highway projects, shoulders and/or bicycle lanes should be considered for feasibility as incidental projects. On the remaining portions of this route, smaller spot safety improvements and driver awareness improvements are recommended.

- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. The area around the intersection of NC 281 and US 64 has a higher percentage of non-white residents than the county average; the area along NC 281 between US 64 and Kim Miller Road has a higher percentage of Hispanic residents than the county average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the three block groups adjacent to the Lake Toxaway Connection Bicycle Route ranges from \$34,531 to \$55,417—the areas with lower income than the county median are generally to the north and east of Silversteen Road.

- **Economic Data**

- Much of the land along this bicycle route is rural—along Macedonia Church Road and Silversteen Road, much of the land is part of Pisgah National Forest. The Lake Toxaway area is a fast-growing residential area, and is seeing increased development of vacation homes. Developable areas along this route are likely to see further residential development, especially as access to this part of Transylvania County is improved.

- **Environmental Data**

- The Lake Toxaway Connection Bicycle Route crosses five National Wetland Inventory wetlands, at the North Fork French Broad River, Lamance Creek, Parker Creek, the West Fork French Broad River, and Indian Creek. Much of this route passes through Pisgah National Forest—much of the privately-held land in the Upper West Fork French Broad River valley is protected from development by conservation easements. There is a Natural Heritage Element Occurrence near the intersection of Macedonia Church Road and NC 215. The Lake Toxaway Methodist Church, a National Register historic structure, is located near this route. This route is also adjacent to the Pisgah Astronomical Research Institute (PARI), on Macedonia Church Road.

### **Rosman Loop – County Bicycle Route**

- **Summary of Need**

- There is a need to improve the facilities along the Rosman Loop Bicycle Route in Transylvania County to provide a safer bicycle facility.

- **Summary of Purpose**

- Improving the facilities along this bicycle route should enable the roadways to accommodate automobiles and bicycles, while providing a safer facility for bicyclists.

- **Roadway Conditions**

- **Existing Characteristics**

- The Rosman Loop Bicycle Route begins at the intersection of US 178 and East Fork Road near Rosman, where the route intersects with Bicycle Route 1. From this point, the route follows US 178 south to Old Toxaway Road, then Old Toxaway Road west to Frozen Creek Road. The route turns northeast and follows Frozen Creek Road to US 64. Finally, the Rosman Loop Bicycle Route follows US 64 east to Turnpike Road, where the route terminates at an intersection with Bicycle Route 5. All of the roads along this route are 2-lane facilities. Speed limits on this route range from 45 miles per hour to 55 miles per hour.

- **Existing Conditions**

- 2004 AADT volumes along the Rosman Loop Bicycle Route range from 500 vpd on Frozen Creek Road to 7,500 vpd on US 64. Current practical capacities of the roadways along this route range from 8,000 vpd to 15,800 vpd. No sections of roadway along this route are currently approaching or exceeding capacity.

- **Projected Conditions**

- With the highway projects recommended in the CTP in place, 2030 projected traffic volumes along the Rosman Loop Bicycle Route range from 1,900 vpd on Frozen Creek Road to 13,400 vpd on US 64. With a projected PM Peak Hour directional volume-to-capacity ratio of 0.80, the section of US 64 used by the Rosman Loop Bicycle Route will

be starting to approach capacity in 2030. No other sections of roadway along this route are projected to be approaching or exceeding capacity in 2030. BCI scores along this route are projected to range from D to F, with US 178, Old Toxaway Road from the Landfill to Frozen Creek Road, and US 64 receiving a high priority for improvements (BCI score of E or F).

- **System Linkages**

- **Existing Bicycle Networks**

- The Rosman Loop Bicycle Route is part of a network of bicycle routes that have been mapped by NCDOT in Transylvania County. This route serves as a loop route, in conjunction with Bicycle Routes 1 and 5, which are intersected on opposite sides of the Town of Rosman.

- **Transportation Plans**

- The Rosman Loop Bicycle Route is designated as an on-road bicycle facility in the CTP. All of the highways along this route are designated as Other Major Thoroughfares (US 64/US 178) or Minor Thoroughfares on the CTP. Several highway improvements are recommended along this route, including: minor widening on US 178 to provide 12' travel lanes; minor widening on Old Toxaway Road to provide 10' travel lanes from the Landfill to Frozen Creek Road; minor widening on Frozen Creek Road to provide 10' travel lanes; and minor widening/straightening on US 64 to provide 12' travel lanes. As part of the design process for each of these highway projects, shoulders and/or bicycle lanes should be considered for feasibility as incidental projects. On the remaining portions of this route, smaller spot safety improvements and driver awareness improvements are recommended.

- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Areas along Frozen Creek Road, and near the landfill on Old Toxaway Road, have a higher percentage of non-white residents than the county average. No locations along this route have a high percentage of Hispanic residents. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the two block groups adjacent to this bicycle route ranges from \$41,033 to \$43,333, which is below the county median.

- **Economic Data**

- The area that the Rosman Loop Bicycle Route passes through is very rural. There are some residential developments, but the area is very isolated, and there is no commercial development to speak of. Limited residential development is likely in the area, due to the close proximity of the rear entrance to Gorges State Park, but will be constrained by the rugged topography of the area.

- **Environmental Data**

- The Rosman Loop Bicycle Route crosses three National Wetland Inventory wetlands, at Little Creek and Frozen Creek (twice). Portions of the route along Frozen Creek Road and US 64 pass through the West Fork French Broad River watershed, which is a High Quality Outstanding Resource watershed. The route passes through the northeast corner of Gorges State Park, and provides access to the park's rear entrance. The Transylvania County Landfill is located along this route, with a primary entrance off Frozen Creek Road and a rear entrance off Old Toxaway Road. There are several churches and campgrounds located along this route.

### **US 64 West (Frozen Creek Road to Jackson County Line)**

- **Summary of Need**

- There is a need to improve US 64 West in Transylvania County to provide a safer bicycle facility.

- **Summary of Purpose**

- Improving the bicycle facilities along this route should enable the roadway to accommodate automobiles and bicycles, while providing a safer facility for bicyclists.

- **Roadway Conditions**

### **Existing Characteristics**

US 64, between Frozen Creek Road and the Jackson County Line, has a 2-lane cross-section with 9' travel lanes and no shoulders. A few short sections of this road have 3 lanes (with one as a climbing lane). The speed limit along this road ranges from 45 miles per hour to 55 miles per hour. US 64 has many steep grades and sharp curves.

### **Existing Conditions**

2004 AADT volumes along this section of US 64 range from 3,900 vpd near the Jackson County Line to 5,900 vpd near Frozen Creek Road. The current practical capacity of this roadway is 11,700 vpd. No points along this section of US 64 are currently approaching or exceeding capacity.

### **Projected Conditions**

With the highway projects recommended in the CTP in place, 2030 projected traffic volumes along this section of US 64 range from 8,700 vpd to 11,100 vpd. The projected practical capacity of this roadway is 15,800 vpd. No points along this section of US 64 are projected to be approaching or exceeding capacity in 2030. The projected BCI score along this route is E, so improvements to this route should receive a high priority.

- **System Linkages**

#### **Existing Bicycle Networks**

US 64 is not currently signed or mapped as a bicycle route, but it is a logical place to provide a bicycle facility. US 64 serves as a connector between two mapped bicycle routes in Transylvania County: the Rosman Loop Bicycle Route (at the Frozen Creek Road intersection) and the Lake Toxaway Connection Bicycle Route (at the eastern NC 281 intersection). This route provides the most direct connection between the Lake Toxaway and Sapphire communities and the rest of Transylvania County, as well as providing a connection to the resort areas in southern Jackson County.

#### **Transportation Plans**

US 64, between Frozen Creek Road and the Jackson County Line, is designated as an on-road bicycle facility on the CTP. This section of US 64 is designated as an Other Major Thoroughfare on the CTP highway map. The following highway improvements are recommended on this section of US 64: widening to provide 12' travel lanes, straightening of curves, addition of climbing lanes, and improvements to the eastern intersection with NC 281. As part of the design process for these highway projects, shoulders and/or bicycle lanes should be considered for feasibility as an incidental project.

- **Social, Economic and Environmental Conditions**

#### **Demographic Data**

Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. The areas near the eastern intersection of US 64 and NC 281 and near US 64's crossing of Indian Creek have higher percentages of non-white residents than the county average. The areas near both intersections with NC 281, the intersection of US 64 and Kim Miller Road, and on the west side of Lake Toxaway have higher percentages of Hispanic residents than the county average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the three block groups adjacent to this section of US 64 ranges from \$43,333 to \$55,417—the areas south of US 64 have a median income slightly lower than the county median.

#### **Economic Data**

Most of the area surrounding US 64 West is rural, although there are also several large residential subdivisions. The area around Lake Toxaway and Sapphire is popular as a vacation area, with many of the homes in the area serving as second homes. This type of development is likely to continue in the future. Areas east of the Quebec community are more likely to stay rural—areas around Lake Toxaway and Gorges State Park are likely to grow at a faster rate.

#### **Environmental Data**

This section of US 64 crosses five National Wetland Inventory wetlands, at South Fork Flat Creek, Morton Creek, Indian Creek, the Toxaway River, and Bearallow Creek, and

passes close-by wetlands at Lake Toxaway and Rock Creek. The route touches the northern boundary of Gorges State Park, and crosses the upper portion of Toxaway Falls. The eastern end of this corridor is within the West Fork French Broad River watershed, which is a High Quality Outstanding Resource watershed. Natural Heritage Element Occurrences are found near the Jackson County Line, near Toxaway Falls, near the eastern intersection with Flat Creek Valley Road, and near Frozen Creek Road. Human environmental features along this route include several churches, campgrounds, T.C. Henderson Elementary School, the Quebec Community Center, the Sapphire post office, and the Gorges State Park temporary headquarters.

### **US 276 South (Parkview Drive to Connestee Road)**

- **Summary of Need**

There is a need to improve US 276 South in Transylvania County to provide a safer bicycle facility.

- **Summary of Purpose**

Improving the bicycle facilities along this route should enable the roadway to accommodate automobiles and bicycles, while providing a safer facility for bicyclists.

- **Roadway Conditions**

#### **Existing Characteristics**

US 276, between Parkview Drive and Connestee Road, has a 2-lane cross-section with 10' travel lanes in the City of Brevard and 9' travel lanes outside the city. The speed limit along this road ranges from 35 miles per hour to 55 miles per hour.

#### **Existing Conditions**

2004 AADT volumes along this section of US 276 range from 4,000 vpd to 6,700 vpd. The current practical capacity of this roadway ranges from 11,400 vpd to 15,800 vpd. No points along this section of US 276 are currently approaching or exceeding capacity.

#### **Projected Conditions**

With the highway projects recommended in the CTP in place, 2030 projected traffic volumes along this section of US 276 range from 5,500 vpd to 14,200 vpd. The projected practical capacities along this road range from 11,400 vpd to 66,300 vpd. No points along this section of US 276 are projected to be approaching or exceeding capacity in 2030. BCI scores along this route are projected to range from D to E, with the segment between the Brevard City Limit and Island Ford Road receiving high priority for improvements (BCI score of E).

- **System Linkages**

#### **Existing Bicycle Networks**

US 276 is not currently signed or mapped as a bicycle route, but it is a logical connection in the local bicycle network, and is currently utilized by many bicyclists. US 276 serves as a connector between the bicycle facility network in the City of Brevard and Bicycle Route 4 in the Connestee area. This route provides the most direct connection between the Connestee Falls and Cedar Mountain communities and the rest of Transylvania County.

#### **Transportation Plans**

US 276, between Parkview Drive and Connestee Road, is designated as an on-road bicycle facility on the CTP. The sections of US 276 between Parkview Drive and Wilson Road, and between Island Ford Road and Connestee Road, are designated as Other Major Thoroughfares on the CTP highway map. The section of US 276 between Wilson Road and Island Ford Road is designated as a Boulevard on the CTP highway map. The following highway improvements are recommended on this section of US 276: widening to provide a 4-lane, divided cross-section between Wilson Road and Island Ford Road and widening to provide a 3-lane cross-section between Island Ford Road and Connestee Road (with one lane serving as a climbing lane). As part of the design process for these highway projects, shoulders and/or bicycle lanes should be considered for feasibility as incidental projects. Additionally, shoulders and/or bicycle lanes are recommended on US 276 between Wilson Road and the Brevard City Limit due to the high traffic projected on this highway.

- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. The area near the intersection of US 276 and Parkview Drive has a higher percentage of non-white residents than the county average. The areas near US 276 and Bert Lane Road, and along US 276 from Island Ford Road to Conestee Road, have a higher percentage of Hispanic residents than the county average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the four block groups adjacent to this section of US 276 ranges from \$43,264 to \$56,313. The area south of the US 276/Becky Mountain Road intersection has a median income slightly lower than the county median.

- **Economic Data**

- The area surrounding this section of US 276 is generally rural. Areas on the west side of US 276 are mostly in the floodplain, and are primarily agricultural. Areas on the east side of US 276 are on steeply-sloping land, and are primarily residential. No major development is anticipated in this corridor, although scattered residential development is likely.

- **Environmental Data**

- This section of US 276 crosses the French Broad River near Wilson Road—much of US 276 between Gallimore Road and Island Ford Road is within or adjacent to the French Broad River floodplain, and often also adjacent to the river itself. Human environmental features in the area include Brevard Elementary School, Hap Simpson Park, several churches, and a campground.

### **On-road Bicycle Facilities in and around Brevard**

- **Summary of Need**

- There is a need to improve several roadways in and around the City of Brevard to provide a safer bicycle network in the area.

- **Summary of Purpose**

- Improving the bicycle facilities in this proposed bicycle network should enable the roadways to accommodate automobiles and bicycles, while providing safer facilities for bicyclists.

- **Roadway Conditions**

- **Existing Characteristics**

- Several existing roads are proposed as part of a network of on-road bicycle facilities around the City of Brevard. These include:

- Asheville Highway (US 64-276 & NC 280) from Ecusta Road to Capps Road
    - Brevard East Loop from Asheville Highway to Greenville Highway
    - Brevard West Loop from Rosman Highway to Mills Avenue/Carver Street
    - Carolina Avenue from Rosman Highway to Cashiers Valley Road (West Loop)
    - Carver Street from Cashiers Valley Road (West Loop) to Oaklawn Avenue
    - Cashiers Valley Road from Nicholson Creek Road (West Loop) to Probart Street
    - Elm Bend Road from Greenville Highway to Wilson Road
    - French Broad Avenue from Railroad Avenue (West Loop) to Neely Road (East Loop)
    - Gaston Street from Maple Avenue to Varsity Street
    - Jordan Road from Maple Avenue to Gallimore Road
    - Maple Avenue from Gaston Street to Jordan Road
    - Oakdale Street from Carver Street to Broad Street
    - Oaklawn Avenue from Carver Street to Main Street
    - Osborne Road from Asheville Highway to Old Hendersonville Road
    - Varsity Street from Broad Street to Gaston Street
    - Wilson Road from Greenville Highway to Old Hendersonville Road

- All of these roadways, with the exception of Asheville Highway, are 2-lane facilities. Asheville Highway is a 4-lane facility. Speed limits on these roads range from 25 miles per hour to 45 miles per hour.

### **Existing Conditions**

2004 AADT volumes along the roadways listed above range from 500 vpd on Jordan Road to 24,000 vpd on Asheville Highway. The current practical capacities of these roadways range from 8,000 vpd to 29,100 vpd. With a volume-to-capacity ratio of 0.91, the section of Asheville Highway between Ecusta Road and Hendersonville Highway is currently approaching capacity. No other roadways in this bicycle network are currently approaching or exceeding capacity.

### **Projected Conditions**

With the highway projects recommended in the CTP in place, 2030 projected traffic volumes on the roadways in this bicycle network are:

- Asheville Highway – 18,800 vpd to 25,800 vpd
- Brevard East Loop – 1,700 vpd to 3,700 vpd
- Brevard West Loop – 5,800 vpd to 9,400 vpd
- Carolina Avenue – 2,500 vpd to 3,200 vpd
- Carver Street – 600 vpd to 1,000 vpd
- Cashiers Valley Road – 2,100 vpd
- Elm Bend Road – 1,700 vpd to 2,600 vpd
- French Broad Avenue – 200 vpd to 1,200 vpd
- Gaston Street – 1,000 vpd
- Jordan Road – 200 vpd
- Maple Avenue – 600 vpd
- Oakdale Street – 200 vpd to 1,200 vpd
- Oaklawn Avenue – 400 vpd
- Osborne Road – 4,300 vpd
- Varsity Street – 1,000 vpd
- Wilson Road – 700 vpd to 3,200 vpd

One additional roadway that is recommended in the highway element of the CTP is proposed as part of this on-road bicycle network—a section of the Brevard West Loop between Cashiers Valley Road and Main Street, which has a projected 2030 traffic volume of 9,900 vpd. The projected practical capacities along these roadways range from 8,000 vpd to 29,100 vpd. No roadways in this bicycle network are projected to be approaching or exceeding capacity in 2030. BCI scores along these facilities are projected to range from C to E, with the segment of Asheville Highway between Ecusta Road and the Allison-Deaver House receiving high priority for improvements (BCI score of E).

- **System Linkages**

#### **Existing Bicycle Networks**

Currently, there are several mapped and signed bicycle routes passing through the Brevard area. These include Bicycle Route 1 (along Country Club Road, Broad Street, and Old Hendersonville Road), Bicycle Route 3 (along Old NC 280, NC 280, Capps Road, and Upper Glade Creek Road), Bicycle Route 6 (along Country Club Road, Illahee Road, Rosman Highway, Cashiers Valley Road, Probart Street, Oaklawn Avenue, and Main Street), and Bicycle Route 8 (along US 276 North, Hendersonville Highway, Glade Creek Road, Old Hendersonville Road, and Everett Road). Additionally, the Brevard Bikeway Phase One is a multi-use path connecting the intersection of Asheville Highway and Osborne Road with Ecusta Road at the Brevard sports complex.

#### **Transportation Plans**

All of the roadways listed as part of this Brevard area bicycle network are designated as on-road bicycle facilities on the CTP. Most of the roadways that are included in this network are designated as Minor Thoroughfares on the CTP highway map, except Asheville Highway, which is designated as a Boulevard. Several highway improvements are recommended along these roadways, including: addition of a median on Asheville Highway (NC 280) between Deaver Road and Capps Road; intersection improvements on the Brevard East Loop; intersection improvements, minor widening (12' lanes) and

new location construction on the Brevard West Loop; minor widening on Cashiers Valley Road to provide 10' travel lanes from Nicholson Creek Road to Probart Street; minor widening on Osborne Road to provide 10' travel lanes; and minor widening/straightening on Wilson Road to provide 11' travel lanes. As part of the design process for these highway projects, shoulders and/or bicycle lanes should be considered for feasibility as incidental projects. Additionally, shoulders and/or bicycle lanes are recommended on Asheville Highway (US 64-276 & NC 280) between Ecusta Road and Deaver Road due to the high traffic projected on this highway. On the remaining portions of this route, smaller spot safety improvements and driver awareness improvements are recommended. These on-road facilities will serve an important role as a connection between signed bicycle routes, planned multi-use paths, and neighborhoods around the city.

- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. In the Brevard area, several areas have a higher percentage of non-white residents than the county average, including: areas west of Caldwell Street in central Brevard (including the area around the Brevard West Loop), the area around the Brevard East Loop, the area around Brevard College, the area around the Wilson Road/Old Hendersonville Road intersection, and the area around Capps Road and Hudlin Gap Road. The following areas have a higher percentage of Hispanic residents than the county average: the area around the US 64/US 276/NC 280 intersection, areas along Old Hendersonville Road, the area around the Brevard West Loop, the area around Brevard College, and the area around Maple Avenue. Median family income in Transylvania County, from the 2000 Census, was \$45,579. The median family income in the block groups adjacent to these on-road bicycle facilities ranges from \$36,328 to \$56,313. The areas with incomes below the county median are primarily located in the western and southern portions of central Brevard and in the Pisgah Forest area.

- **Economic Data**

- The Brevard area is the central hub for commercial and residential development in Transylvania County—it is the county seat and the largest city in the county. Robust growth in residential and commercial development is likely to continue as Brevard's growth moves outward from the central city and as the downtown area grows and redevelops. Large employers in the area include local government, Brevard College, and Transylvania Community Hospital.

- **Environmental Data**

- The roadways included in the Brevard area bicycle network cross four National Wetland Inventory wetlands, at Kings Creek (on Neely Road), the French Broad River (on Wilson Road and on Elm Bend Road), and the Davidson River (on Asheville Highway). Portions of these roadways lie within or adjacent to floodplains. Part of Wilson Road passes through the Williamson Creek watershed, which is a High Quality Outstanding Resource watershed. The Allison-Deaver House, on Asheville Highway, is a National Register historic structure. Natural Heritage Element Occurrences are located near Asheville Highway and the Davidson River, and at several locations along Wilson Road. The City of Brevard's sewer treatment facility is on Wilson Road. Community facilities along these roads include South Broad Street Park, the Transylvania County Public Library, Brevard Elementary School, Brevard College, and Blue Ridge Community College.

**Recommended Multi-use Path Projects:**

As part of the development of the *Brevard Comprehensive Pedestrian Plan* (2006), several multi-use paths were proposed. The multi-use paths recommended in this CTP generally conform to that original plan, with the following three adjustments: the endpoint of the Rosman Highway Multi-use Path is extended from the former Winn-Dixie store to Cashiers Valley Road to facilitate a connection between the path system and Bicycle Route 6 on the southwestern side of Brevard;



the Old Hendersonville Road/Ecusta Road Multi-use Path is realigned to follow the adjusted alignment of Ecusta Road near Old Hendersonville Road; and the Brevard Bikeway (Phase 3) is realigned to follow the proposed alignment of the Brevard West Loop near Asheville Highway. The paths were prioritized in the original pedestrian plan in the following order:

1. Brevard Bikeway, Phase 3 – Allison Road to McLean Road
2. Brevard Bikeway, Phase 2 – Sports Complex to Pisgah National Forest
3. Gallimore Road Multi-use Path – Greenville Highway to Country Club Road
4. Asheville Highway Multi-use Path – Hospital Drive to Ecusta Road
5. Brevard West Loop Multi-use Path – McLean Road to Main Street
6. West Main Street Multi-use Path – Oaklawn Avenue to English Hills/WCCA
7. Tucker Creek Multi-use Path – English Hills/WCCA to Rosman Highway
8. Tucker Creek Multi-use Path – Rosman Highway to Country Club Road
9. Bracken Mountain Multi-use Path – WCCA to Bracken Mountain Property
10. Old Hendersonville Road Multi-use Path – Chestnut Street to Ecusta Road

Unranked:

Rosman Highway Multi-use Path – Tucker Creek to Cashiers Valley Road  
Ecusta Road Multi-use Path – Sports Complex to Old Hendersonville Road  
Brevard College Area Multi-use Path System

### **Brevard Bikeway Phase 3 – Allison Road to McLean Road**

- **Summary of Need**

There is a need to connect neighborhoods and facilitate non-vehicular travel in the area.

- **Summary of Purpose**

The purpose is to provide connectivity that should promote bicycling and walking within this area, while promoting a healthy lifestyle.

- **System Linkages**

#### **Existing Bicycle Networks**

Phase 1 of the Brevard Bikeway is a paved multi-use path that connects the Brevard sports complex on Ecusta Road with the intersection of Asheville Highway and Allison Road. There are no other existing bicycle facilities in the area near the Brevard Bikeway Phase 3.

#### **Existing Pedestrian Networks**

In addition to Phase 1 of the Brevard Bikeway, described above, there is a sidewalk along the east side of Asheville Highway between Allison Road and Osborne Road that will be incorporated into Phase 3 of the Brevard Bikeway. Intersecting roads with existing sidewalks include Deerlake Road and Fisher Road.

#### **Transportation Plans**

The proposed Brevard Bikeway Phase 3 is designated as an off-road bicycle facility on the CTP. The existing sidewalk along the east side of Asheville Highway will need to be improved, and a new-location segment between Asheville Highway/Osborne Road and Railroad Avenue/McLean Road will need to be constructed to meet this vision. The new-location segment will generally run along the west side of the proposed Brevard West Loop, except for a short deviation to access Brevard Middle School. This multi-use path will provide a connection between the Brevard Bikeway Phase 1 in northern Brevard and the Brevard West Loop Multi-use Path in west-central Brevard. As part of this project, a short spur path to connect to the Asheville Highway/Chestnut Street intersection should be constructed to allow easier access to this path from eastern sections of Brevard.

- **Social, Economic and Environmental Conditions**

#### **Demographic Data**

Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Along this proposed multi-use path, the areas near the intersections of Asheville Highway/Osborne Road and Railroad Avenue/McLean Road have a higher percentage of non-white residents than the county average. The

area near the intersection of Asheville Highway and Osborne Road and the area between Fisher Road and McLean Road have a higher percentage of Hispanic residents than the county average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the two block groups adjacent to this proposed multi-use path ranges from \$46,125 to \$48,750, which is above the county median.

**Economic Data**

The area along Asheville Highway in Brevard is a commercial corridor, and is likely to see continued commercial development in the future. The areas near the proposed Brevard West Loop are generally residential, with some light industry located near Railroad Avenue. This area is largely developed with homes, but could see limited residential infill development.

**Environmental Data**

There are no known major natural environmental features in this area. Human environmental features include Blue Ridge Community College and Brevard Middle School.

**Brevard Bikeway Phase 2 – Ecusta Road Sports Complex to Pisgah National Forest**

- **Summary of Need**

There is a need to connect neighborhoods and facilitate non-vehicular travel in the area.

- **Summary of Purpose**

The purpose is to provide connectivity that should promote bicycling and walking within this area, while promoting a healthy lifestyle.

- **System Linkages**

**Existing Bicycle Networks**

Phase 1 of the Brevard Bikeway is a paved multi-use path that connects the Brevard sports complex on Ecusta Road with the intersection of Asheville Highway and Allison Road. NC Bicycle Route 8 (Southern Highlands) runs parallel to the Brevard Bikeway Phase 2, along US 276 through Pisgah National Forest. A short section of the Brevard Bikeway Phase 2 has been constructed on the Lowe's property at the corner of Asheville Highway and Ecusta Road.

**Existing Pedestrian Networks**

Other than Phase 1 of the Brevard Bikeway and the short segment of multi-use path at Lowe's, there are no existing pedestrian facilities in this area.

**Transportation Plans**

The proposed Brevard Bikeway Phase 2 is designated as an off-road bicycle facility on the CTP. A new-location segment is proposed to follow the east side of Ecusta Road from the sports complex to Lowe's. A second new-location segment is proposed to follow the south bank of the Davidson River from Lowe's to the vicinity of Davidson River Campground in Pisgah National Forest. At present, it is recommended that bicycle crossings over Asheville Highway be accommodated at either the Ecusta Road intersection or the US 64/US 276/NC 280 intersection—in the future, however, if the bridges on Asheville Highway over the Davidson River are replaced, it should be studied whether it might be possible to accommodate an underpass for the Brevard Bikeway at this location. This multi-use path will provide a connection between the City of Brevard and the Pisgah National Forest recreational areas.

- **Social, Economic and Environmental Conditions**

**Demographic Data**

Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. The area near the intersection of Ecusta Road and Morris Road has a higher percentage of non-white residents than the county average. Areas inside Pisgah National Forest (including the Schenck Job Corps Center and Davidson River Campground area) have a higher percentage of both non-white and Hispanic residents than the county average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the two block groups adjacent to this facility ranges from \$36,328 on the east side of Asheville Highway to \$48,750 on the west side of Asheville Highway.

### **Economic Data**

The Ecusta Road corridor is a major industrial area—the former Ecusta facility, while currently closed, is a location where the county is trying to focus future industrial growth. The area near the Ecusta Road/Asheville Highway intersection is emerging as a commercial hub. Most of the areas west of Asheville Highway are within Pisgah National Forest, and not subject to future development.

### **Environmental Data**

The Brevard Bikeway Phase 2 would run parallel to the Davidson River for much of its length. The bikeway would pass through parts of Pisgah National Forest. Several Natural Heritage Element Occurrences are found along this stretch of the Davidson River in Pisgah National Forest. Human environmental features along this route include the sports complex, Pisgah Forest Elementary School, Davidson River School, and the Ecusta facility.

## **Gallimore Road Multi-use Path**

- **Summary of Need**

There is a need to connect neighborhoods and schools, and facilitate non-vehicular travel in the area.

- **Summary of Purpose**

The purpose is to provide connectivity that should promote bicycling and walking within this area, while promoting a healthy lifestyle.

- **System Linkages**

#### **Existing Bicycle Networks**

Transylvania County Bicycle Route 1 passes through the southern section of the City of Brevard along Country Club Road. There are no other existing bicycle facilities in the area near the Gallimore Road Multi-use Path.

#### **Existing Pedestrian Networks**

The section of Greenville Highway between Gallimore Road and Parkview Drive currently has a sidewalk on the north side of the street—this sidewalk will be incorporated into the proposed Gallimore Road Multi-use Path. Two streets that will intersect with the proposed path have existing sidewalks: Country Club Road and Greenville Highway.

#### **Transportation Plans**

The proposed Gallimore Road Multi-use Path is designated as an off-road bicycle facility on the CTP. The majority of the route is proposed on new location, following the south side of Gallimore Road from Country Club Road to Greenville Highway. The sidewalk on the north side of Greenville Highway between Gallimore Road and Parkview Drive will need to be upgraded to a multi-use path in order to complete the facility. This multi-use path will provide a partial loop connection through southeastern Brevard, connecting with the Tucker Creek Multi-use Path.

- **Social, Economic and Environmental Conditions**

#### **Demographic Data**

Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. There are areas along Gallimore Road and near the Greenville Highway/Parkview Drive intersection that have a higher percentage of non-white residents than the county average. There are no locations in this area with a high percentage of Hispanic residents. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the three block groups adjacent to the Gallimore Road Multi-use Path ranges from \$37,250 to \$48,563—areas with income lower than the county median are located in the vicinity of Country Club Road.

#### **Economic Data**

This section of Brevard is generally characterized by residential development, with scattered civic and office uses. Much of the area south and east of Gallimore Road is in the floodplain, and therefore undevelopable. Most of the land on the northwest side of Gallimore Road is already fully developed.

### **Environmental Data**

Much of this route is within or adjacent to the floodplain of the French Broad River. Brevard High School, Brevard Elementary School, and the Boys & Girls Club are all located along this route.

### **Asheville Highway Multi-use Path**

- **Summary of Need**

There is a need to connect neighborhoods and facilitate non-vehicular travel in the area.

- **Summary of Purpose**

The purpose is to provide connectivity that should promote bicycling and walking within this area, while promoting a healthy lifestyle.

- **System Linkages**

#### **Existing Bicycle Networks**

Phase 1 of the Brevard Bikeway is a paved multi-use path that connects the Brevard sports complex on Ecusta Road with the intersection of Asheville Highway and Allison Road. A section of the Brevard Bikeway Phase 2 exists on the Lowe's property at the intersection of Asheville Highway and Ecusta Road. There are no other existing bicycle facilities in the area near the Asheville Highway Multi-use Path.

#### **Existing Pedestrian Networks**

Other than Phase 1 of the Brevard Bikeway and the short segment of multi-use path at Lowe's, there are no existing pedestrian facilities in this area.

#### **Transportation Plans**

The proposed Asheville Highway Multi-use Path is designated as an off-road bicycle facility on the CTP. The entire route is proposed on new location, following the east side of Asheville Highway from Hospital Drive (where it connects with the Brevard Bikeway Phase 1) to Ecusta Road (where it connects with the Brevard Bikeway Phase 2). This multi-use path will provide a more direct connection between northern and central Brevard than the Brevard Bikeway.

- **Social, Economic and Environmental Conditions**

#### **Demographic Data**

Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. The neighborhoods on the east side of the Asheville Highway Multi-use Path have a higher percentage of non-white residents than the county average. No areas along this corridor have a high percentage of Hispanic residents. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the three block groups adjacent to this multi-use path ranges from \$36,328 to \$48,750—the area on the east side of the path, between Morris Road and Ecusta Road, has a median income much lower than the county median.

#### **Economic Data**

Currently, much of this corridor is lightly developed or undeveloped, although there are clusters of major commercial development near Hospital Drive and near Ecusta Road. In the future, this corridor is likely to see increased commercial development. The proposed Transylvania County Law Enforcement Center is also along this corridor.

#### **Environmental Data**

The Asheville Highway Multi-use Path crosses one National Wetland Inventory wetland, at Lambs Creek. There are several churches along this route, and Transylvania Memorial Hospital is nearby.

### **Brevard West Loop Multi-use Path**

- **Summary of Need**

There is a need to connect neighborhoods and schools, and facilitate non-vehicular travel in the area.

- **Summary of Purpose**

The purpose is to provide connectivity that should promote bicycling and walking within this area, while promoting a healthy lifestyle.

- **System Linkages**

- **Existing Bicycle Networks**

- Transylvania County Bicycle Route 6 passes through the western section of the City of Brevard along Probart Street. There are no other existing bicycle facilities in the area near the Brevard West Loop Multi-use Path.

- **Existing Pedestrian Networks**

- The section of Railroad Avenue between French Broad Avenue and Probart Street currently has a sidewalk on the east side of the street—this is on the opposite side of the street from the proposed Brevard West Loop Multi-use Path. Several streets that will intersect with the proposed path have existing sidewalks: Whitmire Street, French Broad Avenue, King Street, Probart Street, and Main Street.

- **Transportation Plans**

- The proposed Brevard West Loop Multi-use Path is designated as an off-road bicycle facility on the CTP. The entire route is proposed on new location, following the west side of the proposed Brevard West Loop from McLean Road (where it connects with the Brevard Bikeway Phase 3) to Main Street (where it connects with the West Main Street Multi-use Path). This multi-use path will provide a connection between the Brevard Bikeway in northern Brevard and the West Main Street Multi-use Path in western Brevard.

- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. Several areas along the entire length of the Brevard West Loop Multi-use Path have a higher percentage of non-white and/or Hispanic residents than the county average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the two block groups adjacent to this proposed facility ranges from \$40,000 to \$48,750. The lower-income block group is located primarily on the east side of the proposed multi-use path north of Probart Street, and on both sides of the path south of Probart.

- **Economic Data**

- North of Probart Street, the area surrounding the Brevard West Loop Multi-use Path is primarily industrial. South of Probart, the area is residential. This part of Brevard is a focus of redevelopment efforts—the city's comprehensive plan calls for future development in the industrial area, especially the area north of Whitmire Street, including industrial and mixed-use development.

- **Environmental Data**

- The proposed Brevard West Loop Multi-use Path crosses one National Wetland Inventory wetland, at Kings Creek. Much of the area between McLean Road and Whitmire Street is in the floodplain. There are no known notable human environmental features along this corridor.

### **West Main Street Multi-use Path**

- **Summary of Need**

- There is a need to connect neighborhoods and facilitate non-vehicular travel in the area.

- **Summary of Purpose**

- The purpose is to provide connectivity that should promote bicycling and walking within this area, while promoting a healthy lifestyle.

- **System Linkages**

- **Existing Bicycle Networks**

- Transylvania County Bicycle Route 6 passes through the western section of the City of Brevard along Oaklawn Avenue and Main Street (east of Oaklawn). There are no other existing bicycle facilities in the area near the West Main Street Multi-use Path.

- **Existing Pedestrian Networks**

- On Main Street, between Oaklawn Avenue and Mills Avenue, there is an existing sidewalk on the south side of the street that will be integrated into the West Main Street

Multi-use Path. Oaklawn Avenue and Mills Avenue, which will intersect with the proposed path, also have existing sidewalks.

#### **Transportation Plans**

The proposed West Main Street Multi-use Path is designated as an off-road bicycle facility on the CTP. The path will use an upgraded sidewalk on the south side of Main Street between Oaklawn Avenue and Mills Avenue. To the west of Mills Avenue, the path will be built on new location on the south side of Main Street to the end of the street, then turn south to access the WCCA property. This multi-use path will provide a connection between central Brevard and western Brevard, with connections to the Brevard West Loop Multi-use Path, Tucker Creek Multi-use Path, and Bracken Mountain Multi-use Path.

- **Social, Economic and Environmental Conditions**

#### **Demographic Data**

Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. The area around the West Main Street Multi-use Path has a higher percentage of both non-white and Hispanic residents than the county average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the two block groups adjacent to the proposed path ranges from \$37,500 to \$40,000, which is below the county median.

#### **Economic Data**

The area around this proposed multi-use path is densely-developed with residences, with the exception of the WCCA property. Future residential and mixed-use development is possible in the area of WCCA.

#### **Environmental Data**

There are no known notable human or natural environmental features in this area.

### **Tucker Creek Multi-use Path**

- **Summary of Need**

There is a need to connect neighborhoods and schools, and facilitate non-vehicular travel in the area.

- **Summary of Purpose**

The purpose is to provide connectivity that should promote bicycling and walking within this area, while promoting a healthy lifestyle.

- **System Linkages**

#### **Existing Bicycle Networks**

Transylvania County Bicycle Route 1 passes through the southern section of the City of Brevard along Country Club Road. There are no other existing bicycle facilities in the area near the Tucker Creek Multi-use Path.

#### **Existing Pedestrian Networks**

There are several existing sidewalks that can be incorporated into the proposed multi-use path, including: a sidewalk between WCCA and Hillview Avenue; a sidewalk on the south side of Hillview Avenue; a sidewalk on the west side of Cashiers Valley Road; and two sections of sidewalk on the east side of Country Club Road. Several streets that will intersect with the proposed path have sidewalks: Hillview Street, Carver Street, Mills Avenue, and Cashiers Valley Road.

#### **Transportation Plans**

The proposed Tucker Creek Multi-use Path is designated as an off-road bicycle facility on the CTP. The route will begin at the WCCA office in western Brevard, then proceed south along an upgraded sidewalk to Hillview Avenue. A new location section of path, on the west side of Hillview Avenue will connect to the existing sidewalk on Hillview Street. The path will follow an upgraded sidewalk down the south side of Hillview Street and the west side of Cashiers Valley Road to Tucker Creek. A new location segment of the path will follow Tucker Creek from this point to the point where Rosman Highway crosses the creek. The path, still on new location, will turn west along the south side of Rosman Highway to Forest Hill Road, then south along the east side of Forest Hill Road to Nicholson Creek. The path will then continue on new location along the northeast bank

of Nicholson Creek to Country Club Road. Finally, the path will utilize upgraded sidewalks and new location segments along the east side of Country Club Road to the intersection with Gallimore Road. This multi-use path will provide a partial loop connecting the West Main Street and Bracken Mountain Multi-use Paths in western Brevard with the Rosman Highway Multi-use Path in southern Brevard and the Gallimore Road Multi-use Path in southeastern Brevard. A crossing of the proposed Brevard East Loop in the vicinity of Nicholson Creek could be avoided by routing the path along the north side of that facility between Rosman Highway and Country Club Road—this option would not provide direct access to Brevard High School, however, which is a prime factor in the chosen routing.

- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County’s population in 2000 was non-white, and 1% of the county’s population was Hispanic. The area along this multi-use path with a higher than average percentage of non-white residents extends from WCCA to the junction of Forest Hill Road and Nicholson Creek. The two areas along this path with higher than average percentages of Hispanic residents are located between WCCA and Cashiers Valley Road and near the junction of Rosman Highway and Tucker Creek. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the four block groups adjacent to the Tucker Creek Multi-use Path ranges from \$37,250 to \$46,250—most of the area surrounding the path has a median income lower than the county median, with the exception of the Forest Hill Road area.

- **Economic Data**

- Most of the areas surrounding the proposed Tucker Creek Multi-use Path are residential, with scattered commercial and civic uses. Since much of the path will be built in the floodplain, development is not likely directly on the path, although some infill residential development is possible in the surrounding areas. The most likely location for commercial development along the path is along Rosman Highway.

- **Environmental Data**

- Much of the proposed path will lie within the floodplains of Tucker and Nicholson Creeks. This path will provide access to the community facilities in the English Hills area and Brevard High School.

### **Bracken Mountain Multi-use Path**

- **Summary of Need**

- There is a need to connect neighborhoods and community facilities, and facilitate non-vehicular travel in the area.

- **Summary of Purpose**

- The purpose is to provide connectivity that should promote bicycling and walking within this area, while promoting a healthy lifestyle.

- **System Linkages**

- **Existing Bicycle Networks**

- Transylvania County Bicycle Route 6 passes through the western section of the City of Brevard along Probart Street. There are no other existing bicycle facilities in the area near the Bracken Mountain Multi-use Path.

- **Existing Pedestrian Networks**

- There are no existing sidewalks or multi-use paths in the area near the Bracken Mountain Multi-use Path.

- **Transportation Plans**

- The proposed Bracken Mountain Multi-use Path is designated as an off-road bicycle facility on the CTP. The path will connect the WCCA property (where it will intersect with the proposed West Main Street Multi-use Path and Tucker Creek Multi-use Path) to the Bracken Mountain Property, owned by the City of Brevard. This entire route will be built on new location, following Tucker Creek on the east side of Probart Street and Pinnacle Road on the west side of Probart Street. This multi-use path will provide a connection between the City of Brevard and the recreational facilities planned at Bracken Mountain.

- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. The areas between WCCA and Probart Street along the proposed multi-use path have a higher percentage of non-white residents than the county average. The area around WCCA has a higher percentage of Hispanic residents than the county average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the block group surrounding the Bracken Mountain Multi-use Path is \$37,500, which is well below the county median.

- **Economic Data**

- The area surrounding the Bracken Mountain Multi-use Path is primarily residential, with the major exception of the Brevard Music Center property. This part of Brevard is not fully built-out, and further residential development can be expected in the area. The City of Brevard is planning to develop the Bracken Mountain property at the end of this path as a low-impact recreational facility, with hiking trails, picnic areas, and nature viewing stations.

- **Environmental Data**

- Portions of this proposed multi-use path will be within the floodplain of Tucker Creek. The path will also be in close proximity to two National Wetland Inventory wetlands along Pinnacle Road. Human environmental features along this path include the facilities on the WCCA property and the Brevard Music Center.

### **Old Hendersonville Road/Ecusta Road Multi-use Path**

- **Summary of Need**

- There is a need to connect neighborhoods and schools, and facilitate non-vehicular travel in the area.

- **Summary of Purpose**

- The purpose is to provide connectivity that should promote bicycling and walking within this area, while promoting a healthy lifestyle.

- **System Linkages**

- **Existing Bicycle Networks**

- Phase 1 of the Brevard Bikeway is a paved multi-use path that connects the Brevard sports complex on Ecusta Road with the intersection of Asheville Highway and Allison Road. Transylvania County Bicycle Route 1 passes through the northeastern section of the City of Brevard along Old Hendersonville Road.

- **Existing Pedestrian Networks**

- Other than the Brevard Bikeway Phase 1, described above, there are no existing pedestrian facilities in the area around the proposed Old Hendersonville Road/Ecusta Road Multi-use Path.

- **Transportation Plans**

- The proposed Old Hendersonville Road/Ecusta Road Multi-use Path is designated as an off-road bicycle facility on the CTP. The entire path would be built on new location, following Old Hendersonville Road from Neely Road/Chestnut Street to Wilson Road/realigned Ecusta Road, and following Ecusta Road (including the realigned portion of Ecusta Road) from Old Hendersonville Road to the sports complex near Pisgah Forest Elementary School. This multi-use path would connect east-central Brevard with northeastern Brevard (where it would connect with the Brevard Bikeway Phase 1 and 2). The section of this multi-use path adjacent to Old Hendersonville Road will serve as a segment of Transylvania County Bicycle Route 1.

- **Social, Economic and Environmental Conditions**

- **Demographic Data**

- Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. The areas near the Old Hendersonville Road/Neely Road intersection and the Old Hendersonville Road/Wilson Road intersection have a higher percentage of non-white residents than the county average. The areas along Old Hendersonville Road between Neely Road and Lambs Creek have a higher percentage



of Hispanic residents than the county average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the two block groups adjacent to the proposed multi-use path ranges from \$36,328 in the areas north of Lambs Creek to \$46,125 in the areas south of Lambs Creek.

**Economic Data**

The areas surrounding the proposed Old Hendersonville Road/Ecusta Road Multi-use Path consist of an assortment of industrial, commercial, residential, and agricultural uses. Much of the area south of Old Hendersonville Road is in the floodplain and used for agriculture, while the north side of this road is mostly residential. The areas around Ecusta Road are largely industrial, with small commercial uses scattered around. This area has limited growth potential, but is likely to see industrial growth as the Ecusta property on Ecusta Road is reopened or redeveloped, and could see growth spurred by a proposed interchange with the Sylvan Valley Parkway at Osborne Road.

**Environmental Data**

The proposed path will cross one National Wetland Inventory wetland, at Lambs Creek, and will lie within or adjacent to the floodplain of the French Broad River. There is a hazardous substance disposal site on Old Hendersonville Road near Osborne Road. Human environmental features along this route include Pisgah Forest Elementary School, Davidson River School, and the Pisgah Forest Post Office.

**Rosman Highway Multi-use Path**

- **Summary of Need**

There is a need to connect neighborhoods and facilitate non-vehicular travel in the area.

- **Summary of Purpose**

The purpose is to provide connectivity that should promote bicycling and walking within this area, while promoting a healthy lifestyle.

- **System Linkages**

**Existing Bicycle Networks**

Transylvania County Bicycle Route 6 passes through the southwestern section of the City of Brevard along Cashiers Valley Road, Rosman Highway, and Illahee Road. There are no other existing bicycle facilities in the area near the Rosman Highway Multi-use Path.

**Existing Pedestrian Networks**

There are no existing sidewalks or multi-use paths in the area near the Rosman Highway Multi-use Path.

**Transportation Plans**

The proposed Rosman Highway Multi-use Path is designated as an off-road bicycle facility on the CTP. The path will be located on new location, along the south side of Rosman Highway between Forest Hill Road and Cashiers Valley Road. This multi-use path will provide a connection between far-southwestern sections of Brevard (where it will connect with Bicycle Route 6) and south-central Brevard (where it will connect with the Tucker Creek Multi-use Path). The section of the path between Illahee Road and Cashiers Valley Road will serve as a necessary link in Bicycle Route 6.

- **Social, Economic and Environmental Conditions**

**Demographic Data**

Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. The area near the intersection of Rosman Highway and Forest Hill Road has a higher percentage of non-white residents than the county average. The area along Rosman Highway between Nicholson Creek Road and Illahee Road has a higher percentage of Hispanic residents than the county average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the four block groups adjacent to the Rosman Highway Multi-use Path ranges from \$37,500 to \$47,431—the areas on the north side of Rosman Highway have a lower median income than the county median.

### **Economic Data**

The Rosman Highway corridor is currently developed with scattered commercial uses. The Brevard Land Use Plan calls for future commercial development in this corridor, and there is discussion of extending water and sewer service in this area.

### **Environmental Data**

The western end of the proposed Rosman Highway Multi-use Path is located in the Catheys Creek watershed, which is a High Quality Outstanding Resource watershed. The path also crosses the floodplain of Tucker and Nicholson Creeks. There are no known notable human environmental features along this corridor.

## **Brevard College Area Multi-use Path System**

- **Summary of Need**

There is a need to connect neighborhoods and facilities in and around the Brevard College campus, and facilitate non-vehicular travel in the area.

- **Summary of Purpose**

The purpose is to provide connectivity that should promote bicycling and walking within this area, while promoting a healthy lifestyle.

- **System Linkages**

#### **Existing Bicycle Networks**

Transylvania County Bicycle Route 1 passes through the Brevard College area along Broad Street. There are no other existing bicycle facilities in the area near the Brevard College Area Multi-use Path System.

#### **Existing Pedestrian Networks**

An existing sidewalk on the east side of Broad Street between the Brevard College gateway and Kings Creek and a recreational trail behind the College Station Shopping Center will be incorporated into the proposed multi-use path system. Broad Street and Caldwell Street, which will intersect with the proposed paths, have existing sidewalks.

#### **Transportation Plans**

The proposed paths in the Brevard College Area Multi-use Path System are designated as off-road bicycle facilities on the CTP. This system has four main segments. The first segment will be on new location, roughly following the south side of Lambo Creek from the Brevard College baseball field to Neely Road. The second segment will be on new location, connecting the baseball field with Broad Street, just south of Burger King and the Ingles Gas Station. The third segment will be on new location, running south from the Brevard College baseball field, then turning left and passing through the center of the campus to the intersection of Broad Street and Caldwell Street. The final segment is an extension of the third, which will utilize an upgraded sidewalk on Broad Street and an upgraded recreational trail behind the Food Lion shopping center, plus a short segment on new location, to reach Railroad Avenue at its crossing of Kings Creek. These multi-use paths will provide a system for movement around the Brevard College campus as well as an east-west connection across north-central Brevard—the paths will intersect with the Brevard West Loop Multi-use Path at Railroad Avenue.

- **Social, Economic and Environmental Conditions**

#### **Demographic Data**

Overall, 7% of Transylvania County's population in 2000 was non-white, and 1% of the county's population was Hispanic. The Brevard College area has a higher percentage of both non-white and Hispanic residents than the county average. Median family income in Transylvania County, from the 2000 Census, is \$45,579. The median family income in the three block groups adjacent to this multi-use path system ranges from \$40,000 to \$48,563—the areas with median income below the county median are located on the west side of Broad Street.

#### **Economic Data**

Much of the proposed path system is located on the Brevard College property—the remaining portions pass through the commercial areas along Broad Street (US 64/276). This area has seen major commercial development recently (Food Lion and Ingles shopping centers), and the college is in the process of expanding.

### **Environmental Data**

The proposed multi-use path system will cross and run adjacent to Kings Creek, which is a National Wetland Inventory wetland. Parts of the system will also be located in the Kings Creek and Lambo Creek floodplains. The stone wall and gateway at the entrance to Brevard College (at Broad Street and Caldwell Street) is a National Register historic structure. The system passes through the Brevard College property.

### **Pedestrian Map**

The NCDOT envisions that all citizens of North Carolina and visitors to the state should be able to walk and bicycle safely and conveniently to their chosen destinations with reasonable access to roadways. Information on events, funding, maps, policies, projects, and processes dealing with these modes of transportation is available by contacting the NCDOT Division of Bicycle and Pedestrian Transportation.

The NCDOT is currently in the process of developing a format for CTP pedestrian maps. The recommended pedestrian map for Transylvania County, presented in Figure 3, is presented for informational purposes only—this map is not part of the officially adopted CTP. This map classifies the pedestrian facilities into three categories depending on the type of service each facility provides. These classifications—sidewalk, off-road pedestrian facility, and multi-use path—are described in detail in Appendix B. The recommended improvements are also inventoried in Appendix C.

For the period from 1997 to 2004, there were 29 crashes reported in Transylvania County that involved pedestrians. Of these crashes, 10 occurred on city-maintained streets, 6 occurred in parking lots, 6 occurred on US routes, 4 occurred on state-maintained secondary roads, 2 occurred on NC routes, and 1 occurred on private property.

The recommended pedestrian map includes several improvements needed to provide adequate, safe, and desirable facilities for use by pedestrians. These recommendations were developed based on a needs assessment, the goals and objectives of the study area, comments received from the public, and the known environmental limitations of the study area. Most of the recommendations come directly from the *Brevard Comprehensive Pedestrian Plan (2006)*, with some minor modifications. For these recommendations to officially become part of the adopted CTP, a revised version of the Recommended Pedestrian Map will need to be adopted in the future as part of an amended Transylvania County CTP (after a final format for this map is developed by NCDOT).



INFORMATIONAL - NOT FOR ADOPTION

INFORMATIONAL - NOT FOR ADOPTION

# Pedestrian Map



## Transylvania County North Carolina

North Carolina

### Comprehensive Transportation Plan Study Report

#### Pedestrian Facilities

##### Sidewalks

- Existing
- Needs Improvement
- Recommended

##### Off-Road

- Existing
- Needs Improvement
- Recommended

##### Multi-Use Paths

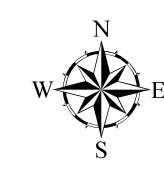
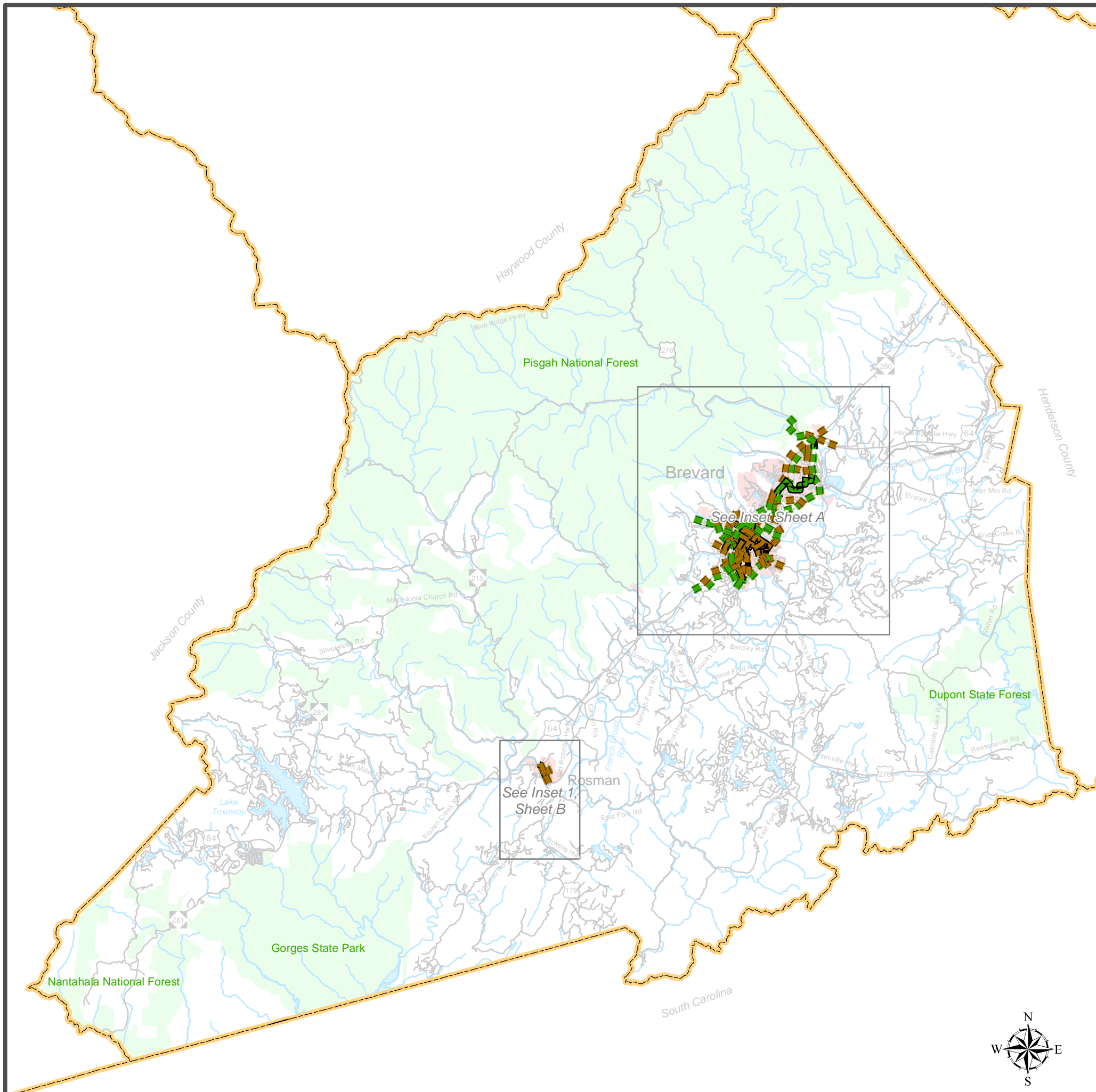
- Existing
- Needs Improvement
- Recommended



Figure 3

Base map date: December 1, 2005

Refer to CTP document for more details







INFORMATIONAL - NOT FOR ADOPTION

INFORMATIONAL - NOT FOR ADOPTION

# Pedestrian Map



## Transylvania County North Carolina

North Carolina

### Comprehensive Transportation Plan Study Report

#### Pedestrian Facilities

##### Sidewalks

- Existing
- Needs Improvement
- Recommended

##### Off-Road

- Existing
- Needs Improvement
- Recommended

##### Multi-Use Paths

- Existing
- Needs Improvement
- Recommended

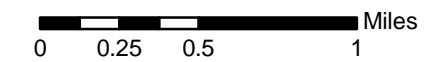
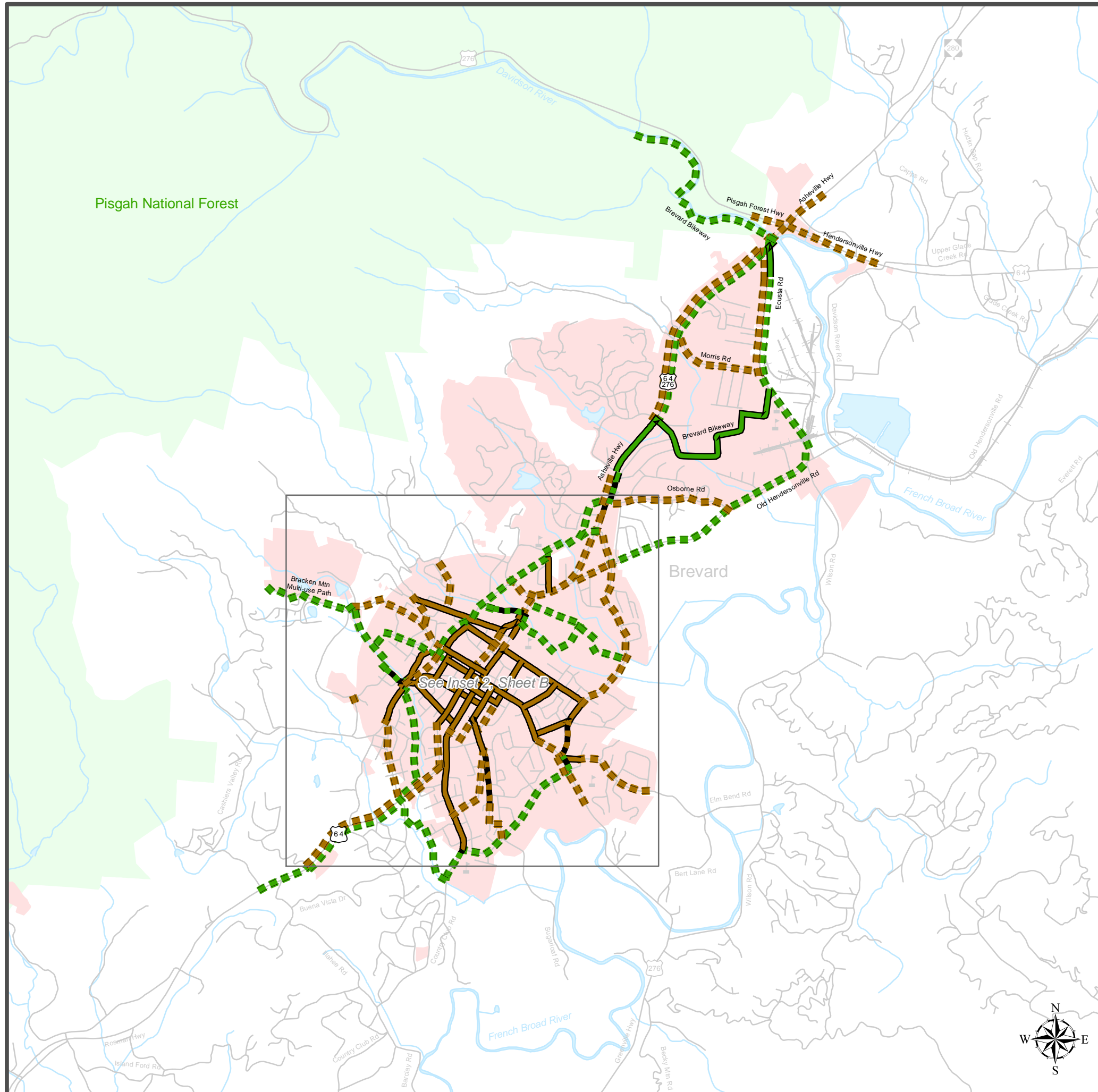


Figure 3 - Inset Sheet A

Base map date: December 1, 2005

Refer to CTP document for more details



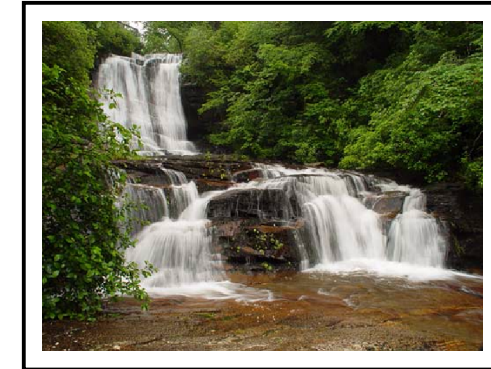




INFORMATIONAL - NOT FOR ADOPTION

INFORMATIONAL - NOT FOR ADOPTION

# Pedestrian Map



## Transylvania County North Carolina

### Comprehensive Transportation Plan Study Report

#### Pedestrian Facilities

##### Sidewalks

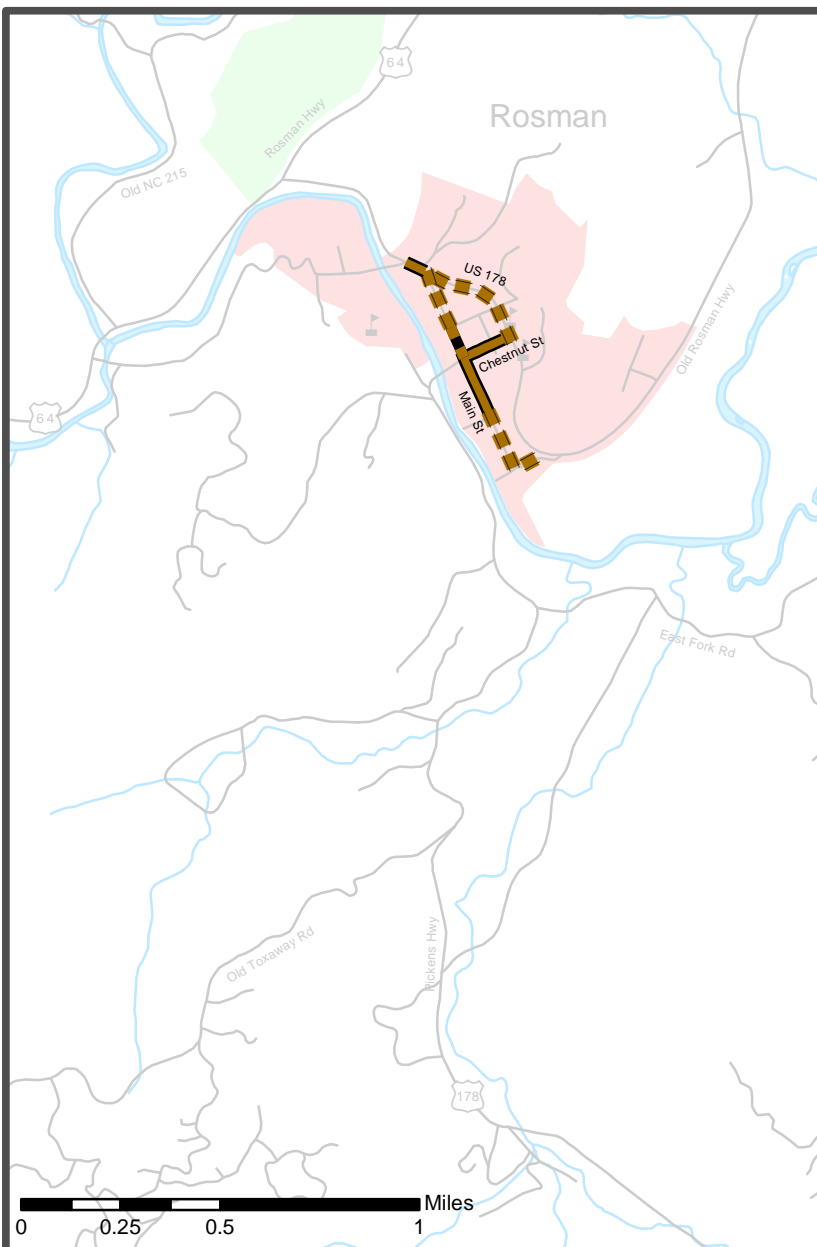
- Existing
- Needs Improvement
- Recommended

##### Off-Road

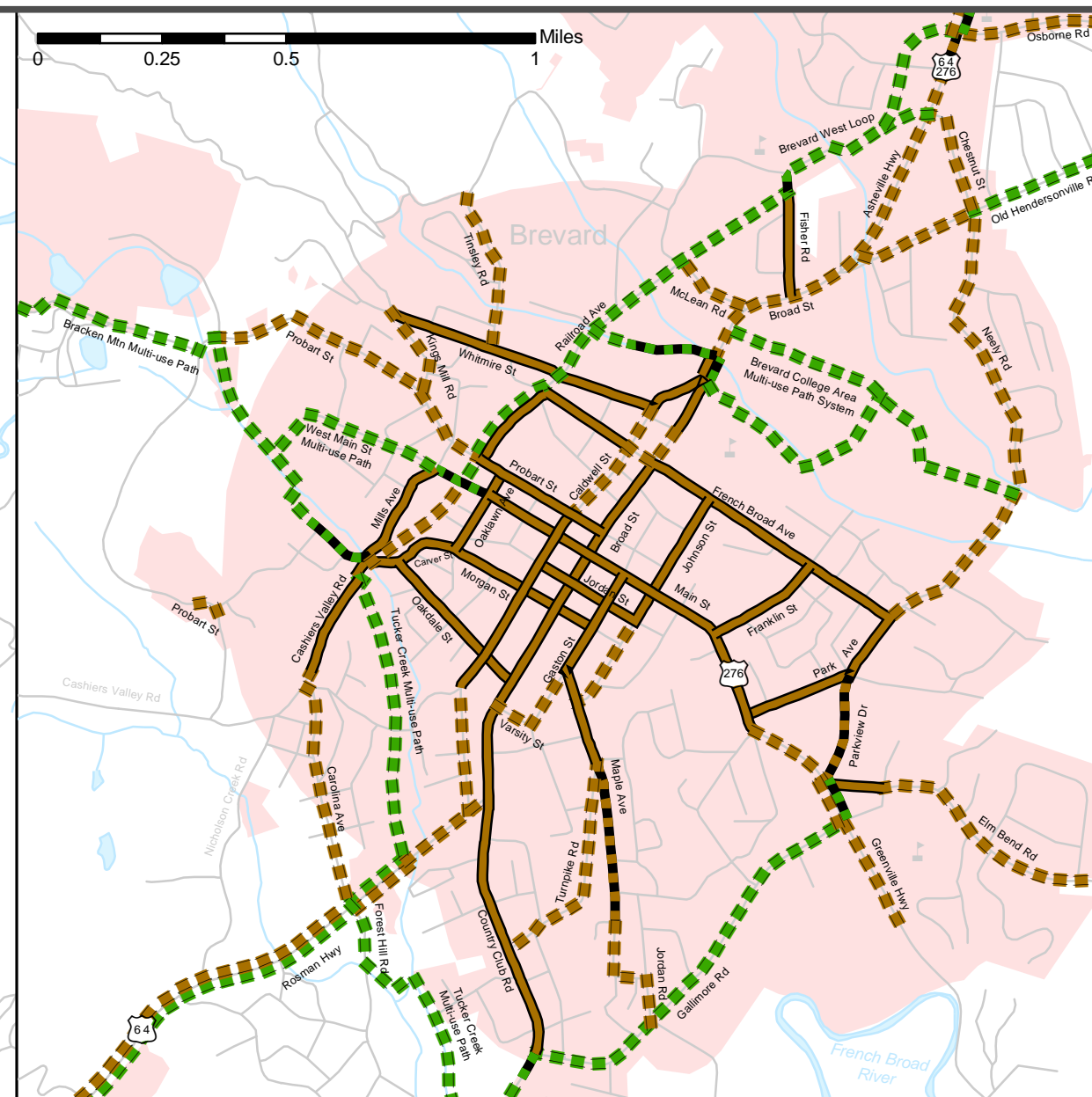
- Existing
- Needs Improvement
- Recommended

##### Multi-Use Paths

- Existing
- Needs Improvement
- Recommended



Inset 1



Inset 2

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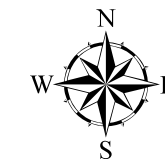


Figure 3 - Inset Sheet B

Base map date: December 1, 2005

Refer to CTP document for more details



## **Recommended Sidewalk Projects:**

The *Brevard Comprehensive Pedestrian Plan* includes many recommendations for sidewalks, including proposed sidewalks and sidewalks in need of repair or improvements. The top ten sidewalk priorities identified in that plan are:

1. Elm Bend Road in front of Brevard Elementary School
2. Probart Street from Railroad Avenue to Andante Lane
3. Neely Road from French Broad Avenue to Old Hendersonville Road
4. Morris Road from Ecusta Road to Asheville Highway
5. Deerlake Road from proposed Brevard West Loop to Deer Run
6. French Broad Avenue from Broad Street to Caldwell Street
7. Hospital Road, Medical Park Drive, and Temple Church Road
8. Johnson Street from Jordan Street to Maple Avenue
9. McLean Road from Broad Street to Railroad Avenue
10. Greenville Highway from Gallimore Road to Brevard Elementary School

## **Recommended Pedestrian Projects on Facilities with Recommended Highway Projects**

The following list shows highways that have recommended highway and pedestrian improvement projects. The pedestrian improvements along these highways should be coordinated with the proposed highway improvements to the full extent possible.

- **US 64 (Rosman Highway) – Cashiers Valley Road to Broad Street**  
This roadway is proposed for improvement to a 4-lane boulevard. There are no existing pedestrian facilities along this roadway. A multi-use path is recommended along the south side of this roadway from Cashiers Valley Road to Forest Hill Road, and along the north side of this roadway from Forest Hill Road to the crossing of Rosman Highway over Tucker Creek. A sidewalk is recommended along the north side of the roadway from Skyview Terrace to Forest Hill Road, along the south side of the roadway from Forest Hill Road to the crossing of Rosman Highway over Tucker Creek, and on both sides of the road from Tucker Creek to Broad Street.
- **US 64 (Caldwell Street) – Rosman Highway to Main Street**  
This roadway is proposed for improvement to a 3-lane major thoroughfare. There are existing sidewalks on the west side of Caldwell Street between Colwell Drive and Silversteen Drive, and on both sides of Caldwell Street between Silversteen Drive and Main Street. New sidewalks are proposed along both sides of the roadway between Rosman Highway and Colwell Drive and along the east side of the roadway between Colwell Drive and Silversteen Drive.
- **US 64/276 (Broad Street/Asheville Highway) – Caldwell Street to Allison Road**  
This roadway is proposed for improvement to a 4-lane boulevard. There are existing sidewalks on both sides of Broad Street between Caldwell Street and the crossing of Broad Street over Kings Creek, and on the east side of Broad Street between Kings Creek and Old Hendersonville Road. There are existing sidewalks on the east side of Asheville Highway between Old Hendersonville Road and Allison Road, and on the west side of Asheville Highway between Deerlake Road and Osborne Road. A multi-use path is recommended along the east side of Broad Street between Caldwell Street and Kings Creek, and on the east side of Asheville Highway between Osborne Road and Allison Road. New sidewalks are recommended along the west side of the roadway, from Kings Creek to Deerlake Road and from Osborne Road to Allison Road. Minor sidewalk gaps need to be filled in existing sidewalks in the vicinity of Deerlake Road.
- **US 64 (Hendersonville Highway) – NC 280 to Davidson River Road**  
This roadway is proposed for improvement to a 4-lane boulevard. There are no existing pedestrian facilities along this roadway. New sidewalks are recommended along both sides of this roadway from NC 280 to Davidson River Road.

- **NC 280 (Asheville Highway) – US 64/276 to Brevard City Limit**  
 This roadway is proposed for improvement to a 4-lane boulevard. There are no existing pedestrian facilities along this roadway. New sidewalks are recommended along both sides of this roadway from US 64/276 to the Brevard city limit.
- **SR 1116 (Country Club Road) – Nicholson Creek to Gallimore Road**  
 This roadway is proposed for a minor widening project. There is an existing sidewalk along the east side of this roadway between the crossing of Country Club Road over Nicholson Creek and Gallimore Road. A multi-use path is recommended along the east side of this roadway between Nicholson Creek and Gallimore Road, using parts of the existing sidewalk.
- **SR 1118 (Gallimore Road) – Country Club Road to Greenville Highway**  
 This roadway is proposed for minor improvements related to the Brevard East Loop project. There are no existing pedestrian facilities along this roadway. A multi-use path is recommended along the south side of this roadway between Country Club Road and Greenville Highway.
- **SR 1123 (Forest Hill Road) – Rosman Highway to Nicholson Creek**  
 This roadway is proposed for minor improvements related to the Brevard East Loop project. There are no existing pedestrian facilities along this roadway. A multi-use path is recommended along the east side of this roadway between Rosman Highway and the crossing over Nicholson Creek.
- **SR 1348 (Probart Street) – Hillview Avenue to 0.05 miles north of Hillview Avenue**  
 This roadway is proposed for a minor widening project. There are no existing pedestrian facilities along this section of roadway. A sidewalk is recommended along the east side of this roadway from Hillview Avenue to a point 0.05 miles to the north, to serve the public housing development in this area.
- **SR 1348 (Probart Street) – Pinnacle Road to Brevard City Limit**  
 This roadway is proposed for a minor widening project. There are no existing pedestrian facilities along this section of roadway. A multi-use path is recommended along the south side of this roadway between Pinnacle Road and Andante Lane. A sidewalk is recommended along the south side of this road between Andante Lane and the Brevard City Limit.
- **SR 1504 (Old Hendersonville Road) – Asheville Highway to Wilson Road**  
 This roadway is proposed for a minor widening project. There are no existing pedestrian facilities along this section of roadway. A multi-use path is recommended along the north side of this roadway between Neely Road/Chestnut Street and Wilson Road/Realigned Ecusta Road. A sidewalk is recommended along the north side of this road between Asheville Highway and Neely Road/Chestnut Street.
- **SR 1546 (Neely Road) – Old Hendersonville Road to French Broad Avenue**  
 This roadway is proposed for minor improvements related to the Brevard East Loop project. There are no existing pedestrian facilities along this roadway. A sidewalk is recommended along the west side of this road between Old Hendersonville Road and French Broad Avenue.
- **SR 1556 (Osborne Road) – Asheville Highway to Old Hendersonville Road**  
 This roadway is proposed for a minor widening project. There are no existing pedestrian facilities along this roadway. A sidewalk is recommended along the north side of this road between Asheville Highway and Old Hendersonville Road.
- **SR 1610 (Chestnut Street) – Asheville Highway to Old Hendersonville Road**  
 This roadway is proposed for minor improvements related to the Brevard East Loop project. There are no existing pedestrian facilities along this roadway. A sidewalk is recommended along the west side of this road between Asheville Highway and Old Hendersonville Road.
- **SR 1612 (Parkview Drive) – Park Avenue to Greenville Highway**  
 This roadway is proposed for minor improvements related to the Brevard East Loop project. There is an existing sidewalk along the west side of this road, but there is a short gap in this sidewalk that should be filled.

- Cashiers Valley Road – Tucker Creek to Mills Avenue/Carver Street**  
 This roadway is proposed for minor widening and other minor improvements as part of the Brevard West Loop project. There is an existing sidewalk along the west side of this roadway between Mills Avenue/Carver Street and the crossing over Tucker Creek. A multi-use path is recommended along the east side of this road between Mills Avenue/Carver Street and Tucker Creek.
- Railroad Avenue – Probart Street to McLean Road**  
 This roadway is proposed for minor widening and other minor improvements as part of the Brevard West Loop project. There is an existing sidewalk along the east side of this roadway between Probart Street and French Broad Avenue. A multi-use path is recommended along the west side of this road between Probart Street and McLean Road.
- Brevard West Loop (New Location) – Carver Street to Probart Street**  
 This roadway is recommended as a 2-lane minor thoroughfare on new location. A sidewalk is recommended along the west side of the road between Carver Street and Main Street. A multi-use path is recommended along the west side of the road between Main Street and Probart Street.
- Brevard West Loop (New Location) – McLean Road to Fisher Road**  
 This roadway is recommended as a 2-lane minor thoroughfare on new location. A multi-use path is recommended along the west side of the road between McLean Road and Fisher Road.
- Brevard West Loop (New Location) – 0.2 miles north of Fisher Rd. to Asheville Hwy.**  
 This roadway is recommended as a 2-lane minor thoroughfare on new location. A multi-use path is recommended along the west side of the road between Asheville Highway and a point 0.2 miles north of Fisher Road (where the multi-use path turns toward Brevard Middle School).
- Ecusta Road Realignment (New Location) – Ecusta Road to Old Hendersonville Road**  
 This roadway is recommended as a 2-lane minor thoroughfare on new location. A multi-use path is recommended along the west side of the road between Old Hendersonville Road and the existing alignment of Ecusta Road (near the railroad crossing).

**Recommended Stand-alone Pedestrian Projects**

The following list shows recommended pedestrian improvements that are not along highways with planned improvements. This list only includes recommended pedestrian improvements along roadways within the CTP highway network and major multi-use paths—sidewalks recommended along minor side streets are not included here, but can be found in the *Brevard Comprehensive Pedestrian Plan*. For a detailed description of the recommended multi-use paths, please refer to the Bicycle Recommendations section above.

- US 64/276 (Broad Street) – French Broad Avenue to Brevard College Main Entrance**  
 There is an existing sidewalk along the east side of this roadway between French Broad Avenue and the main entrance to Brevard College (between French Broad Avenue and Caldwell Street). A sidewalk is recommended along the west side of this road.
- US 64/276 (Asheville Highway) – Hospital Road to NC 280**  
 There is an existing multi-use path along the east side of this roadway between Ecusta Road and the bridge over the Davidson River. A multi-use path is recommended along the east side of this road between Hospital Road and Ecusta Road. Sidewalks are recommended along the west side of this road between Hospital Road and NC 280, and along the east side of this road between the Davidson River and NC 280.
- US 64 (Caldwell Street) – Probart Street to Whitmire Street**  
 There is an existing sidewalk along the east side of this roadway between Probart Street and French Broad Avenue. Sidewalks are recommended along the west side of this road between Probart Street and Whitmire Street, and along the east side of this road between French Broad Avenue and Whitmire Street.

- **US 178 (Pickens Highway/Old Rosman Highway) – North Main Street to Chestnut Street**  
There are no existing pedestrian facilities along this roadway. A sidewalk is recommended along the west side of this roadway, to facilitate pedestrian access to the schools along this road.
- **US 178 (Chestnut Street) – Old Rosman Highway to Main Street**  
There are existing sidewalks along both sides of this roadway, but there are some gaps in the sidewalks—these gaps should be filled.
- **US 276 (Greenville Highway) – 0.25 miles east of Gallimore Road to Wilson Drive**  
There are existing sidewalks along the north side of this roadway between Wilson Drive and a point 0.09 miles east of Gallimore Road (at Brevard Elementary). A multi-use path is recommended along the north side of this road between Gallimore Road and Parkview Drive, using the existing sidewalk location. Sidewalks are recommended along the south side of this road between Wilson Drive and a point 0.25 miles east of Gallimore Road.
- **US 276 (Pisgah Forest Highway) – NC 280 to National Forest Boundary**  
There are no existing pedestrian facilities along this roadway. Sidewalks are recommended along both sides of this road from NC 280 to the Pisgah National Forest boundary.
- **SR 1156 (Main Street – Rosman) – US 178 North to Chestnut Street**  
There are existing sidewalks along both sides of Main Street between Church Street and Chestnut Street—there are some small gaps in these sidewalks, however. A sidewalk is recommended along the west side of Main Street between US 178 North and Church Street, and it is recommended that existing gaps in the sidewalks south of Church Street be filled.
- **SR 1156 (Main Street – Rosman) – Depot Street to Old Rosman Highway**  
There are no existing pedestrian facilities along this section of roadway. A sidewalk is recommended along the west side of this road between Depot Street and Old Rosman Highway, to improve pedestrian access to southern portions of the Town of Rosman.
- **SR 1347 (Carolina Avenue) – Rosman Highway to Cashiers Valley Road**  
There are no existing pedestrian facilities along this roadway. A sidewalk is recommended along the east side of this road between Rosman Highway and Cashiers Valley Road.
- **SR 1353 (Tinsley Road) – Whitmire Street to Kings Creek Road**  
There are no existing pedestrian facilities along this roadway. A sidewalk is recommended along the west side of this road between Whitmire Street and Kings Creek Road.
- **SR 1356 (Fisher Road) – Brevard West Loop to Poplar Street**  
There is an existing sidewalk along the east side of this roadway. A multi-use path is recommended along the east side of this road, using the existing sidewalk location, between the Brevard West Loop and Poplar Street/Brevard Middle School.
- **SR 1512 (Ecusta Road) – Asheville Hwy. to .09 miles north of Old Hendersonville Rd.**  
There is an existing multi-use path along the east side of this roadway between Asheville Highway and a point 0.17 miles south of Asheville Highway (through the Lowe’s property). A multi-use path is recommended along the east side of this road from the existing path to Morris Road, and along the west side of this road from Morris Road to a point 0.09 miles north of Old Hendersonville Road (where the recommended Ecusta Road realignment will intersect). Sidewalks are recommended along the west side of this road between Asheville Highway and Morris Road.
- **SR 1543 (Elm Bend Road) – Brevard City Limit to 0.05 miles east of Magnolia Street**  
There are no existing pedestrian facilities along this section of roadway. A sidewalk is recommended along the south side of this road from the Brevard city limit to a point 0.05 miles east of Magnolia Street, where an existing sidewalk begins.
- **French Broad Avenue – Broad Street to Caldwell Street**  
There is an existing sidewalk along the south side of this roadway—this sidewalk has some small gaps, however. A sidewalk is recommended along the north side of this road between Broad Street and Caldwell Street, and it is recommended that gaps in the sidewalk on the south side of this road be filled.
- **Gaston Street – Maple Avenue to Varsity Street**  
There are no existing pedestrian facilities along this section of roadway. A sidewalk is recommended along the west side of the road between Maple Avenue and Varsity Street.

- **Johnson Street – Maple Avenue to Jordan Street**  
There are no existing pedestrian facilities along this section of roadway. A sidewalk is recommended along the east side of the road between Maple Avenue and Jordan Street.
- **Jordan Road – Gallimore Road to Maple Avenue**  
There are no existing pedestrian facilities along this roadway. A sidewalk is recommended along the west side of this road between Gallimore Road and Maple Avenue.
- **Kings Mill Road – Whitmire Street to Probart Street**  
There are no existing pedestrian facilities along this roadway. A sidewalk is recommended along the west side of this road between Whitmire Street and Probart Street.
- **Main Street (Brevard) – Oaklawn Avenue to Mills Avenue**  
There is an existing sidewalk along the south side of this roadway. A multi-use path is recommended along the south side of this road, using the existing sidewalk location, between Oaklawn Avenue and Mills Avenue.
- **Maple Avenue – Turnpike Road to Jordan Road**  
There is an existing sidewalk along the west side of Maple Avenue between Turnpike Road and Memory Lane—this sidewalk has some small gaps, however. A sidewalk is recommended along the west side of this road between Memory Lane and Jordan Road, and it is recommended that gaps in the existing sidewalk north of Memory Lane be filled.
- **McLean Road – Broad Street to Railroad Avenue**  
There are no existing pedestrian facilities along this roadway. A sidewalk is recommended along the south side of this road between Broad Street and Railroad Avenue.
- **Morris Road – Asheville Highway to Ecusta Road**  
There are no existing pedestrian facilities along this roadway. A sidewalk is recommended along the north side of this road between Asheville Highway and Ecusta Road.
- **Probart Street – Railroad Avenue to Brevard City Limit**  
There are no existing pedestrian facilities along this section of roadway. A sidewalk is recommended along the south side of this road between Railroad Avenue and the Brevard city limit.
- **Turnpike Road (Brevard) – Country Club Road to Maple Avenue**  
There are no existing pedestrian facilities along this roadway. A sidewalk is recommended along the east side of this road between Country Club Road and Maple Avenue.
- **Varsity Street – Broad Street to Gaston Street**  
There are no existing pedestrian facilities along this section of roadway. A sidewalk is recommended along the north side of this road between Broad Street and Gaston Street.
- **Brevard Bikeway (Portions not on Highway Right-of-Way)**  
Much of the proposed Brevard Bikeway is located within the right-of-way of highways, and is listed with those highways (above). Two proposed sections of this path are on independent rights-of-way, however: a 0.19 mile segment between Fisher Road and the Brevard West Loop in the vicinity of Brevard Middle School, and a 1.27 mile segment between Asheville Highway and the Davidson River Campground in Pisgah National Forest. For more information on this and other multi-use path recommendations, please refer to the Bicycle Recommendations section.
- **West Main Street Multi-use Path (Portions not on Highway Right-of-Way)**  
Parts of the proposed West Main Street Multi-use Path are located within the right-of-way of highways, and are listed with those highways (above). One proposed section of this path is not listed above: a 0.39 mile segment between Mills Avenue and the WCCA property. For more information on this and other multi-use path recommendations, please refer to the Bicycle Recommendations section.
- **Tucker Creek Multi-use Path (Portions not on Highway Right-of-Way)**  
Parts of the proposed Tucker Creek Multi-use Path are located within the right-of-way of highways, and are listed with those highways (above). Three proposed sections of this path are on independent rights-of-way, however: a 0.3 mile segment between the WCCA property and Cashiers Valley Road, a 0.57 mile segment between Cashiers Valley Road and Rosman Highway, and 0.52 mile segment between Forest Hill Road and Country Club Road. For

more information on this and other multi-use path recommendations, please refer to the Bicycle Recommendations section.

- **Bracken Mountain Multi-use Path (Portions not on Highway Right-of-Way)**  
Parts of the proposed Bracken Mountain Multi-use Path are located within the right-of-way of highways, and are listed with those highways (above). Two sections of this path are not listed above: a 0.25 mile segment between the WCCA property and Probart Street, and a 0.53 mile segment between Probart Street and the Bracken Mountain property. For more information on this and other multi-use path recommendations, please refer to the Bicycle Recommendations section.
- **Brevard College Area Multi-use Path System (Portions not on Highway Right-of-Way)**  
Parts of the proposed Brevard College Area Multi-use Path System are located within the right-of-way of highways, and are listed with those highways (above). The majority of this path system is located on independent alignment or along private campus roads. For more information on this and other multi-use path recommendations, please refer to the Bicycle Recommendations section.



### III. Alternatives Analysis

During the needs assessment that led to the development of the CTP recommendations, several different alternative solutions to problems are often considered. On particularly large or complex projects, it is often useful to examine and document many different alternatives—this information can be used to develop consensus around a preferred alternative for the CTP, and can provide valuable information later for the project development (NEPA) process. In Transylvania County, many different alternatives were studied to improve east-west travel along the US 64 corridor through the City of Brevard. These alternatives are discussed in detail below. Alternative 1 was selected as the preferred alternative for the CTP based on the transportation needs assessment and safety analysis, including consideration of known natural and human environmental features and the goals and objectives of the area. More information about this CTP recommendation is presented in Chapter 2.

#### **Alternative 1: Sylvan Valley Parkway**

Alternative 1 is the preferred alternative, which is shown on the CTP Highway Map and Figure 4a. This alternative involves a 2-lane expressway on a 4-lane right-of-way, mostly on new location. The roadway would have interchanges with US 64 near Selica Road, near US 276 at Wilson Road, near Old Hendersonville Road at Osborne Road, with US 64 near Davidson River Road, and with NC 280 near Hudlin Gap Road. Figure 4a shows the proposed alignment of this alternative.

Alternative 1 serves as a viable alternative for through-traffic on the US 64, US 276, and NC 280 corridors, due to its design (higher travel speed and less interruption of travel flow). Additionally, due to the access control afforded by an expressway design, it is able to carry a higher number of vehicles (25,500 vpd) than a typical 2-lane rural highway (15,800 vpd). Projected 2030 traffic volumes, assuming all highway projects in this CTP are built, on this alternative are: 10,200 vpd between US 64 West and US 276 South; 16,400 vpd between US 276 South and Old Hendersonville Road; 17,600 vpd between Old Hendersonville Road and US 64 East; and 10,900 vpd between US 64 East and NC 280 East. The maximum projected 2030 PM Peak Hour volume-to-capacity ratio on the Sylvan Valley Parkway is 0.73, meaning that this facility will operate an acceptable level of service with two travel lanes, as proposed. This alternative would divert enough traffic from the existing US 64 route through Brevard to alleviate the current congestion on that facility. If the Sylvan Valley Parkway is built, the maximum projected 2030 volume on the existing US 64 route through Brevard would be 25,800 vpd. The maximum projected 2030 PM Peak Hour volume-to-capacity ratio along the existing US 64 corridor with this alternative is 0.75, meaning that the road is projected to operate at an acceptable level of service.

In addition to the ability of Alternative 1 to accommodate the anticipated traffic, this alternative represents a true long-term solution to through-traffic problems in Brevard. The road will connect with US 64 West at a point where that highway already has access control and will connect with NC 280 at Little Mountain, which is the likely northern extent of urban development in the Brevard area (due to the difficulty of extending water and sewer service up the mountain). The roadway will also be expandable to 4-lanes in the future, as traffic volumes merit, with a potential capacity around 60,000 vpd. This will essentially create a high-speed, high-capacity corridor for through-traffic from the Rosman area to the Henderson County Line.

The proposed alternative has several potential impacts that should be noted. The proposed alignment would place a significant amount of new roadway surface within the floodplain of the French Broad River; measures will need to be taken to ensure that the effects of this are minimized and/or mitigated. Additionally, the roadway will likely involve the taking of a number of structures, and will pass through several developed areas, including: the Hudlin Gap Road, Upper Glade Creek Road, Cemetery Road, Davidson River Road, Bert Lane Road, Sugarloaf Road, Buena Vista Drive, and Illahee Hills areas. Measures should be taken in the final design to

minimize the number of structure takings, property impacts, and the visual/noise impacts on these neighborhoods. Finally, while the intention in designating this facility as an expressway instead of a freeway is to allow the potential for some side roads (especially in areas that will lose their primary access road as a result of this recommendation) to have at-grade access to this roadway; these possible connections will have to be studied in more detail in the future to determine if they are having a detrimental effect on the functioning of the expressway and if further improvements (turn lanes, median barriers, street closures, or grade separations) are necessary.

## **Alternative 2: Wilson Road Boulevard (Eastern Option)**

Alternative 2, as shown on Figure 4b, would create a 4-lane boulevard between US 276 South and NC 280 East, and a 2-lane minor thoroughfare between US 64 West and US 276 South. The improvements would largely follow existing roadways—including Hudlin Gap Road, Old Hendersonville Road, Wilson Road, Gallimore Road, and Buena Vista Drive—but would also include some connections on new location. This alternative reaches the farthest east of any alternative, intersecting with US 64 East in the vicinity of Glade Creek Road (the other three alternatives intersect with US 64 East in the vicinity of Davidson River Road). Improvements to alignment would need to be made on some existing road segments to allow higher-speed traffic (55 miles per hour).

Alternative 2 serves as a viable alternative for through-traffic between US 276 South and US 64 East/NC 280 East, but is not a very attractive route for traffic using US 64 West. Instead, US 64 West traffic uses Alternative 2 to go around Brevard, primarily at times of peak congestion in town, rather than as an attractive alternate route at other times of day. Because this alternative does not have control of access, roadway capacities are lower—14,440 vpd on the 2-lane thoroughfare and 29,100 to 31,700 vpd on the 4-lane boulevard. Projected 2030 traffic volumes, assuming all highway projects recommended in this CTP are built, range from 6,000 vpd to 9,200 vpd on the 2-lane section, and from 7,100 vpd to 16,800 vpd on the 4-lane section. The maximum projected 2030 PM peak hour volume-to-capacity ratio on this facility is 0.68, meaning that this facility will operate at an acceptable level of service as proposed. This alternative would not divert enough traffic from the existing US 64 route through Brevard to significantly reduce the current congestion on that facility, but it would provide some relief, helping to prevent congestion from getting worse. The maximum projected 2030 traffic volume on the existing US 64 route through Brevard with this alternative is 30,700 vpd. The maximum projected 2030 PM peak hour volume-to-capacity ratio along the existing US 64 corridor is 0.84, meaning that the road is projected to operate at an acceptable level of service, but will be starting to approach capacity.

Alternative 2 represents a short-term solution that keeps traffic congestion in Brevard in check, at least through the planning horizon year of 2030. This alternative is potentially less intrusive to both the natural and human environments, since it utilizes existing roadways as much as possible and minimizes new location construction. This alternative also allows continued access to the developed areas surrounding the corridor. This alternative is also anticipated to cost less than a new location expressway alternative, since it requires fewer structures and less right-of-way. By using the existing Wilson Road corridor through the French Broad River floodplain, this alternative can reduce impacts on the floodplain, compared to a new location alignment (although Wilson Road would require widening in this alternative).

Alternative 2 was not selected as the CTP preferred alternative due to the following concerns, when considered in relation to the benefits listed above. First, this alternative does not represent a true bypass alternative for US 64 traffic. Under most circumstances, US 64 traffic will be able to travel through Brevard faster than it could travel around Brevard on this facility. Second, while it is possible to implement some control of access on thoroughfare and boulevard facilities, the level of access control is much lower than that on an expressway. For this reason, it is likely that development along this proposed facility would limit its capacity and force the lowering of speed limits from 55 miles per hour to 35 or 45 miles per hour (further reducing the attractiveness of this alternative to drivers). Additionally, with 2030 traffic volumes on the existing US 64 corridor are

projected to begin approaching capacity even with this alternative in place. Therefore, this alternative may only meet short term needs and not adequately provide the travel service needed further in the future. Finally, since this alternative does not allow for a boulevard facility at the south end of Brevard (between US 276 South and US 64 West), it does not meet the vision outlined in the statewide Strategic Highway Corridors initiative—constructing a boulevard facility at that location is possible, but undesirable due to the nature of the neighborhood streets the proposed route incorporates.

### **Alternative 3: Wilson Road Boulevard (Western Option)**

Alternative 3, as shown in Figure 4c, would create a 4-lane boulevard between US 276 South and US 64/276, a 2-lane minor thoroughfare between US 64 West and US 276 South, and a 4-lane boulevard around Pisgah Forest to connect with US 64 East and NC 280 East. The improvements would largely follow existing roadways—including Hudlin Gap Road, Davidson River Road, Ecusta Road, Wilson Road, and Buena Vista Drive—but would also include some connections on new location. This alternative takes advantage of the existing Wilson Road/Ecusta Road corridor through eastern Brevard, but includes an alternative route (partial loop) around the congested Pisgah Forest Gateway area. Improvements to alignment would need to be made on some existing road segments to allow higher-speed traffic (55 miles per hour).

Alternative 3 is very similar to Alternative 2 in terms of projected traffic—it is a viable alternative for through-traffic between US 276 South and US 64 East/NC 280 East, but is not an attractive route for traffic on US 64 West. Like Alternative 2, this alternative does not have control of access, so its capacity is lower—14,400 vpd on the 2-lane thoroughfare, and 29,100 vpd on the 4-lane boulevards. Projected 2030 traffic volumes, assuming all highway projects recommended in this CTP are built, range from 5,900 vpd to 9,000 vpd on the southern 2-lane section, from 3,800 vpd to 15,300 vpd on the 4-lane Wilson/Ecusta Road section, and from 5,500 vpd to 12,700 vpd on the 4-lane Pisgah Forest Loop. The maximum projected 2030 PM peak hour volume-to-capacity ratio on this facility is 0.66, meaning that this facility will operate at an acceptable level of service as proposed. This alternative would not divert enough traffic from the existing US 64 route through Brevard to significantly reduce the current congestion on that facility, but it would provide some relief, helping to prevent congestion from getting worse. The maximum projected 2030 traffic volume on the existing US 64 route through Brevard with this alternative is 30,100 vpd. The maximum projected 2030 PM peak hour volume-to-capacity ratio along the existing US 64 corridor is 0.83, meaning that the road is projected to operate at an acceptable level of service, but will be starting to approach capacity.

Like Alternative 2, Alternative 3 represents a short-term solution that keeps traffic congestion in Brevard in check, at least through the planning horizon year of 2030. This alternative is potentially less intrusive to both the natural and human environments, since it utilizes existing roadways as much as possible and minimizes new location construction. This alternative also allows continued access to the developed areas surrounding the corridor. This alternative is also anticipated to cost less than a new location expressway alternative, since it requires fewer structures and less right-of-way. By using the existing Wilson Road corridor through the French Broad River floodplain, this alternative can reduce impacts on the floodplain, compared to a new location alignment (although Wilson Road will require widening). It may also be possible to realign this alternative, providing a direct connection between Wilson Road and Davidson River Road, and negating the need for widening of Ecusta Road; however, this would impact the Brevard Wastewater Treatment Plant and may be more costly, due to the need for three bridges (including one to replace the substandard and flood-prone railroad underpass on Davidson River Road).

Alternative 3 was not selected as the CTP preferred alternative due to the following concerns, when considered in relation to the benefits listed above. First this alternative does not represent a true bypass alternative for US 64 traffic—under most circumstances, US 64 traffic will be able to

travel through Brevard faster than it could travel around Brevard on this facility. Second, while it is possible to implement some control of access on thoroughfare and boulevard facilities, the level of access control is much lower than that on an expressway. For this reason, it is likely that development along this proposed facility would limit its capacity and force the lowering of speed limits from 55 miles per hour to 35 or 45 miles per hour (further reducing the attractiveness of this alternative to drivers). Additionally, with 2030 traffic volumes on the existing US 64 corridor are projected to begin approaching capacity even with this alternative in place. Therefore, this alternative may only meet short term needs and not adequately provide the travel service needed further in the future. Finally, since this alternative does not allow for a boulevard facility at the south end of Brevard (between US 276 South and US 64 West), it does not meet the vision outlined in the statewide Strategic Highway Corridors initiative—constructing a boulevard facility at that location is possible, but undesirable due to the nature of the neighborhood streets the proposed route incorporates.

#### **Alternative 4: Sylvan Valley Parkway (Wilson Road Alignment)**

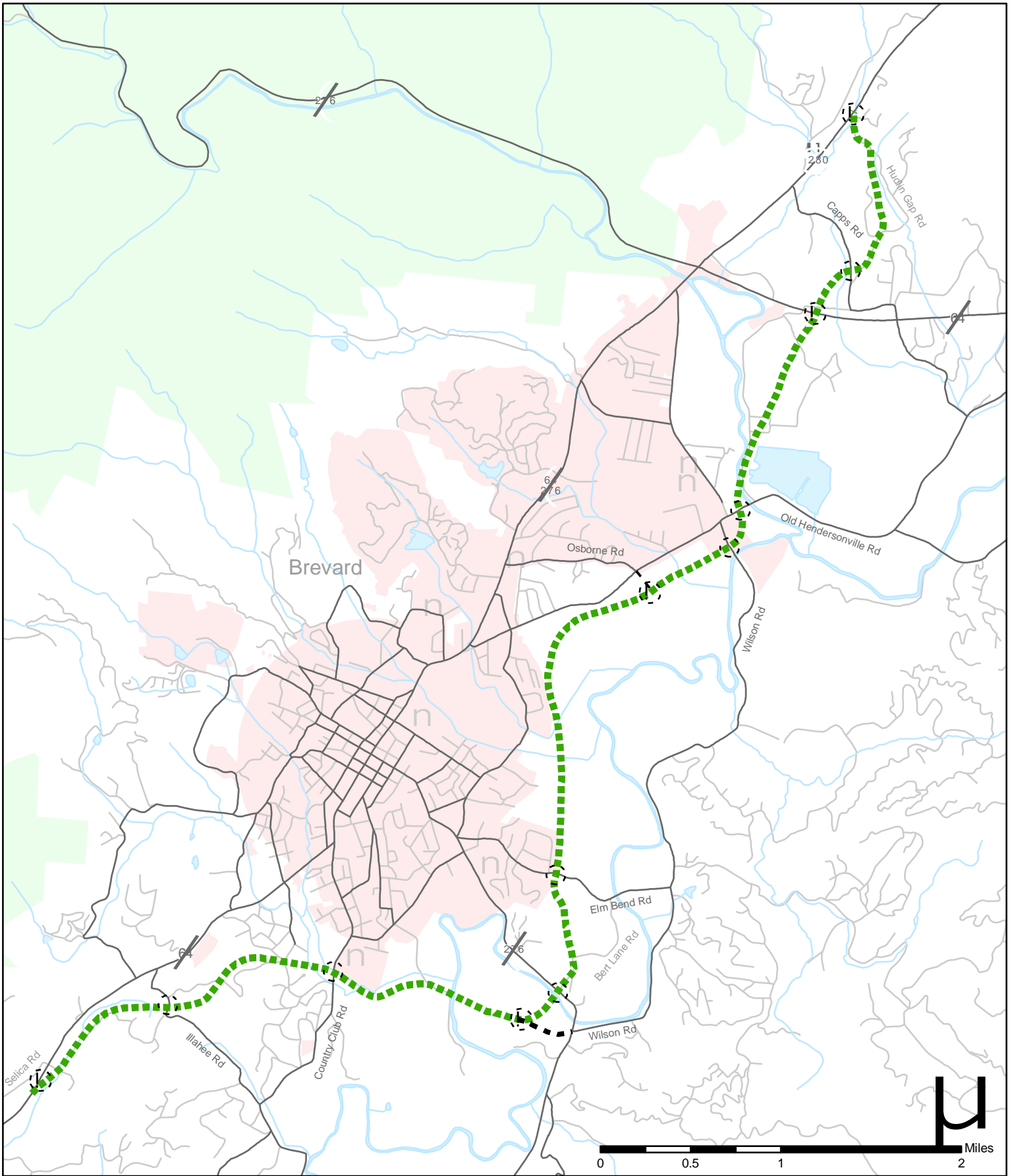
Alternatives 1-3 were presented to local officials and the public in the summer and fall of 2006. As a result of the comments received during this process, a fourth alternative was developed and tested. Alternative 4, as shown in Figure 4d, calls for a 2-lane expressway on 4-lane right-of-way, similar to Alternative 1, but uses the existing Wilson Road corridor along the east side of the French Broad River instead of a new location alignment along the west side of the river. This alternative would have interchanges at: US 64 West near Selica Road, US 276 South at Wilson Road, the vicinity of Elm Bend Road and Williamson Creek Road, the vicinity of Glen Cannon Drive, Wilson Road near the Brevard Wastewater Treatment Plant, US 64 East near Davidson River Road, and NC 280 East near Hudlin Gap Road.

Alternative 4 serves as a viable alternative for through-traffic on the US 64, US 276, and NC 280 corridors, due to its design (higher travel speed and less interruption of travel flow). Additionally, due to the access control afforded by an expressway design, it is able to carry a higher number of vehicles (25,500 vpd) than a typical 2-lane rural highway (15,800 vpd). Projected 2030 traffic volumes, assuming all highway projects recommended in this CTP are built, on this alternative are: 9,800 vpd between US 64 West and US 276 South; 16,200 vpd between US 276 South and Elm Bend Road/Williamson Creek area; 18,900 vpd between Elm Bend Road and the Glen Cannon area; 19,600 vpd between Glen Cannon and Wilson Road north; 16,200 vpd between Wilson Road and US 64 East; and 11,600 vpd between US 64 East and NC 280 East. The maximum projected 2030 PM peak hour volume-to-capacity ratio on this facility is 0.82, meaning that the road is projected to operate at an acceptable level of service in 2030, but will be starting to approach capacity—for this reason, four lanes may be necessary on this facility. This alternative would divert enough traffic from the existing US 64 route through Brevard to alleviate some of the congestion on that facility. The maximum projected 2030 traffic volume on the existing US 64 route through Brevard with this alternative is 26,800 vpd (higher than in Alternative 1, but lower than in Alternatives 2 and 3). The maximum projected 2030 PM peak hour volume-to-capacity ratio along the existing US 64 corridor with this alternative is 0.80, meaning that the road is projected to operate at an acceptable level of service.

In addition to the ability of Alternative 4 to accommodate the anticipated traffic, this alternative represents a true long-term solution to through-traffic problems in Brevard. The road will connect with US 64 West at a point where that highway already has access control and will connect with NC 280 at Little Mountain, which is the likely northern extent of urban development in the Brevard area (due to the difficulty of extending water and sewer service up the mountain). The roadway will also be expandable to 4-lanes in the future, as traffic volumes merit, with a potential capacity around 60,000 vpd. This will essentially create a high-speed, high-capacity corridor for through-traffic from the Rosman area to the Henderson County Line. Unlike Alternative 1, this alignment will follow an existing roadway (Wilson Road) through much of the French Broad River floodplain, having a smaller impact on that natural feature—this is important in terms of flood control, water quality, and visual impacts.

There are several items of concern with Alternative 4, relative to Alternative 1, which tend to outweigh the benefits listed above. The primary difference and greatest disadvantage of Alternatives 4 when compared to Alternative 1 is it requires the upgrading of an existing thoroughfare to an expressway facility. Existing Wilson Road passes through a residential area, and has a number of driveways and intersections. Upgrading this road to an expressway would require the removal of many driveways along this facility, and would require major intersection improvements. At major intersections, interchanges would likely be necessary (including Elm Bend Road, Williamson Creek Road, and Glen Cannon Drive), while right-in/right-out access could be provided at minor intersections (i.e. Long Branch Road, Middlemount Road). This would have a major impact on access and quality of the human environment in these residential areas, and would likely require the taking of homes and businesses in areas where alternative access cannot be provided. This removal of existing roadway access is a relatively unlikely scenario, but is not an impossibility. As with Alternative 1, this alternative would also pass through developed areas along Hudlin Gap Road, Upper Glade Creek Road, Cemetery Road, Davidson River Road, Sugarloaf Road, Buena Vista Drive, and in the Illahee Hills neighborhood. A number of structures would likely be taken for this roadway; therefore, measures would need to be taken in the final design to minimize the number of structure takings, property impacts, and the visual/noise impacts on these neighborhoods. Alternative 4 was not selected as the preferred alternative because it was determined that achieving an expressway facility on existing Wilson Road is less practical than Alternative 1, due to the major impact this would have on adjacent neighborhoods and the anticipated high cost of maintaining access to, or purchasing, affected properties.



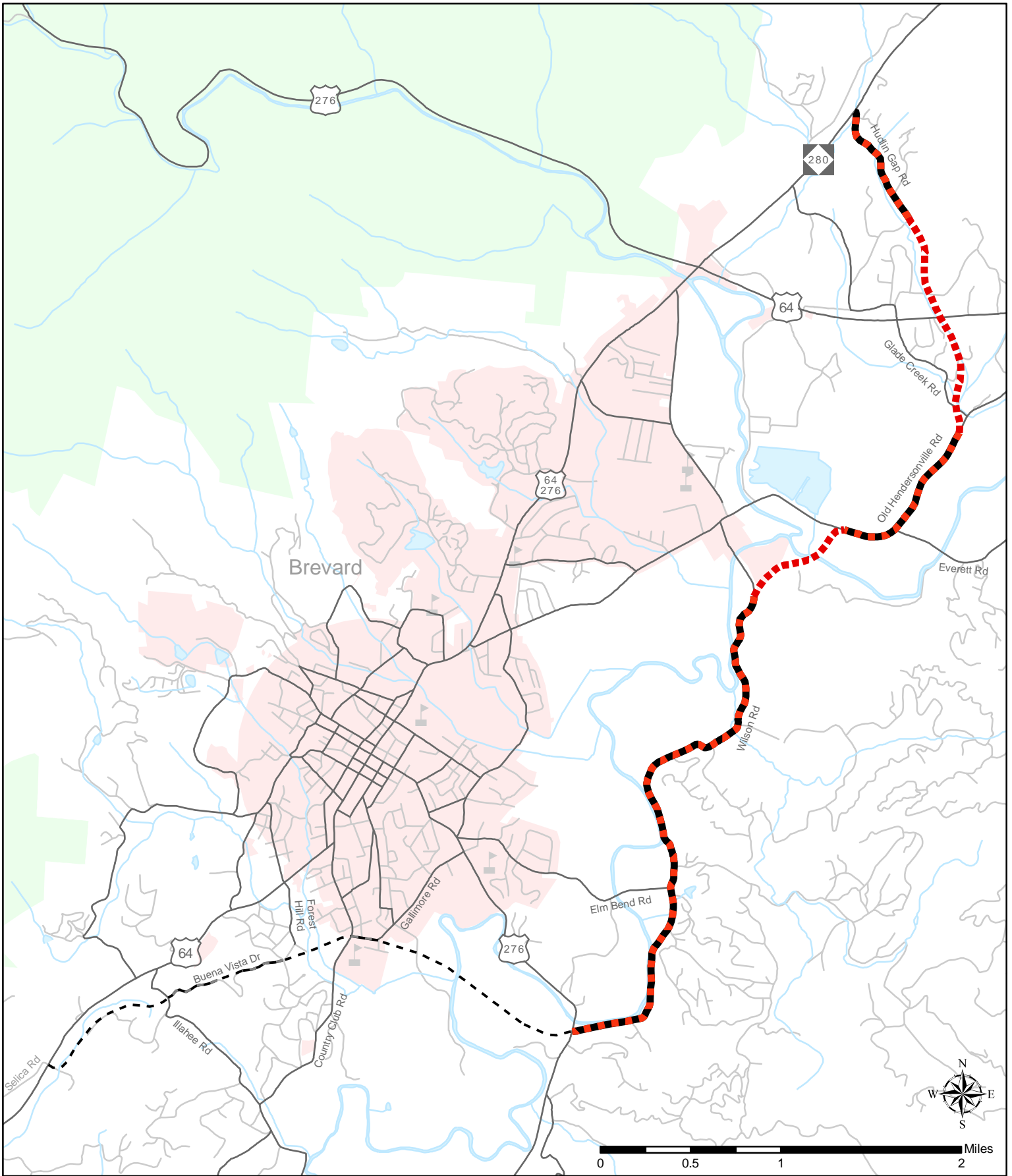


**Figure 4a: Alternative 1 - Sylvan Valley Parkway (New Location, CTP Preferred Alternative)**

<b>Expressway</b>	<b>Other Major Thoroughfare</b>	<b>Minor Thoroughfare</b>	Proposed Interchange
Existing	Existing	Existing	Proposed Grade Separation
Needs Improvement	Needs Improvement	Needs Improvement	
Recommended	Recommended	Recommended	



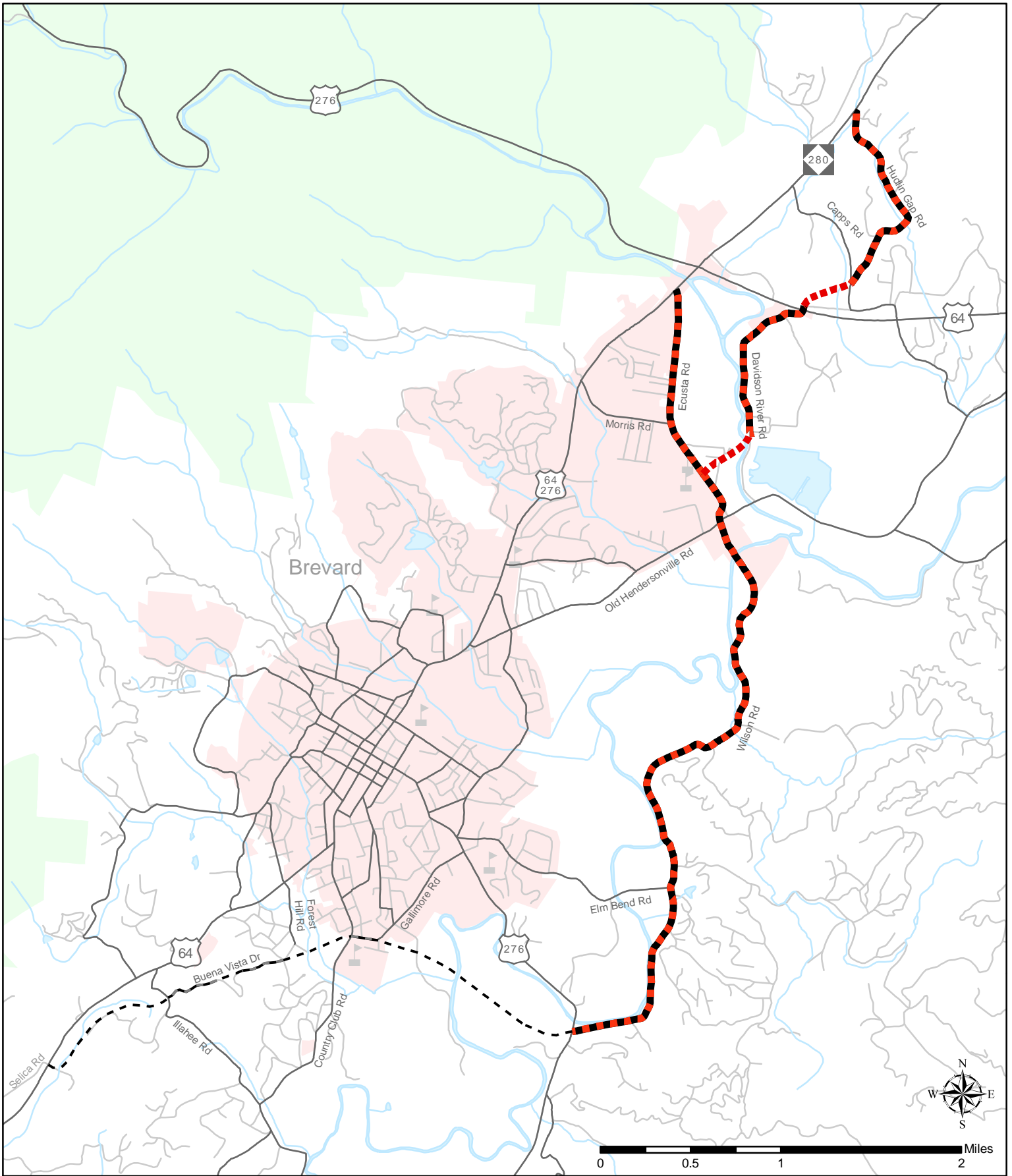




**Figure 4b: Alternative 2 - Wilson Road Boulevard (Eastern Option)**

- |                   |                           |
|-------------------|---------------------------|
| <b>Boulevard</b>  | <b>Minor Thoroughfare</b> |
| Existing          | Existing                  |
| Needs Improvement | Needs Improvement         |
| Recommended       | Recommended               |

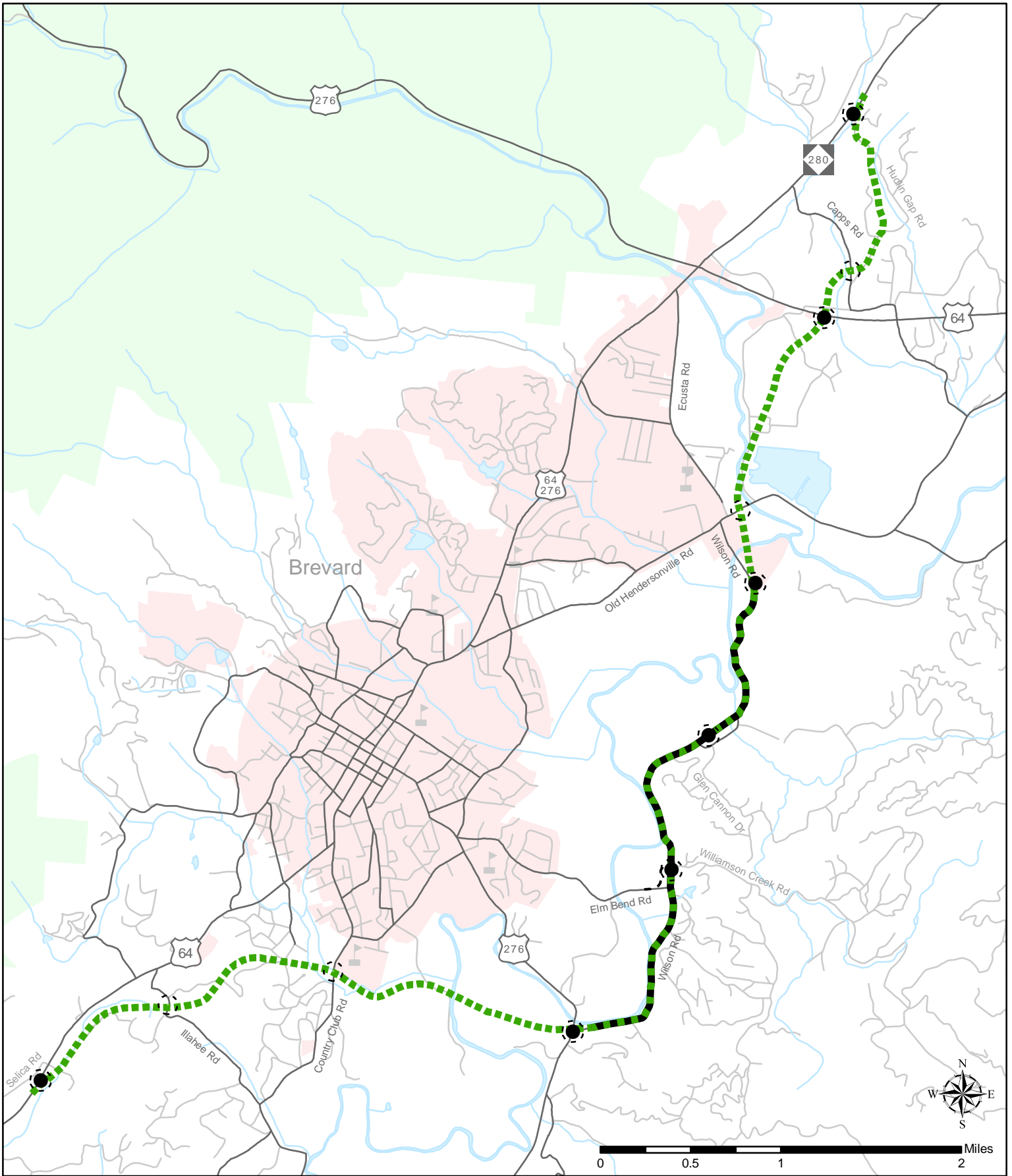











**Figure 4c: Alternative 3 - Wilson Road Boulevard (Western Option)**

- |                   |                           |
|-------------------|---------------------------|
| <b>Boulevard</b>  | <b>Minor Thoroughfare</b> |
| Existing          | Existing                  |
| Needs Improvement | Needs Improvement         |
| Recommended       | Recommended               |





**Figure 4d: Alternative 4 - Sylvan Valley Parkway (Wilson Road Alignment)**

- |  |   |   |
|--|---|---|
| <b>Expressway</b>  | <b>Minor Thoroughfare</b>   |  Proposed Interchange      |
|  Existing          |  Existing          |  Proposed Grade Separation |
|  Needs Improvement |  Needs Improvement |   |
|  Recommended       |  Recommended       |   |



## **Variations on Alternatives 1-4**

### **Southern End Variation on Alternatives 1 and 4**

One possible variation on Alternatives 1 and 4 would involve the construction of the northern sections of these alternatives (between NC 280 East and US 276 South) as expressways and the southern sections (between US 276 South and US 64 West) as 2-lane thoroughfares. This option would help to ease congestion on the existing US 64 route through Brevard, but would also be more sensitive to the neighborhoods along the southern end of the proposed route. This option would adequately handle projected 2030 traffic volumes—it would not, however, meet the vision of the statewide Strategic Highway Corridors map, and would not be easily expandable to meet future long-range traffic growth.

### **Southern End Variation on Alternatives 2 and 3**

One possible variation on Alternatives 2 and 3 would involve the realignment of the southern section of these alternatives to follow Forest Hill Road to US 64 West, instead of Buena Vista Drive. Forest Hill Road is a relatively less-developed roadway, and could more easily accommodate a boulevard cross-section, allowing a potential 4-lane facility for the whole length of these two alternatives. However, this would increase congestion on US 64 in the southwestern portion of Brevard. For this reason, either major access control measures would need to be taken on US 64 between Forest Hill Road and Selica Road (where control of access begins) or a minor thoroughfare parallel to US 64, using an upgraded Buena Vista Drive and a new location connection to US 64 at Selica Road, would be necessary to accommodate traffic in this area. This option would also increase the travel time between US 64 West and US 64 East via the proposed route, making this an even less-attractive option.

## **Alternatives Dropped from Consideration**

### **Widening Existing US 64 Corridor through Brevard**

Widening NC 280 between Hudlin Gap Road and US 64, US 64 between NC 280 and the Brevard Unbalanced Couplet, and US 64 between the Brevard Unbalanced Couplet and Selica Road to 6 lanes, and converting the proposed Brevard Unbalanced Couplet to a One-way Pair facility would allow more traffic to flow through central Brevard and relieve congestion on this facility. However, this alternative would have a severe impact on existing development along this corridor, and would essentially create a high-speed facility through the center of town, which is not in keeping with the local land use vision. For these reasons, this alternative is not recommended.

### **Improvements to Wilson Road and Ecusta Road Only**

Improvements to Wilson Road and Ecusta Road—including widening to four lanes, straightening curves, and realigning the intersections at Old Hendersonville Road—would divert a significant amount of through-traffic between US 276 South and points north and east of Brevard. This action alone would not significantly reduce congestion on US 64 through Brevard, however, since this alternative would not provide a connection to US 64 West. This alternative also would not address congestion at the US 64/US 276/NC 280 intersection.

### **4-lane Brevard West Loop and 4-lane Brevard East Loop**

Widening of the proposed Brevard in-town loop system (West Loop and/or East Loop) would provide relief to traffic congestion in downtown Brevard. These options, however, would not address existing and projected congestion along the US 64/276 corridor northeast of downtown or the US 64 West corridor. These options also would not address congestion at the US 64/US 276/NC 280 intersection in Pisgah Forest. Additionally, these options would have a severe impact on the residential neighborhoods these roads travel through, and would not meet the local land use vision for these neighborhoods.

### **New Location Bypass on West Side of Brevard**

Constructing a bypass on new location to the west of Brevard, through Pisgah National Forest, could reduce congestion in downtown Brevard by diverting through-traffic between US 64 West and US 64/NC 280 East. This option would not accommodate traffic headed to or from US 276 South, and would not provide an access point to central Brevard. This option would have to pass through very rugged, mountainous terrain, and would require a substantial amount of cutting and filling. This option would mostly lie within Pisgah National Forest, and would be clearly visible from many locations in Brevard. It is possible that, given the long grades and circuitous route through mountainous terrain, this option would not provide a reasonable alternative to the existing US 64 corridor in terms of travel time savings. Given the large environmental impact, and the limited ability of this option to facilitate traffic movement, this option is not recommended.

### **1998 Recommended Bypass Alignment**

The last Brevard Thoroughfare Plan (1998) recommended a 2-lane bypass on a 4-lane right-of-way that intersected with US 64/276 just north of Morris Road, US 276 South just south of the Brevard City limit, and US 64 West just west of Forest Hill Road/Carolina Avenue. This proposed alignment would not address existing and projected congestion in northeastern Brevard and the Pisgah Forest area, and along US 64 West in southwestern Brevard. Several major structures have been built, or are proposed, along this alignment—these include the medical buildings surrounding Transylvania Memorial Hospital, a retirement/nursing home, and the Transylvania County Law Enforcement/Justice Center. For these reasons, this alignment is no longer recommended.

### **Partial Bypass (NC 280 East to US 276 South)**

Constructing only the portion of Alternative 1 (Sylvan Valley Parkway) between NC 280 East and US 276 South would provide an attractive route for through-traffic between points south of Brevard and points east of Brevard. This option would not, however, accommodate east-west through-traffic on the US 64 corridor, and would not reduce projected congestion along the existing US 64 corridor significantly. For this reason, this alignment, as a stand-alone project, is not recommended. If, however, the full proposed Sylvan Valley Parkway is constructed in phases, this segment is the logical choice for the first phase (with the segment between US 276 South and US 64 West comprising the second phase). This segment of the proposed parkway carries a significant amount of traffic, and its construction would reduce the strain on Wilson Road, the Brevard East Loop, and other local roadways.

### **Bypass Alignment with Northern Terminus at US 64**

Constructing only the portion of Alternative 1 (Sylvan Valley Parkway) between US 64 West and US 64 East would provide an attractive route for through-traffic between points south and west of Brevard and the Hendersonville area. This option would not, however, accommodate through-traffic with an origin or destination in Asheville (a substantial portion of through-traffic), as this traffic would be forced through the US 64/US 276/NC 280 intersection in Pisgah Forest. For this reason, this alignment is not recommended.

### **Access Management on Existing US 64 Corridor through Brevard**

Implementing control of access and closing intersections/removing signals from the existing US 64 corridor through Brevard would increase the capacity of the existing facility, thereby reducing congestion. With the built-up nature of this area, however, and the future land use vision of this corridor as a suburban-style commercial area, this option would be very expensive, and not in keeping with the community vision. Access management strategies should be used on the US 64 corridor wherever possible, but are not recommended as the sole solution to congestion along this route.



## IV. Population, Land Use, and Roadway System

In order to fulfill the objectives of an adequate long-range transportation plan, reliable forecasts of future travel patterns must be achieved. Such forecasts depend on careful analysis of the following items: historic and potential population changes, significant economic trends, character and intensity of land development, and the ability of the existing transportation system to meet existing and future travel demand. Secondary items that influence forecasts include the effects of legal controls such as zoning ordinances and subdivision regulations, availability of public utilities and transportation facilities, and topographic and other physical features of the planning area.

### Population

Since the volume of traffic on a roadway is related to the size and distribution of the population that it serves, population data are used to aid the development of the transportation plan. The 2005 base year population in this analysis was based on the 2000 Census and county building permit data from 2000 through 2005. Future population estimates in this study were based on a five-county economic analysis performed during the development of the French Broad River MPO Travel Demand Model. The 2005 base-year population of Transylvania County used in this analysis is 29,539 and the 2030 projected population is 51,336. These totals were approved for use in this study by the Transylvania County Board of Commissioners on June 27, 2005 (base year data) and January 9, 2006 (future year data).

### Land Use

Land use refers to the physical development patterns within an area. The demand for trips on a particular transportation facility is related to the land uses adjacent to and connected by the facility. The intensity of the land use adjacent to a transportation facility affects the volume of traffic; for example, a shopping center generates higher volumes of traffic than a similarly sized low-density residential area. The spatial distribution of varying land uses is the primary determinant of when, where, and why congestion occurs. Different land use types have different travel patterns associated with them, based on such factors as the proximity of other land uses and the time of day. For this study, land use has been divided into the following categories:

- Residential – All land that is used for housing, excluding hotels and motels (expressed in terms of the number of households). This is further broken into categories based on the number of persons per household, children per household, and workers per household.
- Commercial/Industrial/Institutional – All land that is used by any type of business, government, or non-profit organization (expressed in terms of the number of employees). This is further broken into the following categories:
  - Highway Retail – retail businesses that are auto-oriented (often along major highways), such as gas stations and restaurants
  - Retail – all retail businesses that are not categorized as Highway Retail, such as general merchandise stores and specialty stores
  - Service – businesses or institutions that provide services rather than goods, such as medical offices and schools
  - Office – businesses or institutions that are primarily administrative, and have less customer interface, such as financial institutions, insurance offices, and government agencies
  - Industrial – businesses that produce or handle goods, such as manufacturing plants, trucking firms, construction companies, and farms

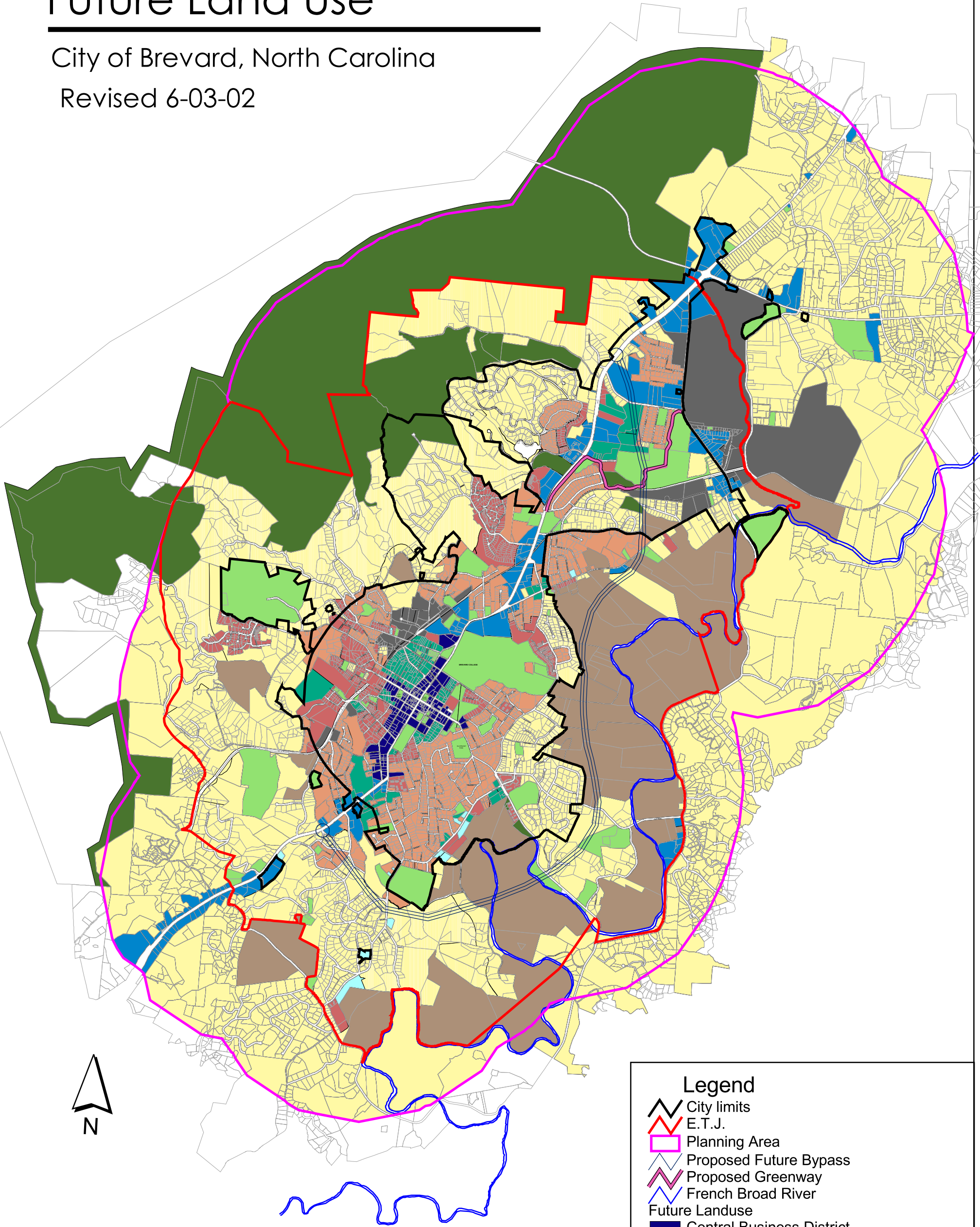
Projections of future land use for this study were based on the Transylvania County Comprehensive Plan and the Brevard Vision 2020 Plan. Figure 5 shows the future land use map for the Brevard planning area.



# Future Land Use

City of Brevard, North Carolina

Revised 6-03-02



## Legend

- City limits
- E.T.J.
- Planning Area
- Proposed Future Bypass
- Proposed Greenway
- French Broad River
- Future Landuse**
- Central Business District
- Mixed Use - Neighborhood
- Mixed Use - Boulevard
- Isolated/Neighborhood Business
- Industrial
- Public / Semi-Public / Institutional
- Residential - Low Density
- Residential - Medium Density
- Residential - High Density
- Natural Resource / Rural Conservation
- Agricultural



## **Roadway System**

An important step in the development of a CTP is the analysis of the existing roadway system and its ability to serve the travel needs of the planning area. Emphasis is placed not only on detecting the existing deficiencies, but also on understanding the causes of these deficiencies. Travel deficiencies may be localized, resulting from problems with inadequate pavement width, intersection geometry, or intersection controls. Travel deficiencies may also result from system problems, such as the need for construction of missing travel links, bypass routes, loop facilities, or radial facilities.

An analysis of the roadway system looks at both current and future travel patterns and identifies existing and anticipated deficiencies. This is usually accomplished through a vehicle collision analysis, roadway capacity analysis, and system deficiency analysis. This information, along with population growth, economic development potential, and land use trends, is used to analyze the future transportation system and develop recommendations for system improvements.

### ***Vehicle Collision Analysis***

Vehicle collisions are often used as an indicator for locating congestion problems. While often the result of driver error or vehicle performance, collisions may also be associated with the physical characteristics of a roadway. Roadway conditions and obstructions, traffic conditions, and weather conditions may all contribute to the occurrence of a collision. While some collisions are the fault of the driver, others may be prevented with physical design or traffic control changes, such as the installation of stop signs or traffic signals.

Crash data for the period from January 1, 2001 to December 31, 2003 were studied as part of the development of this report. This analysis involved the evaluation of both high-crash intersections (intersections with five or more crashes during the analysis period) and linear segments of state-maintained highways (US, NC, and SR routes). For the high-crash intersection analysis, intersection crash rates were determined (number of crashes per 100 million vehicles entering the intersection) and compared to the countywide average intersection crash rate of 64.68 crashes per 100 million entering vehicles. For the highway segment analysis, crash rates were determined for each segment of highway (number of crashes per 100 million vehicle miles traveled on the facility) and compared to statewide average crash rates published by the NCDOT Traffic Engineering and Safety Systems Branch. The statewide crash rates are based on the same three year period included in this analysis, and are categorized by facility type (US, NC, or SR route), urban/rural designation, and lane configuration. Table 4.1 lists the high-crash intersections in Transylvania County and Table 4.2 lists the highway segments in Transylvania County with crash rates higher than the statewide average. Figure 6 shows the locations of these high-crash intersections and highway segments.

The NCDOT is actively involved with investigating and improving many of these locations. To request a more detailed analysis of any of the locations listed in Table 4.1 or Table 4.2, or other areas of concern, please contact the Division Traffic Engineer. Contact information for the Division Traffic Engineer is included in Appendix A.

**Table 4.1 – High Crash Intersections**

<b>Map Index</b>	<b>Intersection</b>	<b>Total Collisions</b>	<b>Crash Rate (per 100 million entering vehicles)</b>	<b>Above County Average</b>
1	Main St (US 276) & Broad St (US 64/276)	31	159.05	Yes
2*	Broad St (US 64/276) & Caldwell St (US 64)	23	71.20	Yes
3	Caldwell St (US 64) & Morgan St	18	134.74	Yes
4	Broad St (US 64/276) & McLean Rd	18	52.19	No
5	Broad St (US 64/276) & French Broad Ave (SR 1544)	15	69.19	Yes
6	Broad St (US 64/276) & Fisher Rd (SR 1356)	14	41.85	No
7	Broad St (US 64) & Jordan St	14	96.86	Yes
8	Old Hendersonville Rd (SR 1504) & Davidson River Rd (SR 1518)	13	161.53	Yes
9	Broad St (US 64/276) & Probart St	18	100.85	Yes
10	Caldwell St (US 64) & Oakdale St	12	109.37	Yes
11	Asheville Hwy (US 64/276) & Chestnut St (SR 1610)	27	88.70	Yes
12	Asheville Hwy (US 64/276) & Osborne Rd (SR 1556)	17	59.83	No
13	Asheville Hwy (US 64/276) & Ecusta Rd (SR 1512)	20	70.93	Yes
14	Asheville Hwy (US 64/276) & Hospital Rd	10	33.58	No
15*	Hendersonville Hwy (US 64) & Crab Creek Rd (SR 1528)	9	85.17	Yes
16	US 64 West & NC 281 North	6	90.57	Yes
17	Broad St (US 64) & Morgan St	8	55.35	No
18	Main St (US 276) & Gaston St	8	101.47	Yes
19	Main St (US 276) & Johnson St	8	102.90	Yes
20	Old Hendersonville Rd (SR 1504) & Crab Creek Rd (SR 1528)	8	137.85	Yes
21	Greenville Hwy (US 276) & Wilson Rd (SR 1540)	7	103.11	Yes
22	Asheville Hwy (NC 280) & Capps Rd (SR 1598)	7	43.02	No
23	US 64 & US 276 & NC 280	17	57.61	No
24	Rosman Hwy (US 64) & Broad St (US 64) & Country Club Rd	6	31.95	No
25	Hendersonville Hwy (US 64) & Enon Rd (SR 1506)	7	66.25	Yes
26	Caldwell St (US 64) & French Broad Ave	6	35.81	No
27	Hendersonville Hwy (US 64) & King Rd (SR 1502)	6	68.49	Yes
28	Caldwell St (US 64) & Main St (SR 1349)	6	36.53	No
29	US 64 West & US 178 South	6	55.35	No
30	Old Rosman Hwy (SR 1388) & Calvert Rd (SR 1195) (southern intersection)	5	125.96	Yes
31	Hendersonville Hwy (US 64) & Davidson River Rd (SR 1518)	5	41.32	No
32	Asheville Hwy (US 64/276) & Deerlake Rd	5	17.40	No
33	Caldwell St (US 64) & Jordan St	5	37.43	No
34	Caldwell St (US 64) & King St	5	34.46	No
35	Old Hendersonville Rd (SR 1504) & Owen Dr	5	71.91	Yes
36	Main St (SR 1349) & England St	5	130.46	Yes
37	Broad St (US 64) & Old Hendersonville Rd (SR 1504)	6	17.94	No

\* Indicates that intersection improvements have been made since the time period of the analysis.

**Table 4.2 – Highway Segments with Crash Rates above State Average**

Route	From	To	Total Collisions	Crash Rate	Statewide Average Crash Rate
Rosman Hwy (US 64)	Kim Miller Rd (SR 1304)	Frozen Creek Rd (SR 1143)	37	204.54	171.66
Rosman Hwy (US 64)	Frozen Creek Rd (SR 1143)	NC 215	14	189.41	171.66
Rosman Hwy (US 64)	NC 215	US 178	9	180.25	171.66
Rosman Hwy (US 64)	Catheys Creek Church Rd (SR 1394)	Clement Rd (SR 1337)	8	237.21	171.66
Rosman Hwy (US 64)	Clement Rd (SR 1337)	Island Ford Rd (SR 1110)	9	143.69	86.37
Rosman Hwy (US 64)	Carolina Ave (SR 1347)	Broad St (US 64)	27	453.26	437.13
Caldwell St (US 64)	Rosman Hwy (US 64)	Oakdale St	12	500.41	323.56
Caldwell St (US 64)	Oakdale St	Main St (SR 1349)	41	1134.6	323.56
Caldwell St (US 64)	Main St (SR 1349)	French Broad Ave	19	513.36	475.54
Broad St (US 64)	Rosman Hwy (US 64)	Varsity St	22	837.14	681.09
Broad St (US 64)	Varsity St	Main St (US 276)	50	1087.2	557.83
Broad St (US 64/276)	Main St (US 276)	French Broad Ave	60	1588.3	437.13
Broad St (US 64/276)	French Broad Ave	Caldwell St (US 64)	35	934.60	437.13
Broad St (US 64/276)	Caldwell St (US 64)	Old Hendersonville Rd (SR 1504)	81	616.44	437.13
Asheville Hwy (US 64/276)	Old Hendersonville Rd (SR 1504)	Osborne Rd (SR 1556)	86	628.31	437.13
Asheville Hwy (US 64/276)	Ecusta Rd (SR 1512)	Hendersonville Hwy (US 64)	49	1035.9	424.41
Hendersonville Hwy (US 64)	Asheville Hwy (US 64/276 & NC 280)	Davidson River Rd (SR 1518)	38	500.77	171.66
Hendersonville Hwy (US 64)	Davidson River Rd (SR 1518)	Glade Creek Rd (SR 1521)	11	206.02	171.66
Hendersonville Hwy (US 64)	Glade Creek Rd (SR 1521)	McCarson Rd (SR 1509)	6	177.9	171.66
Hendersonville Hwy (US 64)	McCarson Rd (SR 1509)	Crab Creek Rd (SR 1528)	35	198.62	171.66
Hendersonville Hwy (US 64)	King Rd (SR 1502)	Henderson County Line	9	229.78	171.66
Greenville Hwy (US 276)	South Carolina Line	Cascade Lake Rd (SR 1536)	8	487.06	171.66
Greenville Hwy (US 276)	Cascade Lake Rd (SR 1536)	East Fork Rd (SR 1107)	19	215.55	171.66
Greenville Hwy (US 276)	East Fork Rd (SR 1107)	Island Ford Rd (SR 1110)	44	250.02	171.66
Greenville Hwy (US 276)	Wilson Rd (SR 1540)	Gallimore Rd (SR 1118)	19	349.83	171.66
Main St (US 276)	Franklin St	Broad St (US 64)	38	1630.8	557.83
US 178	South Carolina Line	Babb Rd (SR 1141)	6	490.99	171.66
US 178	Babb Rd (SR 1141)	Old Toxaway Rd (SR 1139)	9	235.04	171.66
US 178	Old Toxaway Rd (SR 1139)	East Fork Rd (SR 1107)	7	338.06	171.66
US 178	East Fork Rd (SR 1107)	Main St (SR 1156)	10	215.64	171.66
Chestnut St (US 178)	Main St (SR 1156)	Old Rosman Hwy (SR 1388)	10	5854.1	323.56
US 178	Chestnut St (US 178)	Main St (SR 1156)	5	1049.7	323.56
US 178	Main St (SR 1156)	Rosman Hwy (US 64)	8	401.43	171.66
Asheville Hwy (NC 280)	Hendersonville Hwy (US 64)	Capps Rd (SR 1598)	60	552.36	227.77
NC 215	Rosman Hwy (US 64)	Macedonia Church Rd (SR 1326)	17	214.55	184.65
NC 215	Macedonia Church Rd (SR 1326)	Indian Creek Rd (SR 1321)	9	268.68	184.65
NC 215	Indian Creek Rd (SR 1321)	Haywood County Line	12	357.96	184.65
NC 281	Kim Miller Rd (SR 1304)	Shelton Rd (SR 1307)	3	457.23	184.65
NC 281	Shelton Rd (SR 1307)	Silversteen Rd (SR 1309)	4	612.5	184.65

**Table 4.2 Continued**

Route	From	To	Total Collisions	Crash Rate	Statewide Average Crash Rate
NC 281	Slick Fisher Rd (SR 1306)	Jackson County Line	3	579.22	184.65
East Fork Rd (SR 1107)	Happy Acres Rd (SR 1102)	Glady Branch Rd (SR 1105)	9	376.51	355.13
East Fork Rd (SR 1107)	Walnut Hollow Rd (SR 1103)	Middle Fork Rd (SR 1131)	9	579.22	355.13
East Fork Rd (SR 1107)	Middle Fork Rd (SR 1131)	Pickens Hwy (US 178)	4	1119.2	355.13
Island Ford Rd (SR 1110)	Rosman Hwy (US 64)	Pole Miller Rd (SR 1161)	8	801.09	355.13
Island Ford Rd (SR 1110)	Country Club Rd (SR 1113)	Walnut Hollow Rd (SR 1103)	5	390.27	355.13
Illahee Rd (SR 1114)	Rosman Hwy (US 64)	Country Club Rd (SR 1116)	8	843.84	355.13
Country Club Rd (SR 1116)	Barclay Rd (SR 1207)	Illahee Rd (SR 1114)	3	901.23	355.13
Country Club Rd (SR 1116)	Illahee Rd (SR 1114)	Deerwoode Ln (SR 1117)	9	584.16	355.13
Country Club Rd (SR 1116)	Gallimore Rd (SR 1118)	Rosman Hwy (US 64)	19	598.74	407.28
Gallimore Rd (SR 1118)	Country Club Rd (SR 1116)	Jordan Rd	5	563.73	407.28
Green Rd (SR 1127)	Rosman Hwy (US 64)	Hannah Ford Rd (SR 1109)	4	484.09	355.13
Frozen Creek Rd (SR 1143)	Rosman Hwy (US 64)	Old Toxaway Rd (SR 1139)	11	358.13	355.13
Main St (SR 1156)	Old Rosman Hwy (SR 1388)	Chestnut St (US 178)	5	461.7	407.28
Cassell Rd (SR 1209)	Rosman Hwy (US 64)	Old Rosman Hwy (SR 1388)	4	3382.4	355.13
Kim Miller Rd (SR 1304)	Rosman Hwy (US 64)	Reid Rd (SR 1316)	3	702.49	355.13
Macedonia Church Rd (SR 1326)	Kitchen Loop Rd (SR 1310)	Neil Armstrong Rd	3	555.50	355.13
Cashiers Valley Rd (SR 1344)	Rosman Hwy (US 64)	Sega Lake Rd (SR 1342)	5	1325.9	355.13
Cashiers Valley Rd (SR 1344)	Sega Lake Rd (SR 1342)	Nicholson Creek Rd (SR 1346)	4	459.49	355.13
Main St (SR 1349)	Broad St (US 64)	Oaklawn Ave	36	4383.6	518.50
Fisher Rd/McLean Rd (SR 1356)	Broad St (US 64) at Fisher Rd	Tinsley Rd (SR 1353) at McLean Rd	17	2566.1	407.28
Blantyre Church Rd (SR 1501)	King Rd (SR 1502)	Henderson County Line	2	562.00	355.13
King Rd (SR 1502)	Asheville Hwy (NC 280)	King Cir (SR 1582)	7	605.37	355.13
King Rd (SR 1502)	King Cir (SR 1582)	Blantyre Church Rd (SR 1501)	3	552.48	355.13
King Rd (SR 1502)	Blantyre Church Rd (SR 1501)	Hendersonville Hwy (US 64)	10	2002.7	355.13
Grove Bridge Rd (SR 1503)	Hendersonville Hwy (US 64)	Henderson County Line	5	2565.3	355.13
Old Hendersonville Rd (SR 1504)	Everett Rd (SR 1533)	Glade Creek Rd (SR 1521)	10	388.65	355.13
Davidson River Rd (SR 1518)	Hendersonville Hwy (US 64)	Old Hendersonville Rd (SR 1504)	8	419.4	355.13
Glade Creek Rd (SR 1521)	Hendersonville Hwy (US 64)	Old Hendersonville Rd (SR 1504)	8	1076.6	355.13
Talley Rd (SR 1527)	Crab Creek Rd (SR 1528)	Henderson County Line	6	400.54	355.13
Jeter Mountain Rd (SR 1529)	Crab Creek Rd (SR 1528)	Henderson County Line	5	426.35	355.13
Everett Rd (SR 1533)	Hart Rd (SR 1534)	Crab Creek Rd (SR 1528)	10	725.95	355.13
Cascade Lake Rd (SR 1536)	Greenville Hwy (US 276)	Staton Rd (SR 1591)	8	400.54	355.13

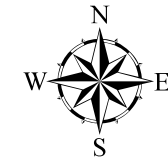


**Table 4.2 Continued**


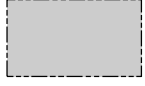


<b>Route</b>	<b>From</b>	<b>To</b>	<b>Total Collisions</b>	<b>Crash Rate</b>	<b>Statewide Average Crash Rate</b>
Wilson Rd (SR 1540)	Greenville Hwy (US 276)	Elm Bend Rd (SR 1543)	11	492.43	355.13
French Broad Ave (SR 1544)	Broad St (US 64/276)	Neely Rd (SR 1546)	19	922.47	407.28
Osborne Rd (SR 1556)	Asheville Hwy (US 64/276)	Old Hendersonville Rd (SR 1504)	21	1328.1	407.28
Reasonover Rd (SR 1560)	Cascade Lake Rd (SR 1536)	Henderson County Line	7	443.01	355.13
Capps Rd (SR 1598)	Asheville Hwy (NC 280)	Upper Glade Creek Rd (SR 1583)	10	1492.2	355.13



# FIGURE 6 CRASH LOCATIONS



## LEGEND

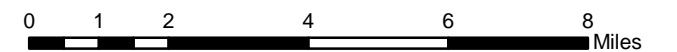
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-  MUNICIPAL BOUNDARIES
-  HIGH CRASH CORRIDORS
-  HIGH CRASH INTERSECTIONS

# TRANSYLVANIA COUNTY

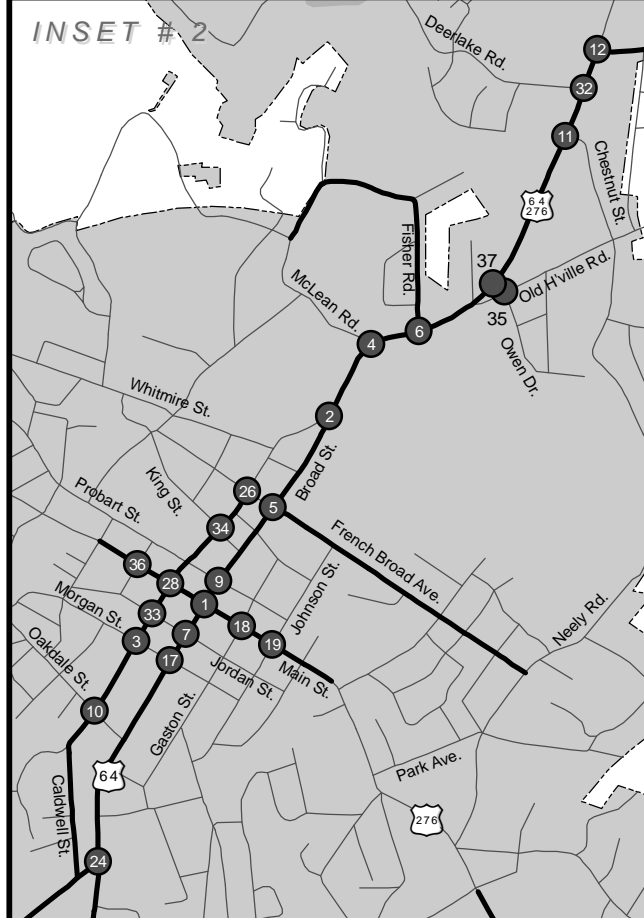
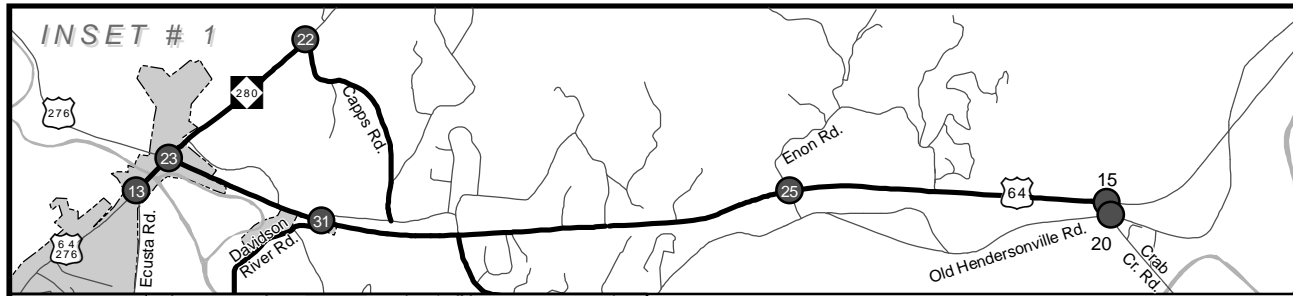
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FEDERAL HIGHWAY ADMINISTRATION



BASE MAP DATE: DECEMBER 1, 2005





**Roadway Capacity Deficiencies**

Roadway capacity deficiencies occur wherever the travel demand on a roadway is close to or higher than the vehicle capacity of that roadway. The travel demand is expressed in terms of the number of vehicles that choose to use a particular roadway on the way to their destinations. The existing travel demand on highways in Transylvania County is based on traffic count data taken annually by the NCDOT Traffic Survey Unit, and is shown in Figure 7 using 2004 traffic data. The projected 2030 travel demand, which is based on anticipated population growth and land use patterns and was developed with the aid of a travel demand model for the urban portions of Transylvania County, is shown in Figure 8.

Capacity is the theoretical maximum number of vehicles that can travel over a given section of roadway during a given period of time, under prevailing roadway and traffic conditions, while still maintaining a level of service that is acceptable to drivers. Many factors contribute to the capacity of a roadway, including:

- Roadway geometry, including number of lanes, horizontal and vertical alignment, and proximity of perceived obstructions to safe travel along the road
- Typical roadway users, such as commuters, recreational travelers, and commercial vehicles
- Control of access to streets and driveways along the road (or lack thereof)
- Development adjacent to the road, including residential, commercial, and industrial land uses
- Number of traffic signals along the roadway
- Peaking characteristics of traffic along the roadway (i.e. a spike in traffic at rush hour versus relatively constant traffic all day)
- Characteristics of intersecting roads along a facility
- Directional split of traffic along the roadway, or the percent of vehicles traveling in each direction at a given time of day

**2004 Traffic Capacity Analysis**

The comparison of the 2004 daily traffic volumes for the roadways included in the highway element of the CTP to the current practical capacities of these facilities identified several existing capacity deficiencies in Transylvania County. These existing deficiencies are summarized in Table 4.3. Figure 7 shows the 2004 daily traffic volumes for Transylvania County.

**Table 4.3 – Existing (2004) Roadway Capacity Deficiencies**

Roadway/Section	Deficiency
<b>Broad St (US 64)</b> From Rosman Hwy (US 64) to Varsity St	Approaching Capacity
<b>Broad St (US 64/276)</b> From Main St (US 276) to French Broad Ave (SR 1544) From French Broad Ave (SR 1544) to Old Hendersonville Rd (SR 1504)	Approaching Capacity Over Capacity
<b>Asheville Hwy (US 64/276)</b> From Old Hendersonville Rd (SR 1504) to Osborne Rd (SR 1556) From Ecusta Rd (SR 1512) to Hendersonville Hwy (US 64)	Approaching Capacity Approaching Capacity
<b>Caldwell St (US 64)</b> From Oakdale St to Main St (SR 1349) From Main St (SR 1349) to Broad St (US 64/276)	Over Capacity Approaching Capacity

**2030 Traffic Capacity Analysis**

The capacity deficiency analysis for the 2030 horizon year is based on the “Existing Plus Committed” alternative, meaning that only those facilities already existing or already funded in the 2007-2013 TIP are considered to exist in this analysis. Only three TIP projects are assumed to be complete in 2030 that could affect roadway capacity: R-619 (paving of NC 281 North), R-2409 (improvements to US 64 West), and R-2594 (improvements to NC 215). Because a time-of-day travel demand model was available for use in part of Transylvania County, the analysis in those

areas is based on the PM Peak Hour capacity. In the remaining rural parts of the county, outside the travel demand model, a daily capacity analysis was performed. This analysis examined the existing roadway network and determined that a number of facilities in Transylvania County will exceed practical capacity by the horizon year. Table 4.4 presents the capacity deficiencies determined for the 2030 horizon year based upon this analysis. Figure 8 shows the projected 2030 daily traffic volumes on roadways in Transylvania County.

**Table 4.4 – Future (2030) Roadway Capacity Deficiencies**

<b>Roadway/Section</b>	<b>Deficiency</b>
<b>Asheville Highway (US 64/276)</b> From Chestnut St (SR 1610) to Hospital Rd From Hospital Rd to Morris Rd From Ecusta Rd (SR 1512) to Hendersonville Hwy (US 64)	Over Capacity Approaching Capacity Over Capacity
<b>Asheville Highway (NC 280)</b> From Hendersonville Hwy (US 64) to Deavor Rd (SR 1511) From Deavor Rd (SR 1511) to Capps Rd (SR 1598) From Capps Rd (SR 1598) to Hudlin Gap Rd (SR 1510)	Over Capacity Approaching Capacity Over Capacity
<b>Broad Street (US 64)</b> From Rosman Hwy (US 64) to Varsity St From Oakdale St to Main St (US 276)	Over Capacity Approaching Capacity
<b>Broad Street (US 64/276)</b> From Probart St to McLean Rd From McLean Rd to Old Hendersonville Rd (SR 1504)	Approaching Capacity Over Capacity
<b>Caldwell Street (US 64)</b> From Rosman Hwy (US 64) to Morgan St From Morgan St to Jordan St From Jordan St to Main St (SR 1349) From Whitmire St to Broad St (US 64/276)	Approaching Capacity Over Capacity Approaching Capacity Approaching Capacity
<b>Cashiers Valley Road</b> From Carolina Ave (SR 1347) to Mills Ave/Carver St	Approaching Capacity
<b>Greenville Highway (US 276)</b> From East Fork Rd (SR 1107) to See Off Mountain Rd (SR 1538) From Connestee Rd (SR 1112) to Island Ford Rd (SR 1110) From Becky Mountain Rd (SR 1538) to Wilson Rd (SR 1540) From Gallimore Rd (SR 1118) to Parkview Dr (SR 1612)	Approaching Capacity Approaching Capacity Approaching Capacity Over Capacity
<b>Neely Road (SR 1546)</b> From French Broad Ave (SR 1544) to Old Hendersonville Rd (SR 1504)	Approaching Capacity
<b>Old Hendersonville Road (SR 1504)</b> From Neely Rd (SR 1546) to Azalea Ave From Wilson Rd (SR 1540) to Ecusta Rd (SR 1512) From Ecusta Rd (SR 1512) to Davidson River Rd (SR 1518)	Approaching Capacity Over Capacity Approaching Capacity
<b>Park Avenue (SR 1611)</b> From Parkview Dr (SR 1612) to French Broad Ave (SR 1544)	Approaching Capacity
<b>Pickens Highway (US 178)</b> From Main St (SR 1156) to Rosman Elementary School Entrance	Approaching Capacity
<b>Rosman Highway (US 64)</b> From NC 281 South to NC 281 North From Kim Miller Rd (SR 1504) to Frozen Creek Rd (SR 1143) From Cassell Rd (SR 1209) to Old Rosman Hwy (SR 1388) From Old Rosman Hwy (SR 1388) to Catheys Creek Church Rd (west) From Catheys Creek Ch Rd (west) to Catheys Creek Church Rd (east) From Catheys Creek Ch Rd (east) to Clement Rd (SR 1337) From Illahee Rd (SR 1114) to Nicholson Creek Rd (SR 1346)	Approaching Capacity Approaching Capacity Approaching Capacity Over Capacity Approaching Capacity Over Capacity Approaching Capacity
<b>Wilson Road (SR 1540)</b> From Glen Cannon Dr (SR 1580) to Old Hendersonville Rd (SR 1504)	Approaching Capacity

FIGURE 7  
BASE YEAR (2004)  
VOLUME & CAPACITY

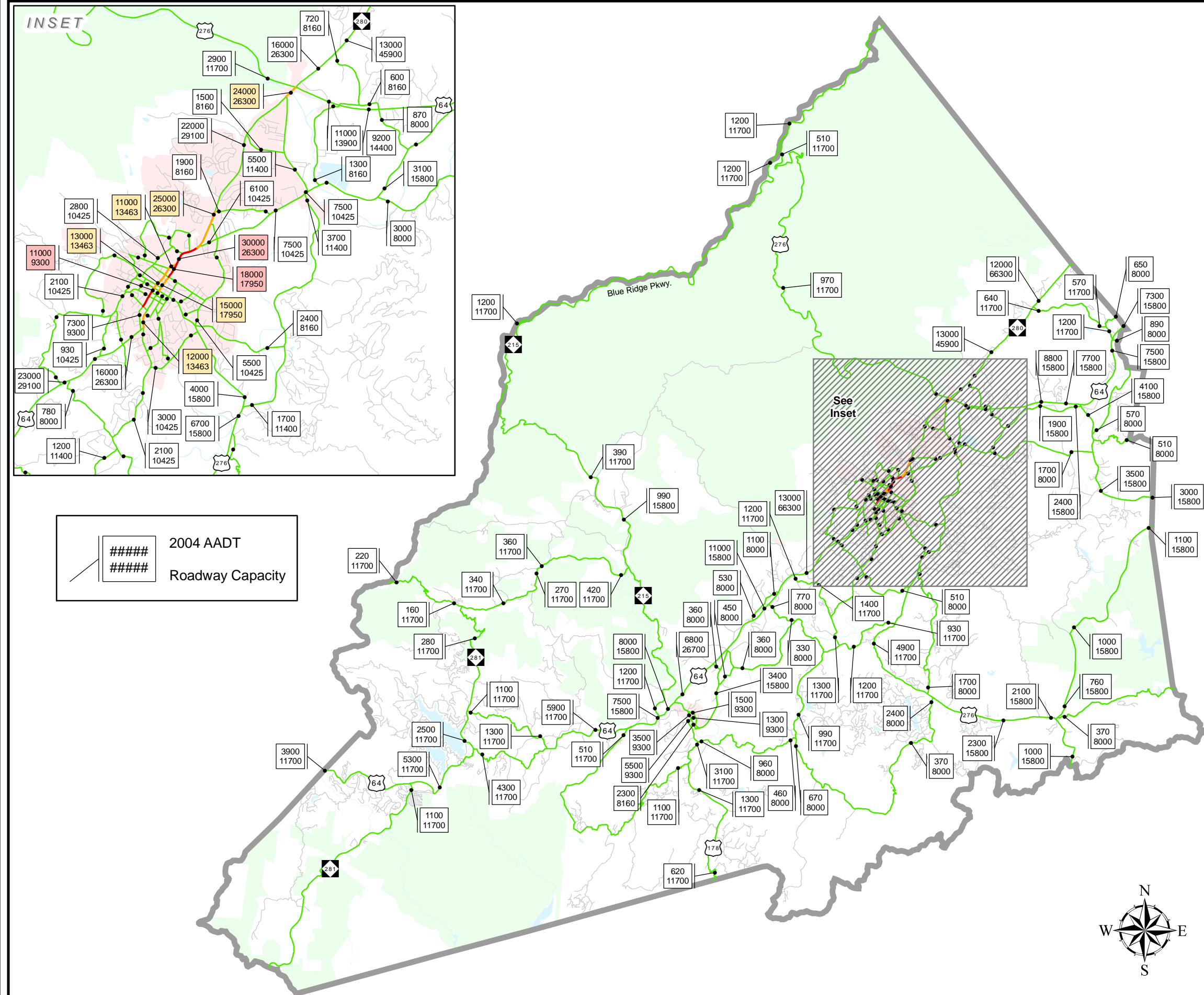
LEGEND

VOLUME-TO-CAPACITY RATIOS

- V/C LESS THAN 0.85
- V/C BETWEEN 0.85 AND 1.0
- V/C GREATER THAN 1.0

- AADT COUNT LOCATIONS

##### 2004 AADT  
##### Roadway Capacity

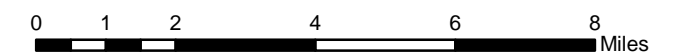
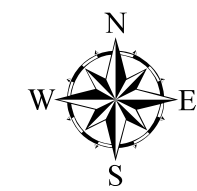


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FEDERAL HIGHWAY ADMINISTRATION



BASE MAP DATE: DECEMBER 1, 2005





FIGURE 8  
FUTURE YEAR (2030)  
VOLUME & CAPACITY

LEGEND

PM PEAK HOUR DIRECTIONAL  
VOLUME-TO-CAPACITY RATIOS

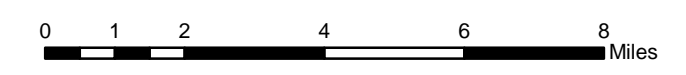
- V/C LESS THAN 0.85
- V/C BETWEEN 0.85 AND 1.0
- V/C GREATER THAN 1.0

TRANSYLVANIA  
COUNTY

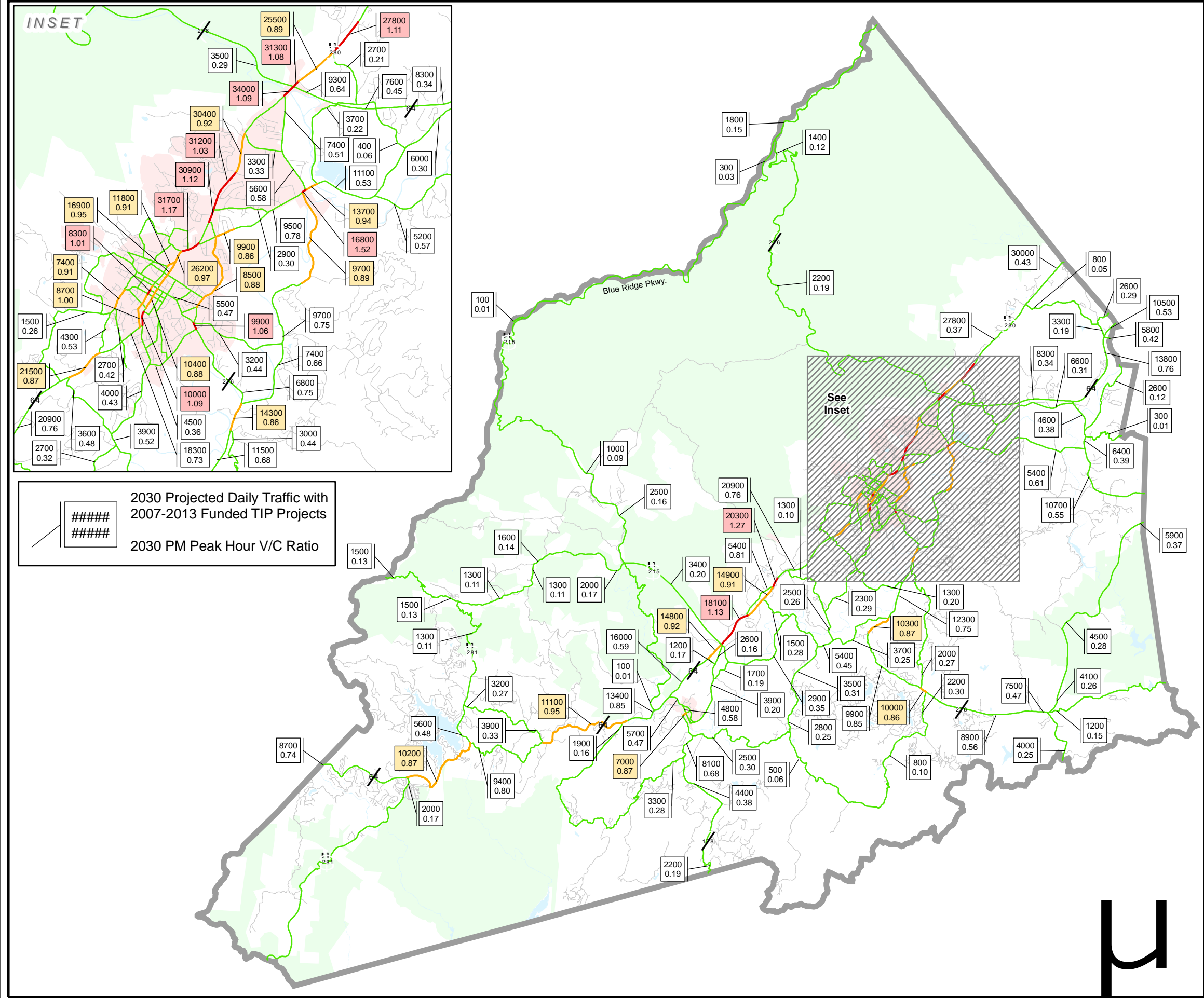
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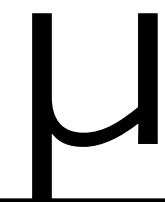


BASE MAP DATE: DECEMBER 1, 2005



#####  
2030 Projected Daily Traffic with  
2007-2013 Funded TIP Projects

#####  
2030 PM Peak Hour V/C Ratio





### **Bridge Conditions**

Bridges are an important element of a highway system. Any bridge deficiency will affect the efficiency of the entire transportation system. In addition, bridges present the greatest threat of community disruption and loss of life of any potential highway failure. Therefore, bridges must be constructed to the same, or higher, design standards as the highway system of which they are a part, and they must be inspected regularly to ensure the safety of the traveling public.

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 bridge replacement. Bridges with the highest priority are replaced as Federal and State funds become available.

A bridge is considered deficient if it is either structurally deficient or functionally obsolete. A bridge at least ten years old is considered structurally deficient if it is in relatively poor condition or has insufficient load-carry capacity, due either to the original design or deterioration. A bridge is considered to be functionally obsolete if it is narrow, has inadequate under-clearances, has insufficient load-carrying capacity, is poorly aligned with the roadway, or can no longer adequately serve existing traffic. A bridge must be classified as deficient in order to qualify for Federal replacement funds, in addition to having a qualifying sufficiency rating. To qualify for replacement, the sufficiency rating must be less than 50%; for rehabilitation, the sufficiency rating must be less than 80%. Deficient bridges in Transylvania County are listed in Table 4.5, and the locations of these bridges are shown in Figure 9.

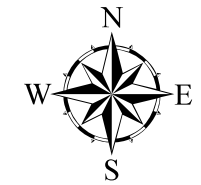
**Table 4.5 – Deficient Bridges**

<b>Bridge Number</b>	<b>Route</b>	<b>Across</b>	<b>Structurally Deficient</b>	<b>Functionally Obsolete</b>
2	Walnut Hollow Rd (SR 1103)	Carson Creek	No	Yes
8	Reasonover Rd (SR 1560)	Little River	No	Yes
9	Reasonover Rd (SR 1560)	W. Branch Reasonover Creek	No	Yes
12	Becky Mountain Rd (SR 1538)	E. Branch French Broad River	No	Yes
13	Sugarloaf Rd (SR 1119)	Tucker Creek	No	Yes
15	Deavor Rd (SR 1511)	Turkey Creek	No	Yes
26	Kim Miller Rd (SR 1304)	Creek	Yes	Yes
27	US 64	Rock Creek	No	Yes
30	Everett Rd (SR 1533)	French Broad River	No	Yes
34	Everett Rd (SR 1533)	Little River	No	Yes
35	Crab Creek Rd (SR 1528)	French Broad River	No	Yes
40	Wilson Rd (SR 1540)	Williamson Creek	No	Yes
41	Cascade Lake Rd (SR 1536)	Laurel Creek	Yes	No
45	Green Rd (SR 1127)	French Broad River	No	Yes
46	NC 215	North Fork French Broad River	No	Yes
52	Old Wagon Rd (SR 1379)	North Fork French Broad River	No	Yes
55	Tanassee Gap Rd (SR 1324)	Tucker Creek	No	Yes
59	Tanassee Gap Rd (SR 1324)	Tucker Creek	No	Yes
61	Silversteen Rd (SR 1309)	Creek	Yes	Yes
63	Silversteen Rd (SR 1309)	North Fork French Broad River	No	Yes
64	Golden Rd (SR 1313)	North Prong Flat Creek	No	Yes
66	Diamond Creek Rd (SR 1322)	North Fork French Broad River	No	Yes
72	Frozen Creek Rd (SR 1143)	Creek	No	Yes
73	NC 215	North Fork French Broad River	No	Yes
76	Turnpike Rd (SR 1135)	West Fork French Broad River	No	Yes
79	Whitmire Rd (SR 1128)	Creek	No	Yes
83	East Fork Rd (SR 1107)	Creek	No	Yes
84	East Fork Rd (SR 1107)	Middle Fork French Broad Riv.	No	Yes




**Table 4.5 Continued**

<b>Bridge Number</b>	<b>Route</b>	<b>Across</b>	<b>Structurally Deficient</b>	<b>Functionally Obsolete</b>
85	East Fork Rd (SR 1107)	East Fork French Broad River	No	Yes
93	Tanassee Gap Rd (SR 1324)	North Fork French Broad River	No	Yes
97	US 64 (eastbound lanes)	Davidson River	No	Yes
98	US 64 (westbound lanes)	Davidson River	No	Yes
102	Railroad Ave	Kings Creek	Yes	No
108	Middle Fork Rd (SR 1131)	Middle Fork French Broad Riv.	No	Yes
109	Middle Fork Rd (SR 1131)	Middle Fork French Broad Riv.	No	Yes
113	Nicholson Creek Rd (SR 1346)	Graham Creek	No	Yes
117	Glady Fork Rd (SR 1105)	East Fork French Broad River	No	Yes
119	Dolly Masters Rd (SR 1104)	East Fork French Broad River	No	Yes
123	Old NC 280 (SR 1361)	Turkey Creek	No	Yes
124	Everett Rd (SR 1533)	Little River Overflow	No	Yes
125	Capps Rd (SR 1598)	Turkey Creek	Yes	No
130	Flat Creek Valley Rd (SR 1147)	Creek	No	Yes
132	Lyday Loop Rd (SR 1506)	Lydia Creek	No	Yes
137	East Fork Rd (SR 1107)	Creek	No	Yes
138	Frozen Creek Rd (SR 1143)	East Branch Toxaway River	No	Yes
139	Old Toxaway Rd (SR 1139)	East Branch Toxaway River	No	Yes
145	Cherryfield Loop Rd (SR 1332)	Cherryfield Creek	No	Yes
147	Cherryfield Loop Rd (SR 1332)	Cherryfield Creek	No	Yes
148	Macedonia Church Rd (SR 1326)	Creek	No	Yes
149	Shoal Creek Rd (SR 1327)	Shoal Creek	Yes	Yes
150	Shoal Creek Rd (SR 1327)	Shoal Creek	No	Yes
157	Chappell Rd (SR 1142)	East Branch Toxaway River	No	Yes
158	Slick Fisher Rd (SR 1306)	Creek	No	Yes
159	Rich Mountain Rd (SR 1537)	Branch of Buckhorn Creek	No	Yes
160	Richland Creek Rd (SR 1312)	Creek	No	Yes
161	McCall Rd (SR 1319)	Flat Creek	No	Yes
189	Babb Rd (SR 1141)	Branch of Middle Fork French Broad River	No	Yes
190	Little River Rd (SR 1101)	Little River	No	Yes
193	Old Hendersonville Rd (SR 1504)	Davidson River	Yes	Yes
194	Old Hendersonville Rd (SR 1504)	Glade Creek	No	Yes
195	Old Hendersonville Rd (SR 1504)	Lydia Creek	No	Yes
196	Merrill Rd (SR 1532)	Crab Creek	Yes	Yes
205	Frozen Creek Rd (SR 1143)	NE Branch Toxaway River	No	Yes
207	Hospital Rd (SR 1592)	Allison Creek	No	Yes
233	Non-system Road	Carson Creek Rd (SR 1106)	Yes	Yes

# FIGURE 9 DEFICIENT BRIDGES



## LEGEND

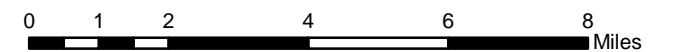
-  COUNTY BOUNDARY
-  MUNICIPAL BOUNDARIES
-  BRIDGE LOCATIONS

# TRANSYLVANIA COUNTY

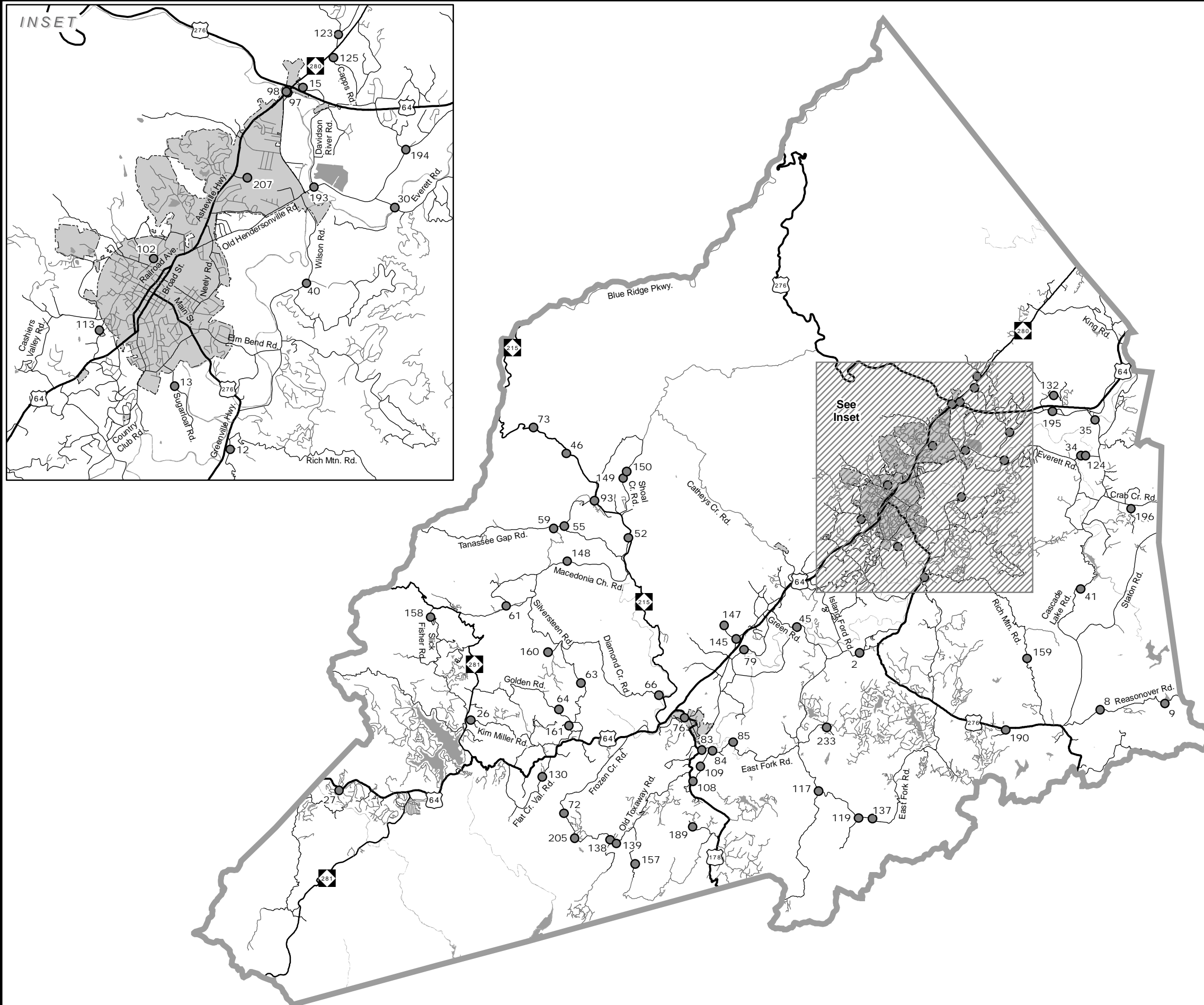
NORTH CAROLINA

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FEDERAL HIGHWAY ADMINISTRATION



BASE MAP DATE: DECEMBER 1, 2005





## V. Environmental Screening

In recent years, the human and natural environmental considerations associated with transportation construction have come to the forefront of the planning process. Section 102 of the National Environmental Policy Act (NEPA) requires the completion of an Environmental Impact Statement (EIS) for projects that have a significant impact on the environment. The EIS includes impacts on wetlands, wildlife, water quality, historic properties, and public lands. While this CTP report does not address these environmental concerns in as much detail as an EIS would, many of these factors were considered during the development of the CTP and the recommended improvements therein. The major environmental features of Transylvania County are shown in Figure 10. The environmental data used in the evaluation of CTP recommendations were obtained from the North Carolina Center for Geographic Information and Analysis (NCCGIA) in 2005, and represent the most current information available at that time. Prior to implementing any of the transportation projects recommended in this CTP, further detailed environmental analysis will be necessary.

### Wetlands

Wetlands are those lands where saturation with water is the dominant factor in determining the nature of soil development, and the types of plant and animal communities living in the soil and on its surface. Wetlands are critical ecosystems in our natural environment. They help regulate and maintain the hydrology of our rivers, lakes, and streams by storing and slowly releasing floodwaters. Wetlands help maintain the quality of water by storing nutrients, reducing sediment loads, and reducing erosion. They are also critical to fish and wildlife populations by providing an important habitat for approximately one-third of the plant and animal species that are federally listed as threatened or endangered. The National Wetland Inventory showed several wetlands throughout Transylvania County, mostly associated with rivers and streams; the impacts that recommended transportation projects may have on wetlands are discussed in Chapter 2.

### Threatened and Endangered Species

The Threatened and Endangered Species Act of 1973 allows the U.S. Fish and Wildlife Service to impose measures on the Department of Transportation to mitigate the environmental impacts of a transportation project on endangered animal and plant species, as well as critical wildlife habitats. Locating any rare species that exist within Transylvania County during this early planning stage will help to avoid or minimize impacts.

A preliminary review of the federally listed threatened and endangered species in Transylvania County was completed to determine what effects, if any, the recommended improvements may have on wildlife. Mapping from the N.C. Department of Environment and Natural Resources revealed occurrences of threatened or endangered plant and/or animal species in the planning area, which are summarized in Table 5.1. The impacts that recommended transportation projects could have on threatened and endangered species are discussed in Chapter 2.

**Table 5.1: Threatened or Endangered Species**

Species or Community	Common Name	Major Group	NC Status	Federal Status
Acidic Cove Forest	--	Natural Community	S5	--
<i>Aconitum reclinatum</i>	Trailing Wolfsbane	Vascular Plant	SR	--
<i>Aegolius acadicus</i> Pop 1	Southern Appalachian Northern Saw-whet Owl	Bird	T	FSC
<i>Alasmidonta raveneliana</i>	Appalachian Elktoe	Mollusk	E	LE
<i>Aneides aeneus</i>	Green Salamander	Amphibian	E	FSC
<i>Anzia americana</i>	A Foliose Lichen	Lichen	SR-T	--
<i>Arethusa bulbosa</i>	Bog Rose	Vascular Plant	E	--

**Table 5.1 Continued**

<b>Species or Community</b>	<b>Common Name</b>	<b>Major Group</b>	<b>NC Status</b>	<b>Federal Status</b>
<i>Arisaema triphyllum</i> ssp <i>stewardsonii</i>	Bog Jack-In-The-Pulpit	Vascular Plant	SR-P	--
<i>Aspiromitus appalachianus</i>	A Hornwort	Hornwort	SR-L	--
<i>Asplenium monanthes</i>	Single-sorus Spleenwort	Vascular Plant	E	--
<i>Aster avitus</i>	Alexander's Rock Aster	Vascular Plant	SR-T	FSC
<i>Baptisia albescens</i>	Thin-pod White Wild Indigo	Vascular Plant	SR-P	--
<i>Barbaetis benfieldi</i>	Benfield's Bearded Small Minnow Mayfly	Insect	SR	--
<i>Bartramidula wilsonii</i>	Dwarf Apple Moss	Moss	SR-D	--
<i>Berberis canadensis</i>	American Barberry	Vascular Plant	SR-T	--
<i>Bolotoperla rossi</i>	A Stonefly	Insect	SR	--
<i>Botrychium jenmanii</i>	Alabama Grape-Fern	Vascular Plant	SR-P	--
<i>Botrychium simplex</i> var <i>simplex</i>	Least Moonwort	Vascular Plant	SR-P	--
<i>Brachyelytrum septentrionale</i>	Northern Shorthusk	Vascular Plant	SR-P	--
<i>Bryocrumia vivicolor</i>	Gorge Moss	Moss	E	FSC
<i>Bryum riparium</i>	Riverside Bryum	Moss	SR-D	--
<i>Calamagrostis porteri</i>	Porter's Reed Grass	Vascular Plant	SR-P	--
<i>Calystegia catesbeiana</i> ssp <i>sericata</i>	Blue Ridge Bindweed	Vascular Plant	SR-T	--
<i>Cambarus chaugaensis</i>	Oconee Stream Crayfish	Crustacean	SC	--
<i>Campanula aparanoidea</i>	Marsh Bellflower	Vascular Plant	SR-P	--
<i>Campylopus atrovirens</i> var <i>cucullatifolius</i>	Cliff Campylopus	Moss	SR-D	--
Canada Hemlock Forest	--	Natural Community	S5	--
<i>Carex biltmoreana</i>	Biltmore Sedge	Vascular Plant	SR-L	--
<i>Carex misera</i>	Wretched Sedge	Vascular Plant	SR-L	--
<i>Carex pedunculata</i>	Longstalk Sedge	Vascular Plant	SR-P	--
<i>Carex projecta</i>	Necklace Sedge	Vascular Plant	SR-P	--
<i>Carex woodii</i>	Wood's Sedge	Vascular Plant	SR-P	--
<i>Certhia americana</i>	Brown Creeper	Bird	SC	--
<i>Cheilolejeunea evansii</i>	A Liverwort	Liverwort	PE	--
<i>Chelone cuthbertii</i>	Cuthbert's Turtlehead	Vascular Plant	SR-L	FSC
Chestnut Oak Forest	--	Natural Community	S5	--
<i>Cirriphyllum piliferum</i>	A Moss	Moss	SR-P	--
<i>Clemmys muhlenbergii</i>	Bog Turtle	Reptile	T	T (S/A)
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-Eared Bat	Mammal	T	FSC
<i>Crotalus horridus</i>	Timber Rattlesnake	Reptile	SC	--
<i>Cryptobranchus alleganiensis</i>	Hellbender	Amphibian	SC	FSC
<i>Dalibarda repens</i>	Robin Runaway	Vascular Plant	E	--
<i>Dendroica cerulea</i>	Cerulean Warbler	Bird	SR	FSC
<i>Drepanolejeunea appalachiana</i>	A Liverwort	Liverwort	SR-L	--
<i>Drunella longicornis</i>	A Mayfly	Insect	SR	--
<i>Entodon sullivanii</i>	Sullivan's Entodon	Moss	SR-O	--



**Table 5.1 Continued**

<b>Species or Community</b>	<b>Common Name</b>	<b>Major Group</b>	<b>NC Status</b>	<b>Federal Status</b>
<i>Etheostoma inscriptum</i>	Turquoise Darter	Fish	SC	--
<i>Eulonchus marialiciae</i>	Mary Alice's Small-headed Fly	Insect	SR	--
<i>Euphydryas phaeton</i>	Baltimore Checkerspot	Insect	SR	--
<i>Falco peregrinus</i>	Peregrine Falcon	Bird	E	--
Floodplain Pool	--	Natural Community	S2	--
<i>Fothergilla major</i>	Large Witch-Alder	Vascular Plant	SR-T	--
<i>Fusconaia subrotunda</i>	Long-solid	Mollusk	SR	--
<i>Geum radiatum</i>	Spreading Avens	Vascular Plant	E-SC	LE
<i>Glaucomys sabrinus coloratus</i>	Carolina Northern Flying Squirrel	Mammal	E	LE
<i>Glyceria laxa</i>	Lax Mannagrass	Vascular Plant	SR-P	--
<i>Glyceria nubigena</i>	Smoky Mountain Mannagrass	Vascular Plant	T	FSC
<i>Gymnoderma lineare</i>	Rock Gnome Lichen	Lichen	T	LE
<i>Hasteola suaveolens</i>	Sweet Indian-Plantain	Vascular Plant	SR-T	--
Heath Bald	--	Natural Community	S3	--
<i>Helianthemum bicknellii</i>	Plains Sunrose	Vascular Plant	SR-P	--
<i>Helianthemum propinquum</i>	Creeping Sunrose	Vascular Plant	SR-P	--
<i>Helonias bullata</i>	Swamp Pink	Vascular Plant	T-SC	LT
<i>Hexastylis rhombiformis</i>	French Broad Heartleaf	Vascular Plant	SR-L	FSC
High Elevation Granitic Dome	--	Natural Community	S2	--
High Elevation Red Oak Forest	--	Natural Community	S5	--
High Elevation Rocky Summit	--	Natural Community	S2	--
<i>Homalia trichomanoides</i>	Lime Homalia	Moss	SR-P	--
<i>Houstonia longifolia</i> var <i>glabra</i>	Granite Dome Bluet	Vascular Plant	SR-L	--
<i>Huperzia appalachiana</i>	Appalachian Fir-Clubmoss	Vascular Plant	SR-P	--
<i>Huperzia porophila</i>	Rock Fir-Clubmoss	Vascular Plant	SR-P	--
<i>Hybopsis rubrifrons</i>	Rosyface Chub	Fish	T	--
<i>Hydrothyria venosa</i>	Waterfan	Lichen	SR-P	--
<i>Isoperla frisoni</i>	A Stonefly	Insect	SR	--
<i>Isotria medeoloides</i>	Small Whorled Pogonia	Vascular Plant	E	LT
<i>Leptodontium excelsum</i>	Grandfather Mountain Leptodontium	Moss	SR-L	--
<i>Leptodontium flexifolium</i>	Pale-margined Leptodontium	Moss	SR-D	--
<i>Liatrix aspera</i>	Rough Blazing Star	Vascular Plant	SR-P	--
Low Elevation Granitic Dome	--	Natural Community	S1	--
Low Elevation Seep	--	Natural Community	S3	--
<i>Loxia curvirostra</i> pop 1	Southern Appalachian Red Crossbill	Bird	SC	FSC
<i>Lysimachia fraseri</i>	Fraser's Loosestrife	Vascular Plant	E	FSC
<i>Macrocoma sullivantii</i>	Sullivant's Maned-Moss	Moss	SR-D	--

**Table 5.1 Continued**

<b>Species or Community</b>	<b>Common Name</b>	<b>Major Group</b>	<b>NC Status</b>	<b>Federal Status</b>
<i>Macromia margarita</i>	Mountain River Cruiser	Insect	SR	FSC
<i>Matrioptila jeanae</i>	A Caddisfly	Insect	SR	--
<i>Micropterus coosae</i>	Redeye Bass	Fish	SR	--
<i>Monotropis odorata</i>	Sweet Pinesap	Vascular Plant	SR-T	FSC
Montane Acidic Cliff	--	Natural Community	S3	--
Montane Oak-Hickory Forest	--	Natural Community	S5	--
<i>Myotis septentrionalis</i>	Northern Long-eared Bat	Mammal	SC	--
<i>Necturus maculosus</i>	Common Mudpuppy	Amphibian	SC	--
<i>Neotoma floridana haematorea</i>	Eastern Woodrat – Southern Appalachian Population	Mammal	SC	FSC
Northern Hardwood Forest (Beech Gap Subtype)	--	Natural Community	S2	--
<i>Notropis lutipinnis</i>	Yellowfin Shiner	Fish	SC	--
<i>Oenothera perennis</i>	Perennial Sundrops	Vascular Plant	SR-P	--
<i>Packera paupercula</i>	Balsam Ragwort	Vascular Plant	SR-P	--
<i>Parnassia grandifolia</i>	Large-leaved Grass-of-Parnassus	Vascular Plant	T	--
<i>Percina nigrofasciata</i>	Blackbanded Darter	Fish	SR	--
<i>Phegopteris connectilis</i>	Northern Beech Fern	Vascular Plant	SR-P	--
Piedmont/Mountain Semipermanent Impoundment	--	Natural Community	S4	--
Pine-Oak/Heath	--	Natural Community	S4	--
<i>Plagiochila caduciloba</i>	A Liverwort	Liverwort	E	--
<i>Plagiochila corniculata</i>	A Liverwort	Liverwort	SR-D	--
<i>Plagiochila echinata</i>	A Liverwort	Liverwort	SR-L	--
<i>Plagiochila ludoviciana</i>	A Liverwort	Liverwort	SR-P	--
<i>Plagiochila sharpii</i>	A Liverwort	Liverwort	SR-L	FSC
<i>Plagiochila sullivantii</i> var <i>sullivantii</i>	A Liverwort	Liverwort	SR-T	--
<i>Plagiochila virginica</i> var <i>caroliniana</i>	A Liverwort	Liverwort	SR-T	FSC
<i>Plagiomnium carolinianum</i>	Carolina Star-Moss	Moss	SR-L	--
<i>Platanthera flava</i> var <i>herbiola</i>	Northern Green Orchid	Vascular Plant	SR-P	--
<i>Platanthera peramoena</i>	Purple Fringeless Orchid	Vascular Plant	SR-P	--
<i>Platyhypnidium pringlei</i>	Pringle's Eurhynchium	Moss	SR-D	--
<i>Pleurobema oviforme</i>	Tennessee Clubshell	Mollusk	E	FSC
<i>Poecile atricapilla practica</i>	Southern Appalachian Black-Capped Chickadee	Bird	SC	FSC
<i>Polygonia faunus smythi</i>	Smyth's Green Comma	Insect	SR	--
<i>Prenanthes roanensis</i>	Roan Rattlesnakeroot	Vascular Plant	SR-L	--
Red Spruce-Fraser Fir Forest	--	Natural Community	S2	--
<i>Rhododendron cumberlandense</i>	Cumberland Azalea	Vascular Plant	SR-P	--
<i>Rhododendron vaseyi</i>	Pink-Shell Azalea	Vascular Plant	SR-L	--
<i>Rhyacophila mainensis</i>	A Caddisfly	Insect	SR	--
Rich Cove Forest	--	Natural Community	S4	--

**Table 5.1 Continued**

<b>Species or Community</b>	<b>Common Name</b>	<b>Major Group</b>	<b>NC Status</b>	<b>Federal Status</b>
<i>Robinia hispida</i> var <i>kelseyi</i>	Kelsey's Locust	Vascular Plant	SR-O	--
<i>Sanguisorba canadensis</i>	Canada Burnet	Vascular Plant	SR-P	--
<i>Sarracenia jonesii</i>	Mountain Sweet Pitcher Plant	Vascular Plant	E-SC	LE
<i>Satyrium kingi</i>	King's Hairstreak	Insect	SR	--
<i>Schlotheimia lancifolia</i>	Highlands Moss	Moss	T	--
<i>Scopelophila ligulata</i>	Copper Moss	Moss	SR-O	--
<i>Shortia galacifolia</i> var <i>galacifolia</i>	Southern Oconee Bells	Vascular Plant	E-SC	FSC
<i>Solidago uliginosa</i>	Bog Goldenrod	Vascular Plant	SR	--
<i>Sorex dispar</i>	Long-tailed Shrew	Mammal	SC	--
Southern Appalachian Bog (Southern Subtype)	--	Natural Community	S1	--
<i>Spartina pectinata</i>	Freshwater Cordgrass	Vascular Plant	SR-P	--
<i>Speyeria diana</i>	Diana Fritillary	Insect	SR	FSC
Spray Cliff	--	Natural Community	S2	--
<i>Stachys clingmanii</i>	Clingman's Hedge-Nettle	Vascular Plant	SR-T	--
Swamp Forest-Bog Complex (Typic Subtype)	--	Natural Community	S2	--
<i>Sylvilagus transitionalis</i>	New England Cottontail	Mammal	SR	FSC
<i>Thermopsis fraxinifolia</i>	Ash-leaved Golden-Banner	Vascular Plant	SR-T	--
<i>Thermopsis mollis</i> sensu stricto	Appalachian Golden-Banner	Vascular Plant	SR-P	--
<i>Thryomanes bewickii</i> altus	Appalachian Bewick's Wren	Bird	E	FSC
<i>Tofieldia glutinosa</i>	Sticky Bog Asphodel	Vascular Plant	SR-P	--
<i>Trichomanes petersii</i>	Dwarf Filmy-Fern	Vascular Plant	T	--
<i>Trichophorum cespitosum</i>	Deerhair Bulrush	Vascular Plant	SR-D	--
<i>Trillium discolor</i>	Mottled Trillium	Vascular Plant	T	--
<i>Trimerotropis saxatilis</i>	Rock-loving Grasshopper	Insect	SR	--
<i>Waldsteinia lobata</i>	Lobed Barren-Strawberry	Vascular Plant	SR-T	--
<i>Waltoncythere acuta</i>	Transylvania Crayfish Ostracod	Crustacean	SR	FSC
White Pine Forest	--	Natural Community	S2	--
<i>Xanthoparmelia monticola</i>	A Foliose Lichen	Lichen	SR-L	--

See Appendix E for definitions of status.

#### Historic Sites

Section 106 of the National Historic Preservation Act requires the Department of Transportation to identify historic properties listed in, as well as eligible for, the National Register of Historic Places (NRHP). The NCDOT must consider the impacts of transportation projects on these properties and consult with the Federal Advisory Council on Historic Preservation.

N.C. General Statute 121-12(a) requires the NCDOT to identify historic properties listed on the National Register, but not necessarily those that are eligible to be listed. The NCDOT must consider the impacts and consult with the N.C. Historical Commission, but is not bound by their recommendations.

The location of historic sites within Transylvania County was investigated to determine any possible impacts resulting from the recommended improvements. This investigation identified several properties listed on the NRHP, which are listed in Table 5.2. The impacts that recommended transportation improvements could have on these properties are discussed in Chapter 2.

**Table 5.2: National Register Listed Properties**

<b>Resource Name</b>	<b>Location</b>	<b>Listed</b>
Godfrey-Barnette House	Brevard	December 1993
Silvermont	Brevard	July 1981
William Breese, Jr. House	Brevard	June 1983
Transylvania County Courthouse	Brevard	May 1979
Brevard College Stone Fence and Gate	Brevard	December 1993
McMinn Building	Brevard	February 1994
Hillmont	Lake Toxaway	October 1986
Lake Toxaway Methodist Church	Lake Toxaway	February 1994
Cantrell Creek Black Forest Lodge	Pisgah Forest	(Federal Nomination)
Biltmore Forest School	Pisgah Forest	November 1974
William Deaver House	Pisgah Forest	August 1979
Morgan's Mill	Rosman	August 1979
Flem Galloway House	Rosman	February 1995
E.M. Backus Lodge	Lake Toxaway	June 1988

#### Archaeological Sites

The locations of recorded archaeological sites were researched to determine the possible impacts of proposed roadway projects. This initial investigation identified no known archaeological sites within Transylvania County, but archaeological sites are often difficult to identify without actual field excavation. As a result, possible sites may not be identified during the initial planning process and each proposed project should be evaluated individually prior to construction.

#### Educational Facilities

The locations of educational facilities in the planning area were considered during the development of the CTP. No proposed transportation facilities or improvements should displace any schools or other educational facilities. The potential impacts of each recommendation on educational facilities are discussed in Chapter 2.

#### Demographics





























As mandated by Title VI of the Civil Rights Act of 1964 and Executive Order 12898, the proposed actions recommended in the CTP have been reviewed with respect to impacts on minority and low-income populations. The data for this analysis came from the 2000 Census. Results of this review for each recommended improvement are included in Chapter 2.

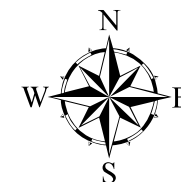
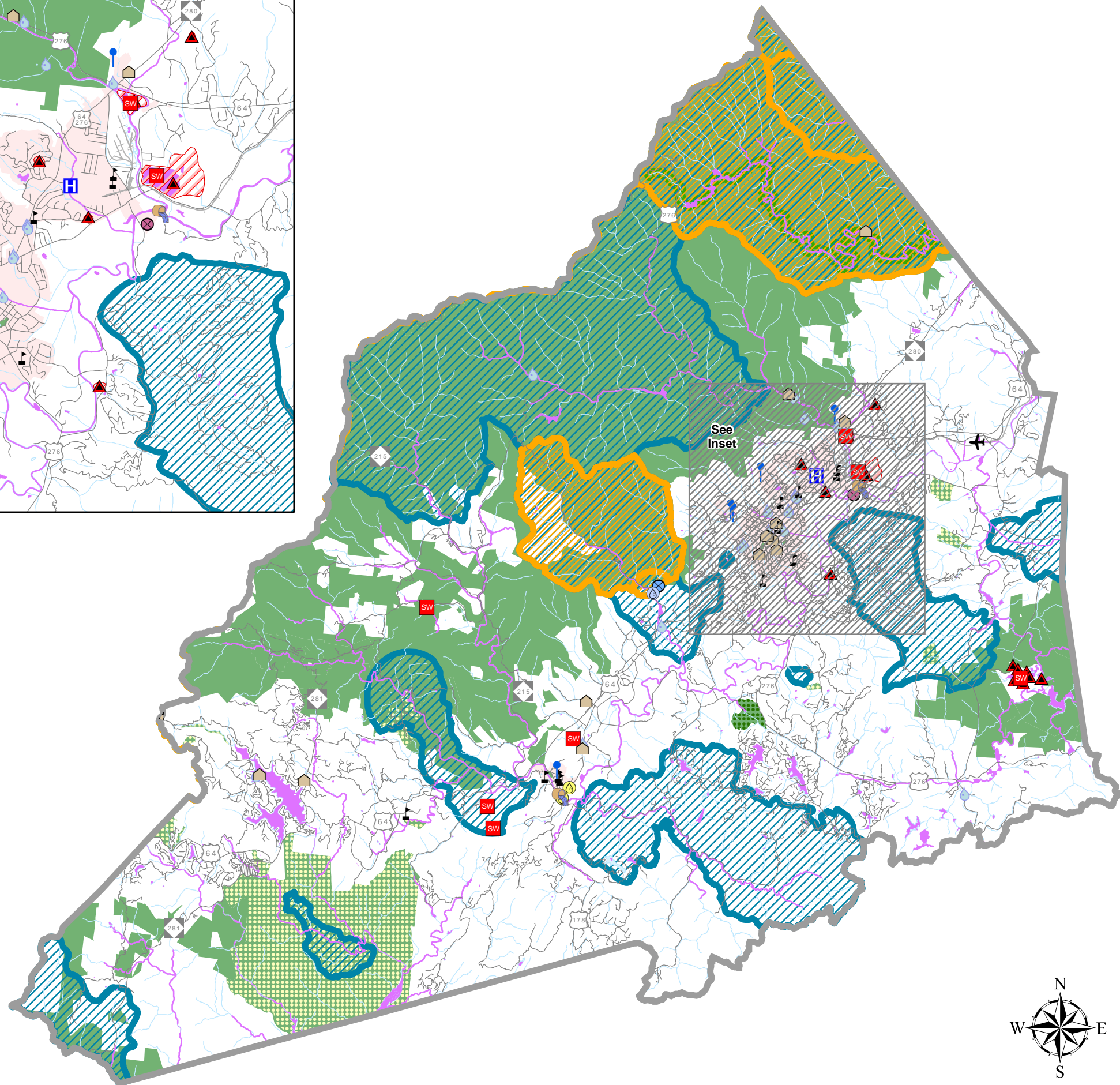
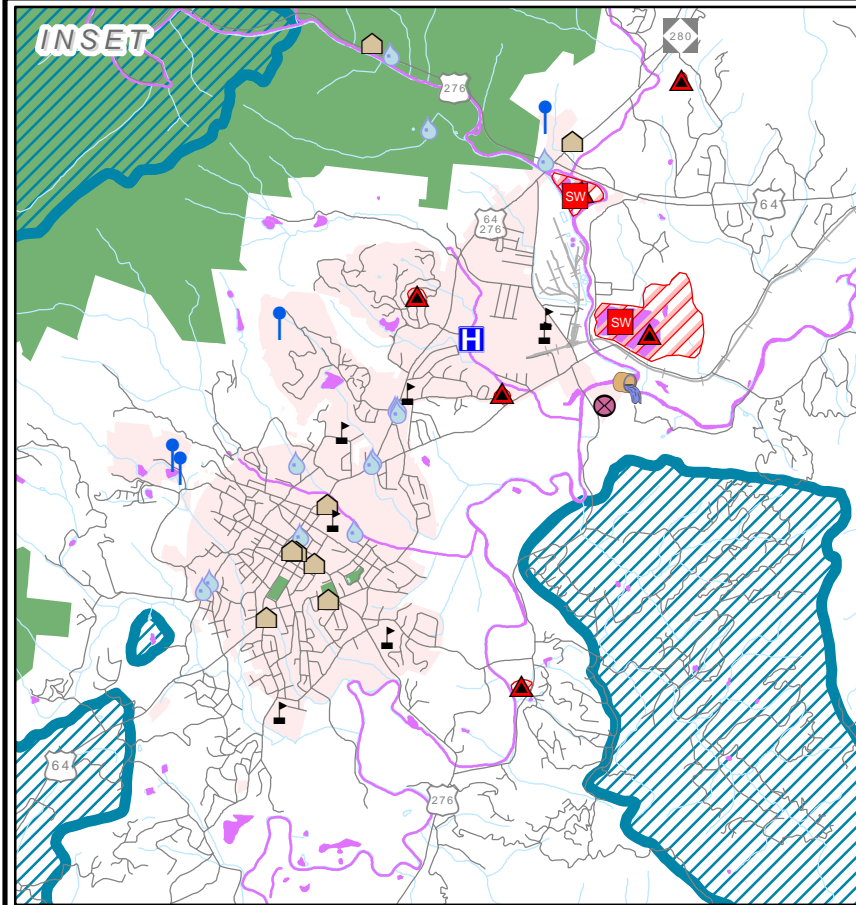
#### Parks and Public Open Spaces

The locations of parks and other public open spaces (such as Pisgah National Forest, Nantahala National Forest, and Dupont State Forest) were considered during the development of the CTP. Parks and public open spaces constitute a large percentage of the total land area of Transylvania County. Several recommended improvements will have an impact on these public lands, as discussed in Chapter 2.

**FIGURE 10**  
**ENVIRONMENTAL FEATURES**

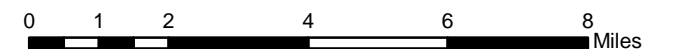
**LEGEND**

-  Hospitals
-  Schools
-  National Register Historic Structures
-  National Register Historic Districts
-  Sanitary Sewer System Discharge Sites
-  Water System - Surface Water Intakes
-  Water System - Groundwater Intakes
-  Water Treatment Plants
-  Sanitary Sewer Treatment Plants
-  Solid Waste Facilities
-  Hazardous Substance Disposal Sites
-  Water System - Water Storage Tanks
-  Groundwater Incidents
-  County Boundary
-  Streets and Highways
-  Railroads
-  Hazardous Substance Disposal Areas
-  National Wetland Inventory - Line Data
-  National Wetland Inventory - Area Data
-  Rivers and Streams
-  Bodies of Water
-  Water Supply Watersheds
-  High Quality Outstanding Resource Watersheds
-  Land Trust Priority Areas
-  Conservation Tax Credit Properties
-  Land Trust Conservation Properties
-  Lands Managed for Conservation & Open Space
-  Cities



**TRANSYLVANIA COUNTY**  
**NORTH CAROLINA**

PREPARED BY THE  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
TRANSPORTATION PLANNING BRANCH  
IN COOPERATION WITH THE  
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION



BASE MAP DATE: DECEMBER 1, 2005



## VI. Public Involvement

### Overview

Since the passage of the Federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the emphasis on public involvement in transportation planning has taken on a new significance. Although public participation has been an element of long-range transportation planning in the past, the regulations from ISTEA (and later TEA-21 in 1998 and SAFETEA-LU in 2005) call for a much more proactive approach. The NCDOT Transportation Planning Branch (TPB) has a long history of making public involvement a key element in the development of any long-range transportation plan, no matter the size of the planning area. This chapter is designed to provide an overview of the public involvement process used in the development of the Transylvania County CTP.

### Study Initiation

In 2003, the City of Brevard requested an update to its 1998 Thoroughfare Plan. Over the next two years, the City, TPB, and the Land of Sky RPO developed this update, using recommendations developed as part of the City's *Vision 2020* comprehensive planning process, and converted the recommendations into the new CTP format. These CTP maps for the City of Brevard were adopted by the Brevard City Council in March 2005. Around the same time, in March 2005, TPB staff were determining the boundary for the new French Broad River MPO Travel Demand Model, and determined that it was logical to include central and eastern portions of Transylvania County in the model. Given the development of this new analysis tool, TPB staff approached Transylvania County and the City of Brevard with the concept of developing a new, combined CTP that would include recommendations for the entire county. TPB staff presented this proposal to the Transylvania County Board of Commissioners on April 25, 2005.

### Vision, Goals, and Objectives Public Involvement Session

On May 23, 2006, a public involvement session was held at the Transylvania County Library in Brevard. This session opened with a brief overview of the CTP process, followed by a discussion of the community's goals and objectives. These goals and objectives were based on Transylvania County's *Comprehensive Plan* (2005), the City of Brevard's *Vision 2020* (1997), and the City of Brevard's *Future Land Use Plan* (2002). Following the group discussion, the results of the analysis of existing traffic conditions were presented. Then meeting attendees were broken into small groups and encouraged to brainstorm about transportation problems in the community and potential solutions—the results of these small group discussions were then presented to the full group. Appendix F contains a listing of attendees to this public involvement session, and the comments recorded as part of the group discussion.

At this public involvement session, a survey was circulated, regarding transportation issues in the community, for members of the public to complete and return. The survey was also posted on the TPB website. Seventeen (17) surveys were completed and returned. The results of the survey are shown in Appendix F.

### Draft Recommendations Public Involvement Session

On July 11, 2006, a second public involvement session was held at the Transylvania County Library in Brevard. This session opened with a presentation of several preliminary recommendations developed by TPB staff for highway projects, based on the projected future traffic conditions. This presentation included three alternative cross-sections/alignments for a proposed bypass or radial connector route around Brevard. Meeting attendees were seated at large tables with the CTP maps for each mode scattered around the room. After the formal presentation, the public was invited to write comments on the maps. Comments from the public were also discussed among the full group of attendees. Appendix F contains a listing of attendees to this public involvement session and the comments recorded on the maps.

### Public Hearing

On August 8, 2006, a public hearing was held at the Transylvania County Library in Brevard. This hearing opened with a brief presentation of the CTP recommendations, followed by the official public hearing. Each attendee was given the opportunity to speak and have their comments recorded. Appendix F contains a listing of public hearing attendees and documentation of the comments submitted during this public hearing.

### Additional Public Meetings

TPB staff attended meetings of the Transylvania County Transportation Advisory Committee (TAC) to discuss the CTP on the following dates: April 12, 2005; February 21, 2006; September 19, 2006 (joint meeting); and October 17, 2006.

TPB staff attended meetings of the Transylvania County Planning Board to discuss the CTP on the following dates: June 16, 2005; August 17, 2006; and September 19, 2006 (joint meeting).

TPB staff attended meetings of the Brevard Planning Board to discuss the CTP on the following dates: August 15, 2006; and September 19, 2006 (joint meeting).

Base-year (2005) socioeconomic data were presented to the Transylvania County Board of Commissioners for approval on June 27, 2005. Future-year (2030) socioeconomic data were presented to the Transylvania County Board of Commissioners for approval on January 9, 2006. CTP recommendations were presented to the Transylvania County Board of Commissioners on January 22, 2007.

On February 12, 2007, the Transylvania County Board of Commissioners held a public hearing at its regular meeting, before voting on CTP adoption at its February 26, 2007 meeting.

On February 19, 2007, the Brevard City Council held a public hearing at its regular meeting, before voting on CTP adoption the same evening.

CTP recommendations were presented to the Rosman Board of Aldermen on February 12, 2007, at which time the board declined to formally adopt the plan. Since this is a county-level plan, and not a municipal CTP for the Town of Rosman, the town is not required to adopt this CTP. The decision of the Board of Aldermen not to adopt this CTP should not be interpreted as an invalidation of the plan—the board simply chose not to use its opportunity for plan adoption.

CTP recommendations were presented to the Land of Sky Rural Planning Organization (RPO) Technical Coordinating Committee (TCC) on March 21, 2007 and the Transportation Advisory Committee (TAC) on March 23, 2007. The CTP was endorsed by the TAC at the March 23, 2007 meeting.



## VII. Conclusion

Transylvania County is a growing county—improvements to the county's transportation system will be necessary over the next 25 years to keep pace with this growth. It is the responsibility of the county and its municipalities to take the initiative for implementation of this CTP. It is imperative that the local governments and citizens take the information provided in this document and pursue funding for desired projects. Any questions regarding funding, active projects, planning, and alternative modes of transportation should be addressed to the appropriate branch within NCDOT. Appendix A includes contact information for many of these branches. If, as time passes, revisions are required for any element of this CTP, then all the transportation elements will also be reviewed for any potential impacts. Prior to the implementation of specific transportation projects, additional public involvement, traffic analysis, and analysis of impacts to the natural/human environment will be conducted as part of the project planning process. The branch of NCDOT responsible for project planning is the Project Development and Environmental Analysis Branch (PDEA).



# APPENDIX A

NCDOT  
Contacts



# Resources & Contacts

## North Carolina Department of Transportation

Customer Service Office  
1-877-DOT4YOU  
(1-877-368-4968)

Secretary of Transportation  
1501 Mail Service Center  
Raleigh, NC 27699-1501  
(919) 733-2520

Board of Transportation Member  
Contact information for current Board of Transportation members may be accessed from the NCDOT homepage on the World Wide Web (<http://www.ncdot.org/board>) or by calling 1-877-DOT4YOU.

Highway Division 14:

**Division Engineer**

*Contact the Division Engineer with general questions regarding NCDOT activities within Division 14 or information on Small Urban funds*

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

**Division Construction Engineer**

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

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

**Division Traffic Engineer**

*Contact the Division Traffic Engineer for information concerning high-collision locations*

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

**District Engineer**

*Contact the District Engineer for information regarding Driveway Permits, Right-of-way Encroachments, and Development Reviews*

4142 Haywood Rd  
Mills River, NC 28742  
(828) 891-7911

**County Maintenance Engineer**

*Contact the County Maintenance Engineer regarding any maintenance activities, such as drainage*

100 Calvert Landfill Rd  
Brevard, NC 28716  
(828) 891-7911

Centralized NCDOT Personnel:

**Transportation Planning Branch**

*Contact the Transportation Planning Branch with long-range planning questions*

1554 Mail Service Center  
Raleigh, NC 27699-1554  
(919) 715-5737

**Secondary Roads Office**

*Contact the Secondary Roads Office for information regarding the Industrial Access Funds program*

1535 Mail Service Center  
Raleigh, NC 27699-1535  
(919) 733-3250

**Program Development Branch**

*Contact the Program Development Branch for information concerning Roadway Official Corridor Maps and the Transportation Improvement Program (TIP)*

1542 Mail Service Center  
Raleigh, NC 27699-1542  
(919) 733-2031

**Project Development & Environmental Analysis 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

**Traffic Engineering & Safety Systems Branch**

*Contact the Traffic Engineering & Safety Systems Branch for information regarding development reviews*

1561 Mail Service Center  
Raleigh, NC 27699-1561  
(919) 733-3915

**Highway Design Branch**

*Contact the Highway Design Branch for information regarding alignments for projects that are in the TIP*

1584 Mail Service Center  
Raleigh, NC 27699-1584  
(919) 250-4001

**Bicycle & Pedestrian Division**

*Contact the Bicycle & Pedestrian Division for information regarding projects in the TIP, funding, and events*

1552 Mail Service Center  
Raleigh, NC 27699-1552  
(919) 801-0771

**Public Transportation Division**

*Contact the Public Transportation Division for information regarding planning and funding for public transportation projects*

1550 Mail Service Center  
Raleigh, NC 27699-1550  
(919) 733-4713

**Rail Division**

*Contact the Rail Division for information regarding engineering and safety, operations, and planning for rail projects*

1553 Mail Service Center  
Raleigh, NC 27699-1553  
(919) 733-7245

**Other NCDOT Departments**

*Contact information for other NCDOT departments, not listed here, is available at the NCDOT homepage on the World Wide Web (<http://www.ncdot.org/>) or by calling 1-877-DOT4YOU.*

Land of Sky Rural Planning Organization (RPO):

*Contact the Land of Sky Rural Planning Organization for information regarding socio-economic data, public involvement, regional topics, and transportation planning*

25 Heritage Dr  
Asheville, NC 28806  
(828) 251-6622

# APPENDIX B

Definitions  
Of  
Comprehensive  
Transportation  
Plan  
Categories





## Definitions for CTP Maps

### Highway Map

- Freeways<sup>1</sup>
  - 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 1,000' or for 350' plus 650' 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<sup>1</sup>
  - 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 2,000 feet; median breaks only at intersections with minor roadways or to permit U-turns; use of frontage roads, rear service roads; driveways limited in location and number; use of acceleration/deceleration or right turning lanes
  - Intersecting facilities – interchange; at-grade intersection for minor roadways; right-in/right-out and/or left-over or grade separation (no signalization for through traffic)
  - Driveways – right-in/right-out only; direct driveway access via service roads or other alternate connections
- Boulevards
  - Functional purpose – moderate mobility; moderate access, moderate volume, medium speed
  - Posted speed – 30 to 55 mph
  - Cross section – two or more lanes with median (median breaks allowed for U-turns per current NCDOT *Driveway Manual*)
  - Multi-modal elements – bus stops, bike lanes (urban) or wide paved shoulders (rural), sidewalks (urban - local government option)
  - Type of access control – limited control of access, partial control of access, or no control of access
  - Access management – two lane facilities may have medians with crossovers, medians with turning pockets or turning lanes; use of acceleration/deceleration or right turning lanes is optional; for abutting properties, use of shared driveways, internal out parcel access and cross-connectivity between adjacent properties is strongly encouraged

- Intersecting facilities – at grade intersections and driveways; interchanges at special locations with high volumes
- Driveways – primarily right-in/right-out, some right-in/right-out in combination with median leftovers; major driveways may be full movement when access is not possible using an alternate roadway
- Other Major Thoroughfares
  - Functional purpose – balanced mobility and access, moderate volume, low to medium speed
  - Posted speed – 25 to 55 mph
  - Cross section – four or more lanes without median
  - 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 45 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*
- 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 public 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 the 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 bicycle transportation (may also accommodate pedestrians, e.g. greenways) and is physically separated from a highway facility usually on a separate right-of-way.

- ❑ Off Road-Needs Improvement – A facility that accommodates bicycle transportation (may also accommodate pedestrians, e.g. greenways) and is physically separated from a highway facility usually on a separate right-of-way that will not adequately serve future bicycle needs. Improvements may include but are not limited to: widening, paving (not re-paving), improved horizontal or vertical alignment.
- ❑ Off Road-Recommended – A facility needed to accommodate bicycle transportation (may also accommodate pedestrians, e.g. greenways) and is physically separated from a highway facility usually on a separate right-of-way. This may also include greenway segments that do not necessarily serve a transportation function but intersect recommended facilities on the highway map or public transportation and rail map.

## Pedestrian Map

**Format for the pedestrian map is under development. The following definitions only apply to the sample pedestrian maps shown in Figure 3, and may not represent the final definitions used once this map format is completed.**

- ❑ Sidewalk-Existing – An existing facility intended for pedestrian travel as its main use that lies within the right-of-way of a public street. This existing sidewalk could be located on either side of a street, or both sides. Please refer to the tables in Appendix C to determine specific information about the side of the street on which a recommended facility lies.
- ❑ Sidewalk-Needs Improvement – An existing facility intended primarily for pedestrian use that lies within the right-of-way of a public street and requires capital improvements, such as widening or completion of small system gaps. This does not denote whether a sidewalk needs repair or routine maintenance. If a street has sidewalks on both sides, and only one side needs improvement, this is shown on the map as “Needs Improvement.” Please refer to the tables in Appendix C to determine specific information about the side of the street on which a recommended facility lies.
- ❑ Sidewalk-Recommended – A pedestrian facility that is recommended for construction along a public street where a sidewalk does not currently exist. The sidewalk could be recommended for either side of the street, or both sides. If a street has a “recommended” facility on either side, it is shown on the map as “recommended.” Please refer to the tables in Appendix C to determine specific information about the side of the street on which a recommended facility lies.
- ❑ Off Road-Existing – An existing facility intended for pedestrian travel as its primary use that lies within its own independent right-of-way. This is not the same as a “Multi-use Path-Existing” (described below), which is designed for use by multiple transportation modes. Examples could include stairways, boardwalks, alleys, or trails that are not open to use by bicycles and other vehicles.
- ❑ Off Road-Needs Improvement – An existing off-road pedestrian facility that requires capital improvements, such as widening, paving, or completion of small system gaps. This does not denote whether a facility needs repair or routine maintenance.
- ❑ Off Road-Recommended – A pedestrian facility that is recommended for construction on an independent right-of-way in a location where there is not any existing pedestrian facility.
- ❑ Multi-use Path Existing – An existing facility that is designed for use by multiple non-motorized modes of transportation, such as pedestrians, bicyclists, and equestrians. Such a facility is usually on an independent right-of-way, but can sometimes be found adjacent to a street.

- Multi-use Path Needs Improvement – An existing facility that is designed for use by multiple non-motorized modes of transportation and which requires capital improvements, such as widening, paving, or completion of small system gaps. This does not denote whether a facility needs repair or routine maintenance. This category would include locations with existing pedestrian-only facilities (such as sidewalks or trails) where improvements are proposed to convert the facility to a multi-use path.
- Multi-use Path Recommended – A facility that is designed for use by multiple non-motorized modes of transportation and is recommended for construction in a location where there is not currently an existing multi-use path or other pedestrian facility. This facility is most likely on an independent right-of-way, but could also be adjacent to a street.

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<sup>1</sup>Every effort will be made to ensure that all Tier 1 (Statewide importance) facilities on the NCMIN (North Carolina Multimodal Investment Network) will be Freeway or Expressway on the Comprehensive Transportation Plan



# APPENDIX C

Comprehensive  
Transportation  
Plan  
Tabulations  
&  
Recommendations





Highway													
Facility & Segment		Existing System						Proposed System					Other Maps**
		Distance (mi)	Cross-Section		ROW (ft)	Speed Limit (mph)	Capacity (vpd)	2004 ADT	Capacity (vpd)	2030 ADT*	Cross-Section	ROW (ft)	
From	To		(ft)	lanes									
<b>US 64</b>													
Jackson County Line	NC 281 South	2.86	18	2	60	45	11700	3900	15800	8700	K / B-4	70	B
NC 281 South	NC 281 North	2.7	18	2	60	45	11700	5300	15800	10200	K / B-4	70	B
NC 281 North	Kim Miller Rd (SR 1304)	3.01	20	2	60	45	11700	4300	15800	9400	K / B-4	70	B
Kim Miller Rd (SR 1304)	Frozen Creek Rd (SR 1143)	2.86	20	2	60	45	11700	5900	15800	11100	K / B-4	70	B
Frozen Creek Rd (SR 1143)	NC 215	0.92	20	2	60	55	15800	7500	15800	13400	K / B-4	70	B
NC 215	US 178	0.58	20	2	60	55	15800	8000	15800	13500	K	70	--
US 178	0.54 miles east of US 178	0.54	36	3	250	55	26700	6800	26700	12700	ADQ	--	--
0.54 miles east of US 178	0.44 miles west of SR 1209	0.54	48	4	300	55	26700	6800	26700	12700	ADQ	--	--
0.44 miles west of SR 1209	Cassell Rd (SR 1209)	0.44	36	3	300	55	26700	6800	26700	12700	ADQ	--	--
Cassell Rd (SR 1209)	Old Rosman Hwy (SR 1388)	0.54	24	2	300	55	15800	6800	15800	11900	ADQ	--	--
Old Rosman Hwy (SR 1388)	Catheys Creek Church Rd (SR 1394)	1.12	24	2	250	55	15800	11000	66300	22600	F	120	T
Catheys Creek Church Rd (SR 1394)	Green Rd (SR 1127)	0.62	24	2	300	55	15800	11000	66300	22200	F	120	T
Green Rd (SR 1127)	Catheys Creek Church Rd (SR 1394)	0.43	24	2	300	55	15800	11000	66300	22000	F	120	T
Catheys Creek Church Rd (SR 1394)	Clement Rd (SR 1337)	0.29	24	2	250	55	15800	11000	66300	23500	F / B-1	120	T B
Clement Rd (SR 1337)	Island Ford Rd (SR 1110)	0.37	48	4	250	55	66300	11000	66300	23500	B-1	--	T B
Island Ford Rd (SR 1110)	0.18 miles east of SR 1338	1.04	48	4	250	55	66300	13000	66300	24100	ADQ	--	T
0.18 miles east of SR 1338	Cashiers Valley Rd (SR 1344)	0.51	60	5	100	45	60200	23000	29100	13900	E	110	T
Cashiers Valley Rd (SR 1344)	Illahee Rd (SR 1114)	0.13	60	5	100	45	29100	23000	29100	13600	E	110	T B P
Illahee Rd (SR 1114)	Nicholson Creek Rd (SR 1346)	0.54	60	5	100	45	29100	16000	29100	14400	E	110	T B P
Nicholson Creek Rd (SR 1346)	Carolina Ave (SR 1347)	0.34	60	5	100	45	29100	16000	29100	8800	E	110	T B P
Carolina Ave (SR 1347)	Caldwell St (US 64 Bus)	0.31	60	5	100	35	26300	16000	26300	9000	E	110	T B P
Caldwell St (US 64 Bus)	Country Club Rd (SR 1116)	0.05	45	3	75	35	20100	16000	26300	5000	E	110	T P
Country Club Rd (SR 1116)	Varsity St	0.19	45	3	60	25	13463	12000	13463	5900	H	80	T B P
Varsity St	Oakdale St	0.06	45	4	60	35	17625	12000	13463	5000	ADQ	--	T B P
Oakdale St	Morgan St	0.17	45	4	60	35	17625	12000	13463	6500	ADQ	--	T B P
Morgan St	Jordan St	0.06	45	4	60	20	17625	12000	13463	6500	ADQ	--	T B P
Jordan St	Main St (US 276)	0.06	50	4	60	20	17625	12000	13463	7500	ADQ	--	T B P
Main St (US 276)	Probart St	0.05	50	4	60	20	17950	15000	22050	12200	ADQ	--	T B P
Probart St	French Broad Ave (SR 1544)	0.17	50	4	60	35	17950	15000	22050	13700	ADQ	--	T B P
French Broad Ave (SR 1544)	Caldwell St (US 64 Bus)	0.2	50	5	60	35	17950	18000	22050	14100	ADQ	--	T B P
Caldwell St (US 64 Bus)	McLean Rd	0.16	50	5	60	35	26300	30000	26300	17400	E / B-1	110	T B P
McLean Rd	Fisher Rd (SR 1356)	0.1	50	5	60	35	26300	30000	26300	20400	E / B-1	110	T B P
Fisher Rd (SR 1356)	Old Hendersonville Rd (SR 1504)	0.17	50	5	75	40	26300	30000	26300	18500	E / B-1	110	T B P
Old Hendersonville Rd (SR 1504)	Chestnut St (SR 1546)	0.32	50	5	75	40	26300	25000	26300	12400	E	110	T P
Chestnut St (SR 1546)	Osborne Rd (SR 1556)	0.18	50	5	100	40	26300	25000	26300	14000	E	110	T P
Osborne Rd (SR 1556)	Camp Straus Rd	0.2	50	5	100	45	29100	22000	29100	24300	E	110	T B P
Camp Straus Rd	Morris Rd	0.93	48	4	100	45	29100	22000	29100	24000	ADQ	--	T B P

\*The 2030 ADT estimate assumes all projects in the CTP are built.

\*\*Other Maps: T - Public Transportation and Rail; B - Bicycle; P - Pedestrian

Highway													
Facility & Segment		Existing System						Proposed System					Other Maps**
		Distance (mi)	Cross-Section		ROW (ft)	Speed Limit (mph)	Capacity (vpd)	2004 ADT	Capacity (vpd)	2030 ADT*	Cross-Section	ROW (ft)	
From	To		(ft)	lanes									
Morris Rd	Ecusta Rd (SR 1512)	0.73	48	4	125	45	29100	22000	29100	21900	ADQ	--	T B P
Ecusta Rd (SR 1512)	NC 280	0.18	48	4	150	35	26300	24000	26300	25800	B-1	--	T B P
NC 280	Davidson River Rd (SR 1518)	0.63	36	3	60	35	13900	11000	26300	8500	E / B-1	110	T B P
Davidson River Rd (SR 1518)	Glade Creek Rd (SR 1521)	0.53	24	2	60	50	14440	9200	29100	13800	E / B-1	110	T B
Glade Creek Rd (SR 1521)	McCarson Rd (SR 1579)	0.4	24	2	60	50	14440	7700	15800	12300	ADQ	--	T
McCarson Rd (SR 1579)	Crab Creek Rd (SR 1528)	2.09	24	2	60	55	15800	7700	15800	12400	ADQ	--	T
Crab Creek Rd (SR 1528)	Grove Bridge Rd (SR 1503)	2.26	24	2	60	55	15800	7500	15800	14300	ADQ	--	T
Grove Bridge Rd (SR 1503)	King Rd (SR 1502)	0.03	24	2	60	55	15800	7500	15800	12600	ADQ	--	T B
King Rd (SR 1502)	Henderson County Line	0.48	24	2	60	55	15800	7300	15800	11300	ADQ	--	T
<b>US 64 Business</b>													
Rosman Hwy (US 64)	Oakdale St	0.33	26	2	40	35	9300	7300	13463	5800	H	80	T P
Oakdale St	Morgan St	0.15	26	2	40	35	9300	11000	13463	5600	H	80	T P
Morgan St	Jordan St	0.06	26	2	40	20	9300	11000	13463	6300	H	80	T P
Jordan St	Main St (SR 1349)	0.07	32	3	40	20	9300	11000	13463	7300	H	80	T P
Main St (SR 1349)	Probart St	0.05	32	3	40	20	13463	13000	13463	4600	ADQ	--	T P
Probart St	French Broad Ave (SR 1544)	0.18	32	3	40	35	13463	13000	13463	4300	ADQ	--	T P
French Broad Ave (SR 1544)	Whitmire St (SR 1351)	0.09	33	3	40	35	13463	13000	13463	3800	ADQ	--	T P
Whitmire St (SR 1351)	Broad St (US 64)	0.13	33	3	40	35	13463	11000	13463	6000	ADQ	--	T P
<b>US 178</b>													
South Carolina State Line	Babb Rd (SR 1141)	1.74	18	2	60	55	11700	620	11700	2200	K	70	--
Babb Rd (SR 1141)	Old Toxaway Rd (SR 1139)	2.58	18	2	60	55	11700	1300	11700	4400	K	70	--
Old Toxaway Rd (SR 1139)	East Fork Rd (SR 1107)	0.72	18	2	60	55	11700	3100	11700	8100	K / B-4	70	B
East Fork Rd (SR 1107)	Rosman Town Limit	0.66	18	2	60	45	10425	5500	10425	1000	ADQ	--	B
Rosman Town Limit	Main St (SR 1156)	0.1	20	2	150	20	9300	5500	9300	900	ADQ	--	B
Main St (SR 1156)	Old Rosman Hwy (SR 1388)	0.13	20	2	50	20	9300	1300	9300	100	ADQ	--	T P
Old Rosman Hwy (SR 1388)	Main St (SR 1156)	0.29	20	2	60	25	9300	1500	9300	300	ADQ	--	P
Main St (SR 1156)	Turnpike Rd (SR 1135)	0.05	20	2	60	25	9300	3500	9300	1900	ADQ	--	B
Turnpike Rd (SR 1135)	US 64	0.42	24	2	60	35	13205	3500	13205	2400	ADQ	--	--

\*The 2030 ADT estimate assumes all projects in the CTP are built.

\*\*Other Maps: T - Public Transportation and Rail; B - Bicycle; P - Pedestrian

Highway													
Facility & Segment		Existing System						Proposed System					Other Maps**
		Distance (mi)	Cross-Section		ROW (ft)	Speed Limit (mph)	Capacity (vpd)	2004 ADT	Capacity (vpd)	2030 ADT*	Cross-Section	ROW (ft)	
From	To		(ft)	lanes									
<b>US 276</b>													
South Carolina State Line	Cascade Lake Rd (SR 1536)	1.62	18	2	60	55	15800	1000	15800	4000	K	70	--
Cascade Lake Rd (SR 1536)	Sherwood Terrace	1.56	18	2	60	55	15800	2100	15800	7500	K / B-4	70	T B
Sherwood Terrace	East Fork Rd (SR 1107)	1.96	18	2	60	55	15800	2300	15800	8900	K / B-4	70	T B
East Fork Rd (SR 1107)	See Off Mountain Rd (SR 1538)	0.18	18	2	60	40	11700	4900	15800	10300	H / B-4	80	T B
See Off Mountain Rd (SR 1538)	Island Ford Rd (SR 1110)	3.07	18	2	60	40	11700	4900	15800	12300	H / B-4	80	T B
Island Ford Rd (SR 1110)	Barclay Rd (SR 1207)	1.09	18	2	60	55	15800	6700	66300	13800	F / B-1	120	T B
Barclay Rd (SR 1207)	Becky Mountain Rd (SR 1538)	0.65	18	2	60	55	15800	6700	66300	13000	F / B-1	120	T B
Becky Mountain Rd (SR 1538)	Wilson Rd (SR 1540)	0.38	18	2	60	55	15800	6700	66300	14200	F / B-1	120	T B
Wilson Rd (SR 1540)	Brevard City Limit	0.81	20	2	60	55	15800	4000	15800	5700	B-4	--	T B
Brevard City Limit	Gallimore Rd (SR 1118)	0.43	20	2	60	35	11400	4000	11400	5500	ADQ	--	T B P
Gallimore Rd (SR 1118)	Parkview Dr (SR 1612)	0.09	20	2	60	35	11400	5600	11400	5500	ADQ	--	T B P
Parkview Dr (SR 1612)	Park Ave (SR 1611)	0.22	30	2	40	35	10425	5600	10425	5100	ADQ	--	T B P
Park Ave (SR 1611)	Franklin St	0.18	30	2	40	35	10425	5600	10425	5100	ADQ	--	T B P
Franklin St	Johnson St	0.15	50	4	75	25	12400	5600	12400	5600	ADQ	--	T B P
Johnson St	Gaston St	0.07	50	4	75	25	12400	5600	12400	4300	ADQ	--	T B P
Gaston St	Broad St (US 64)	0.08	50	4	75	25	12400	5600	12400	5000	ADQ	--	T B P
Main St (SR 1349)	Probart St	0.05	50	4	60	20	17950	16000	17950	12200	ADQ	--	T B P
Probart St	French Broad Ave (SR 1544)	0.17	50	4	60	35	17950	16000	17950	13700	ADQ	--	T B P
French Broad Ave (SR 1544)	Caldwell St (US 64 Bus)	0.2	50	5	60	35	17950	18000	17950	14100	ADQ	--	T B P
Caldwell St (US 64 Bus)	McLean Rd	0.16	50	5	60	35	26300	30000	26300	17400	E / B-1	110	T B P
McLean Rd	Fisher Rd (SR 1356)	0.1	50	5	60	35	26300	30000	26300	20400	E / B-1	110	T B P
Fisher Rd (SR 1356)	Old Hendersonville Rd (SR 1504)	0.17	50	5	75	40	26300	30000	26300	18500	E / B-1	110	T B P
Old Hendersonville Rd (SR 1504)	Chestnut St (SR 1546)	0.32	50	5	75	40	26300	25000	26300	12400	E	110	T B P
Chestnut St (SR 1546)	Osborne Rd (SR 1556)	0.18	50	5	100	40	26300	25000	26300	14000	E	110	T B P
Osborne Rd (SR 1556)	Camp Straus Rd	0.2	50	5	100	45	29100	22000	29100	24300	E	110	T B P
Camp Straus Rd	Morris Rd	0.93	48	4	100	45	29100	22000	29100	24000	ADQ	--	T B P
Morris Rd	Ecusta Rd (SR 1512)	0.73	48	4	125	45	29100	22000	29100	21900	ADQ	--	T B P
Ecusta Rd (SR 1512)	NC 280	0.18	48	4	150	35	26300	24000	26300	25800	B-1	--	T B P
NC 280	Forest Highway 50	5.25	20	2	60	55	15800	2900	15800	3500	ADQ	--	B P
Forest Highway 50	Cradle of Forestry Entrance	6.01	20	2	60	55	11700	970	11700	2200	ADQ	--	B
Cradle of Forestry Entrance	Blue Ridge Pkwy	3.72	20	2	60	55	11700	510	11700	1400	ADQ	--	B
<b>NC 215</b>													
US 64	Macedonia Church Rd (SR 1326)	6.04	16	2	60	55	11700	1200	11700	100	ADQ	--	B
Macedonia Church Rd (SR 1326)	Indian Creek Rd (SR 1321)	3.18	22	2	60	55	15800	990	15800	2500	ADQ	--	B
Indian Creek Rd (SR 1321)	Haywood County Line	7.77	22	2	60	55	11700	390	11700	1000	ADQ	--	B

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\*\*Other Maps: T - Public Transportation and Rail; B - Bicycle; P - Pedestrian

Highway													
Facility & Segment		Existing System						Proposed System					Other Maps**
		Distance (mi)	Cross-Section		ROW (ft)	Speed Limit (mph)	Capacity (vpd)	2004 ADT	Capacity (vpd)	2030 ADT*	Cross-Section	ROW (ft)	
From	To		(ft)	lanes									
<b>NC 280</b>													
US 64/276	Deaver Rd	0.1	48	4	60	40	26300	16000	26300	24600	E / B-1	110	T B P
Deaver Rd	Allison-Deaver House	0.19	48	4	60	40	26300	16000	26300	18800	E / B-1	110	T B P
Allison-Deaver House	Capps Rd (SR 1598)	0.4	48	4	60	45	27645	16000	29100	18800	E / B-1	110	T B
Capps Rd (SR 1598)	Hudlin Gap Rd (SR 1510)	0.54	48	4	60	45	45900	13000	29100	19700	E / B-1	110	T B
Hudlin Gap Rd (SR 1510)	0.45 miles east of SR 1361	1.21	48	4	60	45	45900	13000	54320	30600	F / B-1	120	T B
0.45 miles east of SR 1361	King Rd (SR 1502)	0.99	60	5	100	55	66300	13000	66300	31300	F / B-1	120	T B
King Rd (SR 1502)	Henderson County Line	1.58	60	5	100	55	66300	12000	66300	32700	F	120	T
<b>NC 281</b>													
Jackson County Line	US 64 West	7.75	24	2	100	55	11700	1100	11700	2000	ADQ	--	--
US 64 West	US 64 East	2.71	18	2	60	45	11700	5300	11700	10200	K / B-4	70	B
US 64 East	Kim Miller Rd (SR 1304)	1.27	20	2	100	45	11700	2500	11700	5600	K / B-4	70	B
Kim Miller Rd (SR 1304)	Shelton Rd (SR 1307)	2.11	20	2	60	45	11700	280	11700	1300	ADQ	--	B
Shelton Rd (SR 1307)	Silversteen Rd (SR 1309)	2.09	NA	NA	60	55	11700	280	11700	1300	K / B-4	70	B
Silversteen Rd (SR 1309)	Slick Fisher Rd (SR 1306)	0.79	NA	NA	60	55	11700	160	11700	1500	K	70	--
Slick Fisher Rd (SR 1306)	Jackson County Line	2.17	NA	NA	60	55	11700	220	11700	1500	K	70	--
<b>Walnut Hollow Road (SR 1103)</b>													
East Fork Rd (SR 1107)	Hannah Ford Rd (SR 1109)	2.84	20	2	60	35	11700	990	11700	1800	ADQ	--	B
Hannah Ford Rd (SR 1109)	Island Ford Rd (SR 1110)	0.49	20	2	60	35	11700	990	11700	2300	ADQ	--	B
<b>East Fork Road (SR 1107)</b>													
US 178	Middle Fork Rd (SR 1131)	0.33	18	2	60	35	8000	960	8000	1300	K / B-4	70	B
Middle Fork Rd (SR 1131)	Walnut Hollow Rd (SR 1103)	3.37	18	2	60	35	8000	430	8000	1000	K / B-4	70	B
Walnut Hollow Rd (SR 1103)	Gladly Branch Rd (SR 1105)	1.36	18	2	60	35	8000	670	8000	300	ADQ	--	--
Gladly Branch Rd (SR 1105)	Dolly Masters Rd (SR 1104)	1.71	20	2	60	35	8000	370	8000	300	ADQ	--	--
Dolly Masters Rd (SR 1104)	2.69 miles west of SR 1102	1.3	18	2	60	35	8000	370	8000	100	ADQ	--	--
2.69 miles west of SR 1102	1.60 miles west of SR 1102	1.12	20	2	60	35	8000	370	8000	300	ADQ	--	--
1.60 miles west of SR 1102	Happy Acres Rd (SR 1102)	1.6	18	2	60	35	8000	370	8000	700	ADQ	--	--
Happy Acres Rd (SR 1102)	US 276	1.4	20	2	60	35	8000	2400	8000	2100	ADQ	--	--
<b>Hannah Ford Road (SR 1109)</b>													
Calvert Rd (SR 1195)	Green Rd (SR 1127)	2.62	18	2	60	45	8000	360	8000	200	ADQ	--	--
Green Rd (SR 1127)	Walnut Hollow Rd (SR 1103)	1.42	18	2	60	30	8000	360	8000	800	ADQ	--	--

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\*\*Other Maps: T - Public Transportation and Rail; B - Bicycle; P - Pedestrian

Highway													
Facility & Segment		Existing System						Proposed System					Other Maps**
		Distance (mi)	Cross-Section		ROW (ft)	Speed Limit (mph)	Capacity (vpd)	2004 ADT	Capacity (vpd)	2030 ADT*	Cross-Section	ROW (ft)	
From	To		(ft)	lanes									
<b>Island Ford Road (SR 1110)</b>													
US 64	Pole Miller Rd (SR 1161)	0.72	18	2	60	35	11700	1200	11700	1400	K / B-4	70	B
Pole Miller Rd (SR 1161)	Country Club Rd (SR 1113)	1.2	18	2	60	35	11700	1400	11700	1400	K / B-4	70	B
Country Club Rd (SR 1113)	Walnut Hollow Rd (SR 1103)	0.89	18	2	60	45	11700	1300	11700	1200	K / B-4	70	B
Walnut Hollow Rd (SR 1103)	Connestee Rd (SR 1112)	0.7	18	2	60	35	11700	1200	11700	1800	K / B-4	70	B
Connestee Rd (SR 1112)	US 276	1.35	18	2	60	35	11700	930	11700	1400	K	70	--
<b>Country Club Road (SR 1113)</b>													
Island Ford Rd (SR 1110)	0.79 miles east of SR 1110	0.79	18	2	30	40	11400	1200	11400	1100	K / B-4	70	B
0.79 miles east of SR 1110	Barclay Rd (SR 1207)	0.86	18	2	30	35	11400	1200	11400	1200	K / B-4	70	B
<b>Illahee Road (SR 1114)</b>													
US 64	Camp Illahee Entrance	0.56	18	2	60	35	8000	780	8000	3700	K / B-4	70	B
Camp Illahee Entrance	Country Club Rd (SR 1116)	0.52	18	2	60	35	8000	780	8000	700	K / B-4	70	B
<b>Country Club Road (SR 1116)</b>													
Barclay Rd (SR 1207)	Illahee Rd (SR 1114)	0.16	18	2	60	35	10425	1900	10425	2300	K / B-4	70	B
Illahee Rd (SR 1114)	Deerwoode Ln (SR 1117)	0.68	18	2	60	35	10425	2100	10425	1900	K / B-4	70	B
Deerwoode Ln (SR 1117)	Brevard City Limit	0.28	18	2	60	35	10425	3300	10425	1700	K / B-4	70	B
Brevard City Limit	Gallimore Rd (SR 1118)	0.18	20	2	60	35	10425	3300	10425	2200	K / B-4	70	B P
Gallimore Rd (SR 1118)	Turnpike Rd	0.22	20	2	60	35	10425	6300	10425	2500	ADQ	--	B P
Turnpike Rd	US 64	0.32	20	2	60	35	10425	6300	10425	3700	ADQ	--	B P
<b>Gallimore Road (SR 1118)</b>													
Country Club Rd (SR 1116)	Jordan Rd	0.27	20	2	60	35	10425	3000	10425	2000	ADQ	--	B P
Jordan Rd	Greenville Hwy (US 276)	0.57	20	2	60	35	10425	3500	10425	2300	ADQ	--	B P
<b>Forest Hill Road (SR 1123)</b>													
Rosman Hwy (US 64)	0.36 miles south of US 64	0.36	18	2	60	35	10425	850	10425	3400	K	70	B
<b>Green Road (SR 1127)</b>													
US 64	Hannah Ford Rd (SR 1109)	1.01	18	2	60	35	8000	770	8000	700	ADQ	--	--
<b>Old Toxaway Road (SR 1139)</b>													
Frozen Creek Rd (SR 1143)	Landfill Entrance	2.44	18	2	60	55	11700	1100	11700	3300	K / B-4	70	B
Landfill Entrance	US 178	1.36	20	2	60	35	11700	1100	11700	3300	ADQ	--	B

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\*\*Other Maps: T - Public Transportation and Rail; B - Bicycle; P - Pedestrian

Highway													
Facility & Segment		Existing System						Proposed System					Other Maps**
		Distance (mi)	Cross-Section		ROW (ft)	Speed Limit (mph)	Capacity (vpd)	2004 ADT	Capacity (vpd)	2030 ADT*	Cross-Section	ROW (ft)	
From	To		(ft)	lanes									
<b>Frozen Creek Road (SR 1143)</b>													
US 64	0.7 miles south of US 64	0.7	16	2	50	55	11700	510	11700	1900	K / B-4	70	B
0.7 miles south of US 64	Old Toxaway Rd (SR 1139)	4.69	18	2	50	55	11700	510	11700	1900	K / B-4	70	B
<b>Main Street - Rosman (SR 1156)</b>													
Old Rosman Hwy (SR 1388)	Chestnut St (US 178)	0.43	20	2	60	25	8160	2300	8160	300	ADQ	--	T B P
Chestnut St (US 178)	US 178	0.23	24	2	60	25	9300	3500	9300	1500	ADQ	--	B P
<b>Calvert Road (SR 1195)</b>													
Old Rosman Hwy (SR 1388) south	Hannah Ford Rd (SR 1109)	0.69	18	2	60	40	8000	450	8000	800	ADQ	--	B
Hannah Ford Rd (SR 1109)	Old Rosman Hwy (SR 1388) north	0.5	18	2	60	40	8000	450	8000	100	ADQ	--	B
<b>Barclay Road (SR 1207)</b>													
Country Club Rd (SR 1113)	US 276	1.82	18	2	60	35	8000	510	8000	1400	K	70	--
<b>Cassell Road (SR 1209)</b>													
US 64	Old Rosman Hwy (SR 1388)	0.25	20	2	60	35	8000	360	8000	800	ADQ	--	--
<b>Kim Miller Road (SR 1304)</b>													
NC 281	Reid Rd (SR 1316)	2.48	20	2	60	45	11700	1100	11700	3200	ADQ	--	--
Reid Rd (SR 1316)	US 64	0.56	18	2	60	45	11700	1300	11700	3900	K	70	--
<b>Silversteen Road (SR 1309)</b>													
NC 281	Macedonia Church Rd (SR 1326)	2.16	18	2	50	55	11700	340	11700	1300	K / B-4	70	B
<b>Macedonia Church Road (SR 1326)</b>													
Silversteen Rd (SR 1309)	Kitchen Loop Rd (SR 1310)	0.68	18	2	50	55	11700	270	11700	1300	K / B-4	70	B
Kitchen Loop Rd (SR 1310)	Neil Armstrong Rd (PARI)	1.33	20	2	50	55	11700	360	11700	1600	ADQ	--	B
Neil Armstrong Rd (PARI)	NC 215	1.73	20	2	50	55	11700	420	11700	2000	ADQ	--	B
<b>Cashiers Valley Road (SR 1344)</b>													
US 64	Sega Lake Rd (SR 1342)	0.4	16	2	30	45	8160	840	8160	600	K / B-4	--	B
Sega Lake Rd (SR 1342)	Probart St (SR 1348)	1.42	16	2	30	45	8160	530	8160	1500	K / B-4	--	B
Probart St (SR 1348)	Nicholson Creek Rd (SR 1346)	0.13	16	2	20	25	8160	530	8160	2100	K / B-4	--	B
<b>Nicholson Creek Road (SR 1346)</b>													
US 64	Cashiers Valley Rd (SR 1344)	0.59	20	2	60	35	10425	930	13205	5800	K / B-4	70	B

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\*\*Other Maps: T - Public Transportation and Rail; B - Bicycle; P - Pedestrian

Highway													
Facility & Segment		Existing System						Proposed System					Other Maps**
		Distance (mi)	Cross-Section		ROW (ft)	Speed Limit (mph)	Capacity (vpd)	2004 ADT	Capacity (vpd)	2030 ADT*	Cross-Section	ROW (ft)	
From	To		(ft)	lanes									
<b>Carolina Avenue (SR 1347)</b>													
US 64	Shipman Rd	0.22	16	2	30	35	8160	1000	8160	2500	ADQ	--	B P
Shipman Rd	Cashiers Valley Rd	0.25	16	2	60	35	8160	1000	8160	3200	ADQ	--	B P
<b>Probart Street (SR 1348)</b>													
Cashiers Valley Rd (SR 1344)	Pinnacle Rd (SR 1350)	0.97	16	2	30	35	8160	930	8160	700	K / B-4	--	B
Pinnacle Rd (SR 1350)	Brevard City Limit	0.25	18	2	30	25	8160	1500	8160	200	K / B-4	--	B P
<b>Main Street - Brevard (SR 1349)</b>													
Oaklawn Ave	Caldwell St (US 64 Bus)	0.16	60	4	75	20	12400	3000	12400	700	ADQ	--	B P
Caldwell St (US 64 Bus)	Broad St (US 64)	0.08	60	4	75	20	12400	3000	12400	3800	ADQ	--	T B P
<b>Whitmire Street (SR 1351)</b>													
Railroad Ave	Tinsley Rd (SR 1353)	0.15	24	2	40	25	8160	670	8160	1500	ADQ	--	P
Tinsley Rd (SR 1353)	Kings Mill Rd	0.21	24	2	40	25	8160	670	8160	1100	ADQ	--	P
<b>Tinsley Road (SR 1353)</b>													
Whitmire St (SR 1351)	Kings Creek Rd (SR 1354)	0.34	18	2	30	25	8160	590	8160	400	ADQ	--	P
Kings Creek Rd (SR 1354)	McLean Rd (SR 1356)	0.66	16	2	30	25	8160	720	8160	300	ADQ	--	--
<b>Fisher Road (SR 1356)</b>													
Asheville Hwy (US 64)	McLean Rd (SR 1356)	0.43	20	2	50	25	8160	1100	8160	3900	ADQ	--	P
<b>McLean Road (SR 1356)</b>													
Tinsley Rd (SR 1353)	Fisher Rd (SR 1356)	0.12	20	2	50	25	8160	1100	8160	100	ADQ	--	--
<b>Old Rosman Highway (SR 1388)</b>													
Chestnut St (US 178)	0.22 miles east of US 178	0.22	20	2	60	25	10425	3400	10425	200	ADQ	--	T
0.22 miles east of US 178	Main St (SR 1156)	0.16	20	2	60	35	10425	3400	10425	200	ADQ	--	T
Main St (SR 1156)	Rosman Town Limit	0.46	20	2	80	40	11400	3400	11400	7700	K / B-4	70	T B
Rosman Town Limit	0.44 miles east of Rosman Town Limit	0.44	20	2	100	45	11400	3400	11400	7900	K / B-4	70	T B
0.44 miles east of Rosman Town Limit	Coats America Factory Entrance	0.12	20	2	60	45	11400	3400	11400	7900	K / B-4	70	T B
Coats America Factory Entrance	Calvert Rd (SR 1195)	0.38	20	2	60	45	15800	3400	15800	8900	K / B-4	70	T B
Calvert Rd (SR 1195)	Cassell Rd (SR 1209)	0.41	20	2	60	45	15800	3400	15800	9200	K	70	T
Cassell Rd (SR 1209)	Calvert Rd (SR 1195)	0.54	20	2	60	45	15800	3400	15800	8800	K	70	T
Calvert Rd (SR 1195)	US 64	0.04	20	2	NA	45	15800	3400	15800	8800	K	70	T

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\*\*Other Maps: T - Public Transportation and Rail; B - Bicycle; P - Pedestrian

Highway													
Facility & Segment		Existing System						Proposed System					Other Maps**
		Distance (mi)	Cross-Section		ROW (ft)	Speed Limit (mph)	Capacity (vpd)	2004 ADT	Capacity (vpd)	2030 ADT*	Cross-Section	ROW (ft)	
From	To		(ft)	lanes									
<b>Catheys Creek Church Road (SR 1394)</b>													
US 64 west	Ross Rd (SR 1334)	0.75	20	2	60	40	8000	530	8000	700	ADQ	--	B
Ross Rd (SR 1334)	US 64 east	0.38	20	2	60	40	8000	1100	8000	1300	ADQ	--	B
<b>Blantyre Church Road (SR 1501)</b>													
King Rd (SR 1502)	Henderson County Line	0.5	18	2	60	35	8000	650	8000	1200	K	70	--
<b>King Road (SR 1502)</b>													
NC 280	King Circle (SR 1582)	1.63	18	2	30	35	11700	640	11700	700	ADQ	--	B
King Circle (SR 1582)	Blantyre Church Rd (SR 1501)	0.86	18	2	30	35	11700	570	11700	600	ADQ	--	B
Blantyre Church Rd (SR 1501)	US 64	0.39	18	2	30	35	11700	1200	11700	1700	K / B-4	70	B
<b>Grove Bridge Road (SR 1503)</b>													
US 64	Henderson County Line	0.18	20	2	30	45	8000	890	8000	3500	ADQ	--	B
<b>Old Hendersonville Road (SR 1504)</b>													
Asheville Hwy (US 64)	Neely Rd/Chestnut St	0.25	18	2	50	35	10425	6100	10425	6200	K / B-4	70	B P
Neely Rd/Chestnut St	Brevard City Limit	0.06	18	2	50	35	10425	7500	10425	6900	K	70	B P
Brevard City Limit	Osborne Rd (SR 1556)	0.73	20	2	30	35	10425	7500	10425	6900	K	70	B P
Osborne Rd (SR 1556)	Wilson Rd (SR 1540)	0.54	20	2	30	35	10425	7500	10425	5500	K	70	B P
Wilson Rd (SR 1540)	Ecusta Rd (SR 1512)	0.05	20	2	30	35	10425	7500	10425	4400	K / B-4	70	B
Ecusta Rd (SR 1512)	Davidson River Rd (SR 1518)	0.17	20	2	30	35	11400	7500	11400	4400	K / B-4	70	B
Davidson River Rd (SR 1518)	Railroad Crossing	0.09	20	2	30	35	15800	5900	15800	4400	K / B-4	70	B
Railroad Crossing	Everett Rd (SR 1533)	0.76	20	2	30	50	15800	5900	15800	4400	K / B-4	70	B
Everett Rd (SR 1533)	Glade Creek Rd (SR 1521)	0.76	18	2	30	50	15800	3100	15800	1600	K / B-4	70	B
Glade Creek Rd (SR 1521)	Enon Rd (SR 1506)	1.15	18	2	30	50	15800	2400	15800	1000	K / B-4	70	B
Enon Rd (SR 1506)	Crab Creek Rd (SR 1528)	1.24	18	2	30	50	15800	2400	15800	2000	K / B-4	70	B
<b>Ecusta Road (SR 1512)</b>													
Old Hendersonville Rd (SR 1504)	Morris Rd	0.6	20	2	60	35	11400	5500	11400	3400	ADQ	--	B P
Morris Rd	Asheville Hwy (US 64)	0.75	20	2	60	35	11400	5500	11400	5100	ADQ	--	B P
<b>Davidson River Road (SR 1518)</b>													
Old Hendersonville Rd (SR 1504)	US 64	1.32	18	2	60	35	8160	1300	--	--	--	--	--
<b>Glade Creek Road (SR 1521)</b>													
Old Hendersonville Rd (SR 1504)	US 64	0.73	18	2	60	35	8000	870	8000	600	ADQ	--	B

\*The 2030 ADT estimate assumes all projects in the CTP are built.

\*\*Other Maps: T - Public Transportation and Rail; B - Bicycle; P - Pedestrian



Highway													
Facility & Segment		Existing System						Proposed System					Other Maps**
		Distance (mi)	Cross-Section		ROW (ft)	Speed Limit (mph)	Capacity (vpd)	2004 ADT	Capacity (vpd)	2030 ADT*	Cross-Section	ROW (ft)	
From	To		(ft)	lanes									
<b>Talley Road (SR 1527)</b>													
Crab Creek Rd (SR 1528)	Henderson County Line	2.41	18	2	60	45	8000	570	8000	700	ADQ	--	B
<b>Crab Creek Road (SR 1528)</b>													
US 64	Old Hendersonville Rd (SR 1504)	0.05	22	2	60	45	15800	4100	15800	8300	ADQ	--	--
Old Hendersonville Rd (SR 1504)	Talley Rd (SR 1527)	0.88	22	2	60	45	15800	4100	15800	6900	ADQ	--	B
Talley Rd (SR 1527)	Jeter Mountain Rd (SR 1529)	0.17	22	2	60	45	15800	4100	15800	7100	ADQ	--	B
Jeter Mountain Rd (SR 1529)	Everett Rd (SR 1533)	0.35	22	2	60	45	15800	4100	15800	7200	ADQ	--	B
Everett Rd (SR 1533)	Cascade Lake Rd (SR 1536)	0.98	22	2	60	45	15800	3500	15800	9700	B-4	--	B
Cascade Lake Rd (SR 1536)	Henderson County Line	1.67	22	2	60	45	15800	3500	15800	9100	B-4	--	B
<b>Jeter Mountain Road (SR 1529)</b>													
Crab Creek Road (SR 1528)	Henderson County Line	1.59	20	2	30	30	8000	510	8000	100	ADQ	--	--
<b>Everett Road (SR 1533)</b>													
Old Hendersonville Rd (SR 1504)	Friendship Ln (SR 1600)	0.92	22	2	60	35	8000	3000	8000	3500	ADQ	--	B
Friendship Ln (SR 1600)	0.2 miles east of SR 1617	0.7	18	2	60	40	8000	3000	8000	3500	K / B-4	70	B
0.2 miles east of SR 1617	Hart Rd (SR 1534)	0.87	18	2	60	45	8000	3000	8000	3500	K / B-4	70	B
Hart Rd (SR 1534)	Crab Creek Rd (SR 1528)	0.72	18	2	60	35	8000	1700	8000	2900	K / B-4	70	B
<b>Cascade Lake Road (SR 1536)</b>													
US 276	Staton Rd (SR 1591)	2.5	20	2	60	55	15800	760	15800	4100	K	70	B
<b>Becky Mountain Road/See-Off-Mountain Road (SR 1538)</b>													
US 276 north	Hogsed Rd (SR 1539)	2.2	18	2	30	40	8000	650	8000	1200	ADQ	--	--
Hogsed Rd (SR 1539)	US 276 south	2.29	20	2	30	40	8000	1700	8000	1300	ADQ	--	--
<b>Wilson Road (SR 1540)</b>													
US 276	Elm Bend Rd (SR 1543)	1.17	18	2	60	40	11400	1700	11400	700	K / B-4	--	B
Elm Bend Rd (SR 1543)	Glen Cannon Dr	1.12	18	2	60	40	11400	3700	11400	2500	K / B-4	--	B
Glen Cannon Dr	Brevard City Limit	0.92	18	2	60	40	11400	3700	11400	3200	K / B-4	--	B
Brevard City Limit	Old Hendersonville Rd (SR 1504)	0.46	20	2	60	40	11400	3700	11400	3200	K / B-4	--	B
<b>Elm Bend Road (SR 1543)</b>													
Greenville Hwy (US 276)	Brevard City Limit	0.55	18	2	60	35	8160	2400	8160	2600	ADQ	--	B P
Brevard City Limit	Wilson Rd (SR 1540)	0.78	20	2	60	35	8160	2400	8160	1700	ADQ	--	B

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\*\*Other Maps: T - Public Transportation and Rail; B - Bicycle; P - Pedestrian

Highway													
Facility & Segment		Existing System						Proposed System					Other Maps**
		Distance (mi)	Cross-Section		ROW (ft)	Speed Limit (mph)	Capacity (vpd)	2004 ADT	Capacity (vpd)	2030 ADT*	Cross-Section	ROW (ft)	
From	To		(ft)	lanes									
<b>French Broad Avenue (SR 1544)</b>													
Broad St (US 64)	Johnson St	0.13	20	2	40	25	9300	3300	9300	1100	ADQ	--	B P
Johnson St	Franklin St	0.24	20	2	40	25	10425	3300	10425	1000	ADQ	--	B P
Franklin St	Park Ave/Neely Rd	0.19	18	2	40	25	10425	3300	10425	200	ADQ	--	B P
<b>Neely Road (SR 1546)</b>													
French Broad Ave (SR 1544)	Old Hendersonville Rd (SR 1504)	0.98	18	2	60	25	10425	5600	10425	3700	ADQ	--	B P
<b>Osborne Road (SR 1556)</b>													
Asheville Hwy (US 64)	Old Hendersonville Rd (SR 1504)	0.75	16	2	60	35	8160	1900	8160	4300	K / B-4	70	--
<b>Reasonover Rd (SR 1560)</b>													
Cascade Lake Rd (SR 1536)	Henderson County Line	3.86	16	2	60	45	8000	370	8000	1200	K	70	--
<b>Upper Glade Creek Road (SR 1583)</b>													
US 64 west	Capps Rd (SR 1598)	0.28	18	2	60	35	8000	600	--	--	--	--	--
Capps Rd (SR 1598)	US 64 east	0.33	18	2	60	35	8000	600	8000	1200	ADQ	--	B
<b>Staton Road (SR 1591)</b>													
Cascade Lake Rd (SR 1536)	AGFA/Dupont Plant Entrance	1.31	22	2	60	55	15800	1000	15800	4500	B-4	--	B
AGFA/Dupont Plant Entrance	Henderson County Line	2.95	22	2	60	55	15800	1100	15800	5900	B-4	--	B
<b>Capps Road (SR 1598)</b>													
Upper Glade Creek Rd (SR 1583)	NC 280	0.87	18	2	60	25	8000	720	8000	900	ADQ	--	B
<b>Chestnut Street (SR 1610)</b>													
Old Hendersonville Rd (SR 1504)	Asheville Hwy (US 64)	0.23	18	2	60	25	10425	5600	10425	1700	ADQ	--	B P
<b>Park Avenue (SR 1611)</b>													
Parkview Dr (SR 1612)	French Broad Ave (SR 1544)	0.14	18	2	40	25	10425	5500	10425	3300	ADQ	--	B P
<b>Parkview Drive (SR 1612)</b>													
Greenville Hwy (US 276)	Park Ave (SR 1611)	0.23	18	2	50	25	10425	5500	10425	2600	ADQ	--	B P
<b>Blue Ridge Parkway (portions are in Haywood County)</b>													
Jackson County Line	NC 215	0.29	NA	2	NA	45	11700	1200	11700	100	ADQ	--	B
NC 215	US 276	11.29	NA	2	NA	45	11700	1200	11700	300	ADQ	--	B
US 276	Henderson County Line	5.01	NA	2	NA	45	11700	1200	11700	1800	ADQ	--	B

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\*\*Other Maps: T - Public Transportation and Rail; B - Bicycle; P - Pedestrian

Highway													
Facility & Segment		Existing System						Proposed System					Other Maps**
		Distance (mi)	Cross-Section		ROW (ft)	Speed Limit (mph)	Capacity (vpd)	2004 ADT	Capacity (vpd)	2030 ADT*	Cross-Section	ROW (ft)	
From	To		(ft)	lanes									
<b>Carver Street</b>													
Hillview St/Mills Ave	Oakdale St	0.06	18	2	40	25	9300	2100	9300	1000	ADQ	--	B P
Oakdale St	Oaklawn Ave	0.13	18	2	40	25	9300	2100	9300	600	ADQ	--	B P
<b>Cashiers Valley Road</b>													
Nicholson Creek Rd (SR 1346)	Carolina Ave (SR 1347)	0.09	16	2	20	25	10425	2100	13205	6800	K / B-4	70	B
Carolina Ave (SR 1347)	Hillview St/Mills Ave	0.29	16	2	40	25	10425	2100	13205	9400	K / B-4	70	B P
<b>Franklin Street</b>													
Main St (US 276)	French Broad Ave (SR 1544)	0.24	20	2	30	25	8160	550	8160	300	ADQ	--	P
<b>French Broad Avenue</b>													
Railroad Ave	Caldwell St (US 64 Bus)	0.21	18	2	40	25	8160	3300	8160	1100	ADQ	--	B P
Caldwell St (US 64 Bus)	Broad St (US 64)	0.06	18	2	40	25	9300	3300	9300	1200	ADQ	--	B P
<b>Galloway Street</b>													
Main St	Probart St	0.06	18	2	20	25	8160	1200	8160	100	ADQ	--	--
<b>Gaston Street</b>													
Varsity St	Maple Ave	0.13	20	2	40	25	8160	710	8160	1000	ADQ	--	B P
Maple Ave	Morgan St	0.1	20	2	40	25	8160	1600	8160	1800	ADQ	--	P
Morgan St	Jordan St	0.06	20	2	40	25	8160	1600	8160	1400	ADQ	--	P
Jordan St	Main St (US 276)	0.07	20	2	40	25	8160	1600	8160	1400	ADQ	--	P
<b>Johnson Street</b>													
Maple Ave	Morgan St	0.15	18	2	40	25	8160	1500	8160	100	ADQ	--	P
Morgan St	Jordan St	0.06	18	2	40	25	8160	1500	8160	400	ADQ	--	P
Jordan St	Main St (US 276)	0.07	18	2	40	25	8160	1500	8160	500	ADQ	--	P
Main St (US 276)	French Broad Ave (SR 1544)	0.22	18	2	30	25	8160	1500	8160	900	ADQ	--	P
<b>Jordan Road</b>													
Gallimore Rd (SR 1118)	Maple Ave	0.09	16	2	20	25	8160	480	8160	200	ADQ	--	B P
<b>Jordan Street</b>													
Caldwell St (US 64 Bus)	Broad St (US 64)	0.08	20	2	40	25	5200	1200	5200	300	ADQ	--	P
Broad St (US 64)	Gaston St	0.08	20	2	40	25	5200	1200	5200	200	ADQ	--	P
Gaston St	Johnson St	0.07	20	2	40	25	8160	1200	8160	100	ADQ	--	P

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\*\*Other Maps: T - Public Transportation and Rail; B - Bicycle; P - Pedestrian

Highway													
Facility & Segment		Existing System						Proposed System				Other Maps**	
		Distance (mi)	Cross-Section		ROW (ft)	Speed Limit (mph)	Capacity (vpd)	2004 ADT	Capacity (vpd)	2030 ADT*	Cross-Section		ROW (ft)
From	To		(ft)	lanes									
<b>Kings Mill Road</b>													
Probart St	Whitmire St (SR 1351)	0.19	18	2	25	25	8160	670	8160	200	ADQ	--	P
<b>Main Street - Brevard</b>													
Mills Ave	Oaklawn Ave	0.12	36	2	75	25	9300	3000	9300	1200	ADQ	--	P
<b>Maple Avenue</b>													
Gaston St	Johnson St	0.07	22	2	40	25	8160	1600	8160	600	ADQ	--	B P
Johnson St	Turnpike Rd	0.13	22	2	40	25	8160	1600	8160	600	ADQ	--	B P
Turnpike Rd	Jordan Rd	0.5	22	2	40	25	8160	1600	8160	600	ADQ	--	B P
<b>McLean Road</b>													
Broad St (US 64)	Railroad Ave	0.17	20	2	25	25	10425	3000	10425	3000	ADQ	--	P
Railroad Ave	Tinsley Rd (SR 1353)	0.13	20	2	25	25	8160	3000	8160	400	ADQ	--	--
<b>Mills Avenue</b>													
Cashiers Valley Rd	Main St	0.25	18	2	20	25	9300	1200	9300	1600	ADQ	--	P
<b>Morgan Street</b>													
Oaklawn Ave	Caldwell St (US 64 Bus)	0.16	20	2	40	25	9300	1200	9300	1200	ADQ	--	P
Caldwell St (US 64 Bus)	Broad St (US 64)	0.07	20	2	40	25	5200	1200	5200	200	ADQ	--	P
Broad St (US 64)	Gaston St	0.08	18	2	40	25	5200	1200	5200	200	ADQ	--	P
Gaston St	Johnson St	0.07	18	2	40	25	8160	1200	8160	600	ADQ	--	--
<b>Morris Road</b>													
Asheville Hwy (US 64)	Ecusta Rd (SR 1512)	0.61	20	2	60	35	8160	1500	8160	3200	ADQ	--	P
<b>Oakdale Street</b>													
Carver St	Caldwell St (US 64 Bus)	0.26	20	2	40	25	9300	870	9300	1200	ADQ	--	B P
Caldwell St (US 64 Bus)	Broad St (US 64)	0.07	20	2	40	25	9300	870	9300	200	ADQ	--	B P
<b>Oaklawn Avenue</b>													
Carver St	Main St (SR 1349)	0.13	18	2	40	25	8160	2200	8160	400	ADQ	--	B P
Main St (SR 1349)	Probart St	0.05	18	2	40	25	8160	2200	8160	300	ADQ	--	B P
<b>Park Avenue</b>													
Main St (US 276)	Parkview Dr (SR 1612)	0.22	24	2	40	25	8160	1200	8160	300	ADQ	--	P

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\*\*Other Maps: **T** - Public Transportation and Rail; **B** - Bicycle; **P** - Pedestrian

Highway													
Facility & Segment		Existing System						Proposed System					Other Maps**
		Distance (mi)	Cross-Section		ROW (ft)	Speed Limit (mph)	Capacity (vpd)	2004 ADT	Capacity (vpd)	2030 ADT*	Cross-Section	ROW (ft)	
From	To		(ft)	lanes									
<b>Probart Street</b>													
Brevard City Limit	Kings Mill Rd	0.27	20	2	40	25	8160	1500	8160	200	ADQ	--	B P
Kings Mill Rd	Mills Ave	0.11	20	2	40	25	8160	1500	8160	400	ADQ	--	B P
Mills Ave	Railroad Ave	0.06	20	2	40	25	8160	2600	8160	500	ADQ	--	B P
Railroad Ave	Oaklawn Ave	0.06	20	2	40	25	8160	2600	8160	1200	ADQ	--	B P
Oaklawn Ave	Caldwell St (US 64 Bus)	0.16	20	2	40	25	8160	2600	8160	1300	ADQ	--	P
Caldwell St (US 64 Bus)	Broad St (US 64)	0.07	20	2	40	25	8160	2600	8160	400	ADQ	--	P
<b>Railroad Avenue</b>													
Probart St	French Broad Ave	0.19	20	2	30	25	10425	2800	13205	10300	K	70	B P
French Broad Ave	Whitmire St (SR 1351)	0.04	20	2	40	25	10425	2800	13205	10400	K	70	B P
Whitmire St (SR 1351)	McLean Rd	0.34	20	2	40	25	10425	2800	13205	10000	K	70	B P
<b>Turnpike Road</b>													
Country Club Rd (SR 1116)	Maple Ave	0.46	20	2	40	25	8160	400	8160	400	ADQ	--	P
<b>Varsity Street</b>													
Broad St (US 64)	Gaston St	0.08	20	2	25	25	8160	710	8160	1000	ADQ	--	B P
<b>Whitmire Street</b>													
Railroad Ave	Caldwell St (US 64 Bus)	0.21	24	2	40	25	9300	670	9300	2300	ADQ	--	P
<b>Brevard East Loop (New Location Portions)</b>													
Greenville Hwy (US 276)	Existing Gallimore Rd	0.15	--	--	--	--	--	--	10425	2300	K	70	--
Country Club Rd/Gallimore Rd	Forest Hill Rd	0.35	--	--	--	--	--	--	10425	1400	K	70	--
<b>Brevard West Loop (New Location Portions)</b>													
Cashiers Valley Rd	Main St (Brevard)	0.25	--	--	--	--	--	--	13205	9900	K	70	B P
Main St (Brevard)	Probart St	0.06	--	--	--	--	--	--	13205	10400	K	70	B P
McLean Rd	Fisher Rd	0.26	--	--	--	--	--	--	13205	9200	K	70	B P
Fisher Rd	Deerlake Rd	0.41	--	--	--	--	--	--	13205	7600	K	70	B P
Deerlake Rd	Asheville Hwy (US 64/276)	0.11	--	--	--	--	--	--	13205	11500	K	70	B P
<b>Ecusta Road Realignment</b>													
Existing Ecusta Rd	Old Hendersonville Rd/Wilson Rd	0.11	--	--	--	--	--	--	11400	3000	K	70	B P

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\*\*Other Maps: T - Public Transportation and Rail; B - Bicycle; P - Pedestrian

Highway													
Facility & Segment		Existing System						Proposed System				Other Maps**	
		Distance (mi)	Cross-Section		ROW (ft)	Speed Limit (mph)	Capacity (vpd)	2004 ADT	Capacity (vpd)	2030 ADT*	Cross-Section		ROW (ft)
From	To		(ft)	lanes									
<b>NC 215 (New Location Portion)</b>													
US 64	Existing NC 215	3.5	--	--	--	--	--	--	11700	3400	K	70	--
<b>Sylvan Valley Parkway</b>													
Rosman Hwy (US 64)	Greenville Hwy (US 276)/Wilson Rd	3.1	--	--	--	--	--	--	25500	10200	F	120	--
Greenville Hwy (US 276)/Wilson Rd	Old Hendersonville Rd/Osborne Rd	2.93	--	--	--	--	--	--	25500	16400	F	120	--
Old Hendersonville Rd/Osborne Rd	Hendersonville Hwy (US 64)	1.73	--	--	--	--	--	--	25500	17600	F	120	--
Hendersonville Hwy (US 64)	Asheville Hwy (NC 280)	1.63	--	--	--	--	--	--	25500	10900	F	120	--
<b>Osborne Rd Extension (Sylvan Valley Parkway Interchange)</b>													
Old Hendersonville Rd	Sylvan Valley Parkway	0.15	--	--	--	--	--	--	16700	6500	K	70	--
<b>Wilson Rd Extension (Sylvan Valley Parkway Interchange)</b>													
Greenville Hwy (US 276)	Sylvan Valley Parkway	0.35	--	--	--	--	--	--	16700	9100	K	70	--
<b>US 178 (New Location Portion)</b>													
Old Rosman Hwy/Main St (Rosman)	Existing US 178/East Fork Rd	0.38	--	--	--	--	--	--	15865	7800	K	70	--

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\*\*Other Maps: T - Public Transportation and Rail; B - Bicycle; P - Pedestrian

Public Transportation and Rail											
Facility & Segment		Class	Speed Limit (mph)	Distance (mi)	Existing System			Proposed System			Other Maps**
From	To				Type	ROW (ft)	Trains per day	Type	ROW (ft)	Trains per day	
<b>Norfolk Southern Railroad (TR Line)</b>											
Brevard/Pisgah Forest	Henderson County Line (to Hendersonville)	I	5 to 30	8.1	Freight	25 to 100	< 1	Freight*	25 to 100	< 1	
<i>*Freight rail is the preferred option; however, if this rail line is abandoned in the future, this corridor is proposed as a multi-use path</i>											
<b>Brevard - Hendersonville Bus Route</b>											
Downtown Brevard	Henderson County Line (to Hendersonville)	--	20 to 55	9.76 (20.3 total)	--	--	--	Bus	--	--	H B P
<b>Brevard - Asheville Bus Route</b>											
Downtown Brevard	Henderson County Line (to Asheville Airport)	--	20 to 55	8.39 (19.15 total)	--	--	--	Bus	--	--	H B P
<b>Brevard - Rosman Bus Route</b>											
Downtown Brevard	Rosman	--	20 to 55	9.11	--	--	--	Bus	--	--	H B P
<b>Brevard - Cedar Mountain Bus Route</b>											
Downtown Brevard	Cedar Mountain	--	20 to 55	10.92	--	--	--	Bus	--	--	H B P

Bicycle								
Facility & Segment		Existing System			Proposed System			Other Maps**
		Distance (mi)	Cross-Section (ft) lanes		Type	Cross-Section	BCI Score	
From	To							
<b>Transylvania County Bicycle Route 1</b>								
<b>US 178</b>								
Main St (SR 1349)	Rosman Town Limit	0.1	20	2	On-road	ADQ	C	H
Rosman Town Limit	East Fork Rd (SR 1107)	0.66	18	2	On-road	ADQ	D	H
<b>East Fork Road (SR 1107)</b>								
US 178	Middle Fork Rd (SR 1131)	0.33	18	2	On-road	K / B-4	D	H
Middle Fork Rd (SR 1131)	Walnut Hollow Rd (SR 1103)	3.37	18	2	On-road	K / B-4	D	H
<b>Walnut Hollow Road (SR 1103)</b>								
East Fork Rd (SR 1107)	Hannah Ford Rd (SR 1109)	2.84	20	2	On-road	ADQ	D	H
Hannah Ford Rd (SR 1109)	Island Ford Rd (SR 1110)	0.49	20	2	On-road	ADQ	D	H
<b>Island Ford Road (SR 1110)</b>								
Walnut Hollow Rd (SR 1103)	Country Club Rd (SR 1113)	0.89	18	2	On-road	K / B-4	D	H
<b>Country Club Road (SR 1113)</b>								
Island Ford Rd (SR 1110)	0.79 miles east of SR 1110	0.79	18	2	On-road	K / B-4	D	H
0.79 miles east of SR 1110	Barclay Rd (SR 1207)	0.86	18	2	On-road	K / B-4	D	H
<b>Country Club Road (SR 1116)</b>								
Barclay Rd (SR 1207)	Illahee Rd (SR 1114)	0.16	18	2	On-road	K / B-4	D	H
Illahee Rd (SR 1114)	Deerwoode Ln (SR 1117)	0.68	18	2	On-road	K / B-4	C	H
Deerwoode Ln (SR 1117)	Brevard City Limit	0.28	18	2	On-road	K / B-4	C	H
Brevard City Limit	Gallimore Rd (SR 1118)	0.18	20	2	On-road	K / B-4	C	H P
Gallimore Rd (SR 1118)	Turnpike Rd	0.22	20	2	On-road	ADQ	D	H P
Turnpike Rd	US 64	0.32	20	2	On-road	ADQ	D	H P
<b>US 64 (Broad Street)</b>								
Rosman Hwy	Varsity St	0.19	45	3	On-road	H	C	H T P
Varsity St	Oakdale St	0.06	45	3	On-road	ADQ	C	H T P
Oakdale St	Morgan St	0.17	45	3	On-road	ADQ	D	H T P
Morgan St	Jordan St	0.06	45	3	On-road	ADQ	D	H T P
Jordan St	Main St (US 276)	0.06	50	3	On-road	ADQ	D	H T P
Main St (US 276)	Probart St	0.05	50	4	On-road	ADQ	D	H T P
Probart St	French Broad Ave (SR 1544)	0.17	50	4	On-road	ADQ	D	H T P
French Broad Ave (SR 1544)	Caldwell St (US 64 Bus)	0.2	50	4	On-road	ADQ	D	H T P
Caldwell St (US 64 Bus)	McLean Rd	0.16	50	5	On-road	E / B-1	E	H T P
McLean Rd	Fisher Rd (SR 1356)	0.1	50	5	On-road	E / B-1	E	H T P
Fisher Rd (SR 1356)	Old Hendersonville Rd (SR 1504)	0.17	50	5	On-road	E / B-1	E	H T P

\*\* Other Maps: H - Highway; T - Public Transportation and Rail; P - Pedestrian



<b>Bicycle</b>								
Facility & Segment		Existing System			Proposed System			Other Maps**
		Distance (mi)	Cross-Section (ft) lanes		Type	Cross-Section	BCI Score	
From	To							
<b>Old Hendersonville Road (SR 1504)</b>								
Asheville Hwy (US 64)	Neely Rd/Chestnut St	0.25	18	2	On-road	K / B-4	D	H P
Neely Rd/Chestnut St	Brevard City Limit	0.06	--	--	Multi-use Path	B-5	--	H P
Brevard City Limit	Osborne Rd (SR 1556)	0.73	--	--	Multi-use Path	B-5	--	H P
Osborne Rd (SR 1556)	Wilson Rd (SR 1540)	0.54	--	--	Multi-use Path	B-5	--	H P
Wilson Rd (SR 1540)	Ecusta Rd (SR 1512)	0.05	20	2	On-road	K / B-4	D	H
Ecusta Rd (SR 1512)	Davidson River Rd (SR 1518)	0.17	20	2	On-road	K / B-4	D	H
Davidson River Rd (SR 1518)	Railroad Crossing	0.09	20	2	On-road	K / B-4	D	H
Railroad Crossing	Everett Rd (SR 1533)	0.76	20	2	On-road	K / B-4	D	H
Everett Rd (SR 1533)	Glade Creek Rd (SR 1521)	0.76	18	2	On-road	K / B-4	D	H
Glade Creek Rd (SR 1521)	Enon Rd (SR 1506)	1.15	18	2	On-road	K / B-4	D	H
Enon Rd (SR 1506)	Crab Creek Rd (SR 1528)	1.24	18	2	On-road	K / B-4	D	H
<b>Crab Creek Road (SR 1528)</b>								
Old Hendersonville Rd (SR 1504)	Talley Rd (SR 1527)	0.88	22	2	On-road	ADQ	D	H
Talley Rd (SR 1527)	Jeter Mountain Rd (SR 1529)	0.17	22	2	On-road	ADQ	D	H
Jeter Mountain Rd (SR 1529)	Everett Rd (SR 1533)	0.35	22	2	On-road	ADQ	D	H
<b>North Carolina Bicycle Route 2 (Mountains to Sea)</b>								
<b>Blue Ridge Parkway</b>								
Jackson County Line	NC 215	0.29	NA	2	On-road	ADQ	C	H
NC 215	US 276	11.29	NA	2	On-road	ADQ	C	H
US 276	Henderson County Line	5.01	NA	2	On-road	ADQ	D	H

\*\* Other Maps: H - Highway; T - Public Transportation and Rail; P - Pedestrian

Bicycle								
Facility & Segment		Existing System			Proposed System			Other Maps**
		Distance (mi)	Cross-Section (ft) lanes		Type	Cross-Section	BCI Score	
From	To							
<b>Transylvania County Bicycle Route 3</b>								
Talley Road (SR 1527)								
Crab Creek Rd (SR 1528)	Henderson County Line	2.41	18	2	On-road	ADQ	D	H
Grove Bridge Road (SR 1503)								
Henderson County Line	US 64	0.18	20	2	On-road	ADQ	D	H
US 64								
Grove Bridge Rd (SR 1503)	King Rd (SR 1502)	0.03	24	2	On-road	ADQ	D	H T
King Road (SR 1502)								
US 64	Blantyre Church Rd (SR 1501)	0.39	18	2	On-road	K / B-4	D	H
Blantyre Church Rd (SR 1501)	King Circle (SR 1582)	0.86	18	2	On-road	ADQ	D	H
King Circle (SR 1582)	NC 280	1.63	18	2	On-road	ADQ	D	H
NC 280								
King Rd (SR 1502)	0.45 miles east of SR 1361	1.21	60	5	On-road	F / B-1	F	H T
0.45 miles east of SR 1361	Old NC 280 (SR 1361)	0.45	48	4	On-road	F / B-1	E	H T
Old NC 280 (SR 1361)								
NC 280 East	SR 1360	1.03	18	2	On-road	--	--	--
SR 1360	NC 280 West	0.29	20	2	On-road	--	--	--
NC 280								
Old NC 280 (SR 1361)	Capps Rd (SR 1598)	0.1	48	4	On-road	E / B-1	D	H T
Capps Road (SR 1598)								
NC 280	Upper Glade Creek Rd (SR 1583)	0.87	18	2	On-road	ADQ	C	H
Upper Glade Creek Road (SR 1583)								
Capps Rd (SR 1598)	US 64	0.33	18	2	On-road	ADQ	D	H

\*\* Other Maps: H - Highway; T - Public Transportation and Rail; P - Pedestrian

Bicycle								
Facility & Segment		Existing System			Proposed System			Other Maps**
		Distance (mi)	Cross-Section (ft) lanes		Type	Cross-Section	BCI Score	
From	To							
<b>Transylvania County Bicycle Route 4</b>								
<b>Island Ford Road (SR 1110)</b>								
Walnut Hollow Rd (SR 1103)	Connestee Rd (SR 1112)	0.7	18	2	On-road	K / B-4	D	H
<b>Connestee Road (SR 1112)</b>								
Island Ford Rd (SR 1110)	US 276	0.57	18	2	On-road	--	--	--
<b>US 276</b>								
Connestee Rd (SR 1112)	See-off Mountain Rd (SR 1538)	2.3	18	2	On-road	H / B-4	D	H T
See-off Mountain Rd (SR 1538)	East Fork Rd (SR 1107)	0.18	18	2	On-road	H / B-4	E	H T
East Fork Rd (SR 1107)	Sherwood Terrace	1.96	18	2	On-road	K / B-4	E	H T
Sherwood Terrace	Cascade Lake Rd (SR 1536)	1.56	18	2	On-road	K / B-4	E	H T
<b>Cascade Lake Road (SR 1536)</b>								
US 276	Staton Rd (SR 1591)	2.5	20	2	On-road	K / B-4	D	H
<b>Staton Road (SR 1591)</b>								
Cascade Lake Rd (SR 1536)	AGFA/Dupont Plant Entrance	1.31	22	2	On-road	B-4	E	H
AGFA/Dupont Plant Entrance	Henderson County Line	2.95	22	2	On-road	B-4	E	H
<b>Crab Creek Road (SR 1528)</b>								
Henderson County Line	Cascade Lake Rd (SR 1536)	1.67	22	2	On-road	B-4	E	H
<b>Cascade Lake Road (SR 1536)</b>								
Crab Creek Rd (SR 1528)	Hart Rd (SR 1534)	1.3	16	2	On-road	--	--	--
<b>Hart Road (SR 1534)</b>								
Cascade Lake Rd (SR 1536)	0.5 miles west of SR 1536	0.5	16	2	On-road	--	--	--
0.5 miles west of SR 1536	Everett Rd (SR 1533)	1.9	18	2	On-road	--	--	--

\*\* Other Maps: H - Highway; T - Public Transportation and Rail; P - Pedestrian

Bicycle								
Facility & Segment		Existing System			Proposed System			Other Maps**
		Distance (mi)	Cross-Section (ft) lanes		Type	Cross-Section	BCI Score	
From	To							
<b>Transylvania County Bicycle Route 5</b>								
<b>Main Street - Rosman (SR 1156)</b>								
US 178 (Chestnut St)	US 178 (Old Rosman Hwy)	0.23	24	2	On-road	ADQ	C	H P
<b>US 178</b>								
Main St (SR 1156)	Turnpike Rd (SR 1135)	0.05	20	2	On-road	ADQ	D	H
<b>Turnpike Road (SR 1135)</b>								
US 178	US 64	1.01	18	2	On-road	--	--	--
<b>US 64</b>								
Turnpike Rd (SR 1135)	NC 215	0.1	20	2	On-road	K / B-4	F	H
<b>NC 215</b>								
US 64	Macedonia Church Rd (SR 1326)	6.04	16	2	On-road	ADQ	D	H
Macedonia Church Rd (SR 1326)	Indian Creek Rd (SR 1321)	3.18	22	2	On-road	ADQ	D	H
Indian Creek Rd (SR 1321)	Haywood County Line	7.77	22	2	On-road	ADQ	D	H

\*\* Other Maps: H - Highway; T - Public Transportation and Rail; P - Pedestrian

<b>Bicycle</b>									
Facility & Segment		Existing System			Proposed System			Other Maps**	
		Distance (mi)	Cross-Section (ft) lanes		Type	Cross-Section	BCI Score		
From	To								
<b>Transylvania County Bicycle Route 6</b>									
<b>Main Street - Rosman (SR 1156)</b>									
US 178 (Chestnut St)	Old Rosman Hwy (SR 1388)	0.43	20	2	On-road	ADQ	D	H T P	
<b>Old Rosman Highway (SR 1388)</b>									
Main St (SR 1156)	Rosman Town Limit	0.46	20	2	On-road	K / B-4	E	H T	
Rosman Town Limit	0.44 miles east of Rosman Town Limit	0.44	20	2	On-road	K / B-4	E	H T	
0.44 miles east of Rosman Town Limit	Coats America Factory Entrance	0.12	20	2	On-road	K / B-4	E	H T	
Coats America Factory Entrance	Calvert Rd (SR 1195)	0.38	20	2	On-road	K / B-4	E	H T	
<b>Calvert Road (SR 1195)</b>									
Old Rosman Hwy (SR 1388)	Hannah Ford Rd (SR 1109)	0.69	18	2	On-road	ADQ	D	H	
Hannah Ford Rd (SR 1109)	Whitmire Rd (SR 1128)	0.42	18	2	On-road	ADQ	D	H	
<b>Whitmire Road (SR 1128)</b>									
Calvert Rd (SR 1195)	Pharaoh Dr (SR 1185)	1.58	16	2	On-road	--	--	--	
<b>Pharaoh Dr (SR 1185)</b>									
Whitmire Rd (SR 1128)	Little Egypt Rd (SR 1185)	0.06	18	2	On-road	--	--	--	
<b>Little Egypt Rd (SR 1185)</b>									
Pharaoh Dr (SR 1185)	Garland Ct (SR 1190)	0.45	18	2	On-road	--	--	--	
<b>Garland Ct (SR 1190)</b>									
Little Egypt Rd (SR 1185)	US 64	0.08	18	2	On-road	--	--	--	
<b>Catheys Creek Church Road (SR 1394)</b>									
US 64 west	Ross Rd (SR 1334)	0.75	20	2	On-road	ADQ	D	H	
Ross Rd (SR 1334)	US 64 east	0.38	20	2	On-road	ADQ	D	H	
<b>US 64</b>									
Catheys Creek Church Rd (SR 1394)	Clement Rd (SR 1337)	0.29	24	2	On-road	F / B-1	F	H T	
Clement Rd (SR 1337)	Island Ford Rd (SR 1110)	0.37	48	4	On-road	B-1	F	H T	
<b>Island Ford Road (SR 1110)</b>									
US 64	Pole Miller Rd (SR 1161)	0.72	18	2	On-road	K / B-4	D	H	
Pole Miller Rd (SR 1161)	Country Club Rd (SR 1113)	1.2	18	2	On-road	K / B-4	C	H	
<b>Country Club Road (SR 1113)</b>									
Island Ford Rd (SR 1110)	0.79 miles east of SR 1110	0.79	18	2	On-road	K / B-4	D	H	
0.79 miles east of SR 1110	Barclay Rd (SR 1207)	0.86	18	2	On-road	K / B-4	D	H	
<b>Country Club Road (SR 1116)</b>									
Barclay Rd (SR 1207)	Illahee Rd (SR 1114)	0.16	18	2	On-road	K / B-4	D	H	

\*\* Other Maps: H - Highway; T - Public Transportation and Rail; P - Pedestrian

Bicycle								
Facility & Segment		Existing System			Proposed System			Other Maps**
		Distance (mi)	Cross-Section (ft) lanes		Type	Cross-Section	BCI Score	
From	To							
<b>Illahee Road (SR 1114)</b>								
Country Club Rd (SR 1116)	Camp Illahee Entrance	0.52	18	2	On-road	K / B-4	C	H
Camp Illahee Entrance	US 64	0.56	18	2	On-road	K / B-4	D	H
<b>US 64</b>								
Illahee Rd (SR 1114)	Cashiers Valley Rd (SR 1344)	0.13	--	--	Multi-use Path	B-5	--	H T P
<b>Cashiers Valley Road (SR 1344)</b>								
US 64	Sega Lake Rd (SR 1342)	0.4	16	2	On-road	K / B-4	D	H
Sega Lake Rd (SR 1342)	Probart St (SR 1348)	1.42	16	2	On-road	K / B-4	D	H
<b>Probart Street (SR 1348)</b>								
Cashiers Valley Rd (SR 1344)	Pinnacle Rd (SR 1350)	0.97	16	2	On-road	K / B-4	C	H
Pinnacle Rd (SR 1350)	Brevard City Limit	0.25	18	2	On-road	K / B-4	C	H P
<b>Probart Street</b>								
Brevard City Limit	Kings Mill Rd	0.27	20	2	On-road	ADQ	D	H P
Kings Mill Rd	Mills Ave	0.11	20	2	On-road	ADQ	D	H P
Mills Ave	Railroad Ave	0.06	20	2	On-road	ADQ	D	H P
Railroad Ave	Oaklawn Ave	0.06	20	2	On-road	ADQ	D	H P
<b>Oaklawn Avenue</b>								
Probart St	Main St (SR 1349)	0.05	18	2	On-road	ADQ	D	H P
<b>Main Street - Brevard (SR 1349)</b>								
Oaklawn Ave	Caldwell St (US 64 Bus)	0.16	60	4	On-road	ADQ	C	H P
Caldwell St (US 64 Bus)	Broad St (US 64)	0.08	60	4	On-road	ADQ	D	H T P

\*\* Other Maps: H - Highway; T - Public Transportation and Rail; P - Pedestrian

<b>Bicycle</b>									
Facility & Segment		Existing System			Proposed System			Other Maps**	
		Distance (mi)	Cross-Section (ft) lanes		Type	Cross-Section	BCI Score		
From	To								
<b>North Carolina State Bicycle Route 8 (Southern Highlands)</b>									
<b>US 276</b>									
Blue Ridge Parkway	Cradle of Forestry Entrance	3.72	20	2	On-road	ADQ	D	H	
Cradle of Forestry Entrance	Forest Highway 50	6.01	20	2	On-road	ADQ	D	H	
Forest Highway 50	US 64/NC 280	5.25	20	2	On-road	ADQ	D	H P	
<b>US 64</b>									
US 276/NC 280	Davidson River Rd (SR 1518)	0.63	36	3	On-road	E / B-1	D	H T P	
Davidson River Rd (SR 1518)	Glade Creek Rd (SR 1521)	0.53	24	2	On-road	E / B-1	D	H T	
<b>Glade Creek Road (SR 1521)</b>									
US 64	Old Hendersonville Rd (SR 1504)	0.73	18	2	On-road	ADQ	D	H	
<b>Old Hendersonville Road (SR 1504)</b>									
Glade Creek Rd (SR 1521)	Everett Rd (SR 1533)	0.76	18	2	On-road	K / B-4	D	H	
<b>Everett Road (SR 1533)</b>									
Old Hendersonville Rd (SR 1504)	Friendship Ln (SR 1600)	0.92	22	2	On-road	ADQ	D	H	
Friendship Ln (SR 1600)	0.2 miles east of SR 1617	0.7	18	2	On-road	K / B-4	D	H	
0.2 miles east of SR 1617	Hart Rd (SR 1534)	0.87	18	2	On-road	K / B-4	D	H	
Hart Rd (SR 1534)	Crab Creek Rd (SR 1528)	0.72	18	2	On-road	K / B-4	D	H	
<b>Crab Creek Road (SR 1528)</b>									
Everett Rd (SR 1533)	Cascade Lake Rd (SR 1536)	0.98	22	2	On-road	B-4	E	H	
Cascade Lake Rd (SR 1536)	Henderson County Line	1.67	22	2	On-road	B-4	E	H	
<b>Lake Toxaway Connection - County Bicycle Route</b>									
<b>Macedonia Church Road (SR 1326)</b>									
NC 215	Neil Armstrong Rd (PARI)	1.73	20	2	On-road	ADQ	D	H	
Neil Armstrong Rd (PARI)	Kitchen Loop Rd (SR 1310)	1.33	20	2	On-road	ADQ	D	H	
Kitchen Loop Rd (SR 1310)	Silversteen Rd (SR 1309)	0.68	18	2	On-road	K / B-4	D	H	
<b>Silversteen Road (SR 1309)</b>									
Macedonia Church Rd (SR 1326)	NC 281	2.16	18	2	On-road	K / B-4	D	H	
<b>NC 281</b>									
Silversteen Rd (SR 1309)	Shelton Rd (SR 1307)	2.09	NA	NA	On-road	K / B-4	D	H	
Shelton Rd (SR 1307)	Kim Miller Rd (SR 1304)	2.11	20	2	On-road	ADQ	D	H	
Kim Miller Rd (SR 1304)	US 64	1.27	20	2	On-road	K / B-4	D	H	

\*\* Other Maps: H - Highway; T - Public Transportation and Rail; P - Pedestrian

Bicycle								
Facility & Segment		Existing System			Proposed System			Other Maps**
		Distance (mi)	Cross-Section (ft) lanes		Type	Cross-Section	BCI Score	
From	To							
<b>Rosman Loop - County Bicycle Route</b>								
<b>US 178</b>								
East Fork Rd (SR 1107)	Old Toxaway Rd (SR 1139)	0.72	18	2	On-road	K / B-4	E	H
<b>Old Toxaway Road (SR 1139)</b>								
US 178	Landfill Entrance	1.36	20	2	On-road	ADQ	D	H
Landfill Entrance	Frozen Creek Rd (SR 1143)	2.44	18	2	On-road	K / B-4	E	H
<b>Frozen Creek Road (SR 1143)</b>								
Old Toxaway Rd (SR 1139)	0.7 miles south of US 64	4.69	18	2	On-road	K / B-4	D	H
0.7 miles south of US 64	US 64	0.7	16	2	On-road	K / B-4	D	H
<b>US 64</b>								
Frozen Creek Rd (SR 1143)	Turnpike Rd (SR 1135)	0.82	20	2	On-road	K / B-4	F	H
<b>US 64 West</b>								
Frozen Creek Rd (SR 1143)	Kim Miller Rd (SR 1304)	2.86	20	2	On-road	K / B-4	E	H
Kim Miller Rd (SR 1304)	NC 281 North	3.01	20	2	On-road	K / B-4	E	H
NC 281 North	NC 281 South	2.7	18	2	On-road	K / B-4	E	H
NC 281 South	Jackson County Line	2.86	18	2	On-road	K / B-4	E	H
<b>US 276 South</b>								
Gallimore Rd (SR 1118)	Brevard City Limit	0.43	20	2	On-road	ADQ	D	H T P
Brevard City Limit	Wilson Rd (SR 1540)	0.81	20	2	On-road	B-4	E	H T
Wilson Rd (SR 1540)	Becky Mountain Rd (SR 1538)	0.38	18	2	On-road	F / B-1	E	H T
Becky Mountain Rd (SR 1538)	Barclay Rd (SR 1207)	0.65	18	2	On-road	F / B-1	E	H T
Barclay Rd (SR 1207)	Island Ford Rd (SR 1110)	1.09	18	2	On-road	F / B-1	E	H T
Island Ford Rd (SR 1110)	Connestee Rd (SR 1112)	0.71	18	2	On-road	H / B-4	D	H T
<b>Asheville Highway (US 64/NC 280)</b>								
Ecusta Rd (SR 1512)	US 64 East/US 276 North	0.18	48	4	On-road	B-1	E	H T P
US 64 East/US 276 North	Deaver Rd	0.1	48	4	On-road	E / B-1	E	H T P
Deaver Rd	Allison-Deaver House	0.19	48	4	On-road	E / B-1	E	H T P
Allison-Deaver House	Capps Rd (SR 1598)	0.4	48	4	On-road	E / B-1	D	H T P

\*\* Other Maps: H - Highway; T - Public Transportation and Rail; P - Pedestrian



Bicycle								
Facility & Segment		Existing System			Proposed System			Other Maps**
		Distance (mi)	Cross-Section (ft) lanes		Type	Cross-Section	BCI Score	
From	To							
<b>Brevard East Loop</b>								
Chestnut Street (SR 1610)								
US 64-276	Old Hendersonville Rd (SR 1504)	0.23	18	2	On-road	ADQ	C	H P
<b>Neely Road (SR 1546)</b>								
Old Hendersonville Rd (SR 1504)	French Broad Ave (SR 1536)	0.98	18	2	On-road	ADQ	D	H P
<b>Park Avenue (SR 1611)</b>								
French Broad Ave (SR 1536)	Parkview Dr (SR 1612)	0.14	18	2	On-road	ADQ	D	H P
<b>Parkview Drive (SR 1612)</b>								
Park Ave (SR 1611)	US 276	0.23	18	2	On-road	ADQ	D	H P
<b>Brevard West Loop</b>								
<b>Nicholson Creek Road (SR 1346)</b>								
US 64	Cashiers Valley Rd (SR 1344)	0.59	20	2	On-road	K / B-4	D	H
<b>Cashiers Valley Road</b>								
Nicholson Creek Rd (SR 1346)	Carolina Ave (SR 1347)	0.09	16	2	On-road	K / B-4	D	H
Carolina Ave (SR 1347)	Mills Ave/Carver St	0.29	16	2	On-road	K / B-4	D	H
<b>New Location Section</b>								
Cashiers Valley Rd	Main St	0.25	--	--	On-road	K / B-4	D	H
<b>Carolina Avenue</b>								
US 64	Shipman Rd	0.22	16	2	On-road	ADQ	D	H
Shipman Rd	Cashiers Valley Rd	0.25	16	2	On-road	ADQ	D	H
<b>Carver Street</b>								
Mills Ave/Cashiers Valley Rd	Oakdale St	0.06	18	2	On-road	ADQ	D	H
Oakdale St	Oaklawn Ave	0.13	18	2	On-road	ADQ	D	H
<b>Cashiers Valley Road (SR 1344)</b>								
Nicholson Creek Rd (SR 1346)	Probart St (SR 1348)	0.13	16	2	On-road	K / B-4	C	H
<b>Elm Bend Road (SR 1543)</b>								
US 276	Brevard City Limit	0.55	18	2	On-road	ADQ	D	H P
Brevard City Limit	Wilson Rd (SR 1540)	0.78	20	2	On-road	ADQ	D	H

\*\* Other Maps: H - Highway; T - Public Transportation and Rail; P - Pedestrian

<b>Bicycle</b>								
Facility & Segment		Existing System			Proposed System			Other Maps**
		Distance (mi)	Cross-Section (ft) lanes		Type	Cross-Section	BCI Score	
From	To							
<b>French Broad Avenue (SR 1544)</b>								
Neely Rd/Park Ave	Franklin St	0.19	18	2	On-road	ADQ	D	H P
Franklin St	Johnson St	0.24	20	2	On-road	ADQ	D	H P
Johnson St	Broad St	0.13	20	2	On-road	ADQ	D	H P
<b>French Broad Avenue</b>								
Broad St	Caldwell St	0.06	18	2	On-road	ADQ	D	H P
Caldwell St	Railroad Ave	0.21	18	2	On-road	ADQ	D	H P
<b>Gaston Street</b>								
Varsity Street	Maple Ave	0.13	20	2	On-road	ADQ	C	H P
<b>Jordan Road</b>								
Maple Ave	Gallimore Rd	0.09	16	2	On-road	ADQ	C	H P
<b>Maple Avenue</b>								
Gaston St	Johnson St	0.07	22	2	On-road	ADQ	C	H P
Johnson St	Turnpike Rd	0.13	22	2	On-road	ADQ	C	H P
Turnpike Rd	Jordan Rd	0.5	22	2	On-road	ADQ	C	H P
<b>Oakdale Street</b>								
Carver St	Caldwell St	0.26	20	2	On-road	ADQ	D	H P
Caldwell St	Broad St	0.07	20	2	On-road	ADQ	D	H P
<b>Oaklawn Avenue</b>								
Carver St	Main St	0.13	18	2	On-road	ADQ	D	H P
<b>Osborne Road (SR 1556)</b>								
US 64	Old Hendersonville Rd (SR 1504)	0.75	16	2	On-road	K / B-4	D	H P
<b>Varsity Street</b>								
Broad St	Gaston St	0.08	20	2	On-road	ADQ	D	H P

\*\* Other Maps: H - Highway; T - Public Transportation and Rail; P - Pedestrian

Bicycle								
Facility & Segment		Existing System			Proposed System			Other Maps**
		Distance (mi)	Cross-Section (ft) lanes		Type	Cross-Section	BCI Score	
From	To							
<b>Wilson Road (SR 1540)</b>								
US 276	Elm Bend Rd (SR 1543)	1.17	18	2	On-road	K / B-4	D	H
	Elm Bend Rd (SR 1543)	1.12	18	2	On-road	K / B-4	D	H
	Glen Cannon Dr	0.92	18	2	On-road	K / B-4	D	H
	Brevard City Limit	0.46	20	2	On-road	K / B-4	D	H
	Old Hendersonville Rd (SR 1504)							
<b>Brevard Bikeway</b>								
	Railroad Ave & McLean Rd	0.81	--	--	Multi-use Path	B-5	--	P
	Asheville Hwy & Osborne Rd	1.74	--	--	Multi-use Path	B-5	--	P
	Ecusta Rd at Sports Complex	2.23	--	--	Multi-use Path	B-5	--	P
<b>Gallimore Road Multi-use Path</b>								
	Country Club Rd & Gallimore Rd	0.93	--	--	Multi-use Path	B-5	--	P
<b>Asheville Highway Multi-use Path</b>								
	Asheville Hwy & Hospital Dr	1.28	--	--	Multi-use Path	B-5	--	P
<b>Brevard West Loop Multi-use Path</b>								
	Railroad Ave & McLean Rd	0.63	--	--	Multi-use Path	B-5	--	P
<b>West Main Street Multi-use Path</b>								
	Main St & Oaklawn Ave	0.51	--	--	Multi-use Path	B-5	--	P
<b>Tucker Creek Multi-use Path</b>								
	English Hills/WCCA	1.09	--	--	Multi-use Path	B-5	--	P
	Rosman Hwy & Carolina Ave	0.84	--	--	Multi-use Path	B-5	--	P
<b>Bracken Mountain Multi-use Path</b>								
	English Hills/WCCA	0.83	--	--	Multi-use Path	B-5	--	P
	Pinnacle Rd at Bracken Mtn Property							

\*\* Other Maps: H - Highway; T - Public Transportation and Rail; P - Pedestrian

Bicycle								
Facility & Segment		Existing System			Proposed System			Other Maps**
		Distance (mi)	Cross-Section (ft) lanes		Type	Cross-Section	BCI Score	
From	To							
<b>Old Hendersonville Road/Ecusta Road Multi-use Path</b>								
Old Hendersonville Rd & Neely Rd	Old Hendersonville Rd & Wilson Rd	1.33	--	--	Multi-use Path	B-5	--	P
Old Hendersonville Rd & Wilson Rd	Ecusta Rd at Sports Complex	0.52	--	--	Multi-use Path	B-5	--	P
<b>Rosman Highway Multi-use Path</b>								
Rosman Hwy & Carolina Ave	Rosman Hwy & Cashiers Valley Rd	1	--	--	Multi-use Path	B-5	--	P
<b>Brevard College Area Multi-use Path System</b>								
Railroad Ave at Kings Creek	Broad St & Caldwell St	0.3	--	--	Multi-use Path	B-5	--	P
Broad St at Burger King	Brevard College Baseball Field	0.35	--	--	Multi-use Path	B-5	--	P
Brevard College Baseball Field	Neely Rd at Lambo Creek	0.37	--	--	Multi-use Path	B-5	--	P
Brevard College Baseball Field	Broad St & Caldwell St	0.49	--	--	Multi-use Path	B-5	--	P

\*\* Other Maps: H - Highway; T - Public Transportation and Rail; P - Pedestrian

Pedestrian							
Facility & Segment		Existing System			Proposed System		Other Maps**
From	To	Distance (mi)	Type	Side of Street	Type	Side of Street	
<b>US 64 (Rosman Highway)</b>							
Cashiers Valley Rd	Skyview Terrace	0.31	--	--	Multi-use Path	South	H T B
Skyview Terrace	Forest Hill Rd/Carolina Ave	0.79	--	--	Multi-use Path	South	H T B
					Sidewalk	North	
Forest Hill Rd/Carolina Ave	Tucker Creek	0.15	--	--	Multi-use Path	North	H T B
					Sidewalk	South	
Tucker Creek	Broad St	0.21	--	--	Sidewalk	Both	H T
<b>US 64 (Broad Street)</b>							
Rosman Hwy	French Broad Ave	0.77	Sidewalk	Both	Sidewalk	Both	H T B
French Broad Ave	Brevard College Main Entrance	0.08	Sidewalk	East	Sidewalk	Both	H T B
Brevard College Main Entrance	Caldwell St	0.12	Sidewalk	East	Sidewalk	East	H T B
Caldwell St	Kings Creek	0.04	Sidewalk	Both	Multi-use Path	East	H T B
					Sidewalk	West	
Kings Creek	Old Hendersonville Rd	0.38	Sidewalk	East	Sidewalk	Both	H T B
<b>US 64 (Asheville Highway)</b>							
Old Hendersonville Rd	Chestnut St	0.32	Sidewalk	East	Sidewalk	Both	H T
Chestnut St	Deerlake Rd	0.1	Sidewalk	East***	Sidewalk	Both	H T
Deerlake Rd	Osborne Rd	0.08	Sidewalk	Both***	Sidewalk	Both	H T
Osborne Rd	Allison Rd	0.15	Sidewalk	East	Multi-use Path	East	H T B
					Sidewalk	West	
Allison Rd	Hospital Rd	0.44	Multi-use Path	East	Multi-use Path	East	H T B
Hospital Rd	Ecusta Rd	1.28	--	--	Multi-use Path	East	H T B
					Sidewalk	West	
Ecusta Rd	Davidson River	0.09	Multi-use Path	East	Multi-use Path	East	H T B
					Sidewalk	West	
Davidson River	NC 280	0.09	--	--	Sidewalk	Both	H T B
<b>US 64 (Hendersonville Highway)</b>							
NC 280	Davidson River Rd	0.63	--	--	Sidewalk	Both	H T B

\*\*Other Maps: H - Highway; T - Public Transportation and Rail; B - Bicycle

\*\*\*Existing Segment has small gaps that must be connected

Pedestrian							
Facility & Segment		Existing System			Proposed System		Other Maps**
From	To	Distance (mi)	Type	Side of Street	Type	Side of Street	
<b>US 64 Business (Caldwell Street)</b>							
Rosman Hwy	Colwell Dr	0.08	--	--	Sidewalk	Both	H T
Colwell Dr	Silversteen Dr	0.16	Sidewalk	West	Sidewalk	Both	H T
Silversteen Dr	Probart St	0.42	Sidewalk	Both	Sidewalk	Both	H T
Probart St	French Broad Ave	0.18	Sidewalk	East	Sidewalk	Both	H T
French Broad Ave	Whitmire St	0.09	--	--	Sidewalk	Both	H T
Whitmire St	Broad St	0.13	Sidewalk	West	Sidewalk	West	H T
<b>US 178</b>							
Turnpike Rd	North Main St	0.05	Sidewalk	West	Sidewalk	West	H B
North Main St	Old Rosman Hwy & Chestnut St	0.29	--	--	Sidewalk	West	H
Old Rosman Hwy & Chestnut St	Main St & Chestnut St	0.13	Sidewalk	Both***	Sidewalk	Both	H T
<b>US 276 (Greenville Highway)</b>							
0.25 miles east of Gallimore Rd	0.09 miles east of Gallimore Rd	0.16	--	--	Sidewalk	South	H T B
0.09 miles east of Gallimore Rd	Gallimore Rd	0.09	Sidewalk	North	Sidewalk	Both	H T B
Gallimore Rd	Parkview Dr/Elm Bend Rd	0.09	Sidewalk	North	Multi-use Path Sidewalk	North South	H T B
Parkview Dr/Elm Bend Rd	Wilson Dr	0.18	Sidewalk	North	Sidewalk	Both	H T
<b>US 276 (Main Street)</b>							
Wilson Dr	Broad St	0.52	Sidewalk	Both	Sidewalk	Both	H T
<b>US 276 (Broad Street)</b>							
Main St	French Broad Ave	0.22	Sidewalk	Both	Sidewalk	Both	H T B
French Broad Ave	Brevard College Main Entrance	0.08	Sidewalk	East	Sidewalk	Both	H T B
Brevard College Main Entrance	Caldwell St	0.12	Sidewalk	East	Sidewalk	East	H T B
Caldwell St	Kings Creek	0.04	Sidewalk	Both	Multi-use Path Sidewalk	East West	H T B
Kings Creek	Old Hendersonville Rd	0.38	Sidewalk	East	Sidewalk	Both	H T B

\*\*Other Maps: H - Highway; T - Public Transportation and Rail; B - Bicycle

\*\*\*Existing Segment has small gaps that must be connected

Pedestrian							
Facility & Segment		Existing System			Proposed System		Other Maps**
From	To	Distance (mi)	Type	Side of Street	Type	Side of Street	
<b>US 276 (Asheville Highway)</b>							
Old Hendersonville Rd	Chestnut St	0.32	Sidewalk	East	Sidewalk	Both	H T
Chestnut St	Deerlake Rd	0.1	Sidewalk	East***	Sidewalk	Both	H T
Deerlake Rd	Osborne Rd	0.08	Sidewalk	Both***	Sidewalk	Both	H T
Osborne Rd	Allison Rd	0.15	Sidewalk	East	Multi-use Path Sidewalk	East West	H T B
Allison Rd	Hospital Rd	0.44	Multi-use Path	East	Multi-use Path	East	H T B
Hospital Rd	Ecusta Rd	1.28	--	--	Multi-use Path Sidewalk	East West	H T B
Ecusta Rd	Davidson River	0.09	Multi-use Path	East	Multi-use Path Sidewalk	East West	H T B
Davidson River	NC 280	0.09	--	--	Sidewalk	Both	H T B
<b>US 276 (Pisgah Forest Highway)</b>							
NC 280	National Forest Property	0.2	--	--	Sidewalk	Both	H B
<b>NC 280 (Asheville Highway)</b>							
US 64/276	Brevard City Limit	0.2	--	--	Sidewalk	Both	H T B
<b>Country Club Road (SR 1116)</b>							
Nicholson Creek	Gallimore Rd	0.23	Sidewalk	East***	Multi-use Path	East	H B
Gallimore Rd	Rosman Hwy	0.54	Sidewalk	East	Sidewalk	East	H B
<b>Gallimore Road (SR 1118)</b>							
Country Club Rd	Greenville Hwy	0.84	--	--	Multi-use Path	South	H B
<b>Forest Hill Road (SR 1123)</b>							
Rosman Hwy	Nicholson Creek	0.13	--	--	Multi-use Path	East	H B
<b>Main Street - Rosman (SR 1156)</b>							
US 178 North	Church St	0.19	--	--	Sidewalk	West	H B
Church St	Chestnut St	0.17	Sidewalk	Both***	Sidewalk	Both	H B
Chestnut St	Depot St	0.08	Sidewalk	Both	Sidewalk	Both	H T B
Depot St	Old Rosman Hwy	0.15	--	--	Sidewalk	West	H T B

\*\*Other Maps: H - Highway; T - Public Transportation and Rail; B - Bicycle

\*\*\*Existing Segment has small gaps that must be connected

Pedestrian							
Facility & Segment		Existing System			Proposed System		Other Maps**
From	To	Distance (mi)	Type	Side of Street	Type	Side of Street	
<b>Carolina Avenue (SR 1347)</b>							
Rosman Hwy	Cashiers Valley Rd	0.47	--	--	Sidewalk	East	H B
<b>Probart Street (SR 1348)</b>							
Hillview Ave	0.05 miles north of Hillview Ave	0.05	--	--	Sidewalk	East	H B
Pinnacle Rd	Andante Lane	0.05	--	--	Multi-use Path	South	H B
Andante Lane	Brevard City Limit	0.2	--	--	Sidewalk	South	H B
<b>Main Street - Brevard (SR 1349)</b>							
Broad St	Oaklawn Ave	0.24	Sidewalk	Both	Sidewalk	Both	H T B
<b>Whitmire Street (SR 1351)</b>							
Railroad Ave	Kings Mill Rd	0.36	Sidewalk	North	Sidewalk	North	H
<b>Tinsley Road (SR 1353)</b>							
Whitmire St	Kings Creek Rd	0.34	--	--	Sidewalk	West	H
<b>Fisher Road (SR 1356)</b>							
Asheville Hwy	Brevard West Loop	0.21	Sidewalk	East	Sidewalk	East	H
Brevard West Loop	Poplar St	0.04	Sidewalk	East	Multi-use Path	East	H B
<b>Old Hendersonville Road (SR 1504)</b>							
Asheville Hwy	Neely Rd/Chestnut St	0.25	--	--	Sidewalk	North	H B
Neely Rd/Chestnut St	Wilson Rd	1.33	--	--	Multi-use Path	North	H B
<b>Ecusta Road (SR 1512)</b>							
0.09 mi N of Old Hendersonville Rd	Morris Rd	0.52	--	--	Multi-use Path	West	H B
Morris Rd	0.17 miles south of Asheville Hwy	0.58	--	--	Multi-use Path Sidewalk	East West	H B
0.17 miles south of Asheville Hwy	Asheville Hwy	0.17	Multi-use Path	East	Multi-use Path Sidewalk	East West	H B
<b>Elm Bend Road (SR 1543)</b>							
Greenville Hwy	0.05 miles east of Magnolia St	0.16	Sidewalk	South	Sidewalk	South	H B
0.05 miles east of Magnolia St	Brevard City Limit	0.45	--	--	Sidewalk	South	H B

\*\*Other Maps: H - Highway; T - Public Transportation and Rail; B - Bicycle

\*\*\*Existing Segment has small gaps that must be connected



Pedestrian							
Facility & Segment		Existing System			Proposed System		Other Maps**
From	To	Distance (mi)	Type	Side of Street	Type	Side of Street	
<b>French Broad Avenue (SR 1544)</b>							
Broad St	Neely Rd	0.56	Sidewalk	North	Sidewalk	North	H B
<b>Neely Road (SR 1546)</b>							
Old Hendersonville Rd	French Broad Ave	0.99	--	--	Sidewalk	West	H B
<b>Osborne Road (SR 1556)</b>							
Asheville Hwy	Old Hendersonville Rd	0.75	--	--	Sidewalk	North	H B
<b>Chestnut Street (SR 1610)</b>							
Old Hendersonville Rd	Asheville Hwy	0.23	--	--	Sidewalk	West	H B
<b>Park Avenue (SR 1611)</b>							
French Broad Ave	Parkview Dr	0.14	Sidewalk	East	Sidewalk	East	H B
<b>Parkview Drive (SR 1612)</b>							
Park Ave	Greenville Hwy	0.23	Sidewalk	East***	Sidewalk	East	H B
<b>Carver Street</b>							
Mills Ave/Cashiers Valley Rd	Oaklawn Ave	0.19	Sidewalk	South	Sidewalk	South	H B
<b>Cashiers Valley Road</b>							
Mills Ave/Carver St	Tucker Creek	0.05	Sidewalk	West	Sidewalk Multi-use Path	West East	H B
Tucker Creek	Carolina Ave	0.24	Sidewalk	West	Sidewalk	West	H B
<b>Franklin Street</b>							
Main St	French Broad Ave	0.24	Sidewalk	West	Sidewalk	West	H
<b>French Broad Avenue</b>							
Railroad Ave	Caldwell St	0.21	Sidewalk	Both	Sidewalk	Both	H B
Caldwell St	Broad St	0.06	Sidewalk	South***	Sidewalk	Both	H B

\*\*Other Maps: H - Highway; T - Public Transportation and Rail; B - Bicycle

\*\*\*Existing Segment has small gaps that must be connected

Pedestrian							
Facility & Segment		Existing System			Proposed System		Other Maps**
From	To	Distance (mi)	Type	Side of Street	Type	Side of Street	
<b>Gaston Street</b>							
Main St	Maple Ave	0.23	Sidewalk	Both	Sidewalk	Both	H
Maple Ave	Varsity St	0.13	--	--	Sidewalk	West	H B
<b>Johnson Street</b>							
French Broad Ave	Jordan St	0.29	Sidewalk	East	Sidewalk	East	H
Jordan St	Maple Ave	0.21	--	--	Sidewalk	East	H
<b>Jordan Road</b>							
Gallimore Rd	Maple Ave	0.09	--	--	Sidewalk	West	H B
<b>Jordan Street</b>							
Caldwell St	Gaston St	0.16	Sidewalk	Both	Sidewalk	Both	H
Gaston St	Johnson St	0.07	Sidewalk	North	Sidewalk	North	H
<b>Kings Mill Road</b>							
Whitmire St	Probart St	0.19	--	--	Sidewalk	West	H
<b>Main Street - Brevard</b>							
Oaklawn Ave	Mills Ave	0.12	Sidewalk	South	Multi-use Path	South	H B
<b>Maple Avenue</b>							
Gaston St	Turnpike Rd	0.2	Sidewalk	Both	Sidewalk	Both	H B
Turnpike Rd	Memory Lane	0.32	Sidewalk	West***	Sidewalk	West	H B
Memory Lane	Jordan Rd	0.18	--	--	Sidewalk	West	H B
<b>McLean Road</b>							
Broad St	Railroad Ave	0.17	--	--	Sidewalk	South	H
<b>Mills Avenue</b>							
Cashiers Valley Rd	Main St	0.25	Sidewalk	East	Sidewalk	East	H
<b>Morgan Street</b>							
Oaklawn Ave	Duckworth St	0.09	Sidewalk	South	Sidewalk	South	H
Duckworth St	Gaston St	0.22	Sidewalk	Both	Sidewalk	Both	H

\*\*Other Maps: H - Highway; T - Public Transportation and Rail; B - Bicycle

\*\*\*Existing Segment has small gaps that must be connected

Pedestrian							
Facility & Segment		Existing System			Proposed System		Other Maps**
From	To	Distance (mi)	Type	Side of Street	Type	Side of Street	
<b>Morris Road</b>							
Asheville Hwy	Ecusta Rd	0.61	--	--	Sidewalk	North	H
<b>Oakdale Street</b>							
Carver St	Jenkins Row	0.07	Sidewalk	Both	Sidewalk	Both	H B
Jenkins Row	Caldwell St	0.19	Sidewalk	South	Sidewalk	South	H B
Caldwell St	Broad St	0.07	Sidewalk	North	Sidewalk	North	H B
<b>Oaklawn Avenue</b>							
Carver St/Morgan St	Jordan St	0.02	Sidewalk	Both	Sidewalk	Both	H B
Jordan St	Main St	0.11	Sidewalk	West	Sidewalk	West	H B
Main St	Probart St	0.05	Sidewalk	East	Sidewalk	East	H B
<b>Park Avenue</b>							
Main St	0.1 miles north of Main St	0.1	Sidewalk	Both	Sidewalk	Both	H
0.1 miles north of Main St	Parkview Dr	0.12	Sidewalk	South	Sidewalk	South	H
<b>Probart Street</b>							
Brevard City Limit	Railroad Ave	0.44	--	--	Sidewalk	South	H B
Railroad Ave	Broad St	0.29	Sidewalk	Both	Sidewalk	Both	H B
<b>Railroad Avenue</b>							
Probart St	French Broad Ave	0.19	Sidewalk	East	Sidewalk	East	H B
					Multi-use Path	West	
French Broad Ave	McLean Rd	0.38	--	--	Multi-use Path	West	H B
<b>Turnpike Road</b>							
Country Club Rd	Maple Ave	0.46	--	--	Sidewalk	East	H
<b>Varsity Street</b>							
Broad St	Gaston St	0.08	--	--	Sidewalk	North	H B
<b>Whitmire Street</b>							
Railroad Ave	Caldwell St	0.21	Sidewalk	Both	Sidewalk	Both	H

\*\*Other Maps: H - Highway; T - Public Transportation and Rail; B - Bicycle

\*\*\*Existing Segment has small gaps that must be connected

Pedestrian							
Facility & Segment		Existing System			Proposed System		Other Maps**
From	To	Distance (mi)	Type	Side of Street	Type	Side of Street	
<b>Brevard West Loop (New Location Portions)</b>							
Cashiers Valley Rd/Carver St	Main St	0.25	--	--	Sidewalk	West	H B
Main St	Probart St	0.06	--	--	Multi-use Path	West	H B
McLean Rd	Fisher Rd	0.26	--	--	Multi-use Path	West	H B
0.2 miles north of Fisher Rd	Asheville Hwy	0.32	--	--	Multi-use Path	West	H B
<b>Ecusta Road Realignment (New Location Portion)</b>							
Existing Ecusta Rd	Old Hendersonville Rd	0.11	--	--	Multi-use Path	West	H B
<b>Brevard Bikeway (not on Highway R-O-W)</b>							
Fisher Rd & Poplar St	West Loop, 0.2 mi N of Fisher Rd	0.19	--	--	Multi-use Path	--	B
Hospital Rd & Asheville Hwy	Ecusta Rd at Sports Complex	1.15	Multi-use Path	--	Multi-use Path	--	B
Asheville Hwy at Davidson River	Pisgah National Forest	1.27	--	--	Multi-use Path	--	B
<b>West Main Street Multi-use Path (not on Highway R-O-W)</b>							
Main St & Mills Ave	English Hills/WCCA	0.39	--	--	Multi-use Path	--	B
<b>Tucker Creek Multi-use Path (not on Highway R-O-W)</b>							
English Hills/WCCA	Cashiers Valley Rd & Mills Ave	0.3	--	--	Multi-use Path	--	B
Cashiers Valley Rd at Tucker Creek	Rosman Hwy at Tucker Creek	0.57	--	--	Multi-use Path	--	B
Forest Hill Rd at Nicholson Creek	Country Club Rd at Nicholson Creek	0.52	--	--	Multi-use Path	--	B
<b>Bracken Mountain Multi-use Path (not on Highway R-O-W)</b>							
English Hills/WCCA	Probart St & Andante Lane	0.25	--	--	Multi-use Path	--	B
Probart St & Pinnacle Rd	Bracken Mountain Property	0.53	--	--	Multi-use Path	--	B
<b>Brevard College Area Multi-use Path System (not on Highway R-O-W)</b>							
Railroad Ave at Kings Creek	Broad St at Kings Creek	0.26	--	--	Multi-use Path	--	B
Broad St at Burger King	Brevard College Baseball Field	0.35	--	--	Multi-use Path	--	B
Brevard College Baseball Field	Neely Rd at Lambo Creek	0.37	--	--	Multi-use Path	--	B
Brevard College Baseball Field	Broad St & Caldwell St	0.49	--	--	Multi-use Path	--	B

\*\*Other Maps: H - Highway; T - Public Transportation and Rail; B - Bicycle

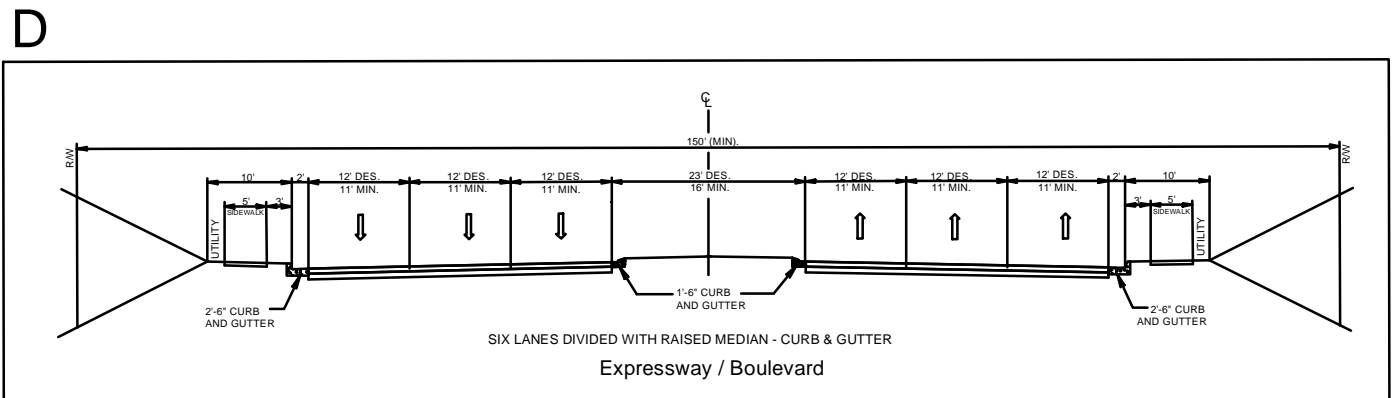
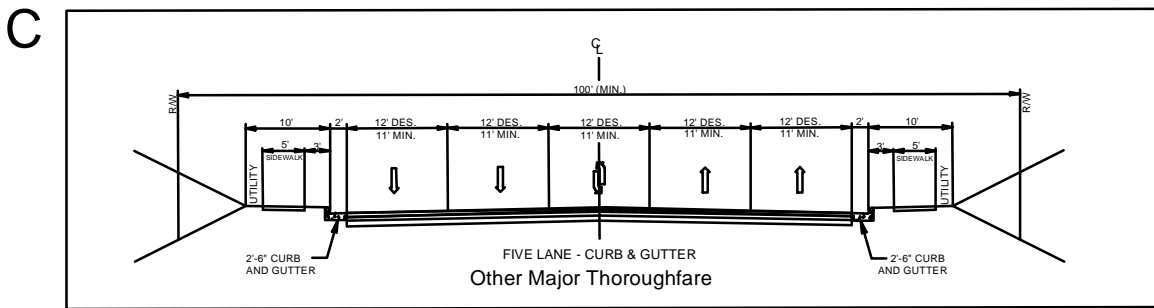
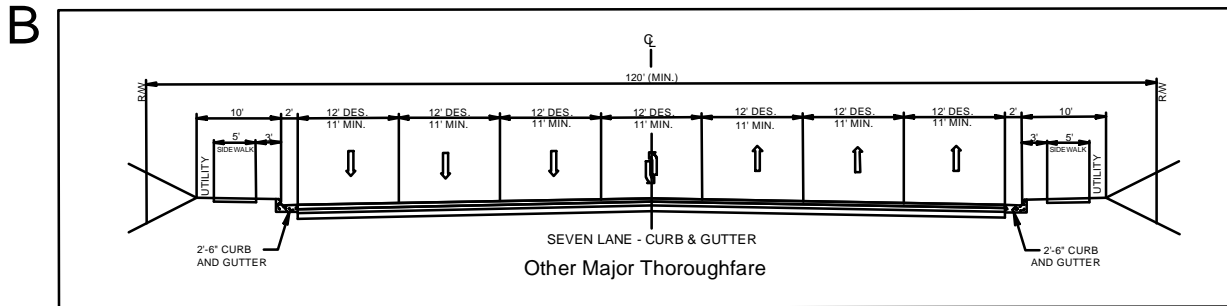
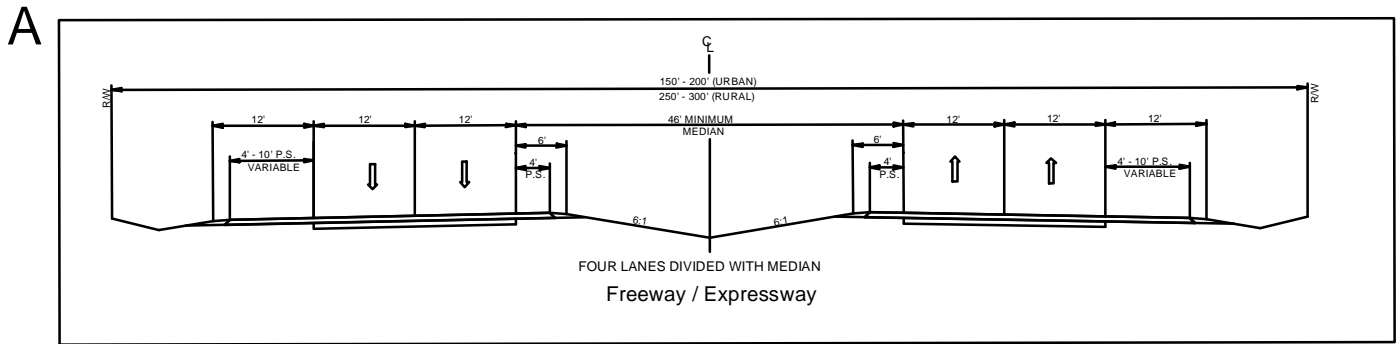
\*\*\*Existing Segment has small gaps that must be connected

# APPENDIX D

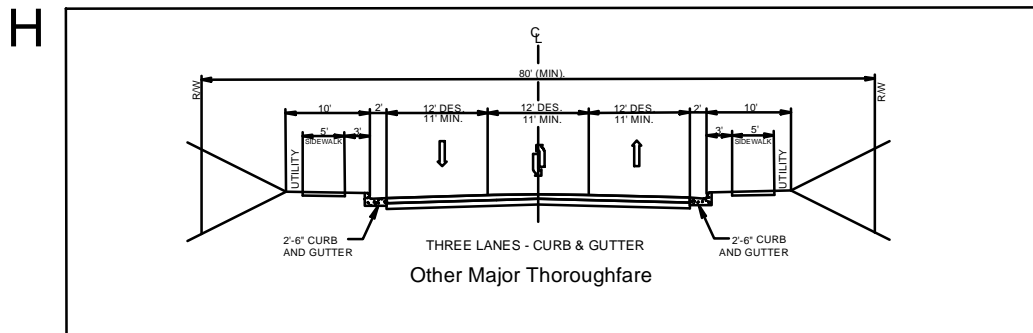
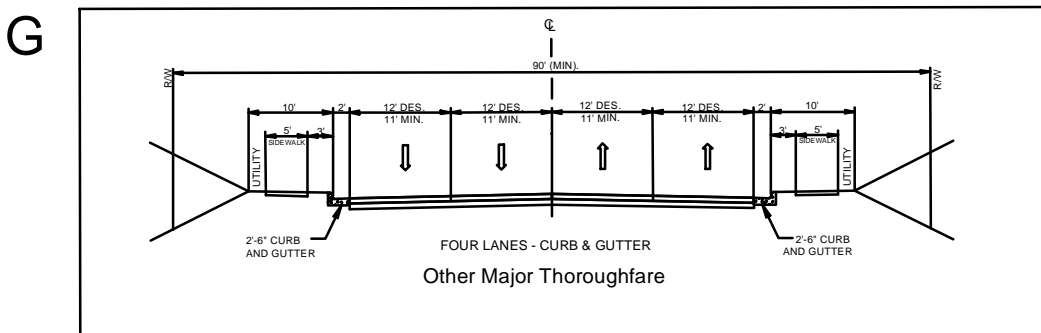
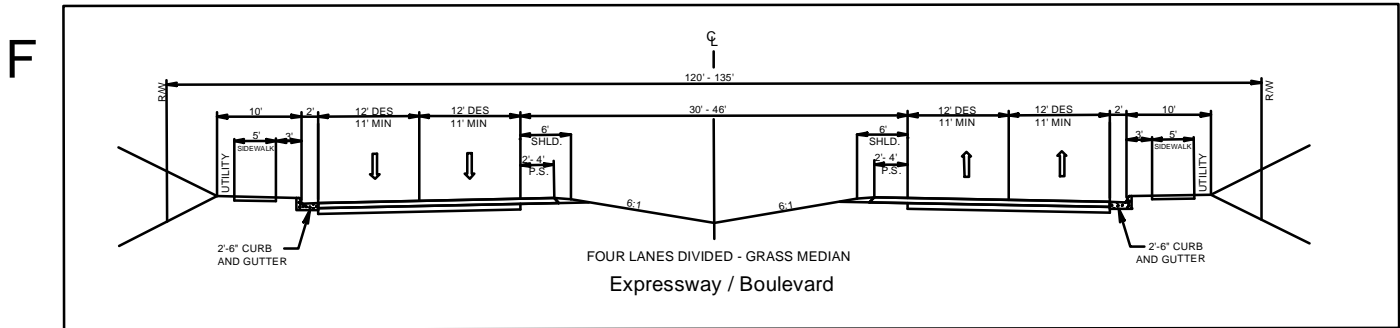
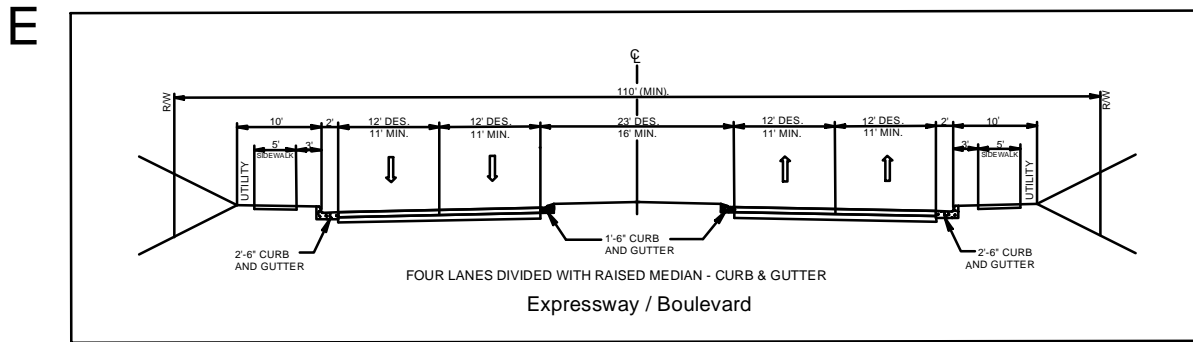
Typical  
Comprehensive  
Transportation  
Plan  
Cross-Sections



# APPENDIX D: TYPICAL HIGHWAY CROSS SECTIONS

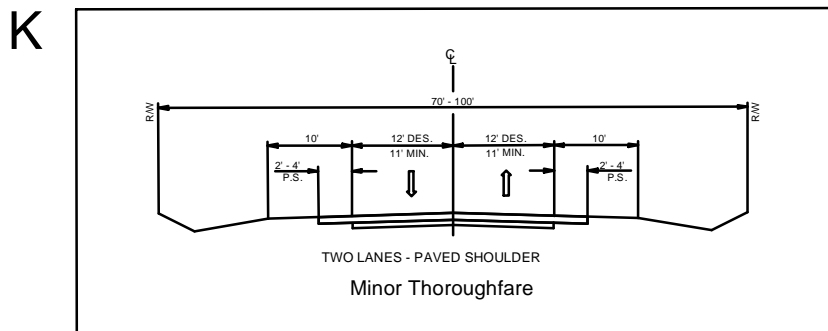
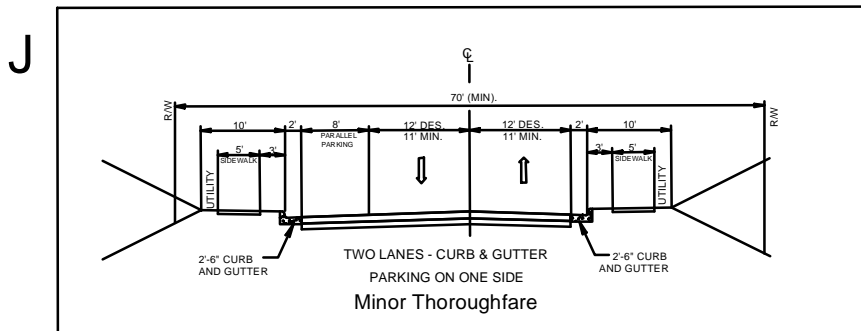
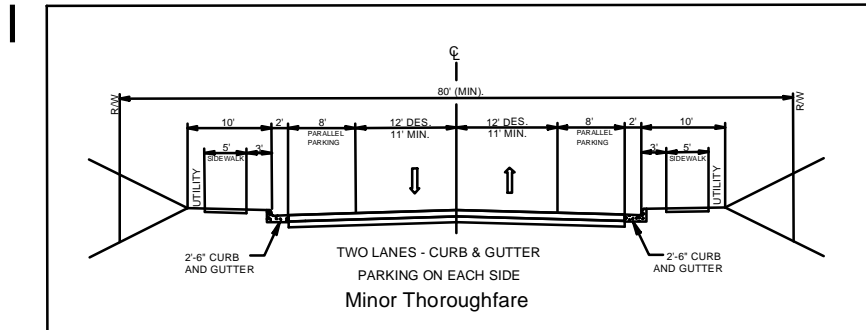


# APPENDIX D: TYPICAL HIGHWAY CROSS SECTIONS



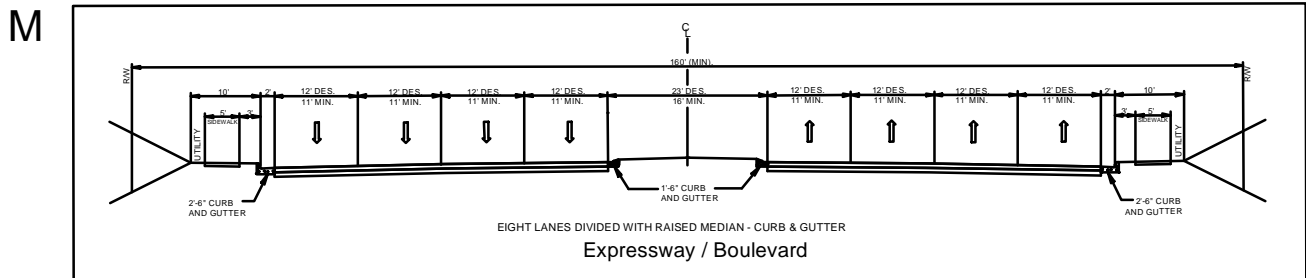
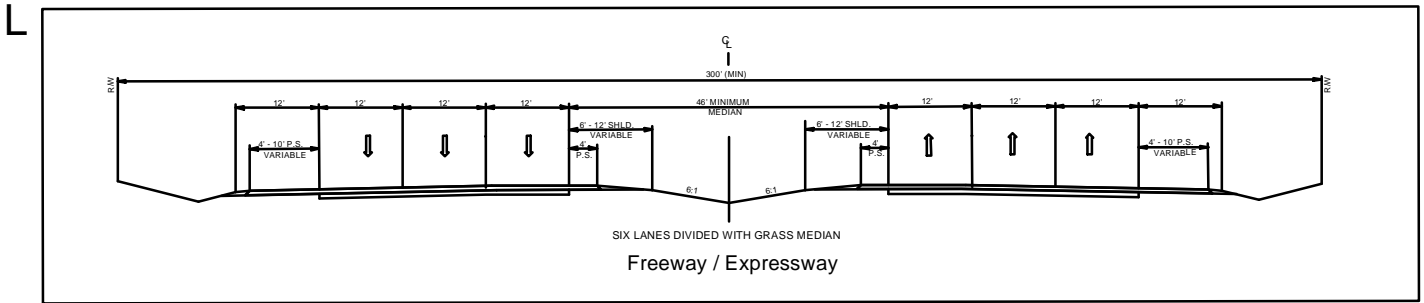


# APPENDIX D: TYPICAL HIGHWAY CROSS SECTIONS



# APPENDIX D:

## TYPICAL HIGHWAY CROSS SECTIONS

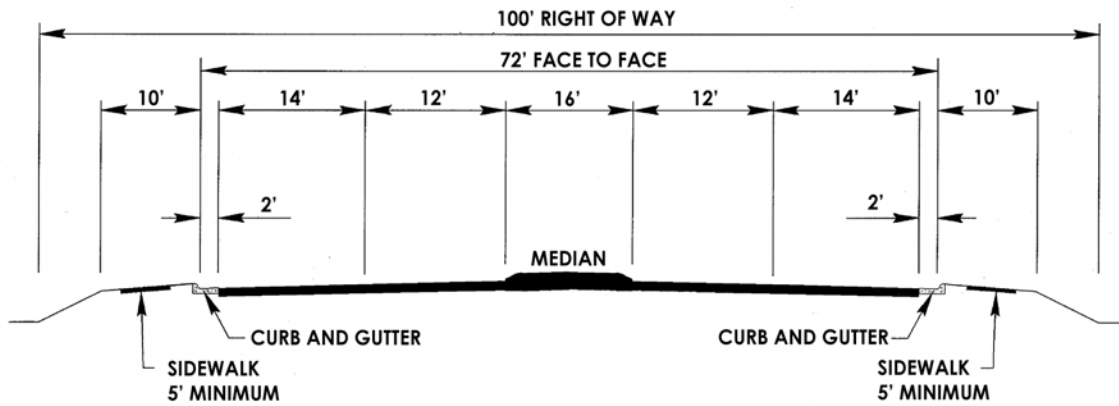


# Typical Bicycle Cross Sections

## WIDE CURB LANES

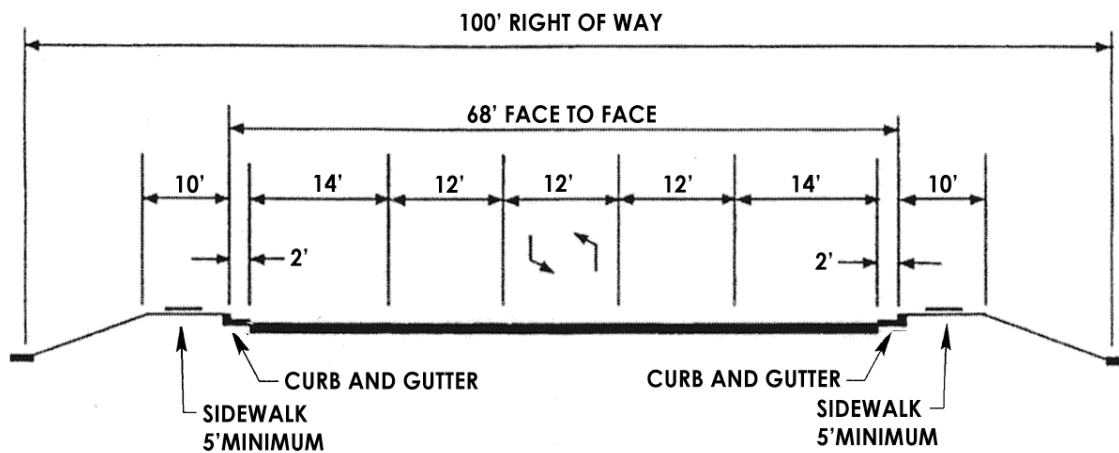
### B-1 4-LANE MEDIAN DIVIDED TYPICAL SECTION

With Wide Outside Lanes



### B-2 5-LANE TYPICAL SECTION

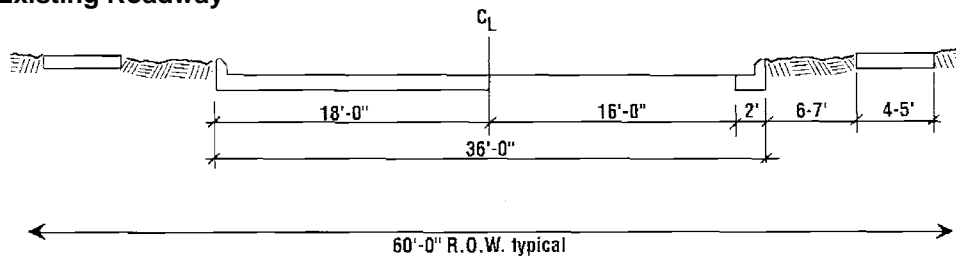
With Wide Outside Lanes



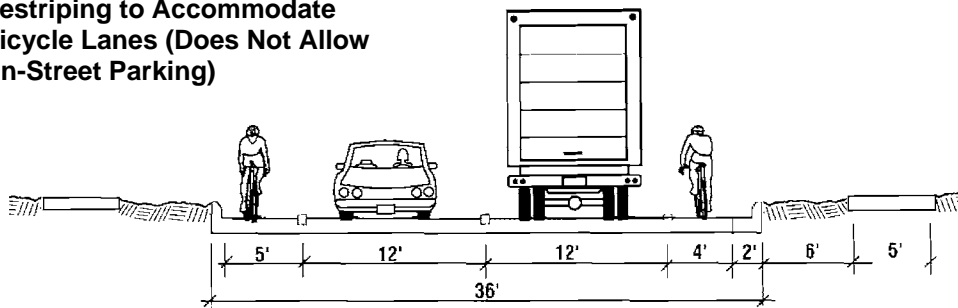
# Typical Bicycle Cross Sections

## B-3 BICYCLE LANES ON COLLECTOR STREETS

Existing Roadway



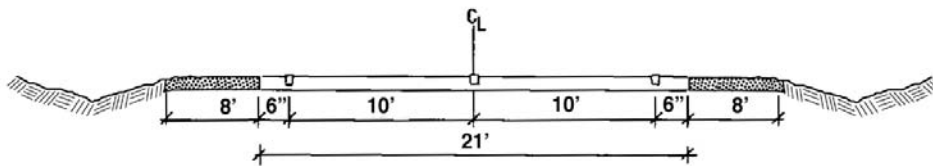
Restriping to Accommodate Bicycle Lanes (Does Not Allow On-Street Parking)



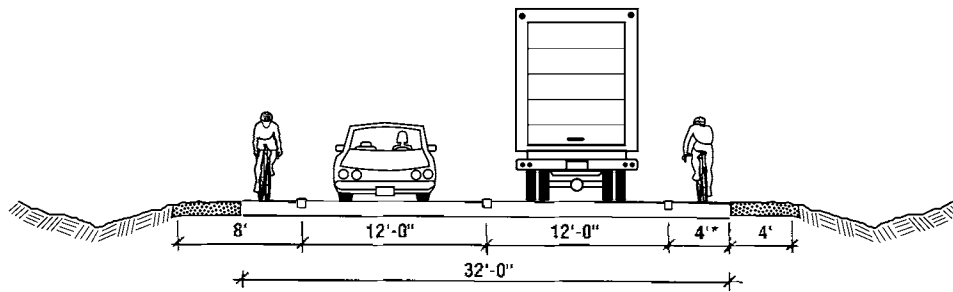
# Typical Bicycle Cross Sections

## **B-4 WIDE PAVED SHOULDERS**

Existing Roadway



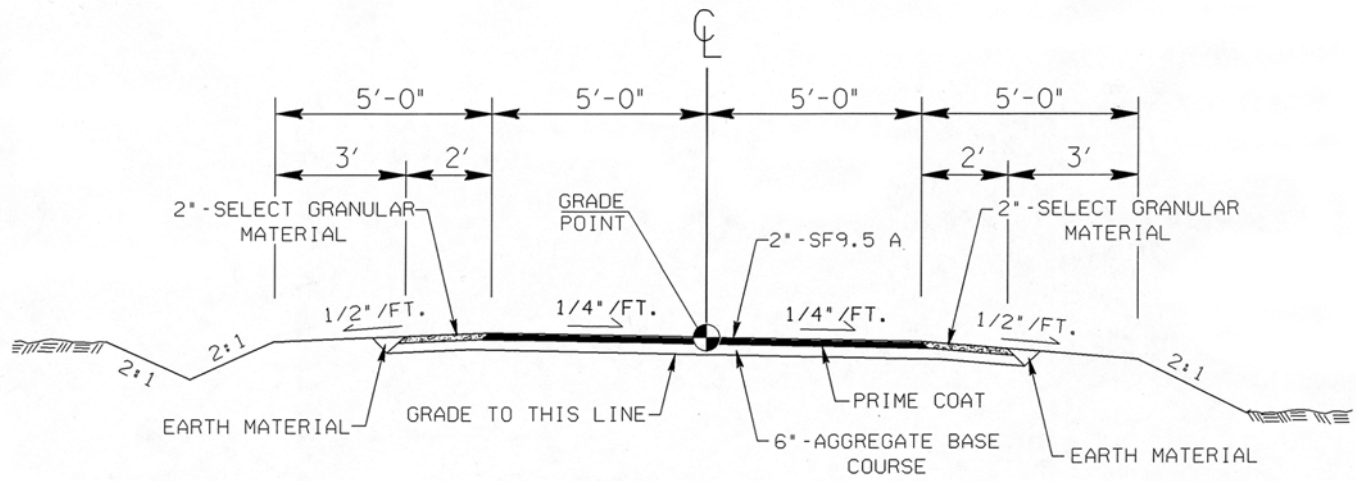
Roadway Retrofitted with  
4-Ft Paved Shoulders



\* If speeds are higher than 40 mph, shoulder widths greater than 4' are recommended.

## Typical Bicycle Cross Sections

### **B-5 RECOMMENDED TYPICAL SECTION OF 10-FT ASPHALT PATHWAY With 2-Ft Select Material Shoulder**



# APPENDIX E

Definitions  
Of  
Environmental  
Status  
Codes





## Definitions Of Environmental Status Codes: Natural Heritage Program List

<u>North Carolina Status</u>	<u>Description for Plants*</u>
<b>E Endangered</b>	“Any species or higher taxon of plant whose continued existence as a viable component of the States flora is determined to be in jeopardy” (GS 19B 106: 202.12). (Endangered species may not be removed from the wild except when a permit is obtained for research, propagation, or rescue which will enhance the survival of the species).
<b>T Threatened</b>	“Any resident species of plant which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range” (GS 19B 106: 202.12). (Regulations are the same as for Endangered Species).
<b>SC Special Concern</b>	“Any species of plant in North Carolina which requires monitoring but which may be collected and sold under regulations adopted under the provisions of [the Plant Protection and Conservation Act]” (GS 19B 106:202.12). (Special Concern species which are not also listed as Endangered or Threatened may be collected from the wild and sold under specific regulations. Propagated material only of Special Concern species which are also listed as Endangered or Threatened may be traded or sold under specific regulations.)
<b>C Candidate</b>	Species which are very rare in North Carolina, generally with 1-20 populations in the state, generally substantially reduced in numbers by habitat destruction (and sometimes also by direct exploitation or disease). These species are also either rare throughout their ranges (fewer than 100 populations total) or disjunct in North Carolina from a main range in a different part of the country or world. Also included are species which may have 20-50 populations in North Carolina, but fewer than 50 populations worldwide. These are species which have the preponderance of their distribution in North Carolina and whose fate depends largely on their conservation here. Also included are many species known to have once occurred in North Carolina but with no known extant occurrences in the state (historical or extirpated species); if these species are relocated in the state, they are likely to be listed as Endangered or Threatened. If present land use trends continue, candidate species are likely to merit listing as Endangered or Threatened.

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\* Plant statuses are determined by the Plant Conservation Program (NC Department of Agriculture) and the Natural Heritage Program (NC Department of Environment and Natural Resources). Endangered, Threatened, and Special Concern species are protected by state law (Plant Protection and Conservation Act, 1979). Candidate and Significantly Rare designations indicate rarity and the need for population monitoring and conservation action. Note that plants can have a double status, e.g., E-SC, indicates that while the plant is endangered, it is collected or sold under regulation.

- SR Significantly Rare** Species which are very rare in North Carolina, generally substantially reduced in numbers by habitat destruction (and sometimes also by direct exploitation or disease). These species are generally more common somewhere else in their ranges, occurring in North Carolina peripherally to their main ranges, mostly in habitats which are unusual in North Carolina. Also included are some species with 20-100 populations in North Carolina, if they also have only 50-100 populations rangewide and are declining.
- L Limited** The range of the species is limited to North Carolina and adjacent states (endemic or near endemic). These are species which may have 20-50 populations in North Carolina, but fewer than 50 populations rangewide. The preponderance of their distribution is in North Carolina and their fate depends largely on conservation here. Also included are some species with 20-100 populations in North Carolina, if they also have only 50-100 populations rangewide and declining.
- T Throughout** These species are rare throughout their ranges (fewer than 100 populations total).
- D Disjunct** The species is disjunct to NC from a main range in a different part of the country or world.
- P Proposed** A species which has been formally proposed for listing as Endangered, Threatened, or Special Concern, but has not yet completed the legally mandated listing process.
- P Peripheral** The species is at the periphery of its range in NC. These species are generally more common somewhere else in their ranges, occurring in North Carolina peripherally to their main ranges, mostly in habitats which are unusual in North Carolina.

**North Carolina Status**    **Description for Animals<sup>2</sup>**

- E Endangered** "Any native or once-native species of wild animal whose continued existence as a viable component of the State's fauna is determined by the Wildlife Resources Commission to be in jeopardy or any species of wild animal determined to be an 'endangered species' pursuant to the Endangered Species Act." (Article 25 of Chapter 113 of the General Statutes; 1987).

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<sup>2</sup> Animal statuses are determined by the Wildlife Resources Commission and the Natural Heritage Program. Endangered, Threatened, and Special Concern species of mammals, birds, reptiles, amphibians, freshwater fishes, and freshwater and terrestrial mollusks have legal protection status in North Carolina (Wildlife Resources Commission). The Significantly Rare designation indicates rarity and the need for population monitoring and conservation action.

- T Threatened** "Any native or once-native species of wild animal which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range, or one that is designated as a threatened species pursuant to the Endangered Species Act." (Article 25 of Chapter 113 of the General Statutes; 1987).
- SC Special Concern** "Any species of wild animal native or once-native to North Carolina which is determined by the Wildlife Resources Commission to require monitoring but which may be taken under regulations adopted under the provisions of this Article." (Article 25 of Chapter 113 of the General Statutes; 1987).
- SR Significantly Rare** Any species which has not been listed by the N.C. Wildlife Resources Commission as an Endangered, Threatened, or Special Concern species, but which exists in the state in small numbers and has been determined by the N.C. Natural Heritage Program to need monitoring. (This is a N.C. Natural Heritage Program designation.) Significantly Rare species include "peripheral" species, whereby North Carolina lies at the periphery of the species' range (such as Hermit Thrush). The designation also includes marine and estuarine fishes identified as "Vulnerable" by the N.C. State Museum of Biological Sciences (Ross et al., 1988, Endangered, Threatened, and Rare Fauna of North Carolina. Part II. A Reevaluation of the Marine and Estuarine Fishes).
- EX Extirpated** A species which is no longer believed to occur in the state.
- P\_ Proposed** Species has been proposed by a Scientific Council as a status (Endangered, Threatened, Special Concern, Watch List, or for De-listing) that is different from the current status, but the status has not yet been adopted by the Wildlife Resources Commission and by the General Assembly as law. In the lists of rare species in this book, these proposed statuses are listed in parentheses below the current status. Only those proposed statuses that are different from the current statuses are listed.

<b><u>Federal Status</u></b>	<b><u>Description</u></b> <sup>3</sup>
<b>E Endangered</b>	A taxon “which is in danger of extinction throughout all or a significant portion of its range” (Endangered Species Act, Section 3).
<b>T Threatened</b>	A taxon “which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range” (Endangered Species Act, Section 3).
<b>EXN Endangered, nonessential experimental population.</b>	The Endangered Species Act permits the reintroduction of endangered animals as "nonessential experimental" populations. Such populations, considered nonessential to the survival of the species, are managed with fewer restrictions than populations listed as endangered.
<b>T Threatened due (S/A) to Similarity of Appearance.</b>	The Endangered Species Act authorizes the treatment of a species (subspecies or population segment) as threatened even though it is not otherwise listed as threatened if: (a) The species so closely resembles in appearance a threatened species that enforcement personnel would have substantial difficulty in differentiating between the listed and unlisted species; (b) the effect of this substantial difficulty is an additional threat to a threatened species; and (c) such treatment of an unlisted species will substantially facilitate the enforcement and further the policy of the Act. The American Alligator has this designation due to similarity of appearance to other rare crocodilians. The Bog Turtle (southern population) has this designation due to similarity of appearance to Bog Turtles in the threatened northern population.
<b>C Candidate</b>	A taxon under consideration for which there is sufficient information to support listing. This category was formerly designated as a Candidate 1 (C1) species.
<b>PE Proposed Endangered</b>	Species has been proposed for listing as endangered.
<b>PD Proposed De-listed</b>	Species has been proposed for de-listing.
<b>FSC Federal “Species of Concern”</b>	Formerly defined as a taxon under consideration for which there is insufficient information to support listing; formerly designated as a Candidate 2 (C2) species.

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<sup>3</sup> These statuses are designated by the US Fish and Wildlife Service. Federally listed Endangered and Threatened species are protected under the provisions of the Endangered Species Act of 1973, as amended through the 100th Congress. Unless otherwise noted, definitions are taken from the *Federal Register*, Vol. 56, No. 225, November 21, 1991 (50 CFR Part 17).

<b><u>State Ranks</u></b>	<b><u>Description</u></b>
<b>S1</b>	Critically imperiled in North Carolina because of extreme rarity or otherwise very vulnerable to extirpation in the state.
<b>S2</b>	Imperiled in North Carolina because of rarity or otherwise vulnerable to extirpation in the state.
<b>S3</b>	Rare or uncommon in North Carolina.
<b>S4</b>	Apparently secure in North Carolina, with many occurrences.
<b>S5</b>	Demonstrably secure in North Carolina and essentially ineradicable under present conditions.
<b>SH</b>	Of historical occurrence in North Carolina, perhaps not having been verified in the past 25 years, and suspected to be still extant in the state.
<b>SR</b>	Reported from North Carolina, but without persuasive documentation for either accepting or rejecting the report.
<b>SX</b>	Believed to be extirpated from North Carolina.
<b>SU</b>	Possibly in peril in North Carolina, but status uncertain; more information is needed.
<b>S?</b>	Unranked, or rank uncertain.
<b>S_B</b>	Rank of breeding population in the state. Used for migratory species only.
<b>S_N</b>	Rank of non-breeding population in the state. Used for migratory species only.
<b>SZ_</b>	Population is not of significant conservation concern; applies to transitory, migratory species.



# APPENDIX

Public  
Involvement





## Public Involvement Session Summary

Date: Tuesday, May 23, 2006

Time: 7:00 pm to 9:00 pm

Location: Transylvania County Library, Brevard

Attendance: around 50 (29 signed-in)

NCDOT Engineer: Matt Day (Transportation Planning Branch)

This public involvement session was intended to allow for discussion of transportation goals in the county and to allow citizens and public officials to present comments and information before we present any recommendations. The session began with a brief presentation outlining the CTP process and where we were currently at in the process. This was followed by a group discussion of goals and objectives. Meeting attendees were provided with a handout showing the goals and objectives outlined in the Transylvania County Comprehensive Plan and the Brevard Vision 2020 Plan (attached). Four goals from these lists were selected to encourage discussion – the questions asked about each goal were, “How does this relate to transportation?” and, “How should we interpret this?” The four general goals selected for discussion were:

- Preserve Transylvania County’s distinctive rural character, mountain heritage, natural environment and ambiance, while promoting proactive planning and economic growth. (from Transylvania County Comprehensive Plan)
- Collaborate with the NC Department of Transportation to provide the best possible roads for Transylvania County and promote alternative transportation. (from Transylvania County Comprehensive Plan)
- Reaffirm and continue to revitalize the City center. (from Brevard Vision 2020)
- Create a better present and future for our children and young adults. (from Brevard Vision 2020)

In the discussion, the following comments were made by the public and recorded on a flipchart:

### GOALS:

1. Environmental impacts and awareness
2. Tourism: attractive roads
3. Maintain character of French Broad River
4. Make Bike Routes safe
5. US 64 & NC 215 improvements for safe travel
6. Passing lanes on US 64
7. Road design appropriate for bicycle use (safety)
8. Balance to preserve rural character
9. Remove/camouflage traffic signal control devices
10. Bypass discussion
  - Effects on merchants (potential)
  - IS IT FEASIBLE?
  - Must limit development along road
  - Provide mobility through Brevard
  - Public transportation effect
  - Must reflect changes on map
11. Promote connectivity between schools, parks, housing & shopping
12. Separation of through traffic from local traffic
13. Consider “safe routes to school” (bike & pedestrian)
14. Connect Brevard to Airport or other places with public transportation
15. Address possibility of action
16. Safe roads
17. Consider bicycle paths off road
18. What are the economic impacts of improvements here and in other counties
19. Gallimore Road bike/pedestrian pathway

Following this large-group discussion of goals, the meeting participants were broken into smaller groups for discussion, based on the tables they were sitting at. Each table had a large map of the county, and the small groups were encouraged to record on the maps any comments they might have about specific locations at the county. These comments could range from identification of problem spots to ideas for specific recommendations. The groups were given 15-20 minutes to discuss this, then each group reported back to the whole group what they had discussed. Below are the items that the small groups reported back to the whole group.

1. Consider elevation of roads for flooding issues
2. Realignment of Wilson & Ecusta Roads
3. Old 64 & Neely Road intersection and Pisgah Forest Gateway intersection have problems
4. Move Pisgah Forest post office (related to #2)
5. NC 215 safer; US 64 improvements; US 178 safety issues; "Tunnel" idea (tunnel under Brevard)
6. Gallimore Road changes; West Loop; Bike trail extension along Ecusta; Caldwell & Oakdale intersection
7. Upgrade of Caldwell Street; West Loop priority; East Loop bike path to connect to Pisgah Forest; Bypass Feasibility Study; Wilson Rd & Ecusta Rd improvement; Bridges & truck traffic; Public transportation (shuttle service, park and ride)

Below is a list of specific comments that were recorded on each of the maps at the tables around the meeting room.

- Bridge widening: Old 64 across Davidson River
- Bridge approaches: Wilson Rd over Williamson Creek, Barclay Rd over French Broad River, Island Ford Rd over Carson Creek, East Fork Rd over East Fork French Broad River (3 bridges – all tight)
- Upgrade (3-lane) Caldwell Street – Morgan St to Rosman Hwy
- West Loop – alternative around US 64/276 in town
- Hike/Bike path (East Loop)
- Bypass Feasibility
- Wilson Rd alignment – upgrade to 45 MPH from Pisgah Forest to Elm Bend
- Bridge/road alignments (choke points)
- Public parking (city)/private transit concession (to Airport)
- Regional employees/connection to employment centers in region
- Keep roads rural – 45 MPH speeds are adequate – safety over speed
- Drawn on map: southern leg of East Loop (connect Gallimore/Country Club to Rosman/Carolina)
- Drawn on map: West loop using Carolina Ave instead of Nicholson Creek Rd
- Offset intersection: 276/Parkview/Elm Bend & 276/Gallimore
- Add turn lanes on US 64 at Glade Creek Rd, Enon Rd, and King/Grove Bridge Roads
- Realignment of Wilson/Ecusta Roads offset
- New truck route (bypass) roughly following Hudlin Gap Rd, Davidson River Rd, and the southern portion of the existing bypass alignment
- Continue high emphasis on improving this part of 64 West (from Lake Toxaway to Quebec area) – on TIP for 2008
- Install new alternate route for NC 215
- Create west connector (n.b. West Loop)
- Align Wilson Rd & Ecusta Rd
- Address flooding on Wilson Rd – raise road and install culverts like Elm Bend Rd
- Look at this route (US 276-Wilson Rd-Ecusta Rd-NC 280) as a connector from 276 South (Connetsee) & make improvements to facilitate (improve bridge alignments and width, improve turn lanes at Ecusta Road)
- We do need bike paths when roads are widened
- 215 improvements should be priority (option: alternative road access)
- Problem intersection (Old 64/Wilson/Ecusta) – options: 1) move post office; 2) connect Ecusta Road to Wilson Road

- Congestion at Pisgah Forest Gateway intersection (US 64/276, NC 280)
- Problem intersection (Old 64/Neely/Chestnut) – left turn from Old 64 to Neely Rd. – options: 1) left turn lane with signal; 2) roundabout; 3) prohibit left turn
- Drawn on map: improvements along Caldwell St from Morgan St to Rosman Hwy (w/ improvements to Caldwell/Oakdale intersection)
- Drawn on map: West Loop connecting Railroad Ave to Deerlake Dr, with spur connecting to Chestnut Street
- Drawn on map: path connecting existing trail to Davidson River Campground (along Ecusta Road, passing behind Lowes, and crossing under US 64 bridges)
- Drawn on map: problems along NC 215 & US 178
- Bridge/structural issue at NC 215 & Tanassee Gap Road
- Congestion on US 64 from Old 64 to Caldwell Street
- Problem at intersection of 276 & Gallimore Road
- Remember, there are real people with real lives living beside all of these roads. Get the environmental impact studies done correctly the first time. Progress is good but not at the expense of everything that an individual has worked 20 years for. If the environmental impact is going to be real severe, you shouldn't build the road. If you must build it anyway, buy the impacted property owner out before they spend years struggling against erosion and sedimentation. After years of struggle their resources are so drained that they must become involved. By that time they have a poor opinion of NCDOT.

Names of Attendees that signed-in:

Artie Wilson, Brevard  
 Keith McCoy, Brevard  
 Fred Kilstrom, Little River  
 Dana Hawkins, Brevard  
 Tyler Galloway, Balsam Grove  
 Ray Miller, Pisgah Forest  
 Joe Albright, Brevard  
 Joan Lemire, Pisgah Forest  
 Tom Bindrim, Pisgah Forest  
 Carroll Parker, Brevard  
 David Carter, Brevard  
 Jason Chappell, Rosman  
 David Guice, Brevard  
 Joshua Freeman, Brevard  
 Dee Dee Perkins, Brevard  
 Russ Keenly, Black Mountain  
 Beverly Cowan, Brevard  
 David Morrow, Brevard  
 Jody Simpson, Balsam Grove  
 Carol Davis, Canton  
 Mike Domowkos, Brevard  
 Mark Burrows, Brevard  
 Mae Johnson, Brevard  
 John Folger, Brevard  
 Mike Thomas, Brevard  
 Jay Hinze, County  
 M. Denton, Brevard  
 H. & L. Smytes, Brevard



# Goals Identified in Previous Plans & Documents

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## Transylvania County Comprehensive Transportation Plan

### Goals from Transylvania County Comprehensive Plan (2005)

- Preserve Transylvania County's distinctive rural character, mountain heritage, natural environment and ambiance, while promoting proactive planning and economic growth.
- Conserve the valuable land, water and air resources within the county, for present and future generations.
- Collaborate with the NC Department of Transportation to provide the best possible roads for Transylvania County and promote alternative transportation.
- Collaborate with the City of Brevard and Town of Rosman to supply reliable and safe drinking water, wastewater treatment and solid waste collection and disposal.
- Promote affordable, safe and adequate housing for all residents.
- Plan and provide appropriate public facilities and services for county residents and businesses.
- Promote the best use of land while protecting citizens' property rights.

### Guiding Principles from Brevard Vision 2020 (1997)

- Plan for a well-designed, connected community with a traditional, friendly, mountain character.
- Reaffirm and continue to revitalize the City center.
- Develop a strong and environmentally sensitive economy supported by a prepared work force.
- Provide for quality neighborhoods and affordable places to live.
- Create a better present and future for our children and young adults.
- Enrich lives through cultural, educational, and recreational experiences.
- Practice environmental stewardship.
- Strengthen City government through partnerships with local citizens.
- Commit to investing strategically in order to create a sustainable tax base.

## Goals from Brevard Land Use Plan (2002)

- Promote managed economic growth while preserving the natural environment and ambiance that make Brevard a desirable place to live, work, and play.
- Maintain and preserve local air quality.
- Maintain and improve natural water resources in Brevard and Transylvania County.
- Understand the nature of flooding problems in Brevard.
- Develop a watershed-based plan of flood reduction and flood control.
- Ensure efficient and appropriate use of available land.
- Control environmentally sensitive development on mountain slopes and ridges.
- Protect open space and forest cover in and around Brevard.
- Preserve traditional rural character along corridors.
- Protect small town atmosphere.
- Maintain existing and future thoroughfares that are efficient, attractive, and safe.
- Accommodate future commercial and office/institutional facilities required by the growth of the community.
- Enable owners of corridor properties to realize benefits they have come to expect from the sale of their properties.
- A safe and accessible downtown with improved pedestrian/vehicular circulation and an effective graphics system.
- A comfortable and inviting downtown that establishes a community gathering place full of life and energy.
- A strong economic center with cultural and educational emphasis that includes a wide range of commercial and professional businesses, government offices, and residences—supported by incentive-based development.
- A physically appealing location with a distinctive community character and a respect for its heritage.
- Provide accessible cultural programs appealing to a wide range of personalities and ages, including older youth and young adults.
- Provide safe places and opportunities for social interaction, as well as appropriate gathering places for youth.
- Provide a traffic circulation system for Brevard and surrounding environs that is safe and flexible and meets the needs of drivers, pedestrians, bicyclists, and skaters.
- Work with County and NCDOT in constructive, effective ways to provide transportation infrastructure that serves the changing needs of our community.
- Adhere to speed limit and other traffic signs posted on City's roadways and in neighborhoods.
- Minimize traffic accidents by improving traffic control and flow and through continuing safety awareness/accident prevention education.
- Provide a network of paths and sidewalks that will enable safe pedestrian and bicycle access to downtown, schools, parks, shopping areas, recreational centers, and residential neighborhoods.
- Provide adequate and appropriate rental housing for the various socio-economic groups.
- Provide safe, adequate, and affordable housing for families within the City limits.
- Organize and allocate funds to promote the rehabilitation of substandard housing and to raise the quality of existing substandard housing.
- Provide safe, adequate, and monitored care facilities/housing for the special populations.
- Preserve, with controlled, proactive planning, the existing qualities of Brevard neighborhoods and set qualitative standards for new development which provides individual freedom without sacrificing community cohesiveness and common good.
- Foster a culture of healthy lifestyle awareness for all citizens.

# How do YOU envision the future of transportation in TRANSYLVANIA COUNTY?



**Come out on May 23 and LET US KNOW!**

**Vision, Goals and Objectives Public Session for the  
Transylvania County  
Comprehensive Transportation Plan**

**Tuesday, May 23, 2006**

**7:00 – 9:00 p.m.**

**New Transylvania County Library in Brevard**



Land of Sky RPO

**NCDOT TPB**  
TRANSPORTATION PLANNING BRANCH

For more information, or to request special meeting arrangements for disabled persons, please contact:

Matthew Day  
Transportation Engineer  
NCDOT Transportation Planning Branch  
(919) 715-5737  
mday@dot.state.nc.us

**Written comments received at July 11, 2006 Public Involvement Session:**

- One citizen does not want urbanization of sidewalks (Broadview Circle)
- Keep “Needs Improvement – Multi-use Path” on the College Walk side of the road.
- [Highlighted pedestrian facility along Neely Road]
- The end of the rail line needs a bus connector
- Needs Bus [pointing to end of rail line in Pisgah Forest]
- Train needs to get us to downtown Brevard
- Bus service serving Connestee and Sherwood Forest to Ingles and Bi-Lo/Walmart would relieve a lot of traffic
- Bike path should have shoulder for use on 276 and should not go onto Connestee Rd.
- Please extend bike path beyond Connestee Rd. for bike, car, truck safety
- Adding ~ 30 ft of elevation for the Sylvan Pkwy will put a huge volume of land into the floodplain causing potential flooding. Big environmental impact.
- Left turn lane needed on 276 to access bypass
- Instead, use Davidson River Rd – widen 2 lanes paved – can be at Walmart in 15 mins [pointing to NC 215 realignment near Balsam Grove]

SIGN - IN

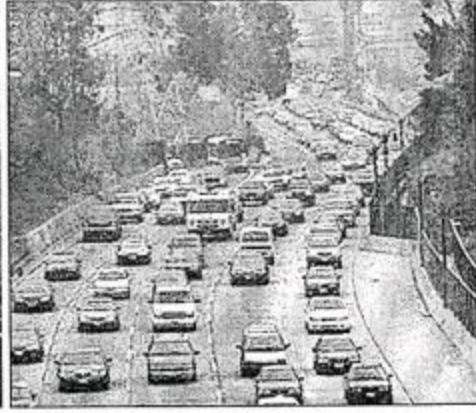
JULY 11, 2006

TRANSYLVANIA CO. CTP PUBLIC MEETING

<u>Name</u>	<u>Email (opt.)</u>
DAVID MORROW	dpmorrow@citcom.NET
LEN GRIFFITHS	ORPOTNYS@citcom.net
Jay Hinz	
John Simpson	J.Simpson@ConicProducts.com
Yi Simpson	
Sara Kellar	
BOB KEWAL	
ROD NUNN	
S. INKEY TAYLOR	
Rosemary Kellar	
KEITH KELLER	WOODMONT L NC @ Yahoo.com
FRED H/STROY	TI CO, FERRIS,
MAC MORROW	mmorrow@keir.mcg.com
GERALD HENSLEY	F. D. Henaly at citcom; Net
Kevin C Betts	Kevin C. ...@citcom.net
MAR GUER	GUER@citcom.net
Robert Moore	
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Artie Wilson	AWilson@citcom.net
Dorothy Schuette	pdoschuette@juno.com
Paul Schuette	" "
Daniel Hoff	
Koonly Locks	ZL@citcom.net
DAVID CARPER	dc@citcom.net
Sos L Freeman	brcupland@citcom.net
John Ptasinski	



# What might transportation look like in Transylvania County in 25 years?



**Come out on JULY 11 and find out!  
Draft Recommendations  
Public Session for the  
Transylvania County  
Comprehensive Transportation Plan**

**Tuesday, July 11, 2006  
7:00 – 9:00 p.m.**

**New Transylvania County Library in Brevard**



Land of Sky RPO

Greenville - Swain - Marion - Transylvania Counties

**NCDOT TPB**  
TRANSPORTATION PLANNING BRANCH

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mday@dot.state.nc.us

Transylvania County CTP Public Hearing  
Tuesday, August 08, 2006  
Brevard Public Library  
7:00pm

- Matt Day (NCDOT-TPB) opened the meeting
- Brief recap of CTP process
- Plan is a blueprint of the future
- Gave instructions on public hearing format
- Matt Day highlighted priority road recommendations
- Matt Day gave notice of other multi-modal improvements and recommendations

Public Hearing

- Q, Keith Norman, representing community concerns: Explain NC 280 as a blvd. and/or expressway and elaborate on its possible design.
- A, Matt Day: When a project is funded and placed in the project development process, the specific design will then be decided.
- Q, Keith Norman: What is the determining factor for a suggested route? How is the suggested route determined?
- A, Matt Day: Any specific designs are the responsibility of another NCDOT branch that considers environmental issues in the design process.
- Q, Keith Norman: Hudlin Gap Road is dangerous for left turning traffic. Please consider safety concerns for the adjacent communities in your plan.
- Q, inaudible, former police officer of Transylvania County. Feels it's a crying shame that NC 215 has not been improved. However, he realizes the current traffic situation in Brevard and wants it relieved as well. He suggests simplifying the improvements that are made to the road to get it done so as not to confuse drivers. One possibility is to place these improvements in the newspaper so drivers will know what to do.
- Q, Gerald Hensley: Why do environmental concerns come second and not first in road planning?
- A, Matt: In the CTP, an environmental screening on a very basic level that identifies floodplains, water resource, wetland, etc., is done, but it is the responsibility of another NCDOT branch to do a more precise analysis.
- Q, unknown: Clarify NC 280 as divided blvd. and why do it?
- A, Matt Day: Safety is of top priority to limit full movement crossovers to reduce the number of conflicts that can lead to a safety problem. Also, it will protect traffic flow.
- Q, Grady Woodring, Balsam Grove: Deteriorating conditions on US 64. Has sent letter to NCDOT. Noted improvements to NC 215 have been postponed to 2012. Heavy traffic and truck traffic is an issue on NC 215.
- A, Matt Day: With respect to NC 215, it is already a TIP and the design is not handled in the CTP. Noted to please attend the TIP public workshop on NC 215.

- Q, Les (?): Why does it take so long to improve NC 215? Why does it take fatalities, school bus problems and other safety issues to get things done? Noted that the Brevard bypass is a good idea.
- Q, William Norman, Hudlin Gap Rd.: NC 280 and its TWLTL is dangerous and has taken lives. He advises his family to not drive on the inside lane because of other drivers and their lack of attention while drinking coffee and talking on the phone. He indicated that bypasses take a lot of taxpayer money. He recommends using other existing roads for the bypass to give the residents access, reduce the use of taxpayer money, and not put it on a new location with no direct access.
- Q, Sara Champion, City Council: How do roads get built in N.C.?
- A, Matt Day: Locals contact the local government to get them to contact the NCDOT for small projects. For larger projects, projects need to be identified on the CTP maps so local governments can work with the Land of Sky RPO to help NCDOT know which projects to fund. This process will assist NCDOT in knowing what local projects are supported for future funding for eventual insertion into the environmental process and the eventual roadway design within a 10 year time frame. Artie Wilson indicated that NC 215 is a high priority project in the RPO.
- Q, Larry Reece, US 276 south: The proposed Sylvan Valley Parkway is in a floodplain and is in essence a 3-mile bridge from Pisgah Forest to Country Club Road and his concern is for citizens on NC 215 and their lives while driving on this road. He wants NCDOT to address one project at a time and not create a long Christmas list.
- Q, Charles Stohr: Don't discourage planning ideas. NCDOT is a planning organization. N.C. should resemble Florida in terms of regional planning and not on a statewide level. N.C. should change highway trust fund to a transportation fund. We need to have transit service to other counties and connect with Asheville and Henderson County transit services. Recommend a meeting to discuss transit service in Brevard and Transylvania County. Recommend a community meeting to discuss multi-modal transportation solutions. Much like what was done in Minnesota, formulate a group of 5-6 transportation experts to do studies and surveys about transportation.
- Q, Rick Brown, business owner, Balsam Grove community: Has a problem with material deliveries on NC 215 to his business. Some heavy trucks will not drive up the road. He has to go and escort big vehicles up and down NC 215. School bus traffic takes up the whole road. NC 215 is used by folks from Jackson County. County Commissioners should promote the use of the Blue Ridge Parkway much like they do in Asheville in advertisements that bring folks to the area.
- Q, Jane Atkinson, Waterford community: Traffic on bypass as it relates to pedestrians and ped safety and Probart Street. If bypass will feed more traffic from Cashiers Valley and create more development, please study the impact to pedestrians.
- A, Matt Day: Traffic projections on Probart St is relatively low.
- Q, Richard Trent, Dillingham Rd.: Would like to use US 64 to get from one side of town to another. Suggests a dedicated right turn lane at Ingles Grocery Store (McLean Rd). Change 4-way stop signs to ease traffic flow and decrease confusion and wait time.

- Q, Heath Keller, County Commissioner Candidate: Disagrees with project recommendations for bypass. Need to reduce congestion by creating, promoting and using transit bus routes. Maybe use school buses to help tourists to help with traffic and parking problems in peak season. Need to slow traffic on the Catheys Creek bridge on US 64 (at Island Ford).
- Q, Brian Wilson: Disagrees with traffic projections for the county. The county is very different from other areas. He believes the model does not accurately reflect that. The county is different, as industry has left. Tourism is now the economy. Wants to address safety issues. Doesn't understand point of all the recommendations and the net gain of promoting all of them. Widen Wilson Road for safety. Recommend US 276 as a scenic highway like is done in for US 276 in S.C. Address drainage issues. Promote US 276 as a gateway into the community. People come here as a destination and not a pass through. NC 215 as well as NC 280 at Little Mountain have safety issues. Believes a Christmas list of projects is a waste of planning effort. Widening improvements for lane width projects should be front page and top priority above all else. Importance is safety of the people. He can live with slow drive up US 276. Truck lane on US 276 is fine, but should not be the top priority. It's a slow drive from Mill Hill. Safety should be focus and not speed.
- Q, F. Carter (?), Balsam Grove: NC 215. How much consideration is given to type of vehicle and not the number of cars? Big vehicles force smaller vehicles off the road. School buses are forced off the road. Disagrees with environmental groups that animal disruptions would be harmful due to the widening of NC 215. Believes the human environment should be the top priority. Get the Wildlife folks and other environmental agencies out there to see the driving condition on NC 215.
- Q, Russ Knights (?), County resident, former county commissioner: Long time ago, leftover money from Tellico Plains project was to help build NC 215. When folks are told that projects will get built, then do it and don't talk about doing it. Be honest with people when talking about road projects. Work together on what's needed. (Ed. Note: I assume he's referring to the Cherohala Skyway).
- Joel Setzer, Division Engineer: Attendance is appreciated at this meeting. Please attend the NC 215 public workshop. The TIP is the funding plan. The CTP is project concept. When the new TIP is printed, public comments are and will be taken. Need folks that support projects to show up and comment about it at the TIP public hearings. Provide comments on needs so NCDOT knows what is important. Folks who determine funding need to hear your comments.
- Q, Gerald Hensley, Brevard. On 178, widen and straighten curves to make road safer for trucks.

Public Hearing has concluded.

PLEASE SIGN IN

Aug. 8, 2006

DAVID MORROW

Paul Schuette

Dorothy Schuette

E.C. Wilson

Jeanne Daigne-Pedra

ROD NUNNELEE

Jane Calkins

WILSON C. TIDDY, JR

Reuben Moore

Charles Stohr

Don + Helen Herman

LINDA HAUSCHILD

Daryle Hogsed

KIMSEY JACKSON

Sara Champion

~~V. D. ...~~

Beverly Fredrickson

BRIAN WILSON

Alvin L. Hall

Jack Shepherd

Sue + Ed Coster

Donald Henley

Kay W. Tiddy

Larry Duggan

DONALD REEVE

GRACY WARDING

Jeff Hubbard

Bob Dunsdale

Ruth E. McElyea

Tyler Gallaway

Kevin C. Betts

Bill McKelvey

Mike Thomas

RUSS KNIGHTS

Elaine Zachary

DANA MASON

Joan Lemire

Tom Birdman

Tom Wepf

Roy Covan

Beverly Covan

Margaret Warren

Michael Donohue

~~AD FOLEY~~

Mark Gurnsey

KEVIN MORAN

KETH KELLER

Richard Trent

Cathy Brown

Luke Brown

MASON SEXTON

## **TRANSYLVANIA COUNTY CTP DRAFT HIGHWAY RECOMMENDATIONS (AUGUST 1, 2006)**

- SYLVAN VALLEY PARKWAY – “Super-2” Expressway (on 4-lane Right of Way) from NC 280 near Hudlin Gap Road to US 64 near Selica Road. Includes short connector roads to Osborne Road, Wilson Road, and Gallimore Road. Interchanges at NC 280 (partial), US 64, Osborne Road Ext./Old Hendersonville Road, Wilson Road Ext./US 276, Gallimore Road Ext./Country Club Road, and US 64 west (partial). All other intersections grade separated or closed, with a few minor exceptions possible (i.e. small cut-off neighborhood along Bert Lane Road, small cut-off section of Hudlin Gap Road, small cut-off section of Cemetery Road). No driveway access or traffic signals.
- NC 280 (ASHEVILLE HIGHWAY) BOULEVARD/EXPRESSWAY – upgrade 4-lane section of NC 280 to a divided Boulevard between US 64 and Hudlin Gap Road. Upgrade 4-lane and 5-lane sections of NC 280 to a divided Expressway (no traffic signals permitted) from Hudlin Gap Road to the Henderson County line.
- US 276/64 (N. BROAD STREET) BOULEVARD – upgrade 5-lane section of US 64/276 from Allison Road to Caldwell Street to a divided Boulevard.
- US 64 (ROSMAN HIGHWAY) BOULEVARD – upgrade 5-lane section of US 64 from S. Broad Street to Selica Road to a divided Boulevard. Widen 2-lane section of US 64 from Clement Road to New NC 215 at Cherryfield to a 4-lane divided Boulevard.
- NC 215 REALIGNMENT – 2-lane major thoroughfare on new location from US 64 at Cherryfield to existing NC 215 at Macedonia Church Road. Existing NC 215 south of Macedonia Church Road will become a minor thoroughfare.
- BREVARD WEST LOOP – 2-lane minor thoroughfare, part on new location, part utilizing Nicholson Creek Road, Cashiers Valley Road, and Railroad Avenue. Existing sections widened to provide 12’ travel lanes. Intersection of Cashiers Valley Road and Nicholson Creek Road realigned. Turning lanes provided at intersections.
- CALDWELL STREET WIDENING – widen 2-lane section of Caldwell Street to 3-lanes. Complete unbalanced couplet (2 lanes northbound on Broad Street & 2 lanes southbound on Caldwell Street).
- US 64 EAST (HENDERSONVILLE HIGHWAY) IMPROVEMENTS – widen 2-lane and 3-lane sections of US 64 to a 4-lane divided Boulevard from NC 280 to Glade Creek Road. Along the remaining 2-lane section east of Glade Creek Road, add turn lanes at busy intersections (including, but not limited to: Enon Road/Lyday Loop Road, Old US 64/Vineyard Loop, Grove Bridge Road, and King Road) to maintain traffic flow.
- ECUSTA ROAD REALIGNMENT – realign Ecusta Road at its intersection with Old Hendersonville Road to align Ecusta Road with Wilson Road.
- US 276 SOUTH (GREENVILLE HIGHWAY) IMPROVEMENTS – widen US 276 to a 4-lane divided Boulevard from Wilson Road/Sylvan Valley Parkway to Island Ford Road. Add climbing lane on steep, curving section of US 276 between Island Ford Road and East Fork Road.
- US 64 WEST IMPROVEMENTS – Add climbing lanes on steep, curving sections of US 64 from US 178 to Jackson County Line. Straighten roadway where possible, and provide 12’ lanes. Improve intersection of US 64 & NC 281 North.
- GREENVILLE HIGHWAY/GALLIMORE ROAD INTERSECTION IMPROVEMENTS – extend left turn lane on US 276 (Greenville Highway) near Brevard Elementary School.
- US 178 (PICKENS HIGHWAY) REALIGNMENT – 2-lane major thoroughfare on new location from existing US 178 at East Fork Road to Old Rosman Highway near Main Street in Rosman. Modification of both ends to create 4-leg intersections. The old US 178 alignment between East Fork Road and Old Rosman Highway will become a minor thoroughfare.
- NC 281 NORTH IMPROVEMENTS – NC 281 paved to secondary road standards from Shelton Road to Jackson County Line.
- MACEDONIA CHURCH ROAD/SILVERSTEEN ROAD IMPROVEMENTS – widen Macedonia Church Road from Kitchen Loop Road to Silversteen Road to 20’ pavement width. Widen Silversteen Road from Macedonia Church Road to NC 281 to 20’ pavement width. Remove stop signs and realign intersections at Macedonia Church Rd./Kitchen Loop Rd. and Macedonia Church Rd./Silversteen Rd. to allow free through movement.

- WILSON ROAD IMPROVEMENTS – widen Wilson Road to 22' pavement width from Old Hendersonville Road to US 276. Raise the roadbed out of the floodplain.
- ISLAND FORD ROAD IMPROVEMENTS – widen Island Ford Road to 20' pavement width from US 64 to US 276. Raise the roadbed out of the floodplain.
- BREVARD EAST LOOP IMPROVEMENTS – Add turn lanes and intersection improvements along Chestnut Street, Neely Road, Park Avenue, and Parkview Drive as needed to maintain traffic flow. Realign Gallimore Road/US 276 intersection to align Gallimore Road with Parkview Drive.
- OLD HENDERSONVILLE ROAD/NEELY ROAD INTERSECTION IMPROVEMENTS – add a left turn lane from westbound Old Hendersonville Road to southbound Neely Road.
- OLD ROSMAN HIGHWAY IMPROVEMENTS – widen Old Rosman Highway to 24' pavement width from US 178 realignment (South Main Street intersection) to US 64 at Cherryfield. Improve sight distance at intersection of Old Rosman Highway and Calvert Road (high accident location).

#### MINOR WIDENING PROJECTS:

US 178 (South Carolina Line to East Fork Rd.) – 12' lanes (currently 9' lanes)

US 276 (South Carolina Line to East Fork Rd.) – 12' lanes (currently 9' lanes)

NC 281 (US 64 to Kim Miller Rd.) – 12' lanes (currently 10' lanes)

East Fork Rd./SR 1107 (US 178 to Walnut Hollow Rd.) – 10' lanes (currently 9' lanes)

Country Club Rd./SR 1113 (Island Ford Rd. to Barclay Rd.) – 10' lanes (currently 9' lanes)

Illahee Rd./SR 1114 (US 64 to Country Club Rd.) – 11' lanes (currently 9' lanes)

Country Club Rd./SR 1116 (Barclay Rd. to Gallimore Rd.) – 11' lanes (currently 9-10' lanes)

Old Toxaway Rd./SR 1139 (Landfill to Frozen Creek Rd.) – 10' lanes (currently 9' lanes)

Frozen Creek Rd./SR 1143 (US 64 to Old Toxaway Rd.) – 10' lanes (currently 8-9' lanes)

Barclay Rd./SR 1207 (US 276 to Country Club Rd.) – 10' lanes (currently 9' lanes)

Kim Miller Rd./SR 1304 (US 64 to Reid Rd.) – 10' lanes (currently 9' lanes)

Cashiers Valley Rd./SR 1344 (US 64 to Nicholson Creek Rd.) – 10' lanes (currently 8' lanes)

Probart St./SR 1348 (Cashiers Valley Rd. to Brevard City Limit) – 10' lanes (currently 8-9' lanes)

Blantyre Church Rd./SR 1501 (King Rd. to Henderson Co. Line) – 10' lanes (currently 9' lanes)

King Rd./SR 1502 (US 64 to Blantyre Church Rd.) – 10' lanes (currently 9' lanes)

Old Hendersonville Rd./SR 1504 (US 64/276 to Everett Rd.) – 12' lanes (currently 9-10' lanes)

Old Hendersonville Rd./SR 1504 (Everett Rd. to Crab Creek Rd.) – 11' lanes (currently 9' lanes)

Everett Rd./SR 1533 (Friendship Lane to Crab Creek Rd.) – 11' lanes (currently 9' lanes)

Osborne Rd./SR 1556 (US 64/276 to Old Hendersonville Rd.) – 10' lanes (currently 8' lanes)

Reasonover Rd./SR 1560 (Cascade Lake Rd. to Henderson Co. Line) – 10' lanes (currently 8' lanes)

Cascade Lake Rd./SR 1536 (US 276 to Staton Rd.) – 11' lanes (currently 10' lanes)



# TRANSYLVANIA COUNTY CTP DRAFT BICYCLE RECOMMENDATIONS (AUGUST 1, 2006)

## MULTI-USE PATHS

- Construction of multi-use paths outlined in City of Brevard Pedestrian Plan.
- Extension of paths proposed in Brevard Pedestrian Plan to logical ending points (connecting to other bicycle routes in the county).
- Some sections of these paths will carry portions of the signed and mapped bicycle routes discussed below.

## ON-ROAD BICYCLE FACILITIES

All signed or mapped bicycle routes in Transylvania County should have improvements made in order to better accommodate bicyclists. These improvements could include bicycle lanes, paved shoulders, wide outside travel lanes, bicycle pull-offs, “Share the Road” signs or other measures, depending on such factors as roadway geometry, traffic volume, and traffic speed. Additionally, several streets in the City of Brevard, US 276 south of Brevard, and US 64 west of Rosman have been suggested as bicycle facilities. Below, specific roadway segments along these bicycle routes have been split into three groups from high importance to low importance of improvements, based on an objective measure called the “Bicycle Compatibility Index.” Those road segments in the high- and medium-importance categories are more likely to need bicycle lanes or paved shoulders. Those segments in the low-importance category are more likely to need only minor improvements.

### High Importance:

US 64 from NC 281 South to NC 215  
US 64 from Catheys Creek Church Rd to Island Ford Rd  
US 64 (Broad St) from Caldwell St to Old Hendersonville Rd  
US 64 from Grove Bridge Rd to King Rd  
US 178 from Old Toxaway Rd to East Fork Rd

US 276 from Cascade Lake Rd to Wilson Rd  
NC 280 from Old NC 280 to King Rd  
Old Toxaway Rd from Frozen Creek Rd to Landfill Entrance  
Old Rosman Hwy from South Main St to Calvert Rd  
Crab Creek Rd from Everett Rd to Henderson County Line  
Staton Rd from Cascade Lake Rd to Henderson County Line

### Medium Importance:

US 64 from Jackson County Line to NC 281 South  
US 64 (Broad St) from Jordan St to Caldwell St  
US 178 (current) from East Fork Rd to Main St  
US 178 from North Main St to Turnpike Rd  
US 276 from NC 280 to Blue Ridge Parkway  
NC 215 (current) from US 64 to Blue Ridge Parkway  
NC 280 from Capps Rd to Old NC 280  
NC 281 from US 64 to Silversteen Rd  
Walnut Hollow Rd  
East Fork Rd from US 178 to Walnut Hollow Rd  
Island Ford Rd from US 64 to Connestee Rd  
Country Club Rd from Island Ford Rd to Illahee Rd  
Country Club Rd from Brevard City Limit to US 64  
Illahee Rd  
Old Toxaway Rd from US 178 to Landfill Entrance  
Frozen Creek Rd  
S. Main St (Rosman) from Chestnut St to Old Rosman Hwy  
Calvert Rd from Old Rosman Hwy to Whitmire Rd  
Silversteen Rd from NC 281 to Macedonia Church Rd  
Macedonia Church Rd from Silversteen Rd to NC 215  
Cashiers Valley Rd

Nicholson Creek Rd  
Carolina Ave  
Catheys Creek Church Rd  
King Rd  
Grove Bridge Rd  
Old Hendersonville Rd from N. Broad St to Neely Rd  
Old Hendersonville Rd from Wilson Rd to Crab Creek Rd  
Glade Creek Rd  
Talley Rd  
Crab Creek Rd from Old Hendersonville Rd to Everett Rd  
Everett Rd  
Cascade Lake Rd from Staton Rd to US 276  
Wilson Rd  
Elm Bend Rd  
French Broad Ave  
Osborne Rd  
Upper Glade Creek Rd from US 64 to Capps Rd  
Carver St  
Oakdale St  
Oaklawn Ave  
Probart St from Oaklawn Ave to Brevard City Limit  
Varsity St

### Low Importance:

US 64 (Broad St) from Country Club Rd to Jordan St  
Country Club Rd from Illahee Rd to Brevard City Limit  
N. Main St (Rosman) from Chestnut St to US 178  
Probart St from Cashiers Valley Rd to Brevard City Limit  
Main St (Brevard) from Broad St to Oaklawn Ave  
Capps Rd  
Chestnut St (Brevard) from Old Hendersonville Rd to US 64  
Gaston St from Varsity St to Maple Ave  
Jordan Rd from Gallimore Rd to Maple Ave

Maple Ave  
Turnpike Rd (Rosman)  
Whitmire Rd from Calvert Rd to Pharaoh Dr  
Pharaoh Dr from Whitmire Rd to Little Egypt Rd  
Little Egypt Rd  
Garland Ct from US 64 to Little Egypt Rd  
Connestee Rd  
Old NC 280  
Hart Rd  
Cascade Lake Rd from Crab Creek Rd to Hart Rd

### No Improvements:

Blue Ridge Parkway

## **TRANSYLVANIA COUNTY CTP DRAFT PEDESTRIAN RECOMMENDATIONS (AUGUST 1, 2006)**

- Incorporate the multi-use path and sidewalk recommendations from the Brevard Pedestrian Plan.
- In addition to the recommendations for Brevard, make the following pedestrian improvements in Rosman:

Construct sidewalk on S. Main St from Depot St to Old Rosman Hwy (and new US 178)

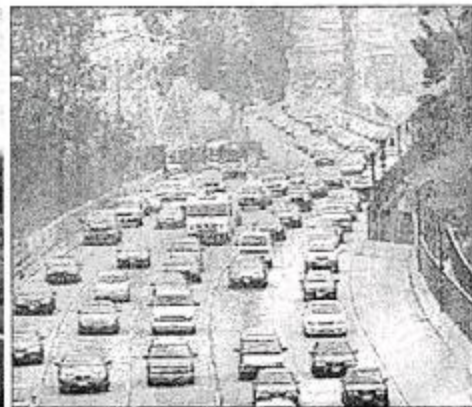
Construct sidewalk on N. Main St from Chestnut St to US 178

Construct sidewalk on US 178 from N. Main St to Rosman school complex

## **TRANSYLVANIA COUNTY CTP DRAFT TRANSIT RECOMMENDATIONS (AUGUST 1, 2006)**

- Maintain existing rail line from Pisgah Forest to Henderson County line for freight service
- Add a new fixed-route bus service from Brevard to Asheville Airport (connection to Asheville & Henderson County transit systems) via NC 280
- Add a new fixed-route bus service from Brevard to Hendersonville via US 64
- Add feeder/shuttle service between Brevard and Rosman, and between Brevard and Conneestee/Cedar Mountain, to connect with proposed fixed-route service

# THIS IS YOUR CHANCE TO TELL US WHAT YOU THINK!



## Final Recommendations & Public Hearing for the Transylvania County Comprehensive Transportation Plan

**Tuesday, August 8, 2006  
7:00 p.m.**

**New Transylvania County Library in Brevard**

Check out the website: [www.ncdot.org/doh/preconstruct/tpb/PLANNING/transylvaniaCTP.html](http://www.ncdot.org/doh/preconstruct/tpb/PLANNING/transylvaniaCTP.html)



For more information, or to request special meeting arrangements for disabled persons, please contact:

Matthew Day  
Transportation Engineer  
NCDOT Transportation Planning Branch  
(919) 715-5737  
[mday@dot.state.nc.us](mailto:mday@dot.state.nc.us)



# Vision, Goals, and Objectives Public Comment and Survey Form

## Transylvania County Comprehensive Transportation Plan

The purpose of the Transylvania County Comprehensive Transportation Plan is to develop a map and document that will guide the major transportation investments made in Transylvania County, the City of Brevard, and the Town of Rosman between now and the year 2030. The plan will include recommendations for all modes of transportation, including highways, bicycle and pedestrian facilities, rail, and public transportation (transit). A major part of this planning process is public involvement—we *want to know what you think about transportation needs in Transylvania County!* Please take a few minutes to fill out this survey and help determine the direction of future transportation in your community.

1. Of the following transportation goals, which are important goals in Transylvania County?  
*Please circle all that apply.*

- |  |                                    |                                      |
|--|------------------------------------|--------------------------------------|
| a. Land access/development                                     | e. Access to public transportation | i. Accommodation of special needs    |
| b. Connectivity with other areas                               | f. Decreasing traffic congestion   | j. Good bicycling environment        |
| c. Good pedestrian environment                                 | g. Improving safety                | k. Industrial access/economic growth |
| d. Improving mobility<br>(ability to move quickly/efficiently) | h. Movement of goods               | l. Other: _____<br>_____             |

2. Of the goals you chose in Question 1, which is the most important? \_\_\_\_\_

Why? \_\_\_\_\_  
\_\_\_\_\_

3. Are there any specific problems or problem areas that need to be addressed in this plan (i.e. a bad intersection, or a section of road that causes problems)?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. Are there any specific locations that are absolutely perfect just the way they are, and nothing should be done to change them?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Survey continues on back of sheet.*

5. If you had a blank check to pay for transportation improvements in Transylvania County, but could only spend the money on **one** project (of any type), what would that project be?

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6. Please rank the following types of transportation improvements in order from most important (1) to least important (6).

- \_\_\_\_\_ Capacity improvements to Highways (i.e. new roads, widened roads/more lanes)
- \_\_\_\_\_ Safety improvements to Highways (i.e. minor spot improvements, shoulders, signals, guardrail)
- \_\_\_\_\_ Access Management (i.e. limitations on driveways & turns, reduction of traffic conflict points)
- \_\_\_\_\_ Transit Improvements (i.e. buses, rail, dial-a-ride)
- \_\_\_\_\_ Bicycle Improvements (i.e. bicycle lanes, wide shoulders, signed routes, multi-use paths)
- \_\_\_\_\_ Pedestrian Improvements (i.e. sidewalks, multi-use paths, crosswalks)

7. Please note any other comments or concerns about the Transylvania County Comprehensive Transportation Plan:

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8. Please provide your home Zip Code (for statistical purposes only): \_\_\_\_\_

Please submit this form in the box near the exit of tonight's meeting (May 23, 2006), or

**Mail to:**

Matthew Day  
Transportation Engineer  
NCDOT Transportation Planning Branch  
1554 Mail Service Center  
Raleigh, NC 27699-1554

**Fax to:**

Matthew Day  
(919) 715-1160

**Deliver in person to:**

Transylvania County Planning & Econ. Dev. Dept.  
203 E. Morgan St., Brevard, NC 28712  
**or**  
Land of Sky Rural Planning Organization (RPO)  
25 Heritage Dr., Asheville, NC 28806

**Surveys must be submitted by June 23, 2006.**

Next Public Involvement Session  
(with draft recommendations):

Tuesday, July 11, 2006  
7:00 p.m.

Transylvania County Library  
Brevard

If you would like to be on the email list for the Transylvania County CTP, please email Matthew Day at **mday@dot.state.nc.us** with the subject line "Add to Email List."



**TRANSYLVANIA COUNTY CTP  
VISION, GOALS, AND OBJECTIVES SURVEY**

Q1. Of the following transportation goals, which are important goals in Transylvania County? (please circle all that apply)

	Number
Q1a. Land Access/development	2
Q1b. Connectivity with other areas	1
Q1c. Good pedestrian environment	
Q1d. Improving mobility (ability to move quickly/efficiently)	2
Q1e. Access to Public Transportation	
Q1f. Decreasing traffic congestion	3
Q1g. Improving safety	3
Q1h. Movement of goods	1
Q1i. Accomodation of special needs	
Q1j. Good bicycling environment	
Q1k. Industrial access/economic growth	2
Q1l. Other	15 (Brevard Bypass 13, Repaving roads 2)

Q2. Of the goals you chose in Question 1, which is the most important? Why?

	Number	Reasons
Q2a. Land Access/development		
Q2b. Connectivity with other areas	1	new connection (truck route) helps with mobility & congestion
Q2c. Good pedestrian environment		
Q2d. Improving mobility (ability to move quickly/efficiently)		
Q2e. Access to Public Transportation		
Q2f. Decreasing traffic congestion	2	
Q2g. Improving safety	3	keep insurance costs down, law enforcement spending less time on accidents
Q2h. Movement of goods		
Q2i. Accomodation of special needs		
Q2j. Good bicycling environment		
Q2k. Industrial access/economic growth		
Q2l. Other	15	Bypass Brevard due to congestion in downtown & Pisgah Forest/increased traffic, repaving needed especially in Brevard (many potholes throughout county), traffic congestion from Rosman Hwy onto Broad St

Q3. Are there any specific problems or problem areas that need to be addressed in this plan (i.e. a bad intersection, or a section of road that causes problems)?

Need redlight at intersection of Allison Rd/Straus Park Market & Asheville Hwy (15 respondents)
Narrow bridges (Old 64 @ Davidson River, Wilson @ Glen Cannon, Island Ford @ Gwynn Valley Camp) (1 respondent)
"Dysfunction Junction" (Walmart/Pisgah Forest area) (2 respondents)
Ecusta Rd/Wilson Rd misalignment (1 respondent)
flooding segments on important rural roads (1 respondent)

Q4. Are there any specific locations that are absolutely perfect just the way they are, and nothing should be done to change them?

	Number
Tanassee Gap Rd	9
US 64 west in Rosman (new road)	5
CCC Camp Rd	3
Cedar Mtn Rd	5

Q5. If you had a blank check to pay for transportation improvements in Transylvania County, but could only spend the money on one project (of any type), what would that be?

	Number
Brevard Bypass	15
Repaving all paved roads	2
NC 215 improvements/new route	2

Q6. Please rank the following types of transportation improvements in order from most important (1) to least important (6)

	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6
Q6a. Capacity improvements to highways		1	1			13
Q6b. Safety improvements to highways	2		1	6	6	
Q6c. Access management		4	8	1	2	
Q6d. Transit improvements	6	1	4	3		1
Q6e. Bicycle improvements		6	1	2	6	
Q6f. Pedestrian improvements	7	3		3	1	1

Q7. Please note any other comments or concerns about the Transylvania County Comprehensive Transportation Plan

	Number
Would like alternative 2 on project B-4289 (SR 1324)	12
Waiting on spring meeting re: B-4289	6
Alternative B on SR 1324 bridge replacement/south side	2
Would like alternative 1 on project B-4289 (SR 1324)	1
Extend 3-lane on 64 E to Glade Creek Rd	1
Add left turn lanes at intersections on 64 E	1

Q8. Please provide your home ZIP code

	Number
28708	13
28712	4