

## **2. Recommended Thoroughfare Plan**

### **Intent of the Thoroughfare Plan**

Transportation is the backbone of a region's economic vitality. Without an adequate transportation system, people can not easily reach their intended destination, goods can not be delivered in a cost effective manner, and investors may look to invest in better served areas. Recent trends such as regional economies; "just in time" delivery, increase automobile ownership, and urban sprawl are taxing existing transportation systems and requiring that more emphasis be placed on planning for our transportation future.

A thoroughfare plan identifies existing and future deficiencies in a transportation system, as well as uncovers the need for new facilities. A county thoroughfare plan also provides a representation of the existing highway system by functional use. This use can be characterized as a part of the arterial road system, the collector road system, or the local road system. A full description of these various systems and their subsystems is given in Appendix A.

This chapter presents the thoroughfare plan recommendations. The goal of this study is to propose a transportation system that will serve the anticipated traffic and land development needs for Catawba County. The primary objective of this plan is to reduce traffic congestion and improve safety by eliminating both existing and projected deficiencies in the County's transportation system. The recommended plan in this study covers only the portion of the County that is outside of the Hickory-Newton-Conover and the Maiden urban areas. Each of these urban areas does have a recommended plan of its own within it's planning area boundary (these urban areas has merged since the adoption of the Catawba County Thoroughfare Plan. See Appendix E for more detail explanation).

### **Thoroughfare Plan Recommendations**

#### Principal Arterial

**US 321** – from Hickory-Newton-Conover planning boundary to Maiden planning boundary

US 321 is a very important corridor both in and outside of Catawba County. This north-south highway is a part of the North Carolina Intrastate System, the Nation Highway System, the Strategic Highway Corridors and the National Truck Network. Regionally, the recently completed freeway section of US 321 in Catawba County provides much needed capacity for the travel flow between the Charlotte and Gastonia Urban Areas to I-40 relieving some pressure on parallel 2- lane highways such as US 16 and US 321 Business. Locally, it relieves congestion on NC 127 in the fast growing Mountain View area. No improvements are needed since this 4-lane divided freeway does have sufficient capacity to handle the projected 2025 traffic of 37,700 vehicles per day (vpd).

### Minor Arterial

**US 321 Business** – Hickory-Newton-Conover MPO boundary to Maiden planning boundary

This minor arterial provides a service for the north-south travel in eastern part of Catawba County. It also provides access to the commercial and residential area in Newton and Maiden. No improvement is need for this 2-lane highway since it does have adequate capacity to handle both existing (8,200 vpd) and projected (11,900 vpd) traffic.

**NC 16** - from Hickory-Newton-Conover planning limit to Lincoln County.

This north-south minor arterial provides multiple travel services for Catawba County. First, it serves as a valuable link for travel between the County and the Charlotte Urban Area allowing for goods and service movements between these areas to operate in an efficient manner. Second, NC 16 serves the rural communities in the southeastern Catawba County by facilitating travel from these areas to the employment and business centers in the major urban centers in the County and the adjacent Counties. This facility currently operates at a level of service C or B with average daily traffic from 7,400 to 9,000 vehicles per day. With the projected 2025 average daily traffic (ADT) between 12,000 to 16,700, this section of NC 16 is expected to deteriorate to a LOS of E to F. Improvements on NC 16 has been scheduled in the State Transportation Improvement Program (STIP). The improvements are divided into two sections. The first section is constructing a bypass paralleling the existing NC 16. This bypass starts at the Town of Lucia in Gaston County and ends at SR 1895 in Catawba County. The cross-section of the bypass is a 4-lane divided with partial control of access. This project is included in the 2002-2008 STIP as project R-2206 and is expected to be completed in 2008. The second section is the widening of NC 16 from SR 1895 to Caleb Setzer Road in Newton. The cross-section of this improvement is a combination of 4-lane divided and 5-lane. This project is included in the 2002-2008 STIP as project R-3100. The estimated cost of project R-2206 and R-3100 is \$44.4 million and 33.7 million, as reported in the 2002-2008 STIP.

**NC 150** - from Lincoln County to Iredell County - Purpose and Need

- **Project Recommendation:** It is recommended that NC 150 be widened to a 4-lane divided facility from NC 27 in Lincoln County to I-77 in Iredell County. The project limits combine for a total of approximately 22.6 miles. This project is included in the 2002-2008 State Transportation Improvement Program (STIP) as project R-2307, which is currently designated as an unfunded project. The estimated cost of this project is \$96.7 million, as reported in the 2002-2008 STIP.

- **Transportation Demand:** This east-west minor arterial serves the inter-county travel in five counties: Cleveland, Lincoln, Catawba, Iredell and Rowan. Major urban areas served by this facility include Shelby, Lincolnton, Mooresville and Salisbury. The section of NC 150 in Catawba and Iredell Counties also serves the fast growing residential and recreational communities in the Lake Norman area.
- **Roadway Capacity and Deficiencies:** With the Average Daily Traffic (ADT) between 9,600 to 13,000 trips per day, the existing roadway is currently operated at a Level of Service (LOS) B to D. At peak hour, some congestion has been experienced in the vicinity of the intersection at Sherill's Ford Road and NC 16. Without any improvement, the entire section of NC 150 in Catawba County will operate at a LOS F where the ADT is projected to be in the range of 26,000 to 35,000 vpd by the year 2025.

#### NC 127 - from Hickory-Newton-Conover planning boundary to NC 10

In Catawba County, this facility provides travel service for the Hickory-Brookford-Mountain View area. In addition to providing a connection for travel between NC 10 to other major highways such as US 321 and I-40, NC 127 also serves a number of developments along its corridor ranging from major residential in Mountain View and northern Hickory to a mix of commercial and governmental offices in downtown Hickory. The existing cross-section of NC 127 is composed of 3 segments: 2 lanes in northern Hickory north of Cloninger Road, 4-5 lanes between Cloninger Road to Zion Church Road in Brookford, and the segment south of Zion Church Road varies between 2-3 lanes. The majority of NC 127 in Catawba County is inside the planning area of the Hickory-Newton-Conover MPO which extends to the Jacob Forks River. To accommodate the projected traffic growth, the 2-3 lanes segment is recommended in the MPO's thoroughfare plan to be widened to 4-lane divided boulevard cross-section. For the segment in Catawba County south of the MPO, the 2025 projected traffic is 19,100 vpd. It is recommended that this segment be widened to a 4-lane divided boulevard.

#### Major Collectors

**NC 18** - This major collector serves the western most part of Catawba County providing for inter-county traveling between Caldwell, Burke, Catawba and Lincoln Counties. No improvement is need for this 2-lane highway since it does have adequate capacity to handle both existing (3,000 vpd) and projected (4,900 vpd) traffic.

#### NC 10 – Outside of the Hickory-Newton-Conover MPO planning boundary

This highway serves the east-west travel in the County. It runs through a number of small rural communities, collects the traffic and distributes the trips onto the principal and minor arterials. Part of NC 10, from South Fork River to Claremont Road in Newton, lies in the Hickory-Newton-Conover MPO planning area. For more information on this section, see Hickory-Newton-Conover Urban Area Transportation Plan –

Technical Update #1 Report. On the part of NC 10 west of South Fork River (to Lincoln County), capacity problems will be experienced in locations where the highway intersects other major roads such as NC 127 and SR 1008. A left turn lane is recommended for these intersections to relieve the potential congestion. No improvements will be needed for the part of NC 10 east of Claremont Road.

**Startown Road (SR 1005)** – Outside of the Hickory-Newton-Conover MPO planning boundary

This 2-lane major collector serves the north-south travel in the southern part of Catawba County. It terminates at US 70 connecting to the southern end of the proposed Eastside Thoroughfare. The heaviest travel on Startown Road occurs in the vicinity of US 70 inside the Hickory-Newton-Conover MPO where the daily volume reaches 11,000 vpd. Outside of the MPO (the portion that covered in this study), the volume drops to around 6,400 vpd. The trend-line shows that the traffic on this section of Startown Road has been growing at annual rate of 3.8%. However, the effect of the proposed Robinson Road Extension (parallel to Startown Road south of NC 10) will temper the growth rate to a moderate 2% per year which projects the traffic volume to 12,000 vpd in 2025. No improvement is recommended for this road.

#### **Robinson Road (SR 1146) Extension**

Robinson Road is classified as a minor collector serving the north-south travel in central Catawba County. It terminates at NC 10 on the southern end and at US 70 on the northern end connecting to Lenoir-Rhyne Boulevard. This 2-lane road lies entirely inside the Hickory-Newton-Conover MPO. In the vicinity of NC 10, traffic volume on Robinson Road is about 4,600 vpd. The 2025 projection on this road is 11,600 vpd.

The proposed Robinson Road Extension starts from a point approximately 1,500 feet north of NC 10 intersection. From this point, the road extends southward crossing NC 10, paralleling US 321 Freeway connecting to West Maiden Road (SR 2007) at Startown Road (SR 1005). This 2-lane facility was proposed for two reasons; to provide continuity and additional capacity. This route, when complete, will provide an alternate way for traveling between the major shopping area in Hickory and the resort community of Lake Norman via West Maiden Road. This route will also provide needed capacity to serve the traffic that will be generated from the anticipated growth along US 321 freeway west of Startown Road. Without this extension, Startown Road will be overcapacity.

#### Minor Collectors

**West Maiden Road (SR 2007)** – from Maiden Planning boundary to Startown Road (SR 2005)

Locally, this 2-lane minor collector provides connecting service for travel between Maiden and US 321 Freeway via Startown Road. Regionally, it will be a part of the

future road system that provides service between Lake Norman area and the shopping area along US 70 in Hickory. No improvement is recommended for this road.

### Other Minor Collectors

The following minor collectors are roads that will need minor widening for safety reasons. Most of these roads are between 18 to 20 feet in cross section. It is recommended that these roads be widened to the minimum tolerable lane widths when funding is available.

Rhoney Farm Road (SR 1002)  
Buffalo Shoals Road (SR 1003)  
Zion Church Road (SR 1008)  
Old Catawba Road (SR 1722)  
Boggs Road (SR 1727)  
Balls Creek Road (SR 1810)  
Bandys Cross Road (SR 1813)  
Little Mountain Road (SR 1815)  
Sherrills Ford Road (SR 1848)  
East Maiden Road (SR 1855)  
Plateau Road (SR 2036)

### **Bicycle Routes**

Catawba County has been working with NCDOT on establishing a bicycle route mapping and signing plan for the County. The project is shown in the 2000-2006 TIP as E-3812. The Bicycle Plan will be incorporated into the Thoroughfare Plan once it is completed.

### **Public Involvement**

The study to update Catawba County's Thoroughfare Plan was started in response to a request from Catawba County in September of 2000. NCDOT officials met with the Catawba County Director of Planning and Development and his staff on October 4, 2000. This meeting was held to present information on the thoroughfare planning process and to gather input on the transportation needs of the County. The preliminary Thoroughfare Plan Recommendations was presented at the Ball's Creek Small Area Plan meeting on October 1, 2001 and subsequently at the Sherrill's Ford Small Area Plan meeting on October 18, 2001. Likewise, the Planning Board received a presentation on the Plan at its February 25, 2002 meeting. Comments and suggestions from these meetings were evaluated and incorporated accordingly. Public Workshops on the recommended Thoroughfare Plan were held on October 17, 2002 at Startown Elementary School and on October 30, 2002 at Sherrill's Ford Elementary School. Comments were addressed and incorporated accordingly. A Public Hearing on the Plan was held at the Catawba County Planning Board meeting on September 29, 2003 in Newton. After the hearing, the Board recommended forwarding the Plan to the Catawba County Board of Commissioners. The Catawba County Thoroughfare Plan was approved and adopted by the Board of

Commissioners on October 20, 2003. The North Carolina Board of Transportation adopted the Plan on June 3, 2004.