CHAPTER VI. TRANSPORTATION

A. INTRODUCTION

The transportation network moves people, commodities, goods and services within and through the County via various modes. The road network is the framework upon which the County's land use pattern has developed. Development impacts the road system's ability to provide safe convenient mobility and access. Excessive or poorly designed development can overburden the road system and generate the need for costly improvements. Coordinating transportation and land use decisions is essential to ensure compatibility between the two and to make the most efficient use of limited fiscal resources.

B. ROADS

The most visible element of the transportation system is the road system (**Map 11, Appendix B**). Road systems consist of a hierarchy of roadways classified by relative purpose, traffic volume and construction standards. Interstates and highways convey high-speed high volume traffic on a multi-lane hard surface with limited access points between communities. Arterial roads provide for high traffic volume circulation at moderate to high speeds within or between communities with controlled access. Collectors provide moderate speed access between arterials and local roads. Local roads are intended to provide low volume and low speed access directly to private property. Collector and local roads are typically hard surfaced in cities and suburban development areas, but may be gravel in sparsely developed rural areas. **Exhibit 109** shows the number of centerline miles in each classification and the average of all average annual daily traffic levels for roads in that classification.

Exhibit 109: Road Classifications

Classification	Centerline miles	Percentage of total county miles	Average Annual Daily Traffic (vehicles per day)
Interstate	16	1.2	N/A
Arterial roads	129	9.4	16,110
Collector roads	245	17.9	2,770
Local roads	979	71.5	690
Totals	1,369	100	

Source: Carroll County Long Range Transportation Plan, Day Wilburn Associates, 2004.

The road network in Carroll County consists of a radial configuration of major roadways connecting Carrollton with other cities in the County. Highways 27, 16, 166, 113, and 61 radiate from Carrollton. The southern part of the county, Highway 5 runs west from Whitesburg to Roopville and then south of Bowdon. Highway 78 runs east and west between Temple and Villa Rica in the northeast corner of the county. Interstate 20, which regionally connects the Atlanta metropolitan area to Birmingham, Alabama, runs through the cities of Temple, Villa Rica, and Bremen, just north of Mt. Zion. I-20 has three interchanges in Carroll County, at Highways 27, 113 and 61.

Of the 1,369 total miles of roads in the County, 1,041 miles are paved roads. Of the paved roads, 181 miles are State routes and 165 are city streets with the remaining balance of 694 miles under County jurisdiction and maintenance. Of the total roadways in the county, approximately 96% are one or two lanes roads, 4% are 4 lane roads, and less than 1% have five or six lanes.

Pavement conditions are evaluated by the Georgia Department of Transportation, which rates each road on a numerical scale. The rating indicates the condition of the road and its need for maintenance. The condition of roads in Carroll County is shown in **Map 12** (see **Appendix B**). Roads rated 81 through 99 are in very good condition with no maintenance needed. Roads rated 65 through 80 have good rideability with some minor repairs needed. Roads rated 45 through 64 have considerable deterioration and need major repair or resurfacing. Roads rated 28 through 44 are badly deteriorated and need leveling and resurfacing. Roads rated 11 through 27 are in critical condition and need immediate attention. Roads with ratings of 10 or less need to be abandoned and are not being maintained.

The most significant traffic congestion is confined to the northeast portion of the County, but commuter traffic is increasingly heavy along Highways 61, 5 and 166. **Exhibit 110** shows roads with the highest average annual daily traffic (AADT) counts. These figures are based on a three-year, two-way count for the years 2000 through 2002. The roads with high traffic counts all experienced strong growth in traffic between 1990-1992 and 2000-2002. However, not all roads in Carroll County experienced an increase in traffic counts. Burns Road/CS 944 north of Buffalo Road showed a 30% drop in traffic, from an AADT of 4,590 in 1990-1992 to 3,200 in 2000-2002.

Exhibit 110: Average Annual Daily Traffic

Road/Route (Station No.)	Count Location	2000-2002 AADT	Percent Increase from 1990-1992
I-20/SR 402 (284)	West of Douglas Cnty Line	63,950	61%
I-20/SR 402 (278)	West of SR 113	43,830	81%
SR 166 (265)	East of Old Airport Road	33,640	66%
US 27/SR1 (12)	South of SR 16/166	31,760	25%
SR 61 (145)	South of Brooks Road	25,180	77%
SR 61 (149)	North of Bay Springs Road	24,940	98%
SR 61 (158)	South of US 78/SR 8	24,600	66%
US 27/SR 1 (25)	North of Myrtle Street	24,160	84%
SR 166 (258)	North of Horsley Mill Rd.	24,100	43%
US 78/SR 8 (101)	East of SR 101	17,710	71%

Source: Carroll County Long Range Transportation Plan, Day Wilburn Associates, 2004.

Current levels of service on Carroll County roads remain relatively uncongested. The level of service compares the design capacity of a particular road segment with the daily traffic volume, grading the ratio on a scale from A to F. Most roads in the County are currently at levels of service A through C. The only road segments that are currently at an F level of service, where traffic volume exceeds the road capacity, are the interchange ramps for I-20 in Bremen and at the Industrial Road interchange in Villa Rica, as shown in **Map 13**. However, the Day Wilburn Associates plan anticipates drops in levels of service for several roadways throughout the County

during the next two decades, as shown in **Map 14** (see **Appendix B**). Increased congestion is projected to be particularly acute along on important travel corridors such as SR 113, SR 101, Carroll Street, SR 166, and SR 61.[37] Based on the traffic modeling conducted during the preparation of the Carroll County Long Range Transportation Plan, improvements will be needed for each of these roads.

Road safety is an important issue in assessing the adequacy of a transportation network. Carroll County experienced 1,585 crashes on state routes in 2001. Of these crashes, over 34% involved an injury and less than one percent involved a fatality. **Exhibit 111** lists the five intersections in the state route system with more than twenty crashes. **Exhibit 112** shows the crash rates for Carroll County by functional classification. The overall crash rate for Carroll County arterial streets is lower than the statewide crash rate for arterial streets.

Exhibit 111: Crashes at Intersections, 2001

Intersection	Number of Crashes
SR 16 at SR 166	48
US 78/SR 8 at SR 61	38
SR 166 at Old Airport Rd./CR 424	26
SR 61 at Hickory Level Rd./CR 393	23
US 27/SR 1 at Roop St./CS 922	20

Source: Carroll County Long Range Transportation Plan, Day Wilburn Associates, 2004.

Exhibit 112: Crashes by Functional Classification, 2001

Functional Class	Number of Crashes	Crash Rate per Million Vehicle Miles Traveled	Fatality Rate per Million Vehicle Miles Traveled
Interstate	109	35	0.64
Arterials	1,238	230	1.3
Collectors	237	228	3.85

Source: Carroll County Long Range Transportation Plan, Day Wilburn Associates, 2004.

C. SIGNALIZATION AND SIGNAGE

Georgia Department of Transportation information shows that there were 2,301 traffic signals and signs in use in Carroll County in 2002, as shown in **Exhibit 113**. Of these, approximately half were located in the unincorporated areas of the county. Over 93% of the signals and signs were stop signs.

37 Additional information regarding existing and projected levels of service can be found in Section 4 of the Carroll County Long Range Transportation Plan, prepared by Day Wilburn Associates, 2004.

Exhibit 113: Signals and Signage

Area	Stop Sign	Beacon-Amber	Stop All Directions	Flasher	Traffic Control - Left Turn Arrow	Stop Sign Opposite	Traffic Control - Pedestrian Signal	Beacon - Red	Signal	Yield Sign Opposite Inventory	Yield Sign	Grand Total
Unincorp. County.	486	2	59		3	631	1		2			1184
Bowdon	28	3	7			30	5	1	3	1		78
Bremen	5							1	2			8
Carrollton	206	1	34		19	298	12	2	58	2	6	638
Mount Zion	5		2	2		13					2	24
Roopville	5	1				6						12
Temple	35	1	3			47		2	2			90
Villa Rica	75	1	26		5	115		1	7		1	231
Whitesburg	11	1	9			14		1				36
Grand Total	856	10	140	2	27	1154	18	8	74	3	9	2301

Source: Georgia Department of Transportation, RC file, September 11, 2002.

D. BRIDGES

Bridges are an important piece of the transportation network in promoting cohesion in roadways. Bridges span rivers, streams, culverts, and other areas where conventional roadways are infeasible. In doing so, they minimize barriers to create a network. While the Chattahoochee and Little Tallapoosa rivers create some obstacles to mobility, no additional crossing are proposed in the Carroll County Long Range Transportation Plan.

The Georgia Department of Transportation inspected all County and Federal Aid Secondary bridges and submitted a Locally Owned Federal Aid Route Bridge Inspections report to Carroll County in January, 2003. The inspection covered 98 bridges. At the time of the inspection, sixty bridges were reported in good condition, twenty were in satisfactory condition, thirteen were in fair condition, four were in poor condition, and one bridge was being replaced.

E. EVACUATION ROUTES

I-20 through Carroll County is designated as an evacuation route for hurricanes traveling north through the Gulf of Mexico and Atlantic Ocean. In addition, I-20 may be used as an evacuation route in the event of an incident at the Army Depot in Anniston, Alabama that causes nerve gas to be released.

F. PARKING

Parking generally is not a constraint throughout Carroll County, except in some downtown areas. Significant parking areas in Carroll County include three park and ride lots for carpooling and express bus pick-up and drop-off points. The lots are located at:

- I-20 and SR 61 near Villa Rica,
- North Side Drive at SR 166 in Carrollton, and
- I-20 and SR 113 near Villa Rica.

Exhibit 115 shows the respective sizes and utilization rates for each lot. Responsibilities for park and ride lots are shared between local governments and GDOT district offices. Currently, local governments are asked to provide general maintenance such weed-eating and trash pickup and the State provides for pothole repairs and resurfacing. Carroll County has just recently been made aware of their responsibilities on the Temple lot, and indications are that the lot's past problems with trash and weeds are being adequately addressed. The Villa Rica and Temple lots are on the District's priority list to be repaved. As yet no funding source has been identified statewide to accomplish this task. District personnel are very happy with the Carrollton facility, to the point of recommending it to their State offices as a model example of what a park and ride lot should be throughout the state.

Exhibit 114: Park and Ride Lot Utilization, 2003-2004

Lot Location	Lot Name	Number of Parking Spaces	2003		2004	
			Average Count	Percent Utilization	Average Count	Percent Utilization
Villa Rica	I-20 & SR 61	160	76	48%	82	51%
North Side Carrollton	SR 166	65	12	18%	15	23%
Temple	I-20 & SR 113	15	6	40%	9	60%

Source: Georgia Department of Transportation.

G. *Bicycle & Pedestrian Ways*

Transportation includes more than just roadways for automobiles. Additional forms of transportation include bicycle and pedestrian ways. The Chattahoochee Trace state bicycle route passes through Carroll County. Approximately 23 miles of the route are located within the County. The Chattahoochee Trace is a north-south bicycle route that extends from the Tennessee state line south to Seminole State Park.

In 2005, the Chattahoochee-Flint Regional Development Center completed a Regional Bicycle and Pedestrian Plan that includes Carroll County, as well as Coweta, Heard, Meriwether and Troup Counties. Along with inventorying existing bicycle and pedestrian facilities and activities, the plan formulated goals and strategies for the ongoing development of these modes of transportation. The bicycle routes included in this plan are shown in **Map 15** (**Appendix B**).

While there are extensive sidewalk networks within incorporated cities, Carroll County does not require or maintain sidewalks in the unincorporated areas of the County. The County is coordinating with its cities to develop urban standards in Urban Growth Areas to address the installation and maintenance of sidewalks. In addition, the County is participating in the Safe Routes to Schools programs, in conjunction with the school district, to develop pedestrian-friendly networks around schools located in residential areas.

H. PUBLIC TRANSPORTATION

Public transportation is limited to selective non-profit services within the larger communities of the County. The Georgia Department of Human Resources provides limited transportation services through its Coordinated Transportation System. This system assists County residents in reaching services of the Division of Aging Services, Mental Health/Developmental Disabilities/Addictive Diseases, and Family and Children Services.

The County should coordinate with regional transit entities to explore potential commuter bus services over the next five years. The long-term prospect of extending commuter rail along the I-20 corridor, discussed in Section J, could be preserved by protecting potential terminal sites.

I. AIRPORTS

Located on 396 acres to the east of Mt. Zion and 5 miles northwest of Carrollton, the West Georgia Regional Airport – O.V. Gray Field (WGRA) was constructed 30 years ago and is under the authority of the West Georgia Airport Authority. The WGRA runway is 5,500 ft. in length and has an asphalt surface that is in good condition as well as a full parallel taxiway. Operations of the airport have been contracted to a private firm, which has overseen $2 million in facility improvements in recent years. Currently, the WGRA is considering extending the runway length to 6,800 feet and has been in discussions with the County and Airport Authority to explore funding options.[38] The existing facilities can accommodate corporate jet and mid-size air traffic. The proposed extension would make WGRA the second longest runway in Georgia – Hartsfield International has the longest – and would allow the airport to handle large jet landings.

The WGRA has been recognized by the community as an underutilized economic development asset. The airport has a number of competitive advantages to other air facilities in the Atlanta Metropolitan Areas, including:

- Adjacent undeveloped land suitable for airport expansion and facility development;
- Access to Interstate 20;
- Existing capacity to serve corporate jets; and
- A proactive management exploring facility improvements.

The community based economic development effort "Carroll Tomorrow" has identified three primary economic development opportunities directly associated to the airport, including:

- Attraction of aircraft building, assembly and part manufacturing businesses;
- Development of a light industrial park adjacent to the airport; and
- Operation of a significant air distribution facility.[39]

Land use adjacent to the airport and the height of structures extending from the runway are not locally regulated. It is common for airport operations to be protected from land use incompatibilities through airport overlay zoning regulations. Such regulations protect the usefulness of public investment in the airport while protecting the public safety and welfare by denoting appropriate land use patterns and structure heights. Since the airport is a regional

38 Carroll Tomorrow. Carroll County Profile of Target Business Clusters (March 6, 2000). Pg 13.
39 For additional information on Carroll Tomorrow's economic strategy see: Carroll Tomorrow. Economic Development Strategy (June 2000). Pg 15 and 49.

facility and the land use decisions of Carroll County, Bremen, Carrollton and Mt. Zion effect airport operations, mutually accepted and enforced airport overlay zoning would preserve the functionality of the airport. **Map 16** shows airport protection zones. Hartsfield Atlanta International Airport (HAIA) is located approximately 50 miles from Carrollton in the southwest portion of Atlanta, which is a relatively easy commute for business and personal use. Over 30 airlines provide commercial passenger service.

The West Georgia Regional Airport provides an indispensable link to regional, state, and national transportation systems. However, aircraft noise, safety, and environmental impacts around the Airport affects the compatibility of land uses surrounding it. Incompatible land uses jeopardize the safety and efficiency of flying activities, and the quality of life of the community's residents. Incompatible airport land uses include residential development, schools, community centers and libraries, hospitals, and buildings used for religious services - all generated by new housing demands. Likewise, the construction of tall structures – including buildings, construction cranes, and cell tower in the vicinity of an Airport can be hazardous to the navigation of airplanes. Aviation electronic navigation aids (such as radar facilities, and instrument landing systems) are not always located on Airport property. Such electronic systems (whether located on-Airport or off) have the potential of being interfered with if non-aviation related electronic sources are placed in proximity or if structures are constructed which could block the navigation aid signals. In addition, the placement of lights (high mast lighting and stadium lights, for example) near an Airport can be a visual distraction to pilots approaching an Airport facility.

Planning objectives will encourage land uses that are generally considered to be incompatible with the Airport and to encourage land uses that are more compatible (such as industrial and commercial uses) to locate around the Airport. Except for height, bulk, and intensity of developments around the Airport, conventional zoning techniques will not always suffice to control the land use around the Airport. A combination of procedures (such as zoning overlay requirements or performance requirements such as conditional uses, TDR, PDR, and other techniques), subdivision regulations, building and housing codes, growth policies have the potential to avoid incompatible development and promote compatible development.

Airport impact zones are useful to define the dimensions and locations of each area needing protection. Airport impact zones usually include (1) a runway protection zone, (2) an inner safety zone, (3) an inner turning zone, (4) an outer safety zone, (5) a sideline safety zone, and (6) a traffic pattern zone. Recommended land uses and densities of land development are different depending on the particular Airport Impact Zone. For example, the recommended land use in Zones (1), (2) and (5) would prohibit residential development and allow low-density industrial development. Recommended land uses in Zones (3) and (4) would range from zero to low-density residential development and industrial development. Recommended land uses in Airport Impact Zone (6) would allow low-density residential development and industrial development.

Often, residents who move into an area may not be aware of an Airport's presence or the implications of Airport noise. One method of informing the public of an Airport's proximity and disclosing the potential for aircraft noise, is to require disclosure through covenants, notice on

subdivision plats, site plans, and through other legal instruments. The location of the Airport and other relevant land use controls in the Airport area should be described in the disclosure and covenants and required as a condition of subdivision approval.

There are many entities involved in implementing or supporting actions directed toward improved land use compatibility around the Airport. These entities include the City of Mount Zion, West Georgia Regional Airport Authority, airlines, commercial operations and customers of the Airport, state government, the County, and the community at-large. Once zoning is adopted for Airport impact zones, proposals for development in the vicinity of the Airport should be evaluated by the Airport Authority and jurisdictional bodies responsible for land use around the Airport.

J. RAILROADS

There are two rail lines traversing the county. The Norfolk – Southern Railway system traverses Carroll County with two routes, an east-west line and a north-south line. The East-West line runs parallel to I-20 through Temple and Villa Rica. Approximately 20-25 trains per day pass along this route, which traverses the historic downtowns of the two cities. This route also provides passenger service through Amtrak, which uses the facility twice daily. The Crescent route has daily runs from New York City to New Orleans by way of Greensboro, NC and Atlanta, GA. There are no passenger stops for this route in the City of Villa Rica. The adjacent eastern and western boarding stops are at Atlanta, Georgia and Anniston, Alabama.

The North-South route runs through Bowdon Junction, Carrollton and Whitesburg with a spur to deliver coal to Georgia Power's Plant Wansley. This route carries an average of five freight trains daily.

The Georgia Department of Transportation is studying a Georgia Rail Passenger Program to provide commuter rail service to Atlanta from outlying areas. One proposed route would terminate at Bremen with stations in Villa Rica and Temple. This route is estimated to cost $303 million for initial capital costs, with 1.1 million passengers estimated to ride at the mid-range level of fares. The route is proposed to be operational in 2011.

K. FUTURE IMPROVEMENTS

The County has completed a study to prioritize improvements to some of its unpaved roads. This Plan promotes a land use pattern that will minimize the need to pave additional roads in rural areas, which will save considerable maintenance costs over the life of the Plan.

The 2004-2006 Georgia State Transportation Improvement Program includes a variety of transportation improvements planned for Carroll County. **Exhibit 115** shows a brief summary of road and bridge projects. The table includes only those projects that affect roadway capacity.

Exhibit 115: 2007-2009 Carroll County STIP Improvements

Type	Description	Planned Construction

Bridges	SR 16/US 27 Alt at Chattahoochee River at Coweta County Line	Authorized 2007
Bridges	Replace bridge Sandy Flat RD at Big Indian Creek 2.5 mi SW of Bowdon	2010
Roadway Project	Intersection improvement SR 166 / Hays Mill RD	After 2011
Roadway Project	Turn Lanes SR 166 / Tyus-Carrollton RD right turn lanes	2008
Roadway Project	Widening SR 1/ US 27 from Central RD north to Dixie ST	After 2011

Source: Georgia Department of Transportation

In addition to these planned improvements, the Carroll County Long Range Transportation Plan prepared by Day Wilburn Associates identified a variety of transportation improvements intended to "provide multimodal, technological, and demand management solutions to meet Carroll's future transportation needs" through 2030. These recommendations were matched to specific identified deficiencies in the county transportation network and include new roadways, roadway widening, interchange reconstruction, access management and traffic operations, High Occupancy Vehicle (HOV) lanes, commuter rail lines, express bus and local transit service, railroad grade separation, and safety improvements.[40]

40 See Appendix B of the Carroll County Long Range Transportation Plan for a detailed list of proposed transportation projects.