

DAVIE COUNTY
LAND DEVELOPMENT PLAN

1. INTRODUCTION

Davie County, North Carolina stands at a unique crossroads in its history. The County has experienced considerable growth over the last several decades, yet remains relatively undeveloped and is therefore capable of shaping itself in a positive way. Despite the fact that the County is still largely rural, Davie has emerged as a leader among rural counties in terms of its development policies. Countywide zoning was enacted in the mid-1970's, far ahead of most other rural counties in North Carolina. A unique overlay zoning district designed to promote higher quality non-residential development was added in 1991.

Yet, as the County prepares to enter a new millennium, there is growing concern that the County is without a plan to guide its growth, and that the development regulations that have benefited the County over the past 20+ years are somewhat outdated and in need of revision to reflect new political and economic realities as well as new planning practices. For example, much of the growth that is currently occurring in the Hillsdale area, while at a somewhat higher level of quality than in the adjacent "Clemmons strip" in nearby Forsyth County, could benefit from a more comprehensive approach to growth management.

In response to these and other factors, the Davie County Board of Commissioners requested in late 1998 that a land development plan be prepared for the County. A committee was subsequently appointed and began working with professional staff from the Davie County Planning Department and North Carolina Division of Community Assistance in January 1999. This report represents the work of the committee along with its recommendations.

1.1 MISSION

To prepare a vision-driven, pro-active plan for the future physical growth and development of Davie County.

1.2 PLANNING PERIOD

Twenty years: 2000-2020

1.3 GEOGRAPHIC SCOPE

The entire County with the exception of the Town of Mocksville and its extraterritorial jurisdiction.

1.4 ORGANIZATION OF THIS PLAN

The plan outlines a course of action for Davie County to pursue in guiding its growth. The plan can be thought of as consisting of two major components: facts and values. Facts help to inform the decision-making process while values reflect the views of the citizens of Davie County. The first sections of the plan describe facts while the latter sections incorporate values. The Future Development Policies found in Chapter 5 along with the Land Classification Map found in Chapter 6 are essentially the guide to the future growth and development of Davie County.

2. BACKGROUND INFORMATION

2.1 BRIEF HISTORY

Although no evidence of permanent Native American settlements exists in what is now Davie County, several tribes such as the Sauras, Senecas, Saponas, and Cherokees claimed the area as hunting ground. Trade with Native Americans brought mainly English, German, and Scotch-Irish settlers to the area in the early 1700s. Groups of German-speaking immigrants settled in communities in the 1760s.

In the mid-1700s, Daniel Boone, who was about 17 years old, came with his family from Pennsylvania and settled in what is now Davie County, when his father, Squire Boone, purchased land in the area. Daniel Boone married and began to raise a family while hunting, exploring and developing the skills and resourcefulness that would make him a legendary frontiersman. He lived with his wife and children in the area for 13 years before moving to an area that is now in Wilkes County. His parents and other family members, however, remained in the area that became Davie County. (Squire and Sarah Boone are buried at the Joppa Church Cemetery in Mocksville.)

When North Carolina became a royal colony of the English Crown in 1730, the area that is now Davie County was part of Bladen County. In 1748, the area became part of Anson County, and in 1753 part of Rowan County. When the people living between the “forks of the Yadkin” wished to have their own government, Davie County was formed out of Rowan County in 1836. The County was named after William R. Davie, a Revolutionary War leader and a governor of North Carolina. The Town of Mocksville, at a place formerly called Mock’s Old Field, became the county seat. In the mid-1800s, about 905 of the people of the County farmed for a living. Corn, wheat, oats, Irish potatoes, sweet potatoes, peas, and beans were grown for food. Hogs were the principal source of meat. Tobacco and cotton were important non-food crops. In the 1920s, dairying became a major agricultural enterprise, and later on, other livestock began to be raised.

Davie County was considered fine land for farmers---vast savannahs or prairies, created perhaps by Native Americans burning off the woods---which made clearing easy and the bottomlands were rich. The County was comprised primarily of small farms, with a few exceptions, notably Cooleemee Plantation, which accounted for 12,000 acres prior to the Civil War.

As the Piedmont began to industrialize, Davie County followed, but not as rapidly as some neighboring areas. After the Civil War, small tobacco factories were scattered over much of the County, but the era of merger and monopoly wiped them out. The railway reached Mocksville in 1891. At about the same period, a large cotton mill was built at Cooleemee. After World War II, such industries as compressors, furniture, and textile products began to develop in the County. Feed mills and tobacco processing also helped to develop industry in the County. Davie County has continued to industrialize, but has always been somewhat of a bedroom community for neighboring counties. Workers from Davie are most apt to commute to jobs in nearby Winston-Salem.

2.2 OVERVIEW of DEVELOPMENT TRENDS and ISSUES

As Davie County enters the 21st century, it is experiencing abundant change. The overall population growth rate of the County (11.96 %) was slightly below the state average of 12.04 % between 1990 and 1997, but the northeastern section of the County is growing considerably more rapidly based on building activity in the area. The County is prosperous, having registered the lowest percentage of families living in poverty of any county in North Carolina in a recent report. Davie County has traditionally perceived itself as a small rural county, but this image is gradually changing. More and more residents commute out of the County to jobs in nearby counties than ever before, and the agricultural base of the County is giving way to one dominated by industry and services, although traditional industries such as tobacco, furniture and textiles appear to be on the wane. Much of the development activity in the County consists of spillover growth from nearby counties such as Forsyth. Land is more abundant in Davie County, and prospective homebuyers are generally able to purchase “more house for the money” and are thereby willing to live in Davie but commute to jobs elsewhere. Because of its strategic location roughly midway between the Triad and the Charlotte region, it also is not uncommon to find two-wage earner families who choose Davie County as a compromise between these two major economic regions.

The quality of life in Davie County is perceived to be very high, and the County is judged to have an excellent school system, all of which contribute to the desirability of Davie as a place to live. There is concern among public officials, however, that residential development alone will not provide the revenues necessary to adequately fund the costs of public services that are required to service a growing population. There is also a concern that market forces and community preferences are making it difficult to provide housing that is affordable for those of more modest means. In addition, there are increasing concerns that the development that is occurring is not laying a good foundation for future development but is instead perpetuating a pattern of urban sprawl.

The Town of Mocksville has historically served in the role as the commercial and industrial center of the County. The Town has been able to retain many of its traditional businesses and industries while expanding its base to capitalize on emerging markets. The Town enjoys an ideal strategic location as a distribution center situated with good access to Interstates 40, 85 and 77. Industrial clusters have developed near the interchange of US 601 and I-40 to capitalize on this unique location.

The preservation of farmland and open space is also a concern...conventional patterns of development have not provided for adequate public open space. Additionally, these patterns have increased dependence on the automobile as a means of travel and have created traffic congestion that is beginning to become a significant problem.

2.3 POPULATION, HOUSING, and ECONOMY

A detailed analysis of Davie County's population, economy, housing, etc. was prepared by the Northwest Piedmont Council of Governments in November 1997. That document, *Davie Futures II Environmental Scan*, was utilized as a source for several of the following statistical tables used in this report. The *Scan* should be referred to for additional statistical information.

2.3.1 Population

Davie County has experienced steady population growth over the last several decades. The County's rate of growth is currently very near the State average.

Davie County Growth: 1970-1997

	1970	1980	1990	1997	Change 90-97
Davie County	18,855	24,599	27,859	31,192	11.96%
Town of Mocksville	2,529	2,637	3,399	3,863	13.65%
Town of Cooleemee	Na	Na	971	995	2.5%
NC	5,084,411	5,880,095	6,632,488	7,431,161	12.04%

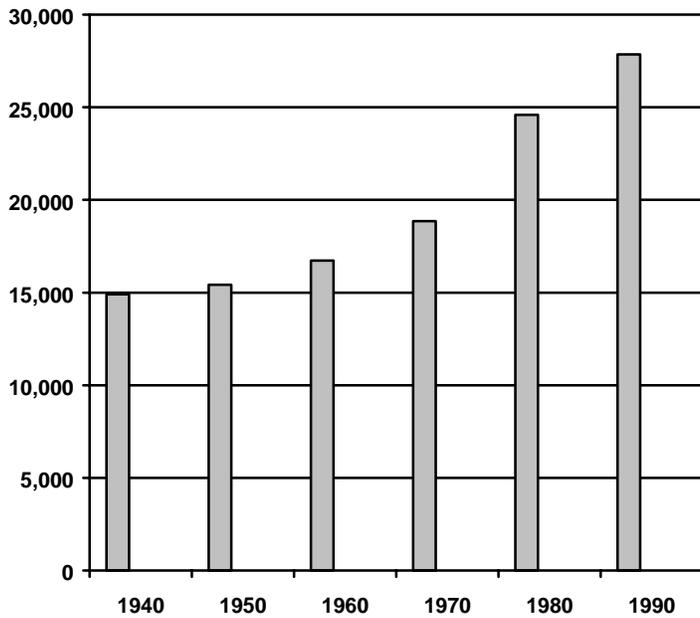
Source: US Bureau of the Census & NC Office of State Planning

A Comparison of Population Growth: 1940-1997

	1940	1950	1960	1970	1980	1990	1997	% change 40-90	# change 40-90
Davie	14,909	15,420	16,728	18,855	24,599	27,859	31,192	86.9%	12,950
Franklin	30,382	31,341	28,755	26,820	30,055	36,414	43,487	19.9%	6,032
Lincoln	24,187	27,459	28,814	32,682	42,372	50,319	57,896	108.0%	26,132
Stokes	22,656	21,520	22,314	23,782	33,086	37,223	42,848	34.1%	7,723
Watauga	18,114	18,342	17,529	23,404	31,666	36,952	40,862	104.0%	18,838
Yadkin	20,657	22,133	22,804	24,599	28,439	30,488	35,199	47.6%	9,831
NC (000s)	3,572	4,062	4,556	5,084	5,880	6,632	7,431	85.7%	3,061

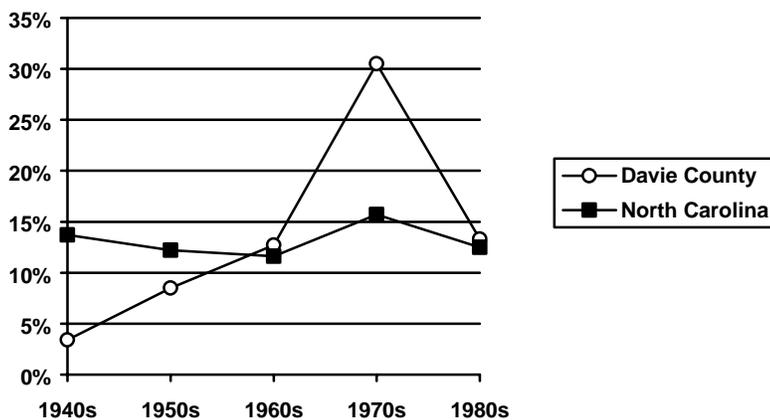
Source: US Department of Commerce, Bureau of the Census

Davie County Population Growth: 1940-1990



Since the 1940's, the growth rate for Davie County compared to the North Carolina rate has seen times of similarity and measurable difference. During the 1940s and 50s, Davie was gaining on the State rate. In the 1960s and the 1980s, growth rates were almost the same, but in the 1970s, Davie County's rate was considerably higher than the State's.

Population Growth Rates



	1940s	1950s	1960s	1970s	1980s
<i>Davie County</i>	3.4%	8.5%	12.7%	30.5%	13.3%
North Carolina	13.7%	12.2%	11.6%	15.7%	12.5%

Source: US Department of Commerce, Bureau of the Census

The fastest growing township in the 1980s was Farmington. Farmington and Shady Grove townships, have tended to grow much faster than the County average. Only Fulton township had a decrease in population. Population counts indicate that Farmington township also has the largest population, followed by Mocksville township.

Davie County Growth by Township: 1970-1990

	1970	1980	1990	Change 80-90
Calahaln Twp.	1,210	1,643	1,861	13.3%
Clarksville Twp.	1,634	2,127	2,429	14.2%
Farmington Twp.	3,319	6,236	7,990	28.1%
Fulton Twp.	1,307	1,713	1,697	-1.0%
Jerusalem Twp.	4,220	4,275	4,636	8.4%
Mocksville Twp.	5,702	6,825	7,014	2.8%
Shady Grove Twp.	1,463	1,780	2,232	25.4%
County Total	18,855	24,599	27,859	13.3%

Source: US Bureau of the Census

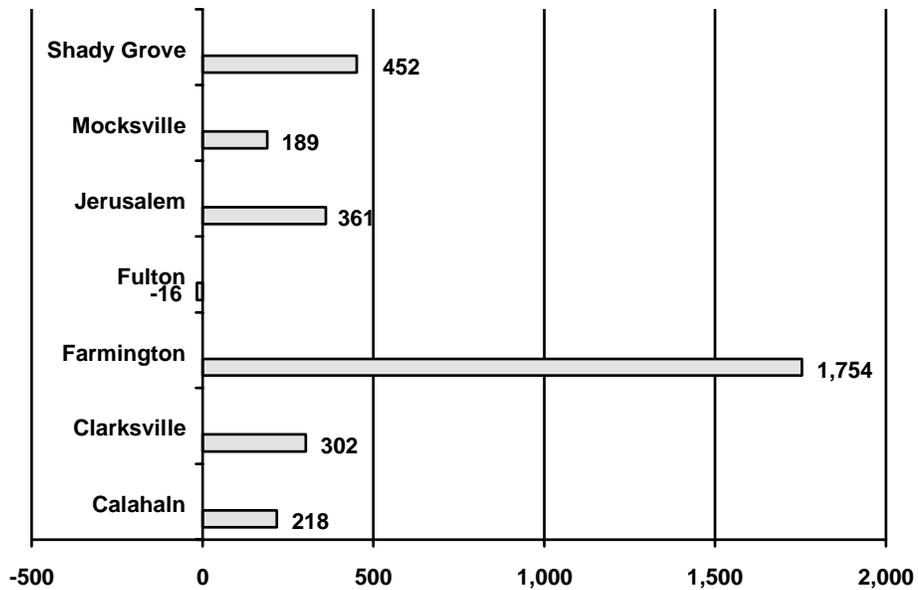
Davie County Population Rank by Township: 1970-1990

Township	1990	Rank*	1980	Rank*	1970	Rank*
Calahaln	1,861	6	1,643	7	1,210	7
Clarksville	2,429	4	2,127	4	1,634	4
Farmington	7,990	1	6,236	2	3,319	3
Fulton	1,697	7	1,713	6	1,307	6
Jerusalem	4,636	3	4,275	3	4,220	2
Mocksville	7,014	2	6,825	1	5,702	1
Shady Grove	2,232	5	1,780	5	1,463	5

*1=High 7=Low

Source: US Department of Commerce, Bureau of the Census

Population Changes by Township Davie County: 1980-1990



Source: US Department of Commerce, Bureau of the Census

From 1990 to 1997, in-migration accounted for 2,684 of the County's 3,333 new residents, while natural increase (births minus deaths) accounted for only 649.

Components of Population Growth: 1990-1997

	1997	1990	Growth		Births	Deaths	Migration	
			Number	%			Number	%
Davie	31,192	27,859	3,333	12.0%	2,583	1,934	2,684	9.6%
NC	7,431,161	6,632,448	798,713	12.0%	746,753	450,798	502,758	7.6%

The most densely settled areas of the County are Mocksville, Farmington, and Jerusalem Townships.

Population Density: 1990

	1990 Population	Square Miles	Population per Square Mile
Calahaln Twp.	1,861	37.2	50.0
Clarksville Twp.	2,429	42.7	56.9
Farmington Twp.	7,990	54.7	146.1
Fulton Twp.	1,697	27.7	61.3
Jerusalem Twp.	4,636	32.4	143.1
Mocksville Twp.	7,014	47.2	148.6
Shady Grove Twp.	2,232	23.5	95.0
County Total	27,859	265.2	105.0

Source: US Bureau of the Census

Davie County's population is projected by the North Carolina Office of State Planning to increase by roughly 25% between 1997 and 2020. This pattern of growth is slightly less than that of the State as a whole.

Population Projections: Through 2020

	1990	1997	2000	2010	2020	Change 1997-2020
Davie Co.	27,859	31,192	32,669	36,116	39,072	25.3%
NC	6,632,488	7,431,161	7,729,991	8,667,434	9,558,210	28.6%

Source: NC Office of State Planning

(Note: The LUP Committee has reviewed the population projections issued by the NC Office of State Planning...which are listed in the table above...and has instead made a decision to base the land use planning process on an assumed population of roughly 45,000 by the year 2020.)

2.3.2 Housing

Housing Characteristics By Township Davie County: 1990

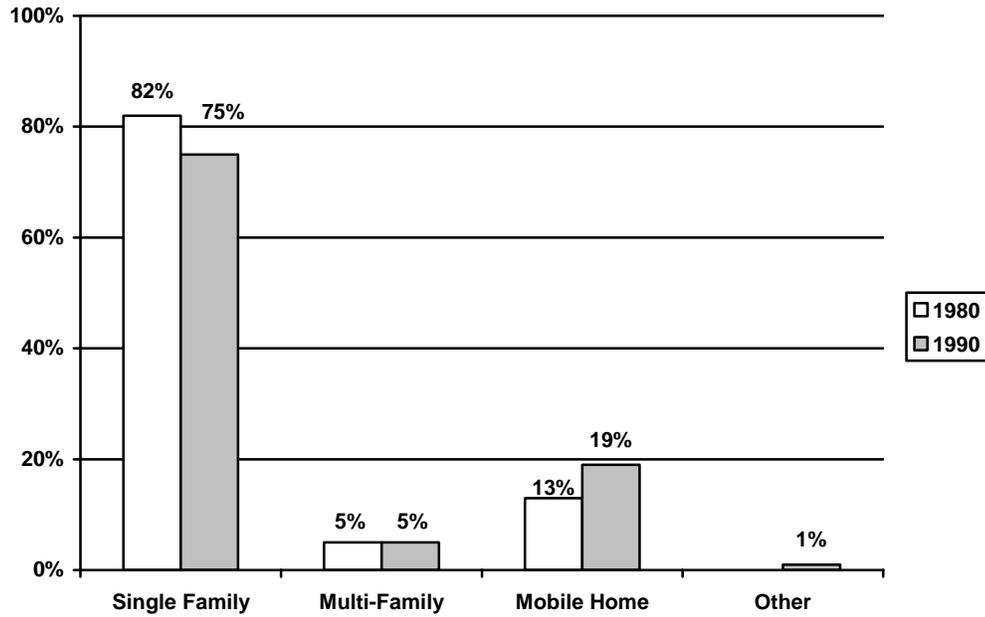
	Total Housing Units	Occupied			Vacant	
		Owner- Occupied Units	Renter- Occupied Units	% of Total Occupied	Units	% of Total Vacant
Calahaln	751	605	98	93.6%	48	6.4%
Clarksville	1,003	827	122	94.6%	54	5.4%
Farmington	3,252	2,648	433	94.7%	171	5.3%
Fulton	658	568	54	94.5%	36	5.5%
Jerusalem	1,944	1,488	319	93.0%	137	7.0%
Mocksville	2,970	1,942	798	92.3%	230	7.7%
Shady Grove	918	777	106	96.2%	35	3.8%

Source: US Department of Commerce, Bureau of the Census, 1990

According to the 1990 Census, 75% of the housing units in Davie County were single-family dwellings. Mobile homes comprised 19% of housing, and 5% were multi-family units.

Between 1980 and 1990, the number of housing units increased by 2,034 (21.5%). Slightly more than 900 of those units were mobile homes. The number of multi-family units saw an increase of only 162 units. The remainder were single-family units.

Housing Types Davie County: 1980-1990



Source: US Department of Commerce, Bureau of the Census

At the time of the 1990 Census, mobile home concentration was the highest in the Clarksville township (30.0%). Concentrations of single-family units were the highest in Fulton township (82.6%). Mocksville township had the largest concentration of multi-family dwellings (12.1%).

Types of Housing*
By Township
Davie County: 1990

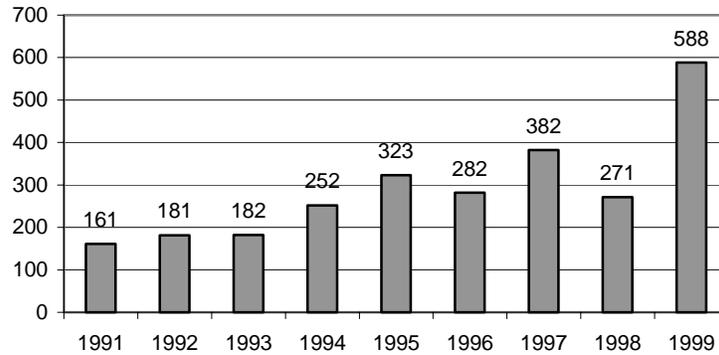
	Total Units	Single Family		Multi-Family		Mobile Homes	
		Units	% of Total	Units	% of Total	Units	% of Total
Calahaln	751	558	78.3%	---	---	145	19.3%
Clarksville	1,003	692	69.0%	---	---	301	30.0%
Farmington	3,252	2,522	77.6%	219	6.8%	496	15.3%
Fulton	658	544	82.7%	---	---	114	17.3%
Jerusalem	1,944	1,439	74.0%	14	0.7%	485	25.0%
Mocksville	2,970	2,192	73.8%	359	12.1%	404	13.6%
Shady Grove	918	687	74.8%	---	---	231	25.2%

*The difference between the three types of housing arrangements and the total units comprise the “other” category. This category, as defined by the Census Bureau, can include houseboats, railroad cars, campers, and vans.

Source: US Department of Commerce, Bureau of the Census, 1990

During the 1991-1999 time period, the highest number of building permits issued was in 1999 (588). There was a 265% increase in the number issued from 1991 to 1999. During the same period, there was a *decline* between 1995 and 1996 (12.7%) and between 1997 and 1998 (29.0%).

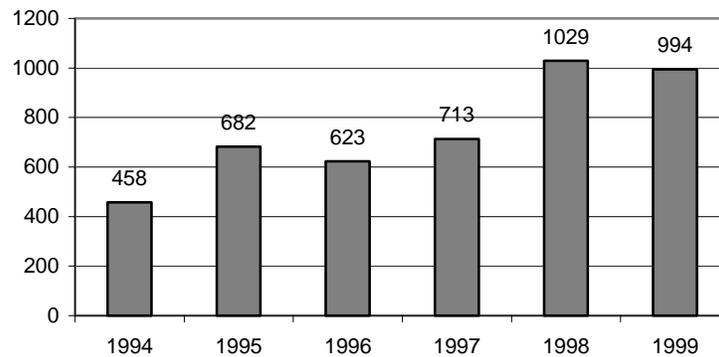
**Building Permits Issued
Davie County: 1991-1999**



*Source: NC Department of Labor, Building Permits Survey, 1997
Davie County Building Inspections Department, 1999*

During the 1994-1999 time period, the highest number of zoning permits issued was in 1998(1029). There was a 125% increase in the number issued from 1994 to 1998. During the same period, there was a *decline* between 1995 and 1996 (8.65%) and between 1998 and 1999 (3.4%).

**Zoning Permits Issued
Davie County: 1994-1999**



Note: Zoning permits include commercial, industrial and residential(site built and manufactured) construction.

Source: Davie County Planning and Zoning, 1999

2.3.3 Economy

It is interesting to note that, while Davie County does not have the highest median household income in the state of North Carolina (that distinction belongs to Wake County at \$47,856), Davie County does have the distinction of having the lowest percentage in the State of the overall population living in poverty.

Income and Poverty Status: 1995 Estimates

	Number of Persons in Poverty	Percentage of Persons in Poverty	Median Household Income
Davie	2,273	7.5	\$37,114
Franklin	6,162	14.6	\$31,267
Lincoln	5,462	9.6	\$35,046
Stokes	4,373	10.3	\$33,629
Watauga	5,684	15.7	\$28,638
Yadkin	3,619	10.5	\$31,053
NC	945,803	13.1	\$31,987

Source: US Census Bureau, February 1999.

An analysis of the industrial composition of Davie County indicates that manufacturing continues to be the primary employer with over 35% of the employment in 1990. This is the case for all comparison counties, with the exception of Watauga, in which services account for the largest share of employment.

A Comparison of Industrial Composition: 1990

	Agr.	Manuf.	Retail	Services	Govt.	Other
<i>Davie</i>	3.6%	35.9%	14.0%	22.7%	1.9%	21.9%
Franklin	4.6%	29.7%	14.1%	24.7%	5.2%	21.7%
Lincoln	1.6%	37.3%	12.8%	19.3%	2.1%	26.9%
Stokes	3.1%	38.2%	12.7%	20.6%	2.3%	23.1%
Watauga	2.9%	10.4%	24.0%	41.3%	2.9%	18.5%
Yadkin	5.5%	37.1%	12.7%	22.8%	1.9%	20.0%
NC	2.8%	26.7%	16.1%	27.9%	3.6%	22.9%

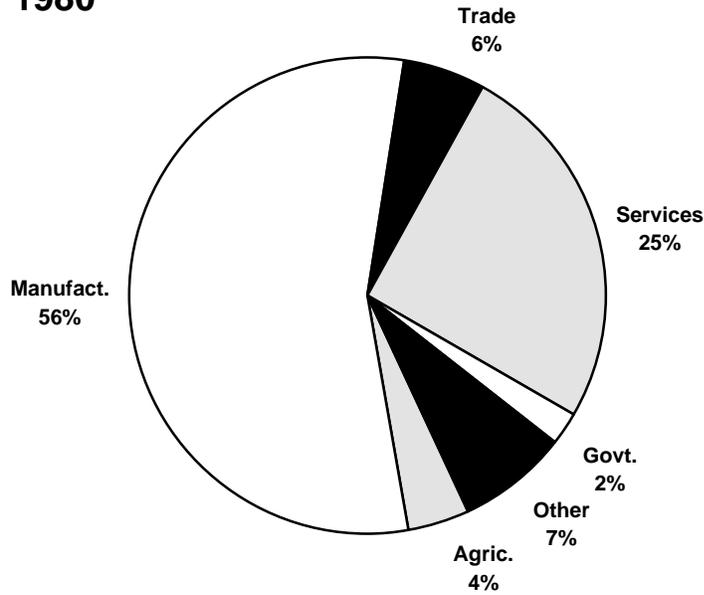
(% is of total employment)

Source: US Department of Commerce, Bureau of the Census, 1990

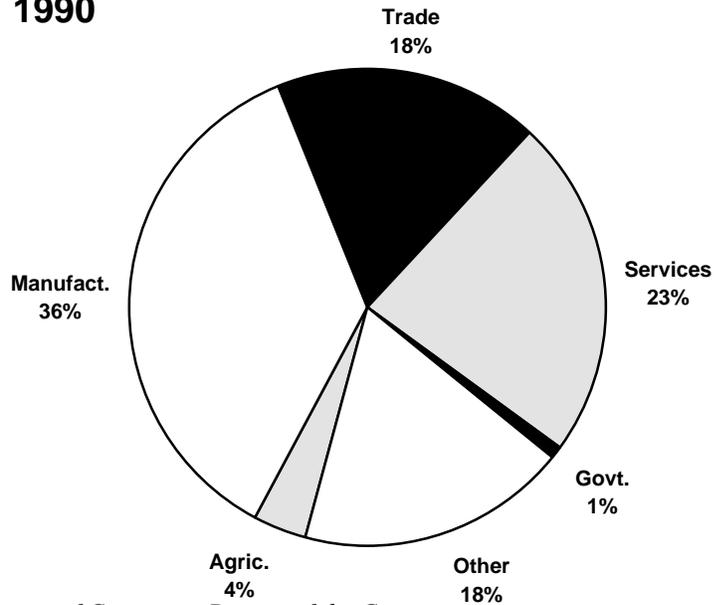
In the period between 1980 and 1990, the trade and “other” industries produced the most growth, while manufacturing saw a decline (-20.9%).

Industrial Composition Davie County

1980



1990



Source: US Department of Commerce Bureau of the Census

According to the Northwest Piedmont Council of Governments, in 1999 the largest manufacturing employers in Davie County included VF Jeanswear, Thomson Crown Wood Products, Ingersoll-Rand, and Lexington Furniture Industries. The largest non-manufacturing facilities were the Davie County School System, Davie County Government, and Davie County Hospital. The following is a listing of employers with more than 100 employees.

Major Employers Davie County: 1999

Employer	# of Employees	Type of Industry
VF Jeanswear	650	MFG
Davie County School System	650	GOVT
Ingersoll-Rand Co.	515	MFG
Lexington Furniture Industries	460	MFG
Jockey International, Inc.	404	MFG
QST Industries, Inc.	300	MFG
County of Davie	287	GOVT
Thomson Crown Wood Products	200	MFG
Crestwood Farms International	200	MFG
Baker Furniture Co.	190	MFG
Davie County Hospital	185	SVC
Sara Lee – Narrow Fabric	160	MFG
Skyline Corp.	140	MFG
Angell Group/Bermuda Village	140	SVC
Funder America, Inc.	135	MFG
Wal-Mart	130	RET
Autumn Care of Mocksville	130	SVC
GATX Logistics, Inc.	120	MFG

MFG – manufacturing; GOVT – government; SVC – service; RET – retail

Source: Local Economic Development Office

**A Comparison of Out-Commuting
By County of Residence
1980-1990**

	1980		1990	
	% Employed In County of Residence	% Employed Outside County of Residence	% Employed In County of Residence	% Employed Outside County of Residence
<i>Davie</i>	47.1%	40.9%	56.2%	42.8%
Franklin	46.6%	44.7%	40.6%	57.9%
Lincoln	55.4%	37.2%	51.2%	47.6%
Stokes	32.1%	58.5%	29.3%	68.9%
Watauga	79.9%	11.6%	85.0%	13.5%
Yadkin	38.0%	48.1%	47.7%	50.8%
NC	75.7%	17.2%	79.8%	22.2%

Source: US Department of Commerce, Bureau of the Census

In 1990, the largest percentage of *out-commuters* were employed in:

	<u>Percentage</u>	<u>Number</u>
Forsyth County	61.4%	3,844
Rowan County	12.2%	763
Iredell County	5.5%	265
Guilford County	4.9%	347
Davidson County	4.2%	309

In 1990, the largest percentage of *in-commuters* were residents of :

	<u>Percentage</u>	<u>Number</u>
Forsyth County	33.5%	802
Yadkin County	18.7%	368
Rowan County	15.4%	448
Davidson County	10.3%	246
Iredell County	9.3%	223

Source: PTCOG Commuting Patterns

In 1992, 40% of the total land in Davie County was in farms. This compares with 46.4% in 1987 and 45.7% in 1982.

Major Agricultural Products Davie County: 1987-1992

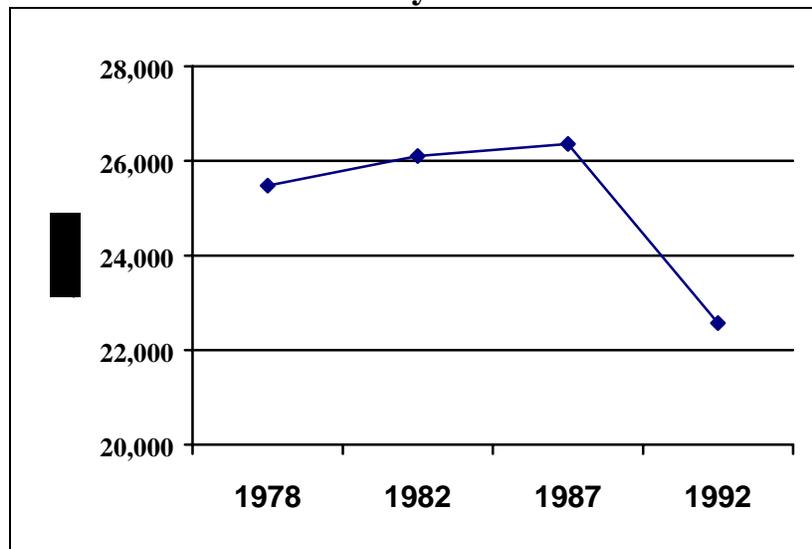
	1992 <u>Number/Acres</u>	1987 <u>Number/Acres</u>
Chickens	(D)*	196,000
Cattle	17,000	18,000
Hay	11,000	12,000
Hogs	6,800	7,200
Corn	3,000	4,000
Wheat	2,400	3,000
Soybeans	2,300	3,700
Tobacco	00	400
Sheep	70	50

*(D) – Data withheld to avoid disclosing data for individual farms.

Source: North Carolina Census of Agriculture, 1992

Although agricultural products continue to play an important role in the County's economy, the number of acres of harvested cropland started a decline between 1987 and 1992. There was a 14.4% decrease during this time.

Harvested Cropland Davie County: 1987-1992



Source: US Department of Commerce, Bureau of the Census, USA Counties 1996

In 1992 there was an average of 125 acres per farm. This is only a minimal decrease from 127 acres (-1.6%) per farm in 1987. Watauga saw the largest decrease in the size of farms (-4.2%). The number of farms declined 12% in the County during this same time period. Franklin saw the largest decrease (-17.6%) in the number of farms while having the largest increase (15.0%) in size per farm. Stokes had the smallest decrease (6.8%) in the number of farms.

When looking at agricultural data for the State as a whole, the number of farms has declined (-12.5% between 1987 and 1992); however, the average size of farms has increased (8.2% between 1987 and 1992).

A Comparison of Farms 1987-1992

	1987		1992		% Change	
	Number Of Farms	Average Size (Acres)	Number Of Farms	Average Size (Acres)	Number Of Farms	Average Size (Acres)
Davie	623	127	548	125	-12.0%	-1.6%
Franklin	666	187	549	215	-17.6%	15.0%
Lincoln	480	124	425	137	-11.5%	10.5%
Stokes	1,153	89	1,075	97	-6.8%	9.0%
Watauga	747	72	673	69	-9.9%	-4.2%
Yadkin	1,045	102	968	107	-7.4%	4.9%
NC	59,284	149	51,854	172	-12.5%	8.2%

Source: NC Agricultural Census, 1992

Between 1987 and 1992 the County saw a 22% decrease in the market value of agricultural products sold, the largest of all comparison counties. Except for Davie and Watauga, all counties experienced an increase. Overall, North Carolina saw a 36.5% increase.

**Market Value of
Agricultural Products Sold
1987-1992**

	1987	1992	% Change
Davie	\$ 17,661	\$ 13,772	-22.0%
Franklin	30,051	46,818	19.9%
Lincoln	13,407	14,110	5.2%
Stokes	16,366	27,586	68.6%
Watauga	8,496	7,557	-11.1%
Yadkin	32,575	43,133	32.4%
NC	3,541,419	4,834,218	36.5%

Source: NC Agricultural Census, 1992

3. DEVELOPMENT FACTORS

3.1 PHYSIOGRAPHY

Davie County is located in the northwestern part of North Carolina. It is bounded on the north by Yadkin County, on the west by Iredell County, and on the east and south by the Yadkin and South Yadkin Rivers. It has a total area of 170,797 acres, or about 267 square miles. If areas of water that are more than 40 acres in size are excluded, the total area of the County is 170,618. Davie County is in the Piedmont Physiographic Region and the average elevation is about 800 feet above sea level. Extremes range from about 1,010 feet, north of the community of Sheffield, near the Iredell County line, to about 630 feet near the confluence of the Yadkin and South Yadkin Rivers.

3.1.1 Hydrology

Davie County lies within the Yadkin River basin which is the second largest river basin in the State, covering 7,213 square miles. The basin is located primarily within the Piedmont physiographic region of the State but also drains the mountain and coastal plain regions. The basin originates on the eastern slopes of the Blue Ridge Mountains in Wilkes, Caldwell, and Surry Counties. A small portion of the Yadkin River headwaters originate in Virginia. It flows northeasterly for about 100 miles, then flows to the southeast until it joins the Uwharrie River to form the Pee Dee River. The Pee Dee River continues flowing southeasterly through South Carolina to the Atlantic Ocean. The North Carolina portion of the basin contains approximately 5,991 miles of freshwater streams and rivers.

Davie County, located in the northwestern Piedmont, is bordered on the east by the Yadkin River and on the south by the South Yadkin River. The Yadkin River is regulated by the W. Kerr Scott Reservoir located 5 miles upstream of Wilkesboro. The Reservoir has a minimum release of 81 million gallons per day. However, since completion of the Reservoir, the Yadkin's flow at Yadkin College has averaged over 2000 mgd. The South Yadkin River has its headwaters in Wilkes and Yadkin Counties and drains large watersheds in Iredell, Davie, and Rowan Counties before joining the Yadkin River at the southeastern border of Davie County. Near Mocksville, the South Yadkin has an average flow of approximately 226 mgd.

Surface waters in North Carolina are assigned a primary classification by the North Carolina Division of Water Quality (DWQ). All waters must at least meet the standards for Class C (fishable / swimmable) waters. The other primary classifications provide additional levels of protection for primary water contact recreation (Class B) and drinking water (Water Supply Classes I through V).

3.1.1.1 Watersheds

The following public water supply watersheds are located within Davie County:

Water Supply Watersheds

Watershed	Classification	River Basin
Bear Creek	WS-IV	Yadkin
Hunting Creek	WS-III	Yadkin
Cooleemee-Yadkin	WS-IV	Yadkin
Davie-Yadkin	WS-IV	Yadkin
Forsyth-Yadkin	WS-IV	Yadkin
Davidson-Yadkin	WS-IV	Yadkin
Salisbury-Yadkin	WS-IV	Yadkin

Watersheds are defined in nature by topography which may or may not conform to political boundaries. The North Carolina Division of Water Quality emphasizes the importance of organizing water quality improvement efforts on a watershed basis in order to handle water quality issues more effectively. The Water Supply Watershed Protection program enables local governments to collectively plan to protect their drinking water supplies in a comprehensive manner. The table below compares the percentage of land in water supply watersheds for Davie County and the adjacent counties.

Yadkin River Basin Water Supply Watershed Classification Analysis Counties Adjacent to Davie County

County	Water Supply Acreage	Total County Acreage	% of County in Water Supply Watershed
Davidson	156,754	362,600	43%
Davie	100,800	179,800	59%
Forsyth	88,749	264,900	34%
Yadkin	135,826	215,000	63%

Source: *Yadkin-Pee Dee River Basinwide Water Quality Management Plan, 1988*

All land is located within a watershed of one kind or another, but only twenty percent of North Carolina's land area is classified as being within water supply watersheds. The Water Supply Watershed Protection Rules, adopted in 1992, require that all local governments having land use jurisdiction within water supply watersheds adopt and implement water supply watershed protection ordinances, maps, and a management plan. Davie County applies these rules in its zoning ordinance by use of water supply watershed overlay zones. The rules specify development restrictions on each type of watershed (WS-1 through WS-V), however Davie County is only affected by watershed classifications WS-III and WS-IV. The water supply watershed overlay zones cover 100,800 acres within the County, presenting significant development constraints in the affected areas. The characteristics of the water supply watershed classifications are explained below.

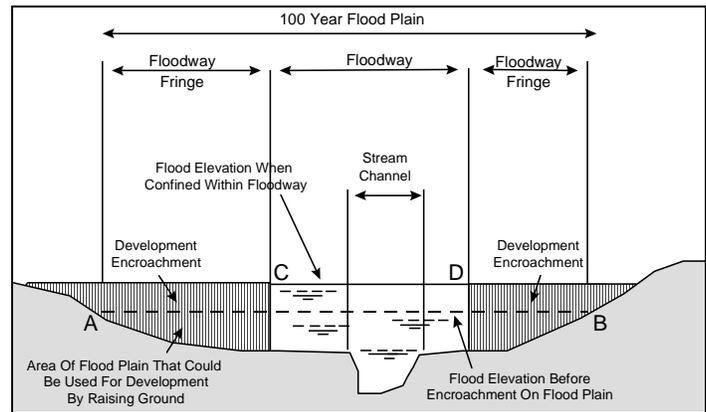
- Water Supply I (WS-I) - Waters used as sources of water supply for drinking, culinary, or food processing purposes for those users desiring maximum protection for their water supplies. WS-I waters are those within natural and undeveloped watersheds in public ownership with no permitted point source (wastewater) discharges.
- Water Supply II (WS-II) - Waters used as sources of water supply for drinking, culinary, or food processing purposes for those users desiring maximum protection for their water supply where a WS-I classification is not feasible. WS-II waters are generally in predominantly undeveloped watersheds.
- Water Supply III (WS-III) - Waters used as sources of water supply for drinking, culinary, or food processing purposes for those users where a more protective WS-I or II classification is not feasible. WS-III waters are generally in low to moderately developed watersheds.
- Water Supply IV (WS-IV) - Waters used as sources of water supply for drinking, culinary, or food processing purposes for those users where a WS-I, II or III classification is not feasible. WS-IV waters are generally in moderately to highly developed watersheds or protected areas.
- Water Supply V (WS-V) - Waters protected as water supplies which are generally upstream and draining to Class WS-IV waters or waters used by industry to supply their employees with drinking water or as waters formerly used as water supply. WS-V has no categorical restrictions on watershed development or wastewater discharges like other WS classifications and local governments are not required to adopt watershed protection ordinances.

3.1.1.2 Flood Prone Areas

The County participates in the National Flood Insurance Program and enforces a flood prevention ordinance within the unincorporated areas of the County. The National Flood Insurance Program (NFIP) Flood Insurance Study, last updated in December 1992, should be used by planners and developers to promote sound land use and floodplain development. The Study identified areas that are subject to 10 year, 50 year, 100 year, and 500 year flood events. Flood events refer to the probability that a flood will occur in any 10, 50, 100, or 500 year period. These events have a 10, 2, 1, and .02 percent chance of being equaled or exceeded during any year. Although the recurrence interval represents the long-term average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year.

Development encroachment on floodplains reduces the flood-carrying capacity, increases the flood heights and velocities, and increases flood hazards in areas beyond the development itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the National Flood Insurance Program, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 100 year floodplain is divided into a *floodway* and a *floodway fringe*. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 100 year flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1 foot, provided that hazardous velocities are not produced. The area between the floodway and the 100 year floodplain boundaries is called the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation of the 100 year flood more than 1 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure X.

**Figure X
Floodway Schematic**



Line AB is the flood elevation before encroachment.
Line CD is the flood elevation after encroachment.

The Town of Mocksville does not participate in the National Flood Insurance Program. The Town of Cooleemee and the Town of Bermuda Run participate through the County's program and ordinances.

3.1.2 Soils

Soil types and associations found in the County are identified in the Soil Survey of Davie County provided by the US Department of Commerce. This report classifies soils in accordance with their limitations or suitability for various types of activities. For the purposes of this Plan, the soils are evaluated on the basis of their suitability for farming and septic tank absorption fields. Davie County contains six major, generalized soil types. The Appendix to this report contains additional detailed information concerning these soil types.

Gaston-Mocksville-Mecklenburg soils are located in the northeastern, central, and southwestern parts of the County and consist of broad ridges and side slopes. The soils are generally well drained, however the slope and shrink-swell properties of the soil require attention when developing in these areas.

Cecil-Pacolet-Rion soils are located in the western, south-central, and northeastern parts of the County and consist of broad ridges and side slopes. Management concerns for development include a high clay content caused by excessive water erosion and erosion on the slopes.

Pacolet-Wedowee soils are found only in the eastern portion of the County along the Yadkin River. These soils are very deep and well drained with gentle slopes. Management concerns for urban development include erosion hazard when ground cover is removed and moderate permeability.

Enon-Mocksville soils are mainly found in the north-central part of the County with two smaller areas along the southern County line. The slope and stones in the surface layer in some areas limit the use of equipment. Because of the slope, erosion is a severe hazard and the shrink-swell properties may limit some types of development.

Mayodan soils are located in the northwestern part of the County and are characterized by steep slopes. Development concerns include slope, shrink-swell, and soil strength.

Chewacla-Riverview soils are located in long narrow segments along major streams and are on the lowest elevations in the County. These soils are somewhat poorly drained and are frequently flooded. Management concerns for urban development include soil wetness, flooding, and low strength.

3.1.2.1 Septic Tanks

Soil receptiveness to septic tanks can affect development patterns and density. In areas where septic tanks are not feasible, growth is halted until a public sewer system can service the area. In areas that can tolerate septic tanks, growth often occurs but is confined to low density development. Once public sewer services are provided to an area, the potential for high density development is present.

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Map 10 shows soil limitations that affect septic tank absorption fields in Davie County. All soils within the County are considered either “moderate” or “severe” in the limitations for septic tanks. The limitations are considered **moderate** if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations. The limitations are considered **severe** if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required. While Map 10 illustrates the dominant soil conditions, it does not eliminate the need for onsite investigation.

The ratings are based on soil properties, site features, and observed performance of the soils. Permeability, depth to a high water table, depth to bedrock, and flooding affect absorption of the effluent while large stones and bedrock interfere with installation. Unsatisfactory performance of septic tank absorption fields can affect public health by polluting ground water.

3.1.2.2 Prime Farmland

Prime farmland soils, as defined by the US Department of Agriculture, are soils that are best suited for production of food, feed, forage, fiber, and oilseed crops (see Map 11). Such soils have properties that favor the economic production of sustained high yields of crops and the soils need only to be treated and managed by acceptable farming methods. Prime farmland soils produce the highest yields with minimal expenditure of energy and economic resources and farming these soils results in the least damage to the environment. Some soils that have a high water table and all soils that are frequently flooded during the growing season qualify as prime farmland only in areas where these limitations have been overcome by drainage measures or flood control. Onsite evaluation is necessary to determine whether or not limitations have been overcome by corrective measures.

Prime farmland is one of several kinds of important farmland defined by the US Department of Agriculture and it is of major importance in meeting the Nation's short and long-range needs for food and fiber. Prime farmland is limited, and the USDA recognizes that government at local, State, and Federal levels, as well as individuals, must encourage and facilitate the wise use of our Nation's prime farmland.

Roughly 96,900 acres, or nearly 57 percent of Davie County, is prime farmland. The prime farmland soils in Davie County are:

AaA	Altavista fine sandy loam, 0 to 2 percent slopes, occasionally flooded
ApB	Appling sandy loam, 2 to 8 percent slopes
CeB2	Cecil sandy clay loam, 2 to 8 percent slopes, eroded
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded (only drained areas either protected from flooding or not frequently flooded during the season of use)
EnB	Enon fine sandy loam, 2 to 8 percent slopes
GnB2	Gaston clay loam, 2 to 8 percent slopes
GrB	Granville gravelly sandy loam, 2 to 8 percent slopes
MaB	Masada fine sandy loam, 2 to 6 percent slopes
MdB	Mayodan silt loam, 2 to 8 percent slopes
MnB2	Mayodan silty clay loam, 2 to 8 percent slopes, eroded
MrB2	Mecklenburg clay loam, 2 to 8 percent slopes, eroded
MsB	Mocksville sandy loam, 2 to 8 percent slopes
PcB2	Pacolet sandy clay loam, 2 to 8 percent slopes, eroded
RvA	Riverview loam, 0 to 2 percent slopes, frequently flooded (only areas protected from flooding or not frequently flooded during the season of use)
SeB	Sedgefield sandy loam, 1 to 6 percent slopes
WeB	Wedowee sandy loam, 2 to 8 percent slopes

3.1.3 Environmentally Sensitive Areas

3.1.3.1 Natural Heritage Inventories

In the Spring of 1990, Davie County contracted with the North Carolina Natural Heritage Foundation, Inc., to conduct an inventory of the most significant natural areas along the Yadkin River. The purpose of the inventory was to assist planning agencies and conservation groups in

identifying and protecting important natural areas and retaining the diversity of environmental resources in the Yadkin River corridor. The study identified four significant sites in the County.

Natural Area	Overall Significance Rank	Integrity Rank	Threat Status	Significant Plant Species	Significant Animal Species	Number of Natural Communities	High Quality Streams
Carter's Creek Bottomland Forest	2	2	1	yes	yes	1	no
1654 Forest	5	3	4	no	yes	2	yes
Point Road Forest	5	4	3	no	no	2	no
Cooleemee Plantation	2	2-3	3	yes	yes	3	yes

Significance Ranks

1. State significance. The sites of State significance possess outstanding natural features or community types which represent one of the best examples found within the State.
2. Regional significance. Sites of regional significance possess outstanding natural features, significant animal or plant species, and are one of the best examples within the Piedmont.
3. County high significance. Sites of County high significance are the most significant sites within the County. They usually contain significant plant or animal species and are an excellent representative of a particular natural community.
4. County medium significance. Sites of County medium significance may not contain significant plant or animal species but are good representatives of a particular community type or habitat type.
5. County general significance. Sites of County general significance are either small and isolated or do not contain significant animal or plant species. These sites do provide needed habitat or are of aesthetic appeal.

Site Integrity

1. Prime. The primary natural area and associated buffer is mature and/or provides a mixture of food sources, cover and breeding habitat. Linkage is high and the site is part of a large unbroken refuge in the corridor.
2. Very good. The primary natural area is mature but the associated buffer is mixed successional land. These sites are part of an unbroken or well linked corridor.
3. Good. The primary natural area is small but mature; associated buffer is of lesser quality owing to various human disturbances. Linkage is moderate to low.
4. Fair. The primary natural area is small, relatively mature or in latter stages of recovery. Linkage is low and associated buffer lands are broken into many small wood lots of poor quality.
5. Poor. The primary natural area is small and isolated with little buffer. Linkage is low or the site is enclosed by heavily developed lands.

Threat Status

1. Extreme. The possibility exists for high impact development such as industrial, or dense residential buildings or timber cutting.
2. Strong. There is a possibility for moderate impact such as diffuse residential building or logging road access.
3. Moderate. The possibility exists for point impacts such as roads, driveways, or power lines.
4. Slight. The site is undeveloped with no timber management plans, but is still considered as multiple use.
5. Negligible. The site is currently maintained as a natural area.

3.1.3.2 Other

The North Carolina Natural Heritage Program, as part of the Department of Environment and Natural Resources, Division of Parks and Recreation, inventories, catalogues, and facilitates protection of the rarest and most outstanding elements of the natural diversity of our State. These elements of natural diversity include those plants and animals which are so rare or the natural communities which are so significant that they merit special consideration as land use decisions are made.

The following table lists the elements of natural diversity (rare species, exemplary natural communities, and special animal habitats) known to occur in Davie County and their current status. The information provided cannot be considered a definitive record of natural heritage elements, and it should not be considered a substitute for field surveys.

Element Occurrence

Major Group	Scientific Name	Common Name	State Status	Federal Status	State Rank	Global Rank	County Status
Bird	Lanius ludovicianus ludovicianus	Loggerhead Shrike	SC		S3B,S3N	G5T5	Current
Fish	Moxostoma robustum	Robust Redhorse	SC	FSC	S1	G1	Historic
Dicot	Desmodium ochroleucum	Creamy Tick trefoil	C		S1?	G2G3	Historic
Dicot	Lotus helleri	Carolina Birdfoot trefoil	C	FSC	S3	G3	Historic
Dicot	Rhus michauxii	Michaux's Sumac	E SC	E	S2	G2	Current
Dicot	Silphium terebinthinaceum	Prairie Dock	C		S2	G4G5	Current
Monocot	Hexalectris spicata	Crested Coralroot	SR		S2	G4?	Historic
Bryophyte	Tortula papillosa	Papillose Tortula	SR		S1	G5	Historic
Natural Community	Dry Mesic Oak Hickory Forest				S5	G5	Current
Natural Community	Floodplain Pool				S2	G3?	Current
Natural Community	Mesic Mixed Hardwood Forest (Piedmont Subtype)				S4	G5T5	Current
Natural Community	Piedmont/Mountain Bottomland Forest				S3?	G5	Current

Federal Status

E - Endangered. A taxon in danger of extinction throughout all or a significant portion of its range.

FSC - Federal "Species of Concern" (Also called "Species at Risk"). Formerly defined as a taxon under consideration for which there is insufficient information to support listing; formerly designated as a Candidate 2 (C2) species. Currently, the US Fish and Wildlife Service does not recognize this as an official designation.

County Status

Current: The element was seen in the county within the last 20 years.

Obscure: The date the element was last observed in the county is uncertain.

Historic: The element was last observed in the county more than 20 years ago.

State Status

SC - Special Concern

C - Candidate

E - Endangered

SR - Significantly Rare

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). E and SC species are protected by state law (Plant Protection and Conservation Act, 1979). C and SR designations indicate rarity and the need for population monitoring and conservation action.

Animal statuses that indicate state protection (E and SC) are published in Endangered Wildlife of North Carolina, March 16, 1992, Nongame and Endangered Wildlife Program (NC Department of Environment and Natural Resources). SR is a Natural Heritage Program designation which indicates rarity and the need for population monitoring and conservation action.

3.2 EXISTING LAND USE

The accompanying map of existing land use within Davie County provides an excellent overview of current development patterns. The vast majority of the County consists of either undeveloped, agricultural, or low-density residential lands. Although there are some notable exceptions, most commercial, industrial or civic/institutional/recreational lands are concentrated in either a) the northeastern section of the County near the NC 801/ US 158 intersection, b) the Mocksville area, c) the Cooleemee area, or d) in the highway corridors linking these three nodes. Much of the northwestern, southwestern and southeastern quadrants of the County are essentially undeveloped.

3.3 HISTORICAL and CULTURAL RESOURCES

3.3.1 National Register of Historic Places

Historic properties within the County represent the character and heritage of the people that have lived in the area. The County, with assistance from the North Carolina State Historic Preservation Office, has identified the historic resources that it wishes to preserve for future generations. This list of resources is constantly growing and should be consulted when making development decisions that may affect these assets. Davie County has fourteen listings in the National Register of Historic Places including the Center Arbor, Cooleemee Plantation, Davie County Jail and Courthouse, and three historic districts in Mocksville. Cooleemee Plantation and the Hinton Rowan Helper House are also National Historic Landmarks.

The National Register was created by the National Historic Preservation Act of 1966 to recognize and protect properties of historic and cultural significance that warrant consideration in federal undertakings such as highway construction and urban renewal projects, and to provide incentives for local and private preservation initiatives.

National Register listing is primarily an honor, meaning that a property has been researched and evaluated according to established procedures and determined to be worthy of preservation for its historical value. The listing of a historic or archaeological property in the National Register does not obligate or restrict a private owner in any way unless the owner seeks a federal benefit such as a grant or tax credit. For a private owner, the chief practical benefit of National Register listing is eligibility for a 20% federal investment tax credit that can be claimed against the cost of a certified rehabilitation of an income-producing historic building.

National Register Properties	Location	Date listed in the National Register
Boxwood Lodge	Mocksville vicinity	06/02/95
Center Arbor	Center Community	09/03/91
Jesse Clement House	Mocksville	04/17/80
Cooleemee Plantation	Mocksville vicinity (NHL)	03/20/73
Davie County Courthouse	Mocksville	05/10/79
Davie County Jail	Mocksville	04/24/73
Downtown Mocksville Historic District	Mocksville	06/01/90
Foard-Tatum House	Cooleemee vicinity	05/26/94
Fulton United Methodist Church	Advance vicinity	11/15/79
Hinton Rowan Helper House	Mocksville vicinity (NHL)	02/17/74
McGuire-Setzer House	Mocksville vicinity	09/04/92
North Main Street Historic District	Mocksville	06/01/90
Salisbury Street Historic District	Mocksville	06/01/90
John Edward Belle Shutt House	Advance	05/16/96

The County does not have a local historic preservation commission to designate properties and districts. Local historic designation is an honor and allows communities to protect historic resources through its ordinances. Owners of locally designated landmarks are eligible to apply for an annual 50 percent property tax deferral as long as the property's important historic features are maintained. Local historic district designation may include an overlay or special use zone that applies to entire neighborhoods or other areas that include historic properties. Historic district zoning can help to stabilize property values by maintaining the neighborhood's character and it benefits property owners by protecting them from inappropriate changes made by other owners that might destroy the special qualities of the neighborhood.

Other properties and districts of local interest include:

- *Joppa Cemetery*, the burying ground of Daniel Boone's parents, Squire and Sarah Boone, which is still in use after 200 years.

3.3.2 Architectural Survey

A county-wide architectural survey was conducted in 1984-85 which led to the publication of "The Historic Architecture of Davie County: An Inventory Analysis and Documentary Catalogue" by Kirk Franklin Mohny, 1986. This work, published by the Davie County Historical and Genealogical Society, was a cooperative local-state project accomplished with grants and staff assistance from the Historic Preservation Office.

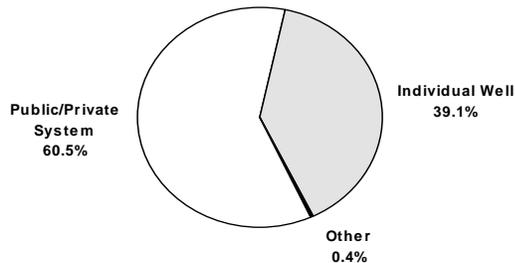
3.4 COMMUNITY FACILITIES and SERVICES

3.4.1 Water

According to the 1990 Census, almost 7,000 (61%) of Davie County's households get their water from a public system or private company. Nearly 2,000 (17%) of those households are within Cooleemee or Mocksville. Overall, 98% of residents living in municipalities are on a public or private system.

Slightly more than 4,500 households in the County (40%) received their water via an individual well. In the State approximately 65% of households were on a public water system, while 32% used a well.

Source of Water Davie County



Source: US Department of Commerce, Bureau of the Census, 1990

3.4.1.1 County Water Treatment Facilities and Capacities

Davie County operates one water treatment plant in Cooleemee and another on Sparks Road near Hillsdale. The County acquired the older Cooleemee plant from Burlington Industries. This water treatment plant, originally constructed in the 1920s, has been expanded and upgraded several times with a current plant capacity of 2.6 million gallons per day (mgd). The County's newer 3.0 mgd treatment plant, located on Sparks Road, was constructed in the early 1990s. This plant is located in the rapidly growing northeastern section of the County. The Sparks Road plant can be expanded to 6.0 mgd and the Cooleemee plant to 3.0 mgd.

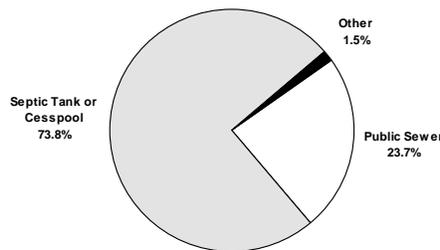
The County operates an extensive distribution system with over 400 miles of water mains. The bulk of the distribution system was constructed in the mid 1970s with a grant from the Farmers Home Administration. The County produced an average of 2.3 mgd of water per day in 1998.

A particular concern is that, while the system does a good job of distributing water, it is inadequate for fire protection. Few areas of the County can be served with adequate fire flows from the system. A *Water System Master Plan* prepared for the County in 1997 lists a number of water system improvements for the County system through the year 2020. These improvements should help with water system operations and fire protection.

3.4.2 Sewer

According to the 1990 Census, almost 3,000 households of Davie County were on the public sewer system. Another 8,500 utilize a septic tank. Slightly more than 89% of the housing units located in the County's municipalities were on the sewer system. Statewide, approximately 50% of households were on a public sewer system and another 49% had a septic tank for sewage disposal.

Sewage Disposal Davie County



3.4.2.1 County Wastewater Treatment Facilities and Capacities

The County (which contracts with the Town of Mocksville for operation) operates a wastewater treatment facility on the South Yadkin River near Cooleemee. The permitted capacity of the plant is 1.5 mgd and the average daily discharge in 1998 was .45 mgd. Only a small portion of the County in and near Cooleemee is served by this facility. The plant can be expanded to 3.0 mgd.

In addition, a public sewerage system is beginning to evolve in the northeastern section of Davie County and was allocated a treatment capacity of 550,000 gallons per day by the Utilities Division of the City of Winston-Salem in 1998. Wastewater is collected primarily from users in the Hillsdale area of Davie County as well as the I-40 rest area. As of May 1999, only about 20,000 gpd remained unallocated to users. The system has essentially been built by private interests, with line extensions taking place on a case-by-case basis. A portion of the system serving the I-40 rest area was paid for by NCDOT.

In addition, Davie County provides wastewater collection service to the I-40/ Farmington Road interchange and then treats this wastewater at the Dutchman Creek treatment plant owned by the Town of Mocksville.

3.4.2.2 National Pollution Discharge Elimination System (NPDES) Permits

The Federal Clean Water Act requires wastewater dischargers to have a permit establishing pollution limits, and specifying monitoring and reporting requirements. National Pollutant Discharge Elimination System (NPDES) permits regulate household and industrial wastes that are collected in sewers and treated at municipal wastewater treatment plants. Any person discharging pollutants from a point source (direct industrial discharge or municipal wastewater) into the waters of the United States needs a NPDES permit. Permits contain limits on what you can discharge, monitoring and reporting requirements, and other provisions to ensure that the discharge does not hurt water quality. In North Carolina, NPDES permits are issued by the Water Quality Section of the Division of Environmental Management. More than 200,000 sources are regulated by NPDES permits nationwide.

Permits regulate discharges with the goals of 1) protecting public health and aquatic life, and 2) assuring that every facility treats wastewater. When and if regulated facilities fail to comply with the provisions of their permits, they may be subject to enforcement actions. EPA uses a variety of techniques to monitor permittees' compliance status, including on-site inspections and review of data submitted by permittees.

National Pollution Discharge Elimination System (NPDES) Permits Issued in Davie County

Facility	Site Address	Site City	Type	Owner	Expires	Type of Discharge	Stream	River
Davie County BOE - Shady Grove	3179 Cornatzer Road	Advance	Minor	Non-Municipal	6/30/99	Domestic - Schools	Carters Creek	Yadkin-Pee Dee
Bermuda Center Sanitation District WWTP		Advance	Minor	Non-Municipal	5/31/99	Domestic -Subdivisions, Domestic - Condominiums, Domestic - Restaurants, Laundry Waste	Yadkin River	Yadkin-Pee Dee
Mocksville - Town WWTP	295 Garwood Road	Mocksville	Minor	Municipal	6/30/99	Domestic - Municipal, Wood Products, Wood Treatment	Dutchman Creek	Yadkin-Pee Dee
NC DOT - Davie County Rest Area	I-40 - Davie County	Redland	Minor	Non-Municipal	6/30/99	Domestic - Lodging	Sugar Creek	Yadkin-Pee Dee
Davie County BOE - Pinebrook	Route 2, Box 468	Mocksville	Minor	Non-Municipal	6/30/99	Domestic - Schools	Cedar Creek	Yadkin-Pee Dee
Davie County BOE - William R Davie	3437 U.S. Highway 601 North	Mocksville	Minor	Non-Municipal	6/30/99	Domestic - Schools	Greasy Creek	Yadkin-Pee Dee
Davie County WTR South Cooleemee WWTP	NC Highway 801 South	Cooleemee	Major	Municipal	7/31/99	Domestic - Municipal, Textiles	South Yadkin River	Yadkin-Pee Dee
Mocksville - Town - Bear Creek WWTP	452 Buck Seaford Road	Mocksville	Minor	Municipal	7/31/99	Domestic - Municipal	Bear Creek	Yadkin-Pee Dee
Davie County - Unity-Sparks Road WTP	728 Sparks Road	Mocksville	Minor	Non-Municipal	5/31/99	Water Plants	Yadkin River	Yadkin-Pee Dee
Davie County Law Enforcement	140 South Main Street	Mocksville	Minor	Non-Municipal	6/30/99	Groundwater Remediation	Leonard Creek	Yadkin-Pee Dee

Source: NC Division of Water Quality, January 1999.

3.4.2.3 Other

In general, water pollution comes from one of two sources, point sources and non-point sources. Point source pollution comes from readily identifiable sources, such as a pipe draining from an industrial plant or sewage treatment facility. This type of pollution is relatively easy to track down and control. Nonpoint source (NPS) pollution is commonly described as pollution contained in stormwater runoff from land surfaces (parking lots, agricultural land, etc.). The pollution can impact surface waters as well as groundwater and comes from diffuse sources, in contrast to "point" source pollution which is discharged through a pipe.

The following facilities hold a "point source" permit with the NC Division of Water Quality:

- Vulcan Materials Company
- Larco-Davie Sand Plant
- Ingersoll-Rand Company
- Eurodrawer, Inc.
- Seaford Lumber Company
- Skyline Corporation
- Sheffield Lumber & Pallett
- Funder America
- NC NAT. GD.
- Concrete Supply Company - Mocksville
- Lexington Furniture
- Baker Furniture Company - Milling Road
- Thomson Crown Wood Products

3.4.3 Schools

Davie County has one school system which employs roughly 650 people. The County is also home to a satellite campus of Davidson County Community College. Over 95% of the school aged population is enrolled in the public school system while the remainder attend private schools elsewhere. In 1995, there were 4,832 children enrolled in the Davie County School System. The average daily membership (ADM) in the School System is projected to rise from 5,566 in 1999 to 6,073 in 2002. During the 1995-96 school year, expenditures for education in the County totaled slightly more than \$23,000,000 (includes all funding sources). During this same time period the County's per pupil expenses (including local and State supplements) were \$4,829, which are slightly less than the State average of \$4,930.

The dropout rate in Davie County is 2.40% which is one of the lowest in North Carolina. The State average dropout rate is 3.45% (both figures are from the FY 1995-96 school year).

Average Daily Membership at Davie County Schools 1994-1998

YEAR	Cooleemee Elementary	Davie County HS	Mocksville Elementary	Central Davie Elementary	North Davie Middle	Pinebrook Elementary	Shady Grove Elementary	South Davie Middle	William R. Davie Elementary	TOTAL
1994-95	387	1256	466	257	628	440	491	520	218	4663
1995-96	427	1197	478	249	634	450	543	585	217	4780
1996-97	441	1272	535	232	623	466	563	583	245	4960
1997-98	462	1317	537	232	641	491	600	607	272	5159
Percent Growth	16.23	4.63	13.22	-10.78	2.03	10.39	18.17	14.33	19.85	9.61

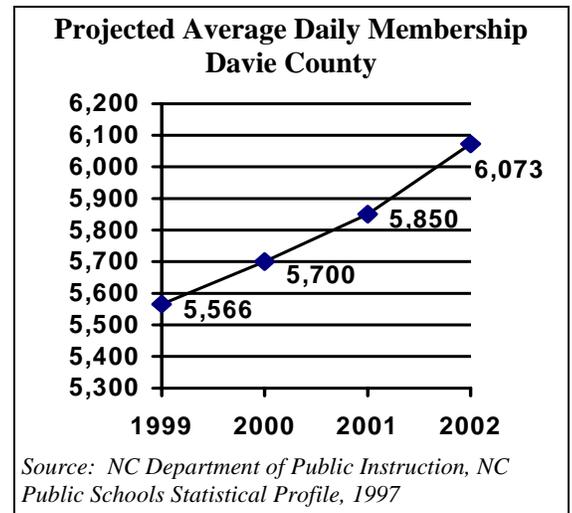
Source: Davie County School System, 1999

The Davie Campus of Davidson County Community College opened in 1994. Enrollment during the 1996-97 school year totaled 5,015 students with most enrolled in a continuing education program. A second campus building was completed in early 1997, which will allow for the addition of several new certificate programs in vocational and technical areas. A third campus building, the Helen C. Gantt Child Development Center is currently under construction.

The Davie County School System has six elementary schools, two middle schools, and one high school. The County is divided into districts based on elementary school enrollment and middle school enrollment. All County students attend Davie County High School which is located in Mocksville (see Map 15 Elementary School Districts). Over sixty percent of the school facilities were built during the baby boom years between 1950 and 1970. In most cases the buildings have been well maintained and are still functioning at an appropriate level. Many of the older schools have newer buildings on campus or have received renovations through the years.

Since the FY 94-95 school year, average daily membership has increased and will continue to do so into the next century (see Projected Average Daily Membership table). The result of this increase has been overcrowding in some schools and the placement of mobile classrooms at various school locations. There are 17 mobile classrooms currently in use throughout the school district (1998-1999 school year). There are 11 units at elementary schools and the System expects to add 2 or 3 additional units at elementary schools for the 1999-2000 school year. There are 3 mobile units at the middle schools and 3 at the high school.

Every five years the Davie County School System embarks on a school facilities plan that addresses the needs of each school and the School System as a whole. Some of the most pressing facility needs include construction of a new elementary school, replacement of old buildings, and planning for a new high school. Based on current overcrowding and major residential developments now underway, the school district has begun construction for a new elementary school, Cornatzer Elementary which will house grades K-5 and will relieve some of the pressure on other elementary schools. The new elementary school will be located in the southeast portion of the County on Cornatzer Road and is expected to open for the 2000 school year. Once the new school is complete, one of the older buildings at Central Davie Elementary will be torn down and replaced. The number of elementary school students enrolled in Davie County schools is expected to increase 19% between 1997-2002. As this population bubble ages, the County will need to look at the possibility of locating and constructing an additional high school and perhaps middle schools.



The School System defines each school as a community school, meaning that the educational facilities are available for community use. There are many examples of community use within the System including use of the schools for youth basketball games and football games. The School System has a shared facilities agreement with the YMCA to build a new walking track

and soccer field and has donated the North Davie athletic complex to the County with a lifetime agreement for school use. In addition, an auditorium at Davie High School has been identified as a need for the school and the County. A 1,500 seat auditorium would be used for education as well as student assemblies, band concerts, drama productions, NC Symphony performances, community meetings and functions, and community college functions.

Davie County schools have one of the most up to date technology systems in the State. Each classroom in the School System has instant Internet access through a fiber optic network installed by a local cable company.

3.4.4 Transportation

3.4.4.1 Highway

Currently, there are 501 miles of state maintained roads in Davie County. 77% of this mileage (388 miles) consists of secondary roads and 23% (113 miles) is in primary roads. There are 18.6 miles of four lane roads in the County and currently 13% of the County's roads remain unpaved.

There are 113 miles of primary roads running through the County. Primary roads and their 1996 average daily traffic counts include:

I-40

39,200 – near Forsyth County Border
25,600 – near Iredell County Border
24,200 – near US 601
29,300 – near Baltimore Road

US 64

7,500 – near Davidson County Border
2,000 – near Iredell County Border

US 601

3,900 – near Rowan County Border
3,200 – near Yadkin County Border
5,800 – near I-40

US 158

4,300 – between Forsyth County Border & US 601
7,900 – ½ mile west of NC 801(1998)
14,000 – 1 mile east of NC 801(1998)

NC 801

12,000 – south of US 158
1,500 – near US 601N
1,800 – near US 601S
1,700 – near US 64

Source: NC Department of Transportation, 1996

Also, I-85 is only a 25-minute drive away through Rowan County and I-77 is a 20-minute drive away through Iredell County.

According to the *1998-2004 Transportation Improvement Program* (North Carolina Department of Transportation) transportation projects identified as a future need or planned projects include:

- I-40 -- pavement rehabilitation and construction of fifth and sixth lanes west of NC 801 West (exit 180) to west of state road 1122 (*part under construction*)
- I-40 -- pavement and bridge rehabilitation beginning at state road 2166 in Iredell County to east of state road 1143 in Davie County (*IFN*)*
- I-40 -- pavement rehabilitation from state road 1436 (mile post 175) to south of NC 801 (mile post 180) (*IFN*)*
- US 64 – widen roadway to multi-lane from US 601 south of Mocksville to US 52 in Lexington and upgrade interchange with US 52 (*IFN*)*
- US 601 – widen roadway to five lanes from US 64 to I-40 (*IFN*)*
- NC 801 – upgrade from state road 1650 to state road 1624 and multi-lane roadway from state road 1624 to US 158 (*IFN*)*
- New Route – construct a two-lane bypass of Mocksville on four-lane right of way from US 64 east of Mocksville to US 601 west of Mocksville

**(IFN) – Identified Future Need*

Other projects under construction, planned, or identified as a future need by the North Carolina Department of Transportation include:

- Bridge replacements at the Yadkin River (US 158), Bear Creek (SR 1139), and Carters Creek (SR 1656)
- Rest area sewer line connection to county system
- Rest area building and grounds renovations to comply with ADA compliance
- Railroad safety improvements near Advance at Norfolk Southern Railway

3.4.4.2 Air

Davie County is home to two airports: Twin Lakes Airport and Sugar Valley Airport. Both are privately owned and publicly used. The table below lists surrounding airports and their characteristics.

Air Transportation

Name	Location	Number Runways	Runway Length (feet)	Type of Ownership	Type of Users
Twin Lakes	Davie	1	3,000	Private	Public
Sugar Valley	Davie	1	2,400	Private	Public
Smith Reynolds	Forsyth	2	6,654	Public	Public
Greensboro PTI	Guilford	2	10,000 6,380	Public	Public
Charlotte/ Douglas Intern.	Mecklenburg	3	8,846 10,000 7,501	Public	Public
Davidson County	Davidson	1	3,300	Public	Private
Hiatt	Davidson	2	2,200 1,160	Private	Public
Rowan County	Rowan	1	5,500	Private	Public
Gold Hill	Rowan	1	3,000	Private	Public
Statesville Municipal	Iredell	2	5,000 3,920	Private	Public
Lake Norman	Iredell	1	3,000	Private	Public

3.4.4.3 Rail and Other

Common Freight Carriers: There are approximately 27 common freight carriers that serve the County.

Rail Service: Rail service to the County is provided by Norfolk Southern Railroad.

3.4.5 Fire Protection

Davie County is served by a comprehensive network of fire departments, most of which rely on volunteers for staffing.

DAVIE COUNTY FIRE DISTRICTS	RATING
Advance	6/9S
Center	5/9S
Cooleemee	6/9S
Cornatzer-Dulin	6/9S
County Line	6/9S
Farmington	5/9S
Fork	4/9S
Jerusalem	6/9S
Mocksville	5
Mocksville Rural	5/9S
Sheffield-CalahaIn	5/9S
Smith Grove	5/9S
William R. Davie	9S
OUT OF COUNTY DEPTS. SERVING DAVIE	
Clemmons (Forsyth)	6
Courtney (Yadkin)	9S
Lone Hickory (Yadkin)	9S
Scotch-Irish (Rowan)	9

(Source: Davie Fire Marshal, 7/99)

3.4.6 Electricity/Telephone/Natural Gas

Electricity is provided by Duke Energy and Energy United Electric Membership Corporation. Energy United EMC serves the entire County with the following exceptions: the Town of Mocksville, Bermuda Run, the Town of Cooleemee (and sections surrounding Cooleemee), Farmington, the Fork-Bixby area, and portions along US Highway 64 West. According to Energy United, they provide service to more than 50% of the population across 75% of the County's area. County telephone services are provided by Sprint/Centel in the Town of Mocksville and the remainder of the County receives service from Yadkin Valley Telephone Membership Corporation. Natural gas is provided by Piedmont Natural Gas.

3.4.7 Solid Waste

Waste Collection

There were slightly more than 25,000 tons of waste collected by Davie Sanitation during 1996-97. Of this, 19% is estimated to have come from residents, while the majority, 58% is estimated to have been from commercial and industrial facilities. The remainder, 23%, is from construction and demolition sites.

Recycling

Throughout the rural areas of the County there are drop-off sites in operation provided by a mobile recycling truck. The municipal areas, along with the County, are served by the "blue bag" curbside system every two weeks. This service is provided by the County. Approximately 30% of the County's households participate in recycling.

4. CURRENT DEVELOPMENT POLICIES

Davie County has three major ordinances that regulate the development of land; the zoning ordinance, subdivision regulations, and the watershed ordinance.

4.1 ZONING

Davie County enforces zoning under Chapter 155 of its local code of ordinances.

From the attention given the subject by legal writers and in court decisions, it is clear that confusion exists as to the distinction between "planning" and "zoning." In reality, zoning is one of many legal and administrative devices by which plans may be implemented. Most of the confusion has arisen out of the fact that many jurisdictions have adopted zoning ordinances before embarking on full-scale planning.

Zoning is essentially a means of insuring that the land uses of a community are properly situated in relation to one another, providing adequate space for each type of development. It allows the control of development density in each area so that property can be adequately serviced by such governmental facilities as the street, school, recreation, and utility systems. This directs new growth into appropriate areas and protects existing property by requiring that development afford adequate light, air and privacy for persons living and working within the community.

Zoning is probably the single most commonly used legal device available for implementing the land-use plan of a community. Zoning may be defined as the division of a county (or other governmental unit) into districts, and the regulation within those districts of:

1. The height and bulk of buildings and other structures;
2. The area of a lot which may be occupied and the size of required open spaces;
3. The density of population;
4. The use of buildings and land for trade, industry, residence or other purposes.

Of major importance for the individual citizen is the part zoning plays in stabilizing and preserving property values. It affects the taxation of property as an element of value to be considered in assessment. Ordinarily, zoning is only indirectly concerned with achieving aesthetic ends, although there has been an increasing tendency to include within zoning ordinances provisions which are most solidly based on "general welfare" concepts.

Zoning has nothing to do with the materials and manner of construction of a building; these are covered by the building code. Also, the zoning ordinance may not be properly used to set minimum costs of permitted structures, and it commonly does not control their appearance. These matters are ordinarily controlled by private restrictive covenants contained in the deeds to property. There are, however, some examples, particularly in relation to historic buildings and areas, where zoning has been and is being used effectively. There appears to be a trend toward a greater acceptance of aesthetic control as a proper function of the zoning ordinance.

The zoning ordinance does not regulate the design of streets, the installation of utilities, the reservation or dedication of parks, street rights-of-way, and school sites, and related matters. These are controlled by subdivision regulations and possibly by an official map preserving the beds of proposed streets against encroachment. The zoning ordinance should, however, be carefully coordinated with these and other control devices. It is becoming more common for the provisions of many of these separate ordinances to be combined into a single comprehensive ordinance, usually called a land development control ordinance.

The North Carolina General Statutes enable a county to zone less than its entire jurisdiction if it chooses. This option is not available to municipalities. Refer to G.S. 153A-340 through 348 for additional information relating to county level zoning.

Davie County was granted the authority to enact zoning legislation by General Statute §153A-340 which exempts bona fide farms from county zoning regulation (this does not apply to farm lands used for non-farm purposes). This is important to note because as more suburban uses are developed out into previously rural areas of the County, conflicts can occur between existing farms and those suburban-type developments. These conflicts can include noise, dust, odors, appearances, and other similar effects commonly produced by farming activities.

Davie County established county-wide zoning in the early 1970's. This was fairly unique for a rural, relatively unpopulated county in North Carolina at that time. Over the years, the zoning ordinance has changed to incorporate newer principles of land use regulation such as overlay zoning, special use zoning and planned unit development.

If a property is zoned properly for its intended use, then the needed permits can simply be obtained through application and the payment of any required fees. If a rezoning is required, the approval of the County Board of Commissioners must be given. This process can take anywhere from a few weeks to a few months, depending on the magnitude, complexity and any controversy generated by the proposal.

Davie County is divided into the following zoning districts: (The number refers to the section of the Zoning Ordinance containing the provisions for each district...the Zoning Ordinance should be referred to for more detailed information, such as the specific uses allowed in each district.)

155.140	RA	Residential Agriculture
155.141	R-20	Residential
155.142	R-12	Residential-Suburban
155.143	R-8	Residential-Multiple Dwelling
155.144	R-M	Residential Manufactured Home
155.145	H-B	Highway Business
155.146	C-S	Community Shopping
155.147	I	Industrial (includes subgroups I-1 through I-4)

Most of Davie County is zoned either strictly residential or residential and agricultural. Some limited commercial and industrial districts are sparsely located throughout the County. Because

of this, as individual property owners seek to use their property for something other than a residential use, a change to a commercial or industrial district is required. This process has been designed over the years so that everyone in the area of the proposed change has the opportunity to voice their support or opposition to that change.

To further limit and control how property is developed, special use zoning was added to the ordinance in 1985. This gives the legislative body (the Board of County Commissioners) the authority to limit such things as landscaping, location of buildings on the property, access to the property, screening from adjoining uses, timing of the development, or any other site specific conditions that will address the purposes of the ordinance. Since the addition of special use zoning to the ordinance, most land use changes have been put in place by special districts. There are many advantages to this in terms of protection of the area, insuring compatibility between various adjoining properties, protecting property values, providing a sense of security to the neighboring property owners, while allowing some limited commercial use of otherwise residential property. The disadvantages to this type of process can be difficulty in administering special rules and conditions particular to many unique districts, inconsistency in the process, discrimination between property owners, etc.

It is important to note that a request to change the zoning ordinance, whether by application for a general district or a special district, is a request to change the basic plan for the area where the property is located. For example, if someone applies to change the zoning from residential to commercial to allow a used car lot, regardless of the special conditions on the site, the basic issue is still whether a business should be located on that property and does it meet the general purposes of the ordinance. Such decisions or changes to the plan may not individually have a large impact, but taken collectively may indicate the need to revise or modify the plan to meet continuing demands for growth and development.

4.1.1 Overlay Zoning

In response to concerns that additional zoning protection was needed for the rapidly growing northeastern section of the County, an overlay zoning district was developed for that area and made part of the Zoning Ordinance in 1992. This zone, which complements rather than replaces the underlying zoning of the area, focuses primarily on design features such as landscaping, parking, lighting, signage, curb cuts, etc. for non-residential land uses.

4.2 SUBDIVISION REGULATIONS

Davie County enforces subdivision regulations under Chapter 154 of its local code of ordinances.

Subdivision regulations are locally-adopted laws governing the process of converting raw land into building sites. They normally accomplish this through plat approval procedures, under which a developer is not permitted to make improvements or to divide and sell his land until the governing body or planning board has approved a plat (map) of the proposed design of his subdivision. The approval or disapproval of the local government is based upon compliance or noncompliance of the proposal with development standards set forth in the subdivision

regulations. In the event that the developer attempts to record an unapproved plat with the local registry of deeds or to sell lots by reference to such a plat, he may be subject to various civil and criminal penalties.

Subdivision regulations may serve a wide range of purposes. To the health officer, for example, they are a means of insuring that a new residential development has a safe water supply and sewage disposal system and that they are properly drained. To the tax official they are a step toward securing adequate records of land titles. To the school or parks official they are a way to preserve or secure the school sites and recreation areas needed to serve the people coming into the neighborhood. To the lot purchaser they are an assurance that he will receive a buildable, properly oriented, well-drained lot, provided with adequate facilities to meet his day-to-day needs, in a subdivision whose value will hold up over the years.

Subdivision regulations enable the County to coordinate the otherwise unrelated plans of a great many individual developers, and in the process to assure that provision is made for such major elements of the land development plan as rights-of-way for major thoroughfares, parks, school sites, major water lines and sewer outfalls, and so forth. They also enable the County to control the internal design of each new subdivision so that its pattern of streets, lots and other facilities will be safe, pleasant, and economical to maintain.

From the standpoint of the local governing board, subdivision regulations may be thought of as having two major objectives. First, these officials are interested in the design aspects of new subdivisions, as are the other officials mentioned. But secondly, they are also interested in allocating the costs of certain improvements most equitably between the residents of the immediate area and the taxpayers of the county as a whole. When subdivision regulations require a developer to dedicate land to the public or to install utilities or to build streets, they represent a judgment that the particular improvements involved are (1) necessary in a contemporary environment and (2) predominantly of special benefit to the people who will buy lots from him (presumably at a price sufficient to cover the cost of these improvements) rather than of general benefit to the taxpayers of the county as a whole. The North Carolina General Statutes allow a county to enforce subdivision regulations for limited sections of its territorial jurisdiction if it also zones those areas. Otherwise, the regulations must be enforced for its entire jurisdiction. Refer to G.S. 153A-330 through 335 for additional information relating to County level subdivision regulations.

4.3 WATERSHED REGULATIONS

Watershed regulations limit the development density of land in an effort to reduce the degradation of drinking water supplies. The location of the seven watersheds create significant development constraints for the County (see Map 6). For example, within the WS-III watershed overlay district, single-family residential development may not exceed two dwelling units per acre (as defined on a project by project basis), no residential lot can be less than ½ an acre (except in an approved cluster development), and when public sewer is not available, the minimum lot size is 30,000 square feet. Other residential developments (multi-family) and non-residential developments can not exceed twenty-four percent (24%) built-upon area except that

10% of the balance of the watershed may be developed for non-residential uses up to a 70% built-upon area.

With the 10/70 Provision, a local government can use 10% of the non-critical area of each watershed within its jurisdiction for new development and expansions to existing development up to a 70% built-upon area limit -- without stormwater control -- if using the low-density option throughout the remainder of the watershed. Local governments "swap" publicly-owned, flood-prone, or otherwise undevelopable land in order to target growth at a higher density for elsewhere within the watershed. The County, for example, could potentially swap "watershed development rights" between high growth and low growth areas in the County. The following table outlines the development restrictions that are applicable for each type of water supply watershed.

Water Supply Protection Rules Summary

Watershed Classification	Allowable Dischargers	Allowable Development: High Density	Allowable Development: Low Density	Stormwater Controls: Hi Density	10/70 Provision	Residuals Application	Landfills	Agriculture BMPs
WS-I Watershed	None	None	None	NA	None	None	None	Required (5)
WS-II Critical Area	General Permits	1du/2ac or 6% built upon (2)	6-24% built upon area	Control the 1" storm	Not allowed	No new sites	No new landfills	Required (5)
WS-II Balance of Watershed	General Permits	1du/ac or 12% built upon area	12-30% built upon area	Control the 1" storm	Allowed	Allowed	No new discharging landfills	Not Required (5)
WS-III Critical Area	General Permits	1du/ac or 12% built upon area	12-30% built upon area	Control the 1" storm	Not Allowed	No new sites	No new landfills	Required (5)
WS-III Balance of Watershed	Domestic & Non-process Industrial	2du/ac or 24% built upon area	24-50% built upon area	Control the 1" storm	Allowed	Allowed	No new discharging landfills	Not Required (5)
WS-IV Critical Area	Domestic & Industrial (1)	2du/ac or 24% built upon (3)	24-50% built upon area (3)	Control the 1" storm	Not Allowed	No new sites	No new landfills	Required (5)
WS-IV Protected Area	Domestic & Industrial	2du/ac or 24% built upon (3,4)	24-70% built upon area (3,4)	Control the 1" storm	Allowed	Allowed	Allowed	Not Required (5)
WS-V Watershed or River Segment	Domestic & Industrial	No categorical restrictions other than instream water quality standards applicable to all surface water supply waters						

- 1) New industrial process wastewater discharges are allowed but will require additional permits.
- 2) Residential development may apply dwelling units per acre or use percent built-upon surface area. Non-residential development must use percent built-upon surface area.
- 3) Applies only to projects requiring a Sedimentation/Erosion Control Permit.
- 4) One-third acre lot or 36% built-upon area is allowed for projects without curb and gutter systems.
- 5) In WS-I watersheds and critical areas of WS-II, WS-III, and WS-IV watersheds, agricultural operations must maintain a ten-foot vegetated buffer or equivalent control along all perennial streams. Permitted animal operations are allowed in all water supply watersheds.

4.4 CAPITAL IMPROVEMENTS PROGRAMMING

Capital planning and budgeting helps a community provide for the orderly replacement and development of public facilities. To maintain the quality and efficiency of public services such as water and sewer systems, public transportation, schools, or recreation, the facilities involved must be replaced or upgraded periodically. Moreover, new buildings or equipment are often needed to meet the growth in service demand. Both the replacement and new capital needs must be taken care of within the limited capital resources of the community. A capital planning and budget process helps achieve this purpose -- not by lessening the need for new or replacement facilities or by increasing the resources to meet capital needs, but by setting priorities to meet the most pressing needs first, by submitting projects to several analytic stages to eliminate poor or very low-priority projects, by more careful scheduling to lower somewhat the costs on approved

projects, and by providing revenue projections to help a community avoid overextending itself financially in meeting capital needs.

The size or magnitude of capital outlays, their effect on the basic features or development of a community, the fact that capital decisions once implemented are irreversible for a long time, the frequent reliance on bonds to finance capital projects, and the need for orderly replacement and development of capital facilities all help to explain why capital planning and budgeting can be an important decision and management process for local government.

5. FUTURE DEVELOPMENT POLICIES

5.1 GENERAL GOALS

- Seek a realistic balance among the many diverse interests in the County, and especially between economic and environmental concerns
- Maintain a positive identity for the County and its individual communities
- Equip leaders to make good development decisions
- Preserve open space
- Moderate population growth
- Maintain rural character
- Maintain quality of life
- Maintain county cohesiveness
- Encourage high quality growth
- Development should pay more of its way
- Offer more housing choices, including affordable housing
- Limit uncontrolled commercial expansion (strip development, etc.)
- Promote flexibility in development regulations
- Develop a sense of vision for the overall future of the County
- Provide a forum for communications with the citizens of the County

5.2 VISION STATEMENT

In the year 2020, Davie County will continue to enjoy a thriving economy. Traditional manufacturing activity in the County, such as textiles and furniture, will have waned considerably, but the County will have capitalized on its strategic location within the Piedmont Triad by becoming a leading distribution center as well as by revitalizing its industrial base. The County's high quality of life will have attracted many "knowledge" workers who either operate technology based industries within the County, or from their homes, or who commute to leading employment centers within the area such as Charlotte or the Triad, or who telecommute to a vast range of activities throughout the world. Industrial parks developed at the turn of the millennium will have been filled with high quality industry. In the year 2020, overall population will have risen approximately 44% from that of 1997, or to about 45,000.

The County's commitment to quality growth, evidenced by a sound land development planning program undertaken at the turn of the millennium, will have assisted in developing communities that are livable and which are desired by consumers. These communities will be more densely settled and more compact than the development that the County experienced in the latter half of the 20th century, but because of proper planning, residents will enjoy a greater quality of life. Patterns of unrestrained sprawl and unnecessary consumption of undeveloped land that characterized much of the region in the last quarter of the century will have been curbed. Residents will enjoy greater access to public open space, a less cluttered and more attractive landscape, less dependence on the automobile and greater access to alternative transportation, a more pedestrian-friendly community, more meaningful interaction with neighbors, and more

convenient neighborhood amenities such as shops and public facilities, etc. The County's prime farmland will have been identified and appropriate measures taken to preserve such land for future generations while providing economic benefits for landowners through measures such as conservation easements.

The County will have been able to provide a high level of public facilities at a reasonable cost by virtue of having incorporated innovative provisions into its growth management policies. For example, public schools will be funded partially through user fees, major water and sewer lines will be installed by developers as development occurs, and installation of amenities such as sidewalks or public open space will be required conditions of large scale development. Such policies will have the effect of enabling new growth to better pay its way while reducing financial burdens on the public at large.

Realizing that not everyone in the County will have participated in a high level of economic progress, appropriate measures will be taken to ensure that such residents will have access to quality affordable housing. Through proper planning, neighborhoods will be developed in which infrastructure costs have been minimized and housing and employment choices have been maximized.

5.3 STRATEGIES

Three major goals of this land development plan are to balance: 1) individual property rights with the public interest, 2) the free market economic system with appropriate public intervention, and 3) economic development with environmental protection. If a totally unrestrained free market system and individual development choices were yielding the types of growth that Davie County has expressed a desire to attain, there would be little need for land development planning. This appears, however, not to be the case. A collection of individual decisions are gradually generating a land use pattern that, left unmanaged, will overtake the rural landscape, place additional burdens on public services, and erode the quality of life that originally attracted new residents and businesses.

It is therefore appropriate for the County to have conscious strategies for managing growth and delivering the type of growth that is consistent with the County's overall goals. These strategies need not always rely on heavy-handed government regulation. For example, if protection of open space is a general goal for the County, several approaches may be used to achieve this goal. One would be regulation through the zoning ordinance to essentially require reservation or dedication of open space as development occurs. An equally effective approach might be to structure a system of incentives that encourage a developer to reserve open space by coupling clustering techniques with density bonuses in the County's development regulations. Another alternative might be to educate landowners concerning the tax benefits of conservation easements. It may be advantageous to "think outside of the box" by assisting small farmers in gaining access to better technology, which would enable them to make a profit and thereby preserve working farms. Finally, the role of the County in extending infrastructure and creating development pressure on vacant land cannot be overlooked. Therefore, a variety of strategies (not limited merely to

government regulation) can influence land development, may be effective, and should be explored.

The following are some strategies that the County may wish to employ:

5.3.1 Overall Population Growth

Davie County has experienced consistent population growth over the past several decades. The rate of population growth, especially in the northeastern section of the County, has been quite rapid for a basically rural county. It is recommended that the County evaluate this trend and undertake policies that act to moderate the overall rate of population growth. This can best be accomplished not by erecting obstacles to growth, but instead by enacting policies to ensure that residential development that does occur within the County is of high quality and contributes to, rather than detracts from, the community. The bulk of the remaining policies and strategies outlined in this section are consistent with this principle. By setting a high standard for development, growth is less likely to occur at a pace that will outstrip the infrastructure and resources of the County. Growth that does occur will, as a result, be more likely to have a positive impact on the County. Target population: in the year 2020, overall population will have risen approximately 44% from that of 1997 to just under 45,000.

5.3.2 Public Sewer System

A public sewerage system is beginning to evolve in the northeastern section of Davie County and was allocated a sewer capacity of 550,000 gallons per day by the Utilities Division of the City of Winston-Salem in 1998. Wastewater is collected primarily from users in the Hillsdale area of Davie County as well as the I-40 rest stop. As of May 1999, only about 20,000 gpd remained unallocated to users. The system has essentially been built by private interests, with line extensions taking place on a case-by-case basis. The Town of Mocksville provides wastewater collection service to the I-40/Farmington Road interchange as well as an area in and around Mocksville. Also, the County's system serves a small area in and near Cooleemee.

While public sewerage can be viewed as a necessary service in that it eliminates the need for overburdened septic systems or package treatment facilities, it is also a powerful catalyst for future growth. Indeed, in the Hillsdale area, public sewerage has long been viewed as the "missing element" for rapid growth. Now that this service is available, it is even more important that the County gain control of the system and begin to use sewer capacity as a tool to influence development rather than allow such decisions to be made on a case-by-case basis.

RECOMMENDATION: The County should move to consolidate and acquire control of public sewerage service within the unincorporated areas of Davie County. Public sewerage could then be used as a tool to better manage growth. The area of the County slated for sewerage service over the next twenty years should be identified and mapped so that appropriate growth management tools can be applied.

5.3.3 Design

Non-Residential Design

As Davie County enters the 21st century, the focus of attention seems to be not so much “whether” the County will grow, but “how” it will grow. The County took a first step in this direction with the enactment of overlay zoning in the northeastern section of the County in 1992. This overlay district was an effort to effect quality design through management of signage, landscaping, parking areas, overhead wiring, etc. (The County’s design guidelines for the northeastern section are contained in Appendix 4.) Although this action was viewed at the time as a bold step forward, it is time to expand the scope and extent of these provisions as well as other design provisions both within the northeastern section and County as a whole. The services of a qualified architect or landscape architect should be engaged for this purpose.

RECOMMENDATION: Develop detailed design guidelines and standards for non-residential development to be applied countywide.

Residential Design

Although the design of residences is beyond the scope of this plan, the pattern of residential land development is of great importance. In post World War II America, the predominant pattern of residential development has been one of low-density, dispersed, single-family development. This pattern has been fueled primarily by the emergence of the automobile as the dominant means of travel. In fact, Davie County has become somewhat of a bedroom community due in large part to the automobile, as its citizens sought employment in nearby communities such as Winston-Salem. Within the last two decades, however, the spillover from adjacent urban centers such as Winston-Salem has created a tremendous demand for housing. Davie County is generally viewed by neighboring communities as having a quiet, rural atmosphere. However, the predominant pattern of residential development...low density, single-family, large lots... has been simply an *extension of* rather than an *alternative to* that found in neighboring communities. Indeed, the residential pattern within the rapidly growing northeastern section of the County has in many respects been a manifestation of this classic suburban pattern of low density land consumption.

Through proper planning, alternatives to this pattern of residential sprawl should be encouraged while preserving the flexibility of developers to choose patterns which are appropriate for their individual markets. Some tools which the County should promote are:

- Clustering
- Higher density zoning
- Conservation subdivisions
- Mandatory dedication of open space

Community Design

One of the most important trends in community planning in recent years has been the return to a more traditional form of community design, similar to that which was widely practiced in this country before World War II. This trend has been referred to as “neo-traditional design” or “new urbanism.” The basic objective of this movement is to build communities that are more cohesive, less dependent on the automobile, and less wasteful of land resources. The general principles of neo-traditional design are:

- 1) Make communities, not zones; encourage a mix of land uses to make walking for some trips more attractive and feasible.
- 2) Reduce lot sizes; traditional neighborhoods typically have lots that are a third to a quarter the size of conventional suburban neighborhoods.
- 3) Reduce building setbacks from the street; minimize distances between building entrances and transit stops.
- 4) Discourage abundant free parking; research has shown that typical requirements of four spaces per one thousand square feet of floor area are excessive and contribute to inefficient use of land.
- 5) Provide generous landscaping, paved walkways, and safe street crossings; build streets that serve pedestrians at least as much as they serve autos.
- 6) Build streets that are narrower than conventional subdivision streets; require sidewalks, trees and other pedestrian amenities.
- 7) Build neighborhoods within a five to ten minute walk (approximately ¼ mile) of activity centers, shopping, etc.
- 8) Plan a density gradient in which higher densities are required near activity centers and transit stops (if available) with densities becoming lower as one moves away from centers; encourage clustering of buildings in centers, shared parking facilities, and pedestrian/bike pathways connecting centers.
- 9) Discourage cul-de-sacs unless pedestrian and bike access across the ends is part of the design; encourage a grid or modified grid street layout that provides alternate routes to destinations.
- 10) Provide connections with neighboring developments to avoid islands of development that depend on collector streets for all travel between them.

(NCAPA Newsletter, June 1998)

5.3.4 Costs of Growth

Costs of growth can be viewed from different perspectives in that a cost to some may be considered a benefit to others. For instance, residential development of a tract of land is viewed by the developer as an asset from a monetary gain while an environmentalist sees the clearing and grading of wooded areas as a detriment (cost) to the community in the loss of natural areas. The homes built within a development are a benefit to those seeking to relocate to an area, while long time residents see in-migration as a change for the worse. Opinions about costs and their effect on a community tend to vary depending upon the attitudes and beliefs of individuals, groups, and communities. While this section seeks to address costs of development, or more

precisely, the “costs of growth”, exact measures to offset costs are ultimately left to be remedied by regulations (policies, zoning and subdivision regulations, etc.).

In terms of land development, public costs of growth may include schools (increasing student populations requiring additional classroom space and even entire school facilities), long term maintenance of water and sewer lines (materials, workers, vehicles, equipment), maintenance of transportation facilities (buses, rail, roads, sidewalks, etc), public safety services (police, fire, emergency medical service, 911 dispatch), general administration (tax collection, public records depository, planning, inspections), public buildings and spaces (government buildings, art centers, parks, recreational facilities, community educational buildings), social services, health services, animal control, elections, solid waste and recycling, and many other services either provided by local government or mandated by state government as necessary for the local government to provide. Most of these services have associated costs for operation in terms of staff and equipment which the County must provide. Varying methods of revenue, depending upon the service, can offset increases due to inflation, rising costs of supplies, wage increases while some services have no funding sources at all. Growth, if unchecked, can potentially lead to overburdening available revenue sources, so that as development occurs existing funding is inadequate and may cause a reduction or degradation of the level and quality of service over time.

The growth (development) which has been occurring in Davie County has primarily been medium to large lot single family residential land subdivision. Developments in northeastern Davie have tended to draw a great deal of attention because of the appearance of large-scale residential developments, but even in Mocksville and around Cooleemee many smaller scale developments have equaled or exceeded the actual number of dwellings built in the Hillsdale area. While the amount of commercial and industrial development has been improving in the past ten years, residential development has been steadily increasing and far surpassing the amount of commercial or industrial tax base. Traditionally, increases in the property tax base created by commercial and industrial development have offset, somewhat, the demands created by residential development. As more homes are built, population grows through in-migration as well as natural increases. Population increases create a demand for public services and, therefore, a seemingly direct relationship is created between more people and higher public costs.

Almost all public costs of development are assumed by the general property tax revenue collected each year. These costs would include schools, recreation, public safety, county administration, public buildings, social and health services, animal control, elections, etc. Other costs created by development are initially paid-for by the developer such as public streets and utilities. Developers may elect to provide recreation areas on the site of the development or pay a small recreation fee for future County use. Building inspection services are funded through permit fees and collected at the time of construction. And as previously mentioned, recycling is funded through a County fee collected per household. Additional costs of development may be the loss of open spaces, diminishing farmlands, encroachment onto natural or environmental areas, increased commuting times caused by traffic congestion, the loss of rural character of the area, and other types of physical or environmental effects not easily noticed when development occurs.

As a general rule, residential development does not generate sufficient public revenues to cover the costs of required public services such as those previously mentioned. To ensure that development pays its required share of the cost of capital facilities, local governments have instituted requirements known as exactions. Exactions may include dedication of lands (either on-site or at the perimeter of a development), money paid in-lieu of dedication, impact fees, linkage fees, and special facility benefit assessments. These types of fees are generally collected when development occurs (at the time of subdivision), but may also be collected at the time of building activity (which can occur over an extended period following the initial construction of the subdivision). Types of exactions are listed below:

***Dedication** may occur where suitable land is given to the public on the site of the development or at the perimeter of the development for public facilities (recreation, schools, public buildings), roadways, storm drainage systems, water and sewer lines, and park and school facilities.*

***Money in-lieu of dedication** is used primarily where a development is small and there is insufficient land on-site for a needed facility, where the land available is not suited for the facility, or the facility is needed in a location other than the development. Money in-lieu of dedication is particularly valuable for parks, recreation, and school sites. Davie County currently allows money in-lieu of dedication for recreational areas where the money is paid into an account held specifically for the purpose of future recreation needs in the area of the development.*

***Impact fees** is similar to in-lieu fees in that both are used for off-site capital improvements. Impact fees are charges levied by local governments against developers for their pro rata share of capital funding for facilities necessitated by the new development. Impact fees have been used for mostly schools, but are not limited to only schools. Authority, in North Carolina, must be granted by the General Assembly before impact fees may be imposed on development.*

***Linkage fees** are a type of impact fees originally prompted by reduced federal funding for housing programs. A linkage fee may be charged to residential and nonresidential development so long as a nexus, or direct relationship, is created between the development and the need for affordable housing. Housing programs are found more often in cities or urbanized areas, while counties tend to rely on federal or state programs.*

***Facility Benefit Assessments** are also a fee in the nature of an impact fee which seeks to create a relationship between property within a designated area and the ability to pay for public facilities serving the needs of those residing in the area. The FBA is calculated based on the "net equivalent dwelling units" attributable to a parcel of land at the highest potential development under current zoning. FBA funds are collected when specific public facilities are projected to commence according to a capital improvement program. Funds are deposited in a designated account and may be adjusted depending upon increases or decreases of costs, availability of other funds, and the scope of the facility. FBA can be considered an improvement over traditional impact fees by allowing retroactivity and lien features of special assessments while limiting the exaction to only new development.*

Whether the County chooses to impose exactions at the time of development or collect fees at the time of construction, it is clear that previous residential development will not support the long term future costs associated with providing public services. The County does collect certain fees associated with development (recreation fees), and requires in certain cases for land dedications to occur (road rights-of-way, etc). But additional funding sources, as mentioned above, should be evaluated to determine a direct relationship between long term maintenance of existing facilities, increasing public demands caused by population growth and in-migration, future demand created by additional residential development, and future revenue necessary to provide adequate levels and quality of service.

5.3.5 Open Space Preservation

The preservation of open space is a consistently cited goal of the County. There are several avenues that the County should consider:

- Encouraging the preservation of working farms by assisting farmers in maintaining profitable operations and thereby maintaining open space. An example might be the provision of computer technology and training to farmers.
- Encouraging the maintenance of open space as development occurs through mechanisms such as clustering and use of conservation subdivisions.
- Educating property owners regarding the concept and value of conservation easements administered by land trusts.
- Public purchase of farmland and/or open space in limited and unique situations where there is no other alternative for the protection of highly-valued lands.
- Limiting development in sensitive areas such as watersheds and floodplains.
- Purchase of development rights.
- Providing incentives in regulations. One such mechanism is a “density bonus”, in which a developer would be allowed to place a somewhat larger number of dwellings on a tract of land in exchange for concessions such as the provision of additional open space or other community amenities.

5.3.6 Corridor/Interchange Planning

There is an urgent need to protect key transportation corridors and/or interchanges within the County from inappropriate development. Prime examples are the US 158 corridor from Hillsdale to Mocksville, and the Farmington Road/I-40 interchange. Detailed plans for land use accompanied by appropriate design standards tailor-made for each of these areas are critically needed.

5.3.7 Town Centers

There are currently three primary commercial centers within Davie County: the Town of Mocksville, the Town of Cooleemee and the Hillsdale area. It is recommended that Mocksville be strengthened as the primary commercial center of the County, and that commercial development, both along the US 601 corridor in and near Mocksville as well as in the Hillsdale area, take place in a more compact, well-organized fashion than is currently occurring. Commercial sites should be subject to detailed design standards which promote a positive community appearance, a safe and logical flow of traffic, support of overall economic development and livability goals, and compatibility with surrounding uses. As noted below, mixed use development should be allowed under proper circumstances.

5.3.8 Economic Base

Davie County's economy has for many years been driven by traditional industries such as furniture, textiles, tobacco and equipment manufacturing. The County is, however, beginning to emerge as a distribution center due to its strategic location. In order to thrive in the new global economy, the County should also begin laying the groundwork for an economy based on more technology and service industries as well as alternative forms of work such as home-based occupations and telecommuting. The County's land use policies will need to reflect this shift in economic base. If, for example, a high tech industrial corridor were to develop along I-40, such industries generally favor campus-like locations where there are adequate design standards to protect their investments and to present a "cutting edge" image. Traditional infrastructure such as water, sewer, natural gas, rail, etc. is relatively less important to such industries than is a quality living and working environment and a strong supply of well-educated, knowledge-based workers. Such workers also tend to favor livable communities that provide convenient access to work, schools, libraries, and other amenities (such as bicycle paths) and that avoid many of the pitfalls of conventional suburban development.

A parallel shift in the economy is reflected in the growth of home-based occupations as well as telecommuting. The County's land use policies should also accommodate these activities while protecting the investments of nearby property owners.

5.3.9 Mixed Use Developments

Conventional zoning has emphasized the separation of land uses that were deemed to be "incompatible." The unintended consequence of this system has been the segregation of residential areas from convenient shopping and increased dependence on the automobile as a mode of travel. The County's land use policies should envision the mixing of compatible land uses (such as neighborhood retail within a large residential development) as a means of reducing automobile dependent travel and promoting livability.

5.3.10 Interconnectivity of Transportation/Open Space, etc

As development occurs, it will be important for the various transportation systems that are built to connect with each other to promote a smoother flow of traffic as well as increased transportation choices. An example would be to ensure that subdivision streets, rather than terminating in cul-de-sacs or channeling traffic to one major exit/entrance, instead be interconnected and provide multiple points of ingress and egress. Such an arrangement will more effectively distribute traffic and prevent overloading and congestion. The same principle holds true for sidewalks, bikepaths, etc. It will also be important for open space to connect in a larger network so that its benefits are maximized. A key principle in this planning process will be to approach development decisions not as isolated, individual units, but as part of a larger framework of building sustainable communities.

5.3.11 Affordable Housing

As Davie County continues to grow and prosper, there will continue to be a demand for quality affordable housing. Meeting this demand will be a challenge. Current residential development patterns tend to consist either of relatively expensive (\$150,000 or more) stick-built units, or relatively inexpensive (\$60,000 or less) manufactured units. Developers often find it difficult to make a profit on stick-built homes in the \$70,000-\$80,000 range, which creates a significant void in the housing market for prospective moderate income purchasers who wish to invest in an appreciating asset. The affordable housing policies contained in Section 5.4.15 provide some potential solutions to this dilemma.

5.4 DEVELOPMENT PRINCIPLES AND GUIDELINES

5.4.1 Economic Development

5.4.1.1

The County shall encourage new and expanding industries and businesses which: (1) diversify the local economy, (2) utilize a more highly skilled labor force, and (3) increase area residents' incomes.

5.4.1.2

The County shall protect, enhance and encourage a high quality of life, image and cultural amenities as an effective approach to economic development.

5.4.1.3

The benefits of continued economic development shall be balanced against the possible detrimental effects such development may have on the quality of life enjoyed by area residents.

5.4.1.4

The continued growth of the area's tourism industry shall be encouraged.

5.4.1.5

Appropriate educational and training programs shall be encouraged to help unemployed and underemployed local residents take advantage of business expansion and new development.

5.4.1.6

Economic development efforts shall focus on the revitalization and reuse of currently unused or underutilized structures and sites in appropriately located commercial and industrial areas.

5.4.2 Transportation

5.4.2.1

The preparation and periodic updating of a thoroughfare plan shall be encouraged. Key elements of the plan shall be identified annually for implementation on a priority basis.

5.4.2.2

A program of improvements and maintenance to maximize the use of existing roadways shall be encouraged as a cost-effective and environmentally sound means of meeting area transportation needs.

5.4.2.3

The safety and usefulness of area thoroughfares shall be protected by encouraging common access points and avoiding frequent driveway cuts.

5.4.2.4

Pedestrian, bikeway and other similar facilities shall be encouraged as energy-efficient and environmentally sound transportation alternatives.

5.4.2.5

Roads and streets, etc. shall be interconnected to facilitate an efficient flow of traffic and people.

5.4.2.6

The integrity of established residential and commercial areas shall be preserved, to the extent possible, from environmental and traffic impacts associated with new or improved transportation facilities.

5.4.2.7

Transit services shall be supported which: (1) provide mobility to population groups lacking personal transportation, (2) reduce the level of in-town and peak-hour auto traffic, and (3) reduce the demand for parking.

5.4.2.8

Continued improvement and appropriate expansion of the County's airport facilities shall be encouraged and supported. Such expansion shall be carefully planned to minimize potential land use conflicts and hazardous conditions. Since existing airport runways cannot be expanded, a new site may be needed for a 5500 foot runway.

5.4.3 Water and Sewer Services

5.4.3.1

Water and sewer services should be concentrated within the limits of a geographically defined urban growth area consisting of the Developed and Transition classes as depicted on the Land Classification Map. However, water system improvements may be necessary in rural areas to maintain adequate service to existing customers.

5.4.3.2

The County shall afford the highest level of participation in the costs of providing water and sewer to properties within the Developed class to enhance appropriate urban-level development.

5.4.3.3

The Transition area should receive a lesser level of County participation in the cost of providing water and sewer services to properties within this area.

5.4.3.4

The County shall not encourage or participate in the extension of water and sewer services to properties outside of the Developed and Transition classes. Exceptions to this policy may include the provision of services to other local governments, cooperative agreements on major economic development projects, and extension of lines needed to improve pressure in growth areas but which must run through rural areas. The County's Water System Plan shall be updated to reflect these recommendations.

5.4.4 Industrial Development

5.4.4.1

The County shall encourage a public service and regulatory environment conducive to industrial development, tempered by environmental quality considerations, design standards, and the availability of public financial resources.

5.4.4.2

Industrial development shall not be located in areas which would diminish the desirability of existing and planned non-industrial uses, nor shall non-industrial uses be allowed to encroach upon existing or planned industrial sites.

5.4.4.3

Industrial development shall be located on land which is physically suitable and has unique locational advantages for industry. Advanced planning for the identification of such land shall be encouraged for sites with high priority for industrial development.

5.4.4.4

Heavy industrial sites shall be separated from non-industrial areas by natural features, green belts, buffering, major transportation facilities, and/or other suitable means.

5.4.4.5

Light industry may be located in urbanized areas to take advantage of available services and to minimize home-to-work distances. Careful design and/or landscaping shall be required to ensure compatibility with surrounding areas.

5.4.4.6

Warehousing, storage and distribution facilities shall have direct access to appropriate thoroughfares, and shall be visually designed for compatibility to fit their location.

5.4.4.7

New industrial development shall be encouraged to locate in existing and planned industrial parks where practical.

5.4.4.8

Utilities such as water and sewer service should (especially for "wet" industries) be present or available for extension to industrial sites.

5.4.4.9

Access to industries (via air, rail, highway, etc.) should be safe and efficient; industries should be located near or along major thoroughfares in order to reduce traffic congestion on small streets and highways. Connecting streets to existing lesser capacity streets should be encouraged to effectively disperse traffic during peak periods.

5.4.4.10

Industrial sites should be relatively level and should not exceed 5% slope; sites located on floodplains or in areas with poor drainage (less than 2% slope) shall be avoided.

5.4.4.11

Noxious industries, for example, those which are extremely noisy or destructive to the physical environment should be discouraged. Where necessary, landscaping and man-made structures can reduce noise from airports and industry.

5.4.4.12

Industrial use should be compatible with surrounding land uses and should make an effort to blend (both visually and environmentally) harmoniously with the community.

5.4.4.13

Adequate off-street parking facilities should be provided for all industries.

5.4.4.14

Environmentally fragile areas should be discouraged for use as industrial sites.

5.4.5 Commercial Development

5.4.5.1

Commercial development shall be encouraged to occur in clusters or planned shopping centers to minimize the proliferation of “retail strip” locations.

5.4.5.2

Regional commercial centers shall be located adjacent to freeways, major arterials or mass transit routes; they shall contain or be adjacent to existing or planned concentrations of employment and housing.

5.4.5.3

Community commercial centers shall be located adjacent to arterial highways and/or mass transit routes, and contain or be adjacent to other community facilities such as schools, offices, or places of public activity.

5.4.5.4

Neighborhood commercial centers should be located adjacent to a collector street and/or secondary street and near other neighborhood facilities such as schools and parks, and integrated into the design and circulation of the residential neighborhoods they serve.

5.4.5.5

Highway oriented commercial uses shall be clustered along segments of arterial streets and contain land uses which are mutually compatible and reinforcing in use and design; they should be designed in such a way as to minimize signage, access points and excessive lengths of commercial strip development.

- 5.4.5.6 Rural area commercial development shall be limited to local convenience stores, farm supply stores, and generally accepted rural retailing establishments and be clustered near intersections.
- 5.4.5.7 Commercial uses shall be encouraged to develop by consolidation and deepening of existing commercially zoned property, only when such consolidation and deepening is compatible with adjacent land uses.
- 5.4.5.8 Strip development along the area's through streets shall be prohibited. Commercial strip development shall be reduced and/or zoning should be made more restrictive when redevelopment opportunities permit.
- 5.4.5.9 Effective landscaping shall be provided where commercial development adjoins existing or planned residential uses.
- 5.4.5.10 Encroachment by new or expanded commercial uses into viable existing or planned residential areas shall be prohibited.
- 5.4.5.11 Mixed-use commercial development shall be encouraged where appropriate and where compatible with surrounding residential uses.
- 5.4.5.12 New commercial development should be encouraged to locate within existing areas of commercial activity.
- 5.4.5.13 Compact development should be emphasized in order to reduce the costs of public services.
- 5.4.5.14 Adequate off-street parking should be provided in order to ease congestion and to improve the efficiency of traffic arteries. The appearance and location of parking should emphasize the development and de-emphasize the parking area.
- 5.4.5.15 Businesses should be served by roads and streets of a capacity sufficient for safe traffic flow; large businesses should locate at major intersections.
- 5.4.5.16 Commercial areas should promote pedestrian traffic and should be planned with the objective of minimizing travel time between businesses. Sidewalks should be required between existing and planned commercial developments.
- 5.4.5.17 Plans and regulations for commercial areas should include design and appearance criteria in order to make commercial areas economically viable over the long-term.
- 5.4.5.18 Although physiographic requirements will vary for different types of businesses, the site should be free from flooding.

5.4.5.19

Commercial sites should be served with all necessary utilities. Businesses which consume considerable quantities of water should be served by central water and sewerage facilities.

5.4.5.20

“Big box” retailers” should be integrated into commercial developments to avoid disproportionate scale.

5.4.6 Office and Institutional Development

5.4.6.1

Office and institutional development may be encouraged to locate as a transitional land use between activities of higher intensity and those of lower intensity.

5.4.6.2

Linear stripping of offices along thoroughfares shall be discouraged in favor of planned office parks or clusters of offices with common access, parking, etc.

5.4.6.3

Office development shall be encouraged to locate in town centers.

5.4.6.4

In order to achieve maximum efficiency and utilization of facilities, public/semi-public uses such as postal facilities or libraries should locate centrally to the populations which they serve.

5.4.6.5

The natural environment should be protected and used to enhance the function of public/semi-public uses as buffer areas. The preservation of vegetation on the site will, for example, create a better buffer use.

5.4.6.6

Adequate parking, access, and utilities should be provided for all public/semi-public uses.

5.4.6.7

Land required for the expansion of public/semi-public activities should be anticipated and reserved if possible; sites should be reserved for schools, utilities, transport facilities, etc., before the lands become prematurely developed.

5.4.6.8

Inasmuch as feasible, the multiple use of public/semi-public facilities should be encouraged; schools could, for example, serve as recreational facilities or community centers in addition to serving as educational facilities.

5.4.7 Residential Development

5.4.7.1

The protection and rehabilitation of viable neighborhoods shall be encouraged to insure their continued existence as a major housing source and as a reflection of the long term quality of life in Davie County.

- 5.4.7.2 Residential neighborhoods which have become infused or surrounded by non-residential uses may undergo an orderly conversion from residential use to higher density residential use or other compatible alternative land uses.
- 5.4.7.3 Proposed residential development which would expose residents to the harmful effects of environmental hazards shall be prohibited.
- 5.4.7.4 The continued viability of single-family homes as a major housing source shall be encouraged while allowing and encouraging alternate forms of housing.
- 5.4.7.5 Innovative and flexible land planning techniques shall be supported as a means of encouraging development configurations which are more desirable and which may better safeguard existing natural land and water resources.
- 5.4.7.6 Factors in determining preferred locations for high density residential development shall include: close proximity to employment and shopping centers, access to major thoroughfares and transit systems, and the availability of public services and facilities.
- 5.4.7.7 The housing needs of the elderly, handicapped and low to moderate income households shall be particularly recognized in the County's policies and actions regarding residential development. *(Please see also Section 5.4.15)*
- 5.4.7.8 Higher density residential development (more than five dwelling units per acre) should be served by both central water and sewer facilities.
- 5.4.7.9 Medium density residential development should be served by a central water facility and should not be situated on soils which possess severe limitations for septic tank absorption fields unless alternate sewage disposal systems are utilized.
- 5.4.7.10 Residential development which does not have access to either central water or sewerage facilities should locate in areas where soil and geological characteristics are conducive to the long-term support of on-site systems such as wells and/or septic tanks.
- 5.4.7.11 Development activities in the 100 year floodplain shall be discouraged.*(See 5.4.12.2)*
- 5.4.7.12 Slope should not exceed 20%; 5-10% slope is considered ideal for residential subdivisions and 10-15% slope will accommodate single-family homes on larger lots; areas of less than 2% slope should be avoided due to poor drainage.

5.4.7.13

Residences should be served by a safe and efficient transportation network; the physical size and design of roads and streets should be scaled to accommodate the traffic volumes and population which they serve. Development shall be consistent with the Transportation Plan.

5.4.7.14

Buffer areas (e.g. open space or public/semi-public uses) may be used to separate incompatible uses of land.

5.4.7.15

Places of work, shopping, recreation, etc. should be located reasonably central to residential areas in order to promote efficiencies of travel.

5.4.7.16

Residential areas should, in order to promote efficiencies in the delivery of urban services, be encouraged to develop in a fashion which minimizes “leap frog” development (i.e. leaving large vacant areas between developments).

5.4.7.17

Residential development should recognize the importance of protecting natural resources and should seek to minimize adverse impact upon the natural environment (e.g. stream pollution, soil erosion, destruction of wildlife habitat).

5.4.8 Agricultural and Rural Preservation

5.4.8.1

Forestry, agriculture and very low density residential development (less than one dwelling unit per ten acres of land) shall be the preferred land uses in the rural part of the County, as identified on the Land Classification Map. Urban level development shall not be encouraged in the rural area.

5.4.8.2

Rural area lands having a high productive potential shall be conserved, to the extent possible, for appropriate forestry and agricultural use.

5.4.8.3

Farms, woodlands, and floodplains shall be recognized as an integral part of the County’s open space system.

5.4.9 Open Space and Recreation

5.4.9.1

Future park development and open space preservation shall be carefully planned to provide for the rational and equitable distribution of recreation and open space opportunities within the County. Development shall be consistent with the Recreation Master Plan.

5.4.9.2

In determining future sites for park, recreation and open space facilities, multiple objectives for natural area conservation, visual enhancement, promotion of culture and history, watershed and flood prone area protection, etc. shall be considered.

5.4.9.3

Provision of open space and recreation facilities in private development shall be encouraged to complement the demand for publicly financed facilities.

5.4.9.4

The identification and appropriate recreational development of a system of open space greenways within the County shall be encouraged. The use of natural corridors, such as stream floodplains, and secondarily, man-made corridors, such as utility and transportation rights of way and easements shall be emphasized.

5.4.9.5

Land acquisition for new recreation sites in advance of need shall be encouraged to achieve desirable locations at cost effective levels.

5.4.10 Historic and Cultural Preservation

5.4.10.1

The identification, restoration and active use of structures, buildings, monuments, and neighborhoods of historic or architectural significance shall be encouraged as a means of enhancing their economic and cultural value to the County. National registration and designation of local historic areas shall be encouraged, when appropriate.

5.4.10.2

Multiple and appropriate adaptive reuse of the County's historic resources shall be encouraged.

5.4.10.3

Development of the tourism potential of the area's architectural and historic resources shall be encouraged.

5.4.10.4

The destruction of architectural, historic and archaeological resources in the County shall be discouraged.

5.4.11 Community Appearance

5.4.11.1

The significance of major roadway entrances into the county as measures of community image and quality shall be recognized through landscape, signage and other visual improvements.

5.4.11.2

The County, along with private property owners and developers, shall endeavor to jointly improve the appearance and design of major street corridors through improved landscaping and sign control.

5.4.11.3

Sign policies and standards shall be periodically updated to enhance community identity and create a high quality business image.

5.4.11.4

Measures to improve the effectiveness of landscaping and buffering standards for new and existing developments shall be encouraged.

5.4.11.5

The significance of street trees in providing visual relief, summer cooling, improved air quality and livability shall be recognized through public policies and actions to encourage planting and maintenance.

- 5.4.11.6 Infill development, redevelopment, and rehabilitation of structures and sites should occur in a manner which is consistent and supportive of the neighborhood and architectural context of the surrounding area.
- 5.4.11.7 Development which preserves the natural features of the site, including existing topography and significant existing vegetation, shall be encouraged.
- 5.4.11.8 The placement of wires underground shall be required in all public and private developments. New development that connects to existing utilities shall require the placement of these existing utilities underground on the site.

5.4.12 Environmental Quality

- 5.4.12.1 Continued improvements to public sewage collection and treatment facilities shall be supported, with priority to servicing existing or planned densely developed areas where environmental and economic benefits can be realized.
- 5.4.12.2 Development activities in the 100 year floodplain shall be discouraged. If development must occur, low intensive uses such as open space, recreation, and agricultural activities shall be preferred.
- 5.4.12.3 Runoff and drainage from development and agricultural activities shall be of a quality and quantity as near to natural pre-development conditions as possible.
- 5.4.12.4 Industries producing excessive noise, odor, air and water pollution, or other harmful impacts shall be discouraged, unless such adverse impacts can be clearly overcome through effective mitigation.
- 5.4.12.5 Local area requirements for solid waste disposal facilities shall be anticipated through advanced planning; facilities shall be located and designed to not adversely impact significant natural or man-made resources. The County recognizes the need for a regional solution to the solid waste issue, and will evaluate efforts toward that end.
- 5.4.12.6 The location of hazardous waste storage and disposal facilities within the County shall not be supported.
- 5.4.12.7 The provisions of the State Watershed Protection Act and local implementing ordinance shall be conscientiously enforced.

5.4.13 Town Centers

- 5.4.13.1 Public policies and actions shall continue to support the maintenance and revitalization of the County's town centers and adjoining neighborhoods as historic and cultural centers of the community.

5.4.13.2

An appropriate design character for town centers shall be reinforced and supported to put forth a quality image and sense of place.

5.4.13.3

Residential development and redevelopment opportunities shall be encouraged in the town centers as a viable and productive living environment and to support downtown areas' retail businesses.

5.4.13.4

The County, in concert with downtown property owners and merchants, shall encourage public and private efforts to develop and publicize adequate and appropriately designed off street parking lots in the town centers.

5.4.13.5

A variety of mutually compatible and supportive mixed uses shall be encouraged in the town centers.

5.4.13.6

A transitional area between the intensive commercial uses of the town centers and surrounding residential areas shall be encouraged.

5.4.14 Planning Coordination

5.4.14.1

Coordinated intergovernmental planning for land use, transportation, water and sewer, tourism promotion, historic preservation and economic development shall be encouraged.

5.4.14.2

Public involvement shall be encouraged in decisions on land use and development by making the public aware of proposed developments at the earliest opportunity, as well as fostering communication between developers and the public.

5.4.14.3

Neighborhood and special area planning shall be encouraged, where feasible and appropriate, to foster public involvement in the production of closely tailored, action-oriented neighborhood plans and programs.

5.4.15 Affordable Housing

5.4.15.1

Encourage a wide range of housing choices, but continue to emphasize quality at all levels.

5.4.15.2

Provide more apartments, condominiums, and town homes to meet market demand, especially for the elderly and young.

5.4.15.3

Encourage condominiums as an alternative to apartments, due to "pride in ownership" factors.

5.4.15.4

Encourage small condominium projects as infill development to avoid overwhelming adjoining uses.

5.4.15.5

Provide more non-manufactured homes that fall in the affordable housing price range.

5.4.15.6

Provide education and incentives for developers to build more affordable, but non-manufactured, housing; aim to build such units(1,000 to 1,200 square feet units) in the \$70,000-\$80,000 range(1999 dollars).

5.4.15.7

Encourage higher-density, infill development where public water and sewer service are currently present.

5.4.15.8

Explore alternate wastewater disposal technologies to facilitate higher densities in areas where public sewer service is not currently present.

5.4.15.9

Provide incentives for more affordable housing, but set high standards for its development.

5.4.15.10

Provide density bonuses for developers in development codes.

5.4.15.11

Provide developers with alternatives to single-family units on relatively large lots, which tend to increase the cost of housing.

5.4.15.12

Use affordable housing as a buffer between mixed housing types.

5.4.15.13

Encourage broader public acceptance of multi-family housing by designing such units (such as duplexes) to have the appearance of higher-end single-family housing.

5.4.15.14

Reduce the magnitude of multi-family housing projects to overcome the stigma of large-scale multi-family developments; encourage more developments in the 3 to 4 unit range.

5.4.15.15

Build relatively concentrated communities as opposed to scattered low-density developments.

5.4.15.16

The relatively high cost of land in Davie County is a deterrent to the provision of affordable housing. Where land costs are relatively low (such as in the Cooleemee area), encourage the development of duplexes, etc. as an alternative to manufactured housing.

5.4.15.17

Educate developers regarding profitable alternatives to “cookie-cutter” developments.

5.4.15.18

Explore “themed” developments (e.g. with amenities such as walking trails, pet exercise areas, etc.) as a means of stimulating more interest in higher-density development.

5.4.15.19

Explore zero lot-line development as a means of reducing development costs.

5.4.15.20

Discourage the rapid proliferation of manufactured housing in the County by providing affordable housing alternatives in the same price range.

5.4.15.21

Educate potential homebuyers concerning the concept of equity and long-term value.

5.4.15.22

Close loopholes in development regulations that enable manufactured home subdivisions to be treated more leniently than non-manufactured housing subdivisions (i.e. do not allow more than one principal dwelling per lot).

5.4.15.23

Provide incentives for the development of relatively small-scale manufactured home communities (as opposed to very large-scale ones that often generate public opposition).

(Acknowledgment: Salisbury and Highlands Land Use Plans)

6. LAND CLASSIFICATION

6.1. OVERVIEW of LAND CLASSIFICATION SYSTEM

An abbreviated version of the North Carolina Land Classification System shall be used as the basis for determining Davie County's growth strategy over the 20 year planning period. The system contains five broad classes of land. *(A more detailed system containing seven classes of land is found in Appendix 1, and is an option for use by the County at some point in the future.)*

- Developed—Lands where existing population density is moderate to high and where there are a variety of land uses which have the necessary public services.
- Transition—Lands where local government plans to accommodate moderate to high density development during the following twenty year period and where necessary public services will be provided to accommodate that growth.
- Community—Lands where low density development is grouped in existing settlements or will occur in such settlements during the following twenty year period and which will not require extensive public services now or in the future.
- Rural—Lands whose highest use is for agriculture, forestry, mining, water supply, etc., based on their natural resources potential. Also, lands for future needs not currently recognized.
- Conservation—Fragile, hazard and other lands necessary to maintain a healthy natural environment and necessary to provide for the public health, safety, or welfare.

By taking this approach, the County should be able to anticipate and prepare for future development with a reasonable degree of success. The Land Classification Map can serve as a framework for developing a local growth policy while allowing for flexibility at the local level in guiding specific land use (subject to the limitations set forth within each of the five broad classification definitions). Commercial development, for example, is permissible within the Developed, Transition, and Community categories but should not be encouraged within Rural or Conservation lands.

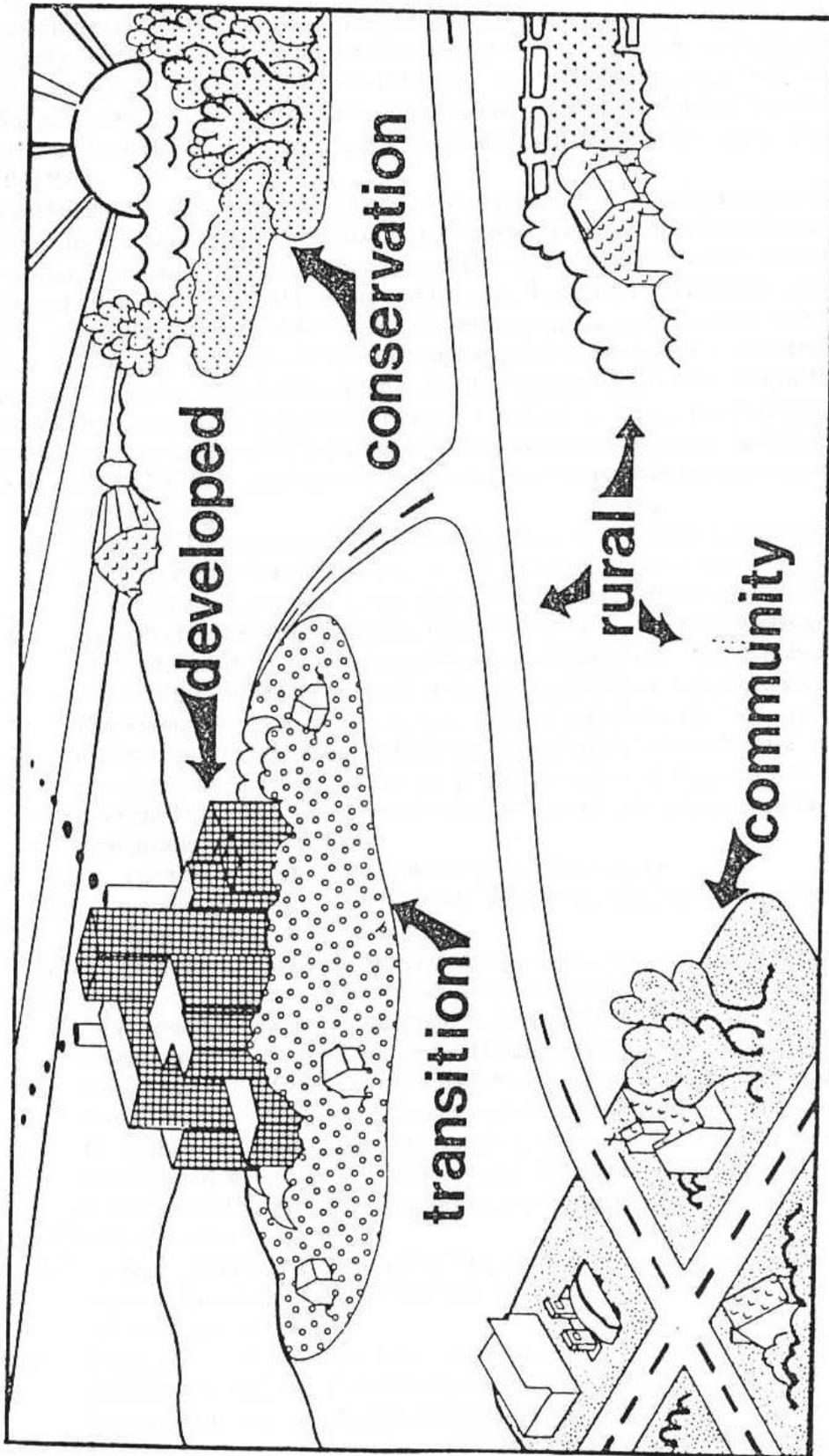
The Land Classification System is designed:

- ...to encourage coordination between local land use policies and those of the state or region. By virtue of using a uniform system of classification, plans prepared at various levels of government and by different agencies are more easily understood and integrated with one another.
- ...to provide a guide to public investment in land. For example, state and local agencies can anticipate the need for early acquisition of lands and easements for schools, recreation areas, transportation, and other public facilities within the Transition class.
- ...to aid in better coordination of regulatory policies and decisions. Conservation and Rural lands will help to focus the attention of state and local agencies and interests on valuable natural resources. Transition and Community lands will be of concern to those agencies and interests working for high quality development through local land use controls.
- ...to provide guidance for more equitable distribution of the local tax burden. Private lands in the Rural and Conservation classes should have lower taxes to reflect the policy that few if any public services will be provided. In contrast, lands in the Transition class should be taxed to pay for the costs of providing public services required to support the relatively high density of growth anticipated.
- ...to be broad and flexible enough so that frequent changes in the Land Classification Map are not necessary. The Map should be updated periodically in order to compensate for unforeseen changes such as the establishment of large scale public facilities or industries.

6.2. LAND CLASSES and DESCRIPTIONS

Land Classes	Purpose	Characteristics	Services	Residential Population Density
Developed	To provide for continued intensive development and redevelopment of existing cities.	Lands currently developed for urban purposes with urban services available	Usual municipal or public services including water, sewer, recreation facilities, police and fire protection, etc.	Existing moderate to high density.
Transition	To provide for future intensive urban development on lands that are most likely to be scheduled for provision of necessary public utilities and services.	Lands being developed for urban purposes but which do not yet have usual urban services, lands necessary to accommodate population growth for next ten to fifteen year period, lands which can be readily serviced with usual urban services, lands generally free from severe physical limitations for development.	Usual municipal or public services to be made available at the time of development or soon thereafter.	Moderate to high density land uses.

Community	To provide for clustered mix uses to help shopping, housing, employment and public service needs within the surrounding region.	Lands characterized by a cluster of residential and commercial land uses in rural areas.	Limited municipal type services such as fire protection, etc.; may have public water but no public sewer systems. Public sewers possible only to correct an existing or projected public health hazard.	Clustered low density (Suitable for private septic tanks.)
Rural	To provide for agriculture, forest management, mineral extraction and various other low intensity uses on large sites including residences where urban services are not required and natural resources will not be unduly impaired; to encourage preservation of scenic resources and guard against the premature or unreasonable alteration of irreplaceable, limited, or significant natural, scenic, historic or other resources not otherwise classified.	Lands identified as appropriate locations for natural resource management and allied uses, lands with high potential for commercial agriculture, forestry or mineral extraction; lands with one or more limitations that would make development costly and hazardous; and lands containing irreplaceable, limited, or significant natural, recreational, or scenic resources not otherwise classified.	Private septic tanks and wells. Others services such as rescue squad, police and fire protection, etc.	Low density single-family residence on large sites to be determined by local conditions and planning standards.
Conservation	To provide for effective long-term management of tracts of land consistent with their significant, limited, or irreplaceable natural, recreational, or scenic resources essentially undisturbed by human occupancy.	Lands that contain major wetlands, undeveloped shorelands that are unique, fragile or hazardous for development, necessary wildlife habitats, publicly owned water-supply watersheds and aquifers, large undeveloped tracts of forests with limited access, lands with one or more characteristics which would make development unwise, lands providing significant recharge to groundwater, and lands which contain significant natural scenic, or recreational resources.	No services and limited access only.	Essentially no residential development.



7. IMPLEMENTATION TOOLS

How to Use the Growth Strategies/Future Development Policies

To aid in the effective use of the growth strategies and future development policies, the following explains for example, how different users can employ the strategies and policies in deciding upon a typical rezoning request:

<p>Example: How the Growth Strategies/Future Development Policies Are Used in Evaluating a Rezoning Request</p>
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As Used by the Developer

The developer or property owner can petition for a rezoning request that is consistent with County policy, thereby increasing the chances for rezoning approval, and minimizing guess work and time wasted.

As Used by the County Staff

The Davie County staff reviews zoning petitions, recommends that the petition be approved or denied, and prepares a written zoning report for the Planning Board. In making their decision and writing the report, the staff reviews relevant planning documents, including plans adopted by the County. Using the adopted policies will facilitate the County staff's review of the rezoning request. The staff will be able to point out those policies that support the rezoning, and those that are in conflict with the rezoning, thereby shaping the overall staff recommendation.

As Used by the Davie County Planning Board

Prior to the regular meeting, each Planning Board member can make his or her own determination as to the consistency of the proposed rezoning with the County's adopted growth strategies and future development policies. As always, the Planning Board should take into account the recommendations of the Davie County Land Use Plan Steering Committee in interpreting the true intent of the policies, but may choose to give different weight to different policies.

As Used by the General Public

Residents of Davie County can and should reference specific policy statements when speaking in favor of or in opposition to a rezoning request.

As Used by the Davie County Board of Commissioners

In its legislative authority to rezone property, the Davie County Board of Commissioners has the final word as to whether the rezoning request is consistent with the various plans that affect the property in question. As customary, the Board of Commissioners should take into account and weigh the interpretation of policy as employed by the property owner, the Davie County Planning Board, County staff, and the general public. Over time, a track record of policy interpretation forms a consistent foundation for decision making.

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Water Supply Plans for Mocksville and Davie County.

APPENDIX

Appendix 1

DETAILED LAND CLASSIFICATION SYSTEM

(Note: A more detailed land classification system may be used by the County in the future if it so chooses. There are seven classes in this system. The following is a description of this system.)

A land classification system has been devised as a means of assisting in the implementation of local policies. By delineating land classes on a map, local government and its citizens can specify those areas where certain policies (local, state and federal) will apply. The land classification system should be supported by and consistent with zoning, subdivision and other local growth management tools. Although specific areas are outlined on a land classification map, land classification is merely a tool to help implement policies and not, in the strict sense of the term, a regulatory mechanism. The intent of each land classification should be described in the text as clearly as possible. To further clarify its intent, the local government should describe how land classification is linked to policy.

The land classification system provides a framework to be used by local governments to identify the future use of all lands. The designation of land classes allows the local government to illustrate its policy statements as to where and to what intensity they want growth to occur, and where it wants to conserve natural and cultural resources by guiding growth.

The land classification system includes seven classes: **Developed, Urban Transition, Limited Transition, Community, Rural, Rural with Services, and Conservation**. The local government may subdivide these classes into more specific subclasses but any subclass should be able to aggregate back to the original class. Some classes may not apply to each local government; for example, the Community or Rural class may not apply in an incorporated municipality. Local governments may make some distinction between Urban Transition areas, which are intended to reflect intensely developing areas with the full range of urban services to be supplied, and Limited Transition areas that are less intensely developed, may have private services and are frequently located in a rural landscape.

In applying the land classification system the local government should give particular attention to how, where and when development of certain types and intensity will be encouraged or discouraged, based upon the community services analyses. Urban land uses and higher intensity uses which presently require the traditional urban services should be directed to lands classified as Developed. Areas developing or anticipated to develop at urban densities which will eventually require urban services should be directed to lands classified as Transition. Low density development in settlements which will not require sewer services should be directed to areas classified as Community. Agriculture, forestry, mineral extraction and other similar low intensity uses and very low-density residential uses should be directed to lands classified as Rural. Generally, public or private water or sewer systems will not be provided in areas classified rural as an incentive for intense development. The land use classification should reflect the future water and wastewater service areas assumed in any water supply plan appendix.

Land Classes and Descriptions

Developed

Purpose. The purpose of the Developed class is to provide for continued intensive development and redevelopment of existing cities, towns and their urban environs.

Description and Characteristics. Areas meeting the intent of the Developed classification are currently urban in character where minimal undeveloped land remains and have in place, or are scheduled for the timely provision of, the usual municipal or public services. Urban in character includes mixed land uses such as residential, commercial, industrial, institutional and other uses at high to moderate densities. Services include water, sewer, recreational facilities, streets and roads, police and fire protection. In some instances an area may not have all

the traditional urban services in place, but if it otherwise has a developed character and is scheduled for the timely provision of these services, it still meets the intent of the developed classification. Areas developed for predominantly residential purposes meet the intent of this classification if they exhibit:

- (i) a density of three or more dwelling units per acre; or
- (ii) a majority of lots of 15,000 square feet or less, which are provided or scheduled to be provided with the traditional urban services; or
- (iii) permanent population densities that are high and seasonal populations that may swell significantly.

Discussion. Local governments may subdivide the Developed class into subclasses such as Developed/Multi-family Residential, Developed/Single-family Residential, Developed/Commercial and Developed/Industrial. In applying the Developed class or subclasses, the local government should discuss how, when and where it will provide the services necessary to support the needs of an urban area. This class is designed to illustrate urban intensity development and services necessary to support it and should be applied to existing cities and towns and intense development within the extraterritorial planning jurisdictional area (if any). The Developed class is one of two classes the local government should apply to areas containing intense urban development requiring urban services.

Urban Transition

Purpose. The purpose of the Urban Transition class is to provide for future intensive urban development on lands that are suitable and that will be provided with the necessary urban services to support intense urban development.

Description and Characteristics. Areas meeting the intent of the Urban Transition classification are presently being developed for urban purposes or will be developed in the next five to ten years to accommodate anticipated population and urban growth. These areas are in, or will be in a "transition" state of development going from lower intensity uses to higher intensity uses and as such will eventually require urban services. Examples of areas meeting the intent of this class are lands included within municipal extraterritorial planning boundaries and areas being considered for annexation.

- Areas classified Urban Transition will provide lands for intensive urban growth when lands in the Developed class are not available. Urban Transition lands must be able to support urban development by being generally free of physical limitations and be served or readily served by urban services. Urban development includes mixed land uses such as residential, commercial, institutional, industrial and other uses at or approaching high to moderate densities. Urban services include water, sewer, streets and roads, police and fire protection that will be made available at the time development occurs or soon thereafter. Permanent population densities in this class will be high and the seasonal population may swell significantly.
- In choosing land for the Urban Transition class, such land should not include: areas with severe physical limitations which would make the provision of urban services difficult or impossible, lands which meet the definition of conservation, lands of special value (unless no other alternative exists) such as productive and unique agricultural lands, forest lands, potentially valuable mineral deposits, water supply watersheds, scenic and tourist resources including archaeological sites, habitat for important wildlife species, areas subject to frequent flooding, areas important for environmental or scientific values, lands where urban development might destroy or damage natural systems or processes of more than local concern, or lands where intense development might result in undue risk to life and property from natural or existing manmade hazards.
- Areas that are predominantly residential meet the intent of this class if:
 - ⇒ they are approaching three dwelling units per acre, or
 - ⇒ a majority of the lots are 15,000 square feet or less and will be provided with essential urban services to support this high density development, or
 - ⇒ are contiguous to existing developed municipal areas.

Limited Transition

Purpose. The purpose of the Limited Transition class is to provide for development in areas that will have some services, but are suitable for lower densities than those associated with the Urban Transition class, or are geographically remote from existing towns and municipalities.

Description and Characteristics. Areas meeting the intent of this class will experience increased development during the planning period. They will be in a state of development necessitating some municipal type services. These areas are of modest densities and often suitable for the provision of closed water systems rather than individual wells.

- Areas classified Limited Transition will provide controlled development with services, but may not be on lands that are suitable for traditional high intensity urban development normally associated with sewers or other services. These may be lands with physical limitations or areas near valuable estuarine waters or other fragile natural systems. Sewers and other services may be provided because such services are already in the area or readily available nearby, because the lands are unsuitable for septic tanks or the cumulative impact of septic tanks may negatively impact significant public resources. Self-contained, large, retirement/vacation developments in otherwise rural areas would meet the intent of this class.
- The Limited Transition class is intended for predominantly residential development with densities of three units per acre or less, or where the majority of lots are 15,000 square feet or greater. In many areas, lower densities may be necessary and should be discussed. Clustering or development associated with Planned Unit Developments may be appropriate in the Limited Transition class.
- Areas which meet the definition of the Conservation class should not be classified Limited Transition.
- Due to its very nature, the Limited Transition land classification may be controversial. As such, if a local government chooses to use this class, it shall describe the circumstances making this classification necessary and shall also describe how this class will help the local government achieve both its economic development and natural resources protection policies. This discussion shall include statements as to why lands included in this classification are appropriate for development which necessitates the provision of services.

Discussion. As sewer and other services become more widespread, they are frequently extended to areas that are not suitable for high density urban development. The use of such services generally increases environmental protection in these areas if the density of development remains relatively low. The Limited Transition class is intended to provide for appropriate moderate densities of development with the benefits of services. However, the reliability of services such as sewage treatment systems is critical in these areas. If the local government intends to allow the private provision of urban services such as sewage systems and garbage collection, then the local government should require special assurances that these private services will reliably protect the public resources and avoid unnecessary public expenses. Both the Urban Transition and Limited Transition classes are designed to illustrate emerging and developing areas where some appropriate level of services are required.

Community

Purpose. The purpose of the Community class is to provide for clustered, mixed land uses at low densities to help meet the housing, shopping, employment and other needs in rural counties.

Description and Characteristics. Areas meeting the intent of the Community class are presently developed at low densities which are suitable for private septic tank use. These areas are clustered residential or commercial land uses which provide both low intensity shopping and housing opportunities and provide a local social sense of a "community". These communities are generally small and some are not incorporated. Very limited municipal type services such as fire protection and community water may be available, but municipal type sewer systems

are not to be provided as a catalyst for future development. In some unusual cases sewer systems may be possible, but only to correct an existing or projected public health hazard. Areas developed in a low density fashion in small, dispersed clusters in a larger rural county landscape with very limited or no water and sewer services meet the intent of this class.

Discussion. The Community class applies to clustered low intensity development in a rural landscape. This development is usually associated with crossroads in counties. Some "communities" may have or may require municipal type services to avert an existing or anticipated health problem. Even though limited services may be available, these areas should not be shown in the higher intensity land classes, as the major characteristic which distinguishes the Community class from the Developed and Transition classes is that services are: not provided to stimulate intense development in a rural setting, but rather to neutralize or avert health problems. Due to the small size of most communities, they will appear as small areas in a dispersed pattern on the county land classification map. This class illustrates small, dispersed groupings of housing and commercial land uses forming "crossroad" communities in a rural landscape.

Rural

Purpose. The Rural class is to provide for agriculture, forestry, mineral extraction and other allied uses traditionally associated with an agrarian region. Other land uses, due to their noxious or hazardous nature and negative impacts on adjacent uses may also be appropriate here if sited in a manner that minimizes their negative effect on surrounding land uses or natural resources. Examples include energy generating plants, refining plants, airports, landfills, sewage treatment facilities, fuel storage tanks and other industrial type uses. Very low density dispersed residential uses on large lots with on site water and sewer are consistent with the intent of the rural class. Development in this class should be as compatible with resource production as possible.

Description and Characteristics. Areas meeting the intent of the Rural classification are appropriate for or presently used for agriculture, forestry, mineral extraction and other uses, that due to their hazardous or noxious nature, should be located in a relatively isolated and undeveloped area. Very low density dispersed, single-family residential uses are also appropriate within rural areas where lot sizes are large and where densities do not require the provision of urban type services. Private septic tanks and wells are the primary on site services available to support residential development, but fire, rescue squad and sheriff protection may also be available. Population densities will be very low.

Discussion. The Rural class is the broadest of the five classes and will generally constitute the major land class on county land classification maps. Local governments may subdivide the Rural class into subclasses such as Rural/Agriculture, Rural/Forestry etc. in order to illustrate where these basic rural activities will occur.

Rural with Services

Purpose. The Rural with Services class is to provide for very low density land uses including residential use where limited water services are provided in order to avert an existing or projected health problem. Development within this class should be low intensity in order to maintain a rural character. Rural water systems, such as those funded by Farmers Home Administration, are or may be available in these areas due to the need to avert poor water quality problems. These systems, however, should be designed to serve a limited number of customers and should not serve as a catalyst for future higher intensity development.

Description and Characteristics. Areas meeting the intent of this class are appropriate for very low intensity residential uses, where lot sizes are large, and where the provision of services will not disrupt the primary rural character of the landscape. Private wells and septic tank services may exist, but most development is supported by a closed water system. Other services such as sheriff protection and rural or volunteer fire protection and emergency rescue, etc. may also be available.

Discussion. This class is intended to be applied where the local government has provided, or intends to provide very limited water services to avert a known or anticipated health problem in a predominantly larger agrarian region.

Conservation

Purpose. The purpose of the Conservation class is to provide for the effective long-term management and protection of significant, limited, or irreplaceable areas. Management is needed due to the natural, cultural, recreational, scenic or natural productive values of both local and more than local concern.

Description and Characteristics. Areas meeting the intent of this classification that should be considered for inclusion include public trust waters and other similar lands, environmentally significant because of their natural role in the integrity of the region, including but not limited to wetlands that have a high probability of providing wildlife habitat, forest lands that are essentially undeveloped and lands which otherwise contain significant productive, natural, scenic, cultural or recreational resources.

Discussion. The Conservation class is designed to illustrate the natural, productive, scenic, cultural and recreational features that make the region a desirable place in which to live, work and visit. As such, the Conservation class should be applied to areas that because of their unique, productive, limited, cultural or natural features should be either not developed at all (preserved), or if developed, done so in an extremely limited and cautious fashion. Examples might include wetlands or other unique lands known for their natural, scenic, historical, cultural or hazardous nature. These areas might include areas identified by the Natural Heritage Program, savannas, tracts of native forests, undeveloped shorelines, etc. When these areas are included in the Conservation class the local government should describe the types of uses it deems appropriate, if any, within each area and under what circumstances those uses might be appropriate. Urban services, public or private, should not be provided in these areas as a catalyst to stimulate intense development. In most cases limited on site services will adequately support any limited development within this class and will also protect the very features which justify the area's inclusion in the Conservation class. The primary intent of the Conservation class is to provide protection for the resources included therein. Policy development in the Land Use Plan should acknowledge the intent of this class and policies should be consistent with the function of areas shown in the Conservation class.

Appendix 2 GENERAL SOIL MAP UNITS

The general soil map shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, it consists of one or more major soils and some minor soils. It is named for the major soils. The soils making up one unit can occur in another but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or a building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

The general soil map of Davie County does not join those of Iredell and Yadkin Counties exactly in all places because of changes in dominance of similar series across county lines, changes in series concepts, or changes in mapping of miscellaneous areas.

1. Gaston-Mocksville-Mecklenburg

Gently sloping to steep, well drained soils that have a loamy surface layer and a clayey or loamy subsoil with a low or moderate shrink-swell potential; formed in material weathered from mafic and intermediate crystalline rocks; on uplands

This map unit is mainly in the northeastern, central, and southwestern parts of the County. The landscape consists of broad to narrow ridges and side slopes.

Most of the gently sloping or strongly sloping soils in this map unit are used as cropland, pasture, or hayland. The rest of the acreage is used mainly as woodland.

This map unit makes up about 27 percent of the County. It is about 49 percent Gaston soils, 17 percent Mocksville soils, 10 percent Mecklenburg soils, and 24 percent soils of minor extent (fig. 2).

Gaston soils are gently sloping on the broad ridges and are strongly sloping and moderately steep on side slopes. Typically, they have a surface layer of dark reddish brown clay loam or loam. The subsoil is predominantly dark red and red clay and clay loam.

Mocksville soils are gently sloping to moderately steep on narrow ridges and are strongly sloping to steep on side slopes. Typically, they have a surface layer of dark grayish brown sandy loam. The subsoil is predominantly dark yellowish brown clay loam.

Mecklenburg soils are gently sloping on the broad ridges and are strongly sloping on side slopes. Typically, they have a surface layer of dark brown clay loam. The subsoil is yellowish red clay and clay loam.

The minor soils include Armenia soils on small or medium flood plains or in depressions, Chewacla soils on flood plains, Iredell and Sedgefield soils in depressions and at the head of drainageways, and Enon soils on ridges and side slopes.

In most areas the gently sloping major soils in this map unit have been cleared of trees and generally are moderately suited to cultivated crops. Corn, soybeans, and small grain are the main

crops. The gently sloping and strongly sloping soils generally are moderately suited to pasture and hay. Tall fescue and ladino clover are the main forage species. A high content of clay in the surface layer of the Gaston and Mecklenburg soils adversely affects tillage and seedbed preparation. The susceptibility to erosion also is a problem, especially in the more sloping areas.

The gently sloping to steep soils generally are moderately suited to woodland. The wooded areas are mostly mixed hardwoods or mixed hardwoods and pine. Some areas that were once cleared of trees are planted to pine or support mostly volunteer native pine. In the steep areas, the use of logging equipment is restricted, and erosion is a hazard along logging roads and skid trails. In some areas woodland management is limited by the high content of clay in the surface layer caused by excessive water erosion.

2. Cecil-Pacolet-Rion

Gently sloping to steep, well drained soils that have a loamy surface layer and a clayey or loamy subsoil with a low shrink-swell potential; formed in material weathered from felsic crystalline rocks; on uplands

This map unit is in the western, south-central, and northeastern parts of the County. The landscape consists of broad ridges and side slopes.

The Cecil soils in this map unit are used mainly as cropland, hayland, or pasture. Some areas are wooded. The Pacolet and Rion soils in this map unit are used mainly as woodland.

This map unit makes up about 23 percent of the County. It is about 32 percent Cecil soils, 30 percent Pacolet soils, 9 percent Rion soils, and 29 percent soils of minor extent (fig. 3).

The gently sloping Cecil soils are on broad ridges. Typically, they have a surface layer of reddish brown sandy clay loam. The subsoil is predominantly red clay.

The gently sloping to steep Pacolet soils are on side slopes. Typically, they have a surface layer of yellowish brown sandy loam or yellowish red sandy clay loam. The subsoil is red clay and clay loam.

The strongly sloping to steep Rion soils are on side slopes. Typically, they have a surface layer of yellowish brown sandy loam. The subsoil is reddish yellow clay loam and brownish yellow sandy loam.

The minor soils include Appling soils on ridges, Chewacla soils on flood plains, and Wedowee soils on gently sloping ridges and strongly sloping side slopes.

The gently sloping to strongly sloping major soils in this map unit are moderately suited to cultivated crops, pasture, and hay. Corn, soybeans, and small grain are the main cultivated crops. Tall fescue and ladino clover are the main forage species. A high content of clay in the surface layer caused by excessive water erosion adversely affects tillage and seedbed preparation on the gently sloping Cecil and Pacolet soils. Erosion is a severe hazard on the strongly sloping to steep soils.

The soils in this map unit are moderately suited to woodland. The wooded areas are mostly mixed hardwoods and pine. In some areas woodland management is limited by the high content of clay in the surface layer caused by excessive water erosion.

3. Pacolet-Wedowee

Gently sloping to steep, well drained soils that have a loamy surface layer and a clayey subsoil with a low shrink-swell potential; formed in material weathered from felsic crystalline rocks; on uplands

This map unit is mainly in the eastern part of the County, along the Yadkin River. The landscape consists of moderately broad to relatively narrow ridges and side slopes.

The gently sloping Pacolet and Wedowee soils are used mainly as cropland, pasture, or hayland. The strongly sloping Pacolet and Wedowee soils are mostly wooded, with some areas used as pasture or hayland.

This map unit makes up about 19 percent of the County. It is about 73 percent Pacolet soils, 10 percent Wedowee soils, and 17 percent soils of minor extent (fig. 4).

The gently sloping Pacolet soils are on ridges, and the strongly sloping Pacolet soils are on side slopes.

Typically, they have a surface layer of yellowish red sandy clay loam and a subsoil of red clay and clay loam.

The gently sloping Wedowee soils are on moderately broad to narrow ridges, and the strongly sloping Wedowee soils are on side slopes. Typically, they have a surface layer of dark yellowish brown sandy loam. The subsoil is predominantly yellowish red clay.

The minor soils include Chewacla soils on flood plains and Rion soils on strongly sloping to steep side slopes.

The gently sloping major soils in this map unit are moderately suited to cropland, pasture, and hay. Corn, soybeans, and small grain are the main cultivated crops. Tall fescue and ladino clover are the main forage species. The slope causes a severe hazard of erosion in cultivated areas.

The soils in this map unit are moderately suited to woodland. Wooded areas are mostly mixed hardwoods or mixed hardwoods and pine. The use of logging equipment is limited in areas of moderately steep and steep soils, and erosion is a hazard along logging roads and skid trails.

4. Enon-Mocksville

Gently sloping to steep, well drained soils that have a loamy surface layer and a clayey or loamy subsoil with a high or low shrink-swell potential; formed in material weathered from mafic and intermediate crystalline rocks; on uplands

This map unit is mainly in the north-central part of the County. Two smaller areas are along the southern county line. The landscape consists of broad ridges and narrow side slopes.

The gently sloping Enon and Mocksville soils are used mainly as pasture or hayland. A small acreage is used as cropland. The rest of this map unit is used mainly as woodland or pasture.

This map unit makes up about 17 percent of the County. It is about 51 percent Enon soils, 20 percent Mocksville soils, and 29 percent soils of minor extent (fig. 5).

The gently sloping Enon soils are on broad to narrow ridges, and the strongly sloping Enon soils are on side slopes. Typically, they have a surface layer of dark brown fine sandy loam. The

subsoil is predominantly yellowish brown clay. Some areas of the Enon soils are very stony.

The gently sloping Mocksville soils are on relatively narrow ridges, and the strongly sloping to steep Mocksville soils are on narrow side slopes. Typically, they have a surface layer of dark grayish brown sandy loam. The subsoil is predominantly dark yellowish brown clay loam.

The minor soils include Armenia, Chewacla, Iredell, Mecklenburg, and Sedgefield soils. Armenia soils are on small or medium flood plains and on flats and in depressions on uplands. Chewacla soils are on flood plains. Iredell soils are in depressions and at the head of drainageways. Mecklenburg soils are on ridges and side slopes. Sedgefield soils are on the broader ridges, in depressions, or in concave areas at the head of drainageways.

The gently sloping major soils in this map unit are moderately suited to cropland and are well suited to pasture. Corn, soybeans, and small grain are the main cultivated crops. Tall fescue and ladino clover

are the main forage species. Erosion is a moderate hazard in cultivated areas. In some areas stones in the surface layer also are a limitation affecting cropland.

The soils in this map unit are moderately suited to woodland. The wooded areas are mostly mixed hardwoods. The slope and stones in the surface layer in some areas limit the use of equipment. Because of the slope, erosion is a severe hazard along logging roads and skid trails.

5. Mayodan

Gently sloping to steep, well drained soils that have a loamy surface layer and a clayey subsoil with a moderate shrink-swell potential; formed in material weathered from Triassic sedimentary rocks; on uplands

This map unit is in the northwestern part of the County. The landscape consists of gently sloping ridges and strongly sloping to steep side slopes.

The gently sloping soils in this map unit are used mainly as cropland, hayland, or pasture. The strongly sloping to steep soils are used mainly as woodland.

This map unit makes up about 10 percent of the County. It is about 85 percent Mayodan soils and 15 percent soils of minor extent (fig. 6).

Typically, the Mayodan soils have a surface layer of pale brown silt loam in uneroded areas and a surface layer of yellowish red silty clay loam in eroded areas. The subsoil is predominantly red and yellowish red clay and silty clay.

The minor soils include Chewacla soils on flood plains and Granville soils on ridges and side slopes.

Most of the gently sloping major soils in this map unit are moderately suited to cultivated crops, pasture, and hay. Corn, soybeans, tobacco, and small grain are the main cultivated crops. Tall fescue and ladino clover are the main forage species. Erosion is a moderate hazard. The more sloping areas are more susceptible to erosion than the less sloping areas and thus are less well suited to cultivated crops. In the moderately eroded areas, a high content of clay in the surface layer adversely affects tillage and seedbed preparation.

The soils in this map unit are moderately suited to woodland. The wooded areas are mostly mixed hardwoods or mixed hardwoods and pine. Areas that were once cleared of trees have been planted to pine or support volunteer native pine. In some areas, the slope restricts the use of logging equipment and erosion is a severe hazard along logging roads and skid trails. In the

moderately eroded areas, the high content of clay in the surface layer limits the use of equipment and increases the seedling mortality rate.

6. Chewacla-Riverview

Nearly level, somewhat poorly drained and well drained soils that have a loamy surface layer and subsoil with a low shrink-swell potential; formed in recent alluvium; on flood plains

This map unit is along the major streams in the County. The areas are long and narrow and are on the lowest elevations in the County.

Chewacla soils are used mainly as woodland. Some areas are used as pasture or cropland. Riverview soils are used mainly as cropland or pasture.

This map unit makes up 4 percent of the County. It is about 54 percent Chewacla soils, 28 percent Riverview soils, and 18 percent soils of minor extent (fig. 7).

Chewacla soils are somewhat poorly drained and are frequently flooded. They are in the lower areas away from the larger stream channels and are commonly adjacent to the channels along the smaller streams. Typically, they have a surface layer of dark yellowish brown loam. The subsoil is yellowish brown, light yellowish brown, and very pale brown loam, sandy clay loam, and sandy loam.

Riverview soils are well drained and are frequently flooded. They occur in the slightly higher areas near the larger stream channels. Typically, they have a surface layer of dark yellowish brown loam. The subsoil is brown, dark yellowish brown, and yellowish brown clay loam and silty clay loam.

The minor soils include Altavista, Buncombe, and Roanoke soils on flood plains and Masada soils on stream terraces.

Most of the major soils in this map unit are moderately suited to cropland and pasture. Corn, soybeans, and small grain are the main cultivated crops. Tall fescue and ladino clover are the main forage species. The wetness and the flooding are the main limitations.

The soils in this map unit are well suited to woodland. The wooded areas are mostly mixed hardwoods. The wetness and the flooding limit the use of equipment and increase the seedling mortality rate.

Appendix 3
Davie County Land Use Planning Committee
Questionnaire Results
May 1999

This survey is meant to give a general overview of how the Committee values various land use related issues. This survey is not meant to be scientific and we should not get too wrapped up in the statistical analysis of the number of votes for each answer to each question. Rather, this survey should be used as a tool to aid the Committee in determining the general direction that the County land use plan should take. The questions in the survey can best be grouped into several categories for review. The categories of questions are: How Much Growth? What Type? Where? Growth Management, Character of Growth and Development, and Housing.

How Much Growth? What Type? Where?

- When asked directly, Committee members are split on whether or not the County should actively stimulate growth. However, responses to other questions indicate that a moderate push for growth would be acceptable. For example, the responses to *question 1* (should Davie County actively stimulate growth?) were evenly split, while the Committee agreed that the County should continue to recruit both high-tech industries and traditional industries to locate within the County.
- Although the group realizes that Davie County will never be totally self-sufficient, the Committee agrees that increased retail/commercial growth is needed in the County to keep tax dollars local.
- The group sees a need for a strong retail center in the County and most agree that Mocksville should remain the primary retail center.
- The Committee believes that the County should continue to expand infrastructure, especially the public sewer system, to stimulate growth in areas that are planned for growth. (Package treatment plants divert growth from planned areas.)
- The Committee agrees that the northeastern portion of the County and the areas around municipalities should be prepared for high density development, while the remainder of the County should remain rural, with low density development. These planned, high density growth areas should be equipped with adequate public facilities and utilities before high density development occurs.

Growth Management - Managed Growth

- Generally, the group felt that the County is in the driver's seat concerning the type and quality of development that occurs.
- The group realizes that too many restrictions on growth could adversely affect the economy. On the other end of the spectrum, there is consensus that rapid, uncontrolled growth would diminish the current quality of life. A balance lies somewhere in the middle between rapid and overly restricted growth. This Committee will help to determine where

that balance lies.

- The group agrees that some entity (besides the developer) should have hold on the development that occurs. Government intervention to manage development is a solution that will add continuity and predictability to the County's growth.
- While most Committee members feel that development should pay its own way, the Committee is almost evenly split on the issue of allowing alternative sewer treatment on property with poorly drained soils (*see question 17*). This split is probably due to the fact that some members were thinking of package treatment plants while others were thinking of individual septic tanks for single family homes.

Character of Growth and Development

- The group wants office and retail development to be clustered for the convenience it will provide to residents and agrees that strip commercial development is not an acceptable form of development for the County.
- The group's opinions on quality development are clear. The group agrees that quality development is important for the positive identity of Davie County and that the County government should address these issues (appearance, signage, landscaping, design, community character) in its growth regulations (zoning ordinance, subdivision ordinance, etc.).
- Surprisingly, most Committee members felt that the environment should be protected even if it meant a decline in other aspects of the County such as the local tax base.

Housing

- The Committee is split on many of the issues addressing housing in the County. Most Committee members agree that appearance standards for manufactured housing should be more restrictive, however, there is no consensus on how strict regulations will affect the availability of affordable housing in the County (*see question 30*).
- In addition, there is no consensus on whether or not the County's provision of affordable housing is adequate (*see question 25*) or whether or not the County should concentrate housing efforts on current citizens or future citizens (*see question 9*).

Major Findings From Wish List Table

- More heavy and light industry in the County, but not in my community.
- More condominiums, recreation, offices, and institutional uses in both the County AND my community.
- More apartments in the County, but not necessarily in my community.
- Less manufactured homes Countywide.

Davie County Land Use Planning Questionnaire Results May 1999

1) County government should take actions to stimulate growth in Davie County.

Strongly Agree 1	Agree 6	Tend to Agree 1	No Opinion 1	Tend to Disagree 3	Disagree 5	Strongly Disagree
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2) County government should take actions to stimulate growth in the *northeastern* quadrant of Davie County.

Strongly Agree	Agree 5	Tend to Agree 5	No Opinion	Tend to Disagree 2	Disagree 4	Strongly Disagree 1
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3) The preservation of rural open spaces and farmland is important to the County's identity and citizens' quality of life.

Strongly Agree 11	Agree 5	Tend to Agree 1	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
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4) Davie County is in a strong bargaining position to attract and influence the type of growth that it wants, rather than having to accept any type of growth that comes along.

Strongly Agree 7	Agree 4	Tend to Agree 4	No Opinion	Tend to Disagree	Disagree 1	Strongly Disagree 1
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5) The public sewer system should be expanded in Davie County to stimulate growth.

Strongly Agree 2	Agree 5	Tend to Agree 5	No Opinion	Tend to Disagree 1	Disagree 3	Strongly Disagree 1
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6) Davie County is economically self-sufficient and does not have to depend on neighboring areas for its economic well-being.

Strongly Agree	Agree 1	Tend to Agree 1	No Opinion	Tend to Disagree 4	Disagree 9	Strongly Disagree 2
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7) Davie County's environment should be protected at all costs, even if this means that other aspects of the County might decline as a result (such as the local tax base.)

Strongly Agree 1	Agree 4	Tend to Agree 6	No Opinion	Tend to Disagree 4	Disagree 2	Strongly Disagree
------------------------	------------	-----------------------	---------------	--------------------------	---------------	----------------------

8) Local government has a responsibility to encourage the provision of suitable housing for its citizens, especially if such housing is to be provided only through the private market.

Strongly Agree 2	Agree 4	Tend to Agree 9	No Opinion 1	Tend to Disagree	Disagree 1	Strongly Disagree
------------------------	------------	-----------------------	--------------------	---------------------	---------------	----------------------

9) Davie County should concentrate its efforts on encouraging suitable housing for its current citizens before it encourages those outside of the County to move to Davie.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
2	3	5	2	5		

10) New development should be required to pay its own way, with no subsidy from local government to cover the costs of public facilities and services that are provided to the development.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
4	6	3	1	2	1	

11) The appearance of manufactured housing (mobile homes, etc.) should be more restrictive in Davie County.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
6	6	1	1	1	2	

12) Growth should be managed in a way to allow economic growth while preserving the character of the community.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
10	6	1				

13) Strip highway commercial development is an acceptable form of development in Davie County.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
	2	3		6	3	3

14) Too many of Davie County's consumer dollars are currently spent outside of the County.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
2	8	6		1		

15) Davie County needs a strong retail center.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
1	9	4		2	1	

16) Davie County's primary retail center should be in Mocksville.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
2	2	5	2	2	4	

17) In areas where soils are poorly suited for septic systems, and no public sewer system is available, the landowner should be allowed to utilize an alternative wastewater treatment system.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
1	2	5	2	4	2	1

18) The addition of landscaping around businesses and industries is important and should be required.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
8	4	4			1	

19) If Davie County grows too rapidly, its basic appeal and quality of life will be diminished.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
6	4	7				

20) As a general rule, high density development should be encouraged in the northeast quadrant of the County and in the areas surrounding municipalities, while the remaining areas in the County should remain rural, with low density development.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
3	1	8		4	1	

21) If development is controlled too tightly, the local economy will suffer.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
2	3	4		3	3	2

22) Quality development is important for Davie County's identity.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
9	8					

23) Community appearance and design are issues which should be addressed by local government.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
5	9	1		2		

24) High-tech, clean industries (medical research, computer companies, etc.) should be encouraged to locate within the County.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
9	8					

25) A sufficient supply of low and middle income housing exists in Davie County.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
	1	6	2	6	2	

26) If high-density development takes place, it should be permitted only in areas in which a wide-range of public services (such as police protection, fire protection, garbage collection, etc.) are present.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
2	9	4		2		

27) No one has the right to tell another person how he or she must use his/her property.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
	1	2	1	6	2	5

28) Commercial development should be "clustered" in activity centers to provide convenience to residents.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
2	5	8	1		1	

29) Package wastewater treatment plants cause development to take place where it would not otherwise occur.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
3	6	7		1		

30) If development controls are applied too rigidly, the supply of housing for native people may be reduced.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
1	2	4	2	4	4	

31) Traditional industries (furniture manufacturing, lumber yards, textiles, etc.) should be encouraged to locate within the County.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
1	2	9	1	3	1	

32) Davie County should continue to conduct an active program of industrial recruitment.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
7	3	7				

33) Davie County should continue an active program of infrastructure expansion.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
3	5	5		4		

34) Signage affects the identity of Davie County and should be regulated.

Strongly Agree	Agree	Tend to Agree	No Opinion	Tend to Disagree	Disagree	Strongly Disagree
6	6	4	1			

Committee members were asked to indicate which of the following types of development they would like to see more or less of in both their immediate community and in Davie County as a whole. Responses were recorded using the district designation of each Committee member.

M=Committee member from Mocksville Area
 C= Committee member from Cooleemee Area

NE=Committee member from Northeast Davie County
 R=Committee member from Remainder of County

TOPIC	<u>My Community</u>			<u>County as Whole</u>		
	MORE	SAME	LESS	MORE	SAME	LESS
Single-family homes	M, C, R, R (4)	M, M, M, NE, NE, NE, NE, C, R, R (10)	NE, R (2)	M, M, NE, NE, C, R, R (8)	M, M, NE, NE, NE, C, R, R (8)	
Duplex homes	M, M, NE, C, C, R (6)	M, NE, R (3)	NE, NE, NE, R, R (5)	M, NE, NE, C, C, R, R (7)	M, NE, NE, NE, NE, R, R, R (8)	
Apartments	M, M, NE, C (4)	M, M, NE, C, R, R, R (7)	NE, NE, R (3)	M, M, M, NE, NE, NE, C, R, R (9)	M, NE, NE, C, R, R, R (8)	
Condominiums (owned)	M, M, M, M, NE, NE, C, C (8)	NE, NE, R, R, R (5)	NE (1)	M, M, M, M, NE, NE, NE, C, C, R, R, R (12)	NE, NE, NE, R, R (5)	
Manufactured housing (mobile homes)		M, M, NE, R, R (5)	NE (1)		NE, NE, NE, NE, NE, R, R, R (8)	M, M, M, M, NE, C, C, R, R (9)
Motels, hotels	M, M, NE, R (4)	M, M, NE, NE, C, C, R, R, R (9)	NE, NE (2)	M, C, R, R (4)	M, M, M, NE, NE, NE, NE, NE, C, R, R, R (12)	NE (1)
Retail	M, M, M, NE, C, C, R, R (8)	M, NE, NE, NE, R (5)	R, R (2)	M, M, M, M, NE, NE, NE, NE, C, R, R, R, R (13)	NE, NE, C, R (4)	
Services	M, M, NE, C, C, R (6)	M, M, NE, NE, NE, R, R, R, R (9)		M, NE, NE, NE, NE, NE, C, C, R, R (10)	M, M, M, NE, R, R (7)	
Shopping centers	M, R (2)	M, M, M, NE, NE, NE, NE, C, C, R, R, R, R (12)	NE (1)	M, NE, NE, NE, R (5)	M, M, M, NE, NE, C, C, R, R, R, R (11)	NE (1)
Highway business	M (1)	M, M, NE, NE, NE, C, R, R, R, R (10)	M, NE, C, R (4)	M, M (2)	M, M, NE, NE, NE, NE, NE, NE, C, R, R, R, R (13)	C, R (2)
Offices	M, M, M, NE, C, R, R, R (8)	M, NE, NE, NE, C, R, R (7)		M, M, M, NE, NE, NE, R, R, R, R (10)	M, NE, NE, NE, C, C, R (7)	
Heavy industrial	M, R (2)	M, M, NE, NE, NE, C, C, R, R (9)	NE, R, R (3)	M, M, M, NE, NE, NE, NE, R, R, R (10)	M, NE, C, C, R (5)	NE, R (2)
Light industrial	M, M, C, R (4)	M, M, NE, NE, C, R, R, R (8)	NE, R (2)	M, M, NE, NE, NE, NE, NE, R, R, R (10)	M, M, NE, C, R (5)	
Institutional (churches, schools, medical)	M, M, M, NE, NE, NE, C, R, R, R (10)	M, NE, C, R, R (5)		M, M, NE, NE, NE, NE, NE, C, R, R, R (11)	M, M, NE, C, R (5)	
Recreation (parks)	M, M, M, NE, NE, NE, NE, R, R, R, R (11)	C, C, R (3)	M (1)	M, M, NE, NE, NE, NE, NE, NE, R, R, R, R (12)	M, C, C, R (4)	M (1)
Other: Nature area	NE (1)			NE (1)		

Appendix 4
DESIGN GUIDELINES
NORTHEASTERN DAVIE COUNTY

ENDORSED BY
DAVIE COUNTY COMMISSIONERS
AUGUST 17, 1992

INTRODUCTION

The northeastern section of Davie County, North Carolina is a rapidly growing area which has experienced significant gains in both population and commercial activity over the past several years. The area is served by Interstate 40 which, acting together with the generally positive perception of Davie County as a desirable residential community, has stimulated considerable growth in the area. An additional source of growth pressure lies in the fact that Davie County is adjacent to the western section of Forsyth County, which has itself experienced much development in recent years and exerts a certain "spillover effect" on Davie County. The availability of public water service and the *potential* availability of public sewer service in northeastern Davie combine to create a situation in which growth will likely continue to occur at a rapid pace. These conditions make it imperative that the County plan now in anticipation of future growth.

Davie County currently has both a Zoning Ordinance and Subdivision Regulations in force. These tools contain basic standards for development and form the foundation for the County's growth management program. There is concern, however, that the County must take additional steps in order to create an environment in which quality growth is fostered. The purpose of these design guidelines is to address this issue, that is, to provide a set of standards which can be used to supplement the zoning and subdivision regulations. These standards can then be used to shape development in the area through mechanisms such as:

- Special use district rezoning
- Special use permits
- Overlay zoning
- Voluntary compliance

For example, an applicant for a special use district rezoning should be expected to address the standards in these guidelines in order to gain approval of the rezoning request. Or, the guidelines could be incorporated into the zoning ordinance as a condition for securing a special use permit (although it would be difficult to apply such standards to only a specific section of the County.)

The guidelines have already been used as the basis for establishing an overlay zone, the *Quality Design District*, in the northeastern section of the County. This overlay zone, which was adopted by the Davie County Board of Commissioners in January, 1992, regulates neither the type of use nor intensity of use of land, but does influence elements such as landscaping, signage, street access, etc.

Finally, it is important to recognize that these *guidelines* are not *regulations* in a formal sense. Instead, they serve as a tool which can guide development in a positive direction. Therefore, the guidelines are a bit more ambitious than regulations simply because some developers may choose to comply voluntarily with these standards, and may wish to know what they can do to contribute to the overall goals expressed in the guidelines. In the absence of these guidelines, there is no uniform standard or target which can be met.

DESIGN GUIDELINES

GOALS:

To protect the quality of life of the area by promoting quality development

To minimize the adverse effects of unsightly strip development which are likely to occur in the absence of design guidelines

To present a positive image of the northeastern section as a gateway to Davie County

General

- Utilize incentives rather than rigid regulations, where possible, to achieve compliance with these design guidelines
- Discourage commercial uses (such as fastfood restaurants, convenience stores, or gas stations) which are generators of high levels of automobile trips
- Encourage owners of existing properties to establish landscaping, signage, sidewalks, etc. which are consistent with the standards applied to new development
- Encourage owners to repair and maintain existing buildings and site features such as signs
- Encourage the provision of architectural features such as planters, walls, benches, etc. in order to "break-up" and better define large expanses of open space
- Organize activities into centers (or "nodes") rather than strips
- Promote a mixture of residential, commercial, and light industrial uses in the area surrounding the intersections of US 158, NC 801, and I-40 in order to prevent the area from becoming a commercial strip
- Preserve the natural landscape as much as possible during the development process

Building Design and Orientation

- Building design should express a "village concept"--human scale facades, a pedestrian orientation, and a sense of public space to be enjoyed
- Buildings should be allowed to locate as near the front property line as possible (with needed parking provided at the rear or sides of the building rather than at the front)
- Buildings should be oriented so that they blend into the landscape rather than dominate it
- Encourage small scale buildings which create a sense of "village"
- Encourage diversity of design and variation in the heights and site placements of buildings in order to prevent a monotonous appearance
- Give attention to compatibility of building materials, building details, and fenestration patterns

Landscaping

- Landscaping should be used to soften the overall impact of the built environment, and to buffer potentially incompatible uses
- Develop a consistent pattern of planting new trees and shrubs in order to enhance the overall image of the roadway
- Identify and protect large "landmark trees" during project site design and public improvements
- Encourage the planting of trees which will be large when mature
- Study the feasibility of establishing landscaped medians along major highways
- Through landscaping, achieve a sense of buildings blending into the landscape rather than dominating it

Parking

- Reduce large, unbroken expanses of pavement by requiring the establishment of internal landscaping within parking areas

- Restrict visibility of parking lots by placing parking to the rear or sides of buildings, or screening them from view
- Parking areas should be separated from the roadway and surrounding uses by intervening landscaped areas
- Traffic within parking areas should flow in an efficient and logical pattern by making use of traffic islands, clear markings, etc.

Signs

- The overall number of signs should be minimized
- The overall area occupied by signs should be minimized
- Signs should be encouraged to blend into the landscape rather than dominate it
- A coordinated pattern of signage should be encouraged both within and among developments
- Building signs (wall signs, integrated roof signs, etc.) should be given priority over freestanding signs
- Flashing or moving signs should be prohibited, as should portable or projecting signs
- Large scale off-premises advertising signs (“billboards”) should be excluded from the area, along with all other off-premises signs
- Permitted signs should convey necessary information but should not be allowed to dominate the landscape
- Sign height should be limited to no more than six (6) feet, and should be kept as low to the ground as possible (without obstructing necessary sight distances of motorists, etc.)
- With regard to freestanding signs, ground signs should be given priority over pole signs
- The overall number of freestanding signs should be minimized and adequate spacing should be provided between such signs in order to prevent a cluttered appearance
- Wall signs should be limited in area and not be allowed to dominate the appearance of the building

Streets

- Connect existing internal circulation Systems
- Develop an internal circulation system among individual properties which connects them into a single (or minimal number of) access point(s)
- Minimize curb cuts onto major highways by reducing the number of cuts allowed in new developments and consolidating existing cuts where feasible
- Scale the number of permitted access points to the length of street frontage; larger lots should be allowed more access points
- Provide pedestrian crosswalks where appropriate
- Reduce the domination of the automobile and encourage pedestrian traffic by constructing sidewalks
- Reduce traffic congestion by providing extra turn lanes, deceleration lanes, etc.
- Wherever possible, encourage access onto streets of lower classification
- Discourage access near major intersections
- Except where formal joint access agreements are in place, keep access points away from abutting property lines

Screening

- Place utility lines (telephone, electric power, cable television, etc.) underground where possible
- Screen potentially unsightly facilities such as solid waste containers, HVAC equipment, etc., from public view
- Require the use of appropriate methods for screening, for example, chain link 'fencing should not be allowed to serve as a visual buffer

Lighting

- Exterior lighting levels should not exceed that which is required to achieve an appropriate level of visibility and safety; for example, no high intensity lighting should be used

- Exterior lighting should be designed and directed so that it is confined primarily to the subject lot, for example, no, search lights or other devices directed primarily away from the lot should be permitted
- No exterior lighting device should exceed a height of thirty (30) feet

What's Wrong With This Picture?

The town below seems like a pleasant place to live. What follows are regulations that the building of such a town today might encounter—a composite from communities across the country.

The Violations:

1. Stores too convenient for local residents. Newly erected commercial buildings must often be in a zone separate from residential areas.

2. Houses too close together. These structures violate minimum side-setback requirements. In many residential areas there must be at least twenty feet between dwellings, eliminating the possibility of row houses.

3. Houses too small. Many newer communities have minimum-square-footage requirements, which effectively dictate that only people of a certain income level may live there.

4. Not enough parking. Typically, three to four parking spaces are required per 1,000 square feet of commercial space. Many commercial buildings today may not be more than one story high because they don't have enough parking space to be taller.

5. Sidewalk café not allowed. Restaurants and other vehicles may be subject to a variety of sidewalk restrictions.

6. Street too narrow. It must be widened wide enough for large fire trucks to maneuver.

7. School use close to town. Segregated land-use practices may confine education, religion, and business to distinct zones.

8. Sidewalk café not allowed. Restaurants and other vehicles may be subject to a variety of sidewalk restrictions.

9. Street too narrow. It must be widened wide enough for large fire trucks to maneuver.

10. School use close to town. Segregated land-use practices may confine education, religion, and business to distinct zones.

11. Apartments above commercial space. They violate common "single-use" provisions.

12. Sidewalk too narrow. Five feet is a typical requirement.

13. Group housing. In some places there are sharp limits on the number of unrelated people who may live together in a single dwelling unit.

14. Aesthetic advances. Communities often have regulations governing the size and placement of signs and ornaments even the size and style of the lettering.

15. Too many buildings. In certain zones less than half and sometimes as little as one fifth of the area may be occupied by structures.

16. Capsules and sleepers not allowed. These are frequently ruled out by minimum-height stipulations.

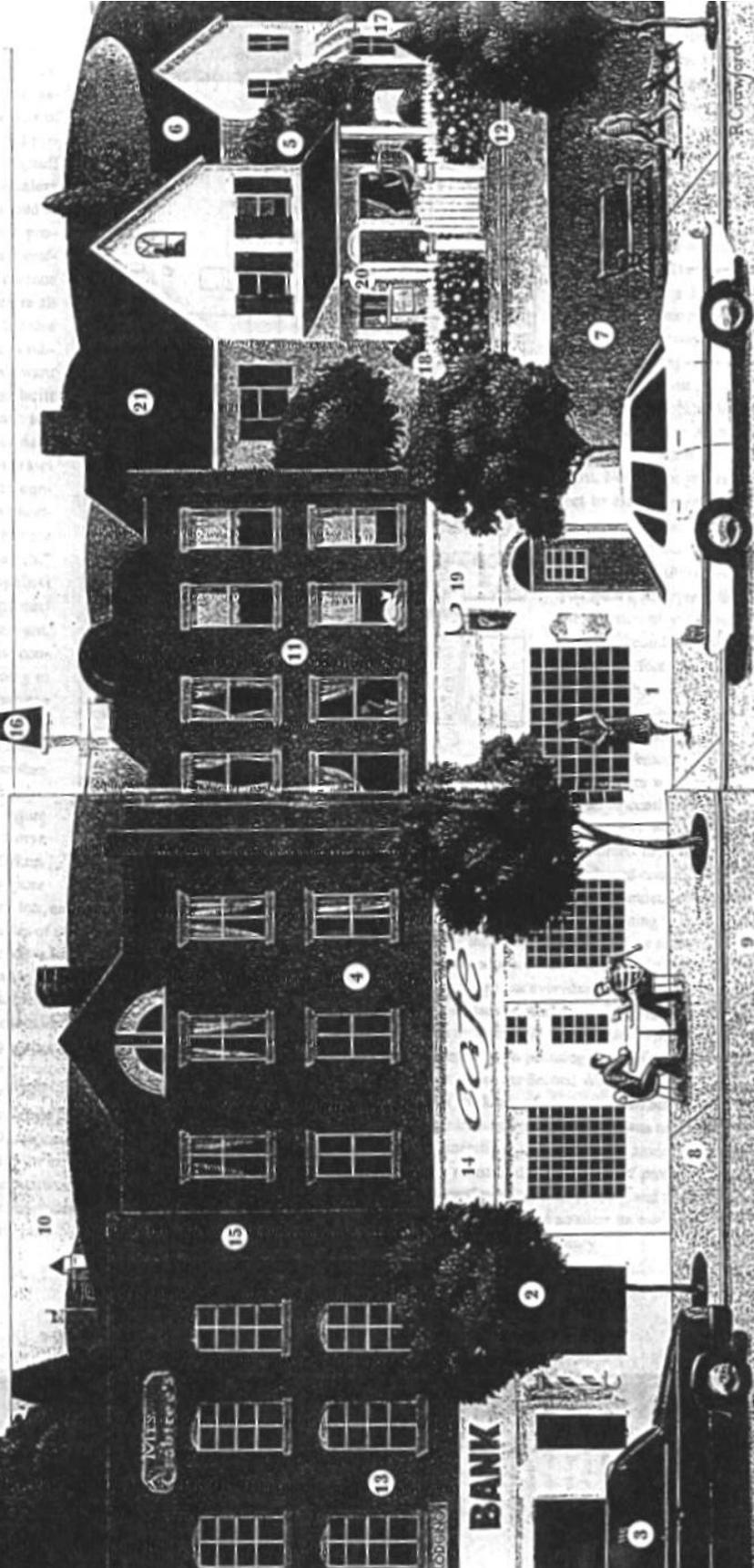
17. No driveway. Individual dwellings may be required to have at least two off-street parking spaces.

18. Illegal fence. Ordinances often cover the permissible size and placement of fences in front yards.

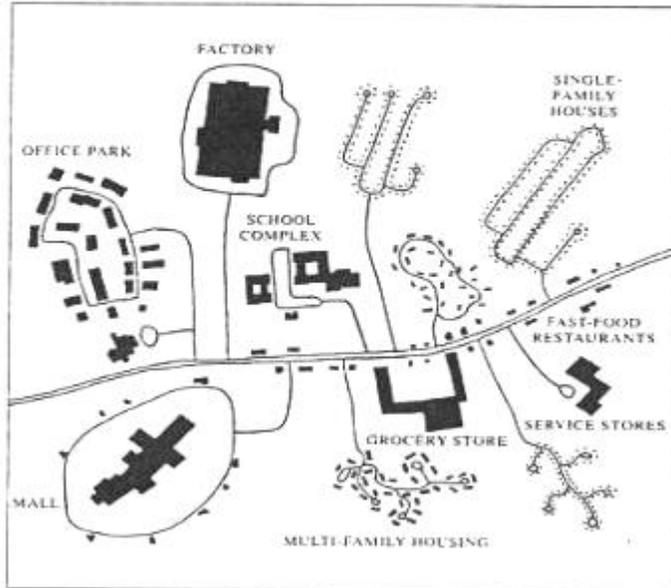
19. No perpendicular signs allowed. Such signs are commonly deemed an intrusion on a street.

20. Not allowed to run a business out of a house. Doctors, dentists, and jewelry stores (and female vendors!) beware.

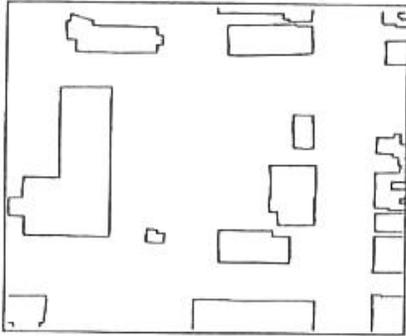
21. House too close to road. Setback rules bar too-close relationships between residences and the sidewalk.



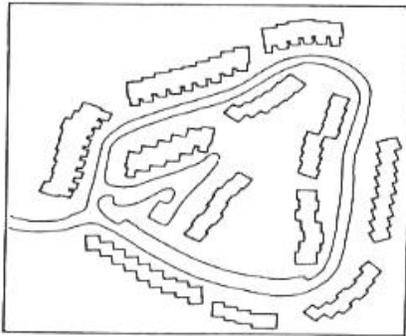
SEPARATION CAUSED BY
ZONING CODES



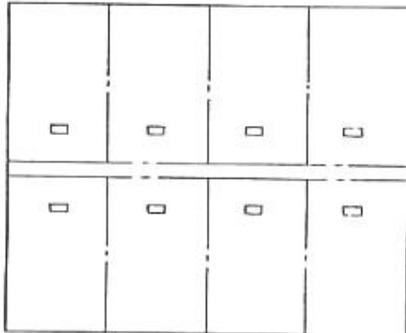
**CURRENT
ZONING CODES**



Commercial sprawl



Apartment complex

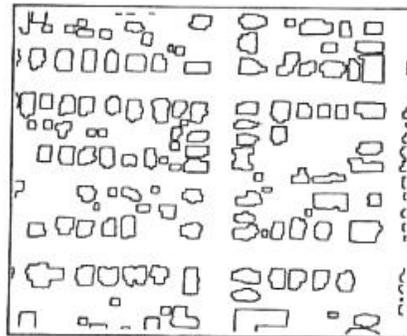


Housing subdivision

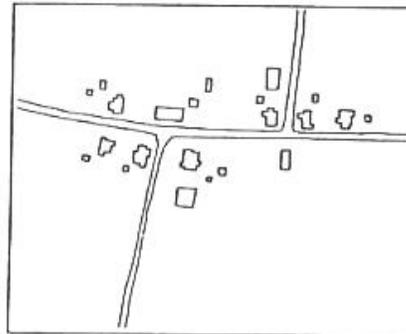
**TRADITIONAL
NEIGHBORHOOD DESIGN**



City blocks



Small town



Village