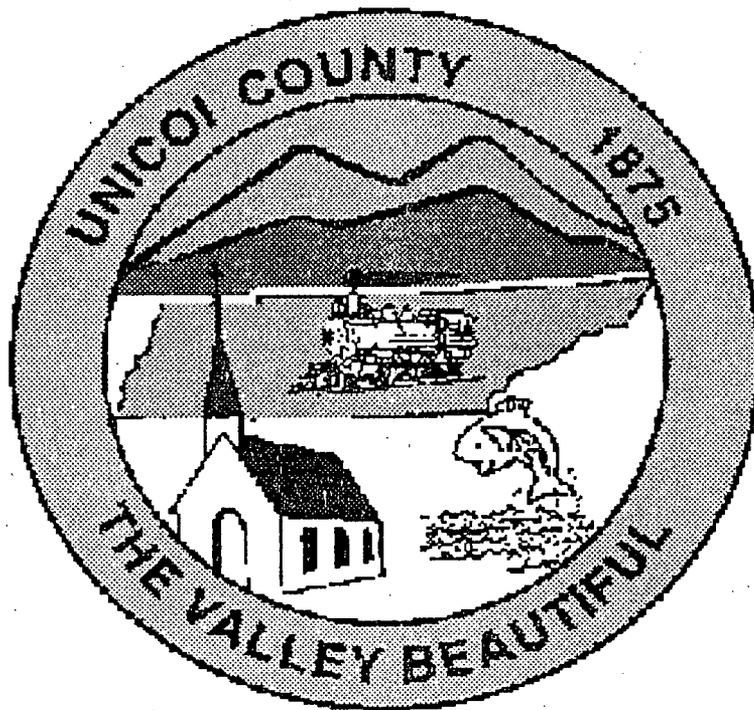


Erwin Land Use and Transportation Policy Plan



ERWIN, TENNESSEE
2000-2020

**LAND USE AND TRANSPORTATION POLICY PLAN
ERWIN, TENNESSEE
2000-2020**

**PREPARED FOR
ERWIN PLANNING COMMISSION**

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UPPER EAST TENNESSEE REGION
JOHNSON CITY, TENNESSEE**

JUNE 2001

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CHAPTER 1

INTRODUCTION

PURPOSE OF PLAN

The purpose of this document is to provide Erwin, Tennessee with a policy plan for the future development of land and transportation facilities. A Land Use and Transportation Policy Plan is an essential planning instrument for a community with the primary purpose of producing an overall development plan and identifying strategies for implementing the plan. The objective of such a plan, as outlined in Section 13-4-203 of the *Tennessee Code Annotated* is to serve as a guide for "accomplishing a coordinated, adjusted and harmonious development of the municipality which will, in accordance with existing and future needs, best promote public health, safety, order, convenience, prosperity, and general welfare as well as efficiency and economy in the process of development."

The Erwin Land Use and Transportation Policy Plan covers a planning period of twenty years, 2000-2020. The information presented in this plan should be used as a framework to guide municipal and county officials, community leaders, businessmen, industrialists, and others as they make decisions, which affect the future growth and development of Erwin. The plan is not intended to supersede the responsibility or authority of local officials and department heads. Instead, it is designed to give the public and private sectors a basis to constructively use the interdependencies, which exist between the various elements and organizations in the community. The development goals, objectives, and policies and the implementation strategies present in this plan should be periodically reviewed, and when necessary, updated to reflect unanticipated occurrences or trends.

SCOPE OF PLAN

This Land Use and Transportation Policy Plan is designed to formulate a coordinated, long-term development program for the Town of Erwin and its identified projected growth area. The preparation of a development program requires gathering and analyzing a vast array of information. The historic events, government structure, natural factors, and socioeconomic characteristics of Erwin are studied to determine how these have affected and will affect land uses and transportation facilities. Existing land uses and transportation facilities are analyzed to identify important characteristics, relationships, patterns and trends. From these analyses, pertinent problems, needs and issues relative to land use and transportation in Erwin are identified. An amalgamation of this information is utilized to produce a Major Thoroughfare Plan and a Development Plan. The Development Plan, as present herein, consists of two interdependent elements: the first being the identification of development goals and objectives and the establishment of policies for achieving them, and the second being the creation of a development plan concept which visually illustrates the goals, objectives, and policies. To achieve the goals and objectives identified in the development plan, specific strategies or measures are outlined in an implementation schedule.

COMMUNITY GOALS, PROCESS AND METHODOLOGIES

The development of community goals and objectives is a primary product of this Land Use and Transportation Policy Plan. Essential to the development of these goals and objectives is citizen participation. Citizen participation is necessary to identify local needs and problems perceived by the community at large. Several methodologies are available for obtaining citizen input. The methodologies utilized in this Plan included surveys and interviews with local government officials and department heads, and solicitation of public comments at planning commission meetings. From this input, the goals and objectives addressing the recognized needs and problems were identified. These goals and objectives are presented within Chapter 6 of this Plan.

COMPANION PLANNING DOCUMENTS

A number of companion planning documents should be used in conjunction with this Erwin Land Use and Transportation Policy Plan. They include:

1. The Erwin Urban Growth Boundary Report, 1999. As part of the Chapter 1101 planning requirements, an Urban Growth Boundary Report was prepared for Erwin in October of 1999. This report presents detailed analysis of Erwin's potential growth over the next twenty years including: population growth projections; the costs and projected costs of core infrastructure, urban services, and public facilities necessary to accommodate growth; and land management requirements for future growth.
2. The Erwin Transportation Study, 1990. The purpose of this study was to identify, analyze, and document existing roadway deficiencies on the city's street system within a designated study boundary. This study also furnished the city with information for developing a program for using available highway funds.
3. The Erwin Land Use and Transportation Policy Plan, 1998. The plan covers a planning period of approximately twelve years, 1998-2010. The purpose of the plan was used as a framework to guide municipal and county officials, community leaders, businessmen, industrialists, and others as they make decisions that affect the future growth and development of Erwin.
4. Street Improvement Program for Erwin, Tennessee, 1991. This study provides town officials with current data on the condition of Erwin's streets and street signs, and to prepare a plan for upgrading those streets and street signs, which are in unsatisfactory condition.

CHAPTER 2 BACKGROUND FOR PLANNING

INTRODUCTION

To effectively plan for any community, gathering information concerning its background is necessary. The size and location of a community are important aspects of a community. Information on a municipality's early settlement and events affecting past development assists in planning for its future development. An understanding of the community's political history and governmental structure helps to reveal the atmosphere in which future planning will take place. Background data for the Town of Erwin is presented in this chapter.

Location and Size

The Town of Erwin, comprising a total land area of approximately 1.66 square miles, is situated in the extreme northeastern part of Tennessee and within the Great Appalachian Valley, near the Nolichucky River, about 15 miles south of Johnson City, 120 miles east of Knoxville, 48 miles north of Asheville, North Carolina, and is located in central Unicoi County. Unicoi County embraces an area of approximately 185 square miles located in the extreme northeastern part of Tennessee and within the Unaka Mountain Range of the Blue Ridge Province. Unicoi County is bounded on the west by Greene County, on the north by Washington County, on the east by Carter County, and on the south by Yancy and Mitchell Counties, North Carolina.

Highways located in Erwin include: U.S. Route 23 and 19W North and South; to the north approximately 35 miles of-highway 322 intersects with I-81 in Sullivan County, Tennessee; I-181 traverses Erwin and Unicoi County, intersecting with I-81 in Sullivan County, Tennessee, and Asheville, North Carolina, approximately 48 miles to the south. Interstate 181 will be changed to future I-26 that will extend from the coast to Virginia. The regional setting for Erwin is shown on Illustration 1.

Early Settlement

Located in the beautiful mountainous section of Upper East Tennessee, Unicoi County early settlers arrived in the late 1700's and churches were organized almost immediately with the first being set up in 1785. The 1879 school reports listed 1 frame and 11 log school buildings.

Unicoi County, derived from parts of Washington and Carter Counties, was established by an Act of the General Assembly of Tennessee on March 23, 1865. Its creation, however, was not completed until October 1875, when the county was divided into ten Civil Districts and public officers were appointed. On January 3, 1876, the County Court was organized and the first county seat was established near the present site of Erwin.

Jacob Brown was one of the earliest settlers in Unicoi County. In 1771, he purchased all of Unicoi County and parts of Washington and Greene Counties from the Indians. He later sold sections to settlers arriving from North Carolina who were looking for

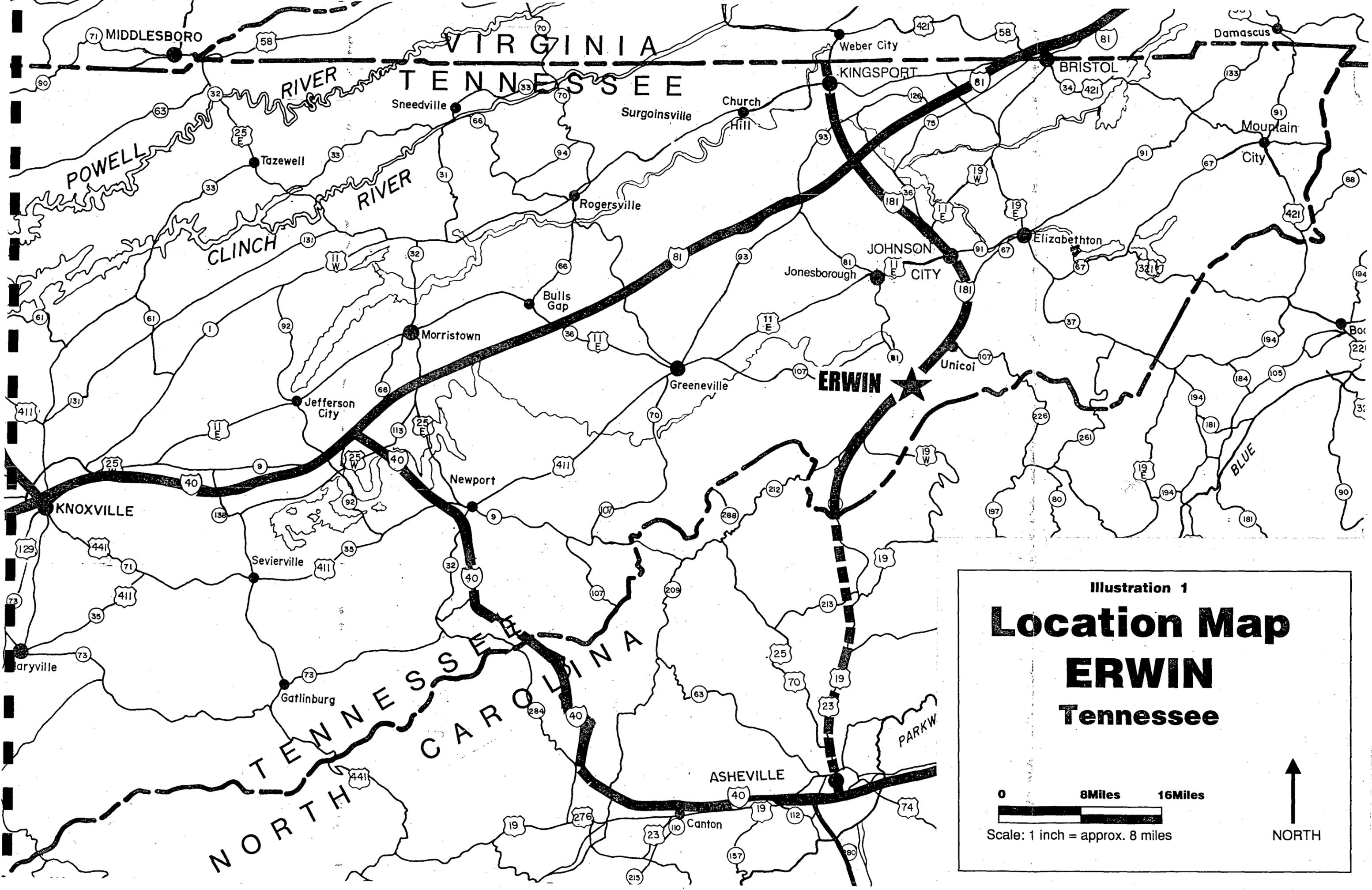


Illustration 1
Location Map
ERWIN
Tennessee

0 8Miles 16Miles
 Scale: 1 inch = approx. 8 miles



home sites. These earlier settlers traded with the Indians, farmed and killed game for livelihood.

The commissioners who organized the county seat, located at the place long known as Longmire Post Office. The land in the vicinity was entered by Joseph Longmire, who divided his estate between his sons, John and Charles; the latter was a merchant and postmaster for many years. The town was laid off in 1876 upon thirty acres belonging to D.J.N. Ervin, who donated one-half of the lots to the county, and reserved the remainder for his own use. A donation of five acres by William Love, and two acres by G. Garland, was also made to the county. The name of the town was at first Vanderbilt, but the Legislature of 1879 changed it to Ervin, in honor of D.J.N. The post office department, however, made a mistake in changing the name, and it has since been called Erwin. Erwin was incorporated in 1903 under a Board of Mayor and Aldermen form of government. Rapid growth began when railroad construction was started in 1886.

Major Events Affecting Development

Planning in Erwin and Unicoi County is not a new idea. The early settlers did a great deal of planning. For example, when locating their homes they were careful to have an adequate water supply. They chose the land most suitable for farming, since this was to be their livelihood. Each person was doing his own planning, but there was little group action. As more people moved in, the community became larger, taking on an urban character. It was obvious that the people had to plan because they no longer depended upon themselves to supply their needs. Various groups were then formed for each particular problem whether it was to be a new school, new road, location of a playground, and the like. These problems, however, were not viewed in light of the welfare of the entire community. Realizing that some department or branch of city government was necessary to coordinate and prepare community-wide plans, the Board of Mayor and Aldermen in July 1965 created the Erwin Municipal Planning Commission as provided by the State Enabling Legislation. The Legislation states, "It shall be the function and duty of the Planning Commission to make and adopt an official general plan for the physical development of the municipality... The Commission may adopt the plan as a whole..., or as the work of making the whole plan progress, may from time to time adopt a part or parts thereof..."

GOVERNMENTAL STRUCTURE

Knowledge of the governmental structure of the municipality is an important aspect of planning for its future. A municipality's form of government, financial capability, and Planning Commission status directly affect its ability to plan for growth and development. The purpose of this section is to provide a general examination of the governmental structure of Erwin, to briefly describe its functions, and to assess its potential influence on future development.

Unicoi County, derived from parts of Washington and Carter Counties, was established by an Act of the General Assembly of Tennessee on March 23, 1865. Its creation,

however, was not completed until October 1875, when the county was divided into ten Civil Districts and public officers were appointed. On January 3, 1876, the County Court was organized and the first county seat was established near the present site of Erwin. Erwin was incorporated in 1903 under a Board of Mayor and Alderman form of government.

A five-member Board of Mayor and Alderman govern Erwin. The municipality operates under a strong mayor form of government with the mayor serving as chief executive officer and presiding member of the Board of Mayor and Alderman. The regular meetings of the Board of Mayor and Alderman are held monthly at the Erwin Town Hall.

The community has forty-one full-time and part-time employees. Employees are as follows:

City Recorder and two Clerks-----	3
Police Department-----	11
Street and Sanitation-----	13
Recreation-----	3
Firemen-----	8
Animal Control-----	1
City Hall Maintenance-----	1
Building Official/Inspector-----	1
Total-----	41

Erwin Utilities, which is owned by the Town of Erwin, controls water, sewer, and electric service within the community. Erwin Utilities is operated by a manager that is under the direction of the Erwin Utilities Board.

The office of mayor is a part-time position, with the town recorder overseeing much of the day-to-day responsibilities of the town and attending all committee meetings. Under Erwin's mayor form of government the chief executive officer attends all committee meetings, presides over the Board of Mayor and Alderman meeting, appoints planning commission members, and can have significant influence on plans for future development.

In July of 1999, the town employed a full-time building official/inspector. The primary responsibility of the official is to assure that buildings and structures in the Town of Erwin jurisdiction are constructed and maintained in the manner specified in the governing building code and local zoning ordinance. Providing the town with an official in this capacity reflects the town's commitment to see that the community is free from conditions that would present a hazard to persons occupying residential/commercial structures or to the general public. The current official is certified as building inspector, fire inspector, plumbing inspector, and plumbing plans reviewer.

Municipal Finances

The financial stability and capability of a municipality directly affects its ability to accomplish planning goals. An analysis of its revenues and expenditures is necessary to determine this financial stability and capability. According to the Town of Erwin Comprehensive Annual Financial Reports for the years ended June 30, 1996 and June 30, 2000, the municipality's total revenues have increased from \$2,620,521 in fiscal year 1996, to \$2,784,945 in fiscal year 2000, and for the same period total expenditures have decreased from \$3,204,785 to \$3,002,848. The largest source of revenue for the Town of Erwin is the local sales tax. The sales tax revenue totaled \$673,210 for the fiscal year 2000. Public Safety, to include fire and police, accounts for the largest source of expenditure for the Town, totaling \$943,392 for the fiscal year 2000.

Municipal Planning Commission

The Erwin Municipal/Regional Planning Commission was activated in July of 1965. The planning commission consists of five members including the mayor and one alderman. The officers of the Planning Commission are Chairman, Vice-Chairman, and Secretary. Regular meetings of the Planning Commission are held monthly at the Erwin Town Hall.

The Erwin Planning Commission has been very active in carrying out its functions and in its role as advisor to the Board of Mayor and Aldermen. Also the Commission has been active in Erwin's growth and development since its establishment. In addition to various official planning documents, including an adopted comprehensive plan and zoning, subdivision and floodplain regulations, the Planning Commission has also prepared numerous special studies, short and mid-range plans, and grant applications addressing public facilities, housing, transportation and recreation improvements. Erwin is served by the Upper East Tennessee Region Office of the Local Planning Assistance Office, Tennessee Department of Economic and Community Development.

Findings. Both the elected officials and town employees in Erwin take the job of providing needed services very seriously. The current board of Mayor and Alderman appear to be committed to a quality-planning program and to provide support of the role of the Planning Commission. This allows the Erwin Planning Program to operate in an atmosphere that is very conducive to effective planning. The Town of Erwin like most small towns is challenged to provide needed services. Recognizing this, the Board of Mayor and Alderman and the Planning Commission strive for new and innovative ways to improve the quality of life and to meet the needs of the community.

SUMMARY OF FINDINGS

The Town of Erwin is the county seat of Unicoi County, Tennessee, having developed as a railroad community. For many years the municipality reaped the development benefits of being located along major transportation routes. A range of natural factors, which include flooding, extreme slope, and topographic constraints, has significantly affected

the pattern of past and present development. Fortunately, the soil, climate, and air and water quality in Erwin and its growth area are favorable to development.

The municipality operates under a mayor form of government and development can be greatly affected by the leadership of the chief executive officer. Financially, the municipality has the capabilities to address some public improvement needs and had implemented a capital budgeting system. The planning program in Erwin is effective and is fully supported by the local government.

CHAPTER 3
NATURAL FACTORS AFFECTING DEVELOPMENT
INTRODUCTION

The natural environment often dictates the pattern of land use or development in a community. The climate, air and water quality, topography, drainage and flooding, and soils are significant natural factors that affect development. Ignoring these factors can prove to be extremely costly to specific property owners as well as the entire community. Not all land is suitable for development. Therefore, as land use development occurs, natural factors, which cannot be altered, must be considered in the plans for development. The limits and type of land use should be responsive to the natural factors in order to protect the welfare of the general populace. Through increased knowledge of these natural factors and the appropriate use of land, future development can avoid the mistakes of the past. The purpose of this chapter is to review and evaluate the natural factors influencing the land use patterns in Erwin and its identified projected growth area under Public Chapter 1101. The passage of Public Chapter 1101 on May 29, 1998 created the need for cities and counties to evaluate their potential growth over the next twenty years defining their responsibility to manage growth, ensure efficient use of land, and provide appropriate public service standards. The law requires that each county prepare a growth plan that places parameters on growth within the county identified as municipal urban growth boundaries, county planned growth areas, and rural areas. A county coordinating committee made up of a representative cross section of the county is established to develop these growth parameters. The county government and municipal governments within the county participate in the process by proposing these boundaries based on land needs and public service capabilities. The result should serve to guide growth within each county in a more efficient manner. The Planned Growth Area is territory identified in the county outside of municipal urban growth boundaries that must meet the requirements of TCA 6-58-106. The Urban Growth Boundary is a line that encompasses territory reserved for municipal growth that must meet the requirements of TCA 6-58-106. The growth area is shown on Illustration 2.

CLIMATE

The general climatic classification of the Erwin and Unicoi County area is Temperate humid. During the summer months, days are warming followed by cooler nights. The valleys are very warm and frequently hot, and mountains that are warm during the day become cool at night. Daytime temperatures seldom exceed 100 degrees during this period.

Winter months are characterized by warm days followed by lower temperatures at night. The average temperature is 37 degrees F, and the lowest temperature on record, which occurred at Unicoi on December 13, 1962, is -18 degrees. Sleet and snow is not uncommon, and snow covers the higher mountains from late fall through early spring.

No data is available on local climatic variation, although some does occur. This is due primarily to differences in elevation, direction of slope face, and proximity to the higher mountains. Precipitation in the county is fairly well distributed throughout the year. July

had the highest precipitation, with an average of 5.14 inches. Rainfall is usually adequate for growth of the adapted crops, but severe draughts do occur in some years.

No data is available for the mountain section of the county, but it would be expected that the temperature would range from five to fifteen degrees cooler, with the precipitation being slightly greater. The average length of the frost-free season in Unicoi County is 177 days. It occurs from about April 18 to October 12. This allows an adequate growing season for staple crops although late spring frosts are often damaging to fruit crops.

Findings. The climate of Erwin and the affect that it has had on development can be best described as moderate. Of the various climatic factors, the periodic heavy rainfalls, which can lead to inundation of floodplain areas, can have an impact on development. In general, climate has no great affect on development in the municipality.

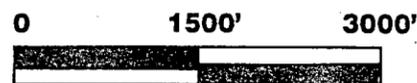
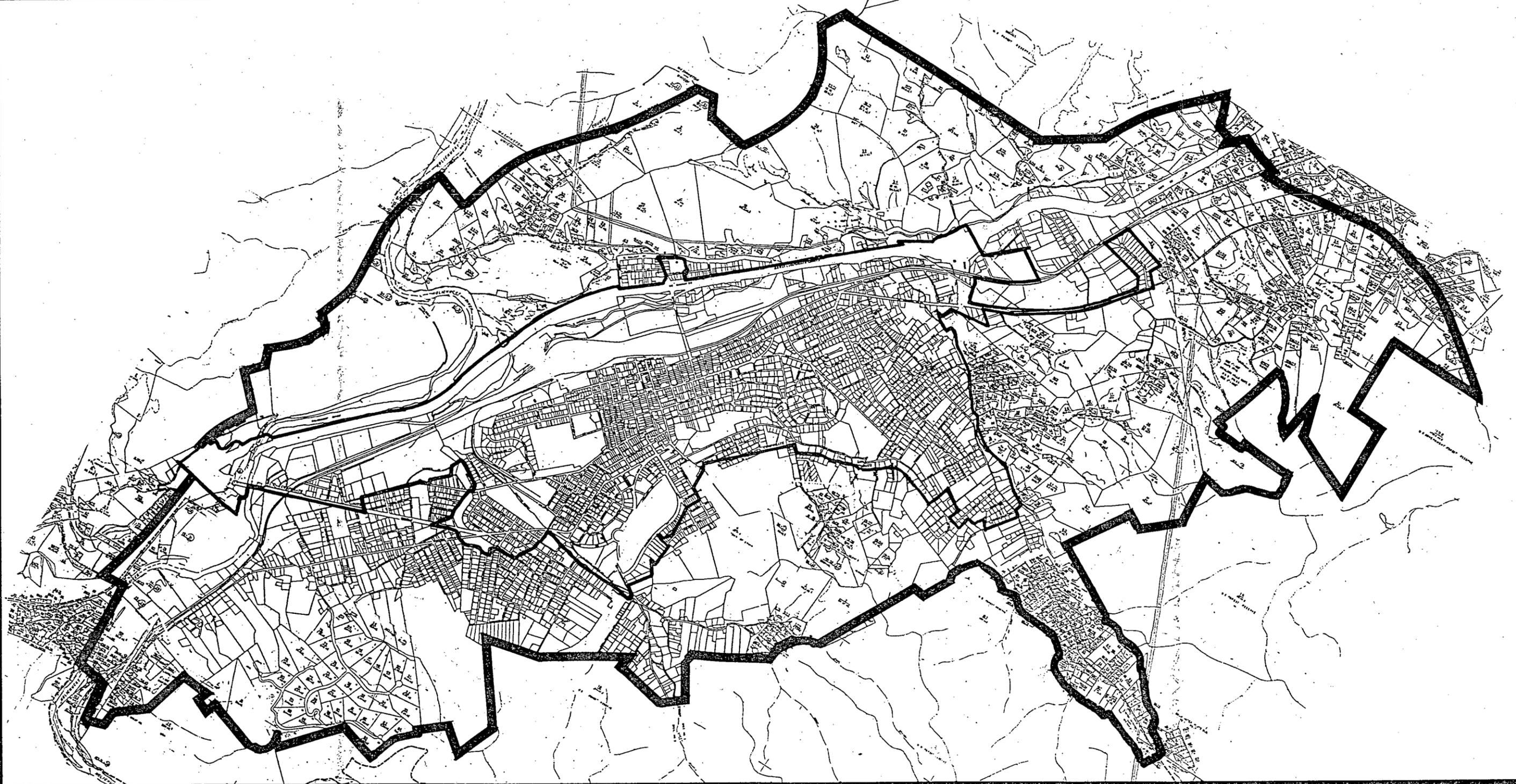
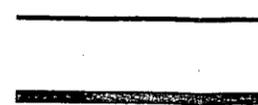


ILLUSTRATION 2
ERWIN, TENNESSEE
URBAN GROWTH AREA MAP

PREPARED JUNE, 2001 BY THE UPPER EAST TENNESSEE SECTION OF THE LOCAL
PLANNING ASSISTANCE OFFICE, DEPT. OF ECONOMIC AND COMMUNITY DEVELOPMENT

LEGEND



ERWIN CORPORATE LIMITS

URBAN GROWTH BOUNDARY

AIR QUALITY AND WATER RESOURCES

At present, the air and water quality in the Erwin area is excellent. Unicoi County is in attainment of air quality standards for all criteria for pollutants. An abundance of open space and a lack of highly urbanized areas are conducive to the maintenance of the purity of the air.

The primary water source for the Town of Erwin is from several sources around town, including the O'Brien Spring near the south end of Gay Street, the Birchfield Well on the west side, the Elks Well on the north side, and the Railroad Well on the south side. According to the latest information provided by the Tennessee Department of Environment and Conservation, the Town of Erwin is under no moratoriums due to water and wastewater treatment problems.

Findings. There are no air quality or water resource quality problems that would directly affect the future land in Erwin and its projected growth area.

TOPOGRAPHY

Topography is defined as the general configuration of the earth's surface, including its slope, geological characteristics, and other natural features. Tennessee's topography is among the most varied in the United States, and the topography of Erwin and Unicoi is no exception. Unicoi County is located in the extreme northeastern part of Tennessee and within the Great Appalachian Valley. Mountain ranges make up 80 percent of the landmass of the county, with elevations ranging from about 1,600 feet at the Unicoi, Washington County line, to 5,000 feet at the North Carolina State line. Other spot elevations are: Flag Pond, 2,300 feet; Flint Mountain, 4,320 feet; Stone Mountain, 3,640 feet; and Little Mountain, 4,400 feet. Deep gorges and valleys have been cut by geographic erosion, leaving steep slopes, cliffs and areas of rock material. Erwin is situated on comparatively level terrain with the exception of two knobs located to the east and west of the central business district. The town is located in the foothills of the Appalachian Mountains at an elevation of 1,600 feet. Excessive slope areas are found throughout the Erwin Urban Growth Boundary. There is 3,100 acres with excessive slope, which are approximately 41 percent of the total Urban Growth Boundary Area. Although the mountainous region of Unicoi County provides for excellent scenic and natural wealth, the rugged terrain has to some extent isolated Unicoi County from the rest of the region. As a result, development of Erwin and Unicoi County has not been as rapid or extensive as compared to other areas within the Upper East Tennessee Region.

Findings. Unfortunately, part of the beauty of the Erwin area yields a significant quantity of land considered undevelopable. Undevelopable land is that which contains concentrations of sinkholes and has a slope in excess of 20 percent. The most significant physical deterrent to development in the Town of Erwin is excessive slope. While there may be scattered sites that meet this criterion, only concentrations are noted in this plan. These are shown on Illustration 3, and total approximately 82 acres.

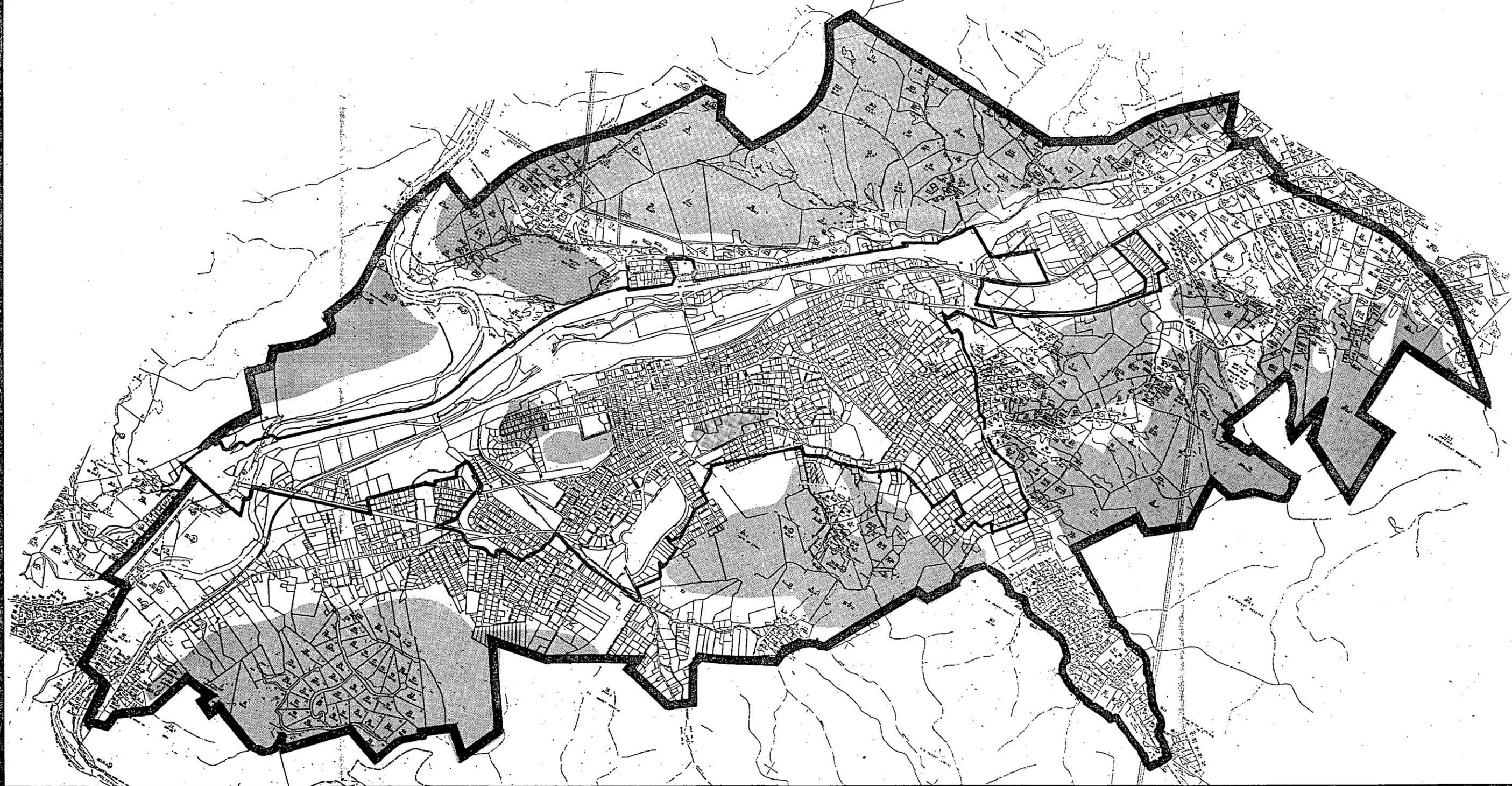


ILLUSTRATION 3
AREAS OF EXCESSIVE SLOPE
ERWIN, TENNESSEE

PREPARED JUNE, 2001 BY THE UPPER EAST TENNESSEE SECTION OF THE LOCAL
 PLANNING ASSISTANCE OFFICE, DEPT. OF ECONOMIC AND COMMUNITY DEVELOPMENT

LEGEND

-  ERWIN CORPORATE LIMITS
-  URBAN GROWTH BOUNDARY
-  EXCESSIVE SLOPE

DRAINAGE AND FLOODING

As a result of the mountainous region, drainage in Erwin and Unicoi County is well developed. A major portion of the county is drained by the Nolichucky River, which flows north through the central part of the county. South Indian Creek, which is fed by many small tributaries, flows northeast into the Nolichucky River draining the west central and southwestern sections of the county. The extreme northwest region section of the county is drained by Clarks Creek, and the Bumpass Cove Creek. These creeks flow northward and empty into the Nolichucky River in Washington County. The eastern, central and southeastern parts of the county are drained by North Indian Creek and its tributaries. This creek flows through the central portion of the county to the southwest, and empties into the Nolichucky River north of Erwin. The extreme northeastern part of the county is drained by Buffalo Creek, which flows to the northeast and empties into the Watauga River in Carter County. As previously mentioned, most of the county is located in a mountainous region with rugged topography. Most of the development in Unicoi County, therefore, has been in the valley areas, which were created by these drainage ways.

The problem of flooding is one of major concern for many communities. As a community expands outward there is a tendency to develop the overflow areas along streams, resulting in an increasingly serious flood problem. This is of particular importance within the Erwin urban area, situated as it is along three major streams. Adjacent to these streams is large land areas subject to flood overflow in which there is a potential interest in development. Development of the most hazardous areas, however, has so far been limited. The principal business and residential development is located on flood free land generally above the danger from flooding.

The areas considered subject to flooding along North and South Indian creeks and the Nolichucky River are those areas below the elevation of a Regional Flood as defined in the Federal Emergency Management Agency's "Flood Insurance Study". The report, prepared in March of 1984 at the request of the Town of Erwin, brings together information on the magnitude of the flood problems along the Nolichucky River, North and South Indian Creek, and several other small streams in and around Erwin. The study provides the flood elevations needed by local officials to promote sound flood plain management. The study stresses the need for public understanding of the local flood situation, and the importance of using the data in preparing general plans to guide future community growth. Information in the FEMA flood study should also be used in developing detailed plans for specific public and private structures and facilities.

Erwin has been a participant in the National Flood Insurance Program since September 5, 1984. This program identifies potential flood hazard areas within the community and provides the residents with the opportunity to purchase flood insurance. According to a study by the Local Planning Assistance Office in 1999, approximately 339 acres of land within the Town of Erwin is classified as flood prone. The flood hazard areas of Erwin, and its projected growth area, which are located primarily along the Nolichucky River, are depicted on Illustration 4. Detailed flood boundaries and flood elevations may be obtained from the Flood Boundary and Floodway Maps, and Flood Insurance Rate Maps prepared for Erwin by the Federal Emergency Management Agency. The Erwin Floodplain Zoning Ordinance regulates development in the identified flood hazard areas.

In July 1999, flash flooding in Erwin, Unicoi County, Tennessee, located in northeast Tennessee close to the Tennessee/North Carolina border, caused considerable damages (approximately \$400,000 per Erwin Officials) to several businesses and residences. The damages were caused by both headwater and backwater flooding of the McInturff drainage basin. Since 1977, the Town of Erwin has had at least five flood events where significant damages were recorded. Section 205 of the Flood Control Act of 1948, as amended, provides authority for the Corps of Engineers to develop and construct small flood control projects. A preliminary assessment report was completed in July 2000, which stated that there is no Federal interest in pursuing flood damage abatement under the Section 205 authority because the study area did not meet minimum flow or drainage area criteria. However, in fiscal year 2001, \$175,000 was congressionally added to the Corps of Engineers budget to complete the Feasibility Phase for a Section 205 under the Continuing Authorities Program. The Feasibility Phase was initiated in November 2000 and approximately \$100,000 (100% Federally funded) had been spent on the Preliminary Assessment Report, cursory Hydraulics and Hydrology analysis and cursory Economic analysis for the area of interest. The cursory analysis was done to establish an array of alternatives and to develop a cost for the Feasibility Study. This allowed the Town of Erwin to determine their ability to cost share the remaining work to be completed in the Feasibility Study. The total cost for the completion of the Feasibility Study was estimated to be \$500,000. The cost share would be \$250,000 to the Town of Erwin and \$250,000 to the Federal Government. At present time, the Town of Erwin has not taken action to sign a Feasibility Cost Sharing Agreement.

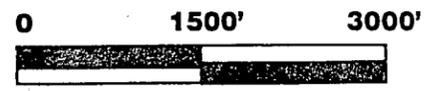
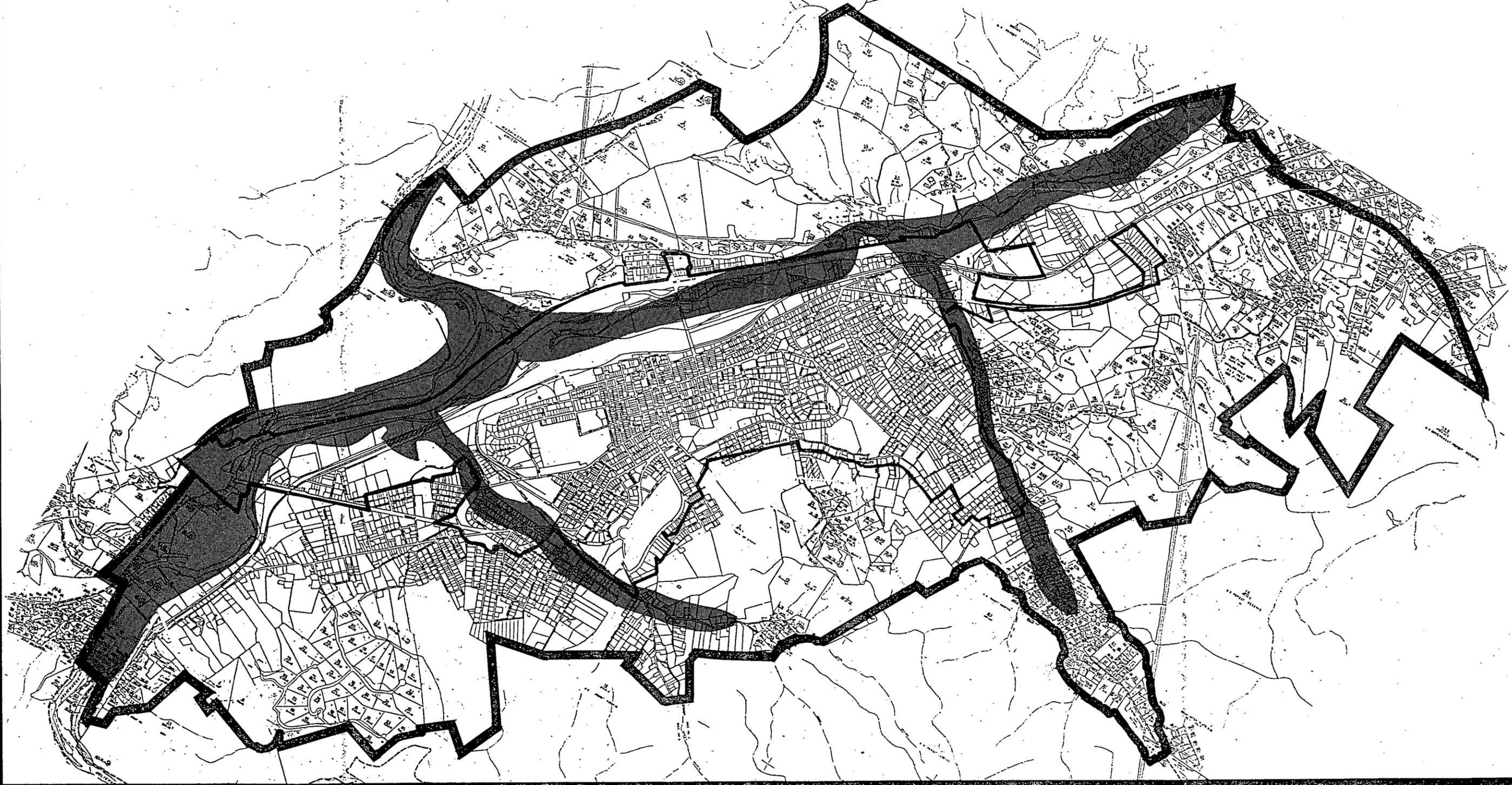


ILLUSTRATION 4
FLOOD HAZARD AREAS
ERWIN, TENNESSEE

PREPARED JUNE, 2001 BY THE UPPER EAST TENNESSEE SECTION OF THE LOCAL
PLANNING ASSISTANCE OFFICE, DEPT. OF ECONOMIC AND COMMUNITY DEVELOPMENT

LEGEND

-  ERWIN CORPORATE LIMITS
-  URBAN GROWTH BOUNDARY
-  FLOOD HAZARD AREAS

Findings. Flooding has significantly affected development in Erwin in the past and will continue to do so in the future. The restrictions placed on the several hundred acres of land in the municipality and county as flood hazard areas, significantly limit their ability for future development. It is expected that there will be considerable pressure for development in the flood hazard areas due to population increase and the need for vacant land. Some interest is being shown in developing low-lying areas along North and South Indian Creeks, and along the Nolichucky River. Due to these expected pressures for development the municipality should consider completing a detailed study of topographic elevations in the area to determine the feasibility for development.

SOILS AND GEOLOGY

One of the most important factors affecting development in any community is the content and capability of the various soils. Knowledge of the various characteristics of the soils, such as flood potential, septic tank capability, drainage qualities, depth to water table, load bearing strength, stability, shrink-swell potential, and soil depth are important in determining the appropriate land use for particular sites. Illustration 5 shows a general soils map for Erwin and the projected growth area. The map depicts the general location of the various soil groupings in and around the municipality. These maps are useful guides in planning for various types of development on large tracts of land or providing general information on the location of soils, but they do not identify the specific soils on individual tracts of land. In any one area on the soil map, there are usually small areas that differ from the dominant conditions of the area as a whole.

The soil associations found within the corporate limits of Erwin and its urban area are: Congaree, Stoney Colluvium, Sequatchie Cobbly, Allne, Etowah Slate, and Colby Alluvium. Illustration 5 shows the soil associations.

The individual soil association found in Erwin and Unicoi County falls into one of four general soil groups. These groups are: the upland group representing about 80 percent of the county, the colluvial group representing 14 percent, the bottom group representing 5 percent, and the terrace group comprising approximately 1 percent of the land area.

The upland group of soils has developed from the following rocks: quartzite, sandstone, granite, gneiss, shale, and limestone. Soils of the uplands that have developed from quartzite and sandstone materials are usually steep. They are shallow over bedrock, and tend to be sandy through the profile. They are light in color with good excessive drainage. Granites and Gneisses give rise to steep upland soils that are midway between zonal and ozonal soils. They are gray brown soils and have distinct horizons with coarse textures. The soils of the uplands that have developed from shale are usually steep. They are shallow over shale bedrocks. These soils range in color from purple to shades of brown and yellow. Textures range from silt loam to silty clay. The upland soils developed from limestone occupy gently sloping to steep slopes. The surface layers are silt loam or loam with the subsoil ranging from silty clay loam to clay.

The soils of the calluvial lands have been formed from parent material that has accumulated in the covers, on benches, footslopes, and along intermittent drainageways. Following is a discussion of each soil classification with particular emphasis on their suitability for development.

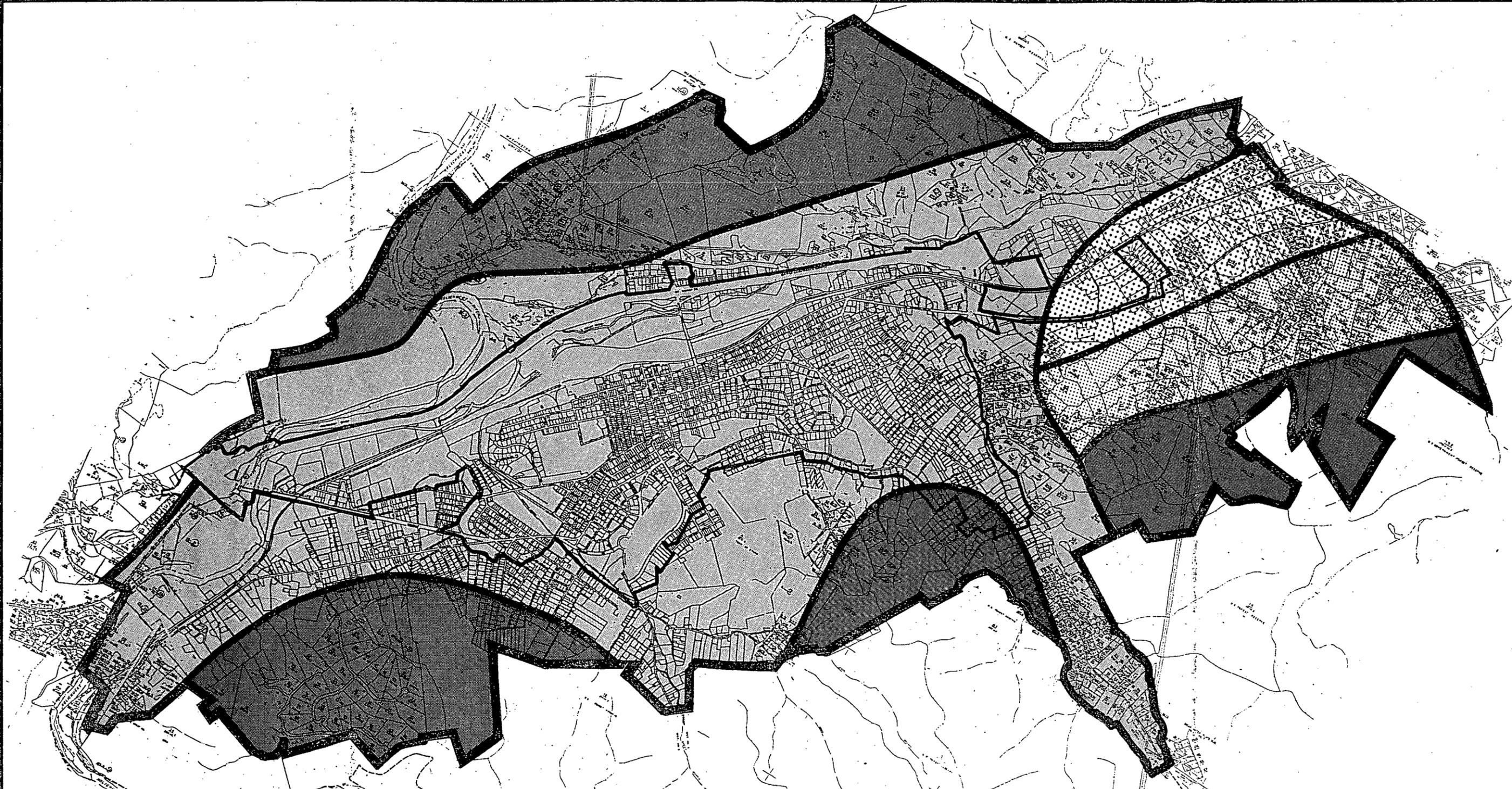
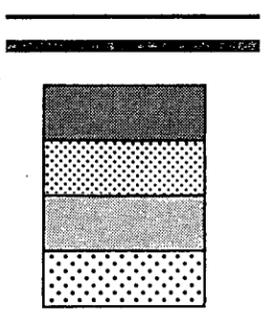


ILLUSTRATION 5
GENERAL SOILS MAP
ERWIN, TENNESSEE

PREPARED JUNE, 2001 BY THE UPPER EAST TENNESSEE SECTION OF THE LOCAL PLANNING ASSISTANCE OFFICE, DEPT. OF ECONOMIC AND COMMUNITY DEVELOPMENT



LEGEND

- ERWIN CORPORATE LIMITS**
- URBAN GROWTH BOUNDARY**
- DITNEY-MAYMEAD-BROOKSHIRE:** Moderately steep to very steep, well drained shaly and loamy soils that are about 2 to more than 6 feet deep over felspathic quartzite, arkosic sandstone, or slate bedrock; on high mountains and in coves.
- CALVIN-SHOUNS:** Sloping to steep, well drained shaly or loamy soils that are 1 to 6 feet deep over redish shale bedrock; on dissected hills, ridges, and foot slopes.
- TATE-TUSQUITEE:** Gently sloping to steep well drained loamy and stony soils that are more than 5 feet deep over limestone or felspathic quartzite bedrock; on footslopes, benches and low terraces in coves.
- DUNMOR-SHOUNS-SEQUOIA:** Sloping to steep, well drained, dominantly clayey soils that are 5 to 6 feet deep over domomitic limestone or hard shale bedrock.

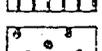
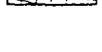
1. Conagree. Congaree soils, located generally along North Indian Creek and the Nolichucky River are deep, well drained soils with a high water holding capacity. Although these soils have good foundation material the use of these areas are limited for building development due to the periodic flooding of North Indian Creek and the Nolichucky River. The Conagree soils are high in natural fertility and appear most desirable for agriculture use and recreational use.
2. Stony Colluvium. These soils have an average slope of 5 to 12 percent and are considered poor farming land. A high mixture of stone (average ten inches in diameter) makes excavation difficult particularly for utility extensions. These soils are located north of Tenth Street and appear for the most part, suitable for residential and recreational development.
3. Sequatchie Cobbly. Tenth Street, 7th Street, and Clinchfield Railroad generally bound Sequatchie Cobbly soils. These soils are sandy, deep, well drainage and with numerous cobbles up to ten inches in diameter. The topographic features are moderate with slopes between 5 and 12 percent. The areas containing the Sequatchie Cobbly soils appear to be most suitable for residential or recreational development in view of the percentage of slope.
4. Allen. This soil resource is characterized by deep, well-drained loamy soils with average slopes between 12 and 20 percent. They are found in the north central part of the town and offer a good foundation material, high percolation rate with a minimum amount of erosion. Limestone bedrock is at depths of two to eight feet; however, the land can be developed with residential or recreation uses without undue hardships from natural features.
5. Etowah and Slate. Etowah and Slate soils have two locations in the urban area as indicated on the soil Resource Map. These soils have silty clay subsoil and they are deep, well drained with average slopes from 5 to 12 percent. This soil resource has a high percolation rate and is considered to be adequate for residential and recreational development.
6. Cobbly Alluvium. Numerous cobbles deep well drained, average slope from 2 to 5 percent and good percolation rate are some of the characteristics of the soil. This soil resource is found adjacent to the westerly corporate limits and for the most part is suitable for any type of urban development.

Minerals

The value of mineral production in Unicoi County is minimal, with limestone being the leading money producer. Other minerals present, some of which have been commercially mined in the past, include iron, zinc, lead, granite, unakite, and barite. Feldspar and mica are obtained from North Carolina for use in plants in Erwin.

Following is a list of all known minerals in the county and pertinent information about each. The general location of mineral deposits is shown on Illustration 6.

LEGEND

-  PAST IRON, MANGANESE, ZINC, AND LEAD MINING
-  RADIOACTIVE MATERIALS PLANT
-  FELDSPAR GRINDING PLANT
-  MICA GRINDING PLANT
-  SAND-GRAVEL PLANT
-  PAST BARITE MINING
-  MANGANESE MINING
-  MAGNESIUM LIMESTONE
-  DOLOMITE
-  GRANITE

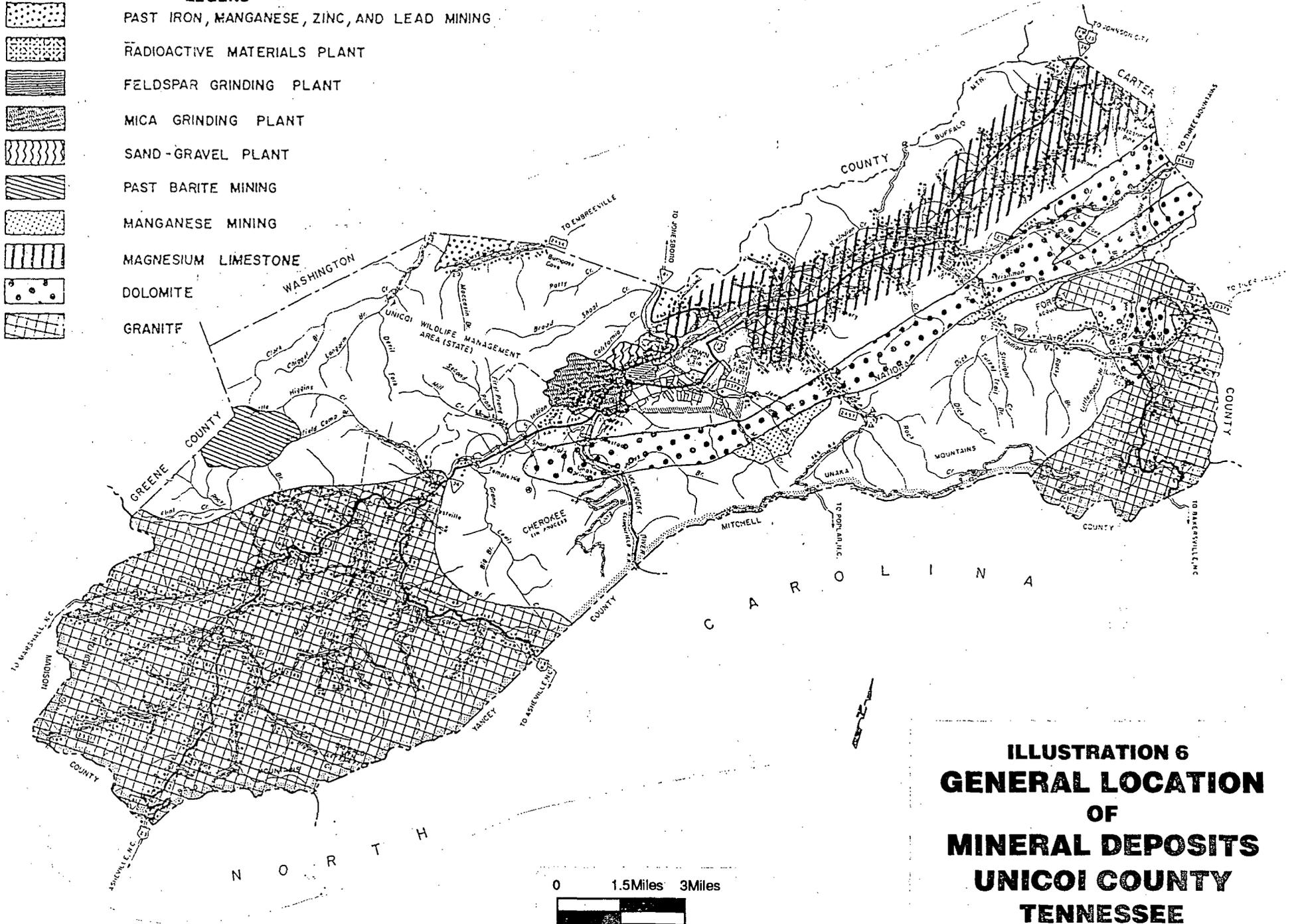


ILLUSTRATION 6
GENERAL LOCATION
OF
MINERAL DEPOSITS
UNICOI COUNTY
TENNESSEE

1. Manganese. This mineral is located primarily in the Bumpass Cove district although some is located in Unicoi district near Erwin. The most intensive mining occurred during the years 1938. In recent years, mining of this ore has been limited.
2. Iron. Small deposits of iron are found in Bumpass Cove and in the Unicoi District. The iron mining industry became unprofitable in 1909; therefore, no mining of this mineral has occurred in recent years.
3. Zinc. There has been no mining of this ore in recent years. However, rich deposits of oxidized zinc in small amounts were discovered about 1912 in the Bumpass Cove district.
4. Lead. The mining of this mineral occurred prior to eighteen hundred and has continued until recently. These deposits are located in the Bumpass Cove district of Unicoi County.
5. Limestone. Crushed limestone and dolomite used chiefly for cement, lime, road material and railroad ballast is located throughout the northern half of the county. This material is mined from time to time for highway and railroad construction.
6. Granite. This mineral is not being quarried in Unicoi County. However, large deposits are found in most of the southern third of the county and certain areas in the northeastern part.
7. Unakite. Unakite is a variety of granite, which is characterized by contrasting pink feldspar and green epidote. This mineral has been used to some extent in jewelry and has a potential as a decorative and monumental stone. Deposits of Unakite are found in the southern part of the county.
8. Barite. Small deposits of barite are found in the southeastern part of the county near Rocky Fork. This mineral was first produced in 1957 in small amounts. No mining of this ore has occurred in recent years.
9. Radioactive Minerals. Radioactive minerals are produced in a plant at Erwin from imported raw materials. These minerals are used in the production of nuclear fuel elements.

The geology of the Erwin area has also played a significant role in determining the direction and extent of development. Of particular importance is the depth of the soil covering above the underlying rock strata, or the depth to bedrock. Because of the shallow bedrock depth in the area, this factor can affect growth by limiting those areas where subsurface utilities may be installed practically and feasibly. Generally there are relatively few areas in Erwin and its surrounding growth area that have problems due to depth to bedrock. Unicoi County, as a comparison, has only seven percent of the soils are moderately suitable for building construction without sanitary sewers. In addition, the vast majority of the residential development in Erwin and its growth area has occurred on these soils where the depth of the bedrock has not presented any practical or cost constraints to the installation of water lines and gravity flow sewer lines, or to the installation of septic tanks in the growth area.

SUMMARY OF FINDINGS

Like many communities, the pattern of land use or development in the Town of Erwin has been significantly affected by natural factors. What is significant and perhaps unique to Erwin is the degree and range of natural factors that have affected development. A combination of flooding, extreme slope, and topographic constraints have significantly restricted areas for growth and development in the municipality. Unfortunately the potential growth area of Erwin also has similar natural factors affecting development. On a positive note, the soil, climate, and air and water quality in Erwin and its growth area are favorable to development.

Areas for future development in Erwin that are not negatively affected by natural factors are limited. Overcoming the constraints of flooding, extreme slope, and topography on much of the vacant lands in Erwin, will be costly in many cases. The only direction for future expansion of the municipal boundaries is to the northeast along Highway 19W/23 into the future growth area. Although limited, the growth area does have some vacant lands, which could be developed without having to overcome significant natural factors.

CHAPTER 4

SOCIO-ECONOMIC FACTORS AFFECTING DEVELOPMENT

INTRODUCTION

In order to understand the socioeconomic factors that affect development it is necessary to look at population growth and employment patterns to analyze past, present and future trends of Erwin and Unicoi County with regard to population and economic activities. These activities are then evaluated within the framework of regional, state and national trends. In order to establish a base for analysis, it is necessary to review local factors within the area that affect population and economic activities. This chapter will present a summary of the findings of the Population and Employment Study emphasizing those population and employment trends pertinent to the preparation of this land use plan. Strategies for community development, projections of land use needs, discussions of land use issues, and the relevance of the land use plan to future planning documents, should reflect the findings of the Population and Employment Study. These findings provide future trend projections, which can be affected, but the trends must be understood to be of planning significance.

TRENDS SUMMARY

For the purposes of this plan the past changes in population and employment were examined for their implications for development within the Town of Erwin. Of most significance are the projected changes in the population and employment within Unicoi County and Erwin for the year 2020.

POPULATION

The population of Erwin declined from 3,387 in 1950 to 3,210 in 1960, before increasing to 5,015 in 1990 as Table 1 reflects. The decrease in Erwin population between 1950 and 1960 of 5.2 percent or 177 persons is attributed primarily to the closing of Southern Pottery and a decline in employment at Clinchfield Railroad. Between 1960 and 1970, the population of Erwin increased by 46.9 percent, representing the largest growth during the study period, and can be attributed to the annexation of the Rock Creek area. During the same study period, the population of Unicoi County declined from 15,886 in 1950 to 15,082 in 1960, before increasing to 16,549 in 1990. Between 1970 and 1980, the population in Unicoi County increased by 7.3 percent, representing the largest growth during the study period, however the increase in population is at a much slower rate as compared to the Region, State and Nation. Graph 1 and 2 shows the Unicoi County and Erwin's population changes from 1950 to 1990.

Table 2, Projected 20-Year Population Growth, reflects an anticipated growth for Erwin to 5,643 in the year 2000, and a continued growth to 6,033 by the year 2020. Population projections for Unicoi County reflect the same socioeconomic factors as Erwin. Graph 3 shows that the County population is projected to grow to 17,454 in the year 2000, and a continued growth to 18,659 by the year 2020. Population projections for counties are usually more accurate than for municipalities because they cover a larger area, and they are not affected by annexations. It is difficult to project population increases for towns because of different rates of annexations in the past, and the amount of developed areas on a town's urban fringe that could be annexed in the future to provide needed urban services. Graph 4 shows the existing and projected population growth for Unicoi County and Erwin.

TABLE 1

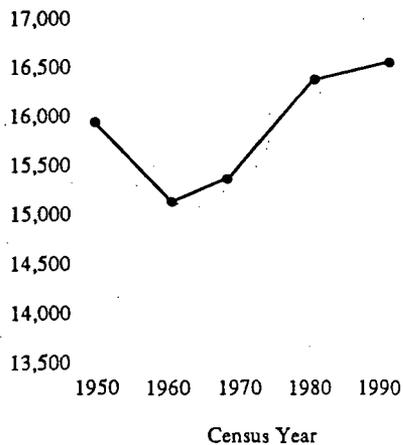
**POPULATION OF AND PERCENT CHANGE INCORPORATED PLACES
1950 TO 1990**

Incorporated Place/County	1950	Percent Change 1950-60	1960	Percent Change 1960-70	1970	Percent Change 1970-80	1980	Percent Change 1980-90	1990
Erwin	3,387	5.23	3,210	46.88	4,715	12.05	5,283	-5.07	5,015
Unicoi County	15,886	-5.06	15,082	1.14	15,254	7.26	16,362	1.14	16,549
First Tennessee Development District	306,288	6.69	326,784	9.99	359,441	16.32	418,095	1.62	424,888
Tennessee	3,291,718	8.37	3,567,089	10.06	3,926,018	16.94	4,591,023	6.23	4,877,185

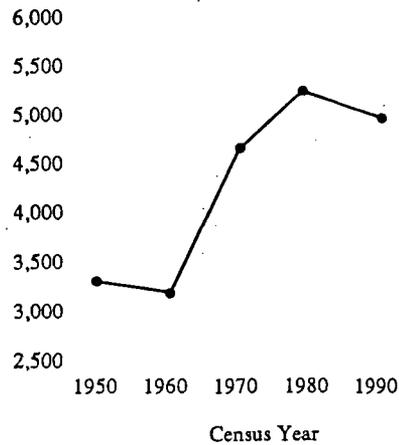
Adapted from U.S. Bureau of The Census, Tennessee Statistical Abstract (1980, 2000), and with the addition of 1950 figures from Erwin Tennessee Land Use Plan 1967.

Note: Population is as counted in each Decennial Census year. No provision has been made for comparable land areas. Growth by annexation and new incorporation is reflected in the data.

**GRAPH 1
UNICOI COUNTY POPULATION
1950 to 1990**



**GRAPH 2
ERWIN POPULATION
1950 to 1990**



URBAN GROWTH PROJECTION

Projected 20 Year Population Growth

The following table uses The University of Tennessee population projections to display anticipated growth in Erwin and Unicoi County and to compare local growth projections to those for the Region and State of Tennessee.

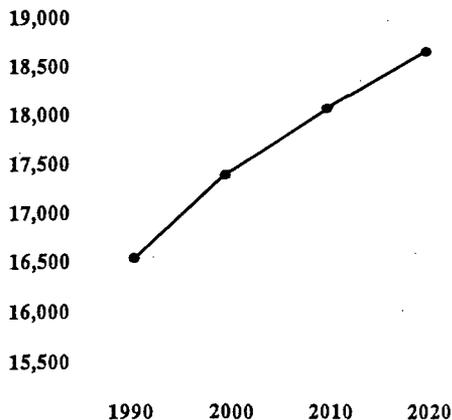
Table 2. 20 year Population Projections

	1990	1998 Certified Population	2000	Percent Change 1990- 2000	2010	Percent Change 2000- 2010	2020	Percent Change 2010- 2020
Erwin	5,015	5,611	5,643	12.5	5,839	3.5	6,033	3.3
Unicoi County	16,534	-----	17,454	5.6	18,059	3.5	18,659	3.3
First Tennessee Development District	425,703	-----	461,592	8.4	485,806	5.2	509,529	4.9
Tennessee	4,890,525	-----	5,533,762	13.2	6,062,695	9.6	6,593,194	8.8

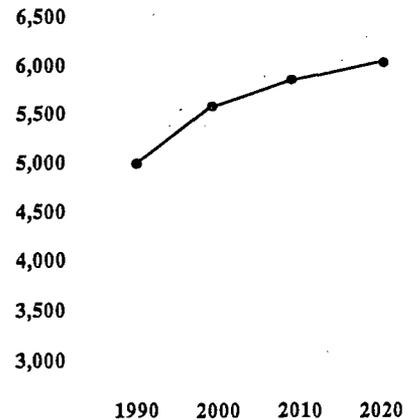
Adapted from the 1990 Census of Population, U.S. Department of Commerce, Bureau of Census Publication 1990 CP-2-4, and the 1998 Certified Population of Tennessee Incorporated Municipalities, Department of Economic and Community Development, Local Planning Assistance Office.

While growth is projected to continue, the rate of increase is anticipated to slow in the Town, County, Region, and State between the present and the year 2020. Erwin's population growth rate is projected to equal that of Unicoi County, however it is not anticipated to keep pace with the Region or State.

**GRAPH 3
UNICOI COUNTY POPULATION
1990 TO 2020**



**GRAPH 4
ERWIN POPULATION
1990-2020**



One method to measure the potential for future growth in a community is to look at the age distribution of the population. A younger population indicates that there will be more people coming into the workforce. Unless the community is a retirement community, an aging population usually indicates that there is an out migration of the labor force. According to the 1999 U.S. Census Bureau data on age distribution, twenty-eight percent of the population in Unicoi County was under twenty years of age. Forty-Eight percent of the population was between the ages of twenty-five and fifty-nine, and the remaining twenty-four percent of the population was sixty years of age or older. These percentages appear normal when compared to the statewide percentages for age distribution, except that Unicoi's percentage of sixty years and older population is among the highest of counties in the First Tennessee Development District, and seven percent higher than the State of Tennessee percentages. During the period from 1960 to 1990, the cohort age distribution in Unicoi County reflected considerable declines in the age groups of twenty-four years of age and under. From 1960 to 1990, the number of the population of twenty-four years of age and under decreased from 6,997 in 1960 to 5,070 in 1990. In 1999, this population group continued to decline with a total of 4,874 peoples under twenty-five years of age. The reductions in the categories of twenty-four and under have long-term implications. These declines suggest substantive loss of population in excess of natural factors. The age group over fifty-five increased substantially both in numbers and as a percentage of total population rising from seventeen 2,621, or 17 percent in 1960, to 4,668, or 28 percent in 1990. There was no marked increase or decrease in group categories from 1990 to 1999, however the population trend continues to decrease with those ages twenty-four years and under, as well as a continued increase, however slight, in the number of people sixty years of age and over. These trends represent some of the forces, which are reflected in the 20-Year Population Growth.

The number of households in Unicoi County reflects the general trend of population change noted above. The number of households was 4,167 in 1960, and increased to 6,621, or fifty-nine percent in 1990. A more significant trend is the continued decrease in the persons-per-household that declined from 3.62 in 1960 to 2.74 in 1980, and 2.46 in 1990.

Findings. According to the University of Tennessee population projections, the population of Erwin is expected to increase at about the same rate as that of Unicoi County for the next twenty years. The decline in the younger population, the increase in older population, the increase in the number of households and the decrease in persons-per-household all have significant implications for planning within the Town of Erwin, in both land use and the delivery and types of services required by the resulting population. Demands and type of recreational services will be impacted as will the need for assisted-living facilities.

EMPLOYMENT

Employment changed within Unicoi County during the past two decades. Employment in all sectors has grown from 6210 in 1980, to 6857 in 1990. Agriculture has remained relatively steady during the past few years. The industry employed 519 persons in 1980 and this number slightly increased to 520 by 1990. Still Agriculture employees only represented 7.6 percent of the work force. At the same time, the number of manufacturing employees increased from 1596 employees in 1980, to 2520 employees in 2000, or an increase of 58 percent. On the other hand, the retail trade and services sector increased employees from 786 or 12.7 percent of the 1980 work force to 1479 employees or 21.6 percent of the 1990 work force.

SUMMARY OF FINDINGS

During the planning period to the year 2020, the Town of Erwin population is projected to increase to 6,033 persons. This projection reflects an increase of only twenty percent or 1018 persons from the thirty-year period between 1990 and 2020. The creation of employment opportunities within Unicoi County offers an opportunity to affect long-term population trends. The current balance of jobs in Unicoi County is slightly reflective of state and national averages with a gradual trend of increasing manufacturing jobs, and increasing jobs in services and retail sectors of the economy. Many of the employees living in Unicoi County and Erwin work in Johnson City, Kingsport, and Bristol SMSA and the local economy of Unicoi County will be influenced by the larger economy of this region.

CHAPTER 5

EXISTING LAND USE AND TRANSPORTATION ANALYSIS

INTRODUCTION

As a prerequisite to preparing a plan for future land use and transportation, a survey and analysis of the existing patterns and characteristics must be completed. The data from this Chapter's existing analysis when integrated with information pertaining to natural factors affecting development, the population, economic factors, and transportation facilities is vital in determining what areas are best suited for the various land uses and transportation facilities over a planning period.

Due to the relative small size of Erwin and its projected growth area, it was determined that it would be feasible or beneficial to divide these two areas into neighborhoods or planning units for more detailed analyses.

EXISTING LAND USE AND TRANSPORTATION

Before a municipality can determine its future land use requirements, it is necessary that an inventory and analysis of existent land uses be completed. This land use inventory identifies and analyzes the various uses by categories and the amounts of land devoted to each.

Illustration 7 depicts the various land uses in the Town of Erwin and the projected growth areas as determined by a land use survey completed by the Local Planning Assistance Office in 1997. The land uses depicted on Illustration 9 are grouped into the following categories:

Residential: Land on which one or more dwelling units are located. This includes all single-family and multi-family residences, mobile homes, and public housing.

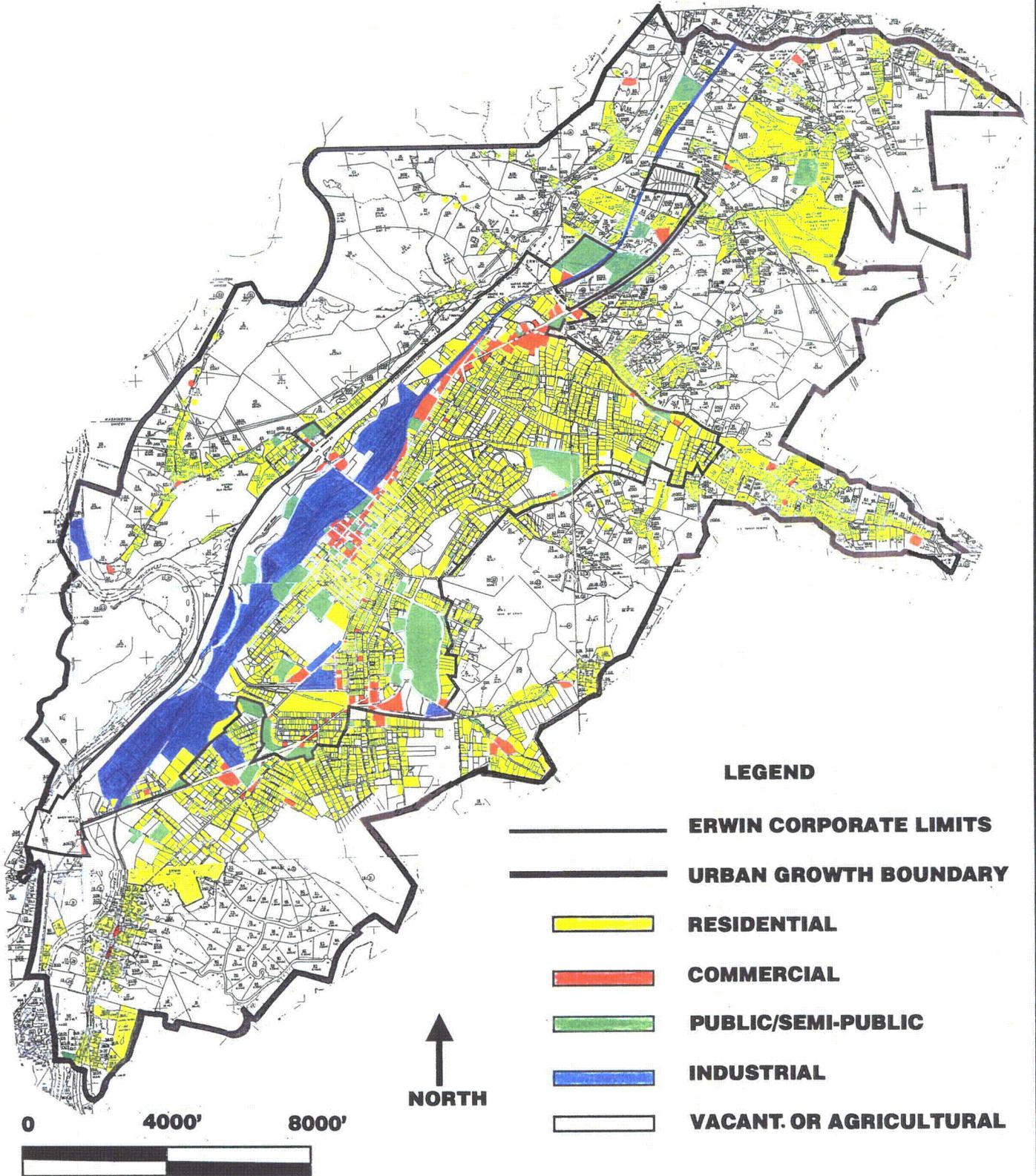
Commercial/Private Services: Land on which retail and wholesale trade activities and/or services occurs. Land on which, an array of private firms that provides special services are located. This category includes hospitals, churches, banks, cemeteries, professional offices, personal services, repair services, etc. and vacant floor space.

Utilities: Land on which utility structures or facilities are located. This includes; water tanks, sewer plants and pump stations, electrical substations and telephone switching stations.

Public Services/Cultural and Recreational: Land on which educational facilities, and all federal, state, and local governmental uses are located. Land on which museums, libraries, parks, and similar uses are located.

Industrial: Land on which the assembly, processing or fabricating of raw materials or products takes place.

ILLUSTRATION 7
EXISTING LAND USE ERWIN, TENNESSEE AND
URBAN GROWTH AREA



MAP PREPARED JUNE 2001 BY THE UPPER EAST TENNESSEE SECTION OF THE LOCAL PLANNING ASSISTANCE OFFICE, DEPT. OF ECONOMIC AND COMMUNITY DEVELOPMENT

Transportation: Land on which municipal streets, county roads and state highways are located, including the right-of-ways:

Vacant Land: Land which either has not been or cannot be developed. Vacant land can be divided into two general categories:

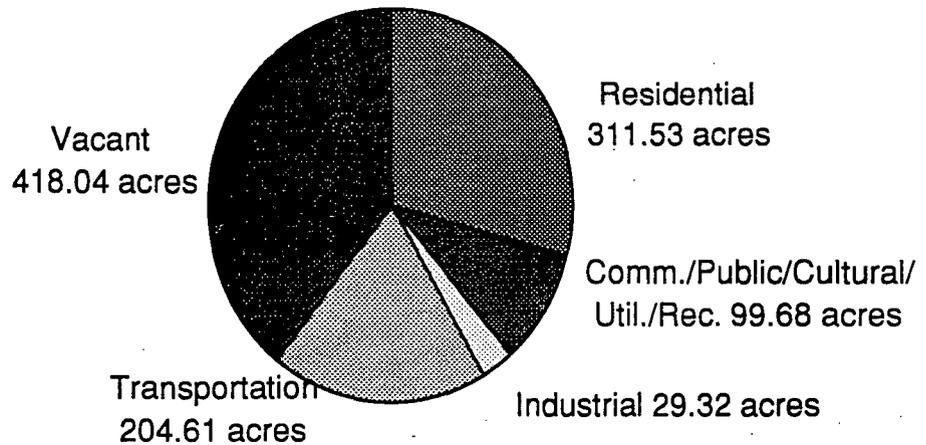
1. **Vacant Unimproved.** Land that currently lies idle or is used for agricultural, or open space purposes and lacks the infrastructure necessary for development.
2. **Vacant Improved.** Land located along streets currently accessible to town services such as vacant subdivision lots.

LAND USE ANALYSIS

As the previous illustration depicts, land use in Erwin has developed along traditional designs reflective of the grid pattern in the older portions of the municipality and the curvilinear pattern in the more recently developed areas. The portions of the potential growth area that have developed, have either developed along; Highway 181, the valley floor on high ground east of the Nolichucky River and south of North Indian Creek, between Buffalo Mountains to the northwest, and Unaka Mountains to the southeast, or in the traditional grid pattern. Natural factors, which are discussed in depth in Chapter 3, have significantly affected the location of land use in both the municipality and its potential growth area. Conflicting land uses are generally well separated from each other in the municipality and it is not yet a significant problem in the projected growth area. As a small community, most residents have easy access to the necessary public and private facilities and services.

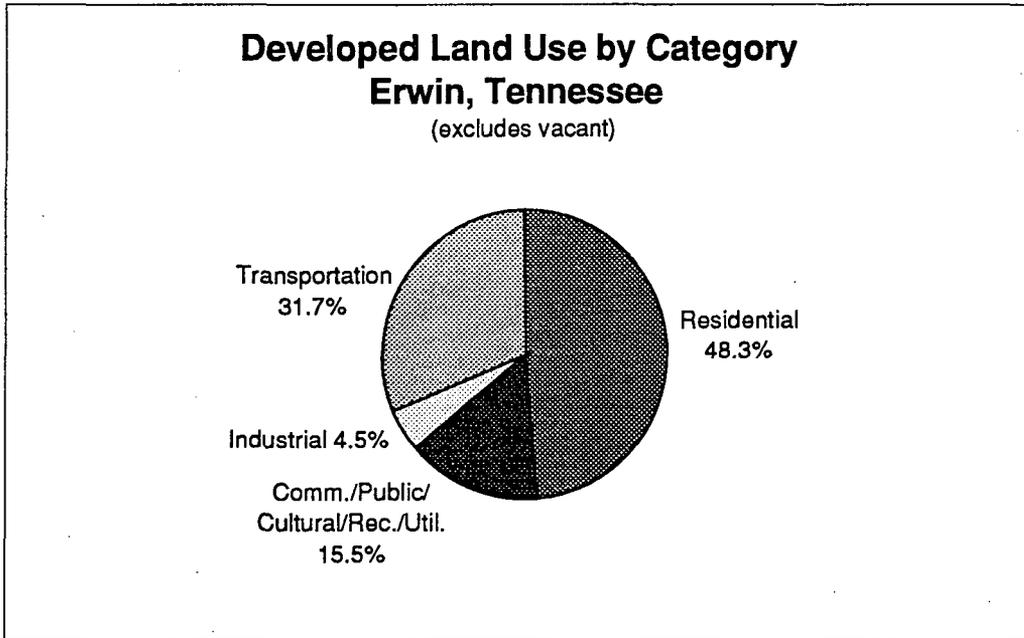
Within the corporate limits of Erwin there are approximately 1,063 acres, or 1.66 square miles of land. Of this total land area, an estimated 61 percent, or 645 acres are developed. Residential land comprises 312 acres, or 29.3 percent of the total land. Industrial uses occupy 29 acres, or 2.8 percent of the developed land area. Approximately 205 acres or 19.3 percent is used for transportation. The remaining 100 acres or 9.4 percent is divided among commercial/private services, public/cultural and recreational and utility facilities, which is reflected in Graph 5.

Total Land Use by Category Erwin, Tennessee



Graph 5

The majority of the total land area, approximately 418 acres, or 39.3 percent is vacant land. However, a large percentage of this land is undeveloped, lacking the infrastructure necessary for development. Furthermore, a significant portion of the vacant land is either susceptible to flooding from streams flowing into the Nolichucky River, has excessive topographic limitations, soil limitations, and/or has excessive slope. The natural factors that shaped the developed lands and limit the development potential of this vacant unimproved land also similarly affect much of the vacant improved land. Developed land use by category is reflected in Graph 6.



Graph 6

Vacant land is the predominant land use category in Erwin. Most is either marginally developable or undeveloped. The predominant developed land use is in the form of residential uses. A detailed analysis of each land use category follows.

Residential

The residential land use category, like in most communities, occupies the largest portion of developed land in Erwin and its projected growth area. Also, like most communities, the traditional single-family detached dwelling unit is the predominant form of residential land use in both areas. Natural factors, however, have had a significant affect on residential development in Erwin and its growth area than they do in most communities.

Residential development in Erwin is primarily located on traditional grid pattern streets branching Southeasterly from Highway 19-23 and Elm Avenue, and the downtown area. The oldest neighborhoods are located closest to the downtown area on lands with few physical constraints to development. As the areas with few physical constraints became limited, residential development in Erwin spread to areas with potential flooding and topographic problems. Primarily due to natural factors, there had been no significant new subdivision development in Erwin in over a decade.

Residential development in the potential growth area of Erwin is primarily located in the northeast between Highway 36 and U.S. Highway 23, from the Erwin corporate limits to Dry Creek Road, for which there are no physical barriers to development. Also, to the west of Erwin, minimal developable area is available in the narrow corridor along and adjacent to Highway 181 before it descends into the Nolichucky flood plain. Although natural factors do somewhat limit the potential for future residential development in the growth area, there are areas, which could be developed. The careful planning and

implementation of public sanitary sewer is the primary objective to this residential growth.

The residential areas in Erwin occupy 32.3 percent of the total developed land, or about 688 acres. Of the residential areas in Erwin, 624.2 acres or 90.7 percent are traditional single-family detached residences. The majority of these residences are located on streets perpendicular both north and south from Highway 19-23 and Elm Street in the center of the municipality. Most of the single-family residential lots are approximately 100 feet in width and are well shaped with good lot width-to-depth ratio. This is reflective of residential development associated with the grid pattern. Although the majority of the lots occupied by single-family detached residences are of adequate size, there are some narrow and smaller lots located throughout the area.

The 1999 survey identified 22.1 acres, or 3 percent of the land contained mobile homes in Erwin. All mobile homes surveyed were located within the residential zoning districts of the town. This can be attributed to a municipal zoning requirement, which restricts mobile homes to mobile home parks. The municipality frequently receives requests for mobile homes on individual lots; however, the local zoning regulations prohibit this.

Multi-family housing units, including both public and private units, represent approximately 5.2 percent, or 35.5 acres of the total land use in Erwin. Although the majority of these are located within traditional multi-family complexes, a minute portion of units has developed as conversions of older single-family detached structures. This has resulted in some multi-family structures being located in areas with insufficient transportation facilities and inadequate off-street parking. The 1999 survey indicated that there were very few vacancies in the private, multi-family complexes and that in many cases waiting lists existed. This indicates a need for additional multi-family housing which has been further complicated by the fact that there is little vacant land zoned for multi-family units available in Erwin. While most are located within relative walking distance of the Central Business District (CBD), the public housing facility located abutting Carolina Avenue with 70 units and the FHA facility located on Holston Avenue are also all located within an identified flood hazard area (Martins Creek).

Residential land use accounts for approximately 23.1 percent, or 1745 acres of the developed land in the potential growth area. The 1999 land use survey identified 1745 housing units on those 1745 acres, which represents an approximate density of one housing unit per acre. The average residential lot size in the potential growth area approaches 40,000 square feet. The larger lots and lower densities can be partially attributed to the lack of public sanitary sewer in the growth area. Of the 1745 housing units in this area, 87 percent are in the form of detached traditional single-family structures located on significantly larger lot subdivisions.

Mobile homes make up approximately 5 percent or 87 housing units in the projected growth area. In the absence of regulatory controls it is surprising that the majority of those mobile homes have located in the same general residential vicinity in the growth area. However, the condition of the mobile home park is indicative of the lack of

regulatory controls. Private, multi-family housing comprises only 2 percent of the total housing units in the potential growth area. This can be directly attributed to the lack of necessary infrastructure, primarily public sanitary sewer, in the potential growth area. There are no public, multi-family housing units in the potential growth area.

Commercial/Private Services

The commercial areas of Erwin are widely scattered throughout the community. There are three main areas of concentrated commercial development. One is the Central Business District (CBD), which is located along Main Street. The other area is along North Main Street from 7th Street to the corporate limits and along the Jackson/Love Highway on the south side of Town. The CBD area contains banks, churches, grocery stores, variety stores, miscellaneous shops, the Erwin Town Hall, the Unicoi County Courthouse, and the U.S. Post Office. The area varies from individual commercial facilities with on-premise parking to clusters of wall-to-wall shops that depend for the most part on public on-street parking.

The second concentrated commercial area along North Main is a typical highway business area with a service station/convenience mart, restaurants, a bank, grocery stores, doctor's offices, a funeral home, and other establishments.

The third area along Jackson/Love Highway is typical of most strip development in any community. The type of businesses includes a funeral home, convenience stores, a grocery store, motel, auto repair shops, and other mixed commercial uses.

The areas in Erwin with the greatest future potential for commercial development are the three interchanges along Highway 181. Some parts of these areas are beyond the town's sewer system at the present time, but are close enough that sewer is a definite possibility for the future.

Findings. There are three commercial areas in Erwin at the present time, a central commercial area near the middle of town and two highway commercial clusters on the north and south end of Town. The areas of greatest future potential are the three Interstate interchanges. Sewer is currently lacking along some parts of the interchanges, but is close enough to be feasible in the near future, especially if a cost-sharing arrangement can be made between a developer and the town.

Industrial

Industrial land uses in Erwin currently occupy 29 acres, or approximately 2.8 percent of the total land area. Riverview Industrial Park, and CSX Railway are the predominant industrial land users. Individual industries such as Hoover Ball, Ram Industries, NFS, etc. are examples of industries that are scattered throughout the town. Riverview Industrial Park has just been expanded, and several acres are now available. Spec buildings are being constructed on two of these tracts, and it is expected that all of the park will be filled within a short period of time.

Findings. Erwin has enough land for industrial expansion for the short term. However, the industrial park will fill up soon, and large tracts suitable for industrial expansion are hard to find in the Erwin area. There are some tracts south of the community that could possibly be developed for industrial purposes. These sites will have a high purchase price, and will be difficult to develop due to natural hazards such as flooding, and in some instances, steep terrain. A large industry, needing several acres of land would have a hard time locating in and around Erwin.

Public, Cultural, Recreational

The largest concentration of land in the public, cultural and recreational category is located mainly in two areas. The Unicoi County School System owns a large tract of land on either side of Mohawk Avenue. A new high school is being constructed on part of the property, and Evans Elementary is also on a portion of the 40-acre site. The old high school is across the street from these schools, and is included as part of this land. The second large tract of land is Fishery Park, which is located in the north end of Erwin on the old Unicoi Highway. The remaining land in this category includes the city hall, little league ball fields, and various churches and cemeteries. Erwin has a larger percentage of this type land use than most cities. The high percentage of open space and public land in Erwin contribute to the character, beauty and livability of the community.

Recreation and open space are priorities for Erwin. The school grounds, community parks, and wetland areas, and homes on large lots add to the character and beauty of the Town. A linear park is being developed along North Indian Creek that will further enhance the livability of the area.

Findings. Erwin has a great deal of public, cultural and recreational land for a community its size, which contributes to the spaciousness, livability, and beauty of the community.

Utilities

Electrical service to the Town of Erwin is provided by Erwin Utilities, which also provides water and sewer service. Natural gas is provided by Unicoi County Gas Utility District.

Water for the town is provided by springs located in and around Erwin, and there is an adequate supply at the present time. Six-inch lines cover most of the town. Fire hydrant coverage is good with most built up areas lying within 500 to 600 feet of a hydrant. In addition to the community itself, much of the urban area around the town is served by Erwin utilities. Some of these areas do not have the six-inch water lines and fire hydrants that are provided within the town. These areas should be upgraded to provide adequate pressure for fire-fighting and future growth.

Most of the built up portion of the town is served by Erwin Utilities. The utility has experienced infiltration problems in the past, as have most communities. This problem is being addressed, and old lines are being replaced.

Erwin is served by natural gas from the Unicoi County Gas District. Lines are available and pressures are suitable for residential, commercial and industrial use. Illustration 7 shows the location of gas lines in Erwin.

Findings. Erwin is adequately served by all necessary utilities. The town should continue to upgrade its sewer system with new lines and expansions as needed, and should expand the system into the urban fringe.

Vacant Land

Approximately 418 acres of land in Erwin or 39.3 percent is vacant land. This does not mean that the community has ample land for all anticipated future development. Some of this land has severe limitations for development due to flooding, or steepness. The remaining land, consisting of approximately 50 acres, is well drained and ideally suited for development. Much of this land is close to and accessible to existent sewer lines. It can and should be used to accommodate much of the new development in Erwin. Additional acreage should be annexed, and plans made to provide extension of utilities.

Findings. Erwin is very close to being fully developed, and vacant land is needed to provide for future land use needs. Annexation of the urban fringe area and the urban growth area is a priority.

TRANSPORTATION ANALYSIS

A municipality's transportation system provides a vital service function that is essential for growth and development. It forms the framework upon which a community is built. A well-planned and maintained transportation system ensures adequate access and traffic circulation, which are prerequisites for economic activity and general community development.

Streets and highways typically occupy a significant percentage of the developed land area in a community. Within Erwin, there are approximately 410 acres of land currently devoted to streets, roadways, and other rights-of-way, representing 19.2 percent of the Town's total area. The Erwin Urban Growth Boundary has approximately 122 acres of land, or 1.6 percent of total land area currently devoted to streets, and 226 acres, or 3 percent of total land area devoted to Interstate Highway rights-of-way. All local streets, state and federal highways, and railroad rights-of-way within Erwin are included in this land use category.

There are considerable design, purpose, and utilization differences between the various thoroughfares that traverse Erwin and its potential growth area. To better understand and analyze the overall system, these local thoroughfares have been classified by their

intended use. This review of the Erwin transportation system also includes a description of the area's general traffic circulation pattern, major traffic generators, impediments to traffic flow, mass transit, and air/rail/port facilities.

Thoroughfare Classification

The primary or intended use of a thoroughfare varies from that of providing access to residential and other structures, to providing uninterrupted movement of high-speed traffic. To clarify the usage, a classification has been established denoting the function served and is shown on Illustration 8. These classifications include (1) interstate highway, (2) arterial streets, (3) major collector streets, (4) minor collectors, and (5) local streets.

Interstate Highway: Access controlled roadways connecting major population centers devoted to serving high traffic volumes and long distance trips. The By-pass, which will soon be designated Interstate 26, is the only highway of this type in Erwin.

Arterial Street: Roadways which link population centers, but often lack controlled access and traffic flow separation. Usually these are numbered U.S. Highways. Highway 19/23, which runs north-south and Highways 81 and 395, which run east-west, can be defined as major arterials.

Major Collectors: Roadways that link arterials and distribute traffic onto minor streets. These links also provide direct access to major traffic generators. Tenth Street, Elm Street, Mohawk Avenue, and Carolina Avenue are examples of major collector streets.

Minor Collector: Roadways that link and provide access to and between local roads and minor streets. Ideally these are internal to or abutting neighborhoods. Minor collectors in Erwin include Seventh Street, Ninth Street, New Street, and Jackson Avenue.

Local Road/Minor Street: Roadways that function primarily as the means for accessing individual properties. Most often, minor streets are intended for limited capacities, carrying traffic for short distances, and serving residential uses. The majority of Erwin's streets are in this classification.

Traffic Circulation Patterns

The traffic circulation pattern in Erwin relies heavily on the Erwin By-pass (future I-26) and Main Street. These roadways carry most of the north/south traffic into, and out of Erwin. Highway 81 carries traffic west toward Jonesborough, and Greeneville, while Highway 395, which lies north of Erwin, carries traffic east into North Carolina. Tenth Street, Elm Street, Love Street, Ohio Avenue, and Mohawk Avenue are the major collector streets and carry traffic to Main Street and the By-pass.

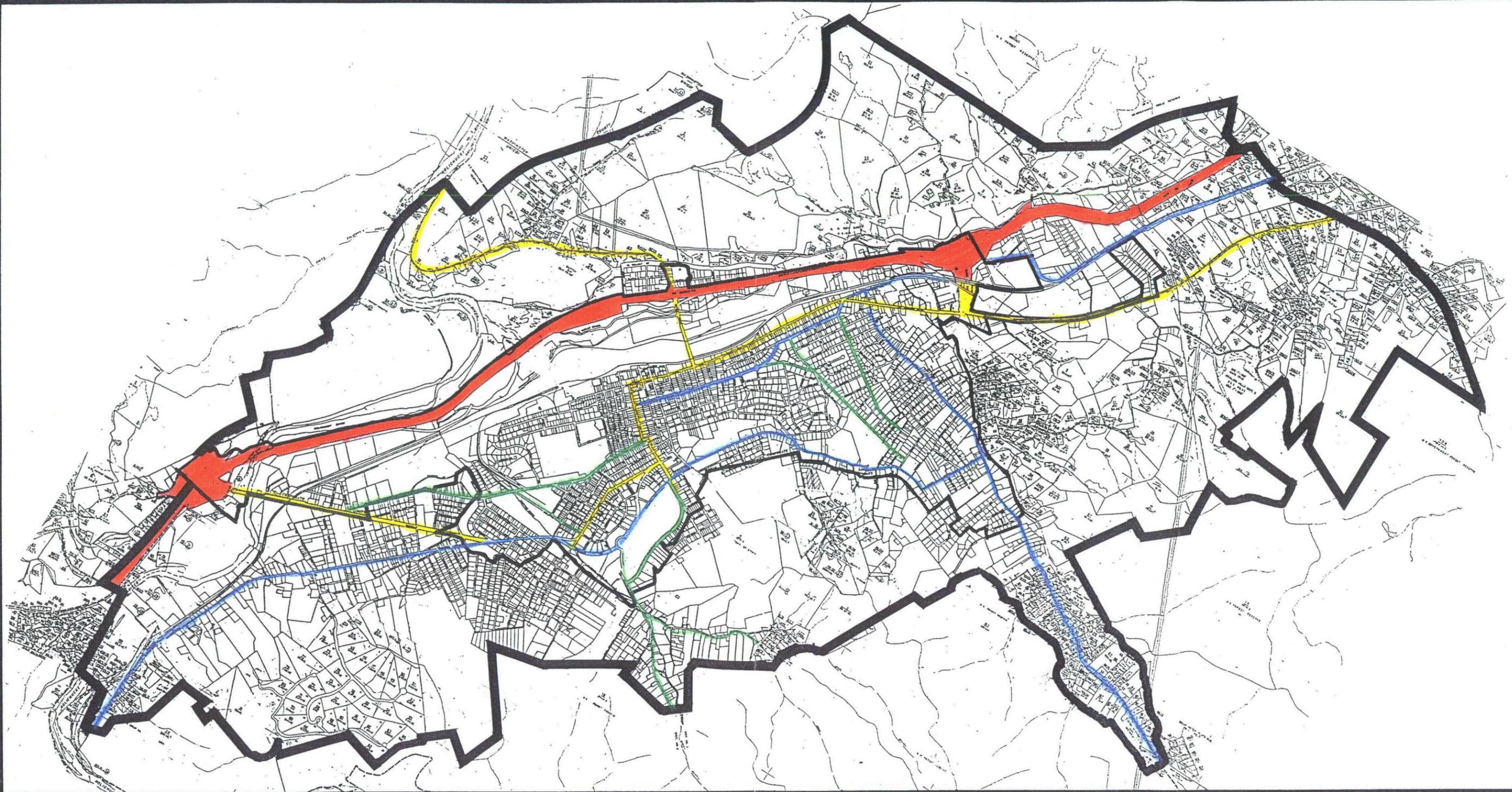
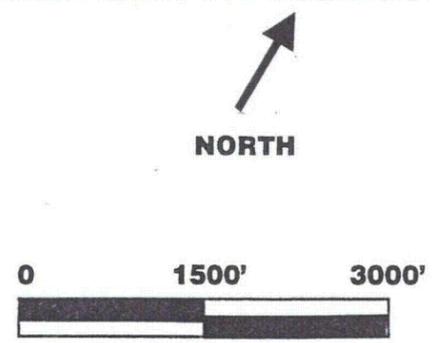


ILLUSTRATION 8
MAJOR ROAD PLAN
ERWIN, TENNESSEE

PREPARED JUNE, 2001 BY THE UPPER EAST TENNESSEE SECTION OF THE LOCAL PLANNING ASSISTANCE OFFICE, DEPT. OF ECONOMIC AND COMMUNITY DEVELOPMENT

LEGEND

-  ERWIN CORPORATE LIMITS
-  URBAN GROWTH BOUNDARY
-  INTERSTATE
-  ARTERIAL STREETS
-  MAJOR COLLECTOR STREETS
-  MINOR COLLECTOR STREETS
-  ALL OTHERS RESIDENTIAL STREETS



Findings: The traffic circulation pattern of Erwin and its projected growth area is dominated by I-181 (future I-26). Due to high traffic volumes on Main Street, circulation problems do exist in Erwin.

Impediments to Traffic

The major impediment to traffic flow in Erwin is the grade road crossing of CSX Railroad as it passes through the downtown area. The track crosses the John Sevier Highway just as it enters the downtown area, and cars must stop to wait for the train to pass. Other impediments are located on some of the residential streets, which are very narrow. Occasionally, local creeks will flood and cause temporary traffic delay problems. Rock Creek has been known to flood North Main Street, and Martin's Creek has occasionally overflowed onto Caroline Avenue, and other streets in the area.

Findings: A need exists for improvements to some residential streets that lack proper width, however this would be costly to the town. The provision of more off-street parking for the CBD would allow for the removal of some of the on-street parking and result in improved traffic flow in the CBD.

Traffic Generators

The primary traffic generators in Erwin are Unicoi County High School, Nuclear Fuel Services, Unicoi County Courthouse, retail outlets, Town Hall, and the U.S. Post Office. Other generators are associated with local industries and with the Interstate 26 interchanges. Overall traffic congestion is greatest during the morning period because it closely coincides with the area's general commuting pattern. No other developments or facilities were found to be large enough traffic generators to place an identifiable strain on the Town's road network.

Findings: In essence, employment related land uses are the traffic generators in a community. The industrial, commercial (public/private), institutional and professional service use areas in Erwin are the primary traffic generators as destination points from Erwin are the primary traffic generators as destination points from Erwin's residential areas. Most of these generators tend to compound traffic problems due to their relatively close proximity to each other.

Air/Rail/Port

There are no airport facilities located within the county. The nearest general aviation airport is Tri-Cities Airport, which is located 25 miles north of Erwin and within Sullivan County.

Erwin has rail access via the CSX Railroad with sidings located at both commercial and industrial areas. A survey of the existing land use in Erwin found that 202 acres, or 9.5 percent of total land area is devoted to railroad rights-of-way. In addition, the Urban Growth Boundary has 72 acres, or 1 percent of total land area devoted to railroad rights-

of-way. Riverview Industrial Park is a frequent user of the rail system. There are no port facilities located near Erwin.

Findings: Erwin has easy access to air facilities. Rail service is available to the town. No port facilities are available.

SUMMARY OF FINDINGS

The current land use pattern in Erwin and in its projected growth area has been and will continue to be significantly affected by natural factors, which limit or restrict areas for development. Mountainous areas on either side of Erwin provide the most severe limitations for development. Nearly all developable areas in Erwin, those with necessary infrastructure and without severe natural limitations, have been developed. Future growth will occur in and around the major highways that for the most part follow the valley created by these mountains. Most new growth in the community should be located as infill development adjacent to these transportation links. New Residential growth will continue to be mainly single family in nature as Erwin continues to expand primarily as a residential community.

Located as it is along the future Interstate 26, (currently I-181), and being the first community encountered by travelers driving north out of North Carolina along that road, Erwin and it's proposed growth area are a gateway to the Tennessee Mountains. As such, future development is expected to take place along Interstate 26 and the downtown area. The Town of Erwin is in the position to implement regulations to guide future development, while other governmental agencies in the southern half of Unicoi County are not. On the request of the Erwin Planning Commission, the Town's Urban Growth Boundary extends to the National Forest Service Boundaries to ensure that appropriate growth management is accomplished throughout the width of the Valley Beautiful.

CHAPTER 6 COMMUNITY FACILITIES INVENTORY AND ANALYSIS

INTRODUCTION

As the population of Erwin increases and more homes are built, great demands will be made for more and improved services. Schools, sewers, parks, cultural and other facilities will have to be expanded to meet ever-increasing needs. Without forethought and planning to meet future demands and needs, there is a strong likelihood of duplicating facilities, choosing poor locations or being unprepared to face a substantial public expenditure when the need arises. While it is generally understood and accepted that municipal governments have a responsibility to provide adequate recreation, education and service facilities, sites may not be available for their development because the land is often used for other purposes. If the sites are available, the cost of the land is often prohibitive. At the same time, people have more leisure time for the pursuit of these activities and thus a paradox is created. At a time when land is becoming less available for this type of use, the people have more time to devote to recreation and cultural pursuits. The people also want more services for their homes and businesses. One way of insuring the orderly growth and development of these community facilities is to acquire land while it is vacant and still available. If vacant land is not available, it may be necessary to acquire developed property. In some areas the facilities available today need to be brought up to acceptable standards in order to provide for future needs. The task is not an easy one and much time, effort and finances will be needed for proper development.

The purpose of this chapter is to examine and evaluate existing community facilities within Erwin and the surrounding area that are available to serve the general public and semi-public or utility sections in the previous chapter. Both public and privately owned facilities such as schools, hospitals, recreational areas and the like will be evaluated. Planning for community facilities should be a continuing process, with periodic reviews and re-evaluations carried out in order to insure an acceptable level of community services and the provision of adequate schools, parks, utilities and similar facilities. It is the basic aim of this chapter to assemble information concerning community facilities for the Erwin Board of Mayor and Aldermen so that adequate facilities to meet future requirements can be planned now.

INVENTORY AND ANALYSIS OF EXISTING FACILITIES

Recreation

The Town of Erwin has a Park and Recreation Official and this position is an extension of the Building Official's responsibilities. The town consists of Fishery Park, a recreational park, and a linear park currently under construction. Fishery Park contains six (6) acres of land occupied by a city swimming pool, a duck pond, three pavilions, picnic tables, a softball field, a basketball court, a tennis court, and a large playground. The town employs three permanent persons to operate and maintain the park.

The linear park is projected to be complete by the year 2003, and consists of a six-mile, eight foot wide, paved walking trail with lights and restrooms. The trail will also incorporate sub-trails that contain a fishing pond with piers. The linear park will extend from the north to the south corporate limits, or from the Holiday Inn to Fishery Park. The

park is maintained by the city, which employs two persons for the summer season. The town has applied for grant monies to fund the lighting and restrooms for the park, and four miles of trails have been paved at present time.

Findings. Erwin maintains an adequate recreation program, and with the projected completion of the linear park in 2003, will be sufficient to meet the long-range needs of the community.

Municipal Offices

The Town of Erwin's Municipal Office is centrally located on North Main Avenue in the downtown area. A new Town Hall was completed on September 6, 1996 and contains 8200 square feet. The office is in excellent condition and is well maintained. The Municipal Office accommodates an array of departments including City Recorders Office, Mayor's Office, Chief of Police Office and Police Station, Building Official Office, and Animal Control Officers Office. The office also includes a spacious board meeting room. The existing building is large enough to meet the long-range needs of the community. All town functions now housed in the building have sufficient space at present time.

Findings. The existing building is large enough to meet the long-range needs of the community. All town functions now housed in the building have sufficient space at present time and for the potential population growth.

Police

The Town of Erwin provides patrol, radio response to calls, and other routine police service within the corporate limits. The Town has eleven full-time officers with no part-time or auxiliary services. The ratio between the number of officer's (11) and the number of town residents (5,643) is one (1) officer per 513 residents. The department has eight (8) police cruisers and two other vehicles to be utilized for police services. All dispatching is coordinated through the Unicoi County 911 office. The 1999-2000 budget for the police department was \$493,440. According to the current budget, the cost for police protection in Erwin is \$87.94 per person. Applying the \$87.94 to the projected population, the additional cost in 2000 dollars for the year 2020 will be \$530,551.

Findings. The police department provides for the needs of the residents of Erwin, however additional employees and equipment would be needed in order for the town to serve it's urban growth area. There are no immediate plans to provide services to the growth area.

Fire

The fire station for the Town of Erwin is located at 301 Broad Street. The town provides professional fire protection within the corporate limits and has achieved an ISO rating of six. The Town has eight (8) full-time firefighters and additional twelve (12) volunteer firefighters. Fire service is provided through the fire station located at the intersection of North Elm Avenue and Broad Street. The Town utilizes two pumper-trucks and one tele-squirt. The 1999-2000 budget for the fire department was \$344,970. Using the same system as with projecting police protection costs, the additional cost of providing fire protection in 2020 will be \$370,915.

Findings. The fire department provides for the needs of the residents of Erwin, however a small sub-station may be considered in the near future for the purpose of improving the town's ISO rating. No formal plans for the sub-station have been adopted at present time.

Public Works

The Town of Erwin maintains approximately thirty-two (32) miles of streets and was budgeted for \$414,177 for the 1999-2000 budget. The Town provides street lighting at a current cost of \$65,000 per year. Three persons are employed in the towns street and sanitation department. The street department provides all the normal street maintenance functions including mowing, signs, drainage, litter, and emergency repairs. Major paving jobs are contracted to outside construction firms. The town provides street lights within the corporate boundaries. The public works department is located at 212 Church Street.

Findings. Public Works provides a full range of services to the residents of the town. A five-year street improvement program study was prepared for the Erwin Planning Commission and prepared by the Local Planning Office of the Department of Economic and Community Development. Many of the improvements suggested in the study have been completed and other improvements will be considered based upon future monies.

Electrical

Erwin Utilities provides electrical service to 8,497 customers spread throughout large areas of Unicoi County and is located at 244 Love Street, and provides adequate service for the current needs.

Findings. The Utilities provides for the needs of the residents of Erwin and the surrounding area, and have the capabilities to serve the potential population growth of the area.

Gas

The Unicoi County Gas Utility District provides gas service to 3700 customers throughout the town and county, and has the capabilities to expand services to the urban growth area.

Findings. The Unicoi County Gas Utility District serves the needs of the community in Erwin. Services are provided upon request and some of the cost to extend gas utility service is consumer based.

Health Facilities

The Unicoi County Memorial Hospital serves Erwin, the county, and surrounding areas. The building is jointly owned by the city and the county. The hospital consists of 48 hospital beds and 46 nursing home beds. Emergency services are contracted with Emergency Coverage Corporation located in Knoxville, Tennessee. Ambulance service is provided by Quality Care Ambulance Services and is dispatched through Uncoi County Dispatch located in the Sheriff's Department. Also, the Johnson City Medical Center provides major medical services for the region.

Findings. While there are limited health care facilities located within the Town of Erwin, the town has ready access to quality health care facilities in nearby cities.

Water

Water for domestic, commercial, and industrial use is provided by Erwin Utilities. The water supply comes from several sources around town, including the O'Brien Spring located near the south end of Gay Street, the Birchfield Well located on the west side, the Elks Well located on the north side, and the Railroad Well located on the south side. There are 4,274 water customers inside the Erwin corporate limits and 502 outside the limits. Those receiving water service outside the corporate limits are primarily located in the Martin's Creek and Temple Hill areas. The average daily water use is approximately 1,905,000 gallons. The existing treatment plants have the capacity to treat about 3,535,000 gallons per day, with planned upgrades intended to bring the amount to 4,111,000 gallons per day. Water serviced areas are shown on Illustration 9.

Findings. With the exception of the part of the proposed Urban Growth Boundary located between Rock Creek Road and Dry Creek Road, the majority of the study area receives water service Erwin Utilities. Planned upgrades will bring 576,000 gallons more per day. Future system upgrades will be needed, but the overall system is adequate.

Sewer

Erwin Utilities provides sanitary sewer service. There are 2,440 customers inside the corporate limits, and 74 customers located outside the Town. The treatment plant has a capacity to treat approximately 1,900,000 gallons per day. Sewer serviced areas are shown on Illustration 10.

Findings. Provision of sewer service will be the largest cost incurred by the Town of Erwin. The only part of the proposed Urban Growth Boundary that currently receives service from Erwin is the Morrill Motors industrial facility in the southwestern end of the region. Major funding assistance will be required for expanding sewer coverage.

Solid Waste Collection

The Town of Erwin does not provide garbage pick-up, however they do contract out for this service. The Town does provide pick-up service for leaves, brush, and large items. The Town employs fourteen (14) persons to handle solid waste. Solid waste collection is transported to the Iris Glen Environmental Center (landfill) located in Johnson City, Tennessee.

Findings. The Solid Waste Collection service in Erwin is adequate to serve the needs of the community.

Schools

Residents of Unicoi County including the towns of Erwin and Unicoi are served by one school system. The Unicoi County School System operates a total of seven schools. The Unicoi County High School, Middle School, Vocational School, Love Chapel Elementary School and Rock Creek Elementary Schools are located in Erwin. There are two elementary schools located within the county, Temple Hill Elementary School and the Unicoi Elementary School.

Findings. A new school, Unicoi County High School, was completed in time for the 1999-2000 school year and provides educational services to grades 9 through 12. There are two elementary schools located in the proposed Urban Growth Boundary, which

include Love Chapel School and Temple Hill School. Currently Rock Creek School is the only elementary school within the Erwin town limits.

SUMMARY OF FINDINGS

Erwin maintains an adequate recreation program, and with the projected completion of the linear park in 2003, will be sufficient to meet the long-range needs of the community. The existing municipal building is large enough to meet the long-range needs of the community. All town functions now housed in the building have sufficient space at present time and for the potential population growth. The police department provides for the needs of the residents of Erwin, however additional employees and equipment would be needed in order for the town to serve its urban growth area. There are no immediate plans to provide services to the growth area. The fire department provides for the needs of the residents of Erwin, however a small sub-station may be considered in the near future for the purpose of improving the town's ISO rating. No formal plans for the sub-station have been adopted at present time. Public Works provides a full range of services to the residents of the town. A five-year street improvement program study was prepared for the Erwin Planning Commission and prepared by the Local Planning Office of the Department of Economic and Community Development. Many of the improvements suggested in the study have been completed and other improvements will be considered based upon future monies. The Utilities provides for the needs of the residents of Erwin and the surrounding area, and have the capabilities to serve the potential population growth of the area. The Unicoi County Gas Utility District serves the needs of the community in Erwin. Services are provided upon request and some of the cost to extend gas utility service is consumer based. While there are limited health care facilities located within the Town of Erwin, the town has ready access to quality health care facilities in nearby cities. With the exception of the part of the proposed Urban Growth Boundary located between Rock Creek Road and Dry Creek Road, the majority of the study area receives water service Erwin Utilities. Planned upgrades will bring 576,000 gallons more per day. Future system upgrades will be needed, but the overall system is adequate. Provision of sewer service will be the largest cost incurred by the Town of Erwin. The only part of the proposed Urban Growth Boundary that currently receives service from Erwin is the Morrill Motors industrial facility in the southwestern end of the region. Major funding assistance will be required for expanding sewer coverage. The solid waste collection service in Erwin is adequate to serve the needs of the community. A new school, Unicoi County High School, was completed in time for the 1999-2000 school year and provides educational services to grades 9 through 12. There are two elementary schools located in the proposed Urban Growth Boundary, which include Love Chapel School and Temple Hill School. Currently Rock Creek School is the only elementary school within the Erwin town limits.

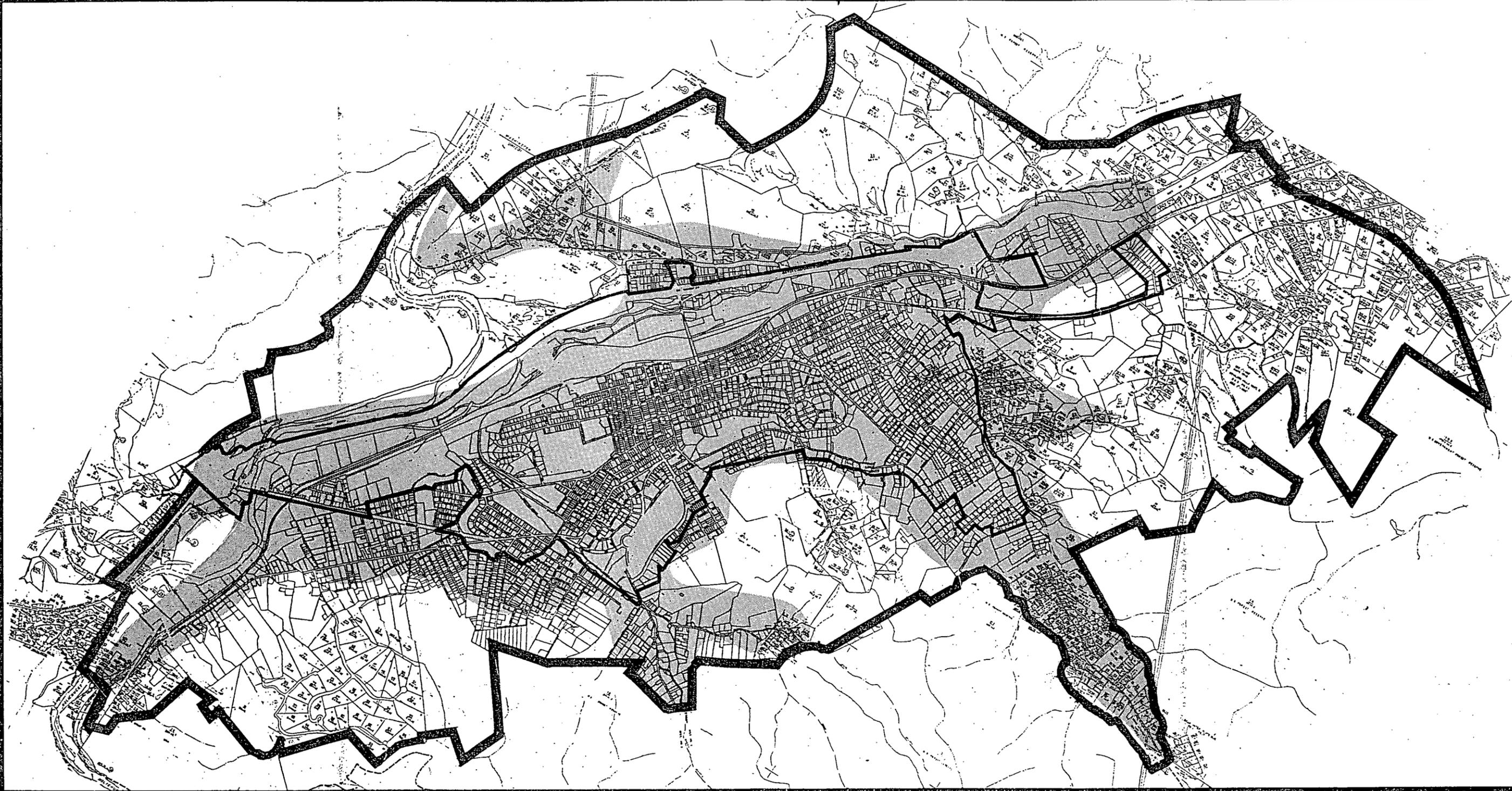


ILLUSTRATION 9
WATER SERVICE AREAS
ERWIN, TENNESSEE

PREPARED JUNE, 2001 BY THE UPPER EAST TENNESSEE SECTION OF THE LOCAL PLANNING ASSISTANCE OFFICE, DEPT. OF ECONOMIC AND COMMUNITY DEVELOPMENT

LEGEND

-  **ERWIN CORPORATE LIMITS**
-  **URBAN GROWTH BOUNDARY**
-  **WATER SERVICE AREAS**

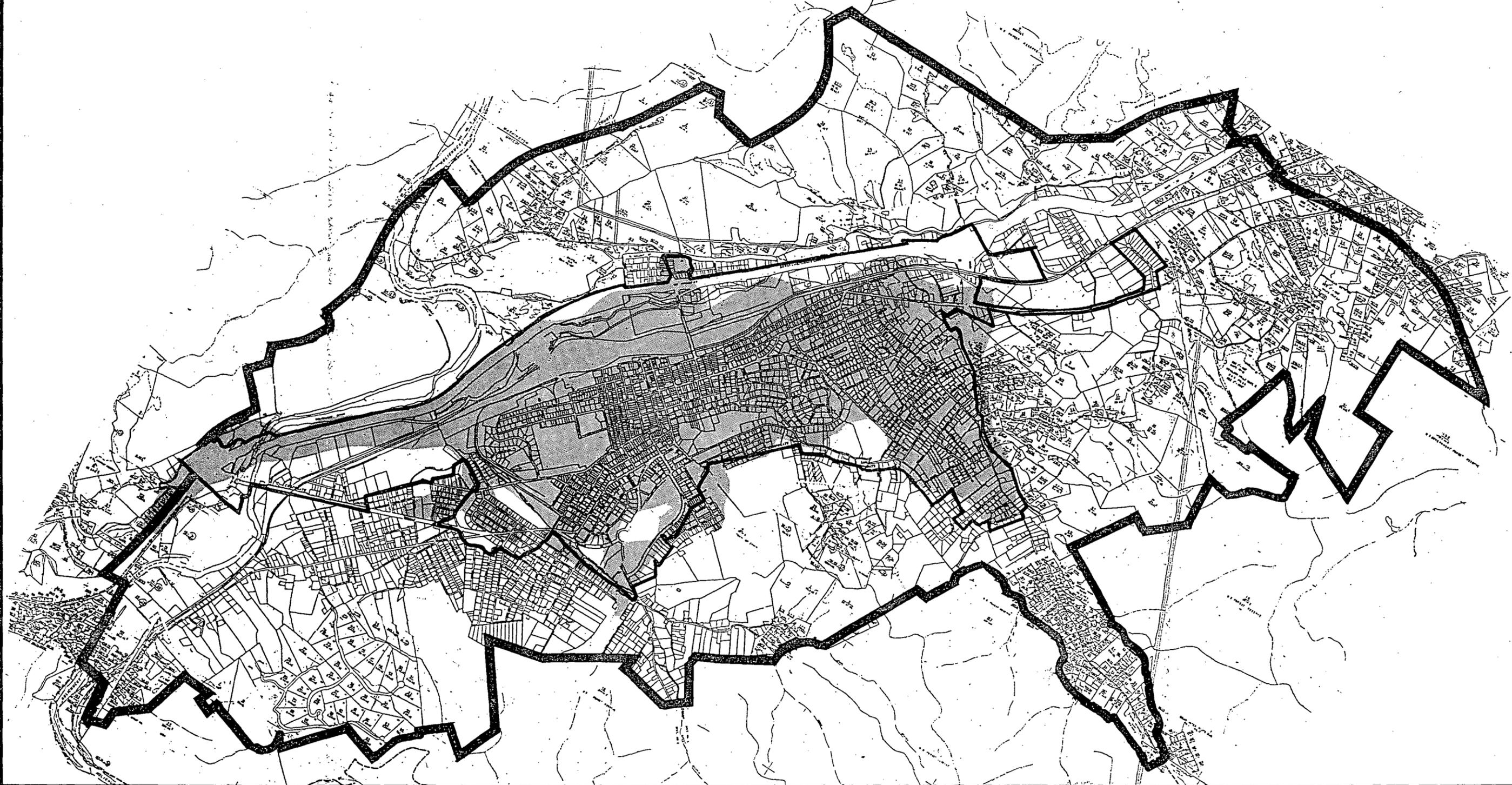


ILLUSTRATION 10

SEWER SERVICE AREAS

ERWIN, TENNESSEE

PREPARED JUNE, 2001 BY THE UPPER EAST TENNESSEE SECTION OF THE LOCAL
 PLANNING ASSISTANCE OFFICE, DEPT. OF ECONOMIC AND COMMUNITY DEVELOPMENT

LEGEND

-  **ERWIN CORPORATE LIMITS**
-  **URBAN GROWTH BOUNDARY**
-  **SEWER SERVICE AREAS**



CHAPTER 7

THE DEVELOPMENT PLAN

INTRODUCTION

A primary concern for most progressive communities is whether they will be able to guide and provide for their future growth and development. The Erwin Land Use and Transportation Policy Plan, through the Development Plan presented in this chapter, establishes how the municipality can best accommodate spatial growth during the twenty-year planning period. The development plan should serve as a general guide for the Town of Erwin and its projected growth area. It is derived from an analysis made of past events affecting development, governmental structure, natural factors, socioeconomic factors, existing land use and the existing transportation system. It is also directly based on several major assumptions, factors, issues and trends.

The Development Plan requires the establishment of development goals reflective of the level of the growth desired. Objectives based on the development goals, and policies to achieve these objectives, are presented in this Chapter. These goals, objectives and policies represent detailed guidelines for future development decisions. These goals, objectives and policies are further reflected in the Major Thoroughfare Plan and the Development Plan Concept, which is intended as a general guide for physical development decisions. The Development Plan Concept is shown on Illustration 11.

MAJOR ASSUMPTIONS, FACTORS, ISSUES AND TRENDS

The major assumptions, findings, and trends identified in the preparation of this plan are presented below. These assumptions represent the findings of the previous chapters, and are the forces that frame the goals, objectives and policies of this plan. The major assumptions, factors, issues and trends identified in this plan will directly affect the future land use, transportation and community facilities of the Town of Erwin. They are listed as follows:

1. The local government will continue to support economic and community development, and the municipality will continue to have a strong planning program.
2. The municipality currently has funds available, although limited, for capital budgeting and the implementation of a public improvement program.
3. Regional planning authority provides for the municipality's control over development in its recently approved growth area.
4. Natural factors, including flooding, poor soil conditions, and topographic constraints, somewhat limit some areas for development in the municipality and its projected growth area.
5. Moderate population growth is projected for the municipality and county during the planning period.

6. The elderly sector of the municipality's population is expected to increase as a significant percentage of the total population. The U.S. Census of Population indicates that since 1970 the percentage of persons 65 years or older has increased considerably, from 14 percent of the population in 1970 to 18.5 percent in 1990, and is expected to increase for the year 2000. This compares to a 1990 figure of 12.6 percent for that age group for Tennessee as a whole.
7. A significant percentage of the population is expected to continue to have incomes below the poverty level.
8. Manufacturing, retail, and public and private services are projected to be the primary sources of employment for the municipality and county during the planning period.
9. The lack of significant new subdivision development in the recent past, the limited availability of vacant lots, and that the Town is partially surrounded by National Forest has restricted this development.
10. Since the municipality has a predominantly older housing stock, there are scattered spots of dilapidated or deteriorated housing.
11. The municipality has little vacant commercial parcels or floor space, which indicates the need for additional commercial properties.
12. The municipality has a limited amount of vacant industrial land available for development. With extensive and proper infrastructure, more can be made available.
13. The county is projected to be the primary provider of locations for large scale and heavy industrial developments.
14. The municipality's water and sewer treatment capacities are adequate to meet the projected demands for future development with minor upgrading of the systems.
15. Some of the municipality's aging water and sewer lines will need to be replaced and upgraded.
16. The primary transportation problems in the municipality are traffic congestion associated with the grade road crossing of CSX Railroad as it passes through the downtown area, some of the residential streets which are very narrow, and occasional flooding of roadways from local creeks.
17. The completion of Interstate 26 is expected to open up land for development.
18. Some annexation will be necessary to provide strategic lands where new commercial and residential development needs to be directed. The projected growth area is expected to provide some of the necessary lands for future residential and commercial

development. Otherwise, annexation should be primarily done by request of the property owner and where important city utilities are needed.

DEVELOPMENT GOALS

To adequately plan and allocate for its future land use, it is necessary that a community establish general development goals. In the context of a future land use plan, a goal is a general statement reflecting the objectives in the areas of land development, transportation, and service delivery the community wants to achieve. The overall goals of this land use plan for the Town of Erwin is to provide a quality living and working environment for the residents of the municipality.

The following goals are general statements that the Erwin Planning Commission believes to be the desires of the citizens regarding the future development of the municipality.

1. To preserve, protect and enhance the quality of life in Erwin while encouraging a more harmonious and higher standard of development.
2. To provide for adequate housing to meet the needs of all residents while ensuring that all residential development provide pleasant and harmonious living environments, are served by adequate vehicular and pedestrian circulation systems, are served by adequate infrastructure, and are properly related to other municipal land uses.
3. To provide an adequate supply of goods and commercial services with varied sites suitable for a variety of outlets.
4. To maintain its standing primarily as a small, well kept community that emphasizes family values.
5. To provide adequate and efficient public facilities and services, and to provide a diversity of cultural and recreational opportunities.
6. To provide utility services that effectively and efficiently meets and anticipates the needs of the municipality.
7. To provide an efficient and effective transportation system with appropriate linkages and capacities.
8. To encourage the development of vacant land which has less natural restrictions and which has the necessary infrastructure.

OBJECTIVES AND DEVELOPMENT POLICIES

Both objectives and policies are utilized to achieve the goals established in this plan. Objectives are more specific, measurable statements of the desired goals. Policies

represent rules or courses of action that indicate how the goals and objectives of the plan will be realized.

The objectives and policies contained in this document represent the official public policy guidelines concerning land use and transportation matters for decision-making by the Town of Erwin. The policies are represented as guidelines to be followed by developers, builders, neighborhood groups, civic organizations, and other private and public interests engaged in and concerned about growth and development in the community. The policies are also presented so that interested individuals and groups can better anticipate the Town's decisions on future matters.

In the following section general growth management objectives and policies are presented. This section is followed by objectives and policies for each of the specific land use categories.

GENERAL DEVELOPMENT AND GROWTH MANAGEMENT

Growth has always been viewed as an inherent component of urban settlements. Most cities understand that growth is necessary for long-term viability and most encourage growth to varying extents. However, in more and more communities, the costs and benefits of continued growth have emerged as public issues. There is often hesitation over accommodating further development with its consequences of greater numbers of residents and higher densities, economic expansion, rapid consumption of land, and alteration of the natural environment.

The Town of Erwin fully anticipates growth and understands its importance as a part of those forces, which beneficially affect the community's quality of life. At the other end of the spectrum, the policy of growth at any cost has long-term detrimental impacts and is not supported by the Town. The approach taken by Erwin will be that of managed growth. To guide general growth and development the following objectives and policies are adopted.

- A. Objective-Assure the protection and integrity of the natural environment by implementing measures to minimize the adverse impacts of development to soils, slopes, vegetation, wetlands and other natural features.

Policies

1. Ensure that areas less suitable for development, due to natural factors, are developed only when appropriate remedial measures are taken.
2. Decisions on development proposals shall be based on an analysis of soils, slope, depth to bedrock, and location relative to flood prone areas.
3. Where the condition of the land is in doubt, and it appears that an unsuitable condition might exist, the potential developer shall have the responsibility for

undertaking the necessary studies to prove the feasibility of the land to support the proposed development.

4. All development proposals will be assessed for the appropriateness of engineering design and the installation of all necessary drainage facilities and appurtenances.
5. The Planning Commission shall ensure that the pre-development run-off discharge rate of any site is not increased as a result of development. Proposed future developments should not increase flooding potential, substantially alter drainage patterns, or lessen natural water quality.
6. Areas located in a designated floodplain should be developed only in conformance with National Flood Insurance Program guidelines.
7. Major natural drainage ways, which are a part of the natural system of dispersing normal flood run-off in any drainage basin, should be protected from encroachment.
8. Restricting the use of septic tanks to appropriate soil types and land formations shall protect ground water. Most new development will be directed to areas on the city sewer system.
9. Development proposals involving soil disturbance shall be in conformance with appropriate sediment and erosion control measures.
10. Area of excessive slope should be conserved as open space if development would cause soil and/or water degradation, or where the terrain possesses special scenic or recreational value.
11. Areas with slopes in excess of ten percent should only be developed where engineering documentation is available to prove that no adverse affects will occur to housing construction, road stability, drainage and erosion.
12. Mature vegetation, particularly trees, should be protected and replanting should be required where existing vegetation is removed or disturbed during construction.
13. Vegetation should be used as an alternative to man-made devices for buffering, screening, insulation, erosion control and water quality protection, whenever practical.
14. The Town shall develop appropriate criteria or measures to ensure the protection of environmentally sensitive and other valuable areas.

- B. Objective-Coordination of the demand for public services with the Town's capacity to supply them.

Policies

1. All new development, whether public or private, shall have appropriate infrastructure, which shall be properly installed at the expense of the developer. Cost sharing of strategic utilities to specific areas will be considered when directed to serve growth areas identified in the land use plan and provided mutual benefit will be bestowed to the developer and the citizens of Erwin.
2. All future expansions or extensions of the Town's services, facilities, or utilities should be in conformance with a plan which phases the improvements in segments suitable to the town's ability to pay.
3. Services and utilities provided by the town should be used as a tool to direct or discourage development in specific directions.
4. Availability and capacity of existing services and utilities should be used as criteria in determining the location of higher intensity uses in the Town and in decisions concerning annexation.
5. To aid developers in determining those areas most conducive to development, database maps of the infrastructure system should be routinely updated.
6. Developments with requirements beyond existing levels of police and fire protection, parks and recreation, and utilities shall only be allowed to develop when such services can be adequately provided and maintained.
7. Appropriate infill development should be encouraged to enhance existing development and to make more efficient use of existing services and utilities.

- C. Objective-Preservation of the Town's fiscal stability.

Policies

1. Fiscal decisions concerning major capital improvements and expenditures shall be based on a Community Facilities Plan and a multi-year Budgeting Program.
2. The Town should establish annexation criteria in a long-range urban fringe study/annexation plan through which it will consider annexation proposals.

3. Urban development proposals, which are contiguous with existing development within the town limits, or consistent with the Town's phasing and annexation plans, should be encouraged through the extension of services.
4. Services provided by the Town should be in conformance with an adopted phasing plan and shall not be provided outside of the Town prior to annexation.
5. The Town should participate in the establishment of a permanent source of funds to provide financing for economic development.
6. The Town should encourage preservation of the tax base through the practice of sound land use decisions.

D. Objective-Protection and enhancement of present and future livability.

Policies

1. The Town should establish livability standards or criteria for assessing the impacts of development projects on the continued livability of the community. For growth management these standards or criteria should assess:
 - a. Environmental impacts such as water quality degradation, destruction of wetlands, etc.
 - b. Social impacts such as public safety, availability of community services, etc.
 - c. Economical and fiscal impacts such as budget constraints, job creation or loss, etc.
 - d. Impacts to public services and facilities, and transportation, such as water supply and treatment capacity, sewer treatment capacity, Average Daily Traffic (ADT) counts on major roads, etc.
2. Land use, site planning, and urban design criteria should be utilized to promote pleasant, functional and understandable relationships between land uses.
3. Planning for community facilities and services should be based on the principal of maintaining or increasing the current levels of service provision.
4. Community development should concentrate on ways to encourage young people to remain in Erwin/Unicoi County to live and work.

RESIDENTIAL

A large portion of the developed land in Erwin is devoted to residential uses, consisting of single-family dwellings, multi-family dwellings and mobile homes. The following table, (Table 3), displays the amount of land necessary to accommodate the projected 2020 population of Erwin. The acreage was derived by calculating the ratio of varying land uses per person, using the 1998 Certified population of 5,611. Residential land use projections are based on maintaining the same number of person per household (2.46) through the year 2020.

Table 3. Additional Acreage Needed by Land Use Category to Accommodate the Projected 2020 Population of the Town of Erwin

Land Use	Ratio	Additional Acreage Needed
Residential	0.12 acres per person	36.0
Commercial	0.01 acres per person	5.4
Industrial	0.02 acres per person	9.2
Public/Semi Public	0.03 acres per person	12.0
Streets	0.07 acres per person	30.8
Total		93.4

Currently Erwin contains approximately 50 acres of vacant land that is without physical limitations. Based on the figure of 93.4 additional acres needed to accommodate anticipated growth until the year 2020, Erwin has a shortage of about 43 acres.

To ensure the most appropriate development of existing and future residential areas in Erwin and its projected growth area, the following developmental objectives and policies are adopted:

- A. Objective-Provide for a variety of housing types and densities for a wide range of family incomes, sizes and life-styles.

Policies

1. The Town should promote new residential developments in environmentally safe and pleasing areas.
2. The Town should allow housing types ranging from single-family structures to multi-family developments, including mobile homes properly located in mobile home parks. Older, substandard and dilapidated mobile homes should be discouraged.
3. Infill development should be encouraged only in locations, which are comparable with surrounding residential densities.

4. Land use controls should be used to foster a variety of housing types compatible with the natural landscape.
5. The Town should encourage and concentrate high density housing development along major traffic corridors where water and sewer lines are available and with easy access to retail business, pedestrian amenities, cultural activities, schools and parks.
6. The Town should encourage low-density housing along local streets within proximity to service centers, which are buffered, from excessive noise, traffic, and conflicting development.
7. Higher density residential uses should locate in planned developments or in close proximity to existent higher density developments.
8. The Town should ensure that the existing housing stock continues to be maintained and that new residential construction is developed to appropriate standards and guidelines.
9. The Town should encourage the rehabilitation of existing residences, which can be purchased by low and moderate-income residents.
10. The Town should encourage the preservation and revitalization of older neighborhoods.
11. The Town should encourage sound development in suitable areas by maintaining and improving transportation facilities.
12. New residential development shall not be allowed in those areas where infrastructure is unavailable or inadequate to support such development.
13. New residential development should be designed to encourage the neighborhood concept and should be situated to be easily accessible to collector or arterial streets.
14. Transitional land uses or areas (linear greenbelts) or other design elements should be provided between residential neighborhoods and commercial areas in order to enhance the compatibility of land uses.

COMMERCIAL AND PRIVATE SERVICES

The Central Business District (CBD) located on Main Street has been the focal point for commerce and private services in Erwin since the early years of the community. Like many older CBD's, this area has experienced some structural deterioration, however, the Erwin CBD has very limited vacant floor space. In recent years, there have been efforts

to restore some of the buildings in the downtown area. The continued remodeling of existing buildings and the infilling of vacant spaces should be encouraged.

The cemeteries and numerous churches in the community contribute additional acreage to this land use category. The cemeteries are spacious, well maintained, and provide a pleasant feeling of open space in Erwin. The church properties are attractively configured and maintained and add significantly to the character of the area. New uses of this type should also enhance the community's appearance, while at the same time, create the least possible conflict with adjacent land uses.

The vital commercial and service areas of the community should be protected and enhanced to help ensure their continued development in a planned environment which will strengthen the economy of the entire county. To guide the continuation and expansion of these essential commercial activities, the following objectives and policies are adopted:

- A. Objective-Take appropriate measures to ensure that the Town of Erwin remains a viable center for commercial and private services to its citizens.

Policies

1. Future commercial developments and redevelopments shall be in compliance with a comprehensive plan for all commercial growth and development.
2. In conjunction with the Chamber of Commerce, the Town should recruit and retain business and service outlets that fulfill local market demands.
3. The Town should encourage and support the expansion of existent commercial areas and those that will result in the consolidation of commercial activities at central locations.
4. The Town should encourage the adaptive reuse of existing structures in the CBD.
5. The Town should expand and/or improve parking within the CBD area.

- B. Objective-Ensure that all new commercial development meets appropriate standards and guidelines.

Policies

1. All commercial developments shall be designed in compliance with appropriate site development standards.
2. Commercial development shall be approved in only those areas where infrastructure is available and adequate to support such development.

3. Commercial development should be designed so as to minimize negative impacts to the existing transportation system.
4. Strip commercial developments should be discouraged in favor of cluster developments with limited entrance and exit points.
5. Commercial uses, which are high intensity traffic generators, shall be located away from the CBD and on major collector or arterial status roads.
6. All new large-scale commercial developments shall be located on frontage or access roads with controlled ingress and egress points, when feasible.
7. All commercial and private service developments shall be provided with an adequate number of off-street parking spaces.
8. Commercial developments should be designed so as to minimize negative impacts to residential developments and to enhance the aesthetics of such developments.
9. To the extent feasible, landscaping or other screening shall be provided between commercial and residential land uses.

INDUSTRIAL

Erwin has a strong industrial base at the present time. Riverview Industrial Park is the only industrial park within the corporate boundary and contains most of the new industry. Located on the south end of Erwin, the Park is nearing its capacity. A new park will be needed in the near future. If other industrial opportunities present themselves, the community should consider annexing sites and participating in providing infrastructure paid for by the prospect, or by use of grants or other means that do not burden the finances of the community. Efforts should be taken to make it possible for existing industries to grow and prosper.

To guide the continuation and expansion of these industrial activities, the following objectives and policies are adopted:

- A. Objective-Retain the existing light industrial base, provide areas for some industrial development in the industrial park or at suitable sites elsewhere.

Policies

1. The Legislative Body should support improvements in the local economy by maintaining industrial site locations and improving existing industrial site locations.

2. The existing industrial park should be provided adequate service and be expanded as needed; new industrial parks and sites should be planned and developed as needed.
3. To provide for additional industrial land and employment in Erwin and provide town services to those industrial activities, the Town should adopt a policy to annex additional industrial properties where it is determined that such annexation are feasible.
4. The Town and the Planning Commission should support appropriate road and traffic improvements at existing industrial locations and at other areas suitable for the expansion or location of industry.
5. Public officials should cooperate with, and actively support, the Unicoi Chamber of Commerce in its effort to attract industrial prospects and to retain and promote the expansion of existing industries.
6. Based on locally developed criteria, industrial land uses known or suspected of having harmful impacts on the health, safety, and welfare of people, and those activities and uses which would degrade, retard, or otherwise harm the natural environment, or the economic potential of the community, shall be discouraged from locating in the Town.

C. Objective-Provide appropriate standards and guidelines for new industrial development and for expansion of existing industrial uses.

Policies

1. All industrial developments shall be designed in compliance with appropriate site development standards.
2. Industrial uses should locate near transportation facilities that offer the access required by the industry. Such uses should not be allowed to create demands, which exceed the capacity of the existing and future transportation network.
3. Industrial development should locate within the Town consistent with the phasing plan for infrastructure, where the proper sizing of facilities such as water, sewer and transportation has occurred or is planned.
4. To the extent feasible, landscaping or other screening shall be provided to reduce the conflict and soften the impact between industrial uses and other land uses.

PUBLIC AND SEMI-PUBLIC COMMUNITY FACILITIES

Public and semi-public uses in Erwin consume a slightly larger percentage of land than in most small towns, therefore these facilities are extremely important land uses within the community. This is especially true of Erwin as the county seat and major provider of services in Unicoi County. These uses should be convenient to the population and enhance the community's appearance, while at the same time creating the least possible conflict with adjacent land uses.

It is imperative that during the site design process for public and semi-public facilities, particular attention should be paid to the following items: the location of buildings in relation to parking and service areas; the relationship of buildings to existing and proposed streets; adjoining land uses; and the natural beauty of surrounding areas. The objectives and policies to be used as guidelines for public and semi-public uses are as follows:

- A. Objective-Provide adequate and efficient public services and facilities, which meet appropriate standards and guidelines.

Policies

1. New facilities should be developed based upon the need and utilizing the information provided in Chapter 6 of this plan.
2. Community facilities should reflect the Town's goals, needs, and capabilities. They should provide for the optimum use of the taxpayer's money and should serve a wide community interest.
3. New community facilities should be planned in a manner that would promote efficient governmental administration.
4. Public facilities and services should be improved and expanded in accordance with an adopted Public Improvement Program and Capital Budget.
5. The Town should be careful not to overextend resources in planning for community facilities and risk losing a sound and stable financial program. Opportunities for participation in federal and state grant-in-aid programs should be explored prior to commitment on new projects.
6. Priorities for funding community facilities should be established in order of: protection of life; maintenance of public health; protection of property; conservation of resources; maintenance of physical property; provision of public services; replacement of obsolete facilities; reduction of operating cost; public convenience and comfort; recreational value; economic value; and social, cultural and aesthetic value.

B. Objective-Provide a diversity of quality cultural and recreational opportunities.

Policies

1. Decisions concerning the provision of recreation facilities should be guided by the Community Facilities section of this plan for such facilities, and shall be consistent with the Capital Budget. A special recreation plan may help direct detailed attention of both recreational facilities and programs.
2. The Town should promote the joint use of parks and other public facilities, especially schools.
3. The Town should enhance the opportunities for passive recreation through the continued development of its greenbelt/greenway system. The system should eventually tie into Fishery Park, and the Appalachian Trail.
4. Community and neighborhood parks should be developed and appropriately located with the Town.
5. The Town should maximize the use of public recreational land through close coordination with federal, state and county officials.
6. The Town should promote efforts to document, preserve and protect historic sites and structures in Erwin and Unicoi County.

UTILITIES

Land Development without the extension of adequate utilities is costly to the general public. In order to achieve proper development and facilitate saving public funds, it is extremely important to coordinate the extension of utilities with the community's development plan. Therefore, the following objectives and policies should be adopted by all agencies responsible for the operation or extension of public utilities:

A. Objective-Provide adequate and efficient public utility facilities.

Policies

1. All new development, whether public or private, should have adequate utilities, which shall be properly installed at the expense of the developer.
2. The Town should ensure that the municipal water and sewer systems are adequate to meet current and future needs.
3. The health of residents shall be protected through the production of State approved potable water and the safe and efficient collection and treatment of wastewater.

4. Through its capital improvements and budget process, the Town shall plan early for capacity expansions to its water and sewer treatment facilities to meet future needs and provide for future growth.

B. Objective-Provide appropriate standards and guidelines for utility facility improvements and extensions.

Policies

1. Adequate utilities should be extended into urbanizing areas on a priority basis with a rate differential between such areas and the municipality. These extensions shall meet health and safety standards.
2. Water and sewer lines of adequate size and location shall be required in all new developments and redevelopments.
3. All utilities should be located so as to minimize future disruptions to roadway integrity.
4. The water distribution system should be periodically evaluated to ensure that water lines are of adequate size to provide adequate pressure for fire fighting, and that a suitable number of fire hydrants are present in all developed areas.
5. The use of underground electrical utilities should be required wherever feasible.
6. Utility structures for the storage of equipment, pumps, or similar materials should be adequately buffered and landscaped so as not to detract from the surrounding area.
7. The location of telecommunication towers should be planned so that the structures are visually screened from nearby residential developments.

C. Objective-Ensure that proper stormwater control measures and infrastructure is provided throughout the Town.

Policies

1. The Town should require new developments to integrate their storm water drainage systems into the immediate drainage basin system.
2. The Town should require appropriate maintenance and repair of any privately controlled drainage facilities or appurtenances which tie into any portion of the public or other existing natural drainage systems.

3. For traffic safety on streets and in parking lots, underground storm water drainage systems should be provided in all new developments and redevelopments.

PUBLIC SERVICE/CULTURAL AND RECREATIONAL

Public service/cultural and recreation uses in Erwin consume a slightly larger percentage of land than in most small towns. Unicoi County high school serves Erwin as well as students from the county and is a significant land use in the community. The towns Fishery Park and other recreational land contribute additional acreage to this land use category. The school grounds are spacious, well maintained and provide a pleasant feeling of open space along Mohawk Avenue. This type of use enhances the community's appearance, while at the same time creating the least possible conflict with adjacent land uses.

It is important that during the site design process for public, recreational, and cultural facilities, particular attention should be paid to the following items: the location of buildings in relation to parking and service areas; the relationship of buildings to existing and proposed streets; adjoining land uses; and the natural beauty of surrounding areas. The objectives and policies to be used as guidelines for public and semi-public uses are as follows:

- A. Objective-Provide adequate and efficient public services and facilities, which meet appropriate standards and guidelines.

Policies

1. The Town should prepare a Comprehensive Community Facilities Plan based on local standards and location criteria.
2. Public facilities and services should be improved and expanded in accordance with an adopted Public Improvement Program and Capital Budget.

- B. Objective-Provide a diversity of quality cultural and recreational opportunities.

Policies

1. Decisions concerning the provision of recreation facilities shall be guided by a Community Facilities Plan for such facilities, and shall be consistent with the Capital Budget. A special recreation plan may help direct detailed attention of both recreational facilities and programs.
2. The Town should promote the joint use of parks and other public facilities, especially schools.

3. The Town should enhance the opportunities for passive recreation through the continued development of its greenbelt/green-way system. The system should eventually tie into Fishery Park and the Appalachian Trail.
4. Community and neighborhood parks should be developed and appropriately located within the Town.
5. The Town should maximize the use of public recreational land through close coordination with federal, state and county officials.
6. The Town should promote efforts to document, preserve and protect historic sites and structures in Erwin and Unicoi County.

VACANT LAND AND OPEN SPACE

Erwin's land use survey indicated that there were 418 acres of vacant land in the Town. As the community grows, a significant amount of this land will be pressed into urban development. Unfortunately, the largest portion of this land either cannot be developed or would be cost prohibitive to develop due to natural factors. In 1999, there are approximately 50 acres of land within Erwin that are vacant and without physical restrictions. There are approximately 890 acres of the Urban Growth Boundary that are currently undeveloped and free of major physical limitations, thus making them suitable for intensive urban development. In addition, some of the vacant land would be best utilized as open space. To guide the future development of the vacant lands in the Town of Erwin and its projected growth area, the following objectives and policies are adopted:

- A. Objective-Ensure that adequate open space is provided in the municipality to enhance its aesthetic quality.

Policies

1. Appropriately located public open spaces and general recreational uses should be provided to serve the local residents as well as visitors. These areas should be readily available and designed to serve all age groups.
2. The Town should ensure that adequate amounts of open space areas are available for future populations.
3. Open space should be included as a requirement to serve every major development.
4. Places of rare natural beauty and areas of historic interest should be preserved and maintained.

5. All publicly owned land should be examined for its potential open space or recreational use before being sold or disposed of by the Town.

Objective-Ensure that appropriate standards and guidelines are followed for development of vacant land and for the provision of open space.

Policies

1. Public support and approval of development proposals that result in the conversion of prime farmlands should be reserved for those developments consistent with this plan and required for urban growth and development.
2. Areas of excessive slope should be conserved as open space, when possible, if development would cause significant soil and/or water degradation, or where the terrain possesses special scenic or recreational value.
3. Vegetation should be used as an alternative to man-made devices for buffering, insulation, erosion control and water quality protection.
4. Filling and excavation in floodplains shall only be allowed when consistent with National Flood Insurance Program regulations and allowed only after careful review of appropriate alternatives.
5. Mature vegetation, especially along stream banks should be protected and indiscriminate removal in order to enhance the aesthetic value of the landscape as well as to control erosion.
6. Consistent with National Flood Insurance Program regulations, the Town shall prohibit any residential development in areas, which have been officially designated as floodways.
7. Within officially designated floodways, the Town should encourage light recreational and open space uses such as greenbelts.
8. The Town shall develop appropriate criteria and measures to ensure the protection and enhancement of environmentally sensitive and other valuable areas.

TRANSPORTATION

The future transportation system in Erwin and its projected growth area will be affected by a number of factors. These factors include the existing street pattern, major impediments to traffic, location of major traffic generators, parking needs, growth trends, construction of new thoroughfares, and the location preferences of new development. Although the municipality cannot control all the factors, which will influence its future

transportation system, it can provide some direction. The following objectives and policies are presented as a guide to achieving an adequate and efficient future transportation system:

- A. Objective-Provide a transportation system that will adequately meet the future needs for growth and development.

Policies

1. All new development, whether public or private, should have an adequate transportation system, which shall be properly installed at the expense of the developer.
2. All new major streets should be located in a manner that will minimize disruption to neighborhoods, open space-recreational areas, or commercial areas.
3. All segments of the transportation system should be designed and located to meet future as well as present demands.
4. Wherever possible, off-street parking shall be required for existing land uses. All new land uses, except for commercial and private service uses in the CBD, shall be required to provide off-street parking facilities.
5. On-street parking for existing uses shall be permitted only where adequate street widths are available and where such parking will not reduce the current level of service of the street.
6. Sidewalks should be extended throughout the Town where feasible and should be maintained in good repair.
7. A town-wide hiking and biking system should be developed.
8. Older streets in the Town should be upgraded and improved through a road improvements program.

- B. Objective-Provide appropriate standards and guidelines for the construction of new streets and other transportation facilities.

Policies

1. Streets should be related to the topography and designed to minimize the points of traffic conflict and turning movements.

2. All new streets and other public ways shall be designed to incorporate storm water drainage systems, which are adequate in size to handle runoff from anticipated developments.
3. All streets and other public ways shall be designed so as to provide the least interference with natural drainage ways.
4. All new streets and other public ways shall be designed and located in a manner, which offers the maximum protection from flood and erosion damage.
5. Future roadways should be designed to incorporate appropriate landscaping to heighten the aesthetic and functional appeal both to motorist and surrounding residents.
6. Street signage and other safety features should be required at the time of development.

CHAPTER 8

PLAN IMPLEMENTATION

INTRODUCTION

In this Chapter several methods for implementation of the objectives and policies developed in this plan are reviewed. Many of these methods for implementation are already being utilized by the Town of Erwin. The Planning Commission and the local Legislative Body may need to examine the effectiveness of current practices or regulations in achieving the stated objectives and policies. Where the identified methods are not currently being used, the municipality should consider taking the appropriate steps to do so.

Also, in this Chapter an Implementation Schedule is presented. It is intended to provide specific strategies for implementing the objectives and policies recommended in this plan. The Implementation Schedule proposes individual strategies for each of the specific land use categories, establishes time frames for completion, and identifies those responsible for implementation.

METHODS FOR IMPLEMENTATION

There have been ten methods of plan implementation identified for Erwin to utilize in the execution of this plan. Each of these is reviewed within this section.

Planning Commission Project Review

Under Tennessee Code Section 13-4-104, after the adoption of a plan, no public improvement project can be authorized or constructed in the municipality until and unless the location and extent of the project have been submitted to the Planning Commission for its review. This review authority enables the Planning Commission to ensure that all public improvement projects are in compliance with the plan. The Erwin Planning Commission should consistently be given the opportunity to review major public improvement projects prior to inclusion in the municipal budget. This should be an annual step in the Town's budgetary process and should be complemented by the preparation of a public improvements program. All utility expansion, public works, drainage, and transportation projects should be reviewed by the Planning Commission prior to incorporation into the municipality's Public Improvement Program and Capital Budget.

Zoning

Zoning is a legal mechanism that can assist the municipality in implementing a land use and transportation plan. A zoning ordinance is designed to regulate the type and intensity of land use. It divides the community into specific districts corresponding to the intended use of the land as guided by the policies of the land use plan. For each district, zoning

regulates the location, height, bulk, and size of buildings and other structures, the percentage of the lot that may be occupied, the sizes of yards, courts and other open spaces, and the density of the population. Zoning can assure the proper location of residential, commercial, and industrial uses. It can protect street right-of-ways so that future widening is feasible. It can also prohibit overcrowding of building lots. In addition, zoning can help stabilize property values and can help prevent deterioration of neighborhoods.

The Town of Erwin first adopted zoning regulations in 1967. These regulations have been amended over time and are current. Also, these regulations need to be reviewed and revised to ensure that the policies presented in this plan can be implemented. The following areas are of particular concern:

1. Residential density requirements should be reviewed to reflect future population growth and may need to be increased where feasible.
2. Historic zoning should be adopted to preserve the historic and cultural properties of the municipality.
3. Site plan review provisions should be revised to provide improved buffering and landscape requirements, better access control regulations, to better control surface water drainage, and to ensure that adequate infrastructure is available.
4. Floodplain zoning provisions should be kept up to date with the latest Federal Emergency Management Agency guidelines.

Subdivision Regulations

Subdivision regulations, used in a coordinated manner with zoning, are another legal mechanism to carry out the recommendations of the Land Use and Transportation Policy Plan. Like zoning, these regulations control private development. They serve as guidelines for the conversion of raw land into building sites. Subdivision regulations provide the guide by which a Planning Commission can review all proposed plats for subdivision in an equitable manner. These controls are necessary if sound, economical development is to be achieved. Through enforcement of these regulations, the design and quality of subdivisions will be improved, resulting in better living conditions and greater stability of property values for the individual property owner. Such controls over land subdivision ensure that installation of adequate utilities that may be economically serviced and maintained. These controls are also used in providing a coordinated street system and to ensure that sufficient open space for recreation and other public services is provided.

Like the zoning regulations, the subdivision regulations should reflect the actual goals of the community and should be changed whenever necessary in order to continue to

accomplish those identified goals. The Erwin Planning Commission first adopted subdivision regulations in 1968. These regulations are up to date.

Codes Enforcement

There are various types of codes that municipalities can adopt to ensure that construction standards are sufficient to protect the health and safety of occupants. The housing code is designed to ensure that existing dwellings are safe, sanitary, and fit for human habitation. Other codes, such as building, electrical, fire, and plumbing codes, provide minimum standards for the construction of new buildings and facilities, and the alteration of existing structures and facilities. These codes are uniform in character and are applied to the municipality as a whole.

A system of codes functions only if accompanied by an inspection system. Code enforcement ensures the adequacy of new residential, commercial and industrial structures while also detecting and preventing the deterioration of existing facilities through periodic inspection. By reducing blight, property values become more stable and tax bases are protected.

The Town of Erwin has adopted the Southern Standard Building Codes for construction. There is an existing full-time certified building inspector employed by the Town of Erwin whom ensures compliance with Tennessee law.

Utility Extension Policies

Another significant tool for effective land use planning is the control over the extension of municipally owned and operated utility services. Utility extension policies can be used for controlling the location and timing of development in a rational, coherent and efficient fashion. Since utility services, such as water and sewer, are so important to any major development, the refusal to extend such services into an area generally assures that only limited development can occur.

Within the Town of Erwin, the extension of utilities is generally the responsibility of the developer, unless annexation is proposed. Due to the large area of the Urban Growth Boundary and the potential for development in that area, the Erwin Legislative Body in conjunction with the Planning Commission should develop a detailed utility extension policy.

Public Improvements Program and Capital Budget

A public improvements and capital budget provides the means through which the local government can effectively undertake a properly planned and programmed approach toward utilizing its financial resources in the most efficient way possible to meet the service and facility needs of the community. The public improvements program identifies recommendations for capital improvements, estimates their costs, and identifies

possible financing alternatives. The capital budget is a method of developing and scheduling a way to finance the projects identified in the public improvements program.

The Town of Erwin currently follows a multi-year public improvement program and capital budget. It is necessary that this important planning tool be kept up to date.

Infill Development

Utilization of existing, developable vacant land within a municipality is a much-overlooked mechanism to implement a land use plan. In most cases, these areas tend to be served by existing infrastructure such as streets, water, sewer, electric and gas; thereby eliminating normal costs associated with additional development. An abundance of vacant developable land is a costly luxury to a municipality. It results in under utilization of infrastructure due to low-density development. Infill development of serviced areas will expand local revenue resources while better utilizing the existing infrastructure system. Infill development is often best encouraged by reducing out lying development alternatives by not rezoning lands prematurely.

Annexation

Historically, as the population of municipalities increased, so has that of the suburban fringe areas that surround them. Residents and businesses are attracted to these fringe areas primarily because they can reap many of the benefits, which municipalities provide without having to bear the costs. Serious consequences such as public health hazards, substandard services, wasteful duplication of services, inequitable distribution of tax burdens and benefits, and undesirable development resulting from non-existent or poor planning and zoning controls, can develop from a failure to annex.

Municipalities can best plan for and deliver the urban services required by fringe areas through annexation. If a municipality fails to expand its corporate limits, development will locate in the urban fringe where it will contribute little to the finances of the municipality, while increasing pressure on the facilities and services provided by the municipality.

Annexation has, in the past, been an underutilized option for the Town of Erwin, due primarily to the natural constraints that surround the municipality. On December 13, 2000, the Town of Erwin adopted a resolution requesting the Local Government Planning Advisory Committee (LGPAC), pursuant to Section 13-3-102, Tennessee Code Annotated, to create an Erwin Planning Region. Once the L.G.P.A.C approves the request, the adopted Urban Growth Boundary will be designated as Erwin's new planning region, thus creating more areas that the municipality could feasibly annex. It is recommended that a multi-year annexation schedule be prepared by the Planning Commission and recommended to the Erwin Legislative Body.

Citizen Participation

Citizen participation is an important factor in determining the success of a land use plan. An informed citizenry that is willing to work to achieve the goals, objectives, and policies set forth in this plan can be a tremendous asset. Citizens can offer support for programs designed to achieve community goals. Successful citizen participation can be achieved through a public education program designed to inform the community of the various purposes and reasons for the actions of both the planning commission and the Board of Mayor and Aldermen. Specific efforts should be taken to obtain input from the general public through organizational public meetings, public hearings, and surveys. News articles should be utilized to educate the public regarding the work activities of the planning commission.

Local Leadership

The Town of Erwin Board of Mayor and Aldermen bears most of the responsibility for implementation of this Land Use and Transportation Policy Plan. As the municipality's decision-makers, they have the authority to adopt appropriate implementation strategies that will fulfill the goals, objectives, and policies developed in this plan. It is important that the legislative body maintain a close working relationship with the planning commission so that the planning process is properly coordinated.

IMPLEMENTATION SCHEDULE

The Erwin Land Use and Transportation Policy Plan is an advisory document intended to serve as a guide for the development of the municipality over the next twenty years. Specific strategies for policy implementation are necessary if the goals and objectives of this Plan are to be achieved. Many of the goals, policies, and objectives can be implemented by assigning existing town staff, addressing issues with legislation, or continuing existing programming.

Each year the Board of Mayor and Aldermen develops an itemized work program. The purpose of this work program is to identify and prioritize what needs to be accomplished during the fiscal year. As part of the process of establishing the itemized work program, the Board should review the goals, policies, and objectives of this plan and determine what should be accomplished and when.

CHAPTER 9

SUMMARY OF PLAN RECOMMENDATIONS

Based on plan findings and goals of the community, the following summary of plan recommendations is provided to serve as a guide for Erwin community leaders and others in making future decisions regarding land use, transportation, and community facilities important to the economic and physical development of Erwin.

Maintain an active planning commission to consistently enforce zoning and subdivision regulations in a fair and equitable manner.

Continue to have the planning commission review all commercial, office, multi-family, and recreational site plans so that the citizens can maintain a high level of involvement in the development activities of the Town.

Maintain, through planning and land use regulation, the spacious open character of Erwin as it grows residentially and commercially.

Promote the safety of the road network by directing growth toward areas of adequate roadways.

Encourage all development to proceed in an environmentally sound and sensitive manner. In addition to preserving the aesthetics of the area, such practices will also save money in the long run for not only the future property owners, but also the Town.

Encourage a variety of new residential development.

Encourage infill commercial development.

Encourage redevelopment of existing structures and/or sites in older commercial areas.

Encourage continued expansion of the park system and increase access to recreational opportunities through grant programs.



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