Tennessee General Assembly
Public Chapter 1101

GROWTH MANAGEMENT PLAN

Prepared for
The City of Lebanon

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CHAPTER ONE - INTRODUCTION AND BACKGROUND

1.1 Introduction

Considering the aggressive development trends that are currently being experienced throughout the middle Tennessee area, urban growth is becoming an important community concern for cities such as Lebanon. The urban growth patterns and development decisions that are made today will shape the environment and quality of life experienced in the city of Lebanon in the 21st century. For this reason, more and more communities are promoting smarter urban growth policies to better accommodate this anticipated growth.

1.2 Purpose

Through the Growth Policy Legislation, Public Chapter 1101, adopted by the Tennessee General Assembly in 1998, local communities are provided with the framework and processes to better plan for their future. Under this flexible framework, the City and County governments are able to cooperatively determine their future while preserving and complementing the unique character of their area.

As specified in Tennessee Code Annotated 6-58-106, there are several conditions that must be met in determining urban growth boundaries, planned growth areas, and rural areas. The standard process requires each municipality and county to prepare a report including 1)population growth projections, 2)current and projected costs of core infrastructure, urban services, and public facilities necessary to support future urban growth, and 3)land use suitability analysis for land needed to accommodate additional urban growth, considering land management issues for environmentally sensitive areas. The purpose of this report is to provide the necessary information to support the proposed Urban Growth Boundary of the City of Lebanon.

1.3 Background and Methodology

Wilson County, and particularly the City of Lebanon, is one such area that is currently experiencing a rapid growth movement. With several new large development projects planned in the City, and many more sure to follow due to several proposed transportation and thoroughfare projects, the time to plan the City's future is now. This Executive Summary provides an examination of the City's plan to meet the future public needs and demands for residential, commercial, and industrial growth.

This report is the culmination of a six month process involving extensive research and analysis of existing conditions, and forecasts of future population growth, infrastructure, and public service demands. Through input from City Officials and two public hearings, community involvement played an important role in the completion of this plan. Each of the major phases of the planning process have been segmented in chapter within this report.

1.4 Format of the Report

In August of 1999, Barge, Waggoner, Sumner and Cannon, Inc. was retained by The City of Lebanon to assist in the preparation of an Urban Growth Plan that fulfilled the requirements of Public Chapter 1101 and provided a plan and overall vision for the future growth of the city. This report provides the culmination of extensive planning and engineering analyzes which attempt to inventory and analyze the growth trends anticipated for the City. These analyzes, combined with the public input received in two meetings, helped create an urban growth boundary, plan of services and land use vision for the City of Lebanon as it enters the new millennium.

Chapter One of the report provides this Introduction and Background statement. Chapter Two presents an Inventory and Analysis Phase in which existing conditions were identified, key issues were defined, and thorough analysis of these issues and future growth areas were determined. Chapter Three presents the proposed Urban Growth Boundary and identifies key areas of anticipated urban growth and generalized future land uses. Chapter Four presents the Public Infrastructure and Services Plan, including forecasted needs for water and sewer utilities, fire, police, etc., and recommended strategies for phasing and implementation. Chapter Five summarizes the conclusions reached during the study. Each of these sections will be outlined and discussed in more detail throughout the report.

Finally, it is difficult for any report to document all the data and analyzes researched and performed during the planning process. This report attempts to provide the key conclusions of this process, while at the same time, meeting the minimum requirements of Section 7 of Public Chapter 1101.

CHAPTER TWO - INVENTORY AND ANALYSIS

This section of the report identifies the key demographic, land use and infrastructure items in the City that may impact the future growth and the limits of this growth. Lebanon continues to be a major presence in the Middle Tennessee Area, and the strength of the Nashville area economy and the City's geographic location in the region has and will continue to place the City in an advantageous position to attract future residential and commercial developments. This chapter inventories and analyzes these factors that will shape this future growth.

2.1 Demographics

One of key components of any land use planning effort is an examination of the forecasts of population growth for the study area. Future plans and policies regarding urban growth must be based on realistic estimates of the demands of a future population for new residential and non-residential land uses. According to population projections provided by the University of Tennessee Center for Business and Economic Research and subsequently revised by the Greater Nashville Regional Council, the City's population is expected to nearly double by the year 2020, from 20,460 to 40,587 persons. Appendix A provides an explanation and details of the population forecasts used by the City as required by Public Chapter 1101.

The effects of a population base which doubles in the next 20 years can be dramatic for a city the size of Lebanon. This expanded population base will require new areas of residential and non-residential development, and the question of whether or not the City is positioned for this growth should now be reviewed. Several natural and manmade factors must be considered to accurately determine the answer.

2.2 Land Development Capability and Suitability

As illustrated in Figure 2.1, there are two primary natural factors or conditions which influence future urban growth patterns in the City. The development potential of a particular piece of property can be dramatically altered based on the certain physical characteristics of the land. The predominant natural factor affecting development in the City is the presence of several large areas of flood prone lands. The geological makeup of the City make it particularly susceptible to flooding, thus development in these flood prone areas is not recommended nor is it likely. Additionally, several areas within the City's extraterritorial planning jurisdiction contain moderately and severely sloping lands. Depending on the severity of the slopes, the development potential of these lands can be limited also.

On the whole, however, the natural constraints to development within the City's current limits and adjacent lands are minimal. The total acreage of impacted lands represents only 13% of the total land within the current City limits and extraterritorial planning areas.

Figure 2.1 Natural Constraints to Development

(Please see Appendix G for this figure.)

2.3 Existing Land Uses

A valuable tool in forecasting the future land use needs and urban boundaries is the examination and analysis of existing land uses. Figure 2.2 illustrates the general nature and location of existing land uses within the City. Table 2-1 summarizes the relationships among the various land use types and the relative percentages of each type against the total acreage.

Table 2-1
Summary of Existing Land Uses

Land Use Category	Total Area (Acres)	% of Total Corporate Area
Residential		
R-1(Single Family)	10,490	60%
R-2(Duplex)	456	3%
Other(Multi-Family)	170	1%
Commercial	1,770	10%
Public-Semi Public	810	4%
Industrial	1,930	11%
Vacant/Undeveloped	1,910	11%
Totals	**17536**	**100%**

A brief description of each land use category and its pattern of development within the City is provided below.

Residential: Like many other cities comparable to Lebanon, residential is the most predominant land use. As in most cities, single family detached housing is the most popular form of housing. Averaging from 2-4 units per acre, the most concentrated areas of single family residential are located on the northern and western portions of the city.

Commercial: The majority of commercial uses are located along the several significant thoroughfares and major roadway corridors across the City. These major corridors include U.S. Highway 231 extending north from I-40, and U.S. Highway 70 extending east and west through the city. These corridors intersect to form the downtown Central Business District and Town Square of the City. In addition to these commercial corridors, other commercial activity exists near existing interstate interchanges.

Industrial: The majority of the industrial activity present in Lebanon occurs in the City's two industrial parks located on the north side of downtown and south of Interstate 40, between the U.S.231 and Highway 70S interchanges. A newly emerging industrial and light manufacturing area is occurring at the Highway 109 interchange with Interstate 40. The recent announcement and location of a Dell Computer facility at the existing Eastgate Business Park will likely spur additional non-residential activity in this area.

Figure 2.2 Existing Land Use Map

(Please see Appendix G for this figure.)

Public/Semi-Public: Almost 900 acres within the City devoted to public uses, including Lebanon's parks, hospital, fairgrounds, airport, and other institutional uses, such as Cumberland University.

Vacant/Undeveloped: Approximately 4,384 acres within the corporate limits has remained undeveloped. The majority of this land has been left undeveloped and not farmed.

2.3 Vacant Land Analysis

In order to determine the need for future urban growth areas to accommodate approximately 20,000 new residents in the City over the next 20 years, an evaluation of the existing vacant and undeveloped lands within the current municipal boundaries is warranted. This analysis will help to ensure that the City's future growth areas are "reasonably compact yet sufficiently large" as required by the growth management law.

Table 2-2 outlines two analyses that were completed to determine the potential of existing vacant properties to accommodate the expected future residential growth. Both calculations examine the additional land needed to accommodate future residential growth, only. To be clear, the City will need additional land for other non-residential land uses, but the demand for these areas will be dependent on the creation of new housing within the City. Once the extent of new housing areas is known, then the new non-residential areas can be more easily forecasted.

Table 2-2a
Vacant Land Analysis

Calculation No. 1. - Persons Per Acre Analysis		
• Total Acreage of Vacant Land within City limits:		1,910
• Total Acreage of "undevelopable" vacant land[1]:		1,280
	Net acres of useable, vacant land	630
• Total Acreage of Developed Residential Uses in City		11,116
• Total Population of City (present)		20,460
	Persons per Acre of Residential Development:	1.8
Projected Increase in Population:		20,127
Persons per Acre		1.8
Additional Acres of Residential Development Land Needed		11,182
	Net acres of useable, vacant land:	630
	Residential Development Acreage Shortfall:	**10,552**

[1] "Undevelopable" is defined as acreage which includes floodplains, steep sloping land and non-residential zoned land.

Table 2-2b
Vacant Land Analysis

Calculation No.2 - Anticipated Buildout Potential Analysis			
Breakdown of Zoned, Vacant and Developable Residential Land in City[2]			
• Agricultural Zoned	38% of total acreage or	239	acres
• R-1A Zoned	47% of total acreage or	296	acres
• R-1 Zoned	12% of total acreage or	76	acres
• R-2 Zoned or greater	3% of total acreage or	19	acres
Buildout Potential of Each Area[3]			
• Agricultural Zoned	239 acres @ 0.8 unit/acres=	191	units
• R-1A Zoned	296 acres @ 1.8 unit/acres=	533	units
• R-1 Zoned	76 acres @ 3.85 unit/acres=	293	units
• R-2 Zoned or greater	19 acres @ 10.6 unit/acres=	201	units
	Total Estimated New Units at Buildout:	1218	units
• Average Number of Persons per Household (per 1990 census)		2.79	
• New Units x persons per Household =persons which can be accommodated in existing vacant land		3,398	
	Approximate Shortfall in "housed" population	**16,730**	**people**

Both calculations point out the lack of an adequate inventory of vacant, undeveloped land within the City to accommodate the forecasted need for future residential development areas. Based on the projected population of the City over the planning period, each analysis demonstrates a significant shortfall in vacant land which is zoned and ready for residential development. Even if the City restructured their land development codes to permit greater residential densities on these lands, it is unlikely that these increased densities would accommodate this growth.

Finally, in addition to the land needed to accommodate future residential growth which has been forecasted, available land is required to accommodate the accompanying non-residential land uses that will be necessary to support this new population base. Appendix B provides a summary review of the analyses conducted to determine the general extent and nature of the land needed to accommodate these uses. It is estimated that this new population base will require several hundred acres of additional non-residential development land. Furthermore, these analyses indicate only the "local" demand for new non-residential land (based on new residents requiring retail and personal service outlets). The full extent of non-residential uses for this area should also include a "regional" demand, since Lebanon is increasing serving the broader region with personal services, retail, commercial and employment opportunities. The exact demand for these regional uses is difficult to estimate, but its impact is real. According to the Joint Economic and Community Development Board of Wilson County, the annual demand for available industrial/warehousing acreage in Wilson County has been averaging

[2] Based on current zoning and City's GIS base maps.

[3] Density calculated at maximum density permitted times a gross factor of 85% for streets, utilities, etc.

between 150 and 200 acres per year over the last several years. The JECDB cautioned that this trend may slow down, but based on the recent new projects (ie. Dell Computers facility, Nashville Speedway, etc.) and the addition or improvement of major regional transportation arteries (i.e. I-40, Highway 109, SR 840), it likely that this demand could outpace the demand for "local" services which support new City residents.

2.4 Existing Public Infrastructure

In order to accommodate future urban growth, adequate infrastructure needs to be in place. The following elements of the City's existing public infrastructure were inventoried and analyzed to determine their ability to meet future demands (see Appendix C for additional information).

Water: The City of Lebanon currently provides domestic water service to the areas inside the city limits and a portion of the perimeter areas within the county. With the Cumberland River serving as the system's supply point, water capacity is not a concern. A review of the existing system indicated that the current capacity in the five holding tanks is 9,500,000 gallons. The current treatment facility has a maximum treatment capacity of 12,000,000 gpd and is currently treating an average of 6,800,000 gpd. This capacity currently serves approximately 8,150 customers (see Appendix C), however, there remains several hundred customers within the City that do not have adequate water service. Furthermore, future development will require improvements to the existing system, and the City has responded by proposing a new distribution line from the treatment plant to the west side of the City. Once in place, this line along with new treatment capacity at the plant, will enable the City to provide adequate and dependable fire and domestic water service to their corporate boundaries. Overall, the City's current Capital Improvements Budget has set aside over $11 million over the planning period to provide service to those "pockets" of the City which do not have adequate services and to improve the overall system capacity and distribution to handle future growth (see Table 4.1 of this report).

Additionally, providing water service to those areas within a proposed urban growth area will require the cooperation of several utility districts which hold the rights to provide water service to these areas. These utility districts include: Gladeville Utility District, Wilson County Water District, West Wilson Utility District, and LaGuardo Utility District. Although most of these districts' systems are structured to provide rural water service, preliminary conversations with each district indicates their willingness and capability to provide the necessary improvements to upgrade their service to handle "urban" densities.

Sanitary Sewer: The current sanitary sewer service available to the City and adjacent areas is provided by the Lebanon Wastewater System. This system serves approximately 6,840 customers (see Appendix C), however, there are still newly annexed areas within the City that do not have adequate sewer service. Again, the City has adopted a capital improvements budget that contains almost $11 million for future system improvements and new service to these "pockets" (see Table 4.1 of this report). The existing wastewater treatment facility has

facility has a maximum capacity of 4,720,000 gpd of which the City is currently treating an average of 3,700,000 gpd. In order to accommodate the growth anticipated for this area, the City is more capable than any other municipality in the county to provide these areas with the adequate sewer service. An additional treatment facility is proposed for the western areas of the City within the next 6-10 years. This additional treatment capacity and other proposed system improvements and expansions will adequately support additional growth.

Electric Service: The City of Lebanon currently provides electrical service to almost 7,100 customers in and around the City (see Appendix C). This service, however, does not reach to all areas of the City. Middle Tennessee Electric Membership Cooperative provides electric service to approximately 20% of the City's residents throughout the area with most of these customers located on the edges of the City in newly annexed areas. Currently, the City is investigating the feasibility of outsourcing the provision of electric service to all areas of the City to MTEMC. Although this decision is still pending, the capability of MTEMC and the City's current system will sufficiently support the anticipated growth. As future development occurs, the City's policies will require developer's to provide additional electric service and street lighting, thus eliminating the burden of future growth of the existing system and rate payers.

Gas: Natural gas service within the City is owned and operated by the City of Lebanon. The total number of customers within the city limits is approximately 5,171, with 205 customers within the county. The current maximum storage capacity is 180,000 gallons at Peak Shaving Plant. Adequate service is presently available to serve the anticipated development demands, however, as a result of these demands, a new office facility at Peak Shaving Plant will be needed to manage the future gas system.

Transportation: The existing grid of major state and federal highways in the Lebanon area provides a transportation network for the City that has helped support past growth and will help spur future growth over the next 20 years. The major north south corridors (Highway 109, Highway 231, and Highway 70) have been supplemented by State Route 840. These thoroughfares are complemented by an array of east-west routes (I-40, Highway 70) that provide critical links to the growing Nashville region. Appendix D provides the current thoroughfare plan for Wilson County and shows the new roads planned for various parts of the City.

2.5 Existing Urban Services

In addition to the infrastructure systems throughout the area, adequate public services should also be present in order to support future urban growth. The following public services were inventoried and analyzed to estimate future demands (see Appendix E for additional information).

Police Protection: The present Lebanon Police Department is headquartered in the new

facility located on Tennessee Boulevard. The department consists of 53 full time officers and a total of 18 support personnel. This is a current average of 2.6 officers per each 1,000 population within the community. The department currently responds to in house dispatching, but proposals for a Multi-Jurisdictional dispatch including 911 is underway.

Fire Protection: The present Lebanon Fire Department consists of 36 total firefighters and 3 additional support personnel located in 2 fire stations. This manpower and equipment provide certain portions of the City with an acceptable ISO rating of 5, but several areas of the City fall below the recommended standards set by the International City Managers Association. Two additional stations are proposed for these areas to provide adequate protection.

Parks and Recreation: The Lebanon Parks and Recreation System currently consists of 13 municipal parks and recreational facilities throughout the community. The recreational programs offered by the Department include baseball for all ages, softball for both boys and girls, football, soccer, and more complex recreation centers. In addition to these existing facilities, 3 new softball fields, 1 new baseball and multipurpose field, and the Jimmy Floyd Family Center are all currently under construction.

Solid Waste Management: Residential household garbage collection is provided weekly by the City for 7,200 customers. Thirteen (13) full time employees provide this service utilizing four (4) 25 cubic yard rear loading units and one (1) 9 cubic yard satellite unit.

2.6 Other Factors Affecting Growth

In addition to the key factors such as estimated population increase, current land use trends, public services capabilities and general economic projections, there are several other factors impacting the Lebanon area that will have a dramatic effect on the future growth of the City. Outlined below are factors that a "reasonable and prudent person" would determine to have a significant bearing on the growth boundaries proposed for the City.

Proposed Development Projects: With plans for large development projects such as Dell Computer and the Nashville Speedway currently in the design stages, demand for urban level services in the surrounding areas will increase. These proposed developments will likely anchor a new development surge in the areas near Highway 109, State Route 840 and Interstate 40. The City of Lebanon has already committed to provide sanitary sewer services for the area. To fully capitalize on the area's growth potential and ability to create new jobs and an expanded tax base for all of Wilson County, urban services should be and will be required.

Proposed Major Thoroughfare Projects: Major roadway improvements have perhaps the largest impact on development opportunities. The County-wide widening and southern extension of Highway 109 will have a major impact on the way this area of Wilson County

develops. Additional proposed transportation projects include a new interstate interchange at Franklin Road and Interstate 40 and the potential SR 840 North construction. Furthermore, the widening of Highway 70 from the Davidson County line to Lebanon and the ongoing study and evaluation of possible commuter rail service from Lebanon to Nashville will have a dramatic effect on the capacity of this critical east-west commuter route. Each of these improvements will introduce new opportunities for job growth and improved access to the area's transportation network, both of which are generally regarded as factors influencing future growth.

Market Conditions and the Nashville "Push": In addition to the new developments and roadway projects slated for construction at the City's southwestern edge, the continued growth and development of the Nashville economic market area will have a tremendous impact on Lebanon's future development. The entire Nashville economic market area has grown and developed on the strength of the Nashville area economy, and the forecast for future growth remains strong (see Appendix F). Population growth for the region has increased 21% over the last ten years. Total non-agricultural employment has increased 27 % since 1990, and the region's unemployment rate has remained below 4% for the last 5 years. Lebanon and Wilson County have shared in this growth and prosperity. Population and employment in the County and City have increased at similar rates, and with the prospect of new roadways (SR 840 and Highway 109) and exciting new developments (Speedway and Dell), the City's ability to capture their fair share of the region's growth will be enhanced. A strong demand for various higher density land uses (residential, warehousing, industrial) can be expected on the City's western boundary as the continued urbanization of the greater Nashville area radiates east along Interstate 40 into west Wilson County. If the proper infrastructure required to support the anticipated growth is put in place, it appears to be only a matter of time before the Nashville "push" and urbanization reaches to the State Route 840 and Highway 109 corridor.

These factors, combined with the general increase in population expected based on historical trends, will require more land than that is currently undeveloped within the City. The next chapter of this report will review possible urban growth areas and the infrastructure required to serve them.

CHAPTER THREE – PROPOSED URBAN GROWTH PLAN

3.1 Introduction

After reviewing the population forecasts, adequacy of both natural and manmade features in the City and surrounding areas and determining the other miscellaneous factors that may influence future urban growth in the Lebanon area, this portion of the report provides the proposed urban growth boundary for the City of Lebanon and the generalized future land uses that are anticipated and desired in these areas.

3.2 Proposed Urban Growth Boundary and Generalized Land Use Plan

Figure 3.1 presents a graphic representation of the proposed Urban Growth Boundary (UGB) for the City of Lebanon, as defined by Section 7 of Public Chapter 1101. Recognizing the growth potential of the greater Lebanon area, the lack of sufficient vacant land to accommodate projected residential growth and its accompanying non-residential developments, and after evaluating the utility information from the various providers, it is evident that the City of Lebanon is more capable than any other municipality within the county to provide urban type services needed to facilitate desired growth in these areas.

Figure 3.2 provides a generalized future land use plan for the City of Lebanon throughout the proposed planning period (2000 - 2020). Outlined below is a brief description of the generalized land use categories forecasted for various portions of the City and its UGB.

TABLE 3-1
GENERAL DESCRIPTION AND CHARACTERISTICS OF LAND USE CATEGORIES

	Characteristics		
Land Use Category	***General Nature of Land Uses***	***Overall Density Range***	***Permitted Uses***
Rural Residential	Rural, farming, open space	1 Unit per 3 acres	Single Family Residential, Farming
Low Density Residential	Suburban residential	1 to 4 Units per acre	Single Family Residential
Medium Density Residential	Urban/Suburban mix (residential)	4 to 7 Units per acre	Single Family, Townhomes
High Density Residential	Urban Apartments	8 to 15 Units per acre	Garden Style Apartments
Commercial	Commercial retail uses based on location	0.25 to 0.35 Floor Area Ratio	Retail, Restaurants, Convenience, etc.
Industrial	Light manufacturing uses (assembly)	0.50 to 1.0 Floor Area Ratio	Light Manufacturing, Warehousing, Assembly
Planned Business	Planned Business Park Environment	0.35 to 0.75 Floor Area Ratio	Offices, Warehousing, Light Manufacturing
Public/Semi-Public	Institutional Uses	N/A	Parks, Schools, etc.

Figure 3.1 Proposed Urban Growth Boundary

(Please see Appendix G for this figure.)

Figure 3.2 Proposed Land Use Plan

(Please see Appendix G for this figure.)

3.3 Major Growth Areas within the UGB

Figure 3.2 identifies those areas with the City's UGB that are the "likely site of high density commercial, industrial and/or residential growth" as required by Public Chapter 1101. The major growth areas within the UGB are described in more detail below.

Highway 109/SR 840 South Area: Development of this corridor will be greatly impacted by the presence of Dell Computer and the Nashville Speedway and the emergence of this area as a new growth node in the Nashville area. This area is targeted for intensive non-residential growth patterns centering on the Highway 109 corridor with medium and low density residential uses providing housing for these new employment centers.

Western Fringe Area: Although much of this area is already developed with rural residential uses, the area still contains several large tracts of undeveloped land which would be prone to development pressures if adequate urban facilities and infrastructure was in place. The likely future growth will consist of large tracts subdividing into low/medium density residential.

Northern Fringe Area: This area, located north of U.S. Highway 70 on the western edge of the city, is expected to experience additional residential growth as the population of the city increases. Several large scale residential developments are currently being built in this area, and development is expected to continue based on the City's recent construction of a sewer interceptor line along U.S. 70. These new sanitary sewer facilities may also spur a "planned business" park at the intersection of U.S. 70 and Highway 109.

Highway 231/SR 840 South Area: Transportation improvements and the proposed sanitary sewer extensions in this area will spur growth in this area. The proposed Bartons Creek interceptor sewer line and the Franklin Road interchange at I-40 will prompt future residential development. Due to limited access to SR 840, however, this area is better suited for less intense land uses than the Hwy 109/840 corridor.

SR 840 North Interchange Area: Growth in this area is likely dependent on the completion of SR 840 North. Development opportunities in this interchange area are 15-20 years in the future, but this area has significant development potential once the roadway is completed.

Tucker's Crossroads Area: The limits of eastern growth for the City is expected to be in the Tucker's Crossroads area. Due to its location at an interstate interchange, this area possesses significant growth potential if appropriate services are provided. Ultimately, the growth of the area will likely be driven by a major private project, not by any public improvements intended to promote growth at this eastern edge. Rural residential uses are targeted for most areas, with the potential for a new employment center at the interchange area.

3.4 Environmental Impacts and Resource Management

There are no known forest management or wildlife management areas in the proposed UGB. The likely long term impact on agricultural lands in most of the planned growth areas will be their eventual development into urban uses. The combination of several area transportation improvements (SR 840, Highway 109, Franklin Road interchange) and the continued urbanization of West Wilson County as a result of the "Nashville Push" will intensify the development pressures in these areas. Preservation of the farmlands in these areas through restrictive land use planning guidelines (i.e. Rural Residential land use classification) is possible, but in the absence of a detailed subarea plan for this high growth area, the City prefers that all property owners in the growth corridors be given equal opportunity to develop their properties.

CHAPTER FOUR - PUBLIC INFRASTRUCTURE AND SERVICES PLAN

4.1 Introduction

As required by Public Chapter 1101, it is the duty of the City of Lebanon to "determine and report the current costs and the projected costs of core infrastructure, urban services and public facilities necessary to facilitate full development of resources within the current boundaries of the municipality and to expand such infrastructure, services and facilities throughout the territory under consideration for inclusion within the urban growth boundaries." This section of the report provides cost estimates for providing core services for these areas, and then examines the City's capacity to undertake these improvements over the 20 year planning period.

At this point it is important to note two fundamental principles which provide the basis for the City's UGB and their proposed Infrastructure and Services Plan. First, the City's interpretation of providing core infrastructure is based on the idea that it is the City's duty is to provide the regional or area-wide infrastructure capacities for future development in the UGB. The development of individual land parcels within the City or its UGB will be "developer-driven," meaning that new development will pay for sewer, water or any other utility extensions to or from the regional infrastructure item. Second, the City's plan is one that stresses the planning concept of concurrency. No new development will be permitted without the proper and adequate infrastructure and services already in place or under construction. In this way, the City's infrastructure base is not slowly eroded by developments which add only small demands on the infrastructure network, yet their incremental impact results in a looming infrastructure crisis for the City. These two principles will permit the City to stage their future growth in a manner that is responsive to the private real estate market, while at the same time, recognizing the budget constraints of a growing suburban community.

4.2 Proposed Public Infrastructure and Services Plan

In order to accommodate future development in the current City limits and the UGB, plans for providing infrastructure and public services were established. Future infrastructure needs were established based on proposed land use areas and densities, and public services were estimated using the City's current level of service as a benchmark for future services. This benchmark was also compared against commonly accepted standards for similar communities.

Figure 4.1 and Table 4-1 provide a graphic and tabular summary of the public infrastructure and services plan required for the City's proposed UGB. Figure 4.1 attempts to provide a "locational" perspective to the proposed improvements by indicating the general location of future parks, sewer facilities, police and fire stations and other infrastructure items. Table 4-1 provides a review of the phasing and total financial commitment by the City to the Plan, with each major infrastructure category identified and the costs associated with providing "full resources within the boundaries" and the "costs of core infrastructure" within the UGB. A

Figure 4.1 Public Infrastructure and Services Plan

(Please see Appendix G for this figure.)

Table 4-1
Summary of Infrastructure Improvements

Proposed Improvements	Phase I 0-5 years	Phase II 6-10 years	Phase III 11-15 years	Phase IV 16-20 years	Totals
Existing Municipal Boundaries (Aug. 1999)					
Water	$7,154,000	$1,350,000	$1,250,000	$1,250,000	$11,004,000
Sewer	$3,460,000	$4,631,530	$1,250,000	$1,250,000	$10,591,530
Fire Protection			$1,120,000		$1,120,000
Police Protection			$250,000		$250,000
Subtotals by Phase/Area	$10,614,000	$5,981,530	$3,870,000	$2,500,000	$22,965,530
Hwy 109/ SR 840 South Area					
Sewer	$2,000,000				$2,000,000
Fire Protection			$1,120,000		$1,120,000
Police Protection			$250,000		$250,000
Parks			$1,500,000		$1,500,000
Subtotals by Phase/Area	$2,000,000	$0	$2,870,000	$0	$4,870,000
Hwy 231/ SR 840 South Area					
Sewer		$1,500,000			$1,500,000
Fire Protection			$560,000		$560,000
Police Protection	$250,000				$250,000
Parks			$750,000		$750,000
Subtotals by Phase/Area	$250,000	$1,500,000	$1,310,000	$0	$3,060,000
Tucker's Crossroads Area					
Sewer				$2,200,000	$2,200,000
Fire Protection				$560,000	$560,000
Subtotals by Phase/Area	$0	$0	$0	$2,760,000	$2,760,000
SR 840 North Interchange Area					
Sewer		$1,000,000			$1,000,000
Fire Protection				$560,000	$560,000
Subtotals by Phase/Area	$0	$1,000,000	$0	$560,000	$1,560,000
Northern Fringe Area					
Sewer	$302,000	$3,300,000			$3,602,000
Fire Protection	$560,000				$560,000
Subtotals by Phase/Area	$862,000	$3,300,000	$0	$0	$4,162,000
Western Fringe Area					
Sewer		$1,400,000			$1,400,000
Fire Protection	$560,000				$560,000
Subtotals by Phase/Area	$560,000	$1,400,000	$0	$0	$1,960,000
Total Infrastructure Improvements	**$14,286,000**	**$13,181,530**	**$8,050,000**	**$5,820,000**	**$41,337,530**

4.3 Summary of Future Infrastructure and Service Improvements

Table 4-1 indicates that approximately $41.3 million of new public infrastructure and services will be required over the next 20 years to adequately provide urban services within the City limits and the UGB. Almost $23 million of these improvements is already being budgeted by the City to address current deficiencies or obsolescence in their existing systems within the City. The remaining $18.3 million is forecasted over the 20 year planning period for new area-wide infrastructure, with $3.7 million planned for Years 1-5, $7.2 million planned for Years 6-10, $4.1 million planned for Years 11-16, and $3.3 million planned for Years 16-20.

Currently, the City is spending an average of approximately seven million dollars per year in infrastructure capital improvements over the last five years, thus these proposed infrastructure investments appear to be less daunting. With the City's adherence to the concepts of concurrency and "developer-driven" infrastructure planning and construction, this plan of capital spending is feasible. With growth and development comes an expanded tax and rate-payer base to support these new services; if growth slows so too does the rate at which the City's infrastructure expands.

Outlined below is a brief examination of the major infrastructure items included in each of the growth areas identified in UGB.

Highway 109/SR 840 South Area: Plans for services in this area include the installation of a sanitary sewer force main along Highway 109 extending south to the intersection of State Route 840 to service new growth along this corridor and the proposed Speedway. Anticipated sewerage flows will exceed 3.5 million gallons per day (MGPD), thus a 18" force main and new sewer pump station will be required to collect and distribute this waste to the Eastgate pumping station. Additionally, two new fire stations are recommended and a new community park is forecasted to meet community demands.

Highway 231/ SR 840 South Area: Infrastructure plans for this area include the planned construction of the Bartons Creek sanitary sewer line extension to service areas south of I-40 at the proposed Franklin Road interchange location. This 15" interceptor line is anticipated to handle a daily flow of 1.5 MGPD. An additional fire station, police substation and community park will be needed as residential growth occurs.

Northern Fringe Area: The City's recent sanitary sewer improvement (new interceptor line along Highway 70 and the railroad) has already prompted new development in the area. The major infrastructure item for this area is the planning of an additional City sewer treatment facility to handle the sewage flows anticipated in the new development areas. The City's existing treatment plant currently has an excess capacity of 4.4 million gallons per day, however, with the combination of the wastewater flows from future growth anticipated in this Plan (8.35 MGPD) and the City's planned improvements to service those "pockets" of undeserved areas within the City (0.60 MGPD), this capacity will be exceeded by almost 4.5 million gallons per day over the planning period. This proposed 5 MGPD plant will enable the City to adequately treat and handle future flows from the growth occurring on its southern

and western edges and provide adequate sanitary sewer service to all areas within the current City limits and the proposed UGB. Finally, a new fire station is also proposed for this area to address future needs.

Western Fringe Area: The installation of a 24" sewer force main along Highway 109 (connecting the Eastgate pump station with the proposed treatment plant) is proposed to service development on the City's western fringe, as well as assist in servicing growth areas in the Highway 109/SR 840 corridor. As Highway 109 is widened and improved north from the Interstate, new residential and non-residential growth is anticipated along this corridor. Future wastewater flows are anticipated to reach almost 1.1 MGPD. Additional police and fire stations are proposed to serve the area, as well as a new community park to provide recreational land for new residents.

Tucker's Crossroads Area: Plans to service this area will depend on a large scale development providing substantial financial assistance to the City for sanitary sewer service. The installation of a pump station at the interstate interchange and 8" force main extending west to the existing City sewer line will be required at the time development occurs, and this collection network will be capable of handling approximately 0.75 MGPD. An additional fire station will also be needed due to the location and nature of the development in this area.

SR 840 North Interchange Area: Infrastructure requirements in this area include the installation of a sanitary sewer pump station and 8" force main extending south to the existing city system. Based on the proposed land uses indicated in Figure 3.2 for this area, an anticipated sewer flow of 0.50 MGPD is anticipated. An additional fire station will be needed as development occurs in the later portions of the planning period.

CHAPTER FIVE - CONCLUSIONS

Recognizing the reality that much of the City's past urban growth has been sporadic and piece-meal, this plan attempts to provide a framework for the City to better manage desired growth, avoid overburdening infrastructure systems, and continue to provide adequate public services to all residents of Lebanon. Based on all the factors discussed herein, the proposed Urban Growth Boundary acknowledges the areas of anticipated growth outside the current municipal limits and provides a plan of services to accommodate this growth and development. The plan also recognizes that the City of Lebanon is more capable to adequately accommodate this growth and provide the required infrastructure and public services to these areas than any other municipality in Wilson County.

The primary factors contributing to the City's need for additional land over the next 20 years include:

*** An analysis of the vacant, undeveloped land in the current City limits indicates that there is insufficient acreage available to accommodate the forecasted future residential growth and development in the City. Based on two separate analyses of the available, undeveloped land and the anticipated residential development acreage needs, a shortfall of over 8,000 acres of zoned, available and developable residential land will exist over the planning period. Additionally, if all available land is forecasted for residential uses, the need for accompanying non-residential development would add to this total shortfall of available land by almost 400 acres in the most conservative estimate and by several thousand acres according to current trends observed by the Wilson County Joint Economic and Community Development Board.**

*** Several factors are affecting the City's proposed UGB beyond the standard forecasts of future population growth and the land that will be required to accommodate this forecasted growth. Currently, several areas within the City and at the City's edge are being viewed as "regional" development nodes, most specifically the areas at the City's southwestern edge. The continued urbanization of the Nashville region is now "pushing" into west Wilson County, and if the proper infrastructure is provided, these areas can become the focus of broader "regional" growth and development, beyond just the historical population trends which might otherwise dictate a more "localized" growth scenario for the City of Lebanon. The construction of SR 840 and the proposed extension of Highway 109 will supply the needed transportation infrastructure for this development, and the City of Lebanon is poised to provide the other essential infrastructure items to service this potential growth. Accordingly, the City's proposed UGB indicates those areas at the City's southwestern edge which are suitable for this anticipated regional growth.**

*** The City's capability to provide urban services to these high growth areas through feasible and planned infrastructure improvements is indicated in the proposed Plan of Services (seeTable 4.1). This Plan includes significant capital spending (averaging approximately $2 million per year) for new infrastructure to service the UGB and those areas of the City currently underserved . However, with the City's current annual**

capital spending on infrastructure items averaging almost $7 million per year, the City has demonstrated its capacity to finance and implement these proposed improvements. In the absence of the City providing these services and recommending this UGB, these developments and their accompanying jobs and tax base will likely locate elsewhere in the Nashville region, and the City and all of Wilson County will have lost the opportunity to gain their fair share of the continued prosperity and growth of the overall Nashville area economy.

Finally, after adoption of this Plan and as required by P.C. 1101, the City will concentrate its resources on providing services to those areas within the current municipal boundaries which are underserved and those areas within the UGB which are forecasted for the most immediate growth and development pressure.

No City sanitary sewer service shall be extended by the City or any Developer to any area until the property is annexed.

Variations or amendments to this Plan will only be considered if extraordinary situations or circumstances present themselves to the City.

When any variation or amendment is proposed to the above stated policy, a detailed written request for service shall be submitted to the Commissioner of Public Works for review. The Commissioner of Public Works shall advise the Mayor of the request. After review of the request, the Mayor & Commissioner of Public Works will make a recommendation to the Planning Commission. The Planning Commission will review all information and forward a recommendation to City Council for their consideration.

An appropriate agreement or contract shall be approved and executed between the City and the Developer.

Appendix A

Population Forecast

ADJUSTMENTS TO LEBANON POPULATION ESTIMATES AND PROJECTIONS

Lebanon's limited sewage treatment capacity and a state moratorium prohibiting new connections to the system during the 1970's and early 1980's resulted in negative population growth for much of that period. However, since the early 1980's the problem was resolved with major system improvements and expansion, resulting in a dramatic turn-around in local growth conditions and trends since that time. The UT-CBER population projections of March 1999 apparently did not fully recognize these changed conditions and, as well, their current population and 2000 base year estimates were well below locally documented figures.

The following, therefore, provides adjusted numbers for current and base year estimates and shows the city's growth rate of the last 10 years as a basis for revised projections to 2020:

1990	Certified Count 1998	Current Estimate	2000 Estimate	Growth 1990 -2000 No.	%
15,208	20,460	21,117	21,774	6,566	43.2

In view of this trend, the level of improved public services and facilities, and current developments in place or underway, Lebanon's 2020 population projection is revised in the attached table by extending current and past trends forward in a straight line. And this appears to more accurately reflect local growth expectations. Other estimates and projections in the table are as presented by UT-CBER, March 1999, except for necessary adjustment in unincorporated area numbers to offset Lebanon's revised estimates and forecast.

WILSON COUNTY POPULATION PROJECTIONS
TO THE YEAR 2020

AREA	1990	LATEST	2000	2005	2010	2015	2020
LEBANON	15,208	20,460	21,774	26,479	31,184	35,889	40,587
MOUNT JULIET	5,389	10,953	11,667	13,287	14,982	16,792	18,715
WATERTOWN	1,250	1,354	1,428	1,586	1,744	1,907	2,073
UNINCORPORATED	46,152	N/A	53,362	56,660	59,882	63,252	66,726
TOTAL	67,999	81,172	88,231	98,012	107,792	117,840	128,101

Sources:
U.S. Census of Population, 1990: "Latest Data" include certified populations as of 7/1/98 where annexations and special censuses exceed 1996 estimates; University of Tennessee Center for Business and Economic Research; Revision of Lebanon estimates and projections by Greater Nashville Regional Council, May 1999.

Appendix B

Non-residential Vacant Land Analysis

Appendix B
Non-Residential Vacant Land Analysis

Estimated Commercial/Retail Space Needed To Support New Population Base	
• Total Forecasted Population Increase:	20,127
• Total New Households Created (@ 2.79 persons per HH)[1]:	7,214
• Total Retail Sales Per Household[2]:	$15,917
• Retail Sales Per Square Foot[3]	$205
Retail Space Which Can be Supported by New Retail Sales:	560,123
Average Buildout Density in Square Feet for Retail Sites (per acre)[4] :	10,890
Net Acreage Needed to Accomdodate New Retail Space:	51.4
Commercial/Retail Development Acreage Shortfall:	**51 acres**

Estimated Industrial/Warehousing/Services Acreage Needed To Support New Population Base	
• Total Forecasted Employment Growth through 2020 (excluding retail trade)[5]:	5,000
• Anticipated Square Footage Requirements Per Employee[6]:	1,450
• Total Square Footage of New Industrial/Warehousing/Services Space[7]	7,250,000
Average Buildout Density in Square Feet for Industrial/Warehousing/Services Sites (per acre)[8] :	21,780
Net Acreage Needed to Accommodate New Industrial/Warehousing/Services Space:	333
Industrial/Warehousing/Services Development Acreage Shortfall:	**333 acres**

Note: Despite the estimates calculated for new industrial and warehousing space, the Joint Economic and Community Development Board of Wilson County projects an annual demand for 100 - 200 acres of industrial land based on the rate of absorption of this land use type over the last five years.

---

[1] Population divided by 2.79 persons per household (1990 census) = total new households.

[2] Based on figures published by Sales and Marketing Magazine, Survey of Buing Power, 1997.

[3] Based on calculated average sales per square foot of various retails stores and outlets published in Dollars and Cents of Shopping Centers, by Urban Land Institute.

[4] Based on buildout density and floor area ratio of 0.25 (or 25 square feet of building space for every 100 square feet of site area).

[5] Estimate based on information provided by Joint Economic and Community Development Board of Wilson County, Tennessee Dept. of Employment Security, and BWSC, Inc.

[6] Based on calculated average of space required for new industrial, warehousing and office uses locating in Wilson County. Information provided by JECDB and intrepreted by BWSC, Inc.

[7] Total new employees x space per employee = total new space required.

[8] Based on buildout density and floor area ratio of 0.50 (or 50 square feet of building space for every 100 square feet of site area).

Appendix C

Infrastructure Information

INVENTORY OF PUBLIC INFRASTRUCTURE & SERVICES
FOR THE CITY OF LEBANON, TENNESSEE
FOR COMPLIANCE WITH PUBLIC CHAPTER 1101,
STATE GROWTH PLANNING LEGISLATION

((Please Use & Attach Additional Pages as Needed)

I. **SUBJECT:** LEBANON WATER SYSTEM

DATE(S) of INVENTORY: 1/11/99 - 5/13/99

PERSON(S) DOING INVENTORY: Wayne Johnson

PERSON(S) INTERVIEWED: Tim Graves, Jodie Beal, Jay Crawford, Jeff Baines

II. **NUMBER OF CURRENT WATER CUSTOMERS:**

A. INSIDE CITY LIMITS

1. Residential Customers 5,964
2. Nonresidential Customers 1,274

Subtotal 7,238

B. OUTSIDE CITY LIMITS

3. Residential Customers 889
4. Nonresidential Customers 19

Subtotal 908

Total 8,146

C. OTHER WATER SERVICE PROVIDERS/UTILITY DISTRICTS BUYING WATER FROM THE LEBANON SYSTEM

Indicate name and location of other provider(s) supplied by the City system and indicate amounts of water provided in gallons per day or other measure of use as may be defined under contract agreement:

~~Wilson County Water & Wastewater Authority - 673,000 GPD~~

Gladeville Utility District 93,000 GPD

LaGuardo Utility District 160,000 GPD

If available, provide number of customers served by other water service providers: _____

Not Available

III. WATER SERVICE RATES/COSTS:

A. TO CUSTOMERS INSIDE CITY

1. Residential -- First 200 cf - $5.25; next 800 cf at $2.76 per 100 cf; next 3,000 cf at $2.69 per 100 cf; next

2. ~~Nonresidential~~ N/A -- 8,000 cf at $2.43 per 100 cf; next 17,000 cf at #1.51 per 100 cf; over 29,000 ct at $1.18 per 100 cf

B. TO CUSTOMERS OUTSIDE CITY

1. Residential -- First 200 cf - $7.88; next 800 cf - $4.14 per 100 cf; next 3,000 cf at $4.03 per 100 cf; next 8,000

2. ~~Nonresidential~~ N/A -- cf at $3.65 per 100 cf; next 17,000 cf at $2.27 per 100 cf; over 29,000 cf at $1.78 per 100 cf

C. TO OTHER WATER SERVICE PROVIDERS/UTILITY DISTRICTS SUPPLIED BY CITY

Wilson County Water & Wastewater Authority- $1.49 per 1,000 gal.

Gladeville Utility District - $1.49 per 1,000 gal.

LaGuardo Utility District - $1.49 per 1,000 gal.

IV. WATER TREATMENT PLANT:

A. LOCATION -- U.S. Highway 231 N. at Cumberland River (Old Hickory Lake)

B. TREATMENT CAPACITY - - Maximum Gallons Per Day - -

12,000,000

C. CURRENT TREATMENT - - Gallons Per Day - -

6,800,000 average

D. DATE(S) OF CONSTRUCTION/EXPANSIONS - - Constructed in 1931; major expansions in 1971, 1986 & 1989

E. Describe any current treatment plant needs or related needs - - now and over next 5 years - -

Stand-by power

Modifications to upgrade solids & sludge dewatering

F. Note any anticipated future treatment plant needs or related needs - - beyond next five years to the Year 2020 - -

Water Treatment Plant expansion & upgrading

V. **WATER SUPPLY SOURCE(S):**

A. LOCATION(S) - - Cumberland River (Old Hickory Lake)

B. ADEQUACY OF SUPPLY

1. Indicate probable maximum amount of water available in gallons per day -

Cumberland River N/A

2. Describe any water quality issues, problems, needs associated with current source(s) - -

NONE

3. Identify possible future supply source(s), if need anticipated - -

Not anticipated

4. Note any other current or future needs - -

VI. **WATER STORAGE FACILITIES:**

A. Note location and capacity of any storage facilities - - 4 Mile Hill - 1,000,000 gal; Rome Pike - 3,000,000 gal.; Leesville Pike 3,000,000 gal; Seay Hill - 500,000 gal; South Perimeter Park 2,000,000 gal.

B. Note adequacy of storage capacity - - duration of storage - -

Current storage capacity is adequate to demands at this time.

C. Describe any current storage or related needs now and over next 5 years - -

Continue storage tank inspection & maintenance

D. Describe any future storage or related needs beyond next five years to Year 2020, if currently anticipated - -

Storage tank inspection & maintenance

New storage facilities

VII. WATER DISTRIBUTION SYSTEM:

A. Provide map of water distribution system/lines, which also shows location of treatment and storage facilities.

B. Describe any current distribution or related needs now and over next 5 years, including adequacy and availability of fire hydrants for fire protection services throughout the system - -

A second water transmission main from Water Treatment Plant

Pocket Plan (upsizing inadequate mains)

Industrial booster pump & transmission main

Abandon existing 16" transmission main

Treatment Plant - $700,000

Leeville Pike - Highway 231 Connector - Phases I,II,III

C. Describe any future distribution or related needs anticipated beyond the next 5 years to the Year 2020 - -

Pocket Plan (replacing inadequate lines)

Western extension - U.S. 231 By-Pass

VIII. WATER DEPARTMENT EQUIPMENT NEEDS:

A. Describe any equipment needs for now and over next 5 years - -

Three 3/4 ton trucks

Dump Truck

B. Describe any equipment needs beyond the next 5 years, if any are now anticipated - -

IX. WATER DEPARTMENT STAFFING/MANPOWER NEEDS:

A. Current Staff - - Fulltime: 9 at Water Treatment Plant 10 In Dist. System

- - Parttime:

Total:

B. Note any current staffing/manpower needs for now and over next 5 years - -

2 Additional workers

X. CURRENT PLANS/IMPROVEMENT PROGRAMS:

Attach and briefly describe any water system plans or improvement programs currently in place or on-going - -

Pocket Plan Phase II - (replacing undersized lines, etc.)

Pump Station upgrading at Williams Ave. & 4 Mile Hill

Second Water Transmission Line from River (Preliminary Study)

Castle Heights Avenue No water line (completed)

Water Storage Tank Inspection

XI. **COMMENT ON ANY OTHER WATER SYSTEM ISSUES, NEEDS OR PROGRAMS NOT COVERED ABOVE:**

_____

_____

_____

_____

_____

_____

_____

_____

INVENTORY OF PUBLIC INFRASTRUCTURE AND SERVICES FOR THE CITY OF LEBANON, TENNESSEE FOR COMPLIANCE WITH PUBLIC CHAPTER 1101, STATE GROWTH PLANNING LEGISLATION

(Please use and attach additional pages as needed.)

I. **SUBJECT:** LEBANON WASTEWATER SYSTEM

DATE(S) of INVENTORY: 1/11/99 - 5/13/99

PERSON(S) DOING INVENTORY: Wayne Johnson

PERSON(S) INTERVIEWED: Tim Graves - Jodie Beal

II. **NUMBER OF CURRENT WASTEWATER CUSTOMERS:**

A. INSIDE CITY LIMITS

1. Residential Customers 5,758
2. Nonresidential Customers 1,069

Subtotal 6,827

B. OUTSIDE CITY LIMITS - - (If Policy Against, Please note)

3. Residential Customers 9
4. Nonresidential Customers 4

Subtotal 13

Total 6,840

III. **WASTEWATER SERVICE RATES/COSTS:**

A. TO CUSTOMERS INSIDE CITY

1. Residential - - First 200 cf - $5.25; next 800 cf-$2.76 per 100 cf; next 3,000 of at $2.69 per 100 cf;
2. ~~Nonresidential~~ - - N/A next 8,000 cf at $2.43 per 100 cf; next 17,000 cf at $1.51 per 100 cf; over 29,000 cf at $1.18 per 100 cf

B. TO CUSTOMERS OUTSIDE CITY

1. Residential -- First 200 cf - $7.88; next 800 cf at $4.14 per 100 cf; next 3,000 cf at $4.03 per 100 cf; next

2. ~~Nonresidential~~ -- N/A 8,000 cf at $3.65 per 100 cf; next 17,000 cf at $2.27 per 100 cf; over 29,000 cf at $1.78 per 100 cf

IV. WASTEWATER TREATMENT PLANT:

A. LOCATION -- 321 Hartmann Drive

B. TREATMENT CAPACITY -- Maximum Gallons Per Day -- 4,720,000

C. CURRENT TREATMENT -- Gallons Per Day -- 3,700,000 average

D. DATE(S) OF CONSTRUCTION/EXPANSIONS -- Constructed in 1961; major expansions in 1984, 1994 & 1998

E. Describe any current treatment plant needs or related needs -- now and over next 5 years -- Acquisition of land for second Wastewater Treatment Plant to support development along the Highway 70/Highway 109 growth corridor -

F. Note any anticipated future treatment plant needs or related needs -- beyond next five years to the Year 2020 -- Expansion of sewerage facilities including a second Wastewater Treatment Plant -

V. WASTEWATER COLLECTION SYSTEM:

A. Provide map of wastewater collection system/lines, which also shows location of treatment plant and any pumping stations - -

B. Describe any current collection or related needs now and over next 5 years - -

Existing sewer rehabilitation ; Pocket Plan

Addition of sewerage facilities for South Fork Subdivision ;

Horn Springs Subdivision & Georgetown Subdivision

C. Describe any future collection or related needs anticipated beyond the next 5 years to the Year 2020 - -

Small Trailer Jet Rodder; TV camera for sewer inspection;

Two 3/4 ton trucks, Backhoe

VI. WASTEWATER DEPARTMENT EQUIPMENT NEEDS:

A. Describe any equipment needs for now and over next 5 years - -

Current equipment is adequate

B. Describe any equipment needs beyond the next 5 years, if any are now anticipated - -

Couple of vehicles and maintenance and upgrading of existing

equipment as necessary

VII. WASTEWATER DEPARTMENT STAFFING/MANPOWER NEEDS:

A. Current Staff - - Fulltime: WWTP Plant 14; Sewer Plant 6

- - Parttime: _____

Total: _____

B. Note any current staffing/manpower needs for now and over next 5 years - -

Add a maintenance crew of three (3) men

VIII. **CURRENT PLANS/IMPROVEMENT PROGRAMS:**

Attach and briefly describe any wastewater system plans or improvement programs currently in place or on-going - -

Highway 70/109 Pump Station & Force Main

Bartons Creek Interceptor Sewer

Flow Equalization Basin

Pocket Plan Phase II (Phase I completed)

Plantation South Pump Station & Force Main

IX. **COMMENT ON ANY OTHER WASTEWATER SYSTEM ISSUES, NEEDS OR PROGRAMS NOT COVERED ABOVE:**

INVENTORY OF PUBLIC INFRASTRUCTURE & SERVICES
FOR THE CITY OF LEBANON, TENNESSEE
FOR COMPLIANCE WITH PC 1101, STATE GROWTH
PLANNING LEGISLATION

(Use and attach additional pages as needed.)

I. Subject: GAS SYSTEM

Date(s) of Inventory: 3-17-99

Person(s) Doing Inventory: Don Cozart

Person(s) Interviewed: _____

Service Owned/Operated by City: Yes [X] No [ ]

Other Service Provider in Lebanon Urban Area, If Applicable?

_____

II. NUMBER/TYPE OF CURRENT GAS SYSTEM CUSTOMERS:

A. INSIDE CITY LIMITS

1.	Residential	4063
2.	Commercial	1083
3.	Industrial	25
	Subtotal	5171

B. OUTSIDE CITY LIMITS

1.	Residential	192
2.	Commercial	12
3.	Industrial	1
	Subtotal	205
	TOTAL	5376

C. IF APPLICABLE, NUMBER OF CUSTOMERS OUTSIDE CITY LIMITS SERVED BY OTHER PROVIDER

1.	Residential	
2.	Commercial	
3.	Industrial	
	TOTAL	

III. STORAGE CAPACITY: 180,000 Gallons Propane Peak Shaving Plant

Average Daily Purchase: Summer 1,000.000 Cu. Ft.
Winter 4,500,000 Cu. Ft.

Average Daily Sales: Summer 1,000,000 Cu. Ft.
Winter 4,500,000 Cu. Ft.

IV. GAS SERVICE RATES/COSTS:

A. Residential $5.60/MCF
B. Commercial $5.60/MCF
C. Industrial $4.60/MCF

V. STAFFING/MANPOWER NEEDS:

A. Current Staff - - Full-time: 13

Part-time: -

TOTAL: 13

B. Note any current staffing/manpower needs for now and over next 5 years:

Due to growing system 2-4 people need to be hired

VI. GAS SYSTEM FACILITY OR BUILDING SPACE NEEDS:

A. Describe any needs now and over next 5 years:

Present gas system has a trailor for an office need new facility located at the Peak Shaving Plant

B. Describe needs beyond next 5 years, if any are now anticipated:

VII. GAS DEPARTMENT EQUIPMENT NEEDS:

A. Describe any equipment needs now and over next 5 years:

Backhoe

Trencher CS

B. Describe any needs beyond the next 5 years, if any are now anticipated:

VIII. CURRENT PLANS/IMPROVEMENT PROGRAMS:

Briefly describe any gas system plans, projects or improvement programs currently in place or anticipated:

Enclosed 5 Year Plan

IX. COMMENT ON ANY OTHER GAS SYSTEM ISSUES, NEEDS OR PROGRAMS NOT COVERED ABOVE:

INVENTORY OF PUBLIC INFRASTRUCTURE & SERVICES FOR THE CITY OF LEBANON, TENNESSEE FOR COMPLIANCE WITH PC 1101, STATE GROWTH PLANNING LEGISLATION

I. Subject: ELECTRICAL SYSTEM

Date(s) of Inventory: 3/29/99

Person(s) Doing Inventory: Hal Bittinger(accounting), Jeff Baines (Comm. P.W.)

Person(s) Interviewed: Joy Adams (Accounting) Bruce Fennell (Eng.)

Service Owned/Operated by City: Yes [X] No [ ]

Other Service Provider in Lebanon Urban Area, If Applicable?

MTEMC

II. NUMBER OF CURRENT ELECTRICAL SYSTEM CUSTOMERS:

A. INSIDE CITY LIMITS

1.	Residential Customers	7060
2.	Nonresidential Customers	0
	Subtotal	7060

B. OUTSIDE CITY LIMITS

1.	Residential Customers	280
2.	Nonresidential Customers	0
	Subtotal	280
	TOTAL	7340

C. IF APPLICABLE, NUMBER OF CUSTOMERS OUTSIDE CITY LIMITS SERVED BY OTHER PROVIDER

Residential _____ Nonresidential _____

III. ELECTRICAL SERVICE RATES/COSTS:

A. Residential .05773 minimum $7.50

B. Nonresidential

IV. AVERAGE KILOWATT HOURS:

Purchased Per Day 1,093,934 KWH

Sold Per Day 1,074,444 KWH

V. STAFFING/MANPOWER NEEDS:

A. Current Staff - - Full-time: 33

Part-time: 0

TOTAL: 33

B. Note any current staffing/manpower needs for now and over next 5 years:

VI. ELECTRICAL SYSTEM FACILITY OR BUILDING SPACE NEEDS:

A. Describe any needs now and over next 5 years:

Developing Plans For a North Substation To Replace Existing City Substation Located on Spring Street.

B. Describe needs beyond next 5 years, if any are now anticipated:

N/A

VII. ELECTRICAL DEPARTMENT EQUIPMENT NEEDS:

A. Describe any equipment needs now and over next 5 years:

Developing Plans To Add Capacitors Throughout Electric System To Control Power Factor

B. Describe any needs beyond the next 5 years, if any are now anticipated:

N/A

VIII. CURRENT PLANS/IMPROVEMENT PROGRAMS:

Briefly describe any electrical system plans, projects or improvement programs currently in place or anticipated:

In The Process of Recondutoring Some Primary Lines Within The Electric System

IX. COMMENT ON ANY OTHER ELECTRICAL SYSTEM ISSUES, NEEDS OR PROGRAMS NOT COVERED ABOVE:

N/A

Appendix D

Major Thoroughfare Plan

Appendix E

Urban Services Information

INVENTORY OF PUBLIC INFRASTRUCTURE & SERVICES
FOR THE CITY OF LEBANON, TENNESSEE
FOR COMPLIANCE WITH PC 1101, STATE GROWTH PLANNING LEGISLATION

(Use and attach additional pages as needed.)

406 Tennessee BNK
443-2323

I. Subject: POLICE PROTECTION FACILITIES & SERVICES

Date(s) of Inventory: March 1999

Person(s) Doing Inventory: Chief Billy Weeks

Person(s) Interviewed: _____

II. NUMBER OF POLICE OFFICERS:

Full-time:	53
Part-time:	
TOTAL:	53

NUMBER OF SUPPORT PERSONNEL:

Full-time:	9
Part-time:	9
TOTAL:	18

III. NUMBER OF CRUISERS IN SERVICE: 54

OTHER VEHICLES IN SERVICE: _____

IV. DISPATCHING:

IN-HOUSE	X
COUNTY E-911	
OTHER (DESCRIBE)	

V. DESCRIBE BUILDING FACILITIES ADMINISTRATIVE, DETENTION AND RELATED SPACE - - AND NOTE ANY ADDITIONAL SPACE NEEDS NOW AND OVER NEXT 5 YEARS:

13,000 Sq. Ft. office and Municipal Court Room.
No backup facility.

NOTE ANY POSSIBLE SPACE NEEDS BEYOND NEXT 5 YEARS, INCLUDING SATELITTE LOCATIONS.

VI. DESCRIBE ANY COOPERATIVE ARRANGEMENTS WITH COUNTY SHERIFF'S DEPARTMENT WITHIN CITY LIMITS AND OUTSIDE CITY:

Normal Mutual Aid Agreements

VII. CURRENT NUMBER OF OFFICERS PER 1,000 POPULATION WITHIN THE COMMUNITY 2.6

CURRENT NUMBER OF PATROL CARS PER 1,000 POPULATION 2.6

HOW DOES LEBANON COMPARE WITH NATIONAL STANDARDS TO SIMILARLY SIZE COMMUNITIES?

Average

DESCRIBE ADDITIONAL NEEDS NOW AND OVER NEXT 5 YEARS:
Increased office space for Investigators. Additional Patrol Officers based on growth and cars for service.

VIII. DESCRIBE ANY ON-GOING OR PROPOSED IMPROVEMENT PROGRAMS OR PROJECT - - POLICING, RECORDS, COMMUNICATIONS, ETC.:
A study and proposal is underway for Multi Jurisdictional dispatch including 911. We are working with Outlets Mall to establish a sub-station.

IX. DESCRIBE/LIST ANY ADDITIONAL EQUIPMENT NEEDS NOW OR OVER NEXT 5 YEARS:
Vehicles based on any new hire officers.

X. DESCRIBE ANY ISSUES, PROBLEMS OR NEEDS NOT COVERED ABOVE:

INVENTORY OF PUBLIC INFRASTRUCTURE & SERVICES FOR THE CITY OF LEBANON, TENNESSEE FOR COMPLIANCE WITH PC 1101, STATE GROWTH PLANNING LEGISLATION

(Use and attach additional pages as needed.)

106 Stove St.
443-2903

I. Subject: FIRE PROTECTION FACILITIES & SERVICES

Date(s) of Inventory: 3/22/99

Person(s) Doing Inventory: Chief Henry W. Preston

Person(s) Interviewed: _____

II. NUMBER OF FIREFIGHTERS:

Full-time:	36
Part-time:	0
Volunteer:	0
TOTAL:	36

NUMBER OF SUPPORT PERSONNEL:

Full-time:	3
Part-time:	0
TOTAL:	3

III. NUMBER OF FIRE STATIONS: 2

RESPONSE AREA: CITY ONLY 27 1/2 sq.mile OUTSIDE 1 mile jurisdiction

(Describe any conditions for service outside the city limits, if applicable)

ISO RATING: 5 / 9

PLEASE ATTACH A MAP SHOWING FIRE STATIONS AND ATTACH A LIST OF SERVICEABLE APPARATUS SHOWING PUMPING CAPACITY AND OTHER VEHICLES.

IV. DESCRIBE EXISTING BUILDING FACILITIES AND SPACE AND INDICATE ANY ADDITIONAL SPACE NEEDS NOW AND OVER NEXT 5 YEARS:

~~Stations 1 & 2 (Hartmann Drive & East Gay St.) -Existing~~

Station #3 Hwy.70 West (Proposed this year 1999) - New

Station # 4 Hwy. 109 & I-40 Area (Proposed year 2000-2001)

~~Station #5 Hwy. 231 South Area South of I-40 (Proposed yr.2000-2001)~~

3 mi radius in city
5 mi radius in county

INDICATE BUILDING FACILITY NEEDS BEYOND 5 YEARS:

Station North of Lebanon 231 North in area of Kontika Sub.

V. DESCRIBE ADDITIONAL EQUIPMENT NEEDS NOW AND OVER NEXT 5 YEARS:

1-11/2 Ton 4 wheel drive Brush Truck - Now (1999-2000)

1-Pumper Telesquirt 1500 G.P.M.- Year 2000-2001

1-Pumper 1500 G.P.M. Replacement for Unit 1208 yr. 2001-2002

BEYOND 5 YEARS, IF APPLICABLE:

2 - Pumpers 1500 G.P.M.

1 - Rescue Truck

VI. NOTE ANY COOPERATIVE ARRANGEMENTS WITH OTHER LOCAL JURISDICTIONS:

Mutual Aid with Wilson County & Gallatin Fire Dept.

VII. DESCRIBE ANY ON-GOING OR PROPOSED IMPROVEMENT PLANS OR PROGRAMS:

On going records and dispatch upgrade with computers

Current hose testing - hydrant testing - equipment testing for I.S.O. rating

Upgrade of training with new Training Officer

Upgrading of Public Education for public with Life Safety Trailer.

VIII. COMMENT ON ANY ISSUES, PROBLEMS, NEEDS NOT COVERED ABOVE:

There is a need at this time to decide on a minimum manning level for all apparatus. There should be at least 3 fire fighters on each engine and 4 fire fighters on the ladder tower this is a minimum as NFPA reg. This would be a help in obtaining an I.S.O. rateing of .3.

INVENTORY

Fire Apparatus & Pumping Capacity

~~and other vehicles in service now.~~

Fire Station No. 1 - 209 East Gay St.:
1-1997 Pumper - 1500 G.P.M. Pumping Capacity
1-1977 Pumper - 1250 G.P.M. Pumping Capacity
1-1989 Ladder Tower -95 ft/ 1500 G.P.M. Pumping Capacity
1-1996 Brush Truck 11/2 Ton-300 gal. tank Pumping Capacity

Fire Station No. 2 - Hartmann Drive:
1-1988 Pumper - 1500 G.P.M. - Pumping Capacity
1-1984 Pick up truck (Service Truck) - Poor Condition

Chief's Office & Staff:
1996 Car - 4 door caprece - Chief's Car
1997 1/2 Ton Pick up truck - Fire Inspector's Vehicle
1998 1/2 Ton Pick up truck - Training Officer & Public Education Vehicle

Retired Standby Equipment (still in use)
1-1968 Pumper 1250 G.P.M. - Pumping Capacity
1-1972 Pumper 1250 G.P.M. - Pumping Capacity

INVENTORY OF PUBLIC INFRASTRUCTURE & SERVICES FOR THE CITY OF LEBANON, TENNESSEE FOR COMPLIANCE WITH PC 1101, STATE GROWTH PLANNING LEGISLATION

(Use and attach additional pages as needed.)

416 Baird Park Circle
449-0303

I. Subject: PARKS & RECREATION

Date(s) of Inventory: 3-20-99

Person(s) Doing Inventory: Alex Buhler

Person(s) Interviewed:

II. STAFFING:

Full-time: 6
Part-time: 7
Volunteer:
TOTAL: 13

DESCRIBE ANY STAFFING NEEDS NOW AND OVER NEXT 5 YEARS:
Will need more Part-time for Baird Park and Don Fox Community Playground. This does not include staffing for Jimmy Floyd Life Center.

III. PROVIDE A LISTING OF ALL PARK & RECREATION AREAS (WITH MAP OF LOCATIONS) IN THE CITY, WITH DESCRIPTION & LISTING OF FACILITIES FOR EACH. ALSO INDICATE SITE ACREAGE FOR EACH LOCATION:

Baird Park - Harold Dean Greer Recreation Center, Babe Ruth Park - Dixie Ruth Park (2), Kiwanis Little League (2) Lebanon Girls Softball (2), Elkins Park Softball - Football Complex (2), Lebanon Youth Soccer (3)

IV. DESCRIBE ANY ON-GOING OR PROPOSED IMPROVEMENT PROJECTS OR PROGRAMS:

Building 3 new softball, 1 new baseball and multi-purpose fields Thackston Property

V. DESCRIBE ANY BUILDING, FACILITY OR SITE NEEDS NOW AND OVER NEXT 5 YEARS:

Jimmy Floyd Family Center currently under construction projected openning November 1999.

AND BUILDING, FACILITY OR SITE NEEDS BEYOND 5 YEARS:

VI. DESCRIBE ANY EQUIPMENT NEEDS NOW AND OVER NEXT 5 YEARS:

Any equipment needed can probably be addressed through normal budget - will need some new equipment

VII. DESCRIBE ANY ISSUE, PROBLEM OR NEED NOT COVERED ABOVE:

INVENTORY OF PUBLIC INFRASTRUCTURE & SERVICES
FOR THE CITY OF LEBANON, TENNESSEE
FOR COMPLIANCE WITH PC 1101, STATE GROWTH
PLANNING LEGISLATION

(Use and attach additional pages as needed.)

I. Subject: OTHER PUBLIC WORKS FACILITIES/SERVICES INCLUDING SOLID WASTE MANAGEMENT; STREET CONSTRUCTION/REPAIR; STREET LIGHTING; STORM DRAINAGE

Date(s) of Inventory: 3/20/99

Person(s) Doing Inventory: Jeff Baines,P.E. Commissioner of Public Works.

Person(s) Interviewed: DAVID G. GIBBS, GENERAL SERVICES ADMINISTRATOR

II. SOLID WATE MANAGEMENT:

A. Number of Employees:

Full-time:	13
Part-time:	0
TOTAL:	13

B. Describe method of collection, current equipment and frequency of pick-ups:

Residential household garbage collection with four (4) 25-yard rear loading units and one (1) 9-yard satellite unit furnishing once a week pick up for 7,200 customers.

C. Describe city owned disposal facilities and/or arrangements for utilization of county owned or other facilities (include tipping fees):

Contracted with BFI for $8.00 per yard at the scale which translates to approximately $16.50 per ton.

D. Describe any current recycling programs/arrangements:

Private Companies are operating drop off bins throughout the City.

E. Describe any collection, recycling or disposal facility or equipment needs now and over next 5 years:

In the next five (5) years, we will need to add another 25-yard unit and an additional three (3) men.

Describe any needs beyond the next 5 years:

Ten (10) year contract with BFI with an option for an additional ten (10) more years.

F. Describe any current plans or improvement projects/programs in place or anticipated:

Update of our current Solid Waste Ordinance.

G. Note any solid waste management issues or problems not covered above:

III. STREET CONSTRUCTION/REPAIR:

A. Number of Employees:

Full-time:	18
Part-time:	0
TOTAL:	18

Note additional staffing needs, if any:

Seven (7) to eight (8) part-time summer employees.

B. Does city have an on-going program of routine inspection, maintenance and repair? If so, please describe:

Full time patching crew

C. List/Describe current equipment:

Road Grader, Dump Truck, Patch Truck

D. Describe any facility or equipment needs now and over next 5 years:

Paving Machine, 10 ton Vibratory Roller, Small Bulldozer

E. Describe any issues, problems, needs not covered above:

IV. STREET LIGHTING:

A. Describe any program now in place for routine inspection and maintenance:

When desired Gerald asks Russell & Shorty to run the town flagging all off or off/on lights. Gerald repairs during normal working hours.

B. Policies for provision of any new street lighting:

When annexation occurs, try to add lights in stated time frame. If a State Road, obtain TDOT approval. If not then add a small light every other lot line. Provide overhead free. Developer pays excess cost if fed from underground.

C. Describe any facility or equipment needs now and over next 5 years:

STORM DRAINAGE:

All storm drains are inventoried, mapped and routinely checked after each rain.

They are prioritized for frequency of blockage

There is an ongoing ditching maintenance program to maintain local drainage ways are flowing properly.

D. Describe any improvement projects/programs proposed or in-place other than previously noted:

NONE

V. STORM DRAINAGE

A. Describe any major unresolved storm drainage problems or issues affecting the city:

~~1) Flooding of town square (2) Flooding in Walkers Branch water shed (ie. Hallcroft Subdivision)~~

B. Note any improvement projects/plans in place or proposed:

Detention east of Hartsville Pike

C. Describe any city policies or financing methods for dealing with storm drainage problems:

Subdivision regulations requiring 100-yr. study for subdivisions outside the regulated 100-yr floodplain.

D. Describe any issues or problems not indicated above:

V. DESCRIBE ANY ADDITIONAL ISSUES OR NEEDS REGARDING THE ABOVE PUBLIC WORKS FACILITIES NEEDS OR OTHER NEEDS NOT PREVIOUSLY NOTED:

Appendix F

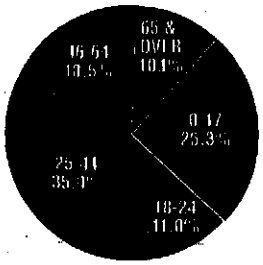
Regional Economic Forecasts

Regional Profile

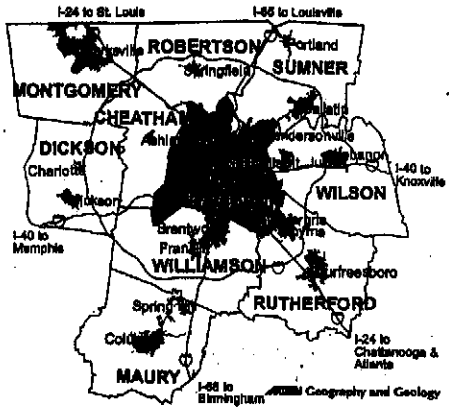
Published by the Nashville Area Chamber of Commerce

Population Growth

County	1990	1999	% Change
Cheatham	27,140	35,560	+31.0
Davidson	510,784	541,490	+6.0
Dickson	35,061	41,482	+18.3
Robertson	41,494	51,499	+24.1
Rutherford	118,570	169,862	+43.3
Sumner	103,281	126,227	+22.2
Williamson	81,021	119,835	+47.9
Wilson	67,675	83,672	+23.6
Nashville MSA	985,026	1,169,647	+18.7
Maury	55,285	72,223	+30.6
Montgomery	101,618	141,797	+39.5
Nashville Economic Market	1,141,929	1,383,208	+21.1
Tennessee	4,890,640	5,497,000	+12.3



AGE NASHVILLE MSA 1990 **RACE**



NASHVILLE ECONOMIC MARKET

The Nashville Economic Market

Nashville is the capital of Tennessee and a vital transportation, business and tourism center for North America. The Nashville Metropolitan Statistical Area (MSA), in the state's center, comprises eight counties and over one million in population. The Nashville Economic Market contains two additional counties.

Nashville-Davidson County has a consolidated government based on a 1963 plan that has become a national model. Davidson County is largely urbanized with extensive residential areas. Growth continues due to transportation, labor supply and development opportunities.

Cheatham County is the state's sixth fastest growing county. The county seat is Ashland City, home to State Industries and many other growing businesses.

Dickson County is developing industry to accompany its agricultural base with firms like Teksid Industries. Charlotte is the county seat and Dickson is the largest town.

Maury County, home to Saturn Corporation, continues to attract new business to communities offering rural amenities and urban accessibility. Columbia, the county seat, offers a variety of regional shopping and business services.

Montgomery County, part of of the Clarksville MSA, supports a diversified economy, Fort Campbell military base and Austin Peay State University. Clarksville, Tennessee's fifth largest city, continues rapid growth. Area industries include Bridgestone Metalpha, Quebecor and Trane Corporation.

Robertson County has a growing and diverse manufacturing sector and a strong agricultural base. Frigidaire operates a large plant in Springfield, the county seat.

Rutherford County is the fastest growing county in Tennessee and among the 50 fastest in the nation. Nissan Motor Manufacturing Corp. U.S.A. is located in Smyrna. Murfreesboro, the county seat and largest city, is home to Middle Tennessee State University and a broad economic base.

Sumner County has much major business development in Gallatin, the county seat, abundant recreational and impressive residential areas in Hendersonville and an extensive industrial base in Portland.

Williamson County is among the nation's 50 fastest growing counties with the emergence of upscale suburbs, retailing and office parks in Brentwood. Franklin, the county seat, offers historic ambiance as well as business settings like the headquarters for PRIMUS Automotive Financial Services.

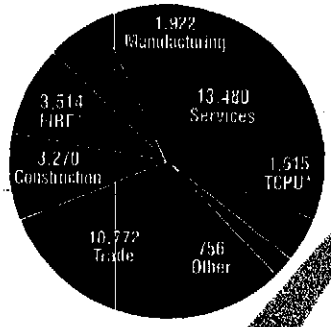
Wilson County continues to grow rapidly in residential commercial and industrial developments as Nashville grows eastward. Lebanon is the county seat and the largest city.

Economic Structure

The Nashville Region's economy is diverse and mirrors the national economy. The area benefits from low unemployment, consistent job growth, substantial outside investment and expansion and a well trained and growing labor force. The Nashville Region tends to outperform the state and nation throughout all stages of the economic cycle. The Nashville economy is clearly not reliant on any one area of business activity. The city is a leader in publishing and printing, finance and insurance, health care management, music and entertainment, automobile and related industry manufacturing, higher education and tourism. In the 1990s, the region has experienced simultaneous gains in services, manufacturing and trade in skilled occupations at competitive salaries and wages. Middle Tennessee's trained and motivated work force continues to draw interest among firms seeking a healthy business climate, consistent long-term growth and unmatched economic potential.

Nashville Economic Market

35,329 Business Establishments



Source: Bureau of Economic Analysis

Employment Characteristics

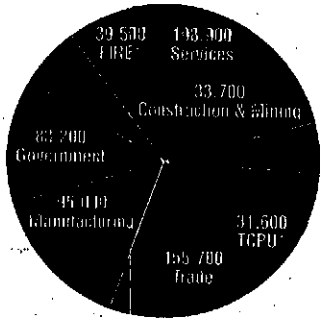
Work Force	1990	1991	1992	1993	1994	1995	1996	1997	1998	% Change 1990-98	Actual Net Change 1990-98
Non-Ag Employment	502,400	504,100	513,800	529,700	[illegible]	592,500	609,000	614,900	638,500	+27.[illegible]	[illegible]100
Manufacturing	89,400	87,500	90,300	91,900	96,300	99,900	99,800	94,900	96,000	+7.4	[illegible]
Construction and Mining	24,600	23,900	19,500	20,400	24,500	28,400	28,200	30,300	33,700	+37.0	+9,100
Services	138,200	141,400	150,200	159,000	166,100	173,100	188,500	193,100	198,900	+43.9	+60,700
FIRE*	30,900	30,500	30,500	30,500	30,900	34,100	35,300	37,800	39,500	+27.8	+8,600
TCPU*	26,900	27,100	30,300	31,300	32,300	34,100	31,500	31,500	31,[illegible]	[illegible]	[illegible]
Retail/Wholesale Trade	123,600	124,600	125,800	129,100	129,100	146,900	148,200	149,700	[illegible]00	+26.0	+32,100
Government	69,000	69,200	67,400	68,400	76,100	76,000	77,500	77,70[illegible]	[illegible]200	+20.6	+14,200

**FIRE (Finance, Insurance and Real Estate) and TCPU (Transportation, Communications and Public Utilities)*

Unemployment Rate	1990	1991	1992	1993	1994	1995	1996	1997	1998
Davidson County	3.5	4.4	4.8	3.8	3.1	3.1	3.0	[illegible]	2.7
Nashville MSA	4.0	4.9	5.2	4.2	3.2	3.3	[illegible]	[illegible]	2.9
Nashville Econ. Market	4.3	5.4	5.3	4.4	3.4	3.5	[illegible]	[illegible]	2.9
Tennessee	5.3	6.4	6.5	5.8	4.7	4.7	4.9	5.2	4.1
United States	5.5	6.7	7.4	6.7	6.0	5.7	5.5	4.9	4.6

Note: Data not seasonally adjusted
Source: Tennessee Department of Employment Security

Employment



New and Expanding Businesses

1990 – 1992
- Bankers Trust/BT Services
- Bridgestone/Firestone
- Caterpillar Financial Services
- Gabriel Ride Control Products
- National Federation of Independent Business
  Nissan Motor Manufacturing Corp. USA
  Saturn Corporation

1993-1995
- Bridgestone Metalpha
- Columbia/HCA Healthcare
  Georgia-Pacific Corporation
- Ingram Industries
- MagneTek
  Oneida Silversmiths
  The Gap
- Thomas Nelson Publishing
- Western Sizzlin' Restaurants

1996-1998
Accuride Corporation
American Standard Inc.
Deloitte & Touche
- Dollar General Corporation
  Metropolitan Life Insurance
- NFL Oilers/Titans
- PRIMUS Financial Automotive Services
- Shop at Home
  SunTrust Financial Services

• *Designates Headquarters*

Commercial Real Estate

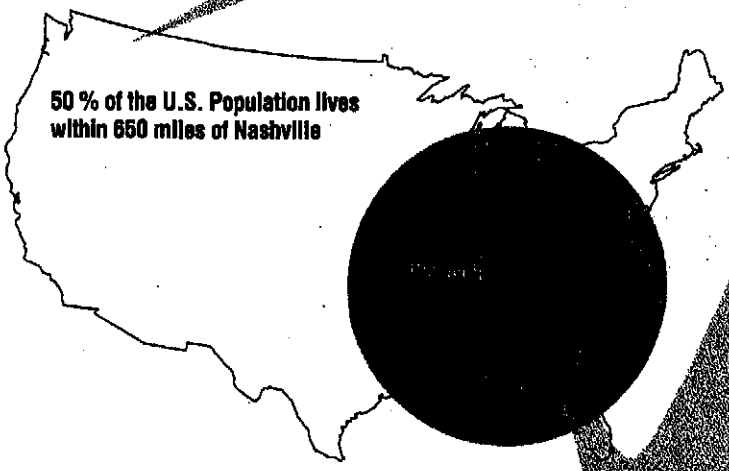
Nashville MSA

	Office Space (000 sq. ft.)	Office Vacancy Rate%	Industrial Space (000 sq. ft.)	Industrial Vacancy Rate %	Retail Space (000 sq. ft.)	Retail Vacancy Rate %
1990	16,478	21.6	110,309	8.4	21,987	15.0
1991	16,791	21.3	110,744	8.3	23,421	17.2
1992	16,846	18.4	110,937	6.4	23,927	14.8
1992	16,740	15.0	111,173	6.4	24,623	14.3
1994	16,909	10.5	111,350	5.4	24,999	12.9
1995	16,909	10.5	112,320	4.6	25,233	6.9
1996	17,871	6.2	114,923	6.7	25,150	6.6
1997	18,521	6.5	116,130	[illegible]	24,910	6.2
1998	20,252	9.92	115,340	7.76	26,284	6.54

Sources: Trammell Crow Company; CB Richard Ellis; Grubb & Ellis Centennial

Transportation Systems

- **Air:** Nashville International Airport, located eight miles southeast of downtown, handled more than eight million passengers and over 60,000 tons of cargo in 1998. Over 360 daily arrivals and departures to over 80 cities in North America. Nashville is served by Air Canada, American, American Eagle, Comair, Continental, Corporate Airlines, Delta, Delta Express, Northwest, Skyway, Southwest, TWA, United, United Express, US Airways, US Airways Express.



- **Road:** Convergence of three major interstate highways, I-40, I-24 and I-65, in Nashville. The I-440 and I-265 connectors link the central city, and I-840/Music City Beltway, connecting nine counties, is under construction with the first portion now completed between Lebanon and Murfreesboro.
- **Rail:** CSX Transportation links 20 states and operates a major intermodal yard for the Southeast with 90 trains daily.
- **Water:** Port of Nashville – Cumberland River; nine-foot navigation channel.
- **Mass Transit:** Intercity bus lines; downtown trolleys, HOV lanes; park and ride lots, two downtown LANDPORTs.

Cost of Living

(U.S. Average = 100)

New York	231.3	Richmond	108.3	Charlotte	99.1
Boston	131.9	Denver	108.1	Dallas	98.6
San Diego	127.8	Phoenix	102.3	Cincinnati	98.3
Washington	123.8	Atlanta	102.2	St. Louis	98.1
Philadelphia	121.2	Raleigh	101.8	Indianapolis	96.6
Detroit	114.0	Orlando	99.5	Baltimore	96.0
Cleveland	112.6	Austin	99.3	Nashville	95.9

Source: ACCRA Cost of Living Index, Third Quarter 1998

Tax Review

- **Personal Income Tax:** None on wages and salaries; 6% on certain types of dividend and interest income
- **Sales Tax:** State 6%; local option 2.25% with maximum $1,600 per single article of tangible personal property. Combined 8.25% applies in most counties.
- **Corporate Excise Tax:** 6% on net earnings.
- **Franchise Tax:** $.25 per $100, or major fraction thereof, of the issued and outstanding capital stock surplus and undivided profits; minimum, $10.
- **Inventory Tax:** None on finished goods inventory.
- **Unemployment Compensation Tax:** 0.15% to 10% of first $7,000 of wages paid to each employee in calendar year. Rate is 0% for employers with a reserved ratio of 20% or more. New employers rate is 2.7% for first three completed calendar years (excluding construction and mining.)
- **Local Gross Receipts Tax:** Varies from .125% to .16 of 1%. Exempts manufacturers and certain professionals.

County Property Tax Rates

Cheatham	$3.15
Davidson	
(General Services District)	3.27
(Urban Services District)	4.12
Dickson	2.87
Maury	2.89
Montgomery	3.30
Robertson	2.63
Rutherford	3.37
Sumner	2.96
Williamson	2.96
Wilson	2.83

Note: Check cities for additional rates.
Ratios per $100 assessed value (1997)
- Residential = 25%
- Industrial and Commercial Real Estate = 40%
- Industrial and Commercial Personal = 30%

Tax Comparison

City	Income	Property	Sales	Auto	Total
New York	$3,330	$1,713	$1,252	$ 75	$6,370
Philadelphia	3,095	2,205	528	102	5,930
Louisville	3,178	1,116	776	333	5,403
Charlotte	1,900	1,063	898	320	4,271
Atlanta	1,733	1,191	954	326	4,204
Los Angeles	996	1,748	928	397	4,034
Chicago	1,308	1,446	1,076	205	4,034
Birmingham	2,248	327	1,114	310	3,999
Indianapolis	1,886	1,124	560	117	3,687
Nashville	0	1,140	1,147	151	2,438

Tax burden based on family of four at $50,000/year.
Source: District of Columbia Dept. of Finance and Revenue, 1996

Top Employers

25 largest, excluding government agencies
(• National, State or Corporate Headquarters)

	Local Employees
• Vanderbilt University & Medical Center	12,719
• Saturn Corporation	9,671
• Columbia/HCA Healthcare Corporation	8,100
• Gaylord Entertainment	6,454
• Nissan Motor Manufacturing Corporation U.S.A.	6,000
• Kroger Company	5,750
• Reemay, Inc.	5,070
United Parcel Service	4,500
• First American National Bank	4,200
• Shoney's, Inc.	4,125
• St. Thomas Hospital	4,000
• BellSouth	3,500
• Inter-City Products Corporation	3,200
• Baptist Health Care Systems, Inc.	3,030
[illegible]Bank	2,900
• Bridgestone/Firestone USA, Inc.	2,800
• Service Merchandise Company	2,589
• Ingram Industries, Inc.	2,500
• Fleetguard	2,300
• The Tennessean	2,300
Whirlpool, Inc.	2,300
• Cracker Barrel Old Country Store, Inc.	2,271
• Comdata Corporation	2,200
• State Industries	2,200
The Trane Company	1,800

Education System

PUBLIC SCHOOL SYSTEMS K-12
NASHVILLE ECONOMIC MARKET

County	1997-98 Enrollment	Drop Out Rate %	% of Graduates Continuing Education	Average SAT Score Total
Cheatham	6,584	5.2	57.2	1,092
Davidson	69,337	21.9	74.1	1,100
Dickson	7,867	20.1	52.1	1,246
Maury	11,762	23.8	62.1	1,143
Montgomery	22,697	8.0	68.3	1,203
Robertson	9,726	10.5	47.8	1,126
Rutherford	23,708	16.1	61.3	1,180
Sumner	21,926	[illegible]	67.8	1,148
Williamson	17,313	11.5	86.7	1,150
Wilson	11,545	14.5	[illegible]	1,136
Total	202,465	16.6	68.6	[illegible]

- In Median Effective Buying Income (EBI) in the Nashville MSA is $38,224.
- Over 45,000 persons in the Nashville MSA have graduate or professional degrees.
- There are more than 70 private and parochial schools in the MSA, with a total enrollment of approximately 20,500 students. Annual tuition costs range from $1,300 to $6,000.

HIGHER EDUCATION
MIDDLE TENNESSEE REGION

Accredited Four-Year & Postgraduate Institutions	
Aquinas College, Nashville	317
Austin Peay State University, Clarksville	7,508
Belmont University, Nashville	3,000
Cumberland University, Lebanon	1,200
Lipscomb University, Nashville	2,381
Fisk University, Nashville	826
Meharry Medical College, Nashville	856
Middle Tennessee State University, Murfreesboro	18,432
Nashville School of Law, Nashville	340
Tennessee Technological University, Cookeville	8,215
Trevecca Nazarene University, Nashville	1,582
Tennessee State University, Nashville	8,750
University of the South, Sewanee	1,507
University of Tennessee Space Institute, Tullahoma	268
Vanderbilt University, Nashville	10,200
Accredited Two-Year Public Colleges	
Nashville State Technical Institute, Nashville	7,271
Volunteer State Community College, Nashville	6,718
Motlow State Community College, Tullahoma	3,365
Columbia State Community College, Columbia	4,366
1998 Total Enrollment	82,585

Music City Facts

Climate & Setting

- Temperature Averages: Annual Average – 59.2 F, January – high 46.3 F, low 27.8 F; June – high 89.8 F, low 69.0 F
- Average annual precipitation is 48.5"
- Average humidity is 58%
- Central Time Zone; Elevation 550'
- Nashville Economic Market area is 5,225 square miles

Utilities

Nashville Electric Service, TVA, Nashville Gas Company and Metro Water Service serve Davidson County.

Monthly Electric Bills

200kW demand; 100,000kWh month

Philadelphia	$9,325
Newark	8,491
San Francisco	7,684
Tampa	5,532
Baltimore	5,507
Houston	5,433
St. Petersburg	5,431
Miami	5,301
Nashville	**5,265**

Source: Virginia Power/North Carolina Power, January 1998 Communications

Communications

Print:

- The TENNESSEAN: circulation – daily 197,000, Sunday 287,000
- Nashville Business Journal

Broadcast/Cable:

- TV: 8 local stations; 78 cable channels
- Radio: 10 AM stations; 19 FM stations

Income

- 1997 Median Effective Buying Income (EBI) in the Nashville MSA is $38,224
- 9,500 Nashville MSA households with EBI of $150,000 or higher; ranked 36th highest of 320 cities.

Per Capita Personal Income (1996)

		TN County Ranking
Cheatham	$18,326	35
Davidson	29,394	2
Dickson	19,216	27
Maury	20,681	16
Montgomery	18,475	34
Robertson	19,341	25
Rutherford	22,041	9
Sumner	21,993	10
Williamson	32,925	1
Wilson	22,096	7
Nashville MSA	26,262	
Tennessee	22,032	
United States	24,436	

Source: Sales & Marketing Managers and Bureau of Economic Analysis

Retail Sales

- The Nashville MSA has 7,409 retail establishments, up over 15% since 1990.

	$ Million	% Change
1990	$ 7,691	5.9
1991	8,146	2.3
1992	8,649	6.1
1993	9,579	10.7
1994	10,673	11.4
1995	11,422	7.0
1996	11,927	4.4
1997	12,798	7.3
1998	13,335	4.2

Source: TN Department of Revenue, Nashville Chamber estimate

Recreation & Arts

- 76 parks and playgrounds; 13 public pools
- 160 tennis courts; 18 golf courses (10 private, 8 public)
- 30,000 acres in lakes for fishing, boating and skiing
- Centennial Sportsplex – swimming, tennis, ice skating
- Tennessee Performing Arts Center
- Nashville Symphony, Ballet, Opera and Tennessee Repertory Theatre
- Grand Ole Opry
- Country Music Hall of Fame
- Tennessee State Museum; Cumberland Science Museum
- Nashville Wildlife Park at Grassmere, The Nashville Zoo, Cheekwood: Nashville's Home of Art and Gardens
- Nashville Arena; NFL Stadium

Nashville
MUSIC CITY USA

For more information on the Nashville Economic Market contact:

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161 Fourth Avenue North
Nashville, Tennessee 37219-2485

Phone: (615) 259-4755 FAX: (615) 256-3074
Internet:
http://www.nashvillechamber.com
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Nashville

A profile of business in the region

Suppliers follow Dell to Middle Tennessee

The ripple effect associated with Dell Computer Corporation's entrance into Middle Tennessee is revving up Nashville-area commercial real estate activity as the personal computer giant's suppliers scramble to find space for their operations.

As of September 30, at least 11 companies have signed leases for space in Davidson, Rutherford and Wilson counties.

"Dell's ripple effect is readily apparent in the activity of its suppliers," said Gaylord Entertainment Company CEO Terry London, who serves as chairman of PARTNERSHIP 2000, the economic development initiative of the Nashville Area Chamber of Commerce.

"We are just beginning to see the first wave of supplier companies setting up shop in Middle Tennessee. We expect many more companies and hundreds, if not thousands, of supplier-related jobs to follow in the coming years."

Janet Miller, director of economic development for the Nashville Chamber, said the new supplier businesses already occupy more than 650,000 square feet of space and account for more than 225 new employees. The companies include Ryder Integrated Logistics, Austin Foam Plastics, Capital City Container, Digimedia and IPC Communication Services.

Kip Thompson, vice president of worldwide facilities for Dell, cited outstanding logistical advantages as one of the primary reasons the company chose the Nashville area for its first U.S. expansion outside of Texas.

"We can get to 60 percent of our customer base in two days from Nashville," he said.

Additionally, Thompson said innovative state and local leadership, superior infrastructure and availability of space to grow their operations played an important role in Dell's location decision.

Dell already employs about 1,000 Middle Tennessee residents at its 304,000-square-foot Lebanon manufacturing facility in Wilson County. The company's main campus, to be housed in Davidson County, is under development.

> *"We can get to 60 percent of our customer base in two days from Nashville."*
>
> *Kip Thompson,*
> *Vice President,*
> *Worldwide Facilities,*
> *Dell Computer Corp.*

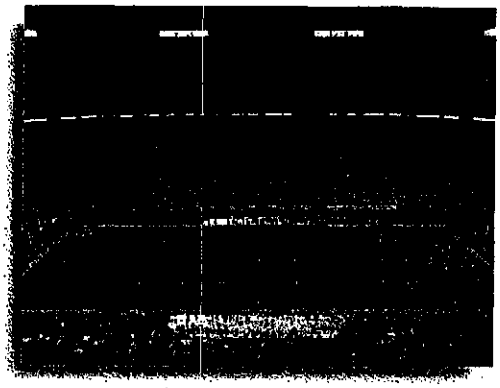
NFL stadium enhances Nashville's image as a professional sports town

The opening and naming of Adelphia Coliseum, the official name of the Tennessee Titans' new home stadium, completed Nashville's transformation into an NFL city.

Adelphia Communications paid $30 million for naming rights to the newly completed 67,000-seat stadium and celebrated with thousands of Titans' fans during a grand opening event this summer.

Titans' fans enjoyed an intense game during the team's regular season debut at "The Delph" on September 12. A crowd of nearly 66,000 – a franchise record at the time – turned out to see the Titans manage a come-from-behind win over the Cincinnati Bengals, 36-35.

"There's a real sense of pride associated with Adelphia Coliseum," said Joe Kelley, chairman of the Nashville Sports Council. "It has helped create a level of excitement and energy among professional sports fans that hasn't existed here until very recently. The stadium's unmistakable presence makes a bold statement to visitors, tourists and travelers that says 'We're in the big leagues now.'"



Fans pack the newly completed, 67,000-seat Adelphia Coliseum to cheer on the Tennessee Titans.

Another important development in the professional sports arena was the official naming of the NHL's Nashville Predators' home venue. Gaylord Entertainment Company, a Nashville-based diversified entertainment company and minority owner of the Predators, signed an $80 million deal to change the name of the Nashville Arena to Gaylord Entertainment Center.

Nashville International Airport improvements to top $45 million

Nashville International Airport was the fourth best among 36 major U.S. airports, according to a Plog Research survey released in 1998 that evaluated baggage delivery, ease of reaching gates, available ground transportation and other amenities.

The Metropolitan Nashville Airport Authority has embarked on two massive expansion initiatives to make it even better. The first, a $35 million capital improvement program, will increase parking availability and significantly enhance terminal access. The second initiative, an $11 million project, will dramatically expand air cargo services.

"These improvements are essential to keep Nashville competitive with other cities," said General William G. Moore, president of the Airport Authority. "As the region has grown, so has the volume of passengers, flights and cargo traveling to and from Nashville."

In terms of parking, expansion efforts will add more than 1,200 new spaces.

Terminal improvements include adding pedestrian bridges with moving sidewalks connecting the baggage and ticketing levels to the parking garage, increasing traffic lanes on all three levels, adding valet parking service and building four climate-controlled waiting rooms for passengers on the ground transportation level.

Additional improvements include expanding passenger pick-up and drop-off areas on the baggage and ticketing levels, adding more covered rental car spaces, taxi waiting spaces, parking toll booths, stairways and elevators in the parking garage.

Improvements to air cargo services will create a complex to be known as the Nashville Air Cargo Link. This program includes rehabilitation and enlargement of cargo aircraft aprons; taxiways and parking areas for customers, trucks and employees, plus the addition of new air cargo facilities on adjacent land.

"The goal of the Nashville Air Cargo Link is to provide seamless service between freight forwarders, manufacturers, distributors and air cargo carriers," said Hugh G. Smith, vice president of air cargo for the Airport Authority.

To further enhance air passenger service, Nashville International Airport added several new non-stop markets to its flight schedule during the last year including service to Seattle, Wash.; Fort Lauderdale, Fla.; San Diego, Calif.; Long Island, N.Y.; and Hartford, Conn.

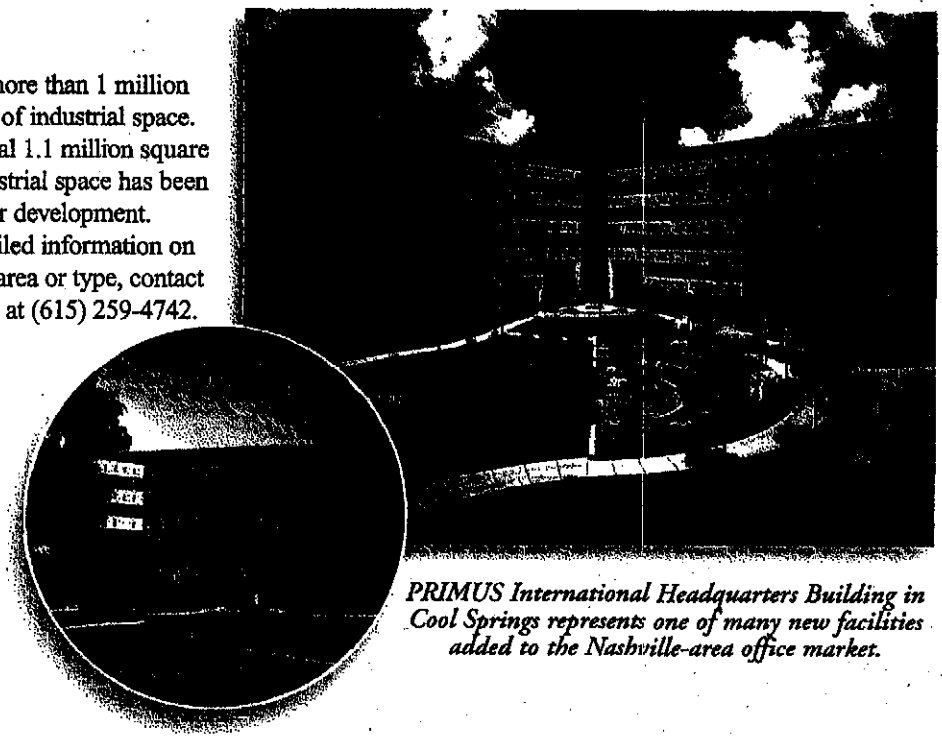
Improvements at Nashville International Airport will significantly enhance the facility's capacity to move goods and people.

Nashville Under Construction

The PRIMUS International Headquarters Building is among the newest facilities added to Middle Tennessee's office market landscape. The 540,000-square-foot building sits on 100 acres and can accommodate about 2,300 employees.

Companies looking to expand in, or relocate to, the Nashville area will have a greater selection of space with the abundance of multi-tenant, speculative and industrial buildings under construction. Current projects will add more than 1.7 million square feet of Class A office space and more than 1 million square feet of industrial space. An additional 1.1 million square feet of industrial space has been proposed for development.

For detailed information on projects by area or type, contact Janet Miller at (615) 259-4742.



PRIMUS International Headquarters Building in Cool Springs represents one of many new facilities added to the Nashville-area office market.

Nashville pursues rail transit to support growth, beat gridlock

Nashville is taking proactive steps to ensure that Middle Tennessee's transportation network keeps pace with the region's growth.

During the past year, the Nashville Area Chamber of Commerce spearheaded efforts to draft a regional multi-modal transportation plan that would shorten commutes to and from downtown Nashville and reduce overall automobile traffic on Middle Tennessee thoroughfares.

"Roads cannot be built fast enough, or cheaply enough, to meet the demands of continued regional growth," said Lewis Levine, vice chairman of transportation for the Chamber. "If we are to continue to grow and prosper, we must enhance our current transportation system so that it offers area residents a comfortable and convenient alternative to driving their cars."

The Chamber outlined its proposed multi-modal transportation plan in a recent report titled "Beating Gridlock: An Attainable Transportation Program for Middle Tennessee." The plan calls for developing commuter rail service to five counties by the year 2010 and building the first leg of a light rail system from downtown Nashville out west to Interstate 440. It also addresses the need to secure regional funding sources for operating and capital costs and the need to launch a public awareness campaign that encourages regional support among business leaders, elected officials and citizens.

A delegation made up of state transportation officials, Chamber representatives and area business leaders traveled to Washington, D.C. in October to seek an estimated $25 million in federal funding to put the first of five commuter rail corridors in operation by 2001.

Visit the Chamber's website at nashvillechamber.com for report details.

The City of Hendersonville plans to build a full-service commuter rail station which could include amenities such as a drycleaner, coffee shop and a post office.

Proposed site for Hendersonville Station and future Hendersonville Commuter Rail Station.

Nashville hosts world's top corporate real estate executives

More than 2,300 top corporate real estate executives and site selection consultants spent several days in Nashville recently. Nashville served as the host city for the International Development Research Council's (IDRC) World Congress held October 16-20 at the Opryland Hotel. This year marked the second time in seven years that the IDRC has selected Nashville to host its meeting.

"This show is typically held in larger markets such as New York, Boston, Chicago and Los Angeles, so bringing in a group of this caliber is a major coup for Nashville – and for the state of Tennessee," said Janet Miller, director of economic development for the Nashville Area Chamber of Commerce. "I think the fact that they chose Nashville not once, but twice, in the last decade is a real testament to our city."

Miller said holding the conference here provided attendees, some of whom have never visited Tennessee or Nashville, a chance to see what the city was all about. And for those who attended the first IDRC World Congress held in Nashville in 1992, it was an opportunity to highlight the many positive changes that occurred since their last visit.

"These folks are the decision makers who have the ability to create significant economic development in Nashville and throughout Tennessee in the years ahead," Miller said.

Fast Facts

- Nashville is among the top ten most educated metropolitan areas in America, according to a recent study conducted by the Center for Regional Economic Issues at Case Western University. The study determined that there is a direct correlation between the number of college degree holders in a particular area and rapid increases in per capita income.
- Growth of women-owned businesses in Nashville is the fifth fastest in the nation, according to recent figures released by the National Foundation for Women Business Owners.
- Crime rates dropped for the third consecutive year in Nashville during 1998 with declines in all major crime categories.
- Nashville ranked 37th in 1999 among U.S. metro areas with the most households with effective buying incomes of $150,000 or more, according to the 1999 Survey of Buying Power. Nashville ranked 47th in population size of this list.
- Two Nashville hospitals – Vanderbilt Medical Center and St. Thomas Hospital – rank among the nation's best for their programs in cardiology and heart surgery, urology and treatment of hormonal disorders, according to *U.S. News & World Report* magazine's annual survey of America's Best Hospitals.

Relocations

Nashville's favorable business climate has attracted numerous national and international companies in recent months. The following is an abbreviated listing of relocations that have occurred since April 1999:

Austin Foam Plastics
Foam and corrugated packing material, 81,000 square feet and 80 new employees, Rutherford County.

Central City Container
Austin-based supplier of cardboard packing for Dell Computer Corporation, 35,000 square feet and 50 new employees, Davidson County.

Dell Computer Corporation
Personal computer manufacturer, first Nashville-area facility of about 300,000 square feet and 1,000 new jobs, Wilson and Davidson counties.

Ford Motor Credit/Fabtiane
Loan service center for Fabtiane with 500 employees, new service center for Ford Motor Credit with 110 new employees, Williamson County.

Imperial Fabricating
New manufacturing and distribution facility for heavy truck parts, 224,000 square feet, Sumner County.

Lightning Logistics
Distribution and logistics center serving Dell and its suppliers, 40,000 square feet and 15 new employees, Davidson County.

Mephisto USA
Relocation of U.S. headquarters and distribution for the fine footwear manufacturer, 84,000 square feet and 50 new employees, Williamson County.

Premium Wear, Inc.
Golf and corporate casual wear manufacturer, 403,000 square feet and 60-75 new employees, Montgomery County.

Ryder Integrated Logistics
Largest logistics consolidator for Dell Computer Corporation, will expand to 340,000 square feet, Rutherford County.

Sprint PCS
New 500-seat customer service center, 90,000 square feet and 1,150 new employees, Davidson County.

Nashville Neighbors: Sumner County

Scenic beauty, excellent quality of life and proximity to Nashville are a few of the many reasons more and more families and businesses are moving to Sumner County.

In the last decade, Sumner County's population has grown by more than 22 percent. Today, more than 125,000 people reside there, making it the third largest county in the Nashville Metropolitan Statistical Area behind Davidson and Rutherford counties.

Sumner County is unique in that it is comprised of four major cities – Gallatin, the county seat; Hendersonville, home of Old Hickory Lake and 26 miles of beautiful shoreline; Portland, the site of impressive new retail development; and White House, one of the top 125 fastest-growing cities in the nation.

"We've seen a lot of new residential activity in recent years which has led to the need for and development of new schools," said Tracy Carman, executive director of the Gallatin Chamber of Commerce. "We've opened three new schools here since January."

The other cities echoed Carman's comments, citing high volumes of residential activity and an abundance of new businesses including Gap Distribution, Bosch Automotive Motor Systems and a new distribution facility for Advance Auto Parts.

Sumner County boasts a healthy mix of industries with concentrations among manufacturing and printing companies. Major employers, aside from those companies listed above, include RR Donnelley & Sons Company and G.F. Furniture in Gallatin; Unipres USA (pressed metal parts for the automotive industry) and National Catalog Corporation in Portland; Osh Kosh B'Gosh in White House; and Betty Machine in Hendersonville.

Old Hickory Lake is one of many popular recreational areas in Sumner County.

Nashville
AREA CHAMBER OF COMMERCE

For more information on the Nashville region contact:

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Vice President,
Economic Development

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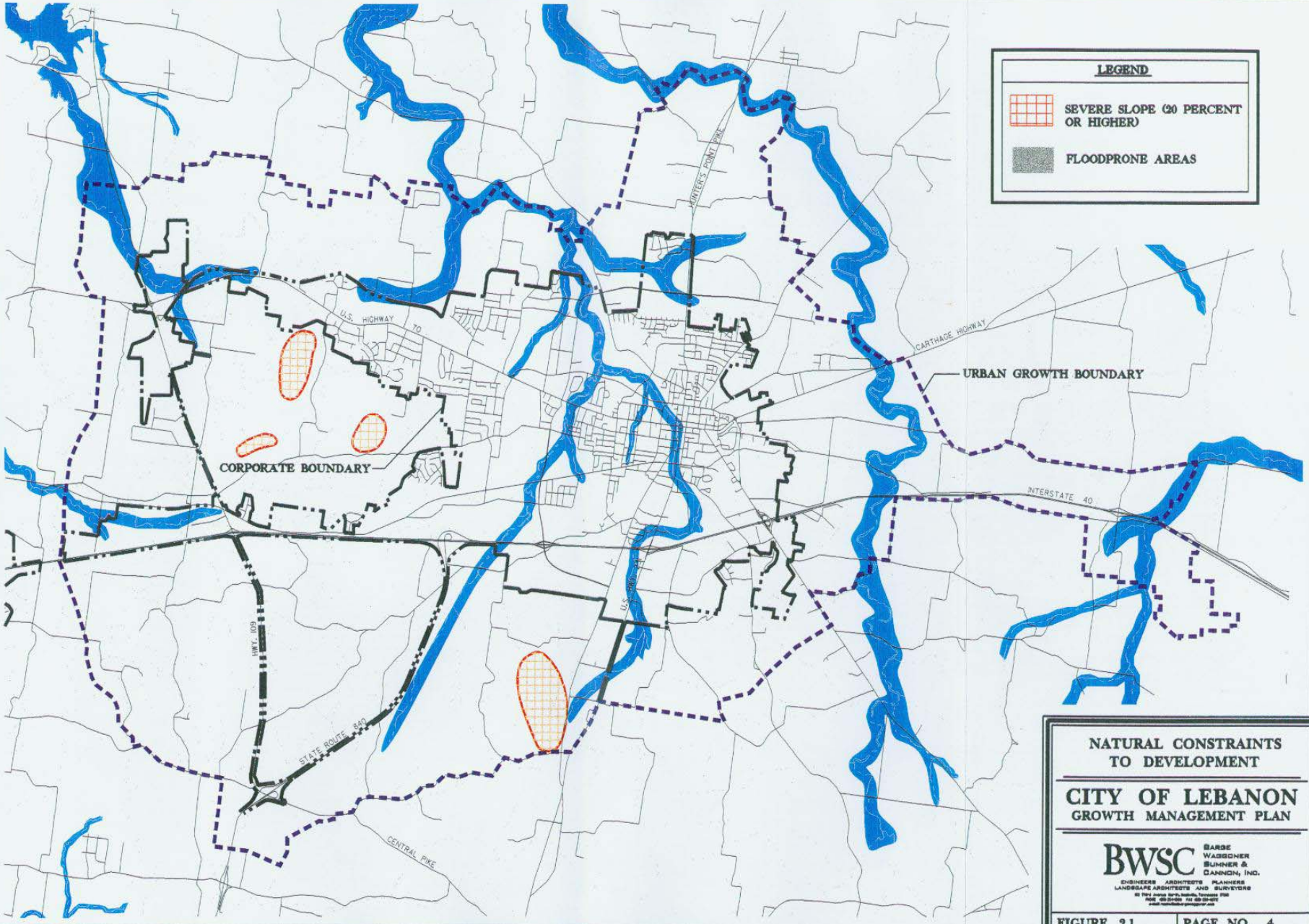
Nashville, TN 37219-2485
Phone: (615) 259-4709
Fax: (615) 256-3074
http://www.nashvillechamber.com

Appendix G

- Figure 2.1 Natural Constraints to Development
- Figure 2.2 Existing Land Use
- Figure 3.1 Proposed Urban Growth Plan
- Figure 3.2 Proposed Land Use Plan
- Figure 4.1 Public Infrastructure and Services Plan

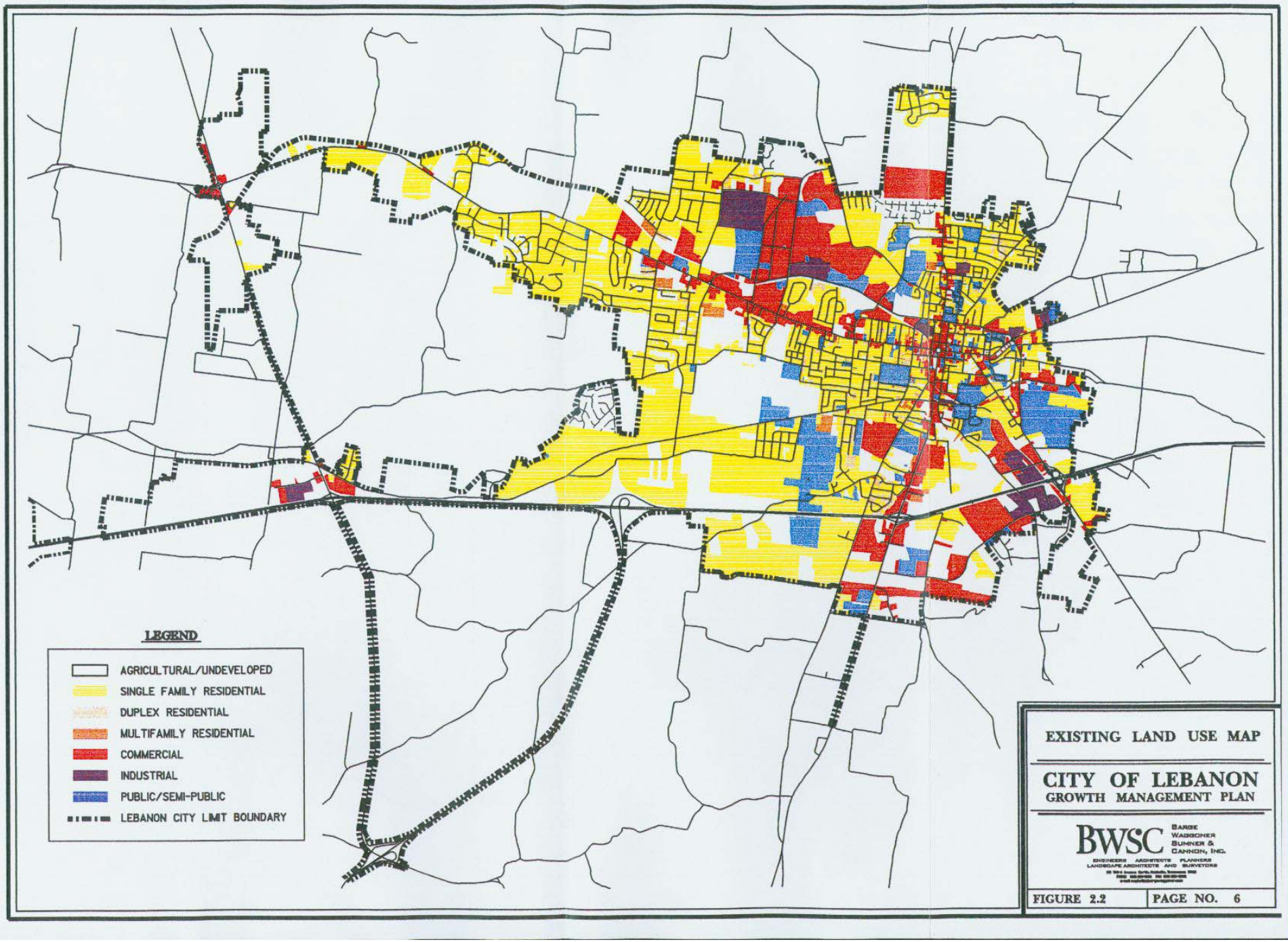


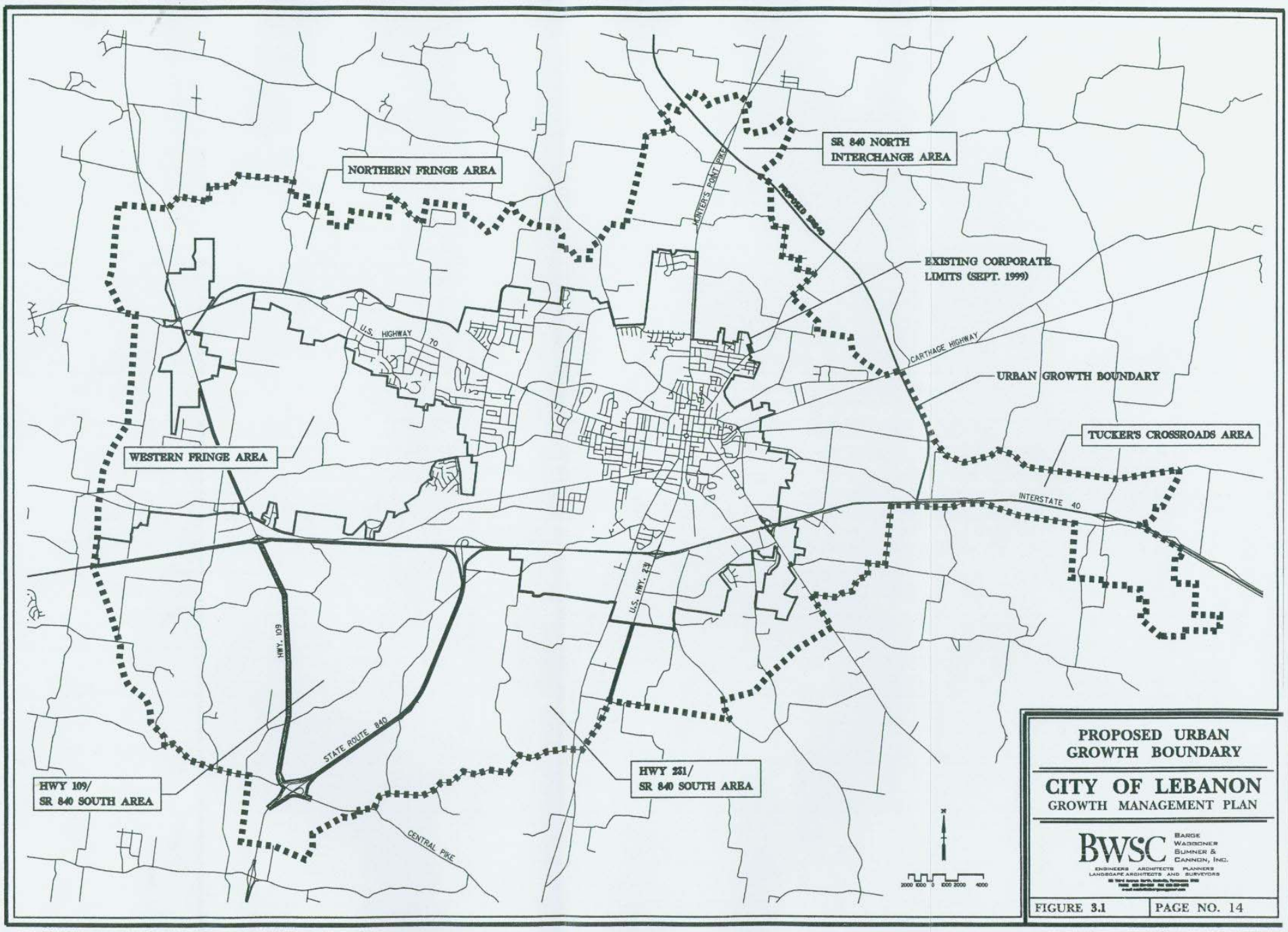
NATURAL CONSTRAINTS TO DEVELOPMENT

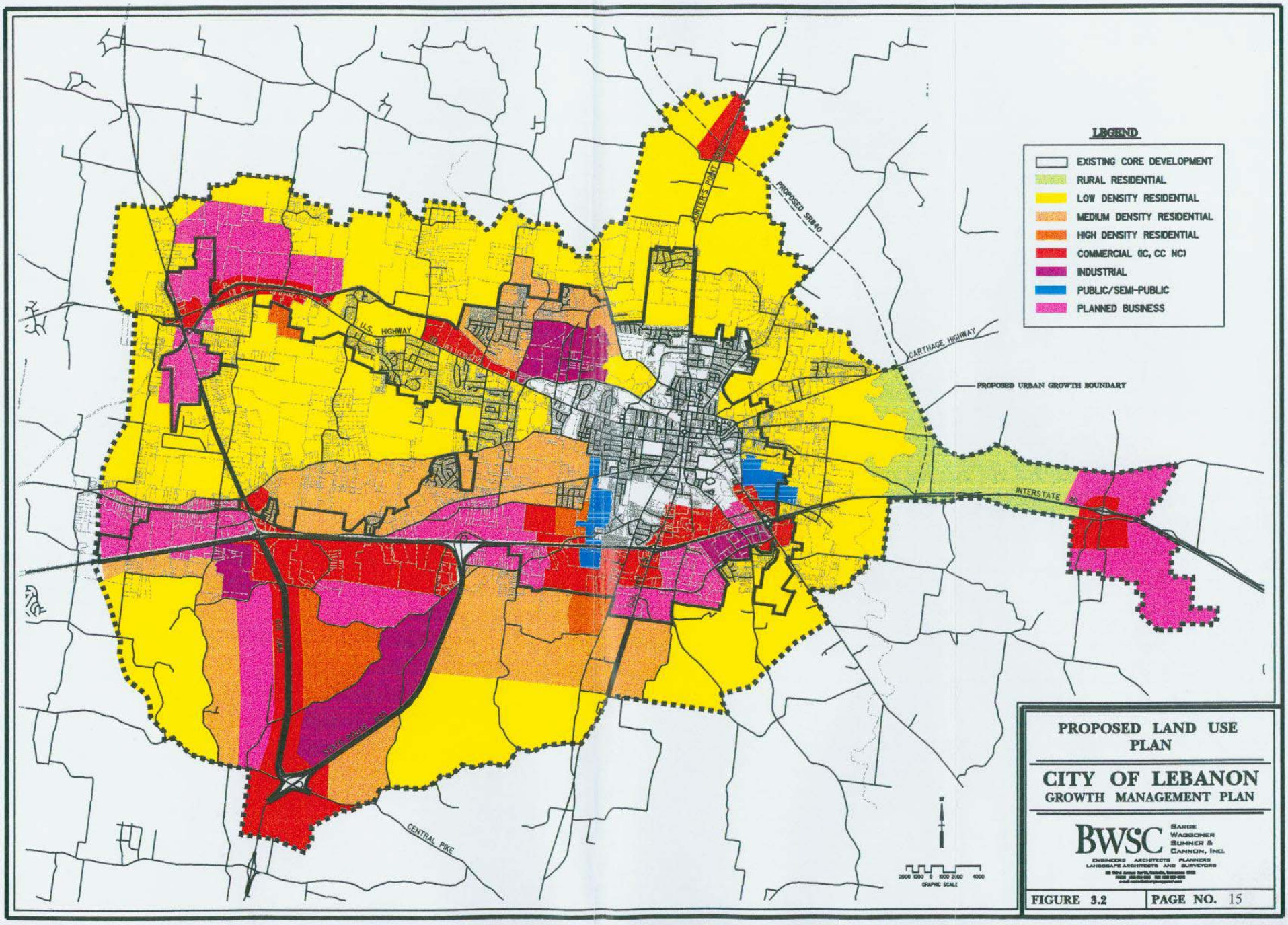
CITY OF LEBANON
GROWTH MANAGEMENT PLAN

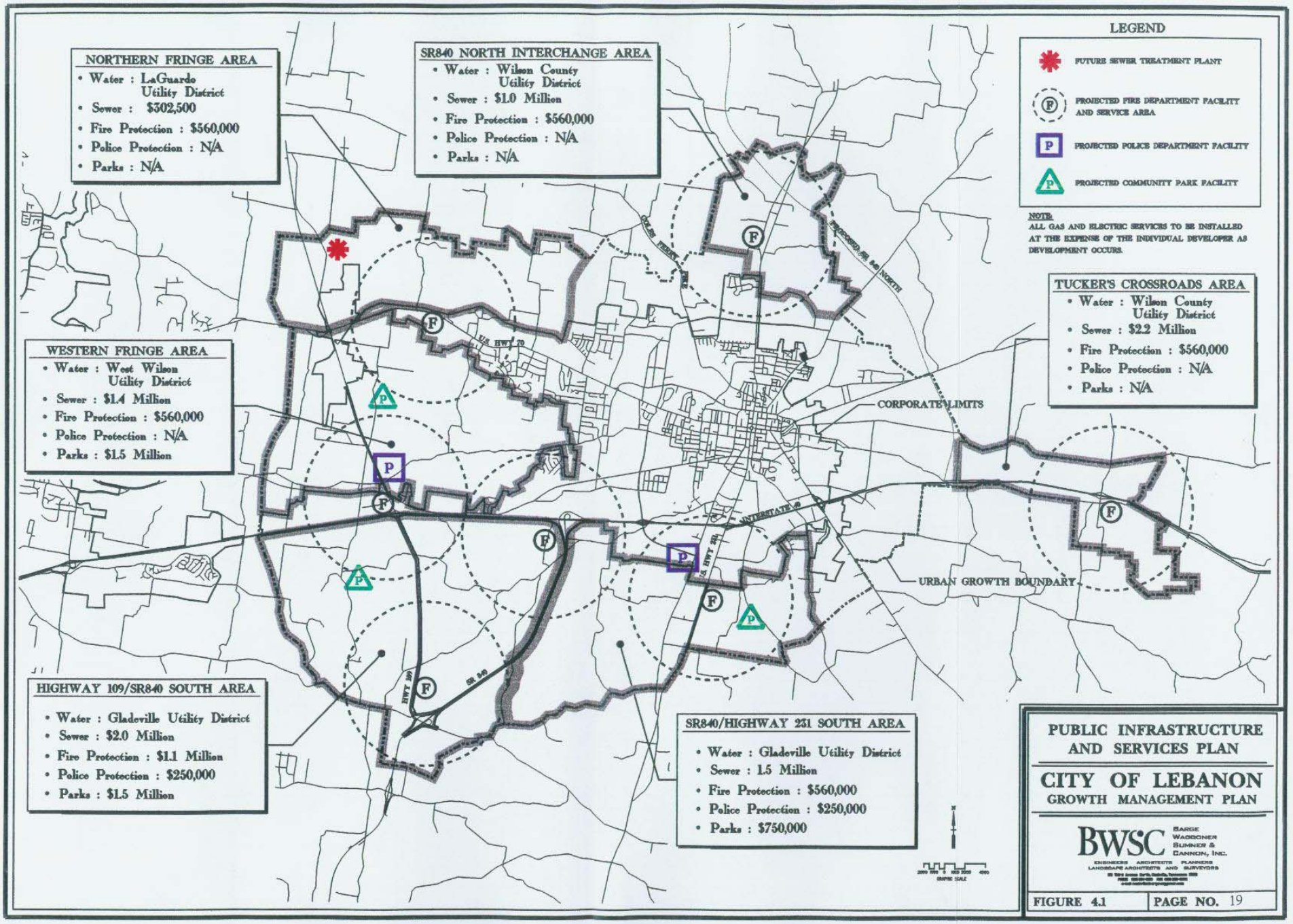
BWSC BARGE WAGGONER SUMNER & CANNON, INC.
ENGINEERS ARCHITECTS PLANNERS
LANDSCAPE ARCHITECTS AND SURVEYORS

FIGURE 2.1 | PAGE NO. 4


LEGEND
AGRICULTURAL/UNDEVELOPED
SINGLE FAMILY RESIDENTIAL
DUPLEX RESIDENTIAL
MULTIFAMILY RESIDENTIAL
COMMERCIAL
INDUSTRIAL
PUBLIC/SEMI-PUBLIC
LEBANON CITY LIMIT BOUNDARY
EXISTING LAND USE MAP
CITY OF LEBANON
GROWTH MANAGEMENT PLAN
BWSC
BARGE WAGGONER SUMNER & CANNON, INC.
ENGINEERS ARCHITECTS PLANNERS
LANDSCAPE ARCHITECTS AND SURVEYORS
FIGURE 2.2
PAGE NO. 6


NORTHERN FRINGE AREA
SR 840 NORTH INTERCHANGE AREA
EXISTING CORPORATE LIMITS (SEPT. 1999)
URBAN GROWTH BOUNDARY
TUCKER'S CROSSROADS AREA
WESTERN FRINGE AREA
HWY 109/ SR 840 SOUTH AREA
HWY 231/ SR 840 SOUTH AREA
U.S. HIGHWAY 70
CARTHAGE HIGHWAY
INTERSTATE 40
U.S. HWY. 231
HWY. 109
STATE ROUTE 840
CENTRAL PIKE
PROPOSED SR840
2000 1000 0 1000 2000 4000
PROPOSED URBAN GROWTH BOUNDARY
CITY OF LEBANON
GROWTH MANAGEMENT PLAN
BWSC
BARGE WASSONER SUMNER & CANNON, INC.
ENGINEERS ARCHITECTS PLANNERS
LANDSCAPE ARCHITECTS AND SURVEYORS
FIGURE 3.1
PAGE NO. 14


LEGEND
EXISTING CORE DEVELOPMENT
RURAL RESIDENTIAL
LOW DENSITY RESIDENTIAL
MEDIUM DENSITY RESIDENTIAL
HIGH DENSITY RESIDENTIAL
COMMERCIAL (C, CC NC)
INDUSTRIAL
PUBLIC/SEMI-PUBLIC
PLANNED BUSINESS
PROPOSED SR840
CARTHAGE HIGHWAY
PROPOSED URBAN GROWTH BOUNDARY
INTERSTATE 40
U.S. HIGHWAY
STATE ROUTE 109
CENTRAL PIKE
GRAPHIC SCALE
PROPOSED LAND USE PLAN
CITY OF LEBANON
GROWTH MANAGEMENT PLAN
BWSC
SARGE WAGGONER SUMNER & CANNON, INC.
ENGINEERS ARCHITECTS PLANNERS
LANDSCAPE ARCHITECTS AND SURVEYORS
FIGURE 3.2
PAGE NO. 15


NORTHERN FRINGE AREA
• Water : LaGuardo Utility District
• Sewer : $302,500
• Fire Protection : $560,000
• Police Protection : N/A
• Parks : N/A
SR840 NORTH INTERCHANGE AREA
• Water : Wilson County Utility District
• Sewer : $1.0 Million
• Fire Protection : $560,000
• Police Protection : N/A
• Parks : N/A
LEGEND
FUTURE SEWER TREATMENT PLANT
PROJECTED FIRE DEPARTMENT FACILITY AND SERVICE AREA
PROJECTED POLICE DEPARTMENT FACILITY
PROJECTED COMMUNITY PARK FACILITY
NOTE:
ALL GAS AND ELECTRIC SERVICES TO BE INSTALLED AT THE EXPENSE OF THE INDIVIDUAL DEVELOPER AS DEVELOPMENT OCCURS.
TUCKER'S CROSSROADS AREA
• Water : Wilson County Utility District
• Sewer : $2.2 Million
• Fire Protection : $560,000
• Police Protection : N/A
• Parks : N/A
WESTERN FRINGE AREA
• Water : West Wilson Utility District
• Sewer : $1.4 Million
• Fire Protection : $560,000
• Police Protection : N/A
• Parks : $1.5 Million
CORPORATE LIMITS
URBAN GROWTH BOUNDARY
HIGHWAY 109/SR840 SOUTH AREA
• Water : Gladeville Utility District
• Sewer : $2.0 Million
• Fire Protection : $1.1 Million
• Police Protection : $250,000
• Parks : $1.5 Million
SR840/HIGHWAY 231 SOUTH AREA
• Water : Gladeville Utility District
• Sewer : 1.5 Million
• Fire Protection : $560,000
• Police Protection : $250,000
• Parks : $750,000
PUBLIC INFRASTRUCTURE AND SERVICES PLAN
CITY OF LEBANON
GROWTH MANAGEMENT PLAN
BWSC
BARGE WAGGONER SUMNER & CANNON, INC.
ENGINEERS ARCHITECTS PLANNERS LANDSCAPE ARCHITECTS AND SURVEYORS
FIGURE 4.1
PAGE NO. 19