Future Land Use Element

Data and Analysis

Introduction

The neighborhood is the fundamental building block to quality of life in Gainesville. The City is committed to establishing and retaining land uses, policies, and infrastructure that will protect the viability of neighborhoods. This can most effectively be achieved by establishing standards that are people-oriented and create an environment rich in housing and transportation choices, adequate public parks, and protected urban natural areas. Evidence of the need for the City to adopt a Future Land Use Element more effectively protecting and retaining quality neighborhoods is the trend in which the unincorporated urban population in Gainesville has been growing at a higher rate than within city limits.

The Future Land Use Element also is oriented toward continuing Gainesville's pattern of a strong central core, redevelopment and revitalization of older areas, and a continued focus on strong, neighborhood centers rich in transportation choice. The Future Land Use Element is intended to complement the Transportation Mobility Element by promoting land use patterns that support transportation choice.

In order to begin analysis of the Future Land Use Element, it is useful as a first step to assess what population could be accommodated under existing land use designations in the city.

Projected City Build-Out

The following estimates of build-out population within city limits, as described in Table 1 and summarized below, are based on development densities designated by existing land use designations for remaining vacant residential lands within the city. Also included is an estimate of additional non-residential square footage that could be built, and an analysis of existing building square footage and floor area ratio for three representative neighborhood (activity) centers.

Residential

Legally subdivided vacant parcels in single-family land use districts, and those parcels too small to accommodate multi-family developments in multi-family land use districts, were assigned one single-family dwelling unit per parcel. Other vacant parcels in all residential districts not restricted by environmental or other site constraints have been assigned the maximum density allowed by the Land Development Code for each zoning district. The exceptions are high-density residential zoning districts, in which densities have been assigned that are lower than the maximum allowed, to take into account the fact that typical multi-family projects in Gainesville are closer to the minimum density allowed rather than the maximum allowed.

Provisos

- Vacant lands designated as planned development are built at one single-family dwelling per lot.

- New single-family construction will occur at the maximum allowable density, while new multi-family construction will continue to occur at a density below the maximum allowed in most cases.

Table 1. Proposed Available Vacant Land Buildout Based Upon 3/15/2000 Data Calculations

Zoning District	Available Single Family DU Lots	Available Vacant Acreage	F.A.R.	DU/Acre	Total DU at Buildout	Proposed Build-out, Sq. Ft.	Proposed Population Increment at Build Out
BUS		49.28	0.20			429,327	
BA		93.80	0.14			572,030	
BT		3.47	0.20			30,231	
PD/Commercial		10.58	0.20			92,173	
SUBTOTAL		**157.13**				**1,123,761**	
OF		30.95	0.20			269,636	
OR		3.88	0.20			33,803	
PD/Office		5.89	0.20			51,314	
MD		6.14	0.20			53,492	
SUBTOTAL		**46.86**				**408,244**	
W		12.27	0.20			106,896	
I-1		288.00	0.20			2,509,056	
I-2		147.00	0.20			1,280,664	
SUBTOTAL		**447.27**				**3,896,616**	
MU-1		107.61	0.20			937,498	
MU-2		95.83	0.20			834,871	
CCD		6.59	0.50			143,530	
SUBTOTAL		**210.03**				**1,915,899**	
PS		323.09					
RSF-1	2261	211.10		3.5	3,000		7,062
RSF-2	308	16.29		4.6	383		901
RSF-3	312	76.40		5.8	755		1,778
RSF-4	149	21.69		8.0	323		759
RMF-5	113	94.59		8.0	870		2,047
RMF-6	13	193.63		10.0	1,949		4,589
RMF-7	14	30.88		14.0	446		1,051
RMF-8	8	4.37		20.0	95		225
RC	330				330		777
MH		5.00		12.0	60		141
RMU		0.76		20.0	15		36
RH-1	8	9.91		25.0	256		602
RH-2		1.54		30.0	46		109
PD/Residential	867				867		2,041
SUBTOTAL	**4,383**	**666**			**9,395**		**22,117**
CON		1,260.72					
ED		1.03					
Total Buildable Acreage		**3,112.29**					
Total DU Buildout Increment					**9,395**		
Total Buildable Sq. Ft.						**7,344,521**	
Population Increment from Buildout							**22,117**

1/25/01

Source: Gainesville Dept. of Community Development, 3/22/99

No significant redevelopment will occur which changes the total amount of non-residential square footage or the number of residential units on a parcel.

- Vacant lands designated for residential development will not be rezoned to allow more or less residential units than what are currently allowed.
- Additional annexation is not taken into account.
- An average of 2.354 persons will be living in each new residential unit, as reported by the UF Bureau of Economic and Business Research.
- Vacant land designated mixed use will not be built to include any residential.
- The A.D. Weiss property (formerly the Gainesville North Activity Center) will have an estimated residential density of 2 units per acre.

Given these provisos, Table 2, 3 and 4 show the determinations made:

Table 2. Projected Residential Build-Out Population Increase

	Existing Vacant SF Parcels	Other Vacant Acres	Added Dwelling Units	Added Population
Residential	400	666 ac	9,395	22,115

Table 3. Projected Non-Residential Build-Out Square Footage Increase

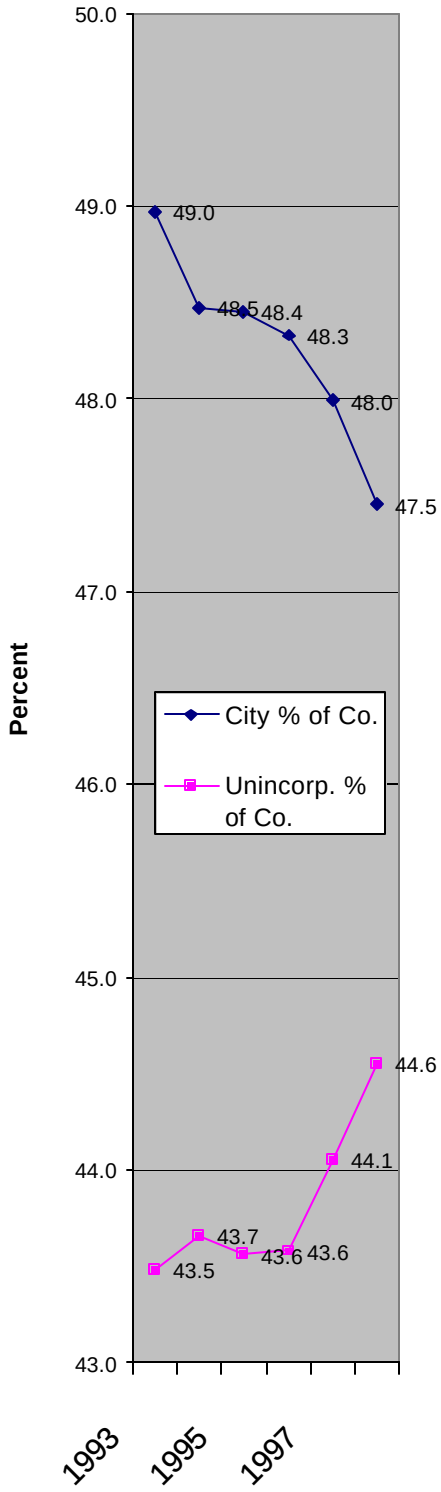
	Vacant Acres	Typical City FARs	Added Sq Ft
Office	47	0.20	408,244
Commercial	157	0.14-0.20	1,123,761
Industrial	447	0.20	3,896,616
Mixed-Use	210	0.20-0.50	1,915,899

A Sample of Neighborhood (Activity) **Centers**. Staff prepared an analysis of existing building square footage and floor area ratio (FAR) for a sample of three neighborhood centers, which can be considered representative of neighborhood centers throughout the city. As can be seen, the FAR for these three centers show that neighborhood centers do not come close to the FAR threshold needed to ensure viable transit. (The commonly recognized threshold is 1.00 to 1.25. The City allows an FAR up to 2.00 within most city neighborhood centers.) Instead, it is clear that neighborhood centers within the city have significant potential for intensification through development and redevelopment.

Table 4. Floor Area Ratios for Selected Neighborhood Centers

	Existing Square Feet	Total Land Area	Existing FAR
Gainesville Mall	864,228 sq ft	5,125,269 sq ft (118 ac)	0.168
Waldo Road AC	162,348 sq ft	1,300,266 sq ft (30 ac)	0.125
Westgate	210,920 sq ft	1,148,242 sq ft (26 ac)	0.184

Figure 1. Population Proportions ('93-'98)



Source: UF Bureau of Economic & Business Research. Florida Statistical Abstract.

A Final Caveat. Because there is no way to predict when or if or how vacant land will be developed for residential in the future, it is impossible to even roughly estimate a build-out year. The only reasonably accurate population projections for Gainesville are the Bureau of Economic and Business Research (BEBR at UF) estimates, in combination with City Department of Community Development estimates shown above. These projections are not at all related to remaining vacant land within the city. There is therefore no relationship whatsoever between the build-out scenarios shown above and the population projections shown above.

The information is useful in recognizing how low Gainesville's residential densities are in comparison to densities that support transit, and in recognizing the in-town development capacity in our existing neighborhood centers.

Density and Proportional Population Trends

For at least a decade, population growth in the unincorporated Gainesville Urban Area has been nearly double the rate of growth within the city. Population is growing at a rate of 4.6 percent each year in the unincorporated Gainesville Urban Area. This residential growth will double the population of this area in only 15 years and lead to a higher population within the remote unincorporated urban area west of the city than what is in the city itself. As a result, a growing proportion of the county population lives outside the City of Gainesville, and outside of other municipalities. (See Figure 1). This trend is a clear indicator of urban sprawl—the negative effects of which are described below.

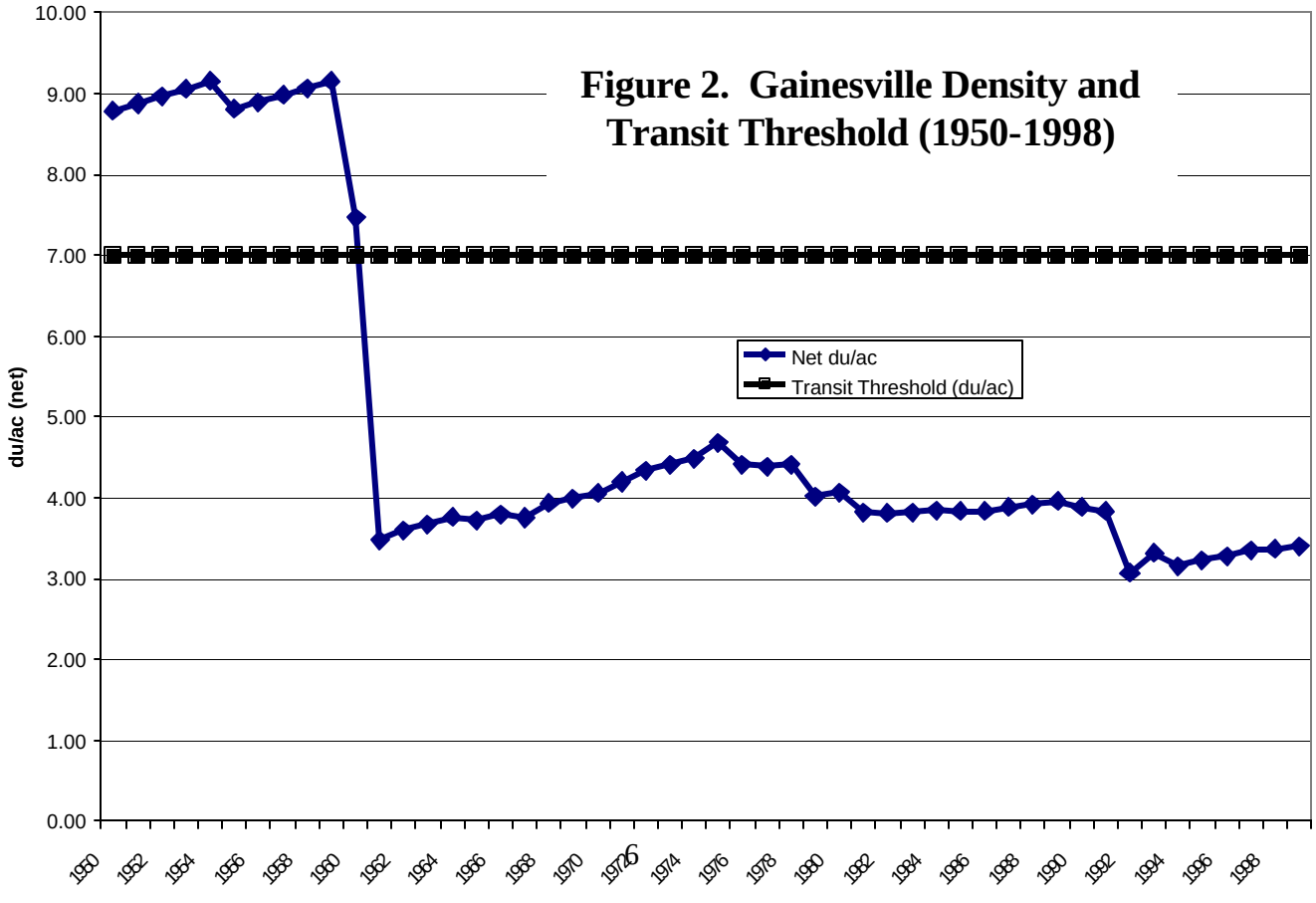
Over the past 40 years, the city has experienced a strong trend toward low-density, single-use land use patterns, characterized mostly by a western expansion of single-family residential development, interspersed with conventional, car-oriented shopping centers (historically called "activity centers") at major street intersections. Since approximately 1960, this low density has leveled off at between 3.0 and 4.5 dwelling units per acre (See Figure 2). This low density, predominantly single-use (residential only) land use character results in high levels of car dependence for nearly all trips. Transportation choice is nearly non-existent because it is too unsafe, inconvenient, and unpleasant to use the bus, walk, or bicycle.

The negative social, environmental, and economic consequences of this land use pattern are substantial and described below. Because of these consequences, key objectives of the City Comprehensive Plan are to promote livable residential densities, neighborhood centers, transportation choice, stabilization of existing city neighborhoods, and mixed use.

An emerging concept that incorporates each of these objectives is known as "Smart Growth."

Merits of Density

The Urban Design Element, in the "Sustainable, Livable Density" section, contains a discussion of the several merits of higher densities for the City. Anthony Downs[1] indicates several social, environmental and economic benefits of higher densities, and points out that it is much more important for a city to prevent new residential housing to be built at very low densities than it is to have such growth occur at high densities. Cervero and Bernick[2] concur by indicating that the most substantial transit benefits are realized when development goes "from very low to moderate densities, say from an average of 4 units per acre to 10 to 15 units per acre – that is, from a



Source: Gainesville Dept of Community Development

setting with quarter-acre estates to one with a mix of small-lot single-family homes and duplexes/triplexes." Going from moderate densities to "high-rise" density delivers comparably minor benefits. In Gainesville, for purposes of comparison, the Suburban Heights neighborhood has a density of approximately 1.5 units per acre, whereas the Duckpond neighborhood has 5-6 units per acre and College Park has approximately 8-9 units per acre.

Additional merits of higher residential densities include:

- Per capita impervious surface coverage is lowest in high-density suburban development.[3]
- Pedestrian-oriented cities devote less than 10 percent of their land to transportation, while car-oriented cities devote up to 30 percent for streets and another 20 percent for off-street parking.[4]
- Low-density development patterns impose higher public sector costs for utilities, streets, schools, and emergency services.[5] At 5 dwelling units per acre, city service capital costs are in the vicinity of $40,000 per unit. At 3 units per acre, costs are approximately $52,000 per unit, and at 1 unit per acre, costs are about $62,000 per unit.[6]

A similar study[7] shows, in Table 5, similar substantial savings to higher density land use patterns.

Table 5: Per Household Annual Municipal Costs based on Residential Density

	1 d.u./ 5 acres	**1 d.u./ acre**	**2.67 d.u./acre**	**4.5 d.u./acre**
Schools	$4,526	$4,478	$3,252	$3,204
Streets	$154	$77	$53	$36
Utilities	$992	$497	$364	$336
Total	**$5,672**	**$5,052**	**$3,669**	**$3,576**

- Including the external costs of car use (pollution, accidents, parking, street land values), a city land use form of several neighborhood (activity) centers, in comparison to a "spread" form, will save up to 17 percent in public capital and operation and maintenance costs, and the "one central downtown" (without centers) saves 29 percent in such public costs over the spread form.[8]
- "Rural residents traditionally accepted lower levels of public services…but sprawl encourages new residents with more demands to move to exurban areas, so municipal governments face pressure to provide urban services to low density sites despite high costs. Some communities use impact fees to internalize a portion of these costs, but in practice these seldom reflect full marginal costs."[9]
- According to the Portland OR police chief, "density – if it is done correctly – will result in better community policing, safer neighborhoods and less crime."[10]
- Car use increases as land use density declines.[11] Similarly, doubling urban densities results in a 25 to 30 percent reduction in vehicle miles traveled.[12]
- With higher densities, travel distances are shorter, transit is more viable, higher levels of bicycling and walking occur, walkable and neighborhood-based retail is more viable,[13] higher

vehicle occupancy results, gas consumption is reduced, and less car use occurs. (transit, bicycling and walking are nearly impossible below 8-9 d.u./acre)[14] According to a number of sources, a density of at least 7 dwelling units per acre is needed to make transit viable.[15] The Snohomish County source also indicates that densities should be at least 9 units per acre within ¼ mile of transit-oriented developments

- There is no correlation between increased density and increases in crime, poverty, depression, or interpersonal conflict.[16] The incremental risk from car crashes faced by suburban residents is higher than the incremental risk of violence faced by urban residents.[17]
- City size is much larger for a given population growth with housing built at low density compared to this same growth at higher density. Thus, a city built out at a population of 150,000 would require much more land at low densities, thereby removing much more farmland and environmental areas, than would this same city of 150,000 if built at higher densities. For example:

Downs[18] looks at a hypothetical a city of 1 million people containing 200 square miles (Gainesville contains 49.3), a radius of 8 miles, and a density of 6 residential units per acre (Gainesville is approximately 3 per acre). He then assumes approximately 280,000 new residents are added to the city over a 10-year period (2.5 percent annual growth rate). The **size** of the city after adding these new residents will be based significantly on the **density** of the new development. Therefore, the **greater the density** of the new development in Gainesville, the **smaller the build-out size** of the city will be. Of course, the ultimate size of the city has an important impact on the cost of utility "trunkline" expansion. In Table 6, Downs presents the following density scenarios and the impact on city size, based on the above assumptions:

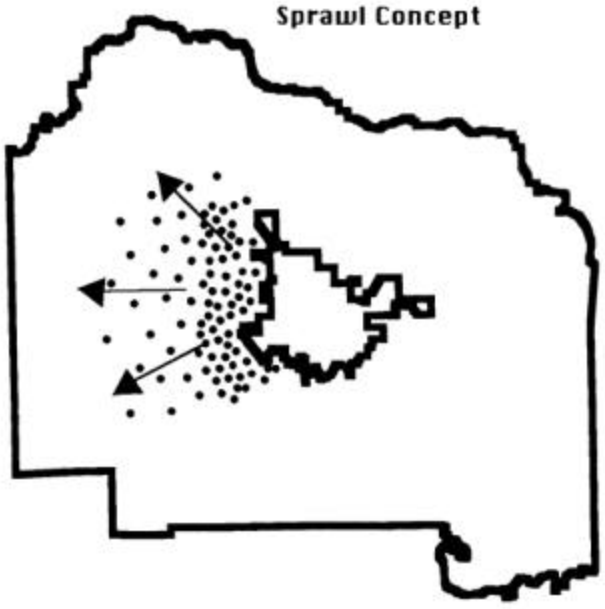
Table 6. Ultimate Hypothetical City Size at Various Densities

	280,000 New Residents at Various Densities		
Traits of New Area	2.21 d.u./ac	4.43 d.u./ac	8.85 d.u./ac
Square Miles Added to City	112	56	28
Percentage Added to Original City Area	56	28	14
Total Square Miles in City	312	256	228
New Radius of City (miles)	10	9	8.5
Percentage Radius Added to City	25	13	7

Land Development Code Strategies for Smart Growth and In-Town Development[19]

- Establish more modest building setbacks and more modest minimum lot sizes.
- Establish more modest street dimension requirements.
- Treat existing neighborhoods as urban assets to be protected and enhanced.
- Convert car parking minimums to maximums, allow on-street parking, and encourage shared parking.

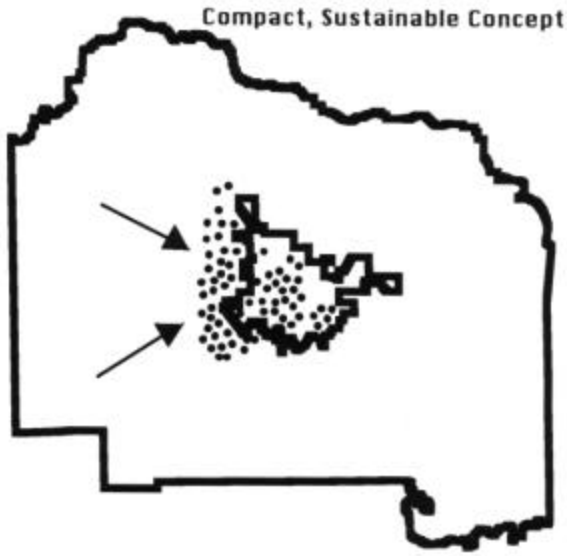
- Allow modest multi-family residential in commercial zoning districts, and modest retail in industrial zoning districts.
- Establish maximum lengths for cul-de-sacs and blocks, require cul-de-sacs to be connected with bicycle and sidewalk paths, require connectivity index minimums, require sidewalks on all streets.
- Require transit-oriented (walkable, higher-density, mixed use) development along important transit routes.
- Establish compatibility standards for new in-town development and mixed use projects.
- Require buildings to be oriented to the street, and parking for cars to be located at the rear or side of buildings.
- Allow staff approval for minor variations from the Code when the overall intent is met.



Negative effects of sprawl:

- Increased city costs for infrastructure and services;
- Increased per capita trips by car;
- Increased travel times;
- Increased household expenditures for transportation;
- Reduced transit cost-effectiveness and frequency;
- Increased social costs (increased air, water, noise pollution);
- Loss of farmland;
- Reduced farmland productivity and viability;
- Loss of sensitive natural areas and wildlife habitat, or fragmentation of such areas;
- Loss of regional, community-separating greenbelts and open spaces;
- Decreased urban attractiveness due to designing primarily for cars;
- Weakened sense of community, sense of place, and sense of civic pride;
- Increased stress;
- Increased energy consumption;
- Reduced historic preservation;
- Segregation by income, age group, and race;
- Separates low-skill, high unemployment areas from new jobs;
- Increased fiscal stress for the city;
- Increased rate of inner city decline.

Tools to Reverse Sprawl



Because population growth has been more rapid in unincorporated urban Gainesville than within city limits for several years, the city is experiencing a declining share of the county population. This has serious negative effects for the city, as outlined in the "negative effects of sprawl" list above. For these reasons, the city is committed to maintaining the livability of its existing neighborhoods, in-town development at appropriate locations, redevelopment, and higher densities, at appropriate locations, within city limits.

There are a number of tools that can be used to reverse this sprawling, low-density dispersal of the urban population:

- A more livable, unique downtown and city neighborhood (activity) centers that are exemplified by residential and non-residential mixed uses, transportation choice, a pleasant ambiance, and civic pride.
- Enhanced code enforcement to discourage flight from the city due to excessive noise, blight, illegal parking of cars, ill-kept properties, and large, excessively visible signs.
- Walkable neighborhoods that feature a high quality of life, and mix of uses, and compatibility of scale and intensity.
- Better schools accessible to students without a car.
- Well-defined squares and parks within walking distance.
- Enhanced public improvements (sidewalks, street re-paving, undergrounding utilities, street lights, or public parks).

Mixed Use Principles

In the 1991 City Comprehensive Plan, the most substantial land use change was to designate a large amount of acreage within the city for mixed use development. However, since that time, very little residential development has been mixed with non-residential development in the mixed use land use districts.

A Mix of Uses:

- Keeps a neighborhood center active and safe on weekends and evenings.
- Buildings at least 2 stories create a pleasant "outdoor room" feeling.
- Creates places for work, residences, civic, and recreation within compact, walkable distances.
- Reduces the need for car travel.
- Mixes uses vertically and horizontally.
- Makes transit efficient and makes smaller retail more viable.

Mixed use remains a critically important objective of the City because, as noted above, mixed use significantly reduces the length of trips, which increases transportation choices. Mixed use also increases round-the-clock vibrancy, which increases public safety. Mixed use allows one form of land use to help financially support another land use. For example, an apartment above a retail store can have its property taxes paid for by the store. Mixed use creates more self-sufficiency in the neighborhood or area, which increases sustainability.

Adherence to the following principles will **promote additional mixed use** development within the city:

- Uses are similar in character and scale—especially when facing each other on a street (see "appropriate uses" list below as a selection of such uses in San Jose).
- A transit stop is incorporated.
- Well-defined, bounded squares and plazas provide areas for enjoyment, relaxation and socializing.
- The environment is pleasant, safe, and convenient for pedestrians and bicyclists. The maximum radius is a five-minute, quarter-mile walk.
- Uses are relatively quiet.
- Uses do not generate a relatively large number of motor vehicle trips.
- Buildings are at least two stories in height.
- Building setbacks are modest.
- Streets contain traffic calming features to create relatively low design speeds.
- Sidewalks are at least five feet wide and provide a comprehensive network of connections to land uses, streets and other sidewalks.
- Lighting and signage are at a pedestrian, rather than motor vehicle, scale.
- Densities are relatively high and lot sizes are relatively small.

- A range of land use types is provided—preferably within a one-quarter mile area—including neighborhood-scaled retail, office, recreation, civic, school, day care, places of assembly and medical.
- Densities and building heights cascade from higher densities at the core of mixed use districts to lower densities at the edges.
- Buildings are oriented toward the street and sidewalk.
- Parking lots and garages are subordinated, and limited in size.
- To be conducive to walking, a block face has a maximum length of 700 feet. Frequent cross-access is provided to keep walking distances conveniently short.
- Car-oriented uses are minimized. Drive-throughs, auto dealers/service, gas stations, motels, and storage are prohibited or substantially restricted.
- Multiple connections to and from surrounding areas should be provided along the edges of a mixed use area.
- Residences are encouraged above commercial uses. They are not allowed on the first floor of multi-story, mixed use buildings.
- Residences are within walking distance of transit.
- Uses that entertain, create street-level activity, and attract day and night activity are appropriate.
- Phasing should be allowed so that uses dependent on other uses are not required prematurely (or at a time before which they would be economically feasible).
- Sign size should be relatively small.
- There should be 23-56 square feet of neighborhood retail per housing unit.
- Office complexes should be required to be mixed use, with retail, personal service and bus service.

Appropriate uses for retail space in mixed use, in-town neighborhoods in San Jose CA

The following is an example of a list of neighborhood-oriented goods and services that San Jose believes can be compatible – in both scale and character – to nearby residential areas, thereby promoting a feasible form of mixed use. This list could be the basis for establishing an amended, refined list of permitted uses in the Gainesville mixed-use zoning districts.

Bakeries
Banks
Bookstores
camera stores
clothing stores
collectible shops
daycare
delis
restaurants/bars
schools (commercial)
shoe stores
toy stores
drugstores
dry cleaners
Florists
food/grocery stores
art and craft galleries
gift stores
hardware stores
health club/gyms
home furnishings
small appliance repair
small theatre
specialty foods
variety stores
ice cream stores
instruction studios
laundromats
office supplies
personal service shops
pet stores
post office
professional offices
public/government uses
sporting goods
stationary stores
tailor
radio/TV/video/music stores

Comparing the Suburban Model and the Traditional Model of Development

There are two forms of residential development in the U.S.: the suburban, car-dependent development, which has been the model since WWII, and the traditional neighborhood, which was the model from colonial times till WWII. The City seeks to protect and promote the choice to live in each of these development models within the city. The City encourages retention of this second, more traditional, approach by encouraging at least some of the new neighborhoods within the city to be constructed along traditional lines. Most of all, the City promotes housing **choice**—that neighborhoods of a variety of types should be available in the city.

The Suburban Model. Originally intended to provide more freedom and quality of life, this model leaves many citizens dependent on the car. With such designs, residents are often forced to use the car to rent a video, drive the kids to soccer practice, and sometimes find themselves stuck in traffic even during lunch hour. Land uses are often separated into single-use enclaves that are too far to reach except by car. Houses are grouped into homogenous, often walled subdivisions that segregate income and age groups. Stores often grow into large malls and Big Boxes to take advantage of the enormous regional catchment area of shoppers that the car allows.

The Traditional Model. What has begun to emerge across the country, in the face of mounting dissatisfaction with the suburban model, is the adoption of neighborhood design principles and land use practices that encourage mixed-use neighborhoods that are less dependent on car travel. Such neighborhoods often exhibit the following design conventions:

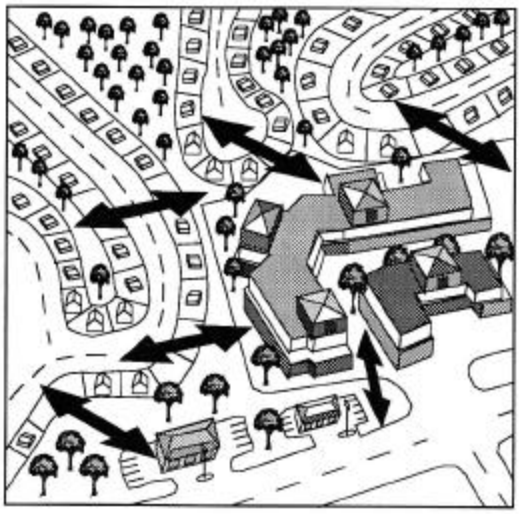
- Neighborhoods are **limited in size** and **oriented toward pedestrian activity**. In general, "limited in size" means that most every form of daily household need is within a five-minute walking radius (approximately one-quarter mile)(note that the expected walking distance varies based on climate, and Gainesville's hot climate indicates walking distances are perhaps shorter than other cities in the U.S. However, this is mitigated by the relatively young age of Gainesville's population. In addition, the City seeks to counterbalance the climate disadvantage by protecting and creating high-quality pedestrian environments which encourage longer walk trips);
- **Residences, shops, workplaces, squares and parks and civic buildings are interwoven** within the neighborhood and **in close proximity**, which creates a vibrant, livable neighborhood featuring transportation choice. This mixed use is primarily achieved by calling for compatibility of scale and intensity;
- **Streets are interconnected** (index of at least 1.4), relatively narrow, on-street parking is present, alleys are built, and the **blocks are small**. This street pattern, in combination with other design features of a traditional neighborhood development, strikes a balance between the needs of the car, the bus rider, the pedestrian and the bicyclist, thereby creating transportation choice;
- Garages are recessed, residences contain front porches, front yard setbacks are modest, and sidewalks are installed on both sides of the street;
- **Civic buildings are given prominent, high-visibility locations** that thereby act as landmarks, symbols and focal points for community identity. These buildings are therefore

assigned the proper level of community priority and serve as central places of assembly for the neighborhood;
- There is a **distinct edge**, or transition, between the developed area and outlying farmland and greenbelts;
- **Public spaces create a pleasant, safe public realm** and are formed and defined by the proper alignment of buildings, orienting buildings to the street (with commercial buildings putting their entrance at street corners), and formally aligned street trees;
- A **full range of housing types and densities** is provided, including small, narrow lots, which allows all age groups and income classes to be integrated, and provides housing choice.
- **Multi-family buildings** are encouraged to be designed to reflect, to the extent possible, the characteristics and amenities typically associated with single-family detached houses. These characteristics and amenities include orientation of the front door to a neighborhood sidewalk and street, modest parking and lighting, sufficient windows and articulation, dumpsters and mechanical equipment kept away from the front, individual identity, private outdoor space, privacy and security.

To achieve public objectives, the City should make a commitment that, at "decision points," the following actions will be taken:

- **Do not vacate street right-of-way** unless doing so would not reduce the feasibility of connections for existing and future transit, pedestrian and bicycle trips. Such vacations often significantly increase the distance that must be traveled by these forms of travel, which discourages these forms of travel due to inconvenience.

- **Approve higher densities** when developments in appropriate locations are proposed. Higher densities promote affordable housing, an increase in housing types, and transportation choices (Burden notes that at least 5 to 8 d.u./acre are needed to make transit and walking viable, and to promote public safety by putting "eyes on the street."). Higher densities also make smaller, locally-owned business more viable by maximizing retail health at a neighborhood scale, and make the community more vibrant. Higher density reduces the need to sprawl into remote areas that often contain farms and natural areas. Design standards are required to ensure higher densities are livable. Major employment, shopping, school, park, civic and cultural areas generally do not provide higher density residential housing within convenient bicycling or walking distance of such significant bicycle trip destinations. As a result, many bicyclists and pedestrians who would consider living within walking or bicycling distance of such areas are unable to do so due to the lack of housing near such areas. It is critical that the City Comprehensive Plan, particularly the Future Land Use Element, encourages relatively high residential densities near these major trip destinations.



Strong Non-Motorized Access:
- Pedestrian and bicycle paths connect out to adjoining, higher density neighborhoods.
- Network of streets and sidewalks creates safe, convenient places to walk.
- Good access creates transportation choice and reduces dependence on car travel

- **Approve mixed use** when well-designed mixed-use development in appropriate locations is proposed. Mixed use significantly reduces the length of trips, which increases transportation choices. Mixed use also increases round-the-clock vibrancy, which increases public safety. Mixed use allows one form of land use to help financially support another land use. For example, an apartment above a retail store can have its property taxes paid for by the store. Mixed use creates more self-sufficiency in the neighborhood or area, which increases sustainability.

- **Approve a reduction or elimination of minimum parking requirements** both at individual locations, when appropriate, and in the Land Development Code. Increase the cost of parking —especially for downtown employees.

- **Approve additional street capacity only as a last resort to protect public safety** and redesign streets to ensure slower traffic speeds. Continue to provide traffic calming in residential neighborhoods.

- **Approve proposed creation of short-cuts** for pedestrians and bicyclists with additional connections and cross access.

- **Encourage or require buildings to put "eyes on the street"** with front facade windows and doors.

Growth Management Framework

The State mandate to update local comprehensive plans places the responsibility on the City to develop a future land use element of its comprehensive plan that will guide development and accommodate expected growth trends without reducing service levels below adopted standards. To meet this challenge, the City must develop a growth management framework for the future which will become the foundation for the land use element.

Future Alternative Design Concepts and Visions

[For ease of reference, the three design concepts described here are duplicated from the Urban Design Element]

There are three broad categories of potential future alternative growth concepts and visions for Gainesville. This Element endorses Concept A as the alternative to be pursued by Gainesville. This concept is generally consistent with the Gainesville 2020 Transportation Plan entitled "Livable Community Reinvestment Plan (LCRP)" that was adopted on October 12, 2000. The vision statement adopted by the MTPO states that the LCRP would "make transportation investments that support livable community centers and neighborhoods by: (1) re-investing in the traditional core areas of Gainesville and the towns of Alachua County to develop walkable downtown

centers; (2) connecting a limited number of highly developed mixed use centers, and (3) providing a high level of premium transit service in a linear Archer Road corridor."

Concept A

Concept A features compact development, new in-town development and redevelopment, and higher densities in appropriate locations. Gradually, over time, conventional shopping centers are transformed into walkable neighborhood centers. Neighborhoods are strengthened and made more livable, vibrant, and safe. A diversity of neighborhoods is available, from conventional, low-density, single-family, to compact row house and other forms. Neighborhoods are kept stable, and are positive places in which to invest. Traffic is dispersed on interconnected streets. A trails network, connecting natural areas, neighborhoods, and neighborhood centers, form an interconnected "emerald necklace" throughout the urban area. People are less likely to flee from residences within the city core.

In Concept A, the city is designed so that people have transportation choices (they are therefore less dependent on their cars), have a stronger connection to urban natural areas, look out for the collective security of their neighborhood, and exhibit a great deal of civic pride. Higher densities and mixed uses allow for smaller, neighborhood-based corner stores and offices, and quality, frequent transit service. Retail, offices, small and neighborhood-based parks, and jobs are pleasant and convenient to walk to, bicycle to, or take transit to from nearby residences.

This concept includes sidewalks, neighborhood centers and street trees. Retail, office, and residential continue to be attracted back to the city core due to the high quality of life, safety, and pedestrian vibrancy.

The rate of development within city limits stabilizes so that growth is faster or as fast as within the city as outside the city within the urban area.

Concept B

Concept B features a single town center – downtown Gainesville. Efforts continue to strengthen the walkable town center features of downtown (through the Traditional City ordinance, and various redevelopment and public improvement efforts). Higher density residential is strongly promoted in the downtown, which transitions to lower density suburban residential outside of the downtown.

In Concept B, people have transportation choices downtown, but land use and transportation patterns remain the same as now in the suburbs outside of downtown.

This concept calls for improving the "public realm" outside downtown primarily by improving the aesthetics of buildings with sign controls and generous landscaping.

Concept C

Concept C is a "status quo" or declining alternative. Downtown Gainesville loses its currently growing vitality and does not compete well with outlying commercial areas. Commercial and government buildings disperse into suburban areas, and retail does not return to downtown at any significant pace. Residential densities remain too low to support transit, and few new residences are created downtown.

In Concept C, by virtue of the way the city is designed, people have few transportation choices. They remain dependent on their cars throughout the city. Primarily, those who cannot own or drive a car are forced to walk, bicycle or use transit, even though such forms of travel are unsafe, costly, inconvenient or otherwise unpleasant. In general, it is only those who do not have a choice that travel by foot, bicycle, or transit. It is inconvenient and unsafe to walk to, bicycle to, or take transit to large and region-serving parks, office parks, large-scale retail, and remote job centers.

Street corridors remain places to drive **through** rather than **to**, which leads to incremental conversion from single-family residential to office, retail, and rental residential. Residential flight from the city core is strong.

The rate of development is faster outside the city within the urban area than within the city.

Some Land Use Recommendations to Achieve Concept A

A portion of this framework will be the development of walkable neighborhoods and neighborhood centers. The goals of this strategy are to implement "smart growth" principles.

In general, this involves incorporating more mixed use, designing for transportation choice, increasing high-quality residential densities in appropriate locations, revitalizing the downtown as a community-serving destination, creating a sense of place and a pleasant ambiance, building civic pride based on a unique local flavor, improving public schools, creating a choice in housing type and price, and enhancing the compatibility of uses that have traditionally been considered incompatible.

Neighborhood (activity) centers and industrial areas are located throughout the city (see Figures 3 and 4). The goals of these centers and areas are to achieve the principles outlined above and prevent the diffusion of commercial activities into commercial strips.

To implement these concepts, this element calls for the development of traditional neighborhoods (TNDs), applying urban design overlay zones to create walkable neighborhoods and centers, designing streets for livability and shared use, and allowing more mixed use development. The element proposes to implement this system by:

- Using four mixed use land use districts: Mixed Use Low (MUL), Mixed Use Medium (MUM), Mixed Use Residential (MUR), and Mixed Use High (MUH). The MUL district will include low intensity neighborhood-serving neighborhood centers. This district will also be used to encourage redevelopment of existing strip commercial areas. The MUM district will be used to designate community-servicing neighborhood centers. This district should not be used to designate strip commercial areas.

- Allowing TNDs by right in a number of land use categories.

Figure 3

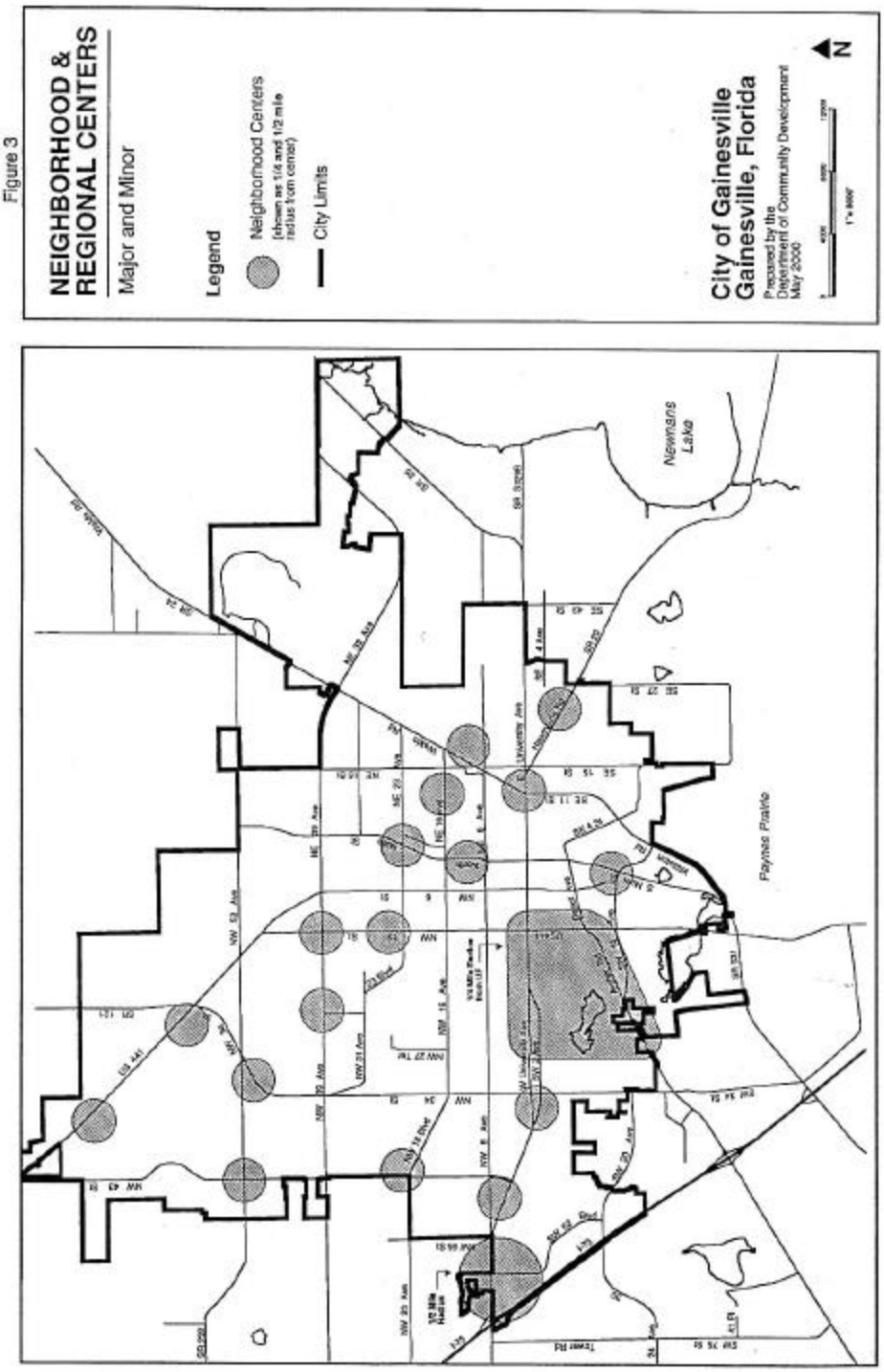
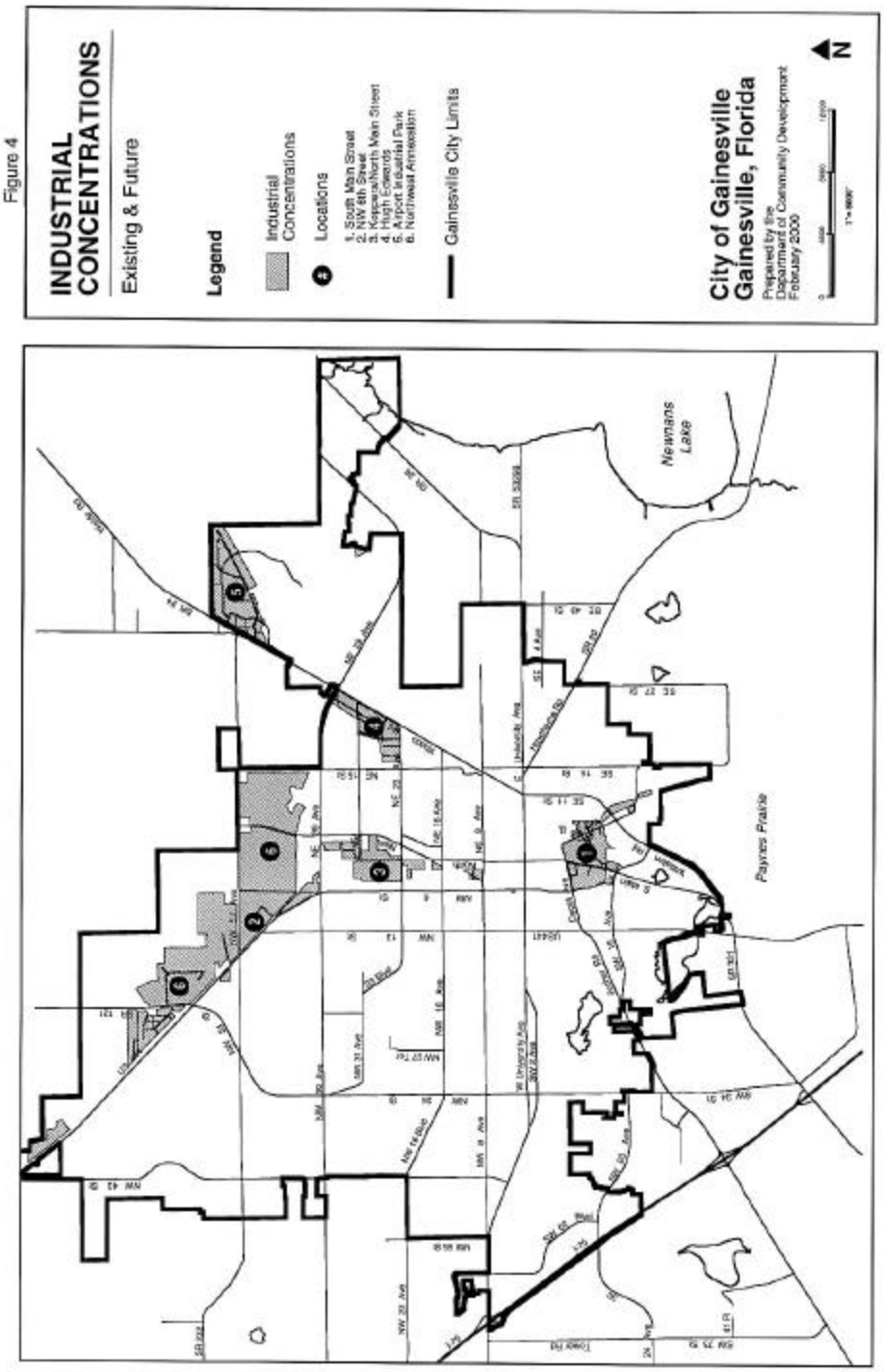

NEIGHBORHOOD & REGIONAL CENTERS
Major and Minor
Legend
Neighborhood Centers
(shown as 1/4 and 1/2 mile radius from center)
City Limits
City of Gainesville
Gainesville, Florida
Prepared by the Department of Community Development
May 2000
N
Newnans Lake
Paynes Prairie

Figure 4


INDUSTRIAL CONCENTRATIONS
Existing & Future
Legend
Industrial Concentrations
Locations
1. South Main Street
2. NW 6th Street
3. Kegerreis/North Main Street
4. Hugh Edwards
5. Airport Industrial Park
6. Northwest Annexation
Gainesville City Limits
City of Gainesville
Gainesville, Florida
Prepared by the
Department of Community Development
February 2000
N
Newnans Lake
Payners Prairie

- Designating existing shopping centers and other areas to be managed by an urban design overlay such as the Traditional City ordinance.

- Revising street specifications.

- The following land use categories will implement the growth management plan (see Table 7 for acreage distributions by Future Land Use category) :

Single Family (up to 8 units per acre).

Residential Low Density (up to 12 units per acre).

Residential Medium Density (8-30 units per acre).

Residential High Density (8-100 units per acre).

Mixed Use Residential (up to 75 units per acre).

Mixed-Use Low Intensity (10-30 units per acre).

Mixed-Use Medium Intensity (14-30 units per acre).

Mixed Use High Intensity (up to 150 units per acre).

Office.

Commercial.

Industrial.

Education.

Recreation.

Conservation.

Agriculture.

Public Facilities.

Planned Use District.

Table 7 showed acreages and percent of total city acreage for each land use category. Since 1991, due to annexation, there is now 9 times more agriculture land within city limits, and more than twice as much conservation land (only the single family, industrial, and public facilities land use categories have greater proportions of land within the city than conservation land). Industrial

land nearly tripled since 1991, office land nearly doubled, and the amount of planned unit development land is now 7 times greater than in 1991.

Land Use Analysis and Requirements

One purpose of this element is to determine the potential land development and redevelopment within the city. Another is to determine the amount of land needed by land use category to accommodate the projected population. The plan will make these determinations based on a projection of city build-out, the availability of street capacity, sanitary sewer, solid waste, drainage, and potable water facilities to serve existing vacant and developed land, and the natural conditions that may affect land development. Population projections are the main consideration for determining future land use needs.

Acreage and Density or Intensity of Use

Tables 7 and 8 contain acreage totals for each of the land uses shown on Figure 5 (appendix map not yet prepared), and each of the zoning districts. Residential uses were categorized according to density. Density was determined by the number of units per acre. Low density residential uses include single-family and low density multi-family dwelling units. The high density residential category is characterized by uses such as high density multi-family.

The non-residential use categories of Office, Commercial, and Industrial are designated as low, medium, and high in intensity of use respectively. These rankings are based on the types of uses permitted in each category as well as factors such as associated trip generating characteristics and parking requirements for uses within the categories.

The Office category permits almost no retail activity and includes uses such as professional offices and banking/financial services. Uses in the Commercial category are primarily characterized by retail activity of varying scales. The least intense commercial uses in this category are neighborhood stores and repair services for household needs. The highest level of intensity is found in shopping center uses in neighborhood centers (activity centers). The most intense level of use is found in the Industrial category which includes manufacturing, wholesaling, warehousing and outdoor storage uses.

Table 7. Existing Land Use Acreage

Land Use	Acreage	Improved	Unimproved*	% of Total
Single Family	7,923	6,419	1,503	29
Public Facilities	4,157	3,387	769	15
Industrial	2,484	1,069	1,415	9
Conservation	2,317	956	1,361	9
Education	2,257	2,190	67	8
Residential (Low)	1,597	1,077	520	6
Agriculture	1,486	554	931	5
Residential (Medium)	1,169	780	389	4
Planned Use District	982	136	846	4
Commercial	584	416	168	2
Mixed Use (Low)	536	376	160	2
Mixed Use (Medium)	427	319	108	2
Office	400	337	63	1
Recreation	369	194	175	1
Residential (High)	294	263	31	1
Mixed Use (High)	131	119	11	<1
Mixed Use Residential	36	35	1	<1
Total	**27,149**	**18,631**	**8,159**	

*Much of the remaining unimproved land within the city has limited development potential due to sensitive environmental features on such land.
Source: Department of Community Development, April 1999.
Note: Excludes 9/28/99 annexation (ord. #980467).

Table 8. Zoning Acreage

Zoning District	Description	Acreage	Improved	Unimproved	% of Total
RSF-1	Single Family, 3.5 du/ac	5,169	4,098	1,071	20
PS	Public Services & Operations	3,121	2,398	723	12
ED	Education	2,257	2,190	67	9
CON	Conservation	2,096	903	1,193	8
PD	Planned Use	1,617	852	766	6
I2	General Industrial	1,548	765	783	6
RSF-2	Single Family, 4.6 du/ac	1,516	1,443	73	6
AGR	Agricultural	1,486	554	931	6
AF	Airport Facility	1,370	1,153	217	5
RSF-3	Single Family, 5.8 du/ac	841	632	209	3
I-1	Limited Industrial	768	289	479	3
RMF-5	Single/Multi Family, 12.0 du/ac	552	427	125	2
RMF-6	Multi-Family, 10-15 du/ac	523	270	253	2
MU-1	Mixed Use Low, 10-30 du/ac	499	342	158	2
RMF-7	Multi-Family, 14-21 du/ac	405	265	140	2
MU-2	Mixed Use Medium, 14-30 du/ac	354	250	104	1
BA	Automotive-oriented Business	283	182	100	1
RSF-4	Single Family, 8.0 du/ac	212	129	83	1
BUS	General Business	209	172	36	1
OF	General Office	199	162	37	1
MH	Mobile Home, 12.0 du/ac	190	185	5	1
RC	Res. Conservation, 12.0 du/ac	149	104	44	1
RH-1	Res. High Density, 20-43 du/ac	146	117	29	1
RH-2	Res. High Density, 43-100 du/ac	136	134	2	1
CCD	Central City, to 150 du/ac	131	120	11	1
RMF-8	Multi-Family, 20-30 du/ac	87	78	9	0.3
MD	Medical	76	76	0	0
OR	Office Residential, 20 du/ac	64	58	7	0.2
CP	Corporate Park	52	48	4	0.2
BT	Tourist-oriented Business	47	43	4	0.2
RMU	Res. Mixed Use, to 75 du/ac	36	35	1	0.1
W	Warehousing & Wholesaling	19	18	1	0.1
Total		**26,159**	**18,493**	**7,666**	

Source: City of Gainesville, Department of Community Development, April 1999.
Notes: Unzoned parcels in 9/28/99 annexation (ord. #980467)areas and in some unimproved PDs have been excluded. Zoning and Land Use Acreage totals are different; zoning has not been assigned to all parcels.

Population Projections

Population projections for the City are shown in Table 9. For comparison and trend purposes, Alachua County projections and the city population as a share of the county population is also shown.

Table 9. Projections of City and County Population

Year	City Projection	County Projection	City Share of County
2000	101,319	220,100	46.0%
2001	102,369		
2002	103,429		
2003	104,501		
2004	105,583		
2005	106,677	237,100	44.9%
2006	107,966		
2007	109,272		
2008	110,593		
2009	111,930		
2010	113,279	253,600	44.6%

Source: For city projections, City of Gainesville Department of Community Development, 2/2/99. For county projections, UF Bureau of Economic and Business Research, Florida Population Studies, February 2000.

The expected increase in population within the city from 2000 to 2010 is 11,960.

Street Capacity

The Transportation Mobility Element addresses the car level of service (LOS) for streets that serve the Gainesville urbanized area. Most of these streets that fall within the City contain additional capacity to accommodate more car trips. However, several key segments contain little or no additional capacity (see Table 10), which has prompted the City to adopt Transportation Concurrency Exception Area (TCEA). The street segments with the least available additional capacity are occurring in the vicinity of University Avenue and West 13th Street (US 441). Table 10 projects additional lack of capacity to accommodate more car trips in the downtown core.

Table 10. Streets with "Deficient" Levels of Service

Street	From	To	Class	2000 LOS
SW 13th St	Archer Rd	Univ. Ave	A	F
NW 13th St	Univ. Ave	NW 29th Rd	A	F
W. University Ave	North/South Drive	W. 13th St	A	E
SW 2nd Ave	Newberry Rd	W. 34th St	A	E
W. 34th St	Univ. Ave	NW 16th St	A	F
N. 39th Ave	NW 43rd St	NW 13th St	A	F
NW 43rd St	Newberry Rd	NW 53rd Ave	A	E

Notes:
Outside of Transportation Concurrency Exception Areas, Level of Service standards are "C" for Florida Intrastate Highway System streets, "D" for State arterials and non-State streets which are County-maintained, and "E" for non-State streets which are City-maintained.
"Class" refers to "functional classification": Arterial = A, Collector = C.
Source: North Central Florida Regional Planning Council. (2000). Average Annual Daily Traffic Highway Level of Service Report. September 12. Gainesville Florida.

Early in the 1990s, a Central City Interim Special Transportation Area (STA) was approved in cooperation with the Florida Department of Transportation (FDOT) to help the City achieve important community development, land use, and transportation goals. The STA was replaced by the Transportation Concurrency Management Area (TCMA), and the TCMA was replaced in 2000 by the TCEA. (See the Transportation Mobility Element). The designation of the TCEA allows the City to pursue redevelopment in the Central City core areas. The TCEA promotes transportation choice and discourages low-density residential sprawl to improve the City transportation, land use, social, and fiscal environment instead of the traditional solution of widening streets, which reduces choice, and promotes sprawl. In the TCEA, land development regulations will be used to limit the number of driveway cuts, improve internal circulation, and place limits on uses which are car-intensive, such as drive-throughs, and encourage pedestrian- and transit-oriented design. The TCEA also goes hand-in-hand with the Urban Design Element to achieve these goals.

The Transportation Mobility Element provides an analysis of the relationship between transportation and land use.

Neighborhood Planning Program

Objectives

The objectives of the neighborhood planning program include building stronger community relationships, defining neighborhood goals and issues, and exploring alternatives for achieving desired neighborhood and city priorities. Additional benefits include tangible physical improvements in the neighborhoods, based on needs identified by both residents and City staff.

Because citizens know best the needs of their neighborhood, an objective of neighborhood-based planning is to encourage citizens to take an active role in solving neighborhood problems, and for the City to provide assistance to ensure successes. An integrated team-based approach to working with neighborhoods allows for this type of collaborative effort to take place. Further, this type of neighborhood planning process addresses issues and opportunities at a scale that is responsive to neighborhood needs.

One of the outcomes of neighborhood planning should be the identification of, and agreement upon, systematic approaches to revitalization that the residents and the City can follow. This is typically considered a "neighborhood action plan." Neighborhood action plans should be strategic and action-oriented, and should focus on, but not be limited to, physical improvements and programs that have the potential to be funded and implemented. It is difficult to sustain residential involvement without evidence that the involvement will result in change, therefore quick successes should be created. Although emphasis on physical improvements will not necessarily address human welfare and social issues that some neighborhoods face, such improvements can increase neighborhood pride, provide needed infrastructure and public safety upgrades, as well as raise awareness and stimulate action such as the creation of outside agency partnerships with the neighborhood to accomplish goals.

Program development

Two neighborhoods (Duval and Grove Street) were designated for participation in the FY98-99 Pilot Program. Those neighborhoods were chosen from among the 10 Target Area Revitalization Program (TARP) areas designated by the Community Development Block Grant Division and approved by the City Commission in 1994. Participating neighborhoods need not be located in TARP areas but should be located primarily in central, eastside, or other older neighborhoods. Because neighborhood interest and participation is very important to the success of a truly collaborative neighborhood planning effort, those neighborhoods with avid citizen interest should be given higher priority than a similar neighborhood with a lower level of citizen interest. Two more neighborhoods (Lincoln Estates and Hibiscus Park) were designated for FY 99-00. Lincoln Estates is an eastside neighborhood and Hibiscus Park is an older neighborhood near the University of Florida.

Once the planning process has been initiated, City staff work with each neighborhood to produce an action plan. The plan may be elaborate or simple, based on the needs of the neighborhood and the willingness of stakeholders to commit the time and effort necessary to complete the tasks. The outcome of the Neighborhood Action Plan includes a prioritized list of projects for development within the City right-of-way or on City-owned property. Some of these projects will be recommended for funding with proposed Neighborhood Planning Grant funds.

"Interdepartmental Neighborhood Action Teams" are assigned to each designated neighborhood at the initiation of the planning process. The purpose of the interdepartmental teams is to provide a coordinated approach and establish planning, revitalization and public service priorities tailored to neighborhood needs. The Neighborhood Action Teams assist neighborhoods with developing an action plan and members will generally serve as their departmental liaison to the designated neighborhood.

The neighborhood planning program was broadened in 2000 to involve all city neighborhoods by starting a neighborhood registration program. Participation in this program allows designated neighborhood contact persons to receive notices of meetings and other relevant information that can be provided at neighborhood meetings. A database of neighborhood organizations is being developed. A map of these neighborhoods has been prepared. Developers proposing large projects in or near registered neighborhoods will be encouraged to make contact with neighborhood organizations early in the development process. Development of a neighborhood web page for the City's web site is also anticipated.

Guidelines

Guidelines for the Neighborhood Planning program include the following:

1. Designate a minimum of one neighborhood for participation in the Neighborhood Planning program per year.

2. Establish a Neighborhood Action Team (NAT), comprising City staff, for each designated neighborhood at the initiation of the planning process.

3. Annually call for a preliminary evaluation of the Neighborhood Planning Program specific to each participating neighborhood, propose designated neighborhoods for the following fiscal year, request Neighborhood Grant Funding for the following year's designated neighborhood(s), and propose potential expansions of the neighborhood planning program.

4. Ensure continuation of a Team Coordinator liaison from the City's Planning Division to each participating neighborhood, which will coordinate continued Neighborhood Action Team involvement as needed.

In addition to the Neighborhood Planning program, since 1987, four other neighborhood plans of various types have been prepared or revised for areas within the redevelopment area: The College Park Special Area Plan, the University Heights Special Area Plan, the Depot area charrette, and the University Avenue corridor between 6th and 13th Streets. The overall goal of each of these plans has the same theme, providing a mechanism that will stimulate both the private and public sector to undertake redevelopment and revitalization activities in such as way as to promote urban vibrancy, compatibility of adjacent uses, transportation choice, retail health, livability, and civic pride.

Heritage Neighborhoods

Concerns about neighborhood stabilization and preservation have led City staff to begin developing recommendations for a program of heritage, conservation or other appropriate overlay districts as needed for neighborhood stabilization. Although concerns of residents about the stability of neighborhoods near the UF campus have been important in starting this process, it is unlikely that the recommended program will be limited to such neighborhoods.

Heritage or conservation districts are typically used to preserve neighborhood character, retain affordable housing, and protect an area from incompatible development. These districts can also be used to protect neighborhoods having considerable architectural or historic heritage that do not qualify for historic district status. The scope of these districts varies considerably nationwide, but the definition from another university city, Cambridge MA, is a particularly encompassing one, as follows:

> "The purpose of establishing a neighborhood conservation district is to conserve and protect the beauty and heritage of the City of Cambridge and to improve the quality of its environment through…conservation and maintenance of neighborhoods…which constitute or reflect distinctive features or the architectural, cultural, political, economic, or social history of the city; to resist and restrain environmental influences to this purpose; to foster appropriate use and wider public knowledge and appreciation of such neighborhoods; …and, by furthering these purposes, to promote the public welfare by making the city a more attractive and desirable place in which to live and work."

Development Suitability of Vacant and Undeveloped Land

An analysis of vacant lands and natural resources that may place constraints on development is discussed below. This analysis compares the location of vacant and undeveloped land to soil conditions, floodplains, wetland areas, creeks, wellfield management zone, groundwater recharge areas and areas with pollution problems. For this discussion, the city is divided into seven water basins: Little Hatchet Creek, Lake Forest, Calf Pond, Sweetwater, Tumblin Creek, Lake Alice and Hogtown Creek. Appendix C presents a graphic presentation of this analysis by each water basin. Figure 6 shows vacant lands at least 3 acres in size in relation to creeks, lakes, wetlands, and the city wellfield.

General Land Development Suitability. The analysis of vacant land indicates that the development potential of some of the unimproved land in the city is limited due to constraints of soil type (see Figures 7 and 19), flood plain, and wetlands. Land development regulations dealing with stormwater, creek and floodplain protection are used to determine development potential on a site-by-site basis. The implementation of an environmental performance overlay district or other revisions to the existing environmental regulations will further control development.

Redevelopment

The City of Gainesville is approximately 90 percent built-out. Much of the existing development within the city is low density and low intensity. Redevelopment and new in-town development is needed, using smart growth principles and compatible with the character of individual neighborhoods. Most of the areas shown for redevelopment are in proposed Zone A of the Transportation Concurrency Exception Area, which is expected to provide significant redevelopment stimulus. Figures 8 and 9 show the proposed redevelopment areas of the city and areas where housing rehabilitation activities will occur. The redevelopment areas included:

Downtown Gainesville, the Enterprise Zone, historic districts, housing rehabilitation areas and areas designated as a pocket of poverty.

Figure 6

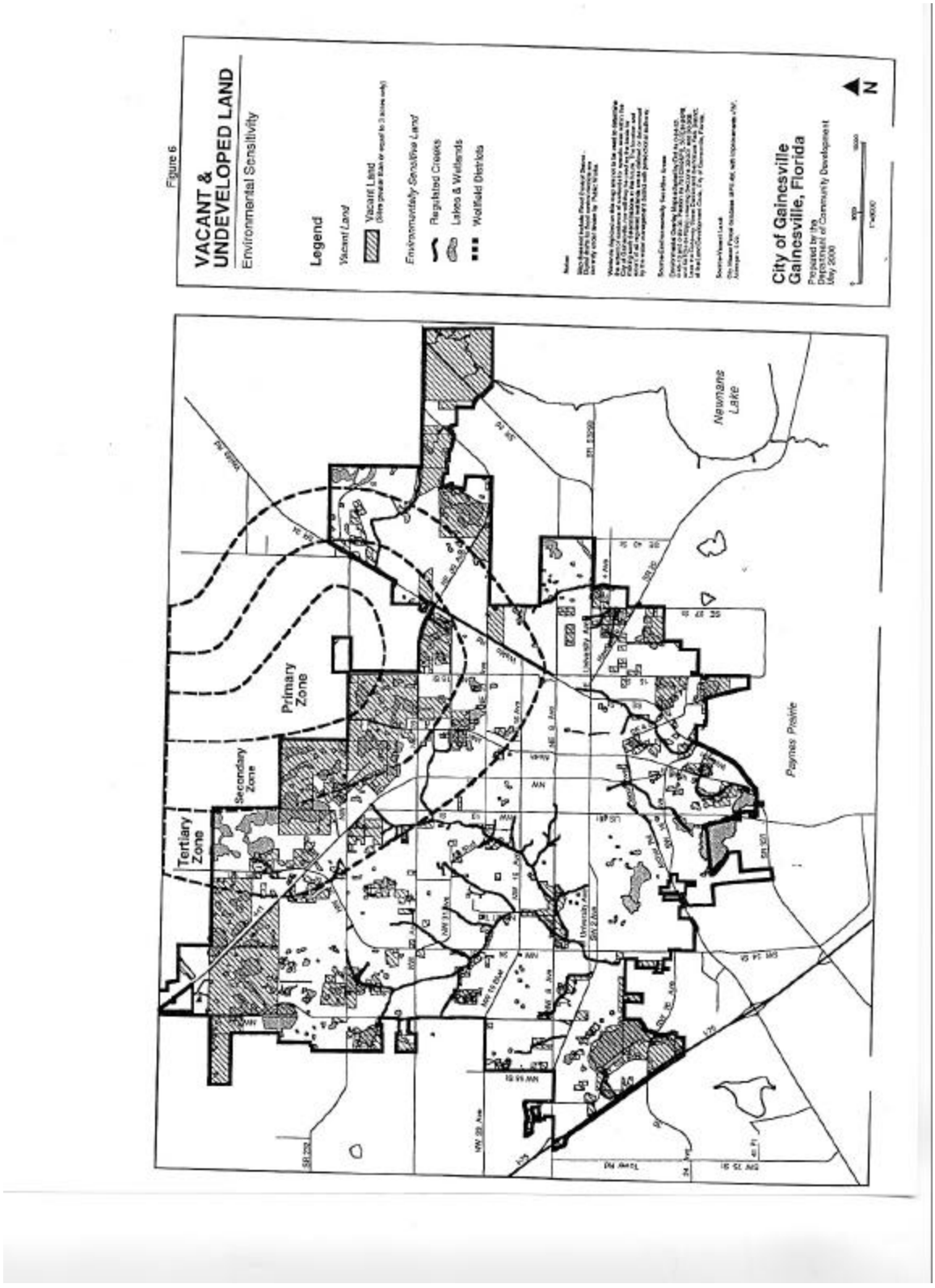

VACANT &
UNDEVELOPED LAND
Environmental Sensitivity
Legend
Vacant Land
Vacant Land
Environmentally Sensitive Land
Regulated Creeks
Lakes & Wetlands
Wellfield Districts
City of Gainesville
Gainesville, Florida
Prepared by the
Department of Community Development
May 2000
N
Primary Zone
Secondary Zone
Tertiary Zone
Newnans Lake
Paynes Prairie

Figure 7

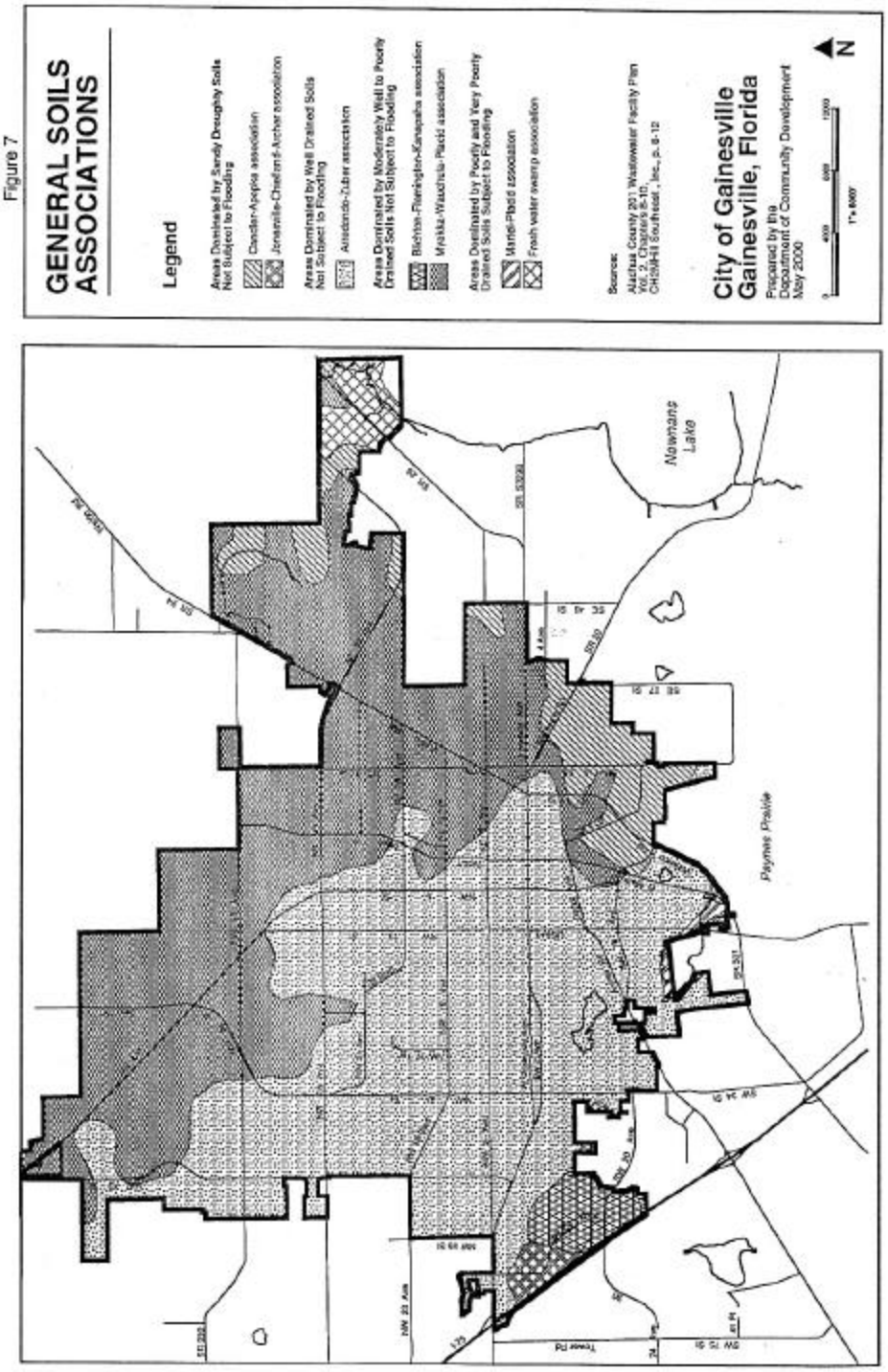

GENERAL SOILS ASSOCIATIONS
Legend
Areas Dominated by Sandy Droughty Soils Not Subject to Flooding
Candler-Apopka association
Jonesville-Chaires-Archer association
Areas Dominated by Well Drained Soils Not Subject to Flooding
Arredondo-Zuber association
Areas Dominated by Moderately Well to Poorly Drained Soils Not Subject to Flooding
Bivans-Pleasonton-Kanapaha association
Mosiac-Wauchula-Placid association
Areas Dominated by Poorly and Very Poorly Drained Soils Subject to Flooding
Mantee-Pheiffe association
Fresh water swamp association
Source:
Alachua County 201 Wastewater Facility Plan Vol. 2, Chapter 5-10, CH2MHill Southeast, Inc., p. 5-12
City of Gainesville
Gainesville, Florida
Prepared by the Department of Community Development May 2000
N
Newnans Lake
Paynes Prairie

Figure 8

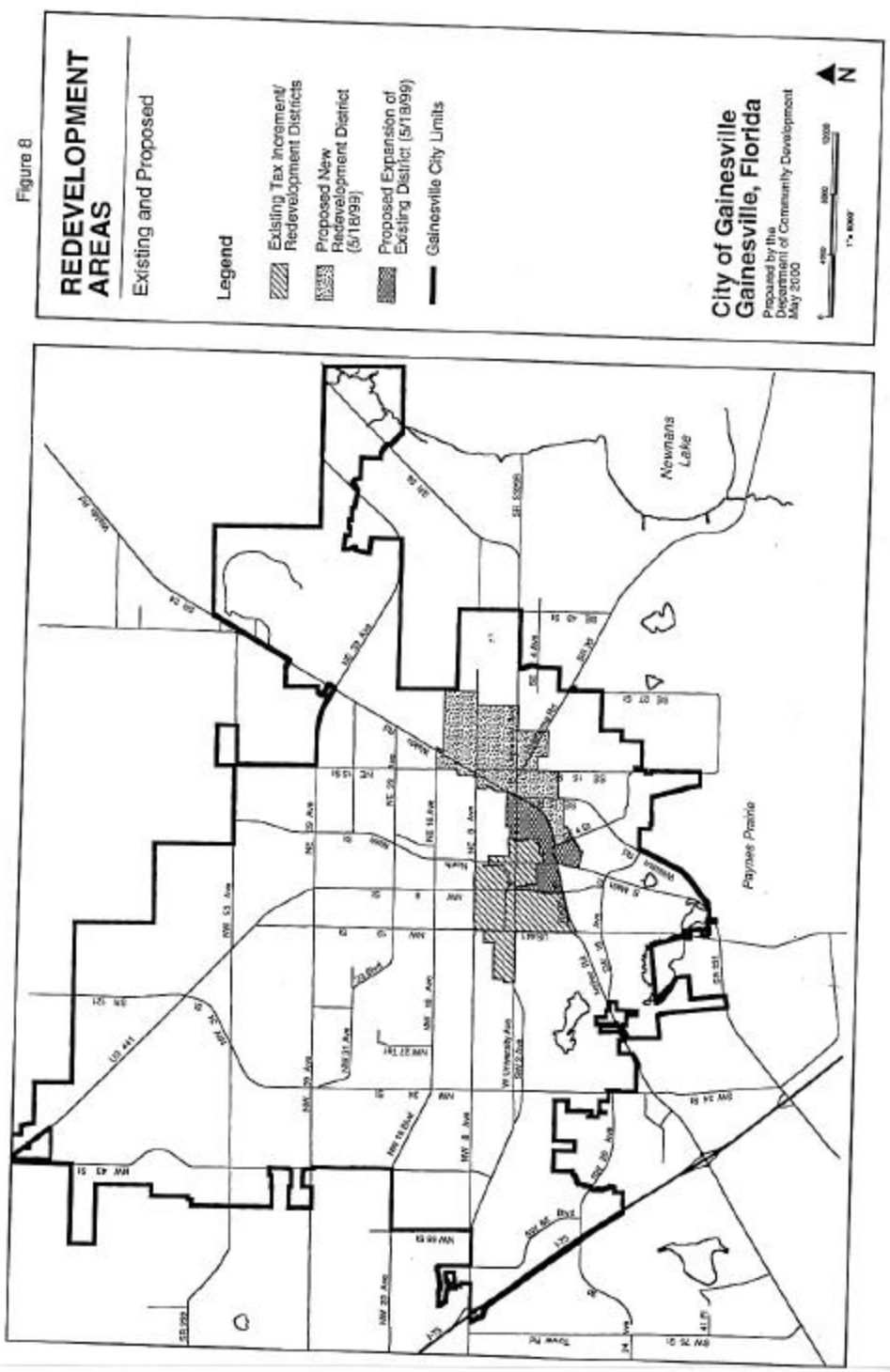
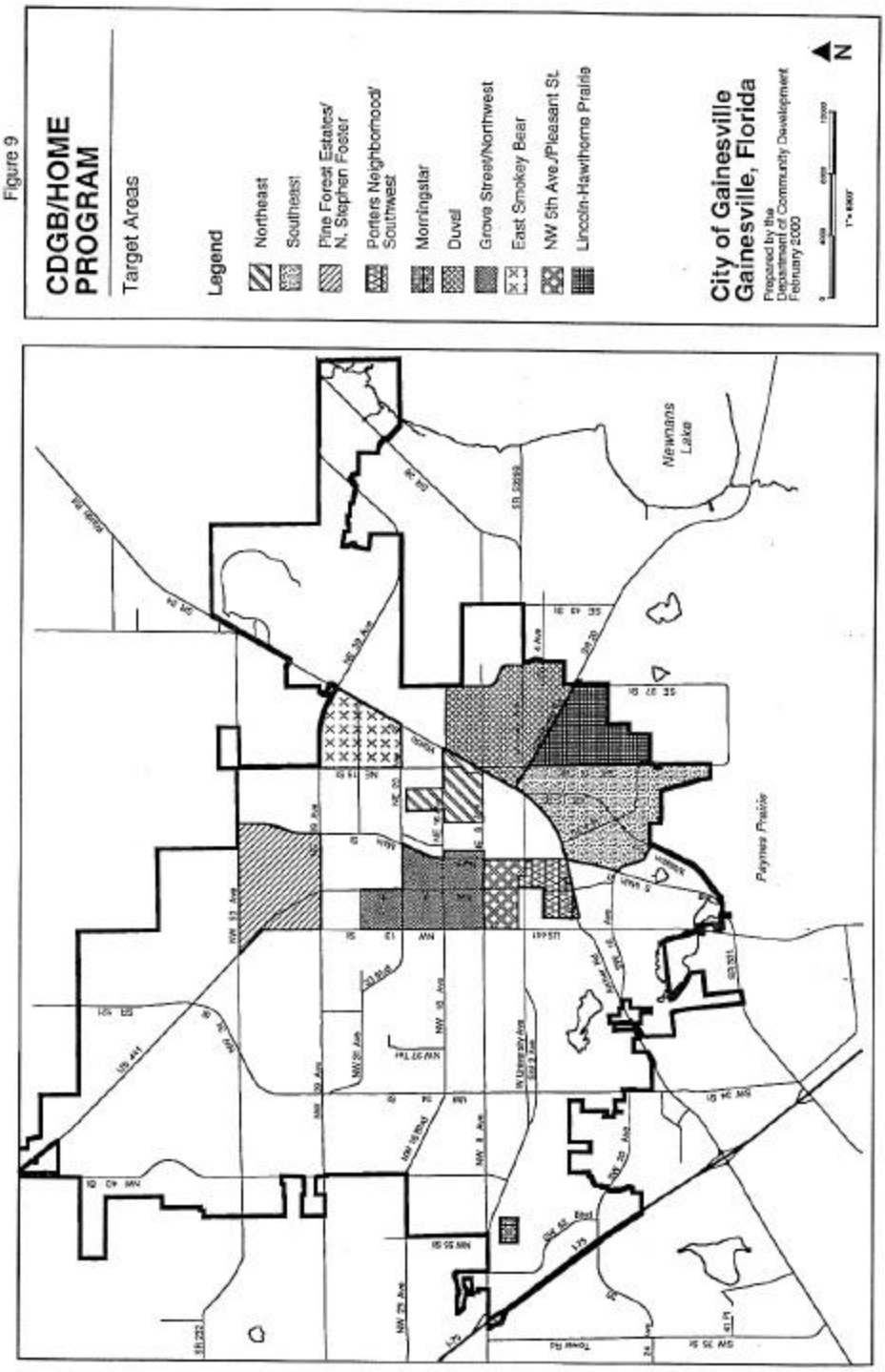

REDEVELOPMENT AREAS
Existing and Proposed
Legend
Existing Tax Increment/ Redevelopment Districts
Proposed New Redevelopment District (5/18/99)
Proposed Expansion of Existing District (5/18/99)
Gainesville City Limits
City of Gainesville
Gainesville, Florida
Prepared by the Department of Community Development
May 2000
N
Newnans Lake
Paynes Prairie

Figure 9


CDGB/HOME PROGRAM
Target Areas
Legend
Northeast
Southeast
Pine Forest Estates/ N. Stephen Foster
Porters Neighborhood/ Southwest
Morningstar
Duval
Grove Street/Northwest
East Smokey Bear
NW 5th Ave./Pleasant St.
Lincoln-Hawthorne Prairie
City of Gainesville
Gainesville, Florida
Prepared by the Department of Community Development
February 2000
N
Newnans Lake
Paynes Prairie

Neighborhoods north, east and south of the University have a large percentage of student residents, but do not accommodate a large enough share of student housing. It is especially desirable to accommodate student housing close to the University to promote citywide transportation choice and several other City objectives. A larger residential population near the University would also be a prime catalyst in revitalizing the downtown. Older neighborhoods close to the downtown continue to include deteriorated dwellings and underutilized parcels, although new housing has been built in the Porters, Pleasant Street, College Park, and University Heights neighborhoods, as well as downtown. The City continues its efforts to attract employers to the downtown and nearby industrial areas which are centrally located and accessible by transit. Another primary target for redevelopment is the North 13th Street Neighborhood Center (N.W. 13th Street and N.W. 23rd Avenue). Recent investment in the area indicates that this neighborhood center is well located to serve community needs and that redevelopment of the area can satisfy community shopping needs generated by the large amount of residential development surrounding the neighborhood center.

The redevelopment areas contain a mix of land uses: commercial, office, residential and industrial. The Enterprise Zone encompasses most of the redevelopment areas. In order for an area to be designated as a State Enterprise Zone, it must exhibit the characteristics described in Section 290.0004(1)(a), F.S. Those characteristics include areas that show physical signs of deterioration and dilapidation which endanger life and property and the health and welfare of the community, among other things. The redevelopment areas also include areas containing valuable historical resources that must be preserved and maintained and areas where the sense of neighborhood is threatened by substandard housing conditions.

In order to encourage new in-town development and redevelopment consistent with the State policies to discourage urban sprawl, the existing Future Land Use Map designates areas near the university and near the downtown to carry densities up to 75 units per acre north of the university, 100 units east and south of the university and 150 units in the downtown. This Element proposes a number of development principles that will promote compatibility for mixed use and higher densities in the vicinity of lower density neighborhoods.

Infrastructure

An important consideration for new in-town development and redevelopment is infrastructure capacity. The projected design capacity of the Potable Water and Sanitary Sewer Element is sufficient to accommodate higher densities. As of February 2000, the Gainesville Transit System can accommodate 21,200,000 person trips at full capacity, and existing transit demand is approximately 4,413,198 person trips (See Transportation Mobility Element). The existing infrastructure can accommodate the increase in residential density which is needed to support the Transit System. As explained in the Transportation Element, an increase in density near traffic generators is expected to improve transportation choice. Development within the areas to be designated for higher densities is not expected to contribute to stormwater problems. As redevelopment occurs, existing problems will be eliminated because new development will have to meet the LOS Standards adopted in the Stormwater Element. Because many of these areas were

developed prior to any water quantity or quality standards, redevelopment can only improve on the present situation.

Nonconforming Uses

Uses identified as being inconsistent with the community's character are categorized as nonconforming uses. These are uses of buildings or lands not permitted in the zoning districts in which such buildings or lands are located. Such uses were typically legal when first established. Once a nonconforming use is discontinued for more than 9 consecutive months, it can only be re-established in conformance with the Land Development Code.

In early 2000, there were approximately 152 residential parcels with residential nonconforming uses (in 1990, there were approximately 185 such nonconformities). It is estimated that in early 2000, about 38 commercial, office or industrial parcels were located within residential districts, where they are nonconforming (in 1990, there were approximately 100 such nonconformities). Also in early 2000, there were approximately 123 commercial, office or industrial parcels containing nonconforming residential uses. Many of these nonconforming uses have existed for almost two decades (since the last city-wide rezoning). This indicates that these uses may actually be healthy and compatible with the surrounding area. Further study of nonconforming uses is needed to determine which uses are not appropriate and therefore should continue to stay nonconforming and whether uses which are thriving should be allowed to become a conforming use. The future land use plan, through its policies, should seek to eliminate incompatible land uses that pose a threat to public safety and welfare.

Car-Oriented Land Uses

The City has recognized that there is a compelling public interest in designating a discreet, contained area to allow auto-oriented uses, and not allow such uses to indiscriminately be established elsewhere. The City, for several years, has had an established policy that auto sales and service should only be allowed on Main Street north of 16th Avenue. The reasons for this policy are:

- Auto-oriented sales and service tends to be a lucrative business in cities such as Gainesville due to the high levels of per capita auto ownership.
- The lucrative nature creates strong pressure to establish such businesses in an enormous number of locations throughout the urban area – to the point of "oversupplying" such uses.
- An oversupply and dispersal of auto sales and services can have a blighting, strip commercial, "anywhere USA" impact on the Gainesville Urban Area.
- Auto sales and service can synergistically benefit when they are concentrated in a single location, as customers tend to be attracted to such consolidated areas, where it is easier to engage in "comparison shopping." Similarly, auto-oriented uses benefit when they are protected from encroachment by industrial and residential land uses.
- Auto sales and services tend to be hostile to nearby residential areas, as well as travel by walking or bicycling, because of the nature of such businesses, which tend to include relatively

loud machine and loudspeaker noise, glaring and highway-oriented lighting, heavy car traffic, large asphalt parking areas, loud and large signs, and excessive walking and bicycling distances.

Proposed Land Use Changes

This Element calls for a number of land use changes to update the Future Land Use Map (see Figure 10). These include:

1. SW 13th Street (from RH to MUM)

This parcel is on SW 13th Street (see Property 1 on Figure 10), and totals 5.5 acres in size. The parcel currently contains a multi-story apartment building and offices.

The City proposes to change the land use of the parcel from Residential-High (RH) to MUM (14-30 units per acre) in order to allow development of multi-family residential and mixed uses that promote transportation choice. MUM land use allows MU-2 zoning (14-30 units per acre). MU-2, which is a zoning district that implements Mixed Use Medium Intensity (MUM) land use, allows residential apartments as well as various commercial uses that are compact, walkable, and serve multiple neighborhoods.

Adjacent parcels within city limits are designated RH to the north, south and east. The adjacent parcel to the west is designated Education (E), and is a vacant property owned by the University of Florida.

2. NW 3rd Street at 500-block in Pleasant Street neighborhood (from RL to REC)

These parcels – 511 & 513 NW 3rd Street—are adjacent and west of a City-owned mini-park (see Property 2 on Figure 10). The park carries a Recreation (REC) land use designation. The subject parcels are vacant, and designated Residential Low (RL), as are the adjacent parcels to the north, west, and south. Changing the designation of the subject parcels to Recreation would allow for the expansion of the City park, and would promote redevelopment plans in the neighborhood.

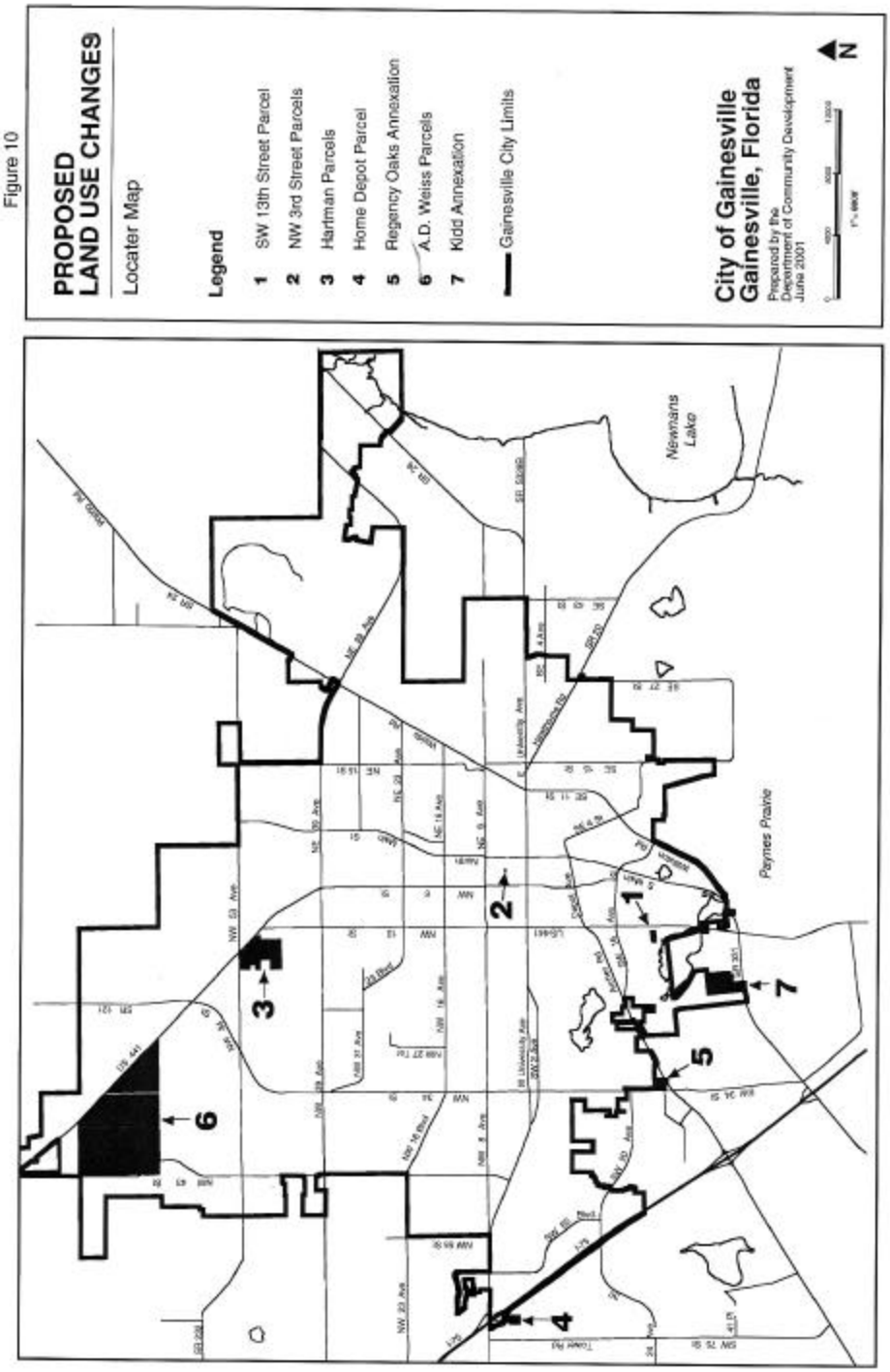
3. Hartman (from RM, RL, SF to SF, C, RM, RL and CON)

This property is approximately 99 acres (see Property 3 on Figure 10). The southwest corner of the Hartman property is proposed for change from Single Family to Conservation (CON), to match the underlying Conservation zoning.

Several other land use changes are needed because of non-existent land use for vacated right of way, and because of several areas with conflicting land use and zoning categories. The vacated right of way with no land use is proposed to be changed in order to be consistent with the underlying Business, RMF-6, and RMF-5 zoning. The respective proposed land use changes are to Commercial, Residential Medium Density, and Residential Low Density. The proposed changes to areas of conflicting land use and zoning are from: Residential Medium (conflicts with RSF-1 zoning) to Single Family; Residential Low (conflicts with RSF-1 zoning) to Single Family; Residential Low (conflicts with RMF-6 zoning) to Residential Medium; and Single Family (conflicts with BUS zoning) to Commercial.

Adjacent parcels are designated Residential Medium, Residential Low, Single Family, and Commercial.

Figure 10


PROPOSED
LAND USE CHANGES
Locater Map
Legend
1 SW 13th Street Parcel
2 NW 3rd Street Parcels
3 Hartman Parcels
4 Home Depot Parcel
5 Regency Oaks Annexation
6 A.D. Weiss Parcels
7 Kidd Annexation
Gainesville City Limits
City of Gainesville
Gainesville, Florida
Prepared by the
Department of Community Development
June 2001
N
Newnans Lake
Paynes Prairie

4. Home Depot (from Alachua County COMM to C)

The City of Gainesville annexed a 10-acre parcel on west of Oaks Mall and I-75 on April 10, 2000 (see Property 4 on Figure 10). Planning staff recommends that this parcel be given a Commercial (C) designation, which allows the present retail operation.

The parcel currently carries the COMM Alachua County land use designation, which allows various commercial land uses. Adjacent parcels are all outside of city limits and are designated COMM.

5. Regency Oaks (from Alachua County COMM to MUL)

The City of Gainesville annexed a 8-acre parcel on SW 34th Street on May 8, 2000 (see Property 5 on Figure 10). Planning staff recommends that this parcel be given a Mixed Use Low (MUL) designation, which makes the present residential operation conforming, as well as allowing retail and office operations. MU-L allows residential densities up to 30 units/acre. Regency Oaks is approximately 18 units per acre.

The parcel currently carries the COMM Alachua County land use designation, which allows various commercial land uses. Adjacent parcels are designated COMM outside of city limits and E (education) within city limits (to the north).

6. A.D. Weiss (from PUD to SF)

Northwest Gainesville contains an undeveloped 716-acre property that was designated as the Gainesville North Activity Center in the 1991-2001 Gainesville Comprehensive Plan, and carried PUD (Planned Use District) land use (see Property 6 on Figure 10). This property was part of the contemplated "Greenways of Gainesville" Development of Regional Impact. The Gainesville North Activity Center and the PUD land use were effectively eliminated by the November 2000 denial of a requested time extension for the required Planned Development zoning approval. This action resulted in reversion to the underlying Single-Family land use category.

Approximately 30 percent of the property consists of regulated, designated wetlands. Sec. 30-302 of the Gainesville Land Development Code prohibits development within 35 feet of the landward extent of a regulated wetland.

Planning staff recommends that this property retain its underlying Single-Family (up to 8 units per acre) Residential land use. This land use will allow the establishment of traditional neighborhood developments (TNDs) by right. With a TND design, per capita impervious surface will be lower than it would be for conventional residential development.[1] The compact, mixed use character will create relatively high internal trip capture and minimize car trips to and from the property. Trips to parks, squares, schools, civic uses, retail, and jobs will commonly be by foot or bicycle, thereby reducing air emission impacts, groundwater pollution, and noise pollution. In addition, visual blight due to excessive car-oriented street, sign, and building design will be minimized. Large, shading street and parking lot trees will provide not only more pleasant walking and bicycling conditions, but will also reduce "heat island" impacts.

7. Idlywild/Serenola ("Kidd Property") (adopt Special Area Plan)

Planning staff recommends that the Special Area Plan prepared and adopted by Alachua County for the recently annexed 44-acre Kidd property be adopted (see Property 7 on Figure 10). The City shall revise the Plan to make the Plan consistent with City regulations and objectives.

In 1989, Alachua County prepared a study and adopted a Special Area Plan (SAP) for the Idylwild/Serenola area. A 44-acre portion of this area (the "Kidd Property", herein called the "Property") was subsequently annexed into the City of Gainesville. The Plan seeks to protect neighborhood character, scenic roads, trees and tree canopy, uplands and wet areas, sensitive or protected species, Payne's Prairie and Biven's Arm, and archeological sites. The 44-acre Kidd Property is part of the Idywild/Serenola area affected by the SAP.

Neighborhood Character. The Plan seeks to protect neighborhood character. Proposed development on the Property must be the same character as the development in adjacent residential areas with regard to building height and housing type.

In part, consistency with neighborhood character, as well as environmental conservation, is to be achieved by designating the allowable density on the Property in such a way as to be transitional between the agricultural land adjacent to the west and the higher density development to the east.

County land use designations are shown on an attached map.

Scenic Roads. The Plan seeks to protect scenic roads, including 56th Avenue and 17th Terrace. Proposed development must be consistent with the Alachua County Scenic Roads ordinance.

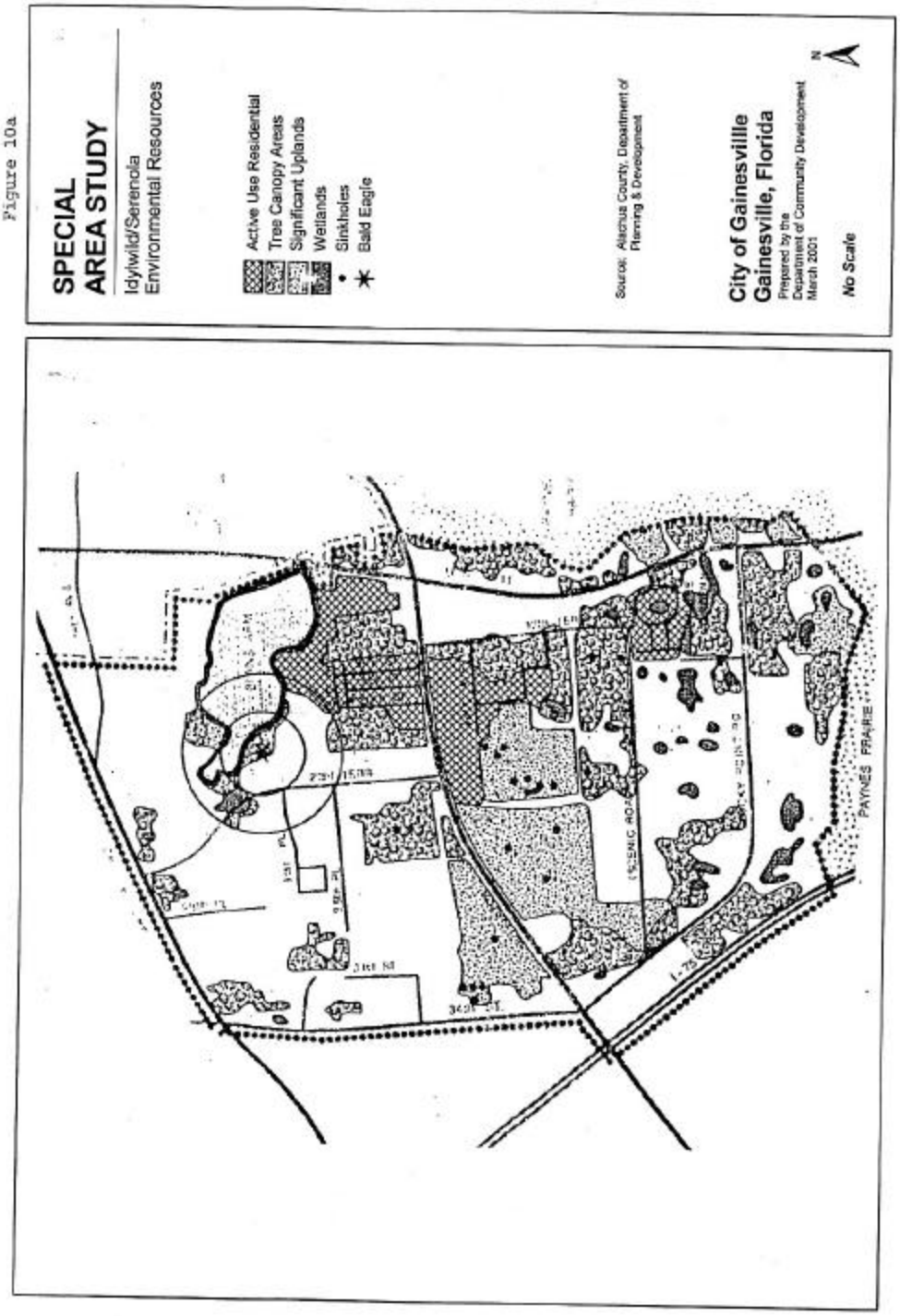
Trees and Tree Canopy. The Property resembles an Upland Mixed Forest natural community, is dominated by a closed canopy (a 90 percent canopy) of loblolly pine and laurel oak. Other canopy species include live oak, black cherry, flowering dogwood, sweetgum, and southern red oak. Several remnant longleaf pines are located in the northwest corner of the Property. Many of these trees are in need of protection, and are the key conservation component of the Property that will drive much of the design and layout of development of the Property. Canopy areas on the Property are generally shown on Figure 10a, Idlywild/Serenola Environmental Resources. A field

[1] A recent U.S. Department of Environmental Regulation study in Atlanta found that conventional residential development creates 0.28 acres of impervious surface per dwelling unit compared to 0.03 acres per dwelling unit in a traditionally designed development.

visit by Alachua County Environmental Protection staff confirmed the above observations on February 28, 2001.

In part, maximizing tree protection is to be achieved with clustering provisions.

Figure 10a


SPECIAL
AREA STUDY
Idylwild/Serenola
Environmental Resources
Active Use Residential
Tree Canopy Areas
Significant Uplands
Wetlands
Sinkholes
Bald Eagle
Source: Alachua County, Department of Planning & Development
City of Gainesville
Gainesville, Florida
Prepared by the Department of Community Development
March 2001
No Scale
N
PAYNES PRAIRIE
I-75

Uplands and Wet Areas. There are no known hydric soils, floodprone areas, wetlands, or significant uplands on the Property.

Threatened and Endangered Species. Sandhill cranes are known to use agricultural land adjacent and west of the Property. Sufficient buffering and other design features will be necessary to ensure against modifying this wintering behavior of the cranes. The property is not suitable habitat for the cranes.

Currently, there is not a bald eagle's nest on the Property, nor is the Property suitable habitat for bald eagles. However, there is a bald eagle's nest on the north shore of Biven's Arm north of the property.

Gopher tortoise could potentially be found on the Property depending on the density of the tree canopy.

Proximity to Paynes Prairie and Biven's Arm. The Property is within the ecological zone of influence for the environmentally significant Biven's Arm and Payne's Prairie.

Archeological Sites. There are 2 recorded archeological sites located north and east of the northeastern corner of the Property. It is unlikely that the Property will contain such sites.

Natural Resources

Natural resources are shown on Figures 11-14.

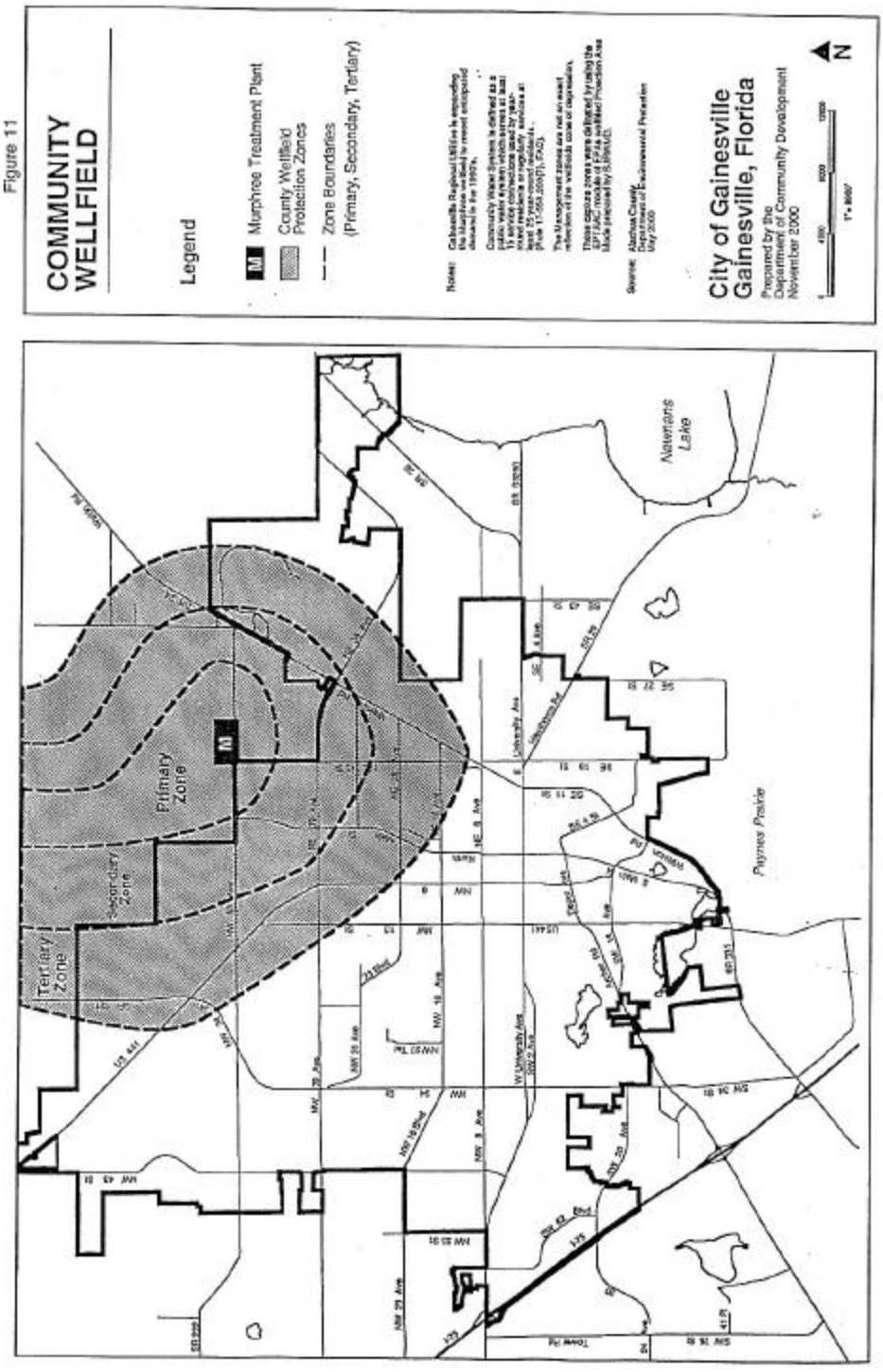
Existing and Planned Waterwells

Figure 11 illustrates existing and planned water wells and the best available data for cones of influence. The Murphree Water Treatment Plant, owned by Gainesville Regional Utilities (GRU), is the primary facility providing potable water for the City and the urban fringe. No "cones of influence" have been designated by the St. John's River Water Management District or other local agencies having qualified professional hydrologists for the Murphree wellfield.

In the absence of such information, Figure 11 includes an overlay of those parts of the Murphree Wellfield Protection Zones that fall within urban area boundaries.

Wellfield "management" zones were originally designated in conjunction with the county's adoption of a wellfield management code in 1988. The Murphree Wellfield Protection Code, including revised wellfield protection zones, was substantially revised and improved in 2000. The wellfield protection zones are a reasonable substitute for a "cone of influence" around the municipal wellfield. The protection zones are based on travel time and were established after substantial technical investigation, including hydrogeological modeling.

Figure 11


COMMUNITY WELLFIELD
Legend
Murphree Treatment Plant
County Wellfield Protection Zones
Zone Boundaries (Primary, Secondary, Tertiary)
Primary Zone
Secondary Zone
Tertiary Zone
Newnans Lake
Paynes Prairie
City of Gainesville, Florida
Prepared by the Department of Community Development
November 2000
N

Murphree Wellfield Protection Code: Protection Zones

Primary Wellfield Protection Zone. The primary wellfield protection zone is the land area immediately surrounding the Murphree Wellfield, and the land area defined as the 2-year Floridan aquifer system travel time at a 60-mgd pumping rate. Requirements for this zone are the most restrictive of the three protection zones (the other two are the secondary and tertiary wellfield protection zones), and incorporate restrictions of both the tertiary and secondary zones.

In the primary zone, no new uses of land that involve the storage, use or manufacture of hazardous materials are allowed. No new domestic or industrial wastewater treatment plants are allowed, and (with limited exceptions), no new septic tank systems are allowed. Transportation of hazardous materials is strictly limited to local traffic serving facilities within the zone. The provisions of the secondary and tertiary wellfield protection zones apply.

The Secondary Wellfield Protection Zone. The secondary wellfield protection zone is the land area surrounding the primary wellfield protection zone, and the land area defined as the 10-year Floridan aquifer system travel time at a 60 mgd pumping rate. No new underground storage of hazardous materials is allowed, except vehicular fuel storage subject to Florida Statutes 376.317. Variance approval is required for the temporary storage (up to 180 days) of hazardous materials in containers or tanks beyond a certain volume for use in normal agricultural or silvicultural (forestry) operations and construction activities. A Hazardous Materials Storage License is required for all regulated storage facilities as set forth in section 355.11 of the County Code. The provisions of the tertiary wellfield protection zone apply to the secondary protection zone.

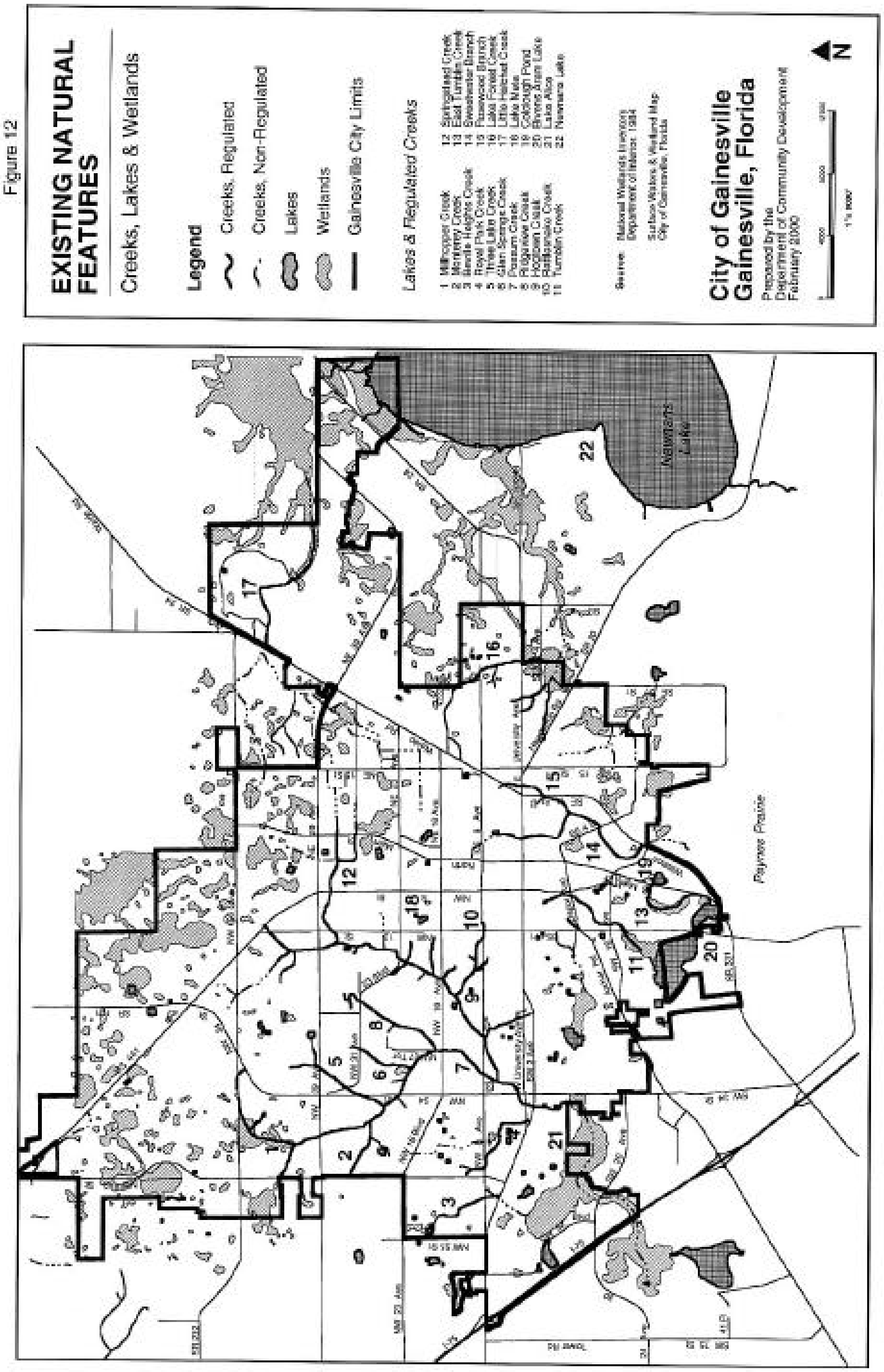
The Tertiary Wellfield Protection Zone. The tertiary wellfield protection zone is the land area surrounding the secondary wellfield protection zone, and the land area defined as the 25-year Floridan aquifer system travel time at a 60 mgd pumping rate. New landfills are prohibited, and new excavations and mining activities are generally prohibited. Filling of existing or newly developing sinkholes or other solution features requires approval from the Alachua County Environmental Protection Department. Agricultural and silvicultural operations must follow or exceed accepted best management practices. No new wells are allowed in any aquifer, except as set forth in s. 355.09(b), Alachua County Code. Existing wells posing a threat to groundwater quality shall be properly abandoned or repaired, and all new and existing wells shall be registered. A Hazardous Materials Storage License is required for regulated facilities (per section 355.11, Alachua County Code) with non-residential septic tanks or wells.

All Zones. All facilities regulated under the County's Hazardous Materials Management Code (except for Class AA facilities) require a Hazardous Materials Storage License.

Rivers, Lakes, and Wetlands

Figure 12 depicts creeks, lakes, and wetland areas in Gainesville.

Figure 12


EXISTING NATURAL FEATURES
Creeks, Lakes & Wetlands
Legend
Creeks, Regulated
Creeks, Non-Regulated
Lakes
Wetlands
Gainesville City Limits
Lakes & Regulated Creeks
1 Millhopper Creek
2 Monterey Creek
3 Beville Heights Creek
4 Royal Park Creek
5 Three Lake Creek
6 Glen Springs Creek
7 Possum Creek
8 Ridgeview Creek
9 Hogtown Creek
10 Rattlesnake Creek
11 Tumblin Creek
12 Springstead Creek
13 East Tumblin Creek
14 Sweetwater Branch
15 Rosewood Branch
16 Lake Forest Creek
17 Little Hatchet Creek
18 Lake Mela
19 Colclough Pond
20 Bivens Arm Lake
21 Lake Alice
22 Newnans Lake
Newnans Lake
Paynes Prairie
City of Gainesville
Gainesville, Florida
Prepared by the
Department of Community Development
February 2000
N

Creek Basins

Little Hatchet Creek. Nearly all of the undeveloped land located within this basin is affected by features that may affect land development. The two main affected areas consist of the Airport Industrial Park and a large vacant tract of land adjacent to N.E. 39th Avenue designated for residential use (see Figure 6). Analyses of these areas indicate that the Airport Industrial Park is affected by soils with "severe" development constraints and wetland problems; is located within the Wellfield Protection Zones; and is in the vicinity of pollution sources. Restrictions in the Murphree Wellfield Protection Code may limit development of this area. Vacant land in the vicinity of the Airport Industrial Park is suitable for agricultural and industrial development insofar as the development can comply with wellfield protection and stormwater management regulations.

Vacant land adjacent to N.E. 39th Avenue is affected soils with "severe" development constraints, wetlands, floodplains, and the wellfield management zone. The wetlands and floodplains are significant constraints to the development of this property. These constraints will probably limit the use of this property to low density residential or open space.

Lake Forest. Vacant land located within the city limits in this basin has very few limitations to development. However, soils with "severe" development constraints prevail. Such soil conditions require special design features and raise the cost of development. A small portion of available land is within the 100-year floodplain (see Figure 13). Undeveloped land in this area could support residential and some commercial development. No pollution problems have been identified in this area.

Calf Pond and Sweetwater Branch. Most of the vacant land parcels in these basins are affected by surface water wetlands, 100-year floodplains and creeks. Soils with "severe" development constraints appear to coincide with unimproved lands. Such conditions require special design features and raise the cost of development. Due to the creek system, development of industrial property in the South Main Street area may be limited.

Tumblin Creek and Lake Alice. None of the undeveloped land within this basin is affected by poor soil conditions. The only significant parcel of undeveloped land (SW Williston Road near Bivens Arm) is affected by a wetland and the 100-year floodplain. Based on the environmental conditions in this area, the development of this site should be limited to low intensity uses. There are no pollution problems that will prevent or limit the development potential of undeveloped lands in this basin.

Hogtown Creek. Areas that will have the most problems being developed are those that are affected by the creek system, floodplains and surface water wetlands. Policies regarding development in the wellfield management zone will also affect the development of some areas in this basin. The Land Use Plan in the City's 1991-2001 Comprehensive Plan designates nearly all of the vacant land affected by natural areas as residential or conservation and park land. This basin also contains a significant pollution problem (the Cabot Carbon/Koppers Superfund Site) that affects soil, water and air conditions.

Floodplains

See Figure 13 for floodplains. The Master Flood Control Maps (1990) are on file in the Public Works Department. The figures and maps show the 100-year floodplain areas for Gainesville.

Floodprone Areas

Most of the floodplain areas in the city are not suitable for development. Floodplains in the city are usually associated with the creek system. City ordinances currently restrict development in flood channels, floodplains, and along regulated creeks. Figure 14 shows those areas of the city that where designated as Conservation on the land use map of the City's 1991-2001 Comprehensive Plan. The land which is designated conservation closely corresponds with areas designated as the 100-year floodplain (see Figure 13). The significance of floodplains to development in the city is discussed in the Stormwater Management Element.

Potable Water

The Murphree Water Treatment Plant, located in northeast Gainesville, serves the Gainesville urban area. The plant's 1999 estimated service area population was 157,441 people (see Figure 15). The average daily demand in 1999 was 25 million gallons per day (mgd). The 1999 total system average daily per capita consumption is 159 gallons. Currently the Murphree Water Plant has a design capacity of 40 mgd with a planned expansion due in 2001 to 51 mgd. At 40 mgd, the Plant can support the existing land uses. The planned expansion will accommodate the anticipated redevelopment and development of the urban area beyond the 2011 planning horizon of the city's comprehensive plan.

Deficiencies. Based on the overall capacity of the Murphree Water Treatment Plant facilities, services are available to support existing land uses. Gainesville Regional Utilities (GRU) water personnel identified low-pressure areas that occur in the City (See Figure 16):

Capital projects are budgeted to address low-pressure problems.

Natural Groundwater Aquifer Recharge

The primary water supply for Gainesville is the Floridan Aquifer. The Aquifer underlies all of the Gainesville urban area and falls within 3 zones: (1) confined; (2) semi-confined/perforated; and (3) unconfined. Figure 17 shows the degree of confinement (protection) of the Aquifer system in the Gainesville urban area. In the eastern and northeastern portions of the urban area, at least 10 feet of clays or clayey sands protect the Floridan. In the northwestern and central portions, the protecting layer is variable and perforated by sinkholes which operate as a significant source of recharge for the Floridan. In the southwestern portion of the urban area, the Floridan is relatively vulnerable (overlain with thin, sandy soil) and therefore under water table conditions. This is an

area of high recharge to the Floridan and especially vulnerable to contamination, because an overlying confining layer is lacking.

Figure 13

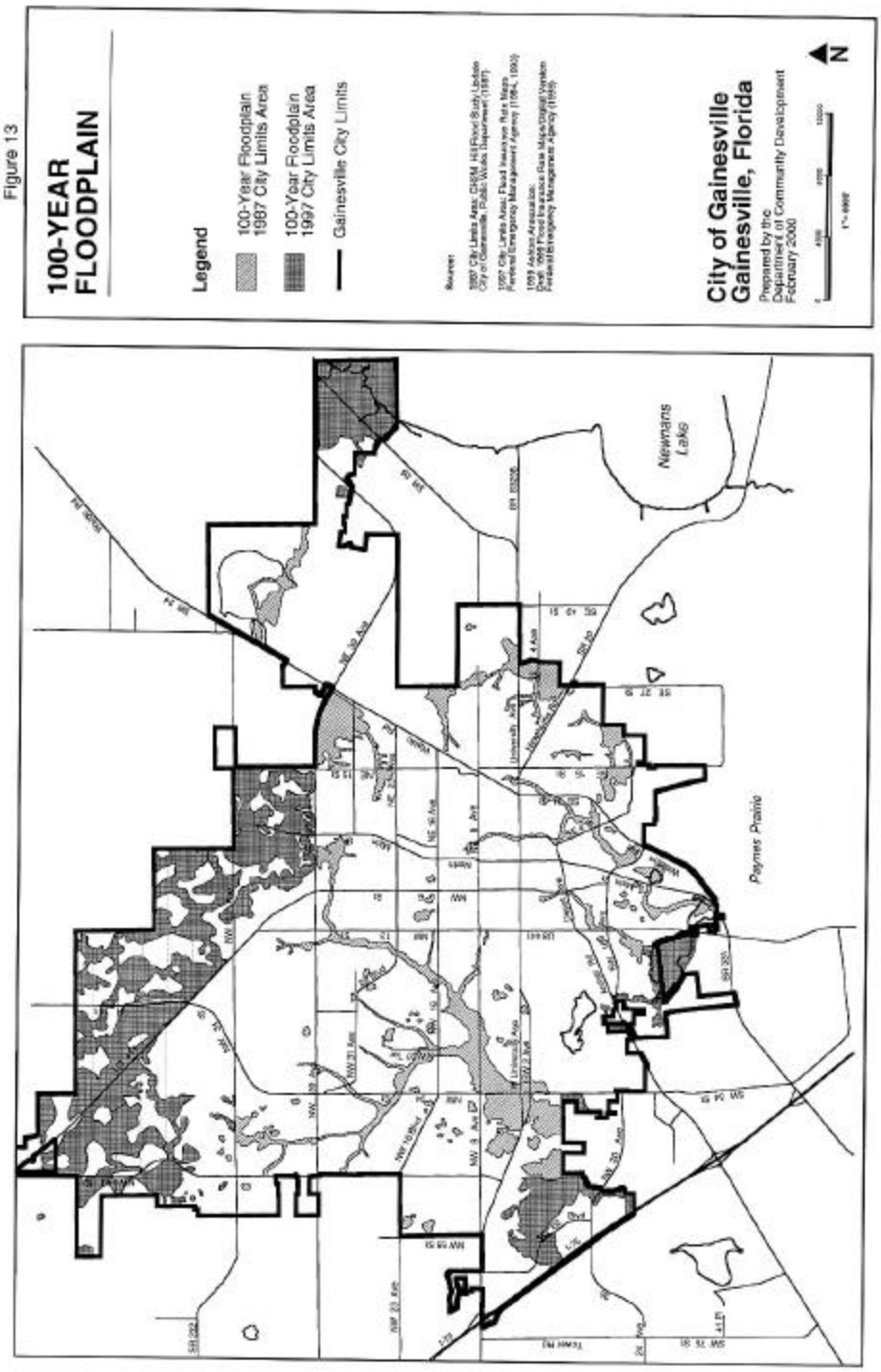

100-YEAR FLOODPLAIN
Legend
100-Year Floodplain 1987 City Limits Area
100-Year Floodplain 1997 City Limits Area
Gainesville City Limits
City of Gainesville
Gainesville, Florida
Prepared by the Department of Community Development February 2000
N
Newnans Lake
Paynes Prairie

Figure 14

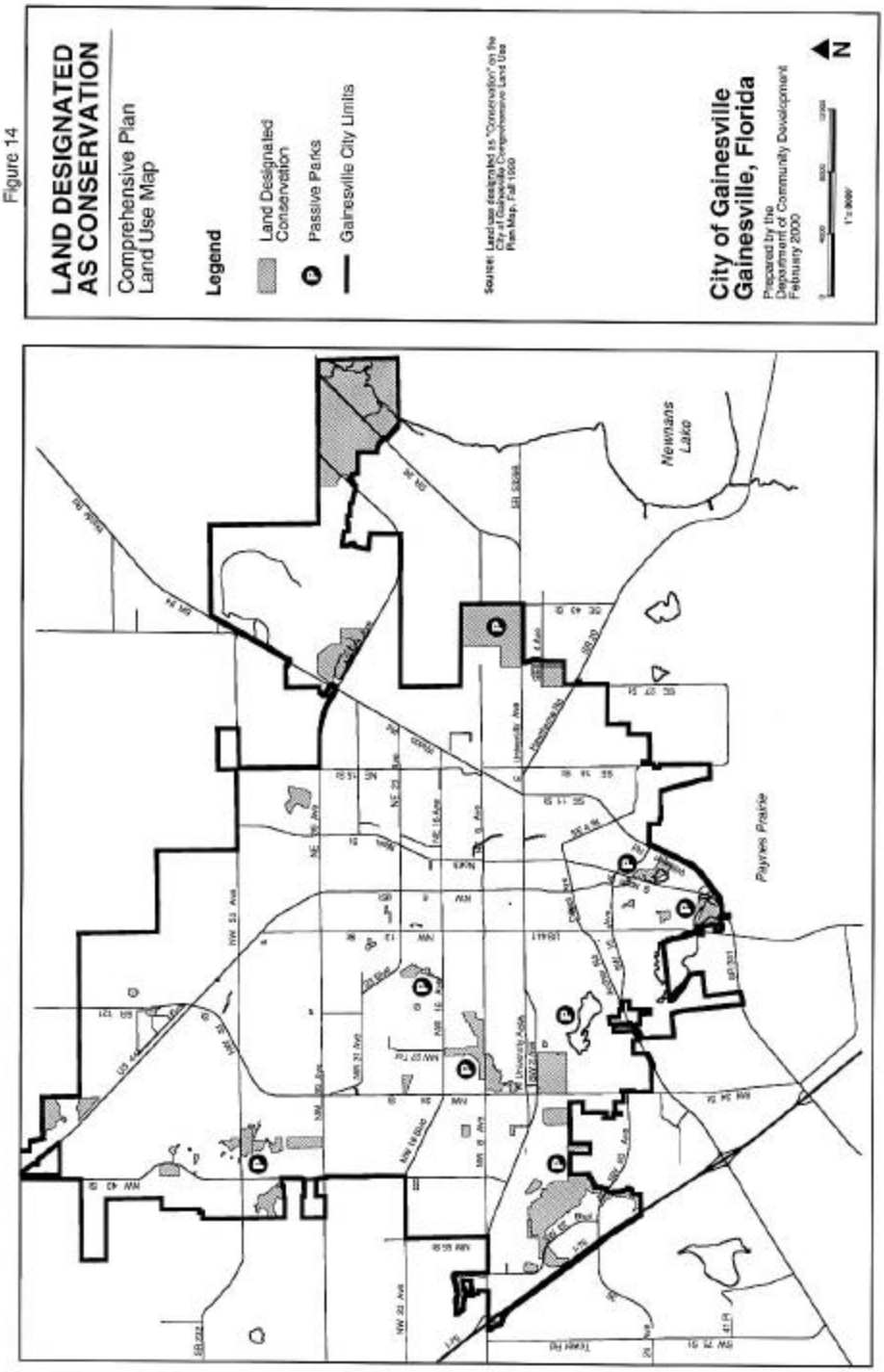

LAND DESIGNATED AS CONSERVATION
Comprehensive Plan Land Use Map
Legend
Land Designated Conservation
Passive Parks
Gainesville City Limits
Source: Land use designated as "Conservation" on the City of Gainesville Comprehensive Land Use Plan Map, Fall 1999
City of Gainesville
Gainesville, Florida
Prepared by the Department of Community Development February 2000
N
Newnans Lake
Payne's Prairie

Figure 15

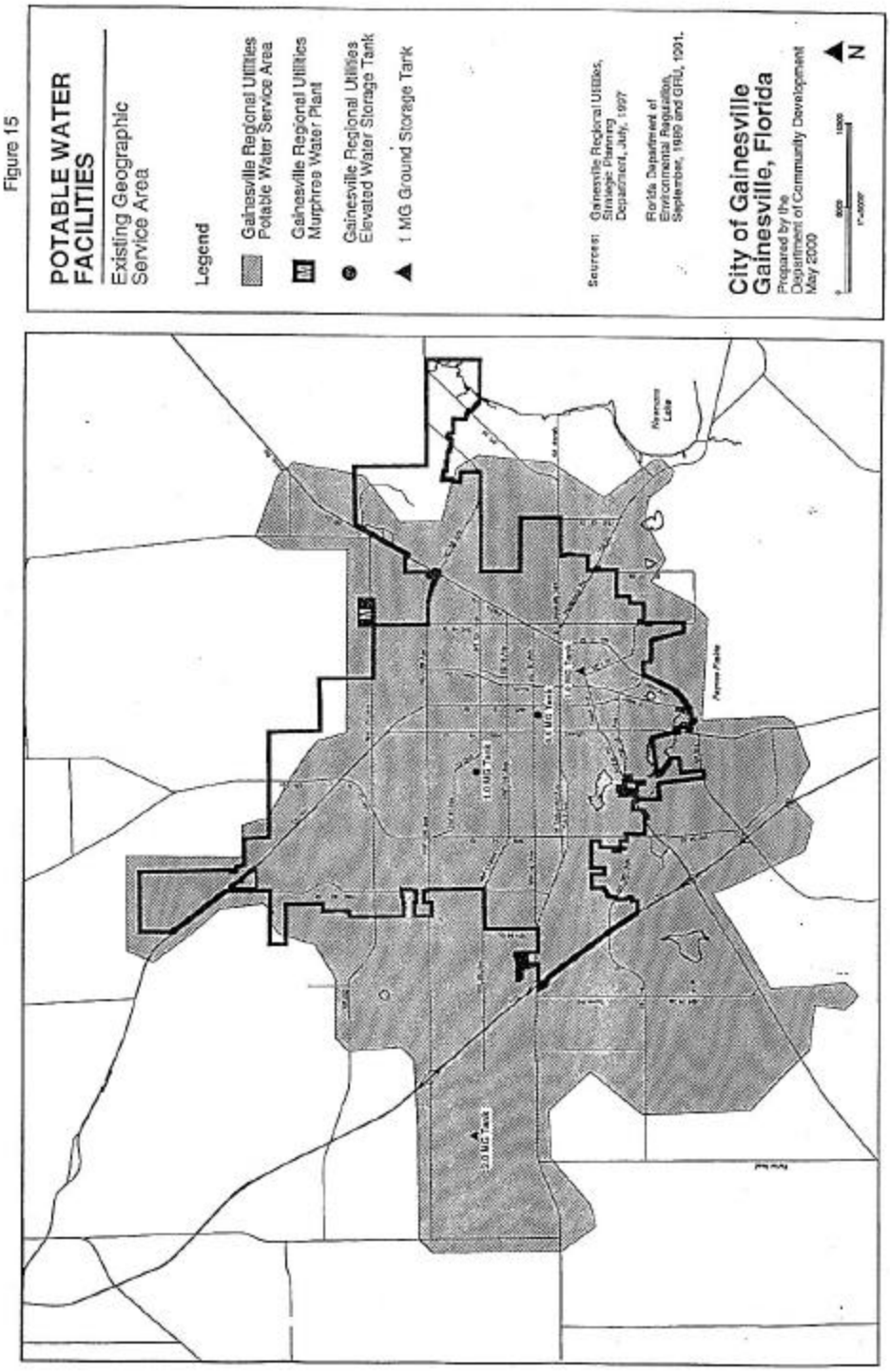

POTABLE WATER FACILITIES
Existing Geographic Service Area
Legend
Gainesville Regional Utilities Potable Water Service Area
Gainesville Regional Utilities Murphree Water Plant
Gainesville Regional Utilities Elevated Water Storage Tank
1 MG Ground Storage Tank
Sources: Gainesville Regional Utilities, Strategic Planning Department, July, 1997
Florida Department of Environmental Regulation, September, 1989 and GRU, 1991.
City of Gainesville
Gainesville, Florida
Prepared by the Department of Community Development
May 2000
N

Figure 16

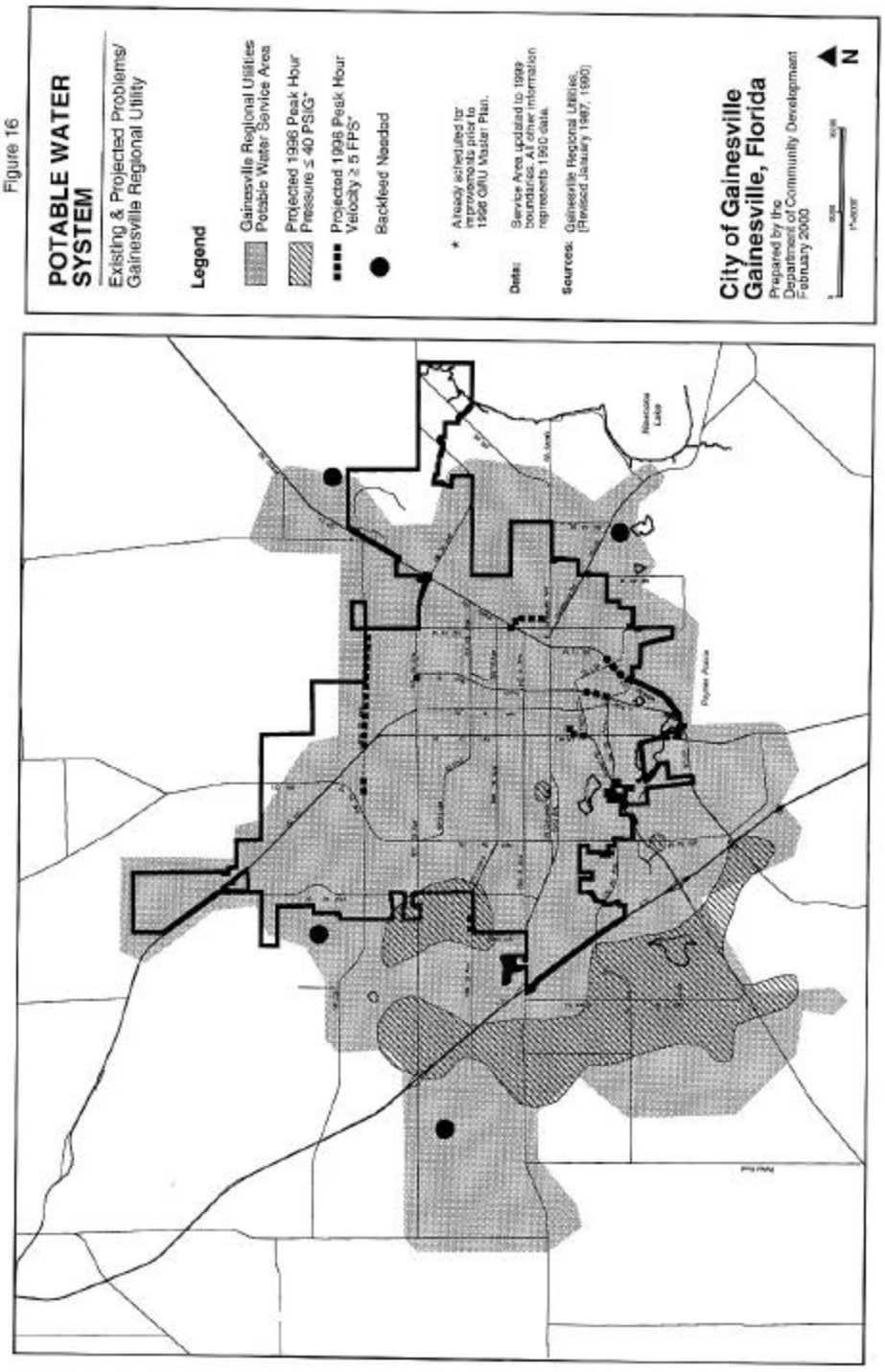
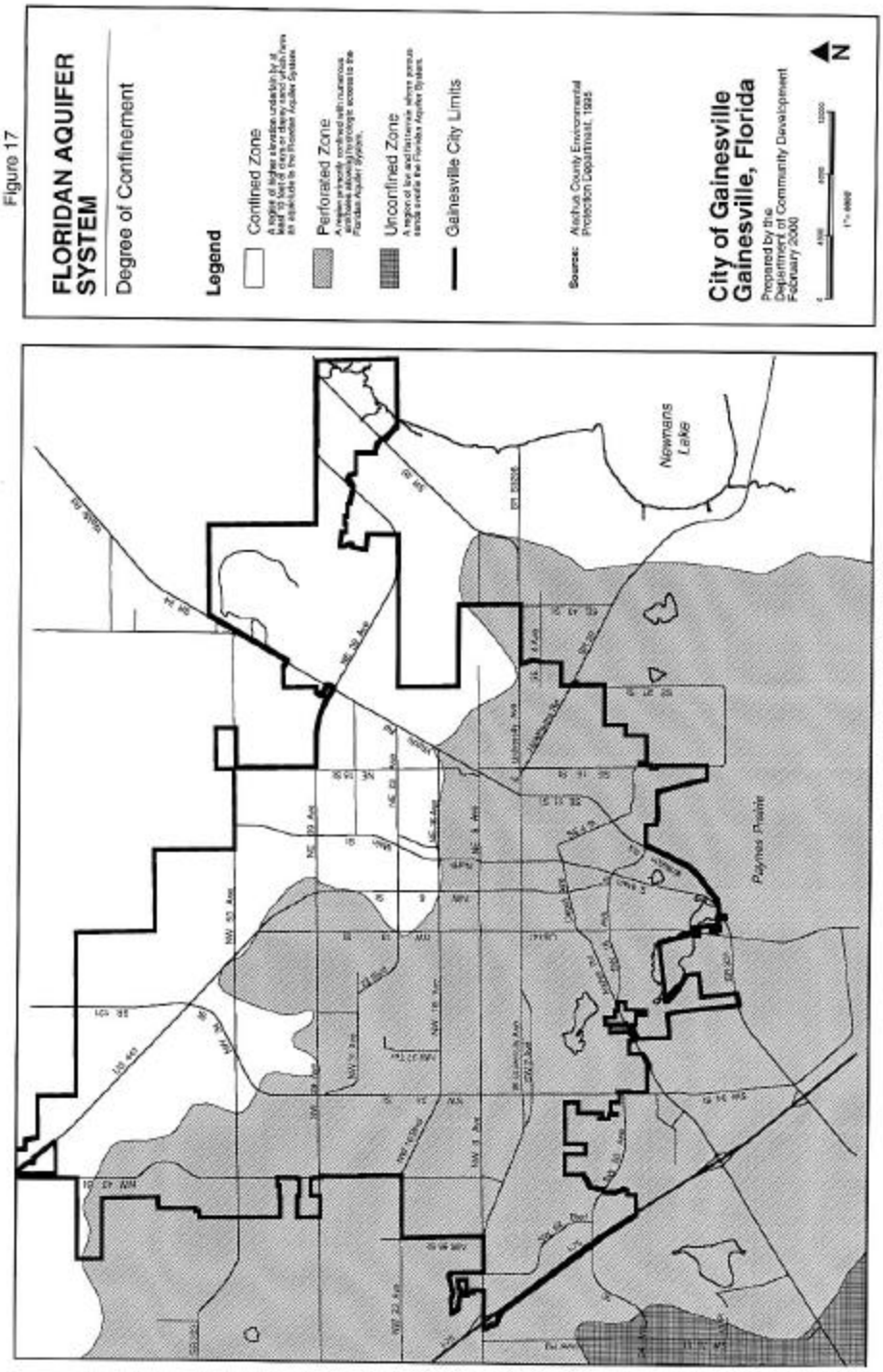

POTABLE WATER SYSTEM
Existing & Projected Problems/ Gainesville Regional Utility
Legend
Gainesville Regional Utilities Potable Water Service Area
Projected 1998 Peak Hour Pressure ≤ 40 PSIG*
Projected 1998 Peak Hour Velocity ≥ 5 FPS*
Backfeed Needed
* Already scheduled for improvements prior to 1998 GRU Master Plan.
Data: Service Area updated to 1999 boundaries. All other information represents 1990 data.
Sources: Gainesville Regional Utilities, (Revised January 1997, 1990)
City of Gainesville
Gainesville, Florida
Prepared by the Department of Community Development
February 2000
N

Figure 17


FLORIDAN AQUIFER SYSTEM
Degree of Confinement
Legend
Confined Zone
Perforated Zone
Unconfined Zone
Gainesville City Limits
Source: Alachua County Environmental Protection Department, 1995
City of Gainesville
Gainesville, Florida
Prepared by the Department of Community Development
February 2000
N
Newmans Lake
Paynes Prairie

Areas of high groundwater recharge that are for regional planning rather than site specific purposes have been mapped by the St. Johns River and the Suwannee River Water Management Districts. Subsets of these maps for Gainesville have been prepared by City staff. These maps are included in the Future Land Use Map Series.

Community Wellfield

In order to protect the community's water supply, the Murphree Wellfield must be protected. Since St. John's River Water Management District (or other local agencies responsible for the management of the aquifer) has not designated a "cone of influence" for the Murphree Wellfield, Alachua County has adopted a Murphree Wellfield Protection Code. The code established 3 protection zones around the wellfield: Primary, Secondary and, Tertiary zones (see Figure 11). The primary protection zone is the most restrictive, and includes all restrictions of the secondary and (least restrictive) tertiary zones.

Wellfield "management" zones were originally designated in conjunction with the county's adoption of a wellfield management code in 1988. The Murphree Wellfield Protection Code, including revised wellfield protection zones, was substantially revised and improved in 2000. The wellfield protection zones are a reasonable substitute for a "cone of influence" around the municipal wellfield. The protection zones are based on travel time and were established after substantial technical investigation, including hydrogeological modeling. The protective zones are further discussed in the section entitled "Murphree Wellfield Protection Code: Protection Zones".

Figure 11 shows the location of the wellfield protection zones. An overlay of this figure and the existing land use map indicate there are a number of industrial sites located within the secondary and tertiary zones. In order to protect the community's water supply the Future Land Use Plan must prevent land uses incompatible with Wellfield Protection Code restrictions.

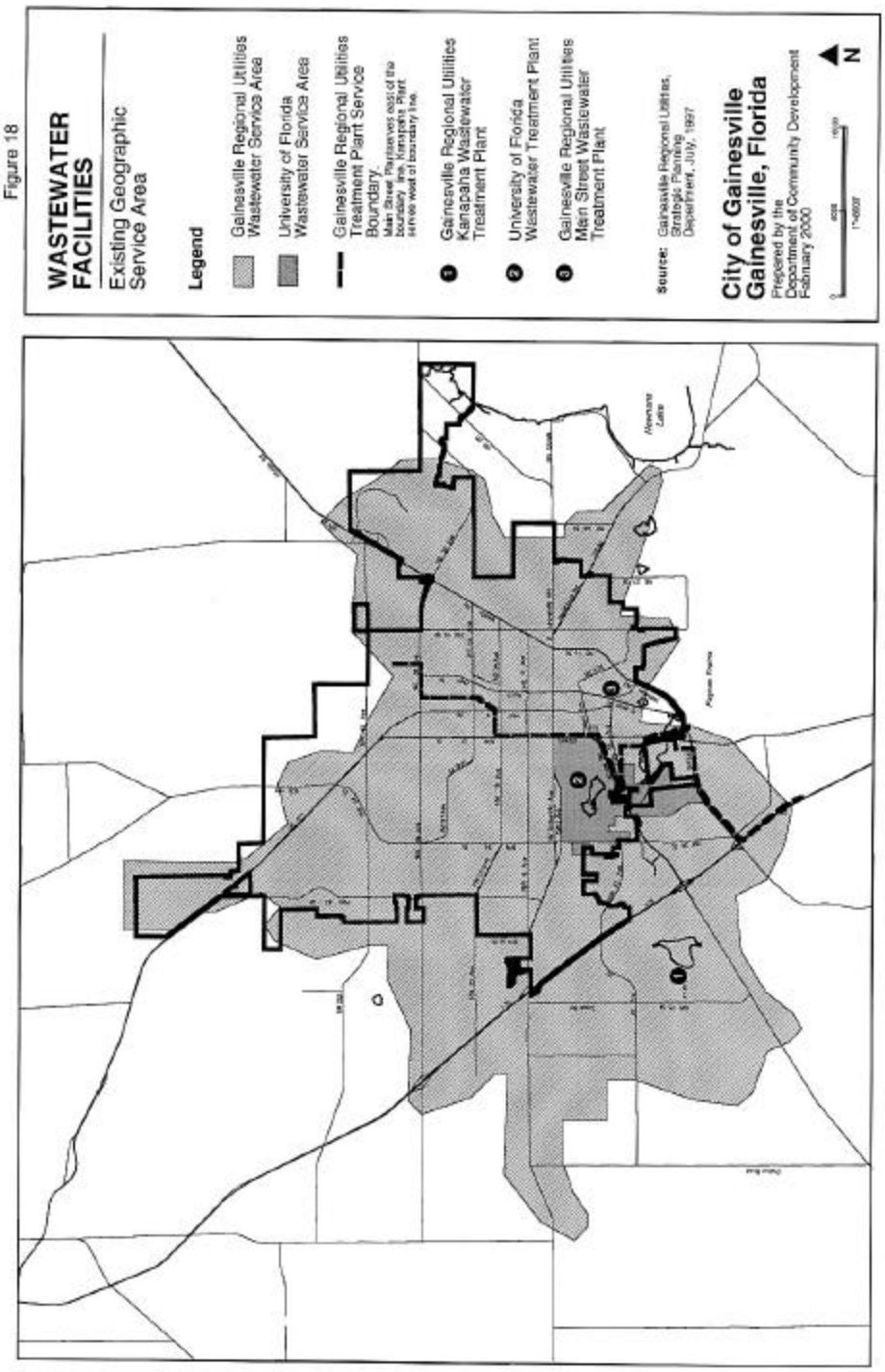
The City requires a wellfield protection special use permit (issued by the City Commission, rather than the Plan Board, unlike other special use permits) for all new development (with limited exceptions) within the primary, secondary and tertiary wellfield protection zones. Most expansions of existing development or changes at a site requiring any level of development plan review also require a wellfield protection special use permit.

Sanitary Sewers

The Gainesville urban area is served by 2 sewage treatment plants: Kanapaha and Main Street Plants, owned and operated by the City of Gainesville. The Kanapaha and the Main Street plant have design capacities of 10 million gallons per day (mgd) and 7.5 mgd of wastewater respectively (W/WW Data and Analysis Report 1991). In 1999 the average daily demand at the Kanapaha Plant was 8.3 mgd and 5.4 mgd at the Main Street Plant. These plants currently have a service area (See Figure 18) population of 142,581 persons. The University of Florida operates a

sewage treatment plant which has a design capacity of 3.1 mgd and an average daily demand of 1.8 mgd.

Figure 18


WASTEWATER FACILITIES
Existing Geographic Service Area
Legend
Gainesville Regional Utilities Wastewater Service Area
University of Florida Wastewater Service Area
Gainesville Regional Utilities Treatment Plant Service Boundary
Main Street Plant serves east of the boundary line. Kanapaha Plant serves west of boundary line.
1 Gainesville Regional Utilities Kanapaha Wastewater Treatment Plant
2 University of Florida Westewater Treatment Plant
3 Gainesville Regional Utilities Main Street Wastewater Treatment Plant
Source: Gainesville Regional Utilities, Strategic Planning Department, July, 1997
City of Gainesville
Gainesville, Florida
Prepared by the Department of Community Development February 2000
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The current average daily flow is projected to be 16.3 mgd in the year 2000 with a surplus based on average flow of 1.2 mgd. A planned 5.0 mgd expansion of the Kanapaha Plant to increase design capacity to 15 mgd will adequately serve future city and urban area residents.

Stormwater

The City's Public Works Department provides stormwater management. The Stormwater Management Utility is a dedicated revenue source for improvements, maintenance and personnel. The City can be divided into 10 creek basins, related to the creek system. Two of these basins flow ultimately into the St. John's River system. The remaining basins are stream-to-sink which discharge to an underground aquifer or depression basins. Virtually all of Gainesville is served by some form of drainage system. The replacement of aging and inadequate systems is a greater concern than the construction of new facilities. New development has provided stormwater facilities for water quantity since the mid-1970s and water quality since the early 1980s. The City's Flood Study update indicates that the soil information used to design stormwater management facilities in past years was inaccurate, resulting in higher floodzone elevations than expected.

The Public Works Department has conducted a preliminary survey of the City's stormwater management systems and has identified existing stormwater management deficiencies including both maintenance and capital needs. As a result, many of the maintenance needs can be addressed through the maintenance programs of the Stormwater Management Utility. Capital items have been prioritized. They include a Brownfield Project that would involve using a brownfield site for a master stormwater basin for the downtown area. This would allow further redevelopment and revitalization of the downtown area at higher densities and intensities. This will encourage compact development and allow a more urban-type development and design pattern. It would reduce redevelopment costs at individual sites, increase intensity of use on each parcel, and provide a possible recreational amenity in the area. The Hogtown Creek Sediment Project would construct sedimentation control facilities to reduce the amount of sediment that collects at this location. This will help to reduce the incidences of flooding in the area.

Stormwater level of service deficiencies are not expected to limit development because regulations will require new development to meet the adopted LOS standards. The Stormwater Management Utility will prioritize and budget improvements necessary to remedy existing deficiencies.

Solid and Hazardous Waste

Alachua County provides solid waste facilities for the City at the Leveda Brown Environmental Park/Transfer Station. The City is committed to deliver residentially and commercially collected solid waste collected by the City's franchised haulers to the transfer station for solid waste management.

A privately owned Class III landfill located in southeast Gainesville provides capacity for disposal of construction and demolition materials.

Currently, the City contracts with Boone/Waste Management to provide mandatory residential solid waste collection services within city limits. In addition to solid waste collection, the City began a citywide recycling program in 1989. Through this program, Boone/Waste Management is contracted to collect newspaper, glass, aluminum and metal cans, polyethylene terephthalate (PETE) and high-density polyethylene (HDPE) bottles from all single-family homes and multi-family dwelling units. The collection of polyvinyl chloride (plastic #3) became effective on October 1, 1999. The collection of such recyclables is at least once per week. The City's goal is to reduce its solid waste stream by 50 percent.

In 1999, Alachua County opened a Household Hazardous Waste (HHW) collection and processing center adjacent to the transfer station. An evaluation by County staff determined that the center would provide a higher level of service at a lower cost, compared to using a private firm to serve as the contractor for collection of hazardous waste.

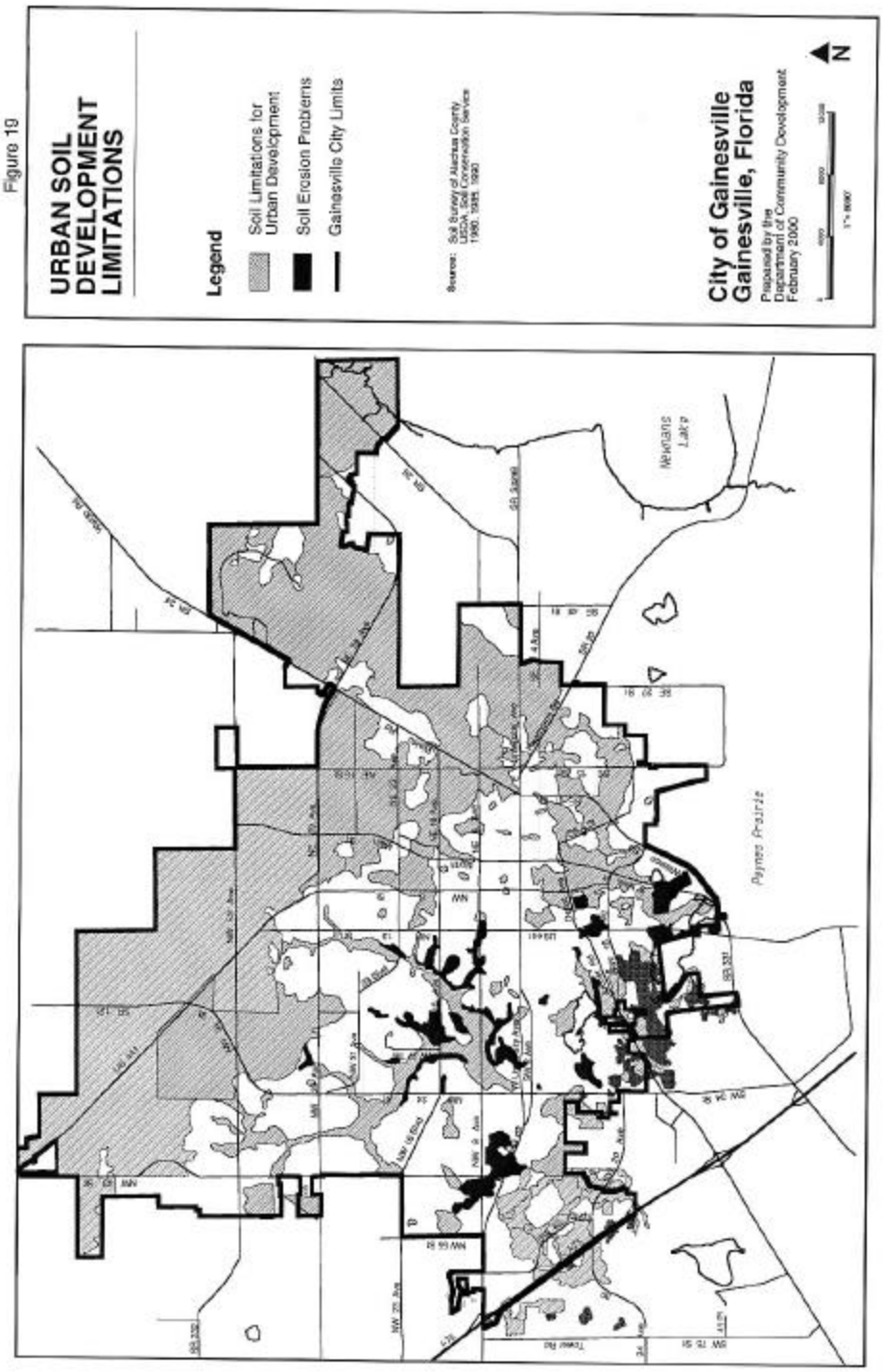
The HHW Collection Center accepts wastes considered hazardous including corrosive, toxic, ignitable and reactive materials. The intent is to minimize and divert HHW from landfills and improper disposal by means of reuse, recycling or hazardous waste disposal. The Collection Center features a reuse area where particular products that are accepted will be made available for use by the public.

Minerals and Soils

The following minerals are commonly found and have been mined in the Gainesville urban area: limestone, sand, and phosphate. Because these resources are so widely available it is unlikely they will be extensively excavated within the city limits, due to existing levels of urban development.

Figure 19 indicates soil limitations for this area. Soil types were classified into two categories (Moderate-Severe Problems and Erosion Problems) based on their impact on development. Information about these categories and the soils included within them is provided below.

Figure 19


URBAN SOIL DEVELOPMENT LIMITATIONS
Legend
Soil Limitations for Urban Development
Soil Erosion Problems
Gainesville City Limits
Source: Soil Survey of Alachua County USDA, Soil Conservation Service 1980, 1985, 1990
City of Gainesville
Gainesville, Florida
Prepared by the Department of Community Development
February 2000
N
Newnans Lake
Paynes Prairie

The "soil erosion problems" on Figure 19 refers to soil classifications from the Alachua County Soil Survey prepared by the USDA Soil Conservation Service (SCS). In that source, these areas are called Moderate-Severe Development Problem areas. SCS analyzed shrink-swell potential as a hazard to building foundations and streets, corrosivity problems of steel piping and concrete base forms, and flooding potential or cave-in hazards for shallow excavations. Dwellings with or without basements and small commercial buildings were included in the analysis of foundation problems. The SCS soil types with moderate-severe ratings for such problems are as follows:

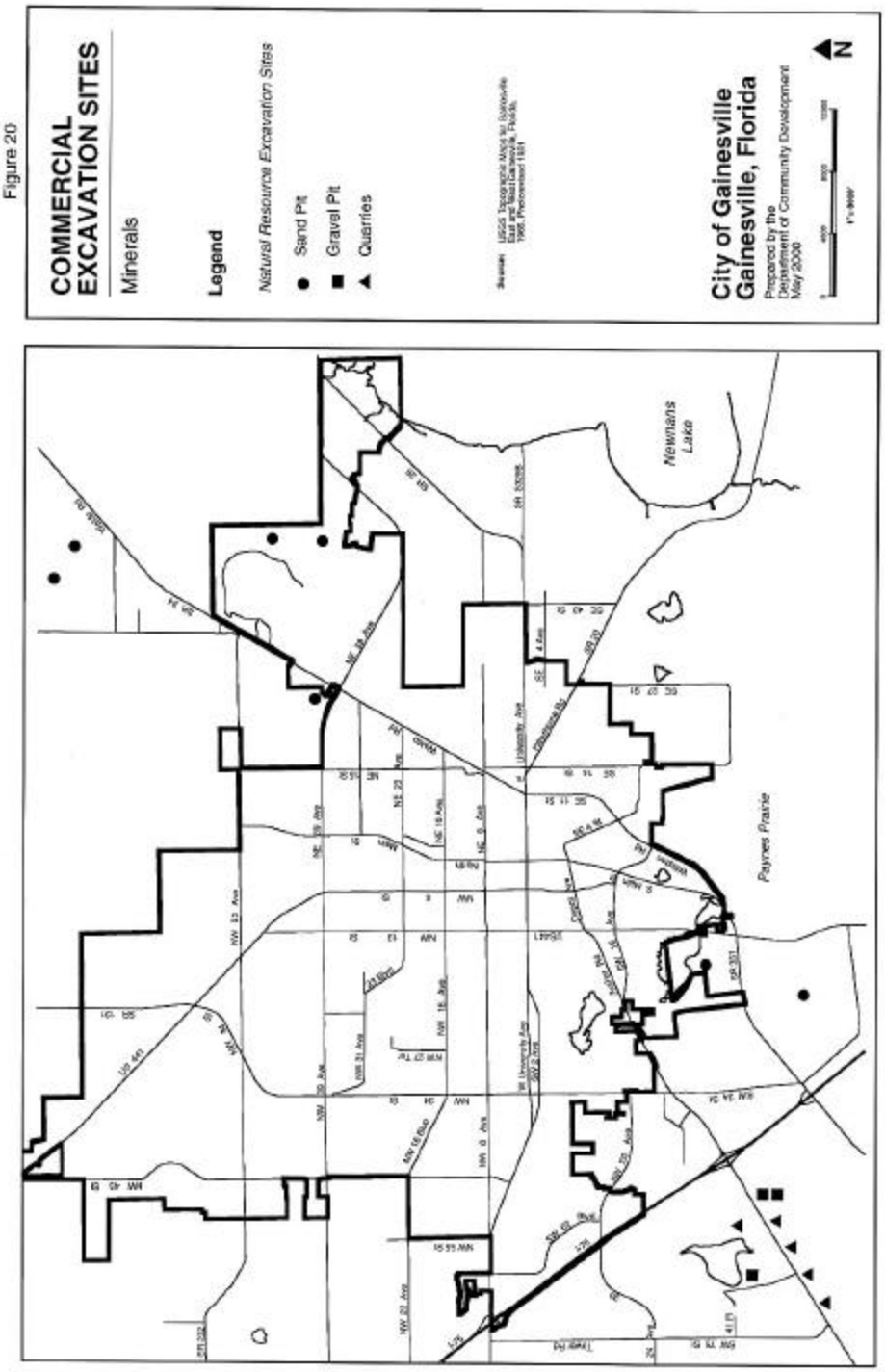
7B	Kanapaha fine sand, 0-5% slope
11	Riviera sand
13	Pelham sand
14	Pomona sand
15	Pompano sand
16	Surrency sand
17	Wauchula sand
18	Wauchula-Urban land complex
19	Monteocha loamy sand
20B	Tavares sand, 0-5% slope
21	Newnan sand
23	Mulet sand
25	Pomona sand, depressional
26	Samsula muck
29B	Lochloosa loamy sand, 2-5% slope
31B	Blichton fine sand, 2-5% slope
31C	Blichton fine sand, 5-8% slope
32C	Flemington loamy sand, 5-8% slope
33B	Norfolk loamy fine sand, 2-5% slope
34	Placid sand, depressional
37-8	Pits and dumps
44	Myakka sand
51	Plummer sand.

"Soil Erosion Problems" on Figure 19 refers to soil types where loss of vegetative cover on slopes of 2-8% would lead to topsoil loss via wind or rainfall. Those types are as follows.

29B	Lochloosa loamy sand, 2-5% slope
29C	Lochloosa loamy sand, 5-8% slope
30B	Kendrick loamy sand, 2-5% slope
31B	Blichton fine sand, 2-5% slope
32C	Flemington loamy sand, 5-8% sand
39B	Bonneau fine sand, 2-5% slope

The Gainesville urban area contains limestone, sand and phosphate as urban minerals. Figure 20 shows the location of sites where these resources have been commercially excavated within the

Figure 20


COMMERCIAL EXCAVATION SITES
Minerals
Legend
Natural Resource Excavation Sites
Sand Pit
Gravel Pit
Quarries
City of Gainesville
Gainesville, Florida
Prepared by the
Department of Community Development
May 2000
N
Newnans Lake
Paynes Prairie

city. Currently, there is no existing commercial extraction of minerals within city limits. Future extraction of minerals in the city is unlikely.

Topography

The topography of Gainesville does not limit the development potential of most of the city. One main consideration is the slope of the City. Four slope categories have been identified within the city limits: 0-1 percent, 0-5 percent, 6-12 percent and greater than 12 percent. The least sensitive of the categories is the 0-5 percent category. The most sensitive are the 0-1 percent and greater than 12 percent categories. These are considered to be equivalent because they each have inherent drainage problems. Most of Gainesville is the within the 0-5 percent slope range. The most difficult areas for development are those located adjacent to creeks. The development of Gainesville is limited by several natural low lying systems: Gum Root Swamp in the northeast, Newnans Lake to the east, and Paynes Prairie to the southwest of the city.

Historic Resources

The city contains many valuable architectural (historic) resources that are being preserved through the efforts of the City and the Historic Preservation Board. Currently, the City has four National Register historic districts (See the Historic Preservation Element), including three Gainesville neighborhoods and portions of the University of Florida campus. There are also 24 structures listed individually on the National Register of Historic Places, including 10 on the UF campus. The City's historical resources are contained on approximately 443 acres. The Northeast, Southeast, Pleasant Street and UF Campus districts contain 166, 111, 77, and 70 acres respectively. Individually listed properties contain approximately 19 acres. Due to the importance of the city's historical resources, the Future Land Use Plan will protect the city's historic resources.

Urban Reserve Areas and Annexation

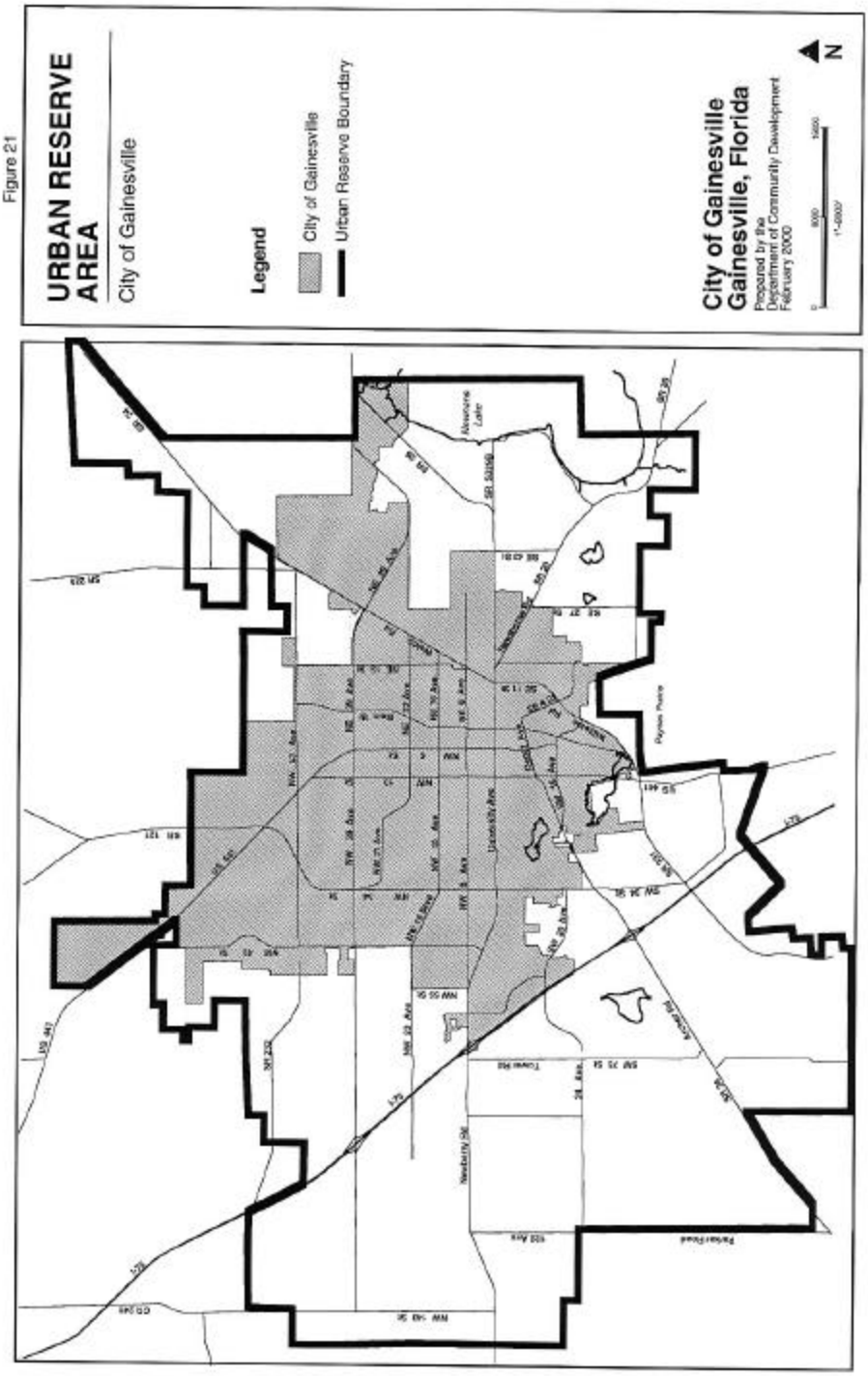
The procedure for the delineation of urban reserve and annexation areas is established by the 1990 Alachua County Boundary Adjustment Act.

The Act encourages intergovernmental coordination by requiring that the urban reserve area, which represents the maximum extent to which municipalities may annex, is adopted by the Alachua County Commission. Chapter 171, F.S. does not contain provisions for urban reserve area designations. In 1990, the Florida Legislature passed a special act which sets forth procedures for establishing municipal reserve areas, adjusting the boundaries of municipalities through annexation and contraction.

The Boundary Adjustment Act replaces former coordinating mechanisms by prescribing a schedule for the establishment of reserve areas and procedures for annexation that do not require joint action on the part of the City or County once the Reserve Area is established. The act also prevents annexation by general law. This method of coordination began in January 1991, when the County scheduled a public hearing on the designation of Reserve Areas. On October 15, 1991, the Alachua County Board of County Commissioners approved the Urban Reserve Area

for Gainesville (See Figure 21). When an area is proposed for annexation, a majority of registered voters in the area must vote for annexation. A separate vote of city residents is not required. The Comprehensive Plan will be amended when areas are annexed.

Figure 21


URBAN RESERVE AREA
City of Gainesville
Legend
City of Gainesville
Urban Reserve Boundary
City of Gainesville
Gainesville, Florida
Prepared by the Department of Community Development
February 2000
N

The Boundary Adjustment Act requires that urban reserve areas be reviewed every 5 years. On January 13, 1998, the County Commission designated the current Gainesville urban reserve area. This has the same boundaries as the area adopted in 1991. The Statements of Services provided by Gainesville and Alachua County in the urban reserve area were also updated.

Urban Infill and Redevelopment

To reduce urban sprawl and keep core urban areas fiscally strong, the Florida Legislature created the Urban Infill and Redevelopment Grant Program. The purpose of the program is to provide planning and implementation grants to local governments to revitalize and redevelop distressed urban areas. In order to qualify, local governments must amend their comprehensive land use plan delineating the boundaries of the urban infill and redevelopment area. The proposed Urban Infill and Redevelopment Area is shown in the Future Land Use Map Series.

The designated area must meet five threshold criteria, as follows:

Requirement #1: Existence of public services such as water and wastewater, transportation, schools and recreation are already available or are scheduled to be provided in an adopted Five-Year Schedule of Capital Improvements in the local government's Comprehensive Plan.

Public Services are provided in the proposed Urban Infill and Redevelopment Area. Policy 2.1.4 of the 1991 Future Land Use Element states that the City certifies that the entire area within the city limits meets the Chapter 163.3164(29) definition of an existing urban service area as supported by the Data and Analysis Report. Existing urban service areas are built-up areas where public facilities and services such as sewage treatment systems, roads, schools, and recreation areas are already in place.

Requirement #2: The area, or one or more neighborhoods within the area, suffers from pervasive poverty, unemployment and general distress as defined by s. 290.0058, F.S.

Poverty and Unemployment Data are shown in Table 11, based on 1990 Census Data. The Urban Infill and Redevelopment Area boundaries coincide with the City of Gainesville Enterprise Zone, adopted by resolution on February 27, 1995. A portion of the area has been proposed as a Community Redevelopment Area, and this area is shown in Figure 22. The Gainesville City Commission has adopted a resolution finding slum and blight in the area, pursuant to s. 163.360(6) F.S.

Requirement #3: The area exhibits a proportion of properties that are substandard, overcrowded, dilapidated, vacant or abandoned, or functionally obsolete, and which is higher than the average for the local government.

Data on vacant housing units are shown in Table 11, based on Census Data. A Housing Conditions Survey was conducted in 1994. The results indicate that approximately 8.4 percent of the housing units in the proposed area were considered dilapidated or substandard, compared to a

5 percent overall city percentage. Certain portions of the proposed area have higher percentages of dilapidated and substandard units than the overall average for the area.

Table 11

Designated Urban Infill and Redevelopment Area										
1990 Census of Population and Housing Summary File Tape 3A										
Census Tracts and Block Groups within the 1990 Gainesville Corporate Limits										
Tract Number	Block Group	Persons for whom poverty status is determined	Persons in Poverty	Poverty Rate	Persons in Labor Force	Unemployed persons	Unemployment rate	Total housing units	Vacant housing units	Vacant Housing Units Rate
(variable is from----)		*General Profiles*	*General Profiles*	*General Profiles*	*General Profiles*	*General Profiles*	*General Profiles*	*H001*	*H004*	
1.00	2	80	31	38.8%	61	13	21.3%	24	4	16.7%
1.00	3	50	27	54.0%	41	0	0.0%	22	0	0.0%
1.00	4	218	76	34.9%	92	0	0.0%	179	18	10.1%
2.00	1	358	196	55.1%	126	17	13.5%	281	75	26.7%
2.00	2	394	253	64.2%	181	42	23.2%	214	46	21.5%
2.00	3	556	179	32.2%	236	9	3.8%	230	29	12.6%
2.00	4	609	311	51.1%	419	47	11.2%	329	43	13.1%
2.00	5	742	556	74.9%	453	73	16.1%	488	24	4.9%
2.00	6	960	627	64.0%	669	78	11.7%	505	37	7.3%
2.00	7	340	123	36.2%	109	8	7.3%	156	41	26.3%
2.00	8	122	70	57.4%	70	0	0.0%	95	25	26.3%
5.00	6	391	200	51.2%	253	0	0.0%	233	19	8.2%
5.00	7	459	203	44.2%	255	37	14.5%	263	40	15.2%
5.00	8	951	280	29.4%	273	7	2.6%	491	30	6.1%
6.00	1	1,173	504	43.0%	365	16	4.4%	367	22	6.0%
6.00	2	209	106	50.7%	50	0	0.0%	118	32	27.1%
6.00	3	734	355	48.4%	255	42	16.5%	332	30	9.0%
6.00	4	1,188	521	43.9%	568	62	10.9%	424	43	10.1%
7.00	1	805	348	43.2%	223	0	0.0%	367	55	15.0%
7.00	2	606	184	30.4%	312	31	9.9%	282	32	11.3%
7.00	3	2,414	933	38.6%	1,122	221	19.7%	880	72	8.2%
7.00	6	862	578	67.8%	207	23	11.1%	230	18	7.8%
7.00	7	237	75	31.6%	101	4	4.0%	102	8	7.8%
8.00	1	3,421	1,753	51.2%	2,038	138	6.8%	1,892	180	9.5%
Proposed Infill Area Summary Statistics		**17,887**	**8,489**	**47.5%**	**8,479**	**868**	**10.2%**	**8,504**	**923**	**10.9%**
City of Gainesville Summary Statistics		**75,434**	**19,860**	**26.3%**	**41,474**	**2,744**	**6.6%**	**34,609**	**2,684**	**7.8%**

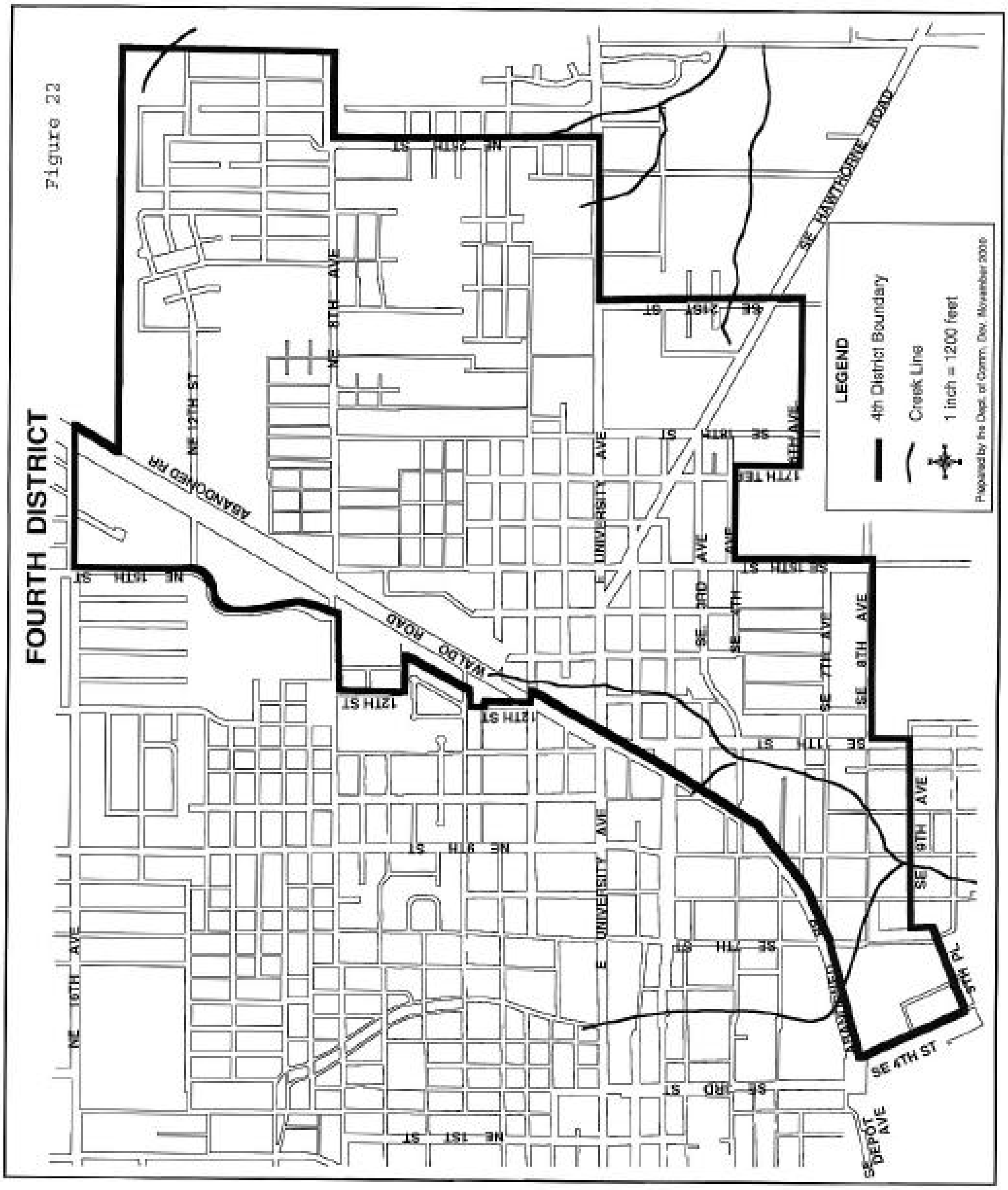


Figure 22
FOURTH DISTRICT
LEGEND
4th District Boundary
Creek Line
1 inch = 1200 feet
ABANDONED RR
WALDO ROAD
SE HAWTHORNE ROAD
E UNIVERSITY AVE
SE 4TH ST

Requirement #4: More than 50 percent of the area is within ¼ mile of a transit stop, or a sufficient number of such transit stops will be made available concurrent with the designation.

Figure 23 demonstrates that more than 50 percent of the area is located within ¼ mile of a transit stop.

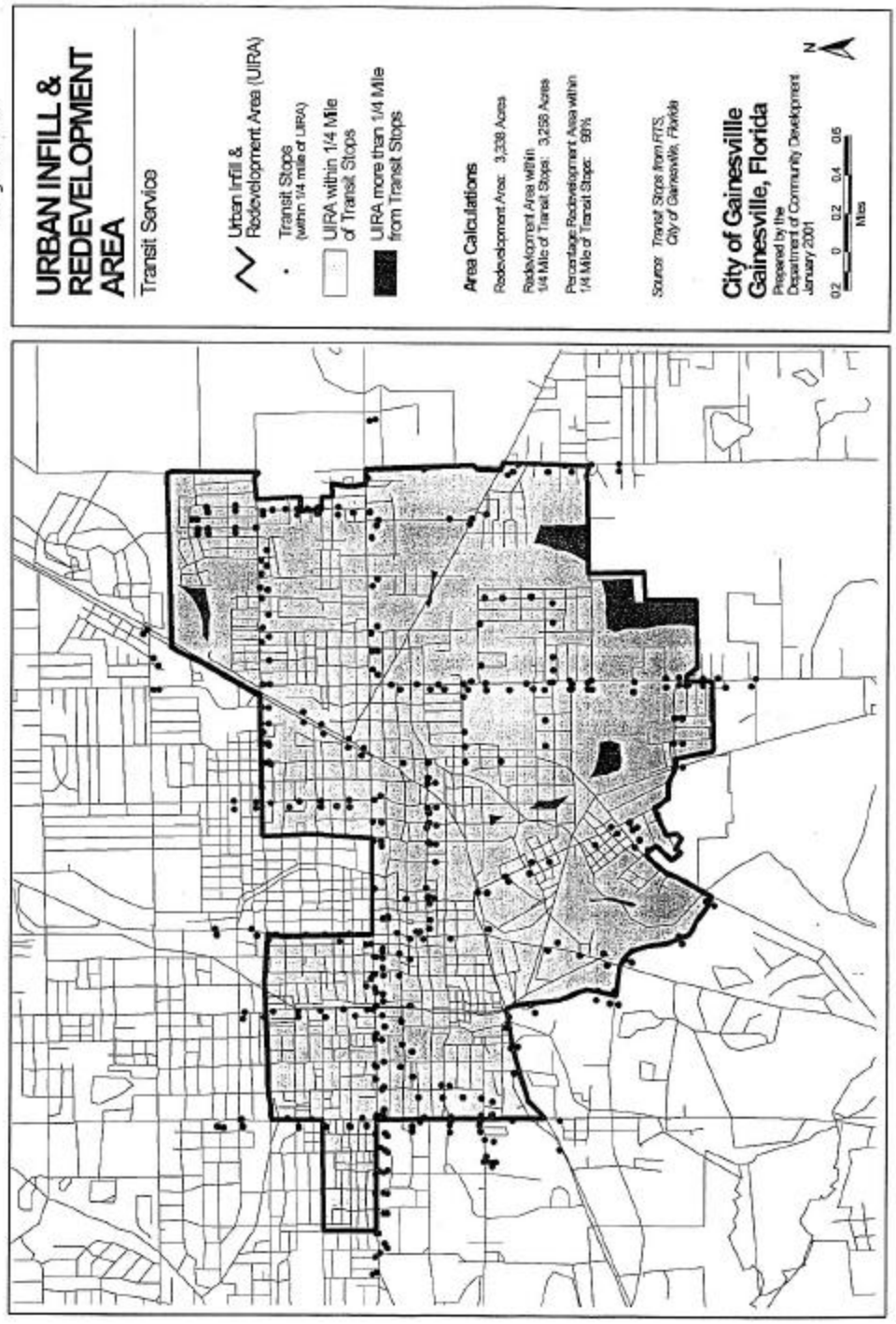
Requirement #5: The area includes or is adjacent to community redevelopment areas, enterprise zones, or Main Street Programs, or has been designated by the state or Federal Government as an urban redevelopment, revitalization, or infill area under an empowerment zone, enterprise community, or brownfield showcase community or similar programs.

A portion of the proposed Urban Infill and Redevelopment Area includes a proposed City of Gainesville 4th District Community Redevelopment Area and the boundaries coincide with an adopted State Enterprise Zone.

Evaluation and Appraisal Report—Major Issues

- Examine the Future Land Use Map for opportunities for **increased residential densities**—particularly near activity centers, transit routes and areas with low owner occupancy.
- Create **incentives for higher density infill**.
- Continue to **annex** areas with an urban character.
- Continue discussions with Alachua County regarding establishment of an **urban growth boundary**.
- Focus **redevelopment** toward the University Avenue corridor from downtown to the UF campus, east Gainesville, existing activity centers, College Park and University Heights, 5th Avenue/Pleasant Street, Enterprise Zone, and low-density residential areas that can be redesignated for higher density.
- Implementation of **minimum density requirements** is necessary. Low-density development patterns leads to traffic congestion, dependence on car travel, isolated neighborhoods, lack of quality public space, calls for street widenings and other public services, and urban sprawl.
- **Accessory units** as an allowable residential use with appropriate restrictions should be explored.
- **Traditional neighborhood design concepts** should be integrated into the Future Land Use Element.
- Explore alternate mitigation strategies to address the loss of **wetlands**.
- Revise percentages allowed for **ancillary office/retail use in high density, multi-family** development.
- Make Traditional Neighborhood Development (**TND**) an allowable use.
- Better define **activity centers**, and allow medium- and low-density multi-family development adjacent to activity centers.
- Consider **amending the mixed use land use** category to address the problem of applying mixed use to properties less than 3 acres.

Figure 23


URBAN INFILL & REDEVELOPMENT AREA
Transit Service
Urban Infill & Redevelopment Area (UIRA)
Transit Stops (within 1/4 mile of UIRA)
UIRA within 1/4 Mile of Transit Stops
UIRA more than 1/4 Mile from Transit Stops
Area Calculations
Redevelopment Area: 3,338 Acres
Redevelopment Area within 1/4 Mile of Transit Stops: 3,258 Acres
Percentage Redevelopment Area within 1/4 Mile of Transit Stops: 98%
Source: Transit Stops from RTS, City of Gainesville, Florida
City of Gainesville
Gainesville, Florida
Prepared by the Department of Community Development
January 2001
0 0.2 0.4 0.6
Miles
N

- Downtown

Downtown Gainesville, over the past few years, has seen a substantial increases in development, health, vibrancy, safety, and restoration. A number of new residential units have recently been built, a new Chamber of Commerce building is under construction (which will include condominiums behind it), a vertically mixed-use, and a five-story building has recently been completed containing residences, restaurants, retail, and offices. Plans are under way to restore an old, historic railroad depot building to contain retail, offices, and services, and to create a stormwater park which will promote more modest, walkable downtown dimensions as the regional approach to stormwater management will reduce the need for land-consuming on-site stormwater basins.

- Historic Districts

Gainesville currently has three designated historic districts on the Local Register: Pleasant Street (approved by the City in 1991), NE Residential (approved by the City in 1985), and SE Residential (approved by the City in 1985). The City applies guidelines for development in these districts that encourage "best practices" in these areas. A fourth district—University Heights Historic District—is currently being proposed.

- East Gainesville

- Neighborhood (Activity) Centers

Gainesville currently has 16 neighborhood centers and 3 regional centers. All of the neighborhood centers are conventional shopping centers with large surface parking lots and no residential mixed use.

- UF/SFCC Downtown

- Coordination w/ County

- What City has done w/ Trad, Central Corridors, TCEA

Gainesville adopted two pedestrian-oriented overlay ordinances in 1998. The Traditional City applies mostly to the downtown area, and the Central Corridors applies to major gateway streets leading into downtown. Traditional City requires modest front setbacks; no parking, HVAC or dumpsters in front; sidewalks; aligned street trees; modest street light height, prohibited auto-oriented uses; front building façade articulation; modest provision of parking; and buildings facing

the street. Central Corridors requires a smaller, transitional set of these standards for new development. The TCEA was adopted in 2000 and applies the Central Corridors standards throughout the city.

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[8] Blais, Pamela (1995). "The Economics of Urban Form." Appendix E of "Greater Toronto". Greater Toronto Area Task Force. December.
[9] Litman, Todd (1999). "Land Use Impact Costs of Transportation." Victoria Transport Policy Institute.
[10] Quoted by Tony Hiss in "Transit's Greatest Gift: The Livable Community." Mass Transit. Sept/Oct 1996, pg 13.
[11] Frank, Lawrence (1994). "Relationships Between Land Use and Travel Behavior in the Puget Sound Region. Washington DOT. Report #WA-RD 351.1; Eric D. Kelly (1994). "The Transportation-Land Use Link." Journal of Planning Literature, vol. 9, no. 2, pp. 128-145. November.
[12] Ewing, Reid (1997). "Is Los Angeles-Style Sprawl Desirable?" JAPA, vol. 63, no. 1, Winter. Pg. 113.
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[14] Newman, Peter W.G. and Jeffery R. Kenworthy (1989). "Gasoline Consumption and Cities." APA Journal. Pg. 25. Winter. Downs, Anthony (1992). Stuck in Traffic, pg 79.
[15] "Creating Transit-Supportive Land Use Regulations," PAS # 468, 12/96, pg 41; Ewing, Reid (1996). "Pedestrian- and Transit-Friendly Design," pg. 6; Sno-Tran (1994). "Creating Transportation Choices Through Zoning." Snohomish County, WA. Pg 4; Downs, Anthony (1994). New Visions for Metropolitan America; Weissman, Steve & Judy Corbett (1992). Land Use Strategies for Livable Places. The Local Government Commission. Sacramento, CA, pg 12.
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[17] Durning, Alan Thein (1996). The Car and the City. Northwest Environment Watch.
[18] Downs, Anthony (1992). Stuck in Traffic, pg 83.
[19] Planners Advisory Service. (1999). The Principles of Smart Development. PAS # ???