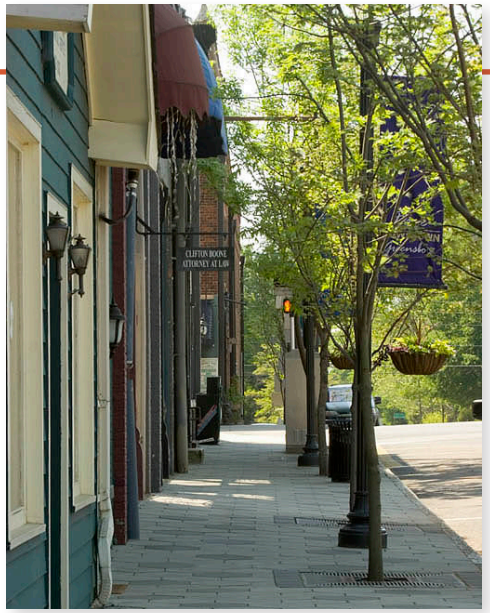
THE JAEGER COMPANY

Five Year Plan

City of Greensboro, Georgia



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FIVE-YEAR PLAN
CITY OF GREENSBORO, GEORGIA

April 2009

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CHAPTER 1
INTRODUCTION

The quality of life in a given community depends on maintaining existing facilities and adding facility and service capacity in order to continue growing and developing. Without adequate facilities, such as roads, water, sewer, schools, parks, etc., private development will not be possible. The provision of facilities is understandably complex, and the provision of facilities can take several years to plan, design, construct, and operate.

This five-year plan is highly descriptive – it describes services and programs provided to residents, businesses, institutions, and industries in Greensboro as if the reader has no knowledge about the details of facilities and services provided.

In 2002, Greensboro prepared a "five-year" plan to guide its future. That plan emphasized capital items, much the same as a conventional capital improvement program, but it also covered non-capital (programmatic) needs for a five-year period. This document is a major update and rewrite of the 2002 five-year plan.

LINES OF INQUIRY

In preparing this updated five-year plan, the city considered the following questions, among others:

- What are the facilities and services that Greensboro's residents receive and utilize?
- What entity provides each facility and service?
- How does the public (as represented by an appointed steering committee) feel about the adequacy of these existing facilities and services?
- Are the facilities and services adequate to meet projected growth needs?
- What specific facility planning issues and techniques should be considered in the planning process?
- How much is being spent by the city, and the county as appropriate, on these facilities and services, and is there a revenue stream derived from such facilities and services?
- What specific projects does the city want and need to undertake in the next five years, and beyond?
- How are the various capital facilities and services financed now by the city?
- Are there additional or innovative financing techniques that can be identified or should be considered?
- How should potential projects get prioritized, given a general shortage of money to complete all projects desired?
- What institutional mechanisms (boards, commissions, authorities, etc.) are in place or are needed to implement the programmatic recommendations of the five-year plan?

OBJECTIVES

This update of the five-year plan for Greensboro has as its foundation the following objectives:

- Assess existing facilities for adequacy and deficiencies;
- Determine existing and desired level-of-service standards;
- Forecast future needs based on population and employment growth and other demands;

- Solicit input from stakeholders and steering committee members on facility improvements and programs that are needed or desired;
- Prioritize all recommended projects;
- Estimate the costs for such improvements;
- Review the city's existing revenue sources and identify other potential new sources;
- Assign responsibilities for program implementation.

SUMMARY OF FACILITY AND SERVICE PROVISION

Table 1.1 identifies the facilities and services provided to the residents, businesses, institutions, and industries within the City of Greensboro and what entity provides the facilities or services. There are various arrangements for the provision of the facilities and services. Many are provided by the City of Greensboro itself, while other major facilities and services are provided by Greene County on a countywide basis. Yet others are provided by quasi-governmental entities or governmental authorities or commissions, and others are provided by the private sector (see Table 1.1).

Table 1.1
Summary of Facility and Service Provision

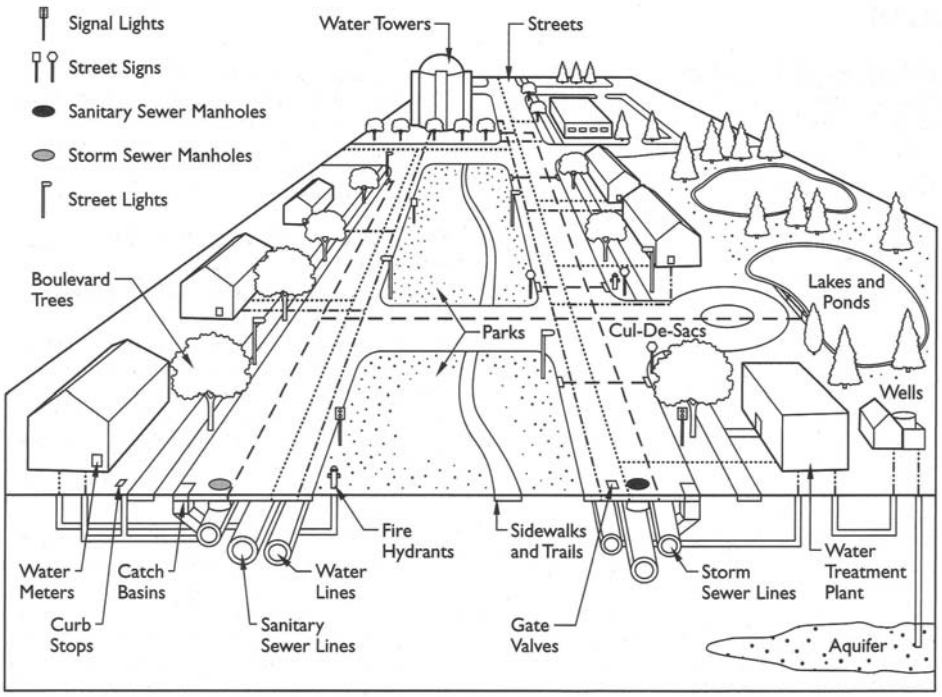
Service or Facility	Greensboro	Greene County	Quasi-Public/ Authority	Private Sector
General Administrative Facilities and Services				
Mayor and City Council	X			
City Manager, City Clerk and Finance	X			
Legal Counsel				X
Business Registration	X			
Tax Assessment and Collection		X		
Voter Registration and Elections		X		
Public Safety				
Police Department	X			
Municipal Court	X			
County Court System and Sheriff		X		
Jail/Detention/Corrections		X		
Fire Department	X	X		
Emergency Medical Services/911		X		
Emergency Management		X		
Utility-type Operations				
Natural Gas	X			
Water	X			
Sewer	X			
Stormwater Management	X	X		
Solid Waste Management		X		X
Park, Recreation, and Cultural Facilities				
Active Parks		X		
Recreation Programs		X		
Passive Facilities	X			
Senior Center		X		
Cultural Center	X			
Public Works and Transportation				
Buildings and Grounds	X			
Cemetery	X			
Animal Control		X		
Public Works Camp	X	X		
Roads and Bridges	X	X	X	
Traffic Signals			X (state)	

Service or Facility	Greensboro	Greene County	Quasi-Public/ Authority	Private Sector
Sidewalks, Bikeways, Greenways	X	X	X (state)	
Airport		X		
Public Transit (Rural)		X		
Engineering Support				X
Planning and Zoning-Related Functions				
Planning	X		X	X
Zoning Administration	X			
Annexation	X			
Historic Preservation	X			
Development Review	X			
Building Permits and Inspections		X		
Flood Plain Management	X			
Geographic Information Systems		X	X	
Code Enforcement	X			
Engineering Support				X
Economic Development				
Downtown/Hometown	X		X	
Business Retention/ Marketing			X	
Industrial Development		X		
Beautification	X			
Health, Education, Welfare, and Social Services				
Public Health (Public/Mental/ Environmental)		X		
Schools		X		X
Libraries			X	
Family and Children Services		X		
Public Housing			X (authority)	
Community Development	X			

ORGANIZATION OF THIS DOCUMENT

Chapters of this five-year plan provide inventories of major services and facilities supporting the residents, businesses, institutions, and industries in the City of Greensboro.

In this plan, facilities and services are grouped generally into eight categories. There is some overlap among the categories in some instances, and arguments could be made that one particular facility or service belongs under a different category than the one assigned. However, the classifications represent typical organizational arrangements by municipal departments.



Source: *Planning and Urban Design Standards*, 2006. Hoboken, NJ: John Wiley & Sons, Inc. 2006, p. 37.

Figure 1.1
Examples of Public Infrastructure

Each of the facilities and services are described in greater detail in subsequent chapters. Attention is paid to what types of facilities and major (capital equipment) are required to run the operation or facility, the level of expenditures required, and whether there are particular revenue streams resulting from such facility or service.

GENERAL DEMAND FORECAST

The need for future facilities and services, and the evaluation of existing facilities and services, requires sound estimates, projections, or forecasts of future population and employment. In some cases, population and employment need to be combined to determine the total impact on a given facility. This section provides those estimates and projections which enable a reliable estimate of short-term facility needs.

The most recent official estimate of Greensboro's population, from the U.S. Census Bureau, is 3,332 persons as of July 1, 2007. Some facilities, such as water, sewer, and public safety, are consumed by the non-resident population (e.g., businesses and industries) in addition to the resident population. Therefore, it is insufficient at least for those certain facilities to project facility needs based on the residential population alone.

The accuracy of projection is of obvious importance. If the service populations are underestimated, facilities are likely to be undersized, making it more difficult to add incremental capacity to some facilities (like water and sewer). On the other hand, planning for a larger

service population than is likely to occur would result in unnecessarily higher costs and/or inefficient use of facilities. The projections provided in Table 2 attempt to provide a balance between the extremes of underestimating and over-projecting service populations for purposes of facility planning.

Employment data for Greensboro are limited if non-existent. We provide working assumptions for the employment in Greensboro in order to estimate the future non-residential population and thus project the needs for facilities and services. While we are interested primarily in the next five years, we need (and provide) working projections for a ten year period, since it is often necessary to look beyond the next five or six years in planning future facilities.

Table 1.2 provides population, employment, and "functional population" projections for Greensboro. The "functional population" is a rough estimate that combines the resident population with employment for a measure of total demand in the community. While there is undoubtedly some overlap in the resident and employment populations (i.e., a significant number of residents of Greensboro also work in Greensboro – and adding both together results in some "double-counting," in terms of some services like public safety, the demands of both the resident and nonresident populations continue. As one example, the fire and police departments continue to serve residences even if their occupants are away working in another county, and public safety departments are also responsible for protecting places of employment.

It is noted here that the inclination is to use the population projections of the comprehensive plan, which assume some "exponential" increases in the population. However, existing estimates of population suggest that the exponential projections have not been attained for 2005 and are unlikely to be attained in 2010, especially given the current condition of the national economy. Due to short-term projections of economic recession, and a nearly total stoppage of the housing market, it is prudent to reconsider the inclination to rely on the comprehensive plan exponential population projections.

It is also noted that, by considering employment in cases where facilities serve businesses, institutions, and industries, this analysis is likely to provide more accurate projections of those facility demands.

Table 1.2
Population, Employment, and Functional Population Estimates and Projections
City of Greensboro, 2009, 2014, and 2020

	2009	2014	2020
Resident Population	3,400	3,900	4,260
Employment	2,040	2,400	2,790
Functional Population	5,440	6,300	7,050

Source: Jerry Weitz & Associates, Inc., January 2009.

Note: Employment is estimated to be 60% of the total employment in the Greensboro Zip Code, which is approximately 60% of total county employment.

CHAPTER 2
GENERAL ADMINISTRATIVE FACILITIES AND SERVICES

MAYOR AND CITY COUNCIL

Greensboro has its own elected body, the Mayor and City Council. The elected body requires administrative space, at least for its council meetings. This means that the elected body at minimum needs a council chambers, and in some cases administrative office space can be necessary (though less critical in a small town like Greensboro). Often, cities use one major room or facility for both council meetings and municipal court. Elected officials are mandated to receive training by state law, and they have various other expenses including transportation and communications. Training is provided through the Georgia Municipal Association, which in turn typically uses the services of the Carl Vinson Institute of Government (at the University of Georgia) for regular training exercises. Salaries or other compensation are budgeted in the general fund.

This type of service requires expenditures, including capital facilities planning for city halls and other administrative spaces, without any significant revenue stream. Expenditures for operational requirements amounted to 1.5 percent of the city's general fund in 2008-2009.

CITY MANAGER, CITY CLERK, CITY ATTORNEY, AND FINANCE STAFF

Description

Administrative personnel for municipalities include a city manager or city administrator, city clerk, and finance personnel. Various clerks may also work in the administrative and finance departments. Often, the utility billing function is housed within the administrative and finance staff. The city must be guided in its actions by competent legal counsel; in most cases, small cities do not have a full-time city attorney and instead contract with a law firm for those services. Ordinances must be codified, which often requires the assistance of a private entity such as the Municipal Code Corporation in Tallahassee, Florida; regionally, the Northeast Georgia Regional Development Center also has contracted with municipalities to provide codification of ordinances. Annual budgets require annual audits, which are performed by private firms (certified public accountants), usually bid out competitively on a multi-year basis.

Cities that require business registration often house business licensing agents in the administrative department. City taxes may be collected individually by the municipality, or they may be collected under intergovernmental agreement by the county on behalf of the city, since there are economies of scale and because the county has to assess and collect personal and real property taxes on a countywide basis. Computers and rather sophisticated software programs are sometimes needed to manage property tax systems, business registration, budgeting and accounting work, and other functions. Voter registration and elections is a countywide function, though municipal elections are sometimes provided separately by cities.

As professionals, there are training expectations on the part of all personnel. City managers, city clerks, city attorneys, and finance personnel all have their own professional associations and annual or semi-annual meetings, during which they receive specialized training and are updated on recent developments in law, practice, and innovation. It is important that cities provide budgets for training. Vehicles are usually assigned to major personnel, at minimum, the city manager.

Existing Budget Information

Executive and financial administration operating costs totaled 14.8 percent of the City of Greensboro's general fund in the 2008-2009 fiscal year. The only significant capital facilities requirement is the administrative space needed to house employees. In addition to the usual expenditures involving salaries, office supplies, communications, travel, and training, administration and finance personnel often need specialized software programs which must be updated. With the exception of business registration revenue, these facilities provide little revenue for a city's general fund. To some extent, utility billing if housed in this department can be compensated or reimbursed by proprietary funds like water and sewer funds.

Anticipated Facility Needs

The primary facility need for this category of facilities and services is general office space. Results of the questionnaire on the steering committee's satisfaction levels with regard to various public facilities reveal that there is high satisfaction with the existing city hall/office space. An addition to city hall or construction of a new city hall was listed as a potential project in the 2002 five-year plan and considered in this updated plan.

Building a new city hall ranked very low (43 of 47 projects) in the prioritization ranking of potential projects generated for this five-year plan. For these reasons alone, the five-year schedule of improvements does not include a recommendation to build a new city hall or acquire new office space during the short-term planning horizon. Greensboro preempted much of the need to expand city hall space by moving the police department into its own facility.

City Hall, Greensboro

While no recommendation is made to pursue the eventual construction of additional city hall space, it is important to provide objective standards and assessments of likely needs in the longer term. The figures in Table 2.1 can be used for future planning purposes. They assume that a suitable level of service standard for office space for a city is 0.5 square feet per residential population.

Table 2.1
Projection of Administrative Space Needs
City of Greensboro, 2009, 2014 and 2020
(Square Feet of Office Space)

	2009	2014	2020
Administrative Space Needs (@ 0.5 square foot per residential population)	1,700	1,950	2,130

These numbers appear to suggest also that facility additions will not be needed during the short-term planning horizon. However, the condition of the existing city hall building was not assessed, and the capital improvement program should include repairs and maintenance of the existing facility, such as reroofing, replacement of HVAC systems, etc. as such needs arise or are identified. It is wise to anticipate and budget for building repairs and major maintenance items for city hall during the short-term planning horizon. Greensboro appears to have done so in that it has budgeted $250,000 for administrative buildings and equipment; presumably these funds can be used to maintain city hall and improve administrative spaces as needed.

The site of the existing city hall is a good location in terms of anchoring the downtown, and the existing site appears large enough to expand the building if necessary. In addition, alternatives to building additional office space are (1) leasing existing office space if available, and/or (2) making more efficient use of the existing space. For instance, finding an alternative meeting room for the City Council and Municipal Court could free up the city hall council chambers for additional office space for administrative employees. As another example, reducing on-site storage needs through file organizing systems and/or off-site storage are also worth considering in the future.

Results of Questionnaires

The initial questionnaire, which received 10 responses, reveals that the steering committee is quite satisfied with the existing city hall space (only one respondent expressed dissatisfaction). While existing space appears small and cramped, the movement of the police department out of city hall some years ago and into its own building mitigated the immediate problems of congestion and overcrowding in the current city hall. Building a new city hall did not rank highly at all in terms of all projects requested to be prioritized by the steering committee (43rd of 47 possible projects). However, respondents ranked it as a “medium” priority project, suggesting that Greensboro should consider a new city hall or city hall expansion as a longer-term public facility need.

Level of Service and Performance Standards

1. Strive to maintain administrative space at a standard of at least 0.5 square feet per resident population.

Recommendations

1. Anticipate maintenance and repair needs for the existing city hall space, and include in the capital improvement budget as necessary.

2. Maximize existing space for future office uses by finding a larger facility within which to hold municipal court and possibly City Council meetings, and converting city courtroom and council chambers for additional office space when needed. Pursue an intergovernmental agreement with Greene County as appropriate.

3. Investigate file space-saving systems and/or consider off-site storage options to free up space in the existing city hall building.

4. Over the long-term, plan for the expansion of City Hall or construction of a new city hall building. Maintain downtown location.

CHAPTER 3
PUBLIC SAFETY FACILITIES AND SERVICES

POLICE DEPARTMENT

Description of Facilities and Services

The police department often is housed in its own facility separate from the city administration. In Greensboro, the police department was housed in city hall until a new, separate police department building was constructed. Police departments require considerable numbers of vehicles for patrols, and the vehicles are heavily used. Each sworn officer may be assigned his or her own vehicle. Operating expenditures are often higher for police departments than other departments since they usually must be staffed 24 hours a day, seven days a week. Specialized costs can include crime laboratory services, cameras, specialized weapons, and other equipment.

Greensboro Police Department

Capital needs can be evaluated in terms of geographic proximity of headquarters, response times, square footage of building space (and adequacy in relation to level of service standards), and specialized equipment, among others. A public safety facility should be located as centrally as possible to the downtown area, because doing so may reduce travel time from the facility to outlying patrol zones. The current location suits this purpose well.

Assessment of Geographic Service Capabilities

Presently, the city of Greensboro's public safety service (geographic land) area is relatively small, and it is anticipated that police can respond to all service calls in the city within approximately five minutes. For that reason, one centralized facility with good access should serve the city well in the short-term and medium range time period. Also, communication and coordination issues may be cited as reasons for favoring one centralized location for police department administration and police operations versus decentralizing operations as demands increase.

However, in light of the city's annexation across (east of) Interstate 20, a more remote business precinct is evolving at the interstate. Some municipal police departments seek to acquire a small amount of commercial space (1,000 to 2,000 square feet) in business areas for a satellite (decentralized) police office. While it does not appear justified in the short-term, such an approach may make sense over the longer term, if the city continues to annex east of I-20 or when service demands from commercial and other developments in that area dictate. City police departments can sometimes acquire office space at reduced leasing rates, or even free-of-charge, within a private commercial or office development, because private development can gain a sense of security from a more prominent presence by public safety personnel. While not called for in the five-year plan, Greensboro should consider that option in the future, if warranted, and if opportunities arise.

One way to determine policy facility adequacy is to forecast office space needs for the police department by projecting staffing needs into the future and determining future needs by an office space multiplier per employee. That method in itself is generally inadequate, because (as noted below) the Police Department has other space needs unrelated to office space directly related to office personnel (e.g., training, firearms shooting, secured evidence storage, crime lab, customer service counters, etc.) that cannot be captured in an assessment of administrative office space needs alone.

Other Capital Facilities

Another major capital item, in addition to police office space, is a firearms training center. Sworn officers should have regular opportunities for training and maintenance of their skills in indoor shooting ranges. Municipal police departments sometimes jointly construct and share shooting range spaces with county sheriff's offices, or in some cases use regional or privately available facilities.

Police departments are often required to keep evidence for many years, and perhaps indefinitely, in storage. Hence, police departments can easily begin to outgrow their storage capacities. Overcrowded storage spaces increase the time of retrieval and decrease efficiency of departmental operations. Police departments can maximize existing space with rolling expandable file systems and bin containers for evidence storage rooms (these are probably capital expenditures, as such facilities are expensive and tend to be retained for ten years or more). If there is little additional opportunity for more use of evidence storage space, the department can rent off-site space, but doing so also increases retrieval time and decreases efficiency. It is preferable that all of the police department's files and records be stored on site with easy access. The department can also contract with a private vendor to store and reproduce (access) records. Hence, storage of records should be considered in future capital expenditures for the police department.

Analysis of Expenditures and Revenues

A municipal police department is often one of the costliest departments to run, given the need for personnel providing law enforcement 24 hours a day, seven days a week. Greensboro is no exception – the police department accounted for 41 percent of the general fund's expenditures in the 2008-2009 budget year. Police departments, to some extent, bring revenue into the city through fines and certain fees. Programs can sometimes be undertaken with federal or state law enforcement grants. In addition, as a public safety service, Greensboro could opt to collect police facility impact fees after preparing and adopting a capital improvements element (CIE) of its comprehensive plan. However, pursuit of that funding source is considered unlikely in the short term.

Results of Questionnaires

Of the ten respondents, eight suggested they were satisfied or very satisfied with the City of Greensboro's police services. Some of that satisfaction may be attributed to the city's decision some years ago now to build a new police department building, thus giving the department its own presence and space in which to maintain its operations. Due to the general adequacy of the police department facility, no projects were included in the list of 47 potential projects for ranking by the steering committee.

Anticipated Facility Needs

Because the city has relatively recently constructed a new building for the police department, no additional facility needs are identified in the five-year work program. However, see "Recommendations" below.

Recommendations

1. Capitalize on any opportunity to provide a small amount of commercial space (1,000 to 2,000 square feet) for a satellite (decentralized) police annex immediately south of Interstate 20 (or in the immediate vicinity of the SR 44/I-20 interchange). Negotiate free-of-charge or reduced rate leasing of private commercial space, if possible.

2. Consider future needs for firearms training, including participation in a countywide firearms training center. Consider an intergovernmental agreement with Greene County as may be appropriate for this purpose.

3. Budget in the capital program for annual replacement of aging patrol vehicles (note: patrol vehicles are not considered "capital" items but are often treated by local governments as such).

Level of Service and Performance Standards

1. Maintain a level of service of no more than a seven-minute response to all police calls in the City of Greensboro (five minutes desired).

2. Replace patrol vehicles as no less than four-year intervals.

3. Strive to maintain a ratio of 2 sworn officers for each 1,000 functional population.

MUNICIPAL COURT

Description

A municipal court is needed to bring to justice violations of the municipal code. A judge and court service personnel must be available, and facility space for holding court session is also required. As noted above, many cities devote one room or facility for both their court room and city hall council chambers. In the past, Greensboro has held municipal court 2-3 times a month in a portion of the Fire Station which contains about 2,000 square feet of space. Municipal court is not an administrative-intensive operation, given the relative infrequency of municipal offenses other than traffic infractions.

Analysis of Expenditures and Revenues

In Greensboro, expenditures for court services amounted to 1.7 percent of the general fund in the 2008-2009 fiscal year. Courts, through fines and other fees, provide some revenue to the general fund.

Recommendations

1. Seek to provide a permanent alternative to use of city hall or the fire station for municipal court. Consider an intergovernmental agreement with Greene County as may be appropriate for this purpose.

2. Evaluate and reassess fines, court charges, and related fees so that Court Services is self-sufficient from a budgeting perspective.

COUNTY COURT SYSTEM AND SHERIFF

Greene County provides countywide courts and law enforcement via the Greene County sheriff. Though critically important to Greensboro, these facilities are not analyzed further in this plan, since they are county rather than municipal facilities. Like police departments, county courts and law enforcement are labor intensive and expensive operations, consuming significant shares of county budgets.

JAIL/DETENTION/CORRECTIONS

Jails are expensive capital facilities to construct, and housing prisoners is also a costly operation. Some municipalities have their own jails, but it is customary for cities to utilize county jails or detention centers instead of maintaining jail cells or detention facilities. In some cases, cities and/or counties contract with other local governments to provide detention facilities or house prisoners on a temporary basis. Greensboro relies on Greene County for these services, including the housing of detainees of municipal code violations in the law enforcement center off of Industrial Boulevard in Greensboro. It is important for the city to maintain and update or renegotiate, as necessary, existing intergovernmental agreement(s) with Greene County to house municipal prisoners.

FIRE AND RESCUE DEPARTMENT

Overview

Planning for fire protection involves several steps, including the identification of the nature and extent of fire risks, establishment of level of service standards, identification of the most efficient and effective use of public resources to obtain the level of service standards, and implementation of a management and evaluation system.[1] The water system, discussed in another section, is an integral part of fire protection capabilities. Fire houses must be adequate in terms of size (e.g., equipment storage, number of bays for rolling stock, full-time firefighters' quarters, etc.).

Fire protection is broader than many people realize at first glance—fire departments have become providers of emergency medical care, emergency management, disaster assistance, "cat in the tree" calls, rescue services, and many other roles. The overall objective of fire

[1] Burns, Robert B. 1988. "Planning for Community Fire Protection." In Ronny J. Coleman and John A. Granito, eds, *Managing Fire Services*, 2nd Ed. Washington, DC: International City Management Association, 1988.

protection services is to "minimize casualties and losses of property from fire by helping to prevent fires from occurring and to reduce losses and casualties from fires that do occur.[2]

Fire departments are complex operations including not only fire suppression activities but also fire prevention and rescue. They are capital intensive operations, as they require fire stations spread out geographically in the community in order to provide adequate response times. In addition, rolling stock (fire trucks) is very expensive, and because they are usually held by a municipality for ten years or more, they are considered "capital items" and funded frequently through capital budgets. Like police departments, fire departments can be labor-intensive if full-time professional firefighting staffs are maintained 24 hours a day, seven days a week. Many smaller municipalities rely on volunteers to staff local fire districts or fire departments; even volunteer staffing is not without cost, however.

Fire departments have high capital costs due to multiple fire stations and the need for capital equipment. Fire department requirements also intersect to some extent with water system planning and operations. For instance, fire hydrants are normally a part of the water system in order to provide adequate, pressurized water available for fire fighting. To that extent, capital facility improvements to the water system can be vitally important to fire suppression activities and improve Insurance Services Organization (ISO) ratings, thereby lowering private costs for fire insurance. Few, if any, revenues are associated with fire department operations, unless a fire fee is charged to residents and businesses.

Description of Existing Facility Arrangements

In Greene County, fire protection is provided countywide (see figure) via nine stations. Greensboro has one fire station (located on Siloam Road) (see photo right), and the city government provides general funds toward its operation and maintenance. Greensboro Volunteer Fire Department, Station #1 (one of nine stations in Green County) consists of a four-bay, 9,375 square-foot facility, built in 1988. The station is owned by the city of Greensboro. The volunteer fire department responds to all structural, wood, and grass fires when requested.

Greensboro Fire Department

[2] Hatry, Harry P., et al. *How Effective Are Your Community Services? Procedures for Measuring Their Quality*. 2nd Ed. Washington, DC: Urban Institute and International City/County Management Association, 1992.

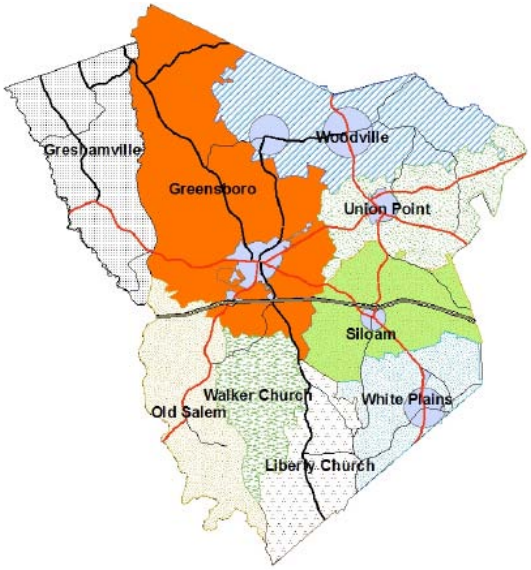


Figure 3.1 Greensboro Fire District in Countywide Perspective

Source: Comprehensive Plan, Greene County and Municipalities, 2004,
by Northeast Georgia Regional Development Center (Chapter 5, Figure 6).

Results of Questionnaires

Respondents to the initial questionnaire were, by and large, somewhat or very satisfied with the current levels of fire protection service in Greensboro. The project prioritization questionnaire listed one fire-related project of the 47 total projects – purchase of a ladder truck. Respondents rated that project as a very low priority (42nd).

Assessing Facility Adequacy

Unlike many other services, there are numerous metrics on which to base a determination of adequacy for fire departments. These include the overall Insurance Services Office, Inc. (ISO) rating, the amount and type of development served within radii of stations, the number of fire stations, the number of bays and square footage of individual fire stations, the staffing levels per station and piece of equipment, the rolling stock (heavy vehicles such as engines and ladder trucks assigned), the number of pieces of reserve equipment, response times, and various other metrics related to water supply including fire hydrant spacing and flow (water pressure).

The Insurance Services Office, Inc. (ISO) rates communities according to the adequacy of water and fire protection systems. The Fire Suppression Rating Schedule (FSRS) is the manual ISO uses in reviewing the fire-fighting capabilities of individual communities. The schedule measures the major elements of a community's fire-suppression system, including but not limited to the sizes and types of buildings in a community, the presence or absence of fire alarm systems, the way calls are received and handled, whether fire fighters are paid or volunteer, the size of water mains and capacity, and how long it takes to respond to a call. Fifty percent of the overall grading is based on the number of engine companies and the amount of water a community needs to fight a fire. ISO reviews the distribution of fire companies throughout the area and checks that the fire department tests its pumps regularly and inventories each engine company's nozzles, hoses, breathing apparatus, and other equipment. The rating schedule manual uses a numerical grading system called the Public Protection Classification

(www.iso.com). ISO ratings are based on a scale from one to ten, with a one being the best and ten being no fire protection.

Table 3.1
Projection of Fire Department Facility Needs
City of Greensboro, 2009, 2014 and 2020

	2009	2014	2020
Functional Population, City of Greensboro (persons)	5,440	6,300	7,050
Level of Service Standard (square feet per functional resident) (based on 9,375 square feet of existing space)	1.72	1.72	1.72
Adequacy determination (existing facilities in 2009)	Adequate (existing standard)	Inadequate	Inadequate
Total Square Footage Needed at Existing Level of Service Standard (square feet per functional resident)	0	10,836	12,126
Additional space to add above existing levels (square feet)	0	1,461	2,751

Analysis of Expenditures and Revenues

Greensboro allocated approximately 4 percent of the general fund budget in the 2008-2009 fiscal year for fire department operations. Because the Greensboro fire station serves an area much greater than the City of Greensboro, the city is not (or should not be) considered fully responsible for the entire costs of the Greensboro Fire District. Indeed, in the FY2008-09 budget, the city shows $30,000 revenues from Greene County for county fire charges. It should be noted that municipalities often desire, or in some cases are often expected, to provide a higher fire protection level of service than rural, county fire districts. Greene County's 2007-2008 general fund budget for the year ending September 30, 2008, reveals budgeted expenditures of $104,910 for the county fire department. The county fire department relies on volunteers.

According to the comprehensive plan, each of the respective fire departments receives funding from the Special-Purpose Local Option Sales Tax (SPLOST) for capital improvements and each is eligible to create a special tax district to generate revenue for their respective department. The most recently negotiated intergovernmental agreement for use of upcoming SPLOST funds indicates that Green County has devoted $2,400,000 for fire protection facilities and equipment, and Greensboro has been allocated $900,000 for public safety facilities and equipment in the upcoming SPLOST program. It is also noted here that as "public safety" facilities, capital improvements to serve new development are eligible to be funded with development impact fees. As noted previously, however, impact fees are not considered a viable funding source in the short term.

Assessment of Facility Needs

Outside the city, Greene County is responsible for fire protection. The Greensboro fire district is therefore a unique combination of city and county unincorporated geographic areas. It is not known how long Greensboro can or should reasonably be expected to continue relying on the county's volunteer fire department. Because of the concentration of industry, businesses, residences, and institutions in Greensboro, needs are clearly greater within the city limits than in unincorporated parts of the Greensboro fire department's jurisdiction.

If one considers a higher level of service is needed in Greensboro proper (city limits) as opposed to the Greensboro fire district (see map above), then the city should strongly consider eventual establishment of its own municipal fire department, and/or establishing a special tax district to fund improvements over the next several years. Greensboro's fire station is a long way from the northern part of the county which is still within its fire district. At the other end, near I-20, as commercial and industrial development continues in that area, fire calls and needs are bound to increase significantly. In a longer-term perspective, Greensboro should probably work with the county to de-annex the northern part of its fire service area from the Greensboro fire district (allowing other potentially closer districts to serve that area), and establish a second Greensboro fire station south of I-20 or immediately near the interchange of I-20 and SR 44. That recommendation is valid as growth occurs in a more concentrated fashion around the interchange of I-20 and SR 44, but it also appears to be warranted based on the facts that the Greensboro fire district extends south beyond the current city limits – along a growth corridor (SR 44), and because the I-20/SR 44 interchange is a good four-minute or more travel time from the existing fire station in Greensboro.

Fire trucks are properly considered capital items, because they have a useful life of ten years or more and are not normally purchased through general fund expenditures. They are therefore properly considered in the capital facilities plans for Greensboro.

Greensboro's fire department has identified the need to purchase a ladder truck to serve existing and future anticipated development. Generally, the fire department has concerns about reaching occupied floors above the second-story of a building, and Greensboro now has three-story condominiums which raise issues of rescue (see photo). As a result, when the city put together its SPLOST funding proposals and negotiated an agreement with Greene County for funding, it included $900,000 for the purpose of purchasing a ladder truck.

Occupancy above Second Story Height in Greensboro

The SPLOST agreement was considered by the city manager to be a preliminary suggestion and subject to further refinement based on this plan (November 2008 interview). Furthermore, whether such a large percentage (approximately 13 percent) of city SPLOST funds (almost $7 million projected) should be spent on a ladder truck has become a local issue, prompting the city to seek an independent assessment from the Northeast Georgia Regional Commission as to whether the ladder truck for the Greensboro fire department should be funded as initially proposed using SPLOST funds.

While the results of the five-year plan should be considered tentative, pending the Commission's recommendations in that regard, the analysis here would suggest that present needs for a ladder truck are likely to be limited only to third-story residential occupancies (i.e., one existing project), and perhaps third-story occupancy of hotels. There may very well be alternatives for the fire department to ensure the public safety of residential occupancies above second-story buildings, such as sprinkler systems and extensions of existing ladders. In a time

where there are so many, competing, needs for SPLOST funds, and the prospects that in a poor economy such funding may not be generated at levels initially projected, serious consideration of the issue of whether to fund a ladder truck with SPLOST funds is certainly warranted.

Another consideration with regard to this issue is the sentiment of the steering committee for the five-year planning effort. In a questionnaire which asked committee members to rate prospective projects, the purchase of a ladder truck received a low priority rating (ranked 42 of 47 projects preliminarily identified).

Furthermore, as alluded to in the comprehensive plan, a special district method of funding future improvements is an alternative that could be explored for funding major new capital equipment for the Greensboro fire district. Additionally, as the needs for a ladder truck are based primarily on height, and Greensboro so far does not have significant numbers of dwellings with occupancies above the second story, a fire impact fee (development impact fee program) seems to have merit in terms of funding needs that are generated primarily based on new development alone.

Yet another consideration with regard to this issue is whether the Greensboro fire district has adequate space to house a new ladder truck upon purchase, and whether that location is the most optimal given potential service demands.

Fire Hydrants

Fire hydrants are placed for purposes of fire protection, and they also provide a means of flushing segments of the water lines. As part of new water line extensions, the city's consulting engineer has recommended hydrants be installed every 750 feet (Pendergrass & Associates 2002). If this standard is met, most structures would be within 375 feet of a hydrant along the street frontage. A minimum standard of having all structures within 500 feet of a fire hydrant is recommended. The cost of installing additional fire hydrant assemblies is approximately $1,500 each (Pendergrass & Associates 2002).

Response Times

The speed of providing fire suppression services is essential. Therefore, response time is often one of the more important level-of-service standards. Speed is a function of distance, and therefore, radii or travel time distances are often plotted around fire stations as a measure of time as well as distance. Sometimes, average response time statistics can be used or standards established. A five minute standard is an absolute maximum, because research into fire indicates that temperature increases and the fire builds during the first few minutes—typically three or four. After four or five minutes, unrestrained fire growth leads to flashover or ignition of the total contents of the room (or rooms, or building). Furthermore, five minutes is not sufficient when one considers that an unconscious person with depleted oxygen will typically suffer permanent brain damage after approximately four minutes. "A relatively high percentage of fire alarms are handled successfully by the first arriving suppression vehicle, provided it arrives quickly, has a sufficiently large crew, and does not have to perform multiple duties such as search and rescue or laddering as well as extinguishment."[3]

[3] Granito, John A., and John M. Dionne. 1988. "Evaluating Community Fire Protection." In Ronny J. Coleman and John A. Granito, eds, *Managing Fire Services*, 2nd Ed. Washington, DC: International City Management Association, 1988.

Recommendations

1. During the short-term or medium term, consider revising the Greensboro fire district to de-annex the northern portion of the service area if it can be served safely and feasibly by other county fire districts.

2. Complete the independent assessment of whether Greensboro should purchase a ladder truck for some $900,000, using approximately 13% of anticipated SPLOST funds over the next five years. If the assessment finds the ladder truck is not needed in the next five years, or based on existing development-generated needs, amend the intergovernmental agreement with Greene County for SPLOST funds to redirect funds to other, higher priority uses.

3. Consider establishing a special fire tax for the city of Greensboro, and which may include unincorporated lands within the current Greensboro fire district. The fire district fees should not be uniform across the district, but rather should be higher for high-risk industries and properties that are within a very short response time of the department's facilities. Unincorporated areas within the district that are more remote, with longer response times, have less benefit because of longer response times and potentially could be charged at lower rates.

4. Consider an impact fee for commercial and residential developments with occupancies above typical second-story heights, which could be established to exclusively fund a ladder truck, which is required to serve the unique needs of such developments.

5. Plan for a second, 2,750- to 3,000-square foot fire station in the immediate vicinity of the I-20 and SR 44 interchange by the year 2019 (deficiencies projected by 2014), assuming passage of a funding source (special fire tax district recommended above). Fund the new station by 2017. The estimated cost of building the facility (approximately $550,000) and equipping it with one fire truck (estimated $250,000) is approximately $800,000. That figure excludes land costs and the ladder truck described above, and it assumes a two-bay, 3,000 square foot facility at $150 per square foot.

6. Over the long term, reevaluate the reliance on the countywide system of volunteer fire departments and consider establishing a City of Greensboro fire department.

Level of Service and Performance Standards

1. Maintain and ensure minimum water flows for fire-fighting purposes of 1,500 gallons per minute in commercial areas and 1,000 gallons per minute in residential areas.

2. Each structure should be within 500 feet of a fire hydrant (preferably 375 feet).

3. Reduce the ISO rating in the City of Greensboro from current level "5" to a "4" by 2019.

4. Within the city of Greensboro, first responders should arrive within a response time of two (2) minutes or less in 95 percent of the cases, and fire calls should have response times of no more than four (4) minutes.

EMERGENCY MEDICAL SERVICES/911 AND EMERGENCY MANAGEMENT

Emergency Medical Services

Emergency medical services (EMS) are often provided on a countywide basis by counties or private vendors, rather than municipalities. As of 2004, Greene County had purchased two fully equipped ambulances and was establishing EMS as a county-operated function after some years of contracting with private providers. EMS vehicles are heavily used and become a frequent expenditure for the service provider, though they are not necessarily considered capital items since they are not maintained for ten years or more.

Greene County EMS is located along SR 44 (2070 South Main Street)

Similarly, emergency communications and dispatch are often done on a countywide basis in a manner coordinated with municipalities in the county. Emergency communications systems are expensive and require periodic expenditures to maintain and upgrade. Because Greene County provides these services for Greensboro, they are not discussed further here. However, it is important to note that Greensboro's police and fire departments rely on countywide communication systems and therefore may be requested or required to contribute funding toward the maintenance and upgrade of such communication facilities and services.

Mutual Aid Agreements

Counties and municipalities are authorized by Georgia law (O.C.G.A. 36-69-1 et seq.) to enter into contracts and mutual aid agreements with counties or municipalities for the provision of law enforcement services in a local emergency.

Emergency Management

Emergency management involves responding to various natural and man-made disasters, including but not limited to flooding, toxic chemical spills, and domestic acts of terrorism. Though emergency management functions are often addressed by a given county on a countywide basis, they must involve the municipalities, and emergency management plans often assign vital roles to key municipal personnel such as the fire department (rescue), police department (public safety), and public works (critical infrastructure). Because Greene County provides these services for Greensboro, they are not discussed further here. However, the costs of participating in emergency management planning and operational exercises, and their burden on city staff, should not go unnoticed at the time of municipal budgeting. Furthermore, full preparation for emergencies can also necessitate capital expenditures for specialized equipment. The likelihood is good that disaster will strike any community within the 20-year planning horizon of a comprehensive plan. Fire professionals often are tasked with taking the lead in managing emergencies. That assignment of responsibility is logical because they deal with fires, rescues, hazardous materials, and many other life-threatening situations. They have the communications to organize responses, can mobilize the proper equipment, and have the tactical skills needed to make rescues and extractions. Disaster mitigation, preparedness, response, and recovery long have been parts of local government planning, though it is

probably not often that emergency management is integrated into the local government's comprehensive plan.

Local governments should conduct community hazard vulnerability analyses to identify the types of environmental extremes (e.g., floods, tornadoes, hurricanes, earthquakes), technological accidents (e.g., toxic chemical releases,), and deliberate incidents (e.g., sabotage or terrorist attack involving chemical, biological, radiological/nuclear, or explosive/flammable materials) to which their communities may be exposed. Plans for each potential hazard (e.g., flood, tornado, hazardous material releases, etc.) should be integrated into a comprehensive plan for multi-hazard emergency management.[4]

Analysis of Expenditures

Greene County's 2007-2008 general fund budget for the year ending September 30, 2008, reveals budgeted expenditures of $152,326 for emergency management.

Recommendations

1. Conduct or periodically update community hazard vulnerability analyses to identify the types of environmental extremes (e.g., floods, tornadoes, hurricanes, earthquakes), technological accidents (e.g., toxic chemical releases,), and deliberate incidents (e.g., sabotage or terrorist attack involving chemical, biological, radiological/nuclear, or explosive/flammable materials) to which the city may be exposed.

2. Participate with the county in preparing plans for each potential hazard (e.g., flood, tornado, hazardous material releases, etc.) and integrate those tactical plans into a comprehensive plan for multi-hazard emergency management.

[4] Excerpts from Chapter 7 of *Emergency Management: Principles and Practice for Local Government,* Second Edition (December 2007), published by International City/County Management Association.

CHAPTER 4
UTILITY-TYPE OPERATIONS

Utility-type operations in Greensboro include natural gas, water, and wastewater (sanitary sewer). These operations typically charge fees and thus have regular revenue streams to offset expenditures. This chapter also discusses stormwater management and solid waste management.

NATURAL GAS

Greensboro operates a natural gas distribution system. It purchases natural gas and distributes it to customers. The natural gas fund is its own, separate fund in terms of municipal accounting. The cost of purchasing natural gas in the most recent annual budget was nearly $5 million, and total expenses (including a transfer to the general fund) were more than $6.5 million. A key, recent, capital cost of maintaining the gas system was the replacement of gas meters at a cost of $100,000. Even with a transfer to the general fund, the gas department had more revenues than expenditures in the most recent municipal budget.

WATER SYSTEM

Overview

Potable water is a vital community service. Developed areas depend for their very survival on water supply. With any growing community, the need for water will continue to increase. Municipal water is best thought of as an integrated system of production, treatment, storage, and distribution. Even the smallest public water systems are complicated and expensive operations. Thus, there are many aspects of the water system that normally are included in facility analyses and recommendations.

The federal Safe Drinking Water Act of 1974, as amended, establishes strict water quality standards. Compliance with the standards developed under this law is mandatory. Many water sources require additional, expensive treatment in order to achieve these new standards. Even after full treatment, including filtration, water is disinfected to ensure the destruction of pathogenic organisms. Bacteriological, physical, and chemical tests are required to be performed on water samples collected regularly from the source, during treatment, and from the distribution system. Water systems should meet other standards with regard to water color, turbidity, odor, and taste. The city should monitor these other water quality standards and should be responsive to citizen complaints with regard to water quality.

A major factor in determining pipe sizes and water pressure is provision for fire protection (see discussion of fire hydrants in the chapter on public safety facilities). Building, life safety, and fire codes generally establish recommendations for minimum water flows. Pressure is also an important consideration – the optimum range for water system pressure is between 40 and 60 pounds per square inch (psi). A minimum pressure of 20 psi is needed during fires, and customer complaints can be expected when water pressure falls below 20 psi. Too much pressure can cause leakage and failure of older hot water heaters, so a maximum main pressure is 100 psi. [5]

[5] Colley, B. C. 1986. *Practical Manual of Site Development*. New York: McGraw-Hill.

Water storage is needed to provide extra volumes of water to fight fires and feed portions of the distribution system during repairs to mains, pumps, and transmission pipes. Distribution system storage facilities may vary considerably, with no apparent recommended professional standard.

Distribution System Design

Whenever possible, water supply lines should be laid out in a grid-like manner so that there are no dead ends (i.e., a practice called “looping”). The advantage of looping is that there are no dead ends where water can stagnate, and if repairs are required, smaller areas will have the water supply cut off. Sizing the piping system is usually done by the water company using the “Hardy-Cross solution of successive approximations or the nodal method. The water system includes other appurtenances in addition to water mains. There are a variety of valves. Gate valves are used to regulate the flow in pipes and are located at many places in the system. Other types of valves in the water system include air-relief, blow-off, and drain values, as well as check valves, pressure-relief valves, air inlet valves and pressure-regulating valves. Thrust blocks, water meters, and fire hydrants are also components of the water distribution system (Colley 1986).

Standard Specifications

The water system should be guided by a set of standard specifications and details. Such standards provide uniformity of construction, materials, and equipment. Sources of appropriate standards for water systems include the American Water Works Association, the American Public Works Association, and the American Society for Testing and Materials. Such standards should be adopted by the city engineer as part of a more comprehensive set of construction standards and specifications.

Forecasting Future Water Needs

To meet future needs for water, estimates of future consumption are needed. Many factors influence the amount of water used, including the price, leaks in the system, wasteful practices versus conservation measures, the sizes and types of commercial and industrial establishments, and the amount of annexation (or changes to users within extraterritorial water service area boundaries) and rezoning. If the estimates are too low, the community risks not having enough water to meet its needs. If the estimates are too high, it risks spending substantial sums of money for capacity it will not use.

Domestic water use can vary between 40 and 120 gallons per person per day. Average per capita per day consumption of water for all uses (residential, commercial, institutional, and industrial) generally is in the range of 170 to 300 gallons per capita per day. Water use can be much higher than these averages, and there are substantial variations in water use from community to community, and according to land use. For planning purposes in the absence of a water master plan, a level of service of 300 gallons per day per person is recommended. More specific estimates of water demands can be completed by consulting use data such as those indicated in Table 4.1.

Table 4.1
Average Water Use by Selected Land Use

Use	Average Use (Day)
Detached, Single-Family (site built)	100 gallons per capita
Manufactured home	75 gallons per capita
Multi-family dwelling unit	75 gallons per capita
Office	93 gallons per 1,000 gross square feet
Retail Space	106 gallons per 1,000 gross square feet
Hotel or motel	168 gallons per room
Restaurant	50 gallons per seat
Day care center or school	16 per student
Industry	150 gallons per employee
Assembly hall	2 gallons per seat in largest assembly room
Self-service laundry	250 gallons per washing machine

Source: Compiled by Jerry Weitz & Associates, Inc., from the following sources: Robert Burchell et al. *Development Impact Assessment Handbook* (Washington, DC: Urban Land Institute, 1994). Listoken, David, and Carole Walker. *The Subdivision and Site Plan Handbook* (New Brunswick, NJ: Rutgers, the State University of New Jersey, Center for Urban Policy Research,1989). Matusik, John, and Gary L. Nickerson. "Water Distribution." In *Land Development Handbook: Planning, Engineering, and Surveying*, Second Edition. The Dewberry Companies (New York: McGraw-Hill, 2002.). Colley, B. C. *Practical Manual of Site Development* (New York: McGraw-Hill,1986).

Results of Questionnaires

The public water system in Greensboro is considered satisfactory according to members of the steering committee. An initial questionnaire provided results from 10 members of the committee, who responded by and large that they are satisfied or very satisfied with the city's water system at present. Repairing water lines where needed was ranked highly (7^{th} of 47 possible projects) by respondents to the second questionnaire asking for rating of potential projects as "very high," "high," "medium," "low," and "none." A water line replacement program, however, ranked much lower (tied for 26^{th} of 47 projects listed). And extending water lines to unserved areas rated even lower (40^{th} of 47 project listed). These results are taken generally to mean that where problems exist in the water system, stakeholders support the correction of such problems, but replacement of aging water lines should not yet be programmed and the city should not subsidize the extension of water lines to new areas.

Assessment of Future Needs

Greensboro's water system served 1,017 residential customers and 239 commercial and industrial customers as of about 2004 (Comprehensive Plan, Chapter 5, p. 5-7).

The comprehensive plan includes an assessment of the Greensboro Water System – indicating that storage capacity may become an issue within the plan's horizon (to the year 2024). The assessment also indicates that the system has inadequate pipes that need to be replaced to maintain adequate water quality and pressure (Chapter 5, p. 5-25). Water storage in Greensboro as of the 2002 five-year plan consisted of 500,000 gallons in a basin at the water plant and three water towers with 100,000 to 150,000 gallons of storage each. Since that plan, the city has added a water tank south of I-20. Greensboro's system is interconnected with Union Point's water system by an eight inch main.

New Water Storage Tank
East of Interstate 20

If not already sufficient, contingency plans should be prepared for dealing with major water line breaks, loss of water sources during drought, and other possible damages to the water system such as flooding. Emergency funds may be available from federal and state agencies under certain conditions.

Drought Preparedness and Water Conservation

Water supply is among the most important elements in determining carrying capacity and the limits to population and economic growth. Some communities have responded to the threat of drought with drought preparedness programs. For communities that supply water, such a program should provide evidence of drought-condition water yields and identify new long-term sources of water supply. Water utilities should also review rate structures to ensure that they rise as households and businesses use more water (i.e., water conservation pricing as opposed to average cost pricing).

For other communities, whether they supply water or not, a drought preparedness program should address the receipt, storage, and distribution of emergency water supplies, general water demand management, restrictions on outdoor water use for landscaping and swimming pools, watering lawns, and washing vehicles, and water conservation education programs. Communities can prepare water audits, which are studies of how efficiently water is being used and the potential to conserve water. Where water supply is a significant limitation, major new developments or expansions of water service areas should be reviewed against projected future water supplies.

Analysis of Expenditures and Revenues

Like gas, the water and sewer systems are financed via a fund that is separate from the general fund. Water and wastewater are accounted for separately within that account. In the most recent budget, total revenues from the water portion of the fund were from water charges and water meter charges; they totaled nearly $1 million. Capital expenditures included a payment of principal and interest of $100,000 on Georgia Environmental Facilities Authority (GEFA) loans and $100,000 for the replacement of water meters. The city also made a payment of $25,000 on a major piece of capital equipment (backhoe).

Financial Considerations

Because the water system is a utility, the revenue produced by the system should be sufficient to pay for all necessary capital expenditures, operation and maintenance costs, debt service, administrative costs, and provide a contingency fund for emergencies. Customers should also pay for the amount of water they use. Flat monthly rates for water encourage wasteful practices. Customers requiring very large volumes of water should pay additional demand charges. All customer lines should be metered. Developers of new subdivisions should be required to install the water mains and appurtenances through or along the tract and deed the facilities to the city. If it does not already exist, the city should establish a policy for the "oversizing" of water mains so that when a larger water main is needed than would serve the subdivision or development, the city can contribute a prorated share of the cost to construct a water main that serves a larger population or area.

Level of Service and Performance Standards

1. Maintain minimum water system pressure of 20 pounds per square inch (psi) with a desired range of between 40 and 60 psi. The maximum main pressure should be 100 psi.

2. In the absence of a water master plan, a level of service of 300 gallons per day per person should be maintained.

Recommendations

1. Prepare and adopt standard specifications and details for the water system.

2. Prepare and maintain maps of major water lines in the city's water system service area.

3. Since compliance with the standards developed under federal Safe Drinking Water Act of 1974, as amended, is mandatory, improvements necessitated by that mandate should receive the highest of priorities.

4. Whenever possible, water supply lines should be laid out in a grid-like manner so that there are no dead ends (i.e., a practice called "looping").

5. Repair leaks and other problems with existing water lines. Include sufficient funding for repair of existing water lines in the capital improvement program.

6. Replace water lines when the cost of repair becomes inefficient in comparison with replacement costs.

7. The city should not subsidize the extension of water lines to new areas for development.

8. Prepare contingency plans for dealing with major water line breaks, loss of water sources during drought, and other possible damages to the water system.

9. Review rate structures to ensure that rates increase as households and businesses use more water (i.e., water conservation pricing as opposed to average cost pricing).

10. Charge water rates that result in revenue sufficient to pay for all necessary capital expenditures, operation and maintenance costs, debt service, administrative costs, and provide a contingency fund for emergencies.

11. Developers of new subdivisions should be required to install the water mains and appurtenances through or along the tract and deed the facilities to the city.

12. Establish a policy for the "oversizing" of water mains so that when a larger water main is needed than would serve a given subdivision or development, the city can contribute a prorated share of the cost to construct a water main that serves a larger population or area.

SEWER SYSTEM

Overview

Sanitary sewer systems are indispensable to maintaining community health. The city must be able to manage water-borne waste by operating, maintaining, expanding, and replacing components of the wastewater system to ensure uninterrupted collection, transport, processing, and treatment. Collection and treatment of sewage is one of the most critical elements in the development of any site. A key challenge for the wastewater system is to convey all sanitary wastewater flows to the treatment plant without bypassing flows into receiving waters and without causing waste backups that store sanitary sewage on private properties. Wastewater systems that discharge into receiving waters must apply for a permit to discharge under the National Pollutant Discharge Elimination System (NPDES) administered by the U.S. Environmental Protection Agency. Permits require collection of samples, laboratory analyses, reporting, and periodic inspections to assure compliance with regulatory requirements.

Existing Facilities

The city operates a sewage system and treatment is via an activated sludge system plant east of South Main Street on Town Creek. There is also a slow-rate land application system there. The city's sewage system served 756 residential customers and 178 commercial and industrial customers as of 2004 (Comprehensive Plan, p. 5-9).

System Design Considerations

In most cases, a sewer system can be accommodated by installing gravity-flow sewer and connecting to the existing public sewer system. When existing sanitary sewer outfalls are too high for the design of a gravity-flow system, a pumped system with forced mains (pressure systems) must be used, with pumping stations located at either the upper or lower end of the force main (Colley 1986).

Sewage flow rates vary during the day. Due to such fluctuations, the sewer pipe sizes are not designed for the average flow, but rather, peak flows. The peak flow is the highest instantaneous rate of flow occurring during the day. Peaking factors should be applied by a civil engineer in considering flow requirements. On larger sites, infiltration of groundwater into the sanitary sewers may be a factor in sizing the pipe (Colley 1986).

Maintenance of the sanitary sewer main network requires manholes installed at regular intervals and at potential trouble spots. Manholes must be provided where sewer mains connect and where there is a change of direction in the main (Colley 1986).

In areas where sanitary sewer is not available, septic tanks may be allowed for individual residences or for buildings generating small amounts of sewage. Soil tests for percolation are required, and the approval of septic tanks must meet minimum sizes and drain field sizes as required by the county health department. Within municipalities, on-site sewage management systems such as septic tanks are usually considered, at best, a temporary means of disposal.

Sewer Service Area and Recent Extensions

According to the sewer system map in the 1994 Comprehensive Plan, approximately 75% of the original circular city limits was at that time served by sanitary sewer. During the last five years, the city completed preliminary engineering work to serve the northeast portion of the city with sanitary sewer services (Pendergrass & Associates 2002). That area, which extends along N. East Street and Penfield Road, consists mostly of residences occupied by low- and moderate-income families. Sewer lines also were extended to Airport Industrial Park with a city-county Community Development Block Grant (CDBG) project. Greensboro also extended sewer lines along the SR 44 corridor and across the Interstate 20 Bridge Overpass.

Forecasting Future Sanitary Sewer Needs

As a general rule of thumb, approximately 70 to 80 percent of the potable water supplied by any given community's water system is returned to the sanitary sewer collection system. Sanitary sewer systems are usually sized to accommodate average wastewater flows of approximately one hundred gallons per capita per day.[6] (Somers et al. 1986). Another source notes that in general "about 60 to 80 percent of the per capital consumption of water will become sewage (Colley 1986). Yet another source estimates that 65 percent of the water used for residential use returns to the sewage system.[7]

Results of Questionnaires

Overall satisfaction ratings of sanitary sewer services in Greensboro are mixed as measured by the initial questionnaire of steering committee members. While half of the ten respondents were satisfied or very satisfied, three were dissatisfied or very dissatisfied. With regard to project priorities, sewer improvement projects ranked low. Upgrading the capacity of the sewage treatment plant rated 32nd of 47 projects listed, and extending sewer lines to priority unserved areas ranked 33rd. Discussion of potential projects revealed that Greensboro has one sewer line in particular that overflows and should receive immediate attention – that line runs north of Siloam Road.

[6] Somers, Donald M., Martin J. Manning, and L. Scott Tucker. "Water Resources." In Sam M. Christofano and William S. Foster, Eds., *Management of Local Public Works*. Washington, DC: International City Management Association, 1986.

[7] Brewer, William E., and Charles P Alter. *The Complete Manual of Land Planning and Development*. Englewood Cliffs, NJ: Prentice Hall, 1988.

Assessment of Future Needs

With regard to the Greensboro Sewer System, increasing demands on the system are anticipated in the comprehensive plan due to construction of multi-family residential development and expansion of commercial and industrial activity (including the I-20 interchange with SR 44). The sewer system assessment also indicates that the city needs to repair deficient segments of the sewerage network. Furthermore, additional extensions are likely to be needed, in order to mitigate septic tank failures and stimulate economic development, according to the comprehensive plan (Chapter 5, p. 5-28).

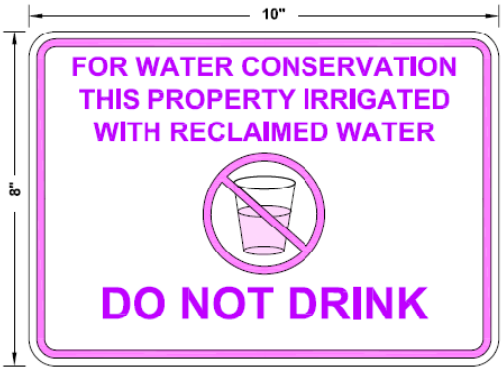
Analysis of Expenditures and Revenues

Like gas, the water and sewer systems are financed via a fund that is separate from the general fund. Water and wastewater are accounted for separately within that account. In the most recent budget, total revenues from the water portion of the fund were from water charges and water meter charges; they totaled nearly $1 million. Capital expenditures included a payment of principal and interest of $100,000 on Georgia Environmental Facilities Authority (GEFA) loans and $100,000 for the replacement of water meters. The city also made a payment of $25,000 on a major piece of capital equipment (backhoe).

With regard to sanitary sewer, revenues totaled approximately $750,000, levied from sewer charges sewer taps, and cut-on fees. Major capital outlays for the year were the Airport Road – One Georgia sewer line extension ($530,000) ($500,000 of which was covered through a One Georgia grant), payment on the principal for bonds ($373,200) and sewer meter replacements ($100,000).

Water Reuse or Gray Water

Reused wastewater, sometimes referred to as "gray water" or "reclaimed water," is wastewater from sewage treatment plants that receives at least secondary treatment before being used for agricultural, industrial, landscaping, or other uses. Gray water is subject to standards set by the U.S. Environmental Protection Agency which are based on the anticipated level of human contact. Gray water helps conserve potable water when lower quality water (i.e., "gray water" will serve the purpose).



For communities with reuse systems, reclaimed water is delivered to homes and businesses through an underground distribution system entirely separate from the drinking water system. Reclaimed water can serve in many capacities where it is unnecessary to use high-quality, potable (or drinkable) water. Uses of reclaimed water include: irrigating lawns and landscaping designs; irrigation of edible crops that will be peeled, cooked or thermally processed before consumption is allowed; use in fountains or decorative pools; and fire-fighting. Reclaimed water systems can save extensive amounts of drinking water each day. Use of gray water is less expensive for the vast majority of customers. Promoting greater use of reclaimed water among private developments helps to delay the need for developing costly new water sources and

building or expanding very expensive treatment plants. Promotion of water reuse can also help a community to comply with permits relating to its water supply and wastewater treatment.[8]

Level of Service and Performance Standards

1. In the absence of a more-specific, data-based standard for the City of Greensboro, plan for future sanitary sewer system demands based on the rule that 65 to 80 percent of water use will be returned to the sanitary sewer system.

Recommendations

1. Prepare and adopt standard specifications and details for the sanitary sewer system.

2. Prepare and maintain maps of major sewer lines in the city's sewer system service area.

3. Repair leaks and other problems with existing sewer lines. Include sufficient funding for repair of sewer water lines in the capital improvement program.

4. Favor gravity-flow systems over forced-main systems due to the need for pump stations in the latter, which can increase costs and require additional maintenance.

5. Replace sewer lines when the cost of repair becomes inefficient in comparison with replacement costs.

6. The city should not subsidize the extension of sewer lines to new areas for development, except where it has already or which is further needed for economic development within the economic development target area.

7. Charge sewer rates that result in revenue sufficient to pay for all necessary capital expenditures, operation and maintenance costs, debt service, administrative costs, and provide a contingency fund for emergencies.

8. Developers of new subdivisions should be required to install sewer mains and appurtenances through or along the tract and deed the facilities to the city.

9. Establish a policy for the "oversizing" of sewer mains so that when a larger sewer main is needed than would serve a given subdivision or development, the city can contribute a prorated share of the cost to construct a sewer main that serves a larger population or area.

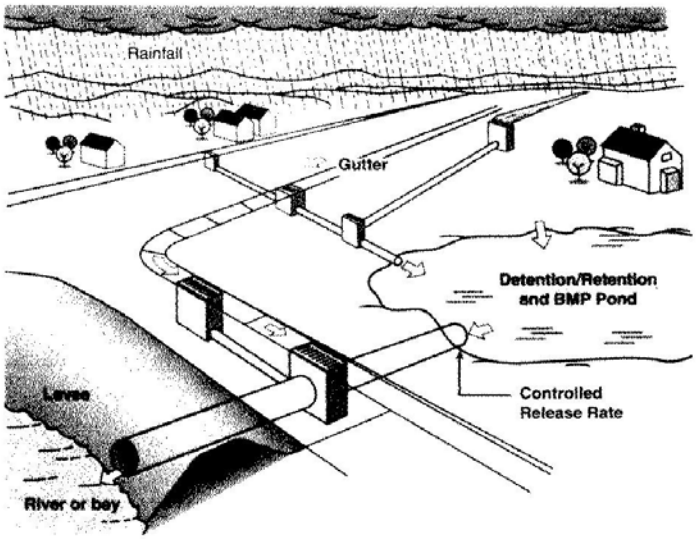
10. Over the long term, continue to consider the financial feasibility of a water reuse system.

[8] Daniels, Tom, and Katherine Daniels. 2000. *The Environmental Planning Handbook for Sustainable Communities and Regions*. Chicago: Planners Press, pp. 85. Flowery Branch, GA, Subdivision and Land Development Regulations, Sec. 1305, Reclaimed Water.

STORMWATER MANAGEMENT

Overview

Stormwater management is concerned with channeling runoff in a safe, controlled manner to protect land areas from erosion and flooding. Like sanitary sewer systems, stormwater drainage is a gravity-flow system, but where more outfalls are available and alternatives other than connecting to the existing network can be used (Colley 1986). The city has a general responsibility for ensuring that sufficient attention is given to storm water impacts, particularly along city roads. Storm drainage facilities must be designed to protect people and property from storm water inundation.



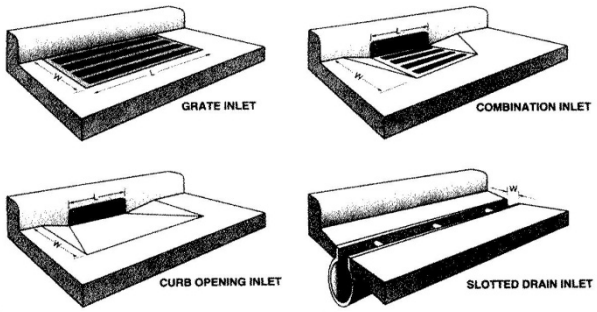
Source: Kibler, David F., ed., Urban Stormwater Hydrology Monograph 7. Washington, DC, 1982. Figure 21.1 in Springer, William S. 2002. "Storm Drain Design." Chapter 21 in *Land Development Handbook: Planning, Engineering, and Surveying*," 2nd Ed. New York: McGraw-Hill, 2002.

Figure 4.1
Typical Urban Drainage System

System Design Considerations

Surface improvements for controlling stormwater are grading, ditches, and storm water inlets. Drainage systems can be divided into major and minor systems. Minor systems consist of swales, ditches, gutters, pipes, inlets, and catch basins. Inlets intercept surface runoff and transfer it to the network of stormwater pipes. Storm water inlets are located at the low point in ditches or pipes, where the water is collected and routed underground. When piping is required, there are engineering criteria that must be applied. Systems must be designed according to established and accepted engineering specifications. Catch basins, which collect water flowing in streets, need to be located at the low points in streets, at the low points of intersections, usually at one end of the curb returns, and at other intervals to satisfy engineering criteria (Colley 1986).

The basic types of drainage structures are grate inlets, curb inlets, combination inlets, and slotted drain inlets (Springer 2002) (see figure). Combination curb and gutter inlets are very popular, but the type selected should be based on engineering judgment in regard to availability of grates, safety to the public, satisfactory flow, and cost (Brewer and Alter 1988).



Source: Springer, William S. 2002. "Storm Drain Design." Chapter 21 in *Land Development Handbook: Planning, Engineering, and Surveying*," 2nd Ed. New York: McGraw-Hill, 2002. Figure 21.30

Figure 4.2
Types of Curb and Gutter Inlets

Major systems include natural streams and creeks, channels, ponds, lakes, culverts, and detention ponds. Drainage systems can also be divided into on-site and off-site facilities – those that serve a single development such as a detention pond (the former), and those that serve multiple properties (regional) such as a large pond or lake. Stormwater management involves technical hydraulic engineering studies to estimate runoff and size stormwater facility components.[9]

The design of a municipal storm water drainage system depends on the amount of rainfall, and it also varies based on whether the system is designed to accommodate runoff from a 2, 5, 10, 25, or 100 year event. The quantity of runoff is also directly dependent on the surface condition in the watershed area, the extent and kind of vegetation, topography, and system characteristics (Brewer and Alter 1988).

Analysis of Greensboro's Drainage System

Greensboro is particularly concerned with the stormwater runoff from pavements on its roads. Stormwater runoff on roads can become a safety hazard – hydroplaning, reduction of visibility and icing can occur if water stands on local roads. It is therefore imperative for the city to remove stormwater runoff from roads quickly and mitigate the various possible safety risks. Roadways should be designed with the proper longitudinal slopes, cross slopes and fit with the proper type of curb and gutter section or ditch cross-section that will provide effective removal of stormwater runoff (Springer 2002).

[9] Springer, William S. 2002. "Storm Drain Design." Chapter 21 in *Land Development Handbook: Planning, Engineering, and Surveying*," 2nd Ed. New York: McGraw-Hill, 2002.

Informal Pond along Road in Greensboro

Pond Serving as Regional Detention

The system of stormwater facilities in downtown Greensboro is highly informalized. As the city has grown, it has relied more on naturalized drainage patterns as opposed to designing and constructing formal drainage system improvements. The figure (right) shows that as urban development occurs, more pavements are introduced to the system which require improvements to the drainage system.

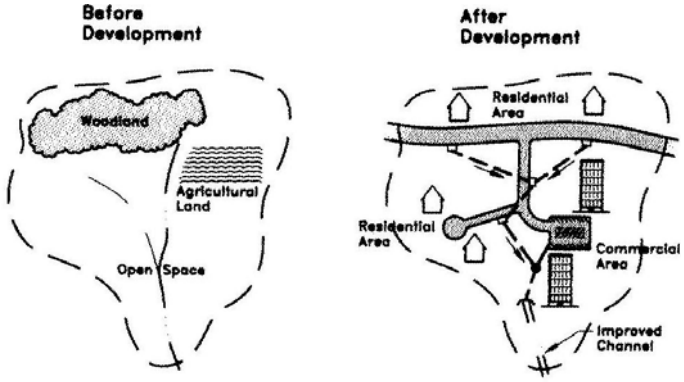


Figure 4.3
Drainage Before and After Development
Source: Parker, Dave, and Kathleen Schaefer, Updated/Revised by Champagne, Phillip C. 2002. "Design of Stormwater Management Facilities." Figure 22.1 in Chapter 22 in *Land Development Handbook: Planning, Engineering, and Surveying*," 2nd Ed. New York: McGraw-Hill, 2002.

In many if not most cases, water flows along the sides of streets without flowing in engineered ditches or drainage channels. In Greensboro, there is no separate fund accounting for stormwater management, although the city in the past has expended hundreds of thousands of dollars on drainage improvements. There are relatively few roads and streets that are built with curbs and gutters.

Drainage Inlet in Need of Repair

Undercutting and Crumbling of Road Pavement Due to Inadequate Drainage Conditions

Results of Questionnaires

With regard to drainage and stormwater management, the committee members expressed satisfaction with such facilities and services. In addition, this project also involved rating of potential projects by the five-year plan steering committee. A questionnaire of potential projects rated the preparation of a master drainage plan as 26th (tie) in a list of 47 potential projects. The general satisfaction levels expressed by the steering committee, and the relatively low ranking for a master drainage plan in terms of priorities, are collectively taken to mean that Greensboro by and large does not have major drainage issues that have been left unresolved.

"Green" Approaches to Stormwater Management

With today's focus on "green" approaches to development, there are many more choices available to handle stormwater than the structural methods traditionally used in the past. Today there are number of "natural-type" approaches that can be used successfully and in most cases for less cost. These approaches strive to allow stormwater to move above ground to the extent possible, rather than using constructed underground systems. Such methods promote more ecological approaches to stormwater management and often utilize vegetation (preferably native to the area) A few "green" drainage approaches to consider include the following:

Bioswales – open drainage courses filled with vegetation and rip/rap designed to slow the intensity of the water and also to cleanse it; vegetation is selected for its ability to cleanse pollutants from the water; bioswales may be designed as straight channels or meandering courses; the intent is to extend the time the water is in the bioswale, thus allowing for evaporation and cleansing; the use of bioswales is a method of reducing the quantity of runoff, while also improving the quality of the water.

Rain Gardens – a depression in the landscape which is planted to allow rainwater runoff an opportunity to be absorbed into the soil, thus replenishing groundwater supplies.

Porous Paving – paved surfaces that allow water to penetrate can be created using a variety of materials, including porous asphalt and concrete and pavers providing voids for water penetration.

The techniques summarized above are only a few of the many options now available to promote ecological approaches in the control of stormwater. Through utilizing these types of methods, the overall quantity of stormwater can be reduced, resulting in smaller and less costly drainage retention or detention structures. Also, water detention facilities can be made more visually appealing through the utilization of native plants. An element that is typically an eyesore can become a focal point as in the case of a wetland garden.

Recommendations

The prior five-year plan recommended that the city prepare a master drainage plan which would comprehensively identify and recommend specific improvements to the drainage system in the city. To date, the city has not funded and undertaken such a study. This update of the five-year plan, undertaken in 2008-2009, included a questionnaire which asked steering committee members to rate their satisfaction with various city facilities and services. Stated differently, frequent or recurring drainage problems would probably have resulted in levels of dissatisfaction and a higher priority score for preparing a drainage master plan. While relatively low in priority in terms of the committee's ranking, preparation of a master drainage plan is still recommended within the next five-years. The initial recommendation is still valid – the city needs to comprehensively assess its drainage system and plan and prioritize improvements.

In considering future drainage improvements, city engineering professionals should be sensitive to the physical character of Greensboro and whether curb and gutter projects will be compatible with historic districts and established residential conditions. For instance, one street lined with curb and gutter in a subdivision that is otherwise without such drainage improvements would likely be out of character. Furthermore, drainage plans should consider the need to use as many "green" or natural techniques as possible, including bio-filtration swales, landscaped detention ponds, and so forth.

SOLID WASTE MANAGEMENT

The Georgia Comprehensive Solid Waste Management Act, passed in 1990 by the Georgia General Assembly, mandates that local governments develop solid waste management plans which effectively reduce per capita solid waste disposal by 25 percent. As part of the Act's designated Minimum Planning Standards and Procedures, each jurisdiction's management plan must include a waste diversion element that identifies its public and private waste reduction and recycling initiatives. This includes its use of drop-off centers, buy-back centers, recovered materials processing facilities (MRF), curbside collection programs, commercial and industrial programs both in-house and those operated in cooperation with a local government program, source reduction and reuse programs, composting and mulching programs, and policies related to financial incentives, waste audits, and waste exchanges. The Minimum Standards also require each local government to report annually on its progress in meeting statewide solid waste reduction goals through such waste diversion efforts.

Waste Diversion

Waste diversion is the elimination of waste going to a final disposal facility. Methods to accomplish waste diversion include source reduction, recycling, and composting. It is important for local governments to obtain proper and accurate information related to various waste diversion options and to assess their associated costs to ensure selection and implementation of viable and effective initiatives for their communities.

Recycling is the process by which materials that would otherwise become solid waste are collected, separated, processed and reused or returned to use in the form of raw materials or products. Local governments may implement a variety of recycling methods including buyback and drop-off centers, curbside recycling collection, multi-family collection programs, and commercial, institutional and industrial recycling programs. Governments may also become involved in the processing and preparation of recyclables at material recovery facilities (MRF) for their ultimate transfer and sale to end-user markets.

The Georgia Department of Community Affairs (DCA), Office of Environmental Management, offers technical assistance to local governments in starting and maintaining waste diversion programs. The Office can help with developing Requests for Proposals (RFPs), contracts and procedures; planning and funding; public education; and with implementing a variety a waste diversion programs. The Georgia Environmental Facilities Authority (GEFA) makes grants and low-interest loans to cities, counties, and authorities for solid waste systems and improvements. Grants can be used to evaluate waste diversion programs, build recycling and composting infrastructure, and to develop education programs to promote waste reduction, recycling, and composting.

Summary of Facilities in Greene County and Greensboro

Greene County is a member of the Northeast Georgia Solid Waste Management Authority (Source: comprehensive plan). In Greensboro, solid waste collection is handled by private contractors. Greene County contracts with a private hauler, Attaway Waste Services, for countywide curbside collection of residential household waste for all county residents including those living inside the city limits of Greensboro. Non-residential collections are handled under private arrangements between waste generators and private vendors.

Greene County's 2007-2008 general fund budget for the year ending September 30, 2008, reveals budgeted expenditures of $1.15 million for sanitation/landfill (landfill disposal contract). Greene County has a contract with a private firm to provide a single, staffed recycling drop-off center at the Greene County Regional Airport. The drop-off center accepts aluminum, newspaper, plastics (#1 and #2), metals, glass, corrugated cardboard, white goods, brown goods, batteries and used motor oil. The County public schools, fire stations and some charitable organizations also collect aluminum beverage cans. Tires are recycled through local tire dealers. All of the cities in Greene County rely on county programs. The City of Greensboro provides curbside collection of yard trimmings and storm downed limbs and trees for all city residents (Source: Regional Comprehensive Solid Waste Management Plan).

There are no solid waste disposal facilities currently operating in Greene County. Solid waste collectors use one or more sanitary landfills in adjacent and nearby counties to dispose of solid waste generated in Greensboro and Greene County (Source: Regional Comprehensive Solid Waste Management Plan). During the course of implementing this five-year plan, it will be Greene County's responsibility to renegotiate a ten-year assurance of solid waste disposal capacity with private vendors and/or landfill providers; the current agreement is valid only until April 2013 (Source: Regional Comprehensive Solid Waste Management Plan).

CHAPTER 5
PARKS, RECREATION, OPEN SPACE, AND CULTURAL FACILITIES

These facilities and services generally include, for most municipalities, active parks, recreation programs, senior center, and the provision and maintenance of passive recreational facilities.

PARK AND RECREATION FACILITIES

City Facilities

The city's parks, recreation and open space sites are shown on one or more maps in this chapter. Currently, the city has one existing recreation site, Robinson Park, and a second site, Mary-Leila Cotton Mill Ball Field, which has been informally used for many years for recreation, but is not currently owned by the city. These sites, as well as other opportunities for future park development on publicly-property, are described in more detail below.

Robinson Park, located in the eastern part of the city, originally consisted of two fenced and lighted baseball fields, a tot ball field and a small covered picnic area. In recent years, the portion of this six-acre parcel with frontage on Main Street/GA Highway 15 has been developed into the city's new police station. The remaining acreage has been converted into a passive use park which consists of a small parking lot, paved walking trails, picnic tables and benches. A large parcel adjacent to Robinson Park has been acquired by the city and could potentially be used for park expansion.

The Mary-Leila Cotton Mill Ball Field (Figure 5.1) is part of this historic mill community. The recreational use of this site as a ball field likely dates from the mill village's original construction. This approximate eight acre site was at one time owned by the City of Greensboro, but in recent years its ownership returned to be part of the mill property holdings. While owned by the city, improvements were made, including the addition of ball field lighting. Today, with the site in private ownership as well as the development of a large-scale ball field complex by Greene County, active recreational use at this site as well as Robinson Park is no longer a local need. The park continues, however, to be used informally by the surrounding community.

During the process of preparing this five-year plan, the opportunity for the potential acquisition of this site as a public open space was discussed by steering committee members and positively received. The site appears to offer many benefits to the community as a future park site. The site, which is an irregular tract, (see figure 5.1) is surrounded by roads on all four sides, including: SR 15 to the west; Mill Street to the north; Greene Street to the south; and Spring Street to the east. In addition to the ball field, the site contains a brick warehouse associated with the former cotton mill and wooded sections near Greene Street containing the remnants of a former pecan grove. Northern sections of the site are fairly flat while southern sections gradually undulate to meet the elevated grades along Greene Street. The city's existing sidewalk system on Greene Street offers pedestrian connections from this site to the surrounding neighborhoods.

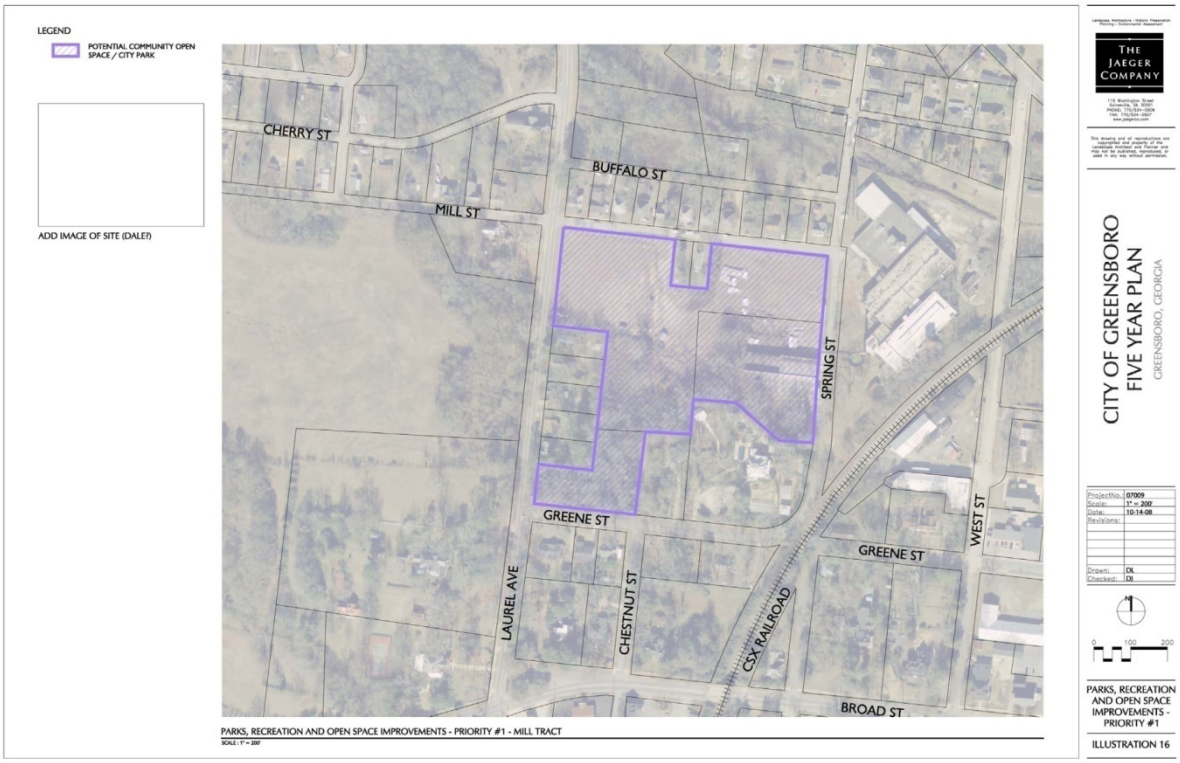


Figure 5.1 Mill Tract

Analysis of Expenditures

In Greensboro, the recreation budget for FY 2008-2009 was $50,740, suggesting that the city has limited financial capacity to devote to recreation facilities and programs. While the city maintains some park lands, it relies on Greene County to meet the demands of the citizenry for active parks and recreation programs. Greensboro had a pro-rated share expenditure of almost $49,000 (presumably to Greene County), in addition to its municipal recreation budget.

A major capital expenditure in the active annual budget is $558,000 to construct the Festival Hall Cultural Center. That capital improvement is funded with SPLOST ($500,000) and general funds ($57,830). Greene County's 2007-2008 general fund budget for the year ending September 30, 2008, reveals budgeted expenditures of approximately $127,000 for the recreation department. It also indicates a transfer from the county general fund of $197,624 to the Senior Center in FY 2008.

Results of Questionnaires

The initial survey of the steering committee asked respondents to indicate what they liked best and least about Greensboro, and it also asked respondents to rate their satisfaction with various facilities and services on a "likert" scale. Though low on the list, the lack of greenspace in the city was cited as one of the things steering committee residents liked least about the city. Respondents were generally mixed about city park facilities – more were dissatisfied or very dissatisfied than satisfied or very satisfied. The initial questionnaire also asked about proximity to park and recreation facilities; with regard to that question, a majority of the respondents were

dissatisfied or very dissatisfied. These findings suggest that the five-year plan should draw greater attention to the needs for park and recreation facilities serving Greensboro's residents.

With regard to potential projects, construction of the cultural center, as already planned, was rated 2nd of 47 possible projects. A community center for Mill Village also rated highly, at 12th of 47 projects. Closing Court Street and refurbishing it as a downtown civic space also rated highly (tied for 13th). Implementing plans and projects that provide for greenways (off-road multi-purpose trails for biking, walking, etc.) was tied for 21st. New passive park acquisition and development rated lower, at 31st of 47 possible projects. Active park development with Greene County rated even lower, at 36th.

Additionally, two park-related projects suggested in the 2002 five-year plan, did not fare well in the rankings. The proposal to create a park using existing city vacant land at Bush Street ranked low (29 of 47 projects listed), and installing improvements at Love Springs ranked 41st.

Senior Center

Greene County operates a Senior Center which provides a gathering place for individuals aged sixty and over. The Center provides opportunities for participation in arts and crafts activities, health screenings, and information and referral programs. It also provides meals on site or home delivered for homebound citizens (Source: Comprehensive Plan).

Analysis and Recommendations

Mary-Leila Cotton Mill Ball Field (Figure 5.1) – As noted previously, the potential acquisition of the mill village ball field site was not considered in the early phases of the planning process. As this was somewhat of a "late comer" to the list of projects, the potential acquisition was discussed in more general terms with the steering committee. Based on their input, the acquisition of this site was deemed by the group to be one of the top priorities. In addition to reacquiring the mill ball field site as a new city park, there are other opportunities to expand the community's recreation and open space resources by utilizing property currently vacant or under-utilized within the city's ownership. These sites, illustrated in maps contained in this five-year plan, include the following:

Bush Street Tract (Figure 5.2) – This site is situated south of South Street and was identified in the previous five-year plan. The site's former use as a landfill and its challenging topography are some detriments to its suitability as a future park site. Such negatives might be overcome with more detailed analyses and inspections. Its central location in the community would make it easily accessible for park use, a quality that was emphasized by the steering committee, even if use of the Bush Street parcel as a park did not receive high priority ranking by the steering committee.

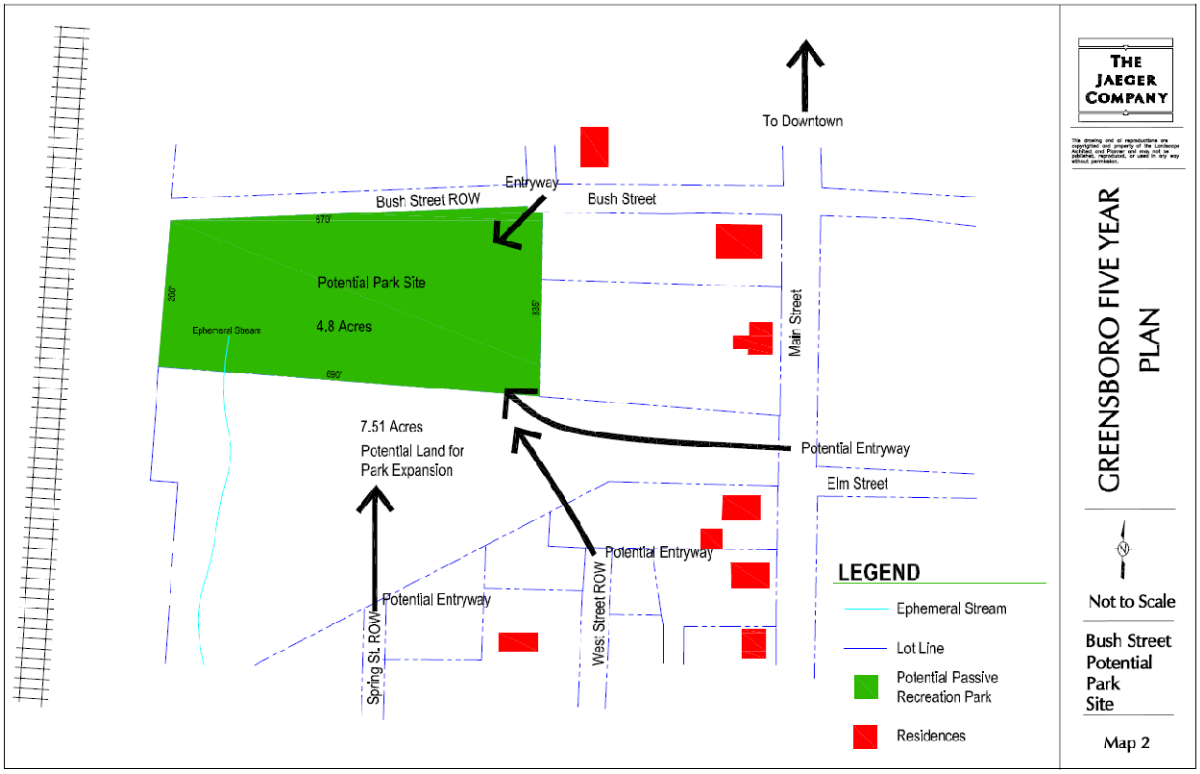


Figure 5.2 Bush Street Potential Park Site

Love Springs Tract – This is another site identified in the previous plan. Like the Bush Street project, it did not rate highly in terms of priority by the steering committee for future park and recreation facilities.

Vacant Tract on W Broad Street/US 278 – This is a new site identified as part of this planning effort. Situated between W. Broad and Apalachee Avenue, its challenging terrain appears to be a major drawback in its future use for park use. Nonetheless, it should be considered in future park planning efforts.

Former Water Treatment Site at Laurel Street – This site offers interesting opportunities due to its location along Richland Creek. Future park use would require additional studies to identify any potential hazards still present from its former use. If any hazards exist and mitigation is possible, a park use here would provide the city with a unique water-based recreational opportunity.

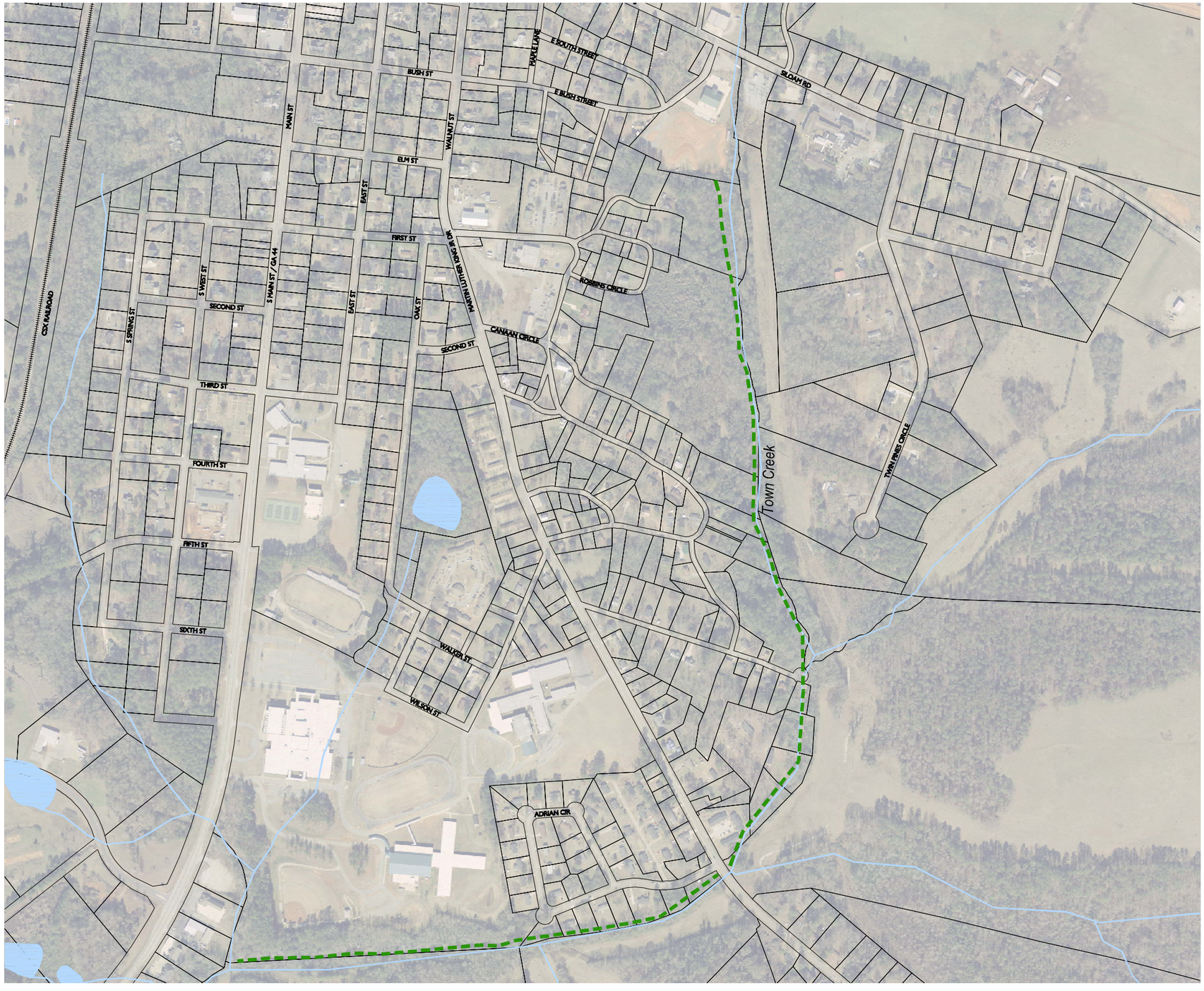
Former Water Treatment Site/Current Landfill – This is another site with environmental challenges which would have to be overcome prior to open space development.

Property along Town Creek (Figure 5.3) – Greensboro owns land along a major creek, which connects to Robinson Park. This tract, which contains a sanitary sewer easement, offers an excellent opportunity for a future city greenway. This potential greenway is especially important, given its potential to connect Robinson Park, residential neighborhoods, and schools in the city.

LEGEND

POTENTIAL GREENWAY TRAIL ROUTE

EXISTING SEWER EASEMENT ALONG TRAIL CREEK



PARKS, RECREATION AND OPEN SPACE IMPROVEMENTS - LONG RANGE - TOWN CREEK GREENWAY TRAIL

SCALE : 1" = 600'

Landscape Architecture - Historic Preservation
Planning - Environmental Assessment

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CITY OF GREENSBORO FIVE YEAR PLAN

GREENSBORO, GEORGIA

ProjectNo.:	07009
Scale:	1" = 600'
Date:	10-14-08
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Drawn:	DL
Checked:	DJ

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PARKS, RECREATION AND OPEN SPACE IMPROVEMENTS - LONG RANGE

Figure 5.3

Based on these observations and input from the steering committee, the five-year plan lists re-acquisition of the mill ball field site as the highest priority for future parks and recreation projects. Additionally, the ball field site is a logical choice for the mill community center which was recommended in the initial five-year plan and re-confirmed as a priority in this updated plan. Development of the Bush Street site for a future park and greenway development for the property along Town Creek are described as long range projects.

DOWNTOWN AND CULTURAL FACILITIES

Streetscapes

The city has completed two phases of streetscape projects within the downtown. The first phase was funded by ISTEA (Intermodal Surface Transportation Efficiency Act) and city and county dollars, and the second was financed by TE (Transportation Enhancement) with a match from the city and county. Both projects included the replacement of original hexagonal pavers with new ones, replacing streetlights with modern lighting based on the city's historic light standard, re-use of the existing granite curbing (when possible), planting trees, and adding irrigation and landscaping. In an innovative measure, the city sold the original historic pavers to citizens for use in their yards, which helped to fund the Downtown Development Authority's future projects.

Museums and Landmarks

The historic courthouse was restored and expanded in 1998 using special local option sales tax proceeds. The oldest jail, known as the "Old Gaol," is a rock structure and is preserved as a historic landmark. The Wyatt Law Enforcement Museum, a statewide museum for Georgia law enforcement, is located at the intersection of E. Greene Street and N. East Street. The law enforcement museum is funded from drug confiscation dollars and the Governor's Discretionary Fund. There is also a historical museum and an African American museum in the downtown. Furthermore, the Baber House in the "railroad community" was recently renovated as a museum. A group called the "Friends of the Museums" has been formed to raise dollars for all the museums so that they can be enhanced, staffed, and open to the public on a more regular basis.

Downtown Pedestrian Signage and Wayfinding System

This is another downtown project that was identified previously and included in the 2002 five-year plan. The signage concept and plan are fully funded and underway. Additional funding for sign installation and construction administration will be needed in order to complete this project.

Restrooms Downtown

Prior planning has identified the need for public restrooms in the downtown. A map of Greensboro Tour Sites shows a future site for public restrooms at Court Street near the Courthouse and Chamber.

Cultural Center

Construction of a cultural center downtown has remained a high priority in Greensboro and is in the early stages of realization. The project is funded and underway.

Results of Questionnaires

Downtown, and its small-town atmosphere, ranked very highly in terms of components citizens like about Greensboro. They view the downtown as confined, lacking in its variety of retail establishments, short on parking, lacking aesthetic quality at its entrances and fringes, and containing buildings in disrepair. Indeed, the major emphasis of the five-year plan is improving the downtown area, which is considered the mainstay of the city's economy and the major source of community pride. Downtown and streetscape improvements received mixed results in the satisfaction rankings – there was an almost even distribution of satisfaction and dissatisfaction with downtown and streetscape improvements. We interpret these findings to mean not necessarily that folks are unhappy with what has been done, but that much more needs to be done with regard to improving downtown and extending streetscapes as already planned (or in the planning stages) by the city.

Streetscapes, sidewalks, and bikeways received the highest number of responses in terms of being the highest priorities for the five-year plan. Downtown projects, such as parking, restrooms, signage, etc. also received high scores. With regard to specific projects, extending sidewalks and streetscapes in/to/from downtown was the third highest ranking project of 47 projects listed. Constructing public restrooms in the downtown ranked 20th of 47 projects listed.

CHAPTER 6
GROUNDS, PUBLIC WORKS, AND TRANSPORTATION

These facilities generally include: buildings and grounds operation and maintenance (including cemeteries), roads and bridges, traffic signals, sidewalks, bikeways, public works camp or maintenance shop building(s), engineering support (professional services), airport, public transit (rural), and animal control.

BUILDINGS AND GROUNDS

Buildings and Grounds Generally

Buildings and grounds in Greensboro include maintenance of all municipal properties, including operation of the municipal cemetery, with a $30,000 budget this year, and the city's maintenance shop. Buildings related to other services, such as police and fire, are addressed separately in other chapters of this five-year plan.

Cemetery

Installing improvements at the city's cemetery ranked very low (45th) in terms of the list of 47 possible projects.

Greensboro Owns and Operates A Municipal Cemetery

Animal Control

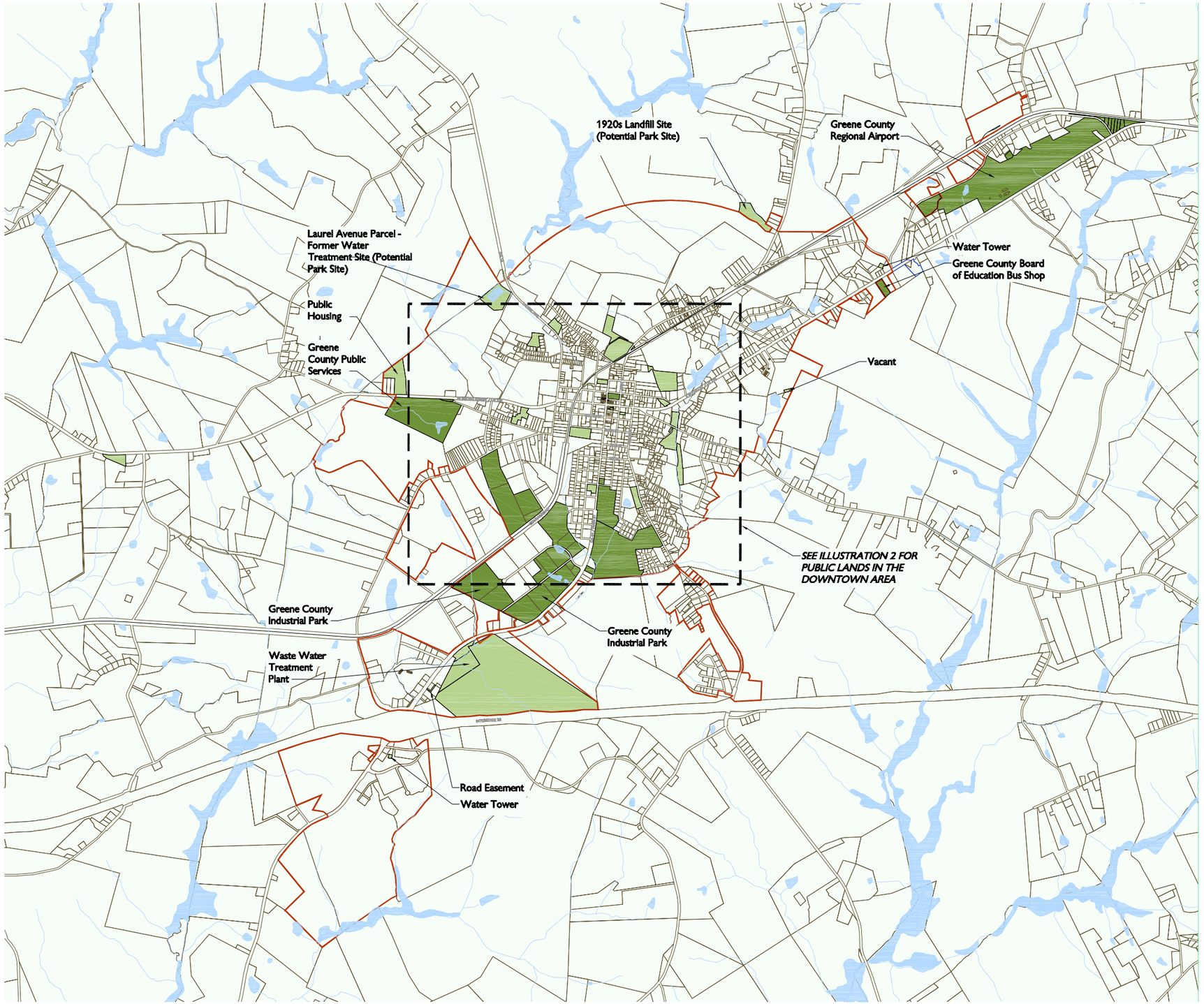
Animal control services are provided by Greene County on a countywide basis. Animal control facilities of the county are located on the county facility campus in Greensboro. Greene County's 2007-2008 general fund budget for the year ending September 30, 2008, reveals budgeted expenditures of $113,088 for animal control.

Municipal Property Inventory

Greensboro owns a total of 29 properties according to the records of the Greene County Tax Assessor. These properties are identified on a map of public properties and shown in Table 5.1, along with various characteristics (site, location, parcel number, total value).

LEGEND

- CITY-OWNED PARCELS
- COUNTY-OWNED PARCELS
- PARCELS
- GREENSBORO CITY LIMITS
- RIVERS, LAKES & STREAMS



PUBLIC LANDS

SCALE : 1" = 3600'

Landscape Architecture - Historic Preservation
Planning - Environmental Assessment

THE JAEGER COMPANY

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CITY OF GREENSBORO FIVE YEAR PLAN

GREENSBORO, GEORGIA

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Date:	02-05-09
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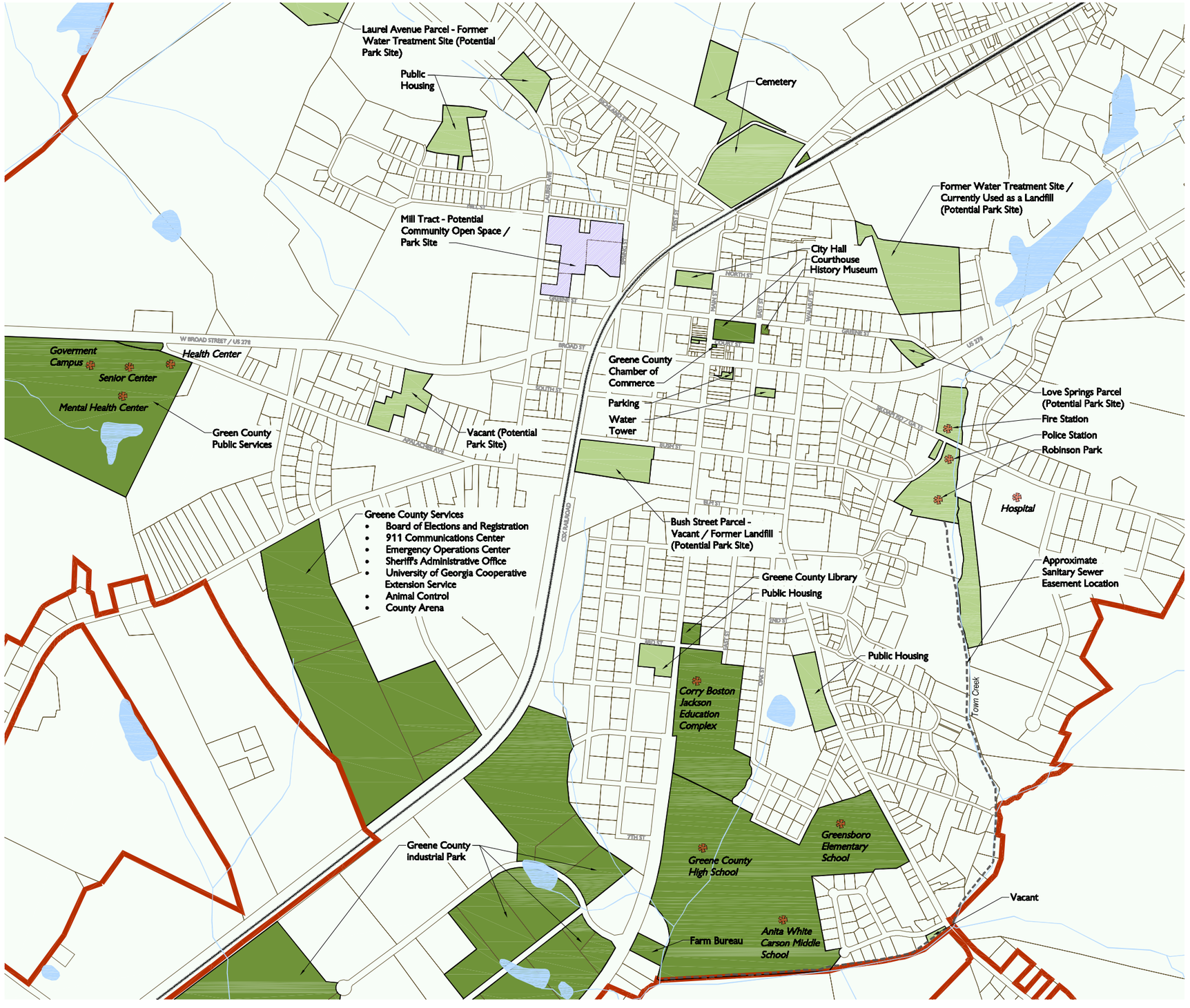
PUBLIC LANDS

Figure 6.1a

LEGEND

- CITY-OWNED PARCELS
- COUNTY-OWNED PARCELS
- POTENTIAL LAND ACQUISITION
- PARCELS
- APPROXIMATE SANITARY SEWER EASEMENT LOCATION
- GREENSBORO CITY LIMITS
- RIVERS, LAKES & STREAMS
- COMMUNITY ACTIVITY NODE



PUBLIC LANDS - ENLARGEMENT

SCALE : 1" = 1000'

Landscape Architecture - Historic Preservation
Planning - Environmental Assessment

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CITY OF GREENSBORO FIVE YEAR PLAN

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PUBLIC LANDS - ENLARGEMENT

Figure 6.1b

Table 6.1
Properties Owned by the City of Greensboro

Parcel No.	Location	Land Use Identified	Acreage	Total Value (2008) ($)
G12000073B	Creekside	Vacant/unknown	6.07	$22,756
G030000050	Apalachee Ave.	Vacant/unknown	3.0	$75,000
G020000230	SR 15 – Mize Court	Vacant -- Housing Authority	n/a	$500
06900000240	SR 15 (Athens Hwy.)	Sewage Plant	14.0	$60,688
G870000010	Bush Street	Vacant/unknown	4.8	$62,500
G020000730	Cherry Street	Vacant/unknown	4.79	$802,500
G060000730	East Street	Vacant/unknown	n/a	$150,000
087000011A	Flowers Road	Vacant/unknown	0.55	$500
G110000080	Greene Street	Vacant/unknown	n/a	$75,000
G100000230	Greene Street	Vacant/unknown	n/a	$500
0860001110	U.S. Hwy 278	Water Tower	0.5	$500
071000007A	SR 44 (Lake Oconee Pkwy)	Emergency Medical Services	3.0	$185,080
07000000800	SR 44 and Interstate 20	Sewage Plant and Spray Irrigation	192.73	$822,648
0510000170	SR 12 (Madison Highway)	Vacant/unknown	n/a	$300,500
069000016B	SR 12 (Madison Highway)	Housing Authority – Improved	16.0	$289,196
G060001760	N. Main St./W. North St.	City Hall	n/a	$135,000
G060000470	S. Main St./E. Broad St.	Parking Lot	n/a	$500
G140000080	MLK/Adrain Drive	Vacant/unknown	n/a	$4,500
071000034A	Meadow Crest Road	Water Tower (2006)	0.37	$125,000
0860000310	Penfield Road	Vacant/unknown	8.0	$54,721
G080000410	S Main St./W. 3rd St./ S. West St.	Vacant/unknown	n/a	$460,000
071000008F	S. Main St. (SR 44)	Vacant/unknown (egress-ingress)	0.34	$500
G110000210	SR 15 (Siloam Road)/ E. Bush St.	Vacant/unknown	n/a	$25,000
0690000270	Memorial Drive	Cemetery	16.0	$500
G110000300	SR 15 (Siloam Road)	Fire Department/Public Works	3.25	$287,500
087A000570	US 278 (Union Point Highway)	Vacant—Fire Department	1.0	$8,205
G110000280	SR 15 (Siloam Road)	Police Dept./ Robinson Park	n/a	$811,994
0710000070	SR 44 (Lake Oconee Pkwy.)	Sewage Treatment	20.0	$3,000,000
G040000270	Industrial Blvd./ Allens Circle	Water Tower	0.35	$500

Source: Q Public, Greene County Tax Assessors, Accessed January 2009.
Note: n/a = not available (acreage not reported)

MUNICIPAL ENHANCEMENT

Greensboro has established a Beautification Commission and has routinely budgeted funds for its operation. There are efforts underway such as landscaping of entrances into the community, which are helping to assist with community enhancement objectives. Nonetheless, there are still problems and issues to be confronted. The regional comprehensive solid waste management plan reveals that illegal dumping has been an issue in Greene County, especially in rural areas, but there are also places in the city that have also become illegal dumping grounds.

Discarded Materials along the CSX Railroad Is One Example of Dumping in Greensboro

Results of Questionnaires

Beautification efforts and cleanliness have been cited by members of the five-year plan steering committee as one of many factors that they like the most about Greensboro. On the other hand, things that steering committee members cited as factors they like least about their community include the visual entrances to downtown, litter in outlying areas, and overgrown vegetation on vacant lots. Furthermore, a growing concern about graffiti is evident.

Of 47 possible projects listed in the project rating questionnaire, steering committee members ranked "install signage and landscaping at city gateway locations" (a project underway at the time of this writing) as the number one project to pursue. A citywide clean-up/beautification program was tied for eighth among the 47 projects listed. As noted in a separate section of this plan (see special area planning), an effort to redevelop and improve the East Broad Street corridor ranked 18th of 47 projects. Clearly, steering committee members want better attention paid to the aesthetic aspects of the community, and they fully support community enhancement and beautification programs.

There are some other efforts that can be employed to keep the city of Greensboro or more beautiful place to live and work. Listed in this section are some additional programs that might be pursued.

Gateway Signage

Greensboro expressed its desire, in the 2002 five-year plan, to provide gateway signage identifying the city limits at locations along major highways entering the city. Though this project was not funded pursuant to the 2002 plan, it remains a high priority project for the citizens of Greensboro. The gateway signage concept and location plans have now been fully funded and are underway. Additional funding for property acquisition, construction document development, and construction will be needed in order to complete this project. In addition to gateway signage identifying the city limits, a second tier of gateway signs is recommended on major routes closer to the downtown area. These signs should identify and reflect the historic character of downtown Greensboro.

I-20 / GA 44 Interchange Beautification

Install native wildflower meadow plantings at the Highway 44 / Interstate 20 interchange as an accompaniment to the shrub and tree planting project funded by the Georgia Department of Transportation as part of the Transportation Enhancement program. The meadow will function as a gateway to the City of Greensboro and the plantings will be of the same species and type used at the city's other gateway locations.

Graffiti Control

At least one respondent to questionnaires indicated there is an issue with graffiti that needs to be painted over. Hence, graffiti control (if graffiti persists) should become a part of Greensboro's comprehensive enhancement efforts.

Keep Georgia Beautiful Program

The Keep Georgia Beautiful Program, administered by the Georgia Department of Community Affairs, identifies ways residents can reduce the amount of waste they generate, has programs that alert citizens about water quality and conservation issues, and works with local affiliates throughout the state to instill a sense of community pride and volunteerism. Communities can establish a local affiliate of Keep America Beautiful by completing a three-step certification process established by the national program. Certification requires the filing of an annual report and network service fee based upon population (Source: Georgia Department of Community Affairs).

Georgia Urban Forest Council

Greensboro could establish an urban forestry program. The Georgia Urban Forest Council, headquartered in Macon, works in conjunction with the Georgia Forestry Commission to improve urban forestry programs throughout the State. The Council provides education, technical support, leadership and policy development in order to improve the quality of life in urban areas. The Council is involved in projects such as the following: Landmark and Historic Tree Program; Urban and Community Forestry Assistance Grant Program; Arborist Certification; Project Learning Tree; tree protection and land development ordinances; Increasing the availability of desirable trees for the public; Georgia's Annual Urban Forestry Conference; and the Annual Urban Forestry Awards Program. The Council serves as a potential partner in urban forestry programs and a source of technical assistance.

Tree City USA

Greensboro is a Tree City USA. Tree City USA recognition contributes to a community's pride and serves as a blueprint for planting and maintaining the community's trees.

STREETS

Overview

The overriding objectives of the road system are to prevent injuries and deaths, reduce damage to motor vehicles and other property, and enhance the economic strength and social qualities of community life (Bailey et al. 1986). Other important objectives to be served by the road system, in addition to safety, include providing accessibility to destinations, comfort, convenience, and low air and noise pollution levels. Furthermore, the system should take into account the levels of service needed for persons without access to cars, particularly the elderly and handicapped (Hatry et al. 1992).

Results of Questionnaires

As a part of this update to the five-year plan, steering committee members were polled on their satisfaction levels with regard to city streets and roads. Also, potential projects involving streets were rated and prioritized. No respondent indicated he or she was either very satisfied or very dissatisfied with city streets. The most frequent response was somewhat satisfied (5 responses), and two respondents indicated they were somewhat dissatisfied.

The initial questionnaire asked respondents to determine whether there were one or more street intersections in the city that they consider dangerous from a safety standpoint. Five

respondents strongly agreed and three agreed, with only one respondent disagreeing. This suggests that the city has some intersections that are dangerous according to observations of the steering committee members. The initial five-year plan identified only one such area – the intersection of Greene Street and N. Main Street – as having a significant sight visibility problem constituting a potential safety hazard.

The initial questionnaire also asked whether there were road maintenance issues unresolved in the city. The questionnaire results yielded relatively mixed results. While four of 10 respondents agreed that there were one or more places in the city that needed better road maintenance, three respondents had no opinion with regard to this issue. Furthermore, only one stakeholder indicated that road repaving projects should be a high priority in the plan.

When asked to rank the need to upgrade intersections that have poor intersection geometry, respondents ranked this project 11th of 47 projects listed. When asked to rank the relative importance of investigating and correcting sight visibility problems at selected road intersections, respondents ranked this as a high priority (16th of 47 projects listed). During discussion with the steering committee, it was determined that one intersection in particular needed improvement – that project (which involved poor turning radii for school buses) is included in the five-year program.

Street Department Expenditures

The streets budget was $1.65 million in FY 2008-2009, including $1.1 million from SPLOST funds and $557,120 funded through the general fund. Expenditures include personnel (salaries) and routine operation and maintenance costs. Capital items included a $10,000 payment for a loader. Electricity for street lighting was $40,000, and gas/diesel purchases were more than $21,000. The budget for patching and paving was $27,000.

Congestion Measures

The “level of service” is a measure of the relationship between service capacity and service demand for public facilities in terms of demand-to-capacity ratios or the comfort and convenience of use or service of public facilities, or both. With regard to roads, level of service is often measured in terms of a volume-to-capacity ratio (abbreviated as v/c). A v/c ratio is a measure of the operating capacity of a roadway or intersection, in terms of the number of vehicles passing through, divided by the number of vehicles that theoretically could pass through when the roadway or intersection is operating at its designed capacity. At a v/c ratio of 1.0, the roadway or intersection is operating at capacity. If the ratio is less than 1.0, the traffic facility has additional capacity. Transportation planners divide levels of service into the following letter grades (see also Figure 6.2):

- Level "A" is a condition with low traffic volumes, high speeds and free flow conditions.
- Level "B" is a condition with light traffic volumes, minor speed restrictions and stable flow.
- Level "C" is a condition with moderate traffic volumes, where speed and maneuvering are restricted to a limited degree by the amount of traffic.
- Level "D" is a condition with heavy traffic operating at tolerable speeds, although temporary slowdowns in flow may occur.
- Level "E" is a condition of very heavy flow and relatively low speeds. Under Level "E" the traffic is unstable and short stoppage may occur.

- Level "F" is a condition of extremely heavy flow, with frequent stoppage and very slow speeds. It is an unstable traffic condition under which traffic often comes to a complete halt.

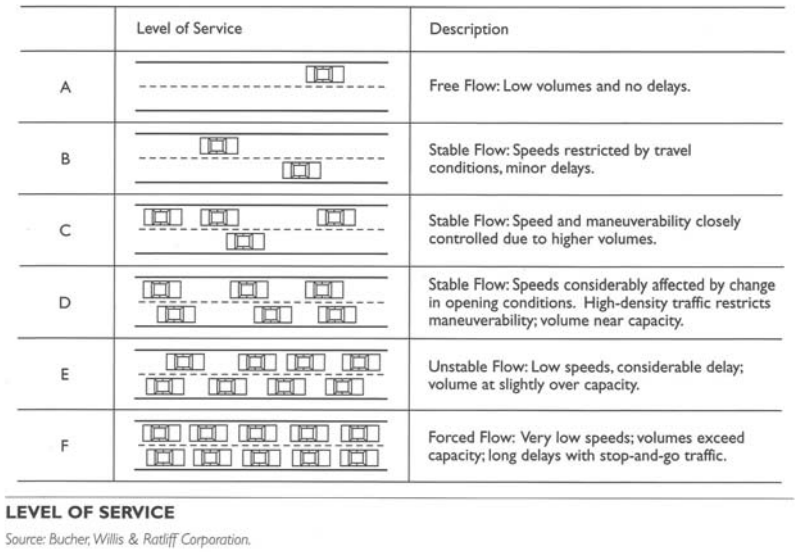


Figure 6.2
Levels of Service for Roads
Source: *Planning and Urban Design Standards*. 2006. John Wiley & Sons, Inc., p. 523.

City Street Railroad Crossings

The 2002 five-year plan indicated that the city should upgrade and improve street intersections with railroad crossings. In 2008, when the steering committee was asked the relative priority of such projects, it replied that the installation of safety improvements at railroad tracks and city street crossings was a relatively low priority (29th of 47 projects listed). Safety, as well as comfort in crossing railroads, should continue to be considered in future municipal improvement plans and programs. The prior five-year plan recommended that the city work with the CSX railroad to provide a RR crossing gate at South Street.

South Street has a Warning Light
But No Physical Barrier

Major Road Improvements

Ten and twenty-year forecasts of traffic, conducted by the Northeast Georgia Regional Development Center as a part of the comprehensive planning process in 2004, indicate that traffic flow in and surrounding Greensboro will continuously worsen. One problem in particular is the highway system's inability to accommodate the high volumes of truck traffic that utilize U.S. Highway 278 and State Routes 15 and 44 for access to Interstate 20. For that reason, plans at the state level have been prepared to construct a bypass around the City of Greensboro to

alleviate traffic congestion within the downtown. The Greensboro Bypass is the major highway improvement recognized in this plan, but it is considered a long-range improvement.

In addition to congestion in downtown where major highways converge, SR 44 at its intersection with Interstate 20 is becoming increasingly congested with the filling in of major commercial development there and other forms of growth in the surrounding area. According to the comprehensive plan, SR 44 has been identified by the Georgia Department of Transportation for widening as a long-term project. The Georgia Department of Transportation's improvement plans are divided into a long-range program and a shorter-term, three year transportation improvement program. Listed below in Table 6.2 are projects and their range for improvement. In the short term, these plans include the realignment of Old Eatonton Road to be further away from the I-20 interchange, as well as a phase three streetscape plan to extend sidewalks along South Main Street.

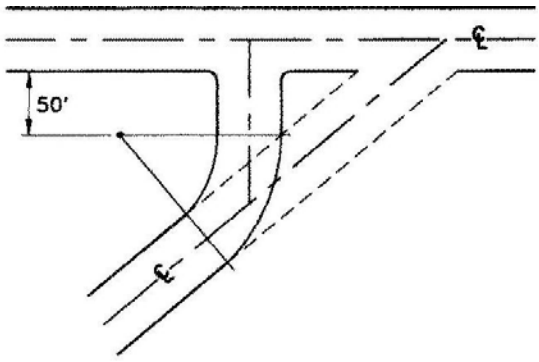
Table 6.2
Georgia Department of Transportation
Major Transportation Projects for Greensboro Area

Title of Project	Type	Length of Project	Year	$
Greensboro Streetscape Plan – Phase III	Transportation Enhancement	Not specified	LUMP	$750,000
SR 44 @CR 39/Old Eatonton Rd N of Interstate 20	Realignment	0.26 mile	2008-2009	$1,572,000
SR 44 from CR 54/Linger Longer Road to East Greensboro Bypass	Widening	7.94 miles	Long Range	n/a
Greensboro Bypass from CR 1/Lick Skillet Road to Beaver Dam Creek	Roadway Project	4.38 miles	Long Range	n/a
East Greensboro Bypass from SR 44 South to SR 44/12 Northeast	Roadway Project	3.61 miles	Long Range	n/a

Local Road Improvements

A full-fledged investigation of all possible road improvement needs was beyond the scope of this study effort and planning document. However, some basic needs are evident.

The city has a number of street intersections which do not align at 90 degrees or near a 90 degree angle. Examples of deficiencies of this type include Reynolds and other side streets along Martin Luther King, Jr. Drive, and these roads are typically also substandard in width as well. Traffic conditions and the potential safety hazards of these intersections probably do not warrant public expenditure to realign the intersections at 90 degree angles, except that in the case of Reynolds and MLK Jr. Drive, improvement is needed given difficulty of school buses to make turns there..



Source: Tanner, J. Thomas. "Suburban Street Design." Figure 20.32 in Chapter 20 of *Land Development Handbook: Planning, Engineering, and Surveying*. New York: McGraw-Hill, 2002

Figure 6.3
Realignment of Intersection to 90 Degrees

Another intersection has higher traffic volumes and a less than optimum alignment - the intersection of Apalachee Avenue and Oconee – that intersection might be considered for realignment to a 90 degree intersection (see Figure 6.3) given that these roads carry somewhat higher traffic volumes than do neighborhood residential subdivision streets.

The city has a number of narrow, substandard streets which do not permit the safe passage of cars from opposite directions at the same time. For many of these narrow roads, the traffic volumes experienced on them does not seem to warrant widening. Furthermore, the city may lack the necessary rights of ways needed to widen such roads, and widening would also be disruptive to abutting properties and might detract from neighborhood character if the roads were widened.

Good examples of this type of substandard (narrow) road include Buffalo Street and Mill Street west of Laurel Street – although these two roads basically only allow for single-lane (one-way) use, they does not necessitate widening given very low volumes of traffic, and widening them would detract from neighborhood character.

One road that may justify widening, at least near its entrance, is Thomas Street, which intersects with U.S. Highway 278. While this road only serves a small number of residences at present, it is very narrow and poses some potential traffic hazards if a vehicle is exiting onto U.S. Highway 278 and another is trying to enter Thomas Street from U.S. Highway 278 at the same time. Thomas Street also may, over the longer term, serve additional undeveloped properties further north of its present termination. This suggests that Thomas Street should be widened at least at the intersection with U.S. Highway 278.

Another project that might suggest improvement from a public safety standpoint is Phelps Drive, which serves as a residential collector of sorts and also provides a secondary entrance to the Ingles Grocery Store site. Further back on Phelps, the road crosses the lake/pond and there is no guard rail. Because this is a potential traffic hazard, as cars could run off the road and into the lake (or the stream on the other side), assuming this is a public street, a guard rail should be installed on this road at its water crossing.

Another project worth mentioning is Pool Road, which has a low spot – standing water – on part of it. The city should correct drainage problems of this sort, budget providing. Finally, it is recommended that Town Creek Boulevard, which contains a Dollar General Store and some mini-warehouses, be extended by developers at the time of development to Oconee Avenue/Old Eatonton Highway.

Traffic Signalization

Traffic controls are generally required to conform to the Manual of Uniform Traffic Control Devices for Streets and Highways. An accurate inventory of all traffic control devices should be available. Presently, the only traffic signals in Greensboro are located on state and federal highways and therefore are maintained by the state of Georgia Department of Transportation.

Pavement Markings and Street Signs

Pavement marking is “one of the best, lowest cost, and most appreciated ways of aiding drivers. But such markings wear off….Some longer lasting paints may cost more originally but may save money in the end” (Bailey et al. 1986). A field reconnaissance of roads in the city reveals that

there are several intersections that do not have street name signs. All intersections should have street signs.

Pavement Maintenance and Resurfacing

The maintenance of local roads is often ignored or underfunded by many local governments. Maintenance costs of the road system tend to mount, and the problem increases when local officials defer maintenance for "just one more year." The city needs to know when to carry out road maintenance and rehabilitation projects to upkeep the local road system. If improvements are not conducted in a timely manner when needed, the quality of local roads decreases and the costs to repair or rehabilitate them increases. For instance, it costs more to rehabilitate if the city delays until a street is in very poor condition (Bailey et al. 1986). Also, the cost escalates three, four, or five times higher the longer the delay. For these reasons, a pavement maintenance system is desirable; such systems are available to most local government agencies at reasonable cost.

Surface treatment, crack filling, and pothole filling are a routine part of a pavement management program. Surface treatment consists of a thin coating of asphalt with stone chip rolled in; this treatment will give a five-year life under moderate traffic conditions. Crack filling is needed to prevent water from entering the base and weakening the street; proper crack filling requires a "sufficient depth of a compressible, expandable asphalt-based material that adheres thoroughly to the sides of the crack (Bailey et al. 1986). The city's pavement maintenance program should also include correction of any soft spot locations (weak base) and the routine filling of potholes.

Beyond the basic safety condition of the roadway, the city should also provide street surfaces on which drivers are comfortable. Local street maintenance workers should regularly examine streets and roads to rate their surface condition from an engineering viewpoint, then determine specific maintenance and repair programs. Street "rideability" (surface condition) can be rated using trained observer ratings or by mechanical roughness-measuring devices. For instance, the following visual rating scale could be applied from an automobile:

Table 6.3
Rating Scale for Street Rideability

Condition	Description
1	Smooth
2	Slightly bumpy
3	Considerably bumpy
4	Severe jolt or potential safety hazard

Source: Hatry et al. 1992.

Bridge Maintenance and Upgrade

Bridges will wear out just as buildings and streets do. Like pavement maintenance, bridge maintenance has been neglected in communities across the country. Bridges are complex structures that always require evaluation by a specialist. Bridge structural engineers can temporarily close any bridge if it poses a public safety hazard. Bridges are regulated by federal and state requirements and guidelines. Bridges are subject to fatigue brought on by constant loading, as well as other factors that will limit the life of the bridge. The American Association of State Highway and Transportation Officials recommends that bridges be inspected once every

two years (Bailey et al. 1986). Due to expenses, bridge work on a public road is almost always funded mostly by federal and state, rather than local sources.

There is one bridge in particular that requires refurbishment or rebuilding. It is a wooden plank bridge which is currently closed. This bridge across the CSX railroad and road section are currently outside the city limits, and so it is not necessarily currently the city of Greensboro's responsibility. Greensboro should work with Greene County to program the improvement or replacement and re-opening of this bridge and road segment, as it provides a useful alternative route to Lake Oconee Parkway (S. Main Street/SR 44) from downtown Greensboro to Interstate 20. Chances are that almost all of the funding could come from federal and state sources.

Bridge Out at Oconee Avenue/ Old Eatonton Road – Requires Refurbishment or Replacement

Level of Service and Performance Standards

1. There needs to be an unobstructed sight distance in both directions on all approaches at an intersection. Any object within the sight triangle that constitutes a sight obstruction should be removed or lowered, including parking, cut slopes, hedges, trees, and bushes.

2. Reduce the number and percentage of streets with pavement driving hazards. Hazards are large potholes, sharp bumps, drops, or tilts in the driving right-of-way.

3. Some safety and quality standards for roads are the following: Cracks wider than 6 mm shall be sealed. Depressions or bumps shall be corrected. Water ponding at depths greater than one inch should be eliminated or corrected. Broken pavement edges, potholes, and breaks shall be promptly repaired (Hatry et al. 1992).

Summary of Recommended Local Street Improvements

The following summarizes the local road improvements identified above:

1. Install gate/barrier at South Street and CSX Railroad Crossing.

2. Realign intersection of Reynolds and MLK Jr. Drive to correct poor intersection geometrics. Also consider realigning Apalachee Avenue at Oconee Avenue to provide a 90 degree intersection.

3. Widen Thomas Street, at minimum, at its intersection with U.S. Highway 278, if not for the full length, assuming Thomas Street is a public street.

4. Install guard rails at water crossing and Phelps Drive (assuming it is a public street).

5. Install drainage improvements on Pool Road to correct standing water problem.

6. Extend Town Creek Boulevard to Oconee Avenue/Old Eatonton Highway (developers at time of development).

7. Refurbish or replace the bridge across the CSX railroad at Oconee Avenue/Old Eatonton Road (county-programmed improvement using state/federal funds).

PARKING AND LOADING IN DOWNTOWN

Parking is a significant issue only in the downtown area of Greensboro. Two parking lots were constructed through funded by ISTEA and city and county dollars at a cost of $248,000. Even with these additions, there is a perception that parking for the downtown may be in short supply. That perception is addressed further in the following paragraphs.

Results of Questionnaires

In a ranking of 47 possible projects, the steering committee for this five-year plan listed the provision of a loading/unloading space for tour buses, etc. as the fifth highest priority (five respondents rated this project as "very high"). The committee also rated "Complete parking needs assessment for downtown" as the 15th highest priority project of 47 projects listed, with eight of ten respondents rating this as a very high or high priority.

Downtown Parking Inventory

Given the importance of this project to the committee, the consultants completed a count of on-street parking in the downtown area. The parking space count did not include off-street parking spaces but it includes one of the public parking lots completed by the city as a relatively recent downtown improvement. The results of the parking count are shown in Table 6.4. On-street and public off-street parking is, not surprisingly, concentrated in the downtown within easy walking distance of the intersection of Broad and Main.

Table 6.4
Inventory of Public Parking Spaces in Downtown Greensboro

Location	Street	Street Segment (From/To)	Side of Street	No. of Spaces
On-street	S. Main St.	South to Broad	West side	9
On-street	S. Main St.	South to Broad	East side	11
Off-street lot	S. Main St.	South to Broad	East side	20
On-street	W. Broad St.	W. of Main St.	South side	7
On-street	E. Broad St.	E. of Main St.	South side	7
Off-street lot	E. Broad St.	E. of Main St.	South side	15 (est.)*
On-street	N. Main St.	Broad to Greene	West side	27
On-street	N. Main St.	Broad to Court	East side	8
On-street	Court St.	Main to East	South side	1
On-street	Court St.	Main to East	North side	13
On-street	N. Main St.	Court to Greene	East side	15
On-street	Greene St.	Main to East	South side	15
On-street	N. Main St.	Greene to North	West side	14
On-street	N. Main St.	Greene to North	East side	19
Total				112

Total if Court Street is Closed			98

* This is an unmarked, unpaved lot without striping. This is an estimate only.
Source: Inventory by Jerry Weitz & Associates, December 2008.

Table 6.4 shows that Greensboro's downtown is served by a minimum of 112 on-street and off-street public parking spaces. It is important to note that this number does not include commercial, off-site parking spaces, nor does it include parking at Greensboro city hall and the parking lot at the Courthouse complex, which are theoretically available to patrons of commercial businesses in the downtown after 5:00 p.m. It is also important to consider that one of the recommendations in this five-year plan, the closing of Court Street and conversion to a downtown public space, would result in the elimination of some 14 on-street parking spaces.

This inventory does not necessarily substitute for a more detailed parking assessment for the downtown. Such an assessment would estimate the total square footages of all civic and commercial spaces in the downtown, account for commercial (off-street, private) spaces in the inventory, and apply parking generation rates to the total building square footages to more realistically determine needs. However, in lieu of that more detailed parking assessment being completed, a rough, qualitative assessment is provided here.

Assessment of Adequacy of Current Downtown Parking Supply

The inventory was conducted on Monday, December 29th, 2008, in the afternoon, a time at which after-Christmas sales occur and parking demand is expected to be high. When the inventory was conducted, the city's off-street lot accessed from South Main Street was not fully utilized, and the unimproved lot on the south side of East Broad Street had no cars parked in that off-street lot. Most prime, on-street parking spaces along South Main were utilized, but on-street spaces along North Main north of Greene Street were mostly occupied. Furthermore, on-street spaces along Court Street and Greene Street did not appear to be used at all during that time. These observations suggest that parking is at present adequate and may remain sufficient during the short-term.

Proposed Improvements

The city's inventory of public, on-street and off-street public spaces could be enhanced with further improvement of the now-unimproved lot on the south side of East Broad. This lot has a sign identifying it as public parking, but because this lot is not marked with spaces, it may deter patrons from parking there. For that reason, it is recommended that the city pave, stripe, and sign that lot for parking use.

Even if the current inventory of public spaces is considered adequate, there remains a need to provide for loading space(s) in the downtown. In addition to the possible need for unloading of tour buses, every day commercial establishments have some unloading activities which are likely to conflict with the on-street parking needs of commercial patrons.

Furthermore, it is prudent for the city to consider potential areas of expanding public parking if the downtown is to expand in size and intensity during the medium or longer term. For instance, considering that this plan calls for a study of the East Broad corridor in order to revitalize and improve it, Greensboro should keep in mind the possible future needs for parking, and perhaps the parking assessment could be further explored under the context of that study.

There is a vacant lot on the south side of that corridor (pictured right) which could be a prime location for the expansion of the city's supply of public, off-street parking. Until the East Broad corridor revitalization analysis and plan are conducted, or in lieu of specific recommendations in that study and plan, this five-year plan recommends that the city acquire the lot next to its existing off-site parking for additional parking in the medium term horizon (2014 and beyond).

Vacant Lot Suitable for Expansion of Downtown Parking Supply

Recommendations

1. Complete a more detailed parking assessment as a part of the East Broad Corridor Revitalization Study and Plan called for in this five-year plan.

2. Pave, stripe, and permanently sign the vacant lot fronting on the south side of East Broad Street for parking and bus loading/unloading.

3. Acquire the vacant lot east of the city's existing off-street parking lot (accessed from South Main Street) for additional parking. If more parking is not needed, this site may be slated for development by the Downtown Development Authority.

STREET LIGHTING

Description

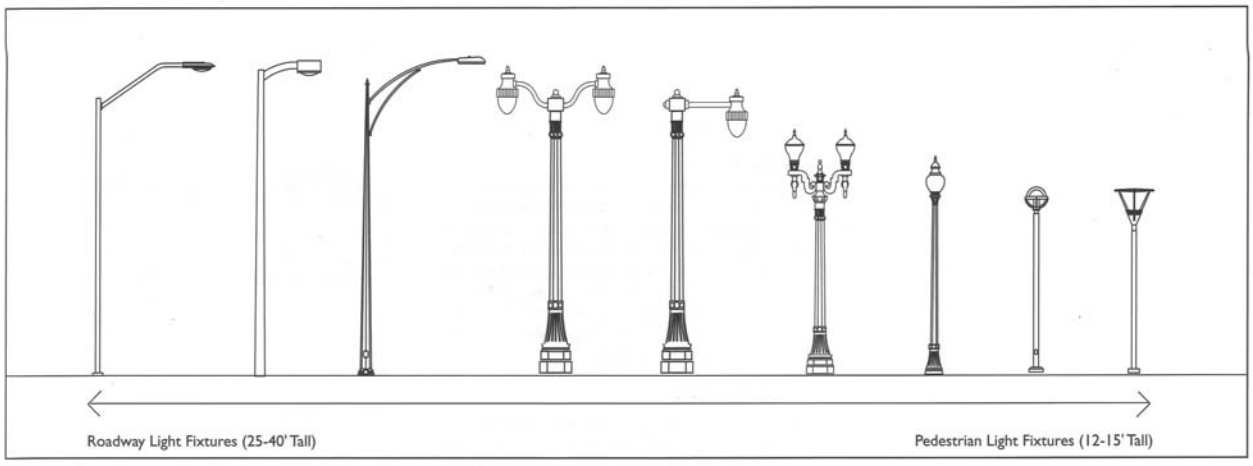
Street lighting is important for driver and pedestrian safety as well as security, but it is also a large consumer of electricity. Principal objectives for street lighting programs include providing and maintaining lighting to: illuminate roads at a level sufficient in particular to prevent road traffic accidents; aid in crime prevention, reduce the occurrence of anti-social behavior and reduce fear of crime within the community. In providing street lighting, the prevention of light pollution is important in rural areas.

The city needs knowledge about where the greatest street-lighting needs are before it can improve the street lighting system. Total annual cost of operation is an important consideration in determining whether to provide night time visibility via street lighting. The necessary visibility will vary according to the classification of roadway. Street lights should be required to conform to construction standards and specifications for light levels, glare reductions, uniformity, and color. The power companies (Georgia Power and an EMC) generally pay for the installation of electric street lighting, and the city pays the bills for operation.

Results of Questionnaires

Adding street lights to the current city system was ranked, somewhat surprisingly, as the fourth highest-rated public improvement project in the survey of 47 possible projects. Of ten

respondents, five chose “add streetlights (extend current coverage in the city)” as a very high priority.



Source: *Planning and Urban Design Standards*, p. 497. New York: McGraw-Hill, 2006.

Figure 6.4
Types of Street Lighting Fixtures

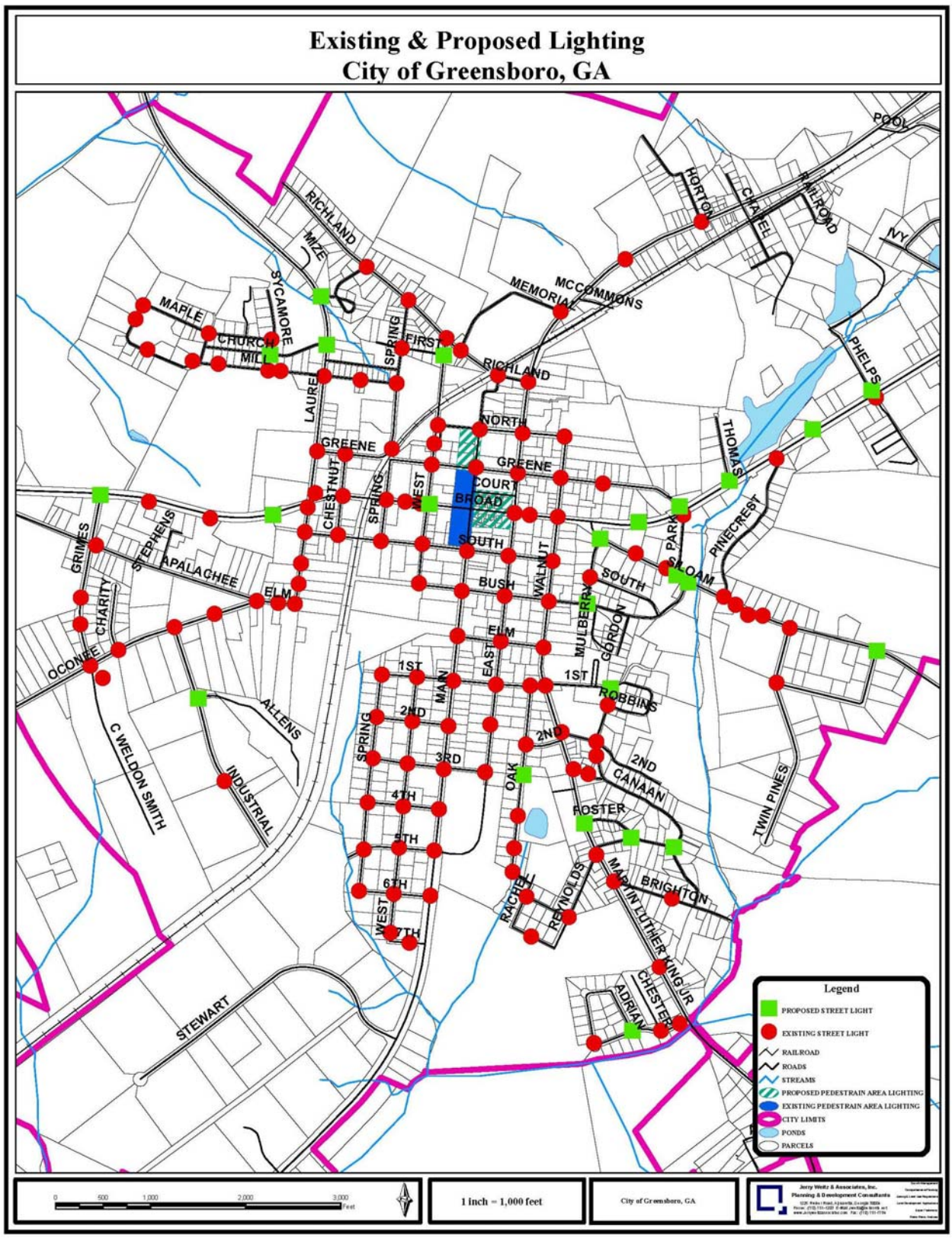


Figure 6.5 Existing and Proposed Street Lighting

Analysis and Recommendations

As a result of the high priority placed on street lighting in the city, the consulting team conducted a field survey of street lighting in the primary area of the city. The survey, shown in Figure 6.5, indicates that the city streets are actually quite well served with street lights. The graphic indicates current coverage of street lighting at street intersections. There are some street intersections, however, where street lights do not exist but are needed. In addition, the steering committee indicated that the underpass linking downtown to the mill area needs to be lighted.

Funding for Street Lights

Street lighting has in the past been paid out of the general fund under the street department. One possible alternative is to establish special assessment districts for street lighting. At this time, however, this does not appear to be necessary, as street lighting is distributed generally well in the central part of the city.

TRAFFIC CALMING

Description

Traffic calming can be defined as the combination of primarily physical measures that reduce the negative effects of motor vehicle use. Measures may include speed humps, raised crosswalks, speed tables, textured surfaces, traffic circles, and others. Traffic calming is concerned with reducing vehicle speeds, vehicle noise, visual impacts, and sometimes traffic volumes. Techniques consist of a series of raised speed humps, raised tables, or other devices along with appropriate traffic control signage to slow speeding and/or discourage cut-through traffic.

Speed Bumps on a Residential Street

Traffic calming techniques use various means to influence the behavior of motorists: physical, psychological, visual, social, and legal (regulatory and enforcement). Although traffic management and calming techniques are often used in areas other than residential neighborhoods, most programs are focused in residential areas, where traffic problems are more prevalent and have the most influence on the day-to-day livability of the community.[10] Traffic calming techniques must meet acceptable engineering principles.

Results of Questionnaires

The initial questionnaire asked respondents to suggest whether traffic calming projects (e.g., physical improvement to slow and limit traffic), need to be considered in one or more places. Of ten responses, four strongly agreed, three agreed, and three others expressed no opinion.

[10] Georgia Department of Transportation, *Statewide Bicycle and Pedestrian Initiative – Pedestrian Facilities Design Guide*, Updated July 25th 2003.

Apparently, the concerns stakeholders had were mostly regarding the main entrances into town. The consultants for this five-year plan observe that Greensboro has a number of speed bumps spread throughout the city in residential neighborhoods, more than what most small cities would typically provide. For this reason, it is not surprising that when it came time to rank potential projects, the installation of additional traffic calming devices ranked low (37th of 47 projects initially listed for potential prioritization).

SIDEWALKS

Overview and Inventory

The city's downtown has a well developed sidewalk network that could be extended into the rest of the community (see existing sidewalks in downtown shown on Figure 6.6). Most of the downtown core has sidewalks on both sides of the streets. Outside of the central downtown area there are typically green spaces of varying widths between the road and sidewalk. Where sidewalks extend into the edges of the town, they tend to be located adjacent to the edge of the road without any greenspace separation. The city's sidewalks are in average condition overall; however several areas are in need of repair. Many sidewalks lack ADA (Americans with Disabilities Act) accessibility. Future repairs and construction of sidewalks should be ADA accessible to make the community easier to traverse for all residents and to conform to federal law.

Repair of Existing Sidewalks is a High Priority for the 5-Year Plan

Priority Criteria for Sidewalks

The following priority criteria were stated in the 2002 five-year plan and were discussed by the steering committee:

1. Improve safety at places with high incidence of accidents
2. Expand downtown streetscape / pedestrian system
3. Connect public services to the downtown and residential neighborhoods
4. Connect parks to the downtown and residential neighborhoods
5. Connect schools to nearby residential areas and each other
6. Fill gaps in existing sidewalks
7. Link to public transportation
8. Coincide with high-priority road improvement projects
9. Connect residential areas to commercial centers
10. Connect residential areas to downtown
11. Link to public transportation
12. Provide bicycle facilities to link the north and south

13. Provide bicycle facilities to link the west and east
14. Link facilities within the city to proposed regional and statewide systems

Figure 6.6 Existing Sidewalk Network, Downtown

Results of Questionnaires

"Walkability" was mentioned as one of several factors that steering committee members like most about Greensboro. At the same time, they recognize the limits of Greensboro's sidewalk network. Sidewalk disconnectivity and the limited extent of sidewalks and streetscapes beyond Main Street were listed as a factor that citizens do not like about Greensboro. The city's sidewalk system received a mixed score with regard to satisfaction ratings. Generally, the improvement of sidewalks is a major priority, as it received the highest ranking of all possible groups of projects.

The project prioritization questionnaire contained specific questions on priorities for sidewalk extension and improvement projects. During that process the steering committee narrowed the priority criteria. The highest ranking priorities for sidewalk projects in Greensboro are to (1) fill gaps in existing sidewalks; (2) improve safety at places with high incidence of accidents; and (3) connect residential areas to downtown. With regard to specific projects, the highest ranking priorities are to (1) complete downtown streetscape improvements – expand from town center; (2) the public service facilities link and Robinson Park link; and (3) downtown link to the Railroad neighborhood.

Overview of Recommendations for Sidewalk Improvements

This chapter provides extensive, detailed recommendations for improving the sidewalk system in Greensboro. The projects are divided into two sets of short-range priorities, described below and illustrated on maps, and long-range projects. See Appendix for cost estimates for specific sidewalk improvement priorities.

Priority #1 – Downtown Streetscape Improvements

Greene Street Extension (Figure 6.7) – This project will fill in a gap in the downtown pedestrian network and connect existing and planned developments on the west side of the city to the center of Greensboro. This planned extension should be modeled after the existing downtown streetscape and should include hexagonal paver sidewalks, granite curbing, street trees in grates, pedestrian-scale lighting, benches, and trash receptacles along both sides of Greene Street from Main Street to West Street. A section of concrete sidewalk along West Street is also included in this extension.

Broad Street Extension (Figure 6.8) – This recommended project will extend the existing streetscape on Broad Street west to the intersection of Broad and West Streets. The character of this extension should be modeled after the existing downtown streetscape and include hexagonal paver sidewalks, granite curbing, street trees in grates, pedestrian scale lighting, benches, and trash receptacles.

Court and Broad Street Extension (Figure 6.9) – This project will extend the existing streetscape on Main and Broad Streets to encompass the entirety of the Court and Broad Street half block. The majority of sidewalk in this area is in poor condition and needs to be replaced.

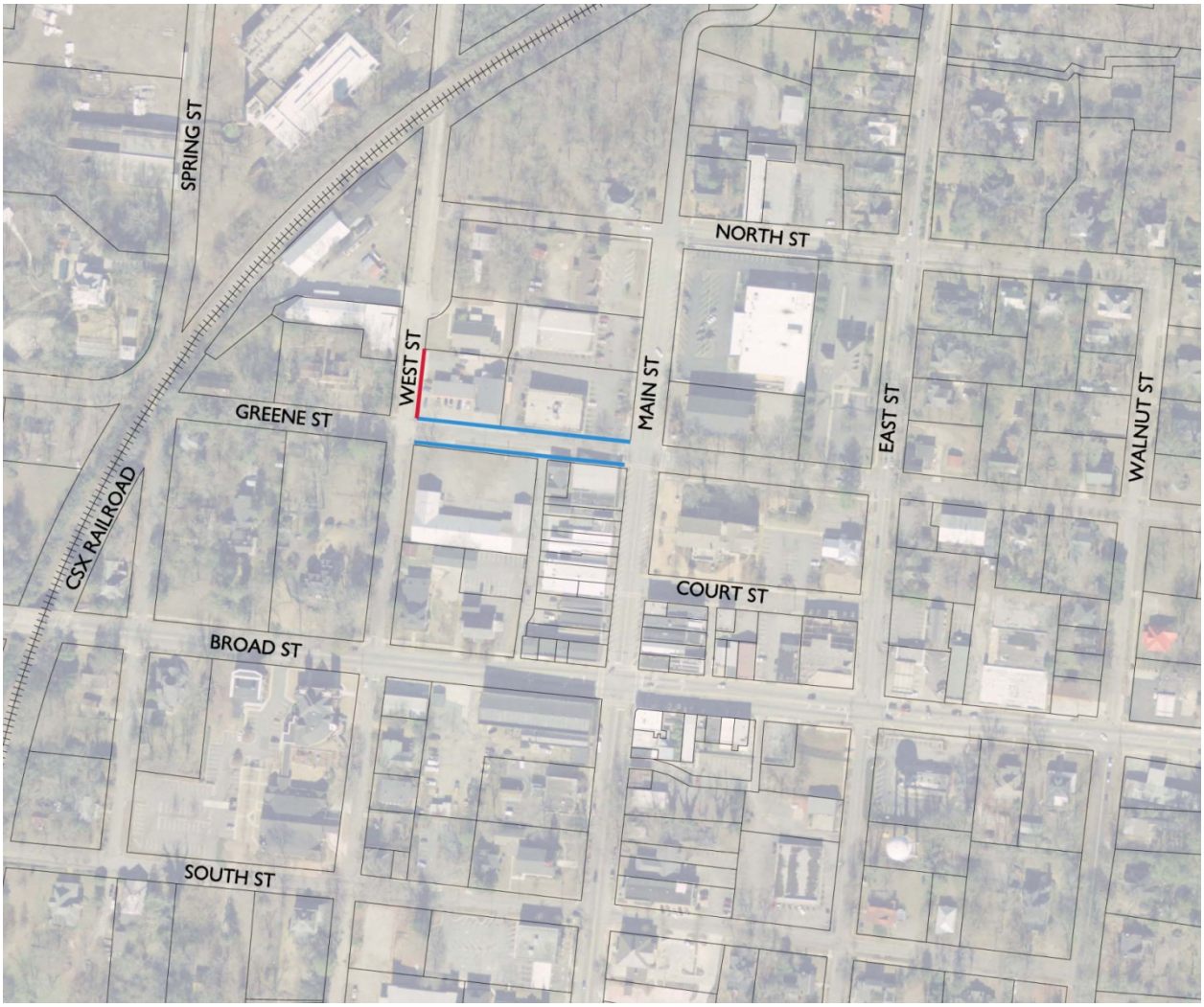


Figure 6.7 Greene Street Extension

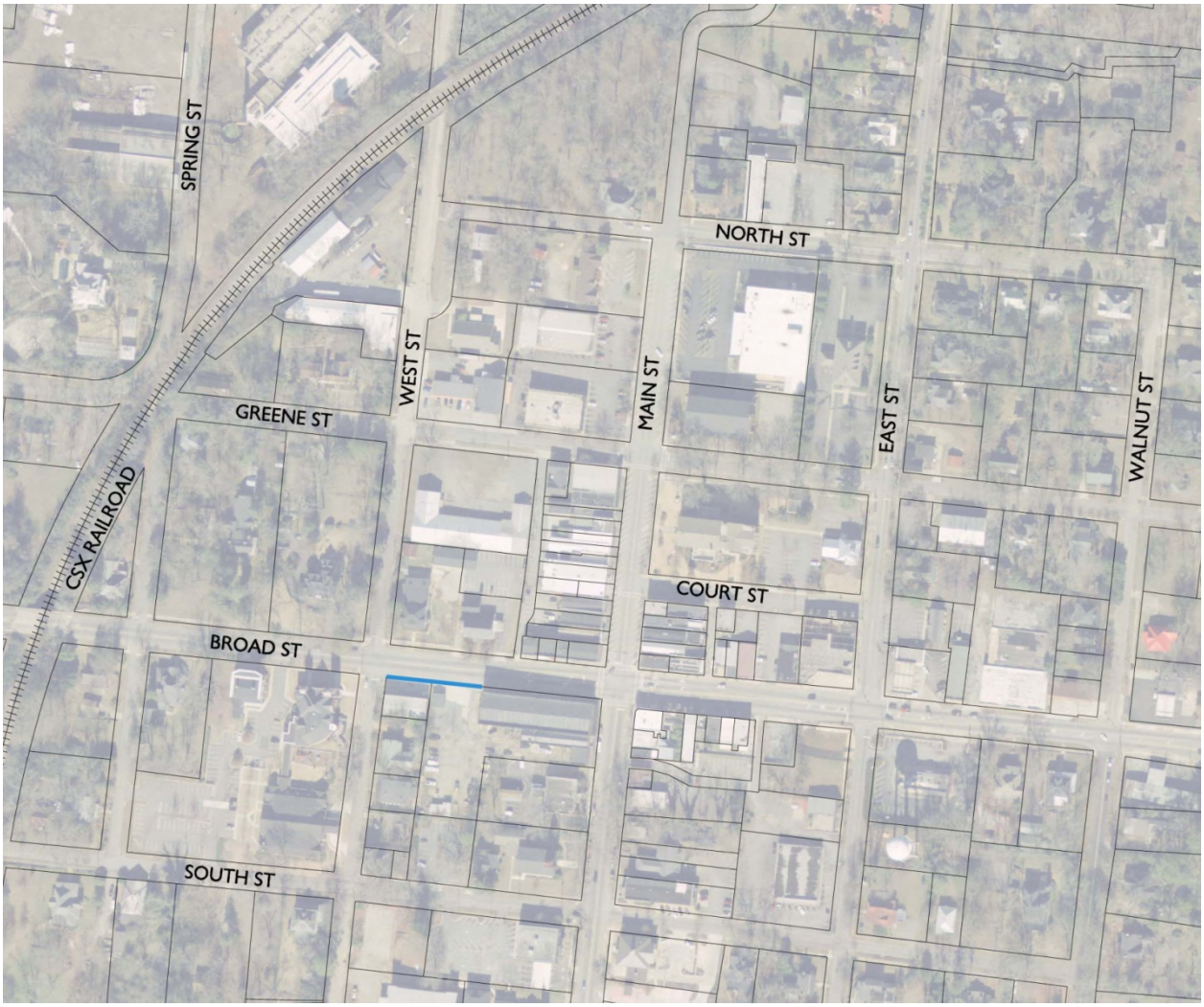


Figure 6.8 Broad Street Extension

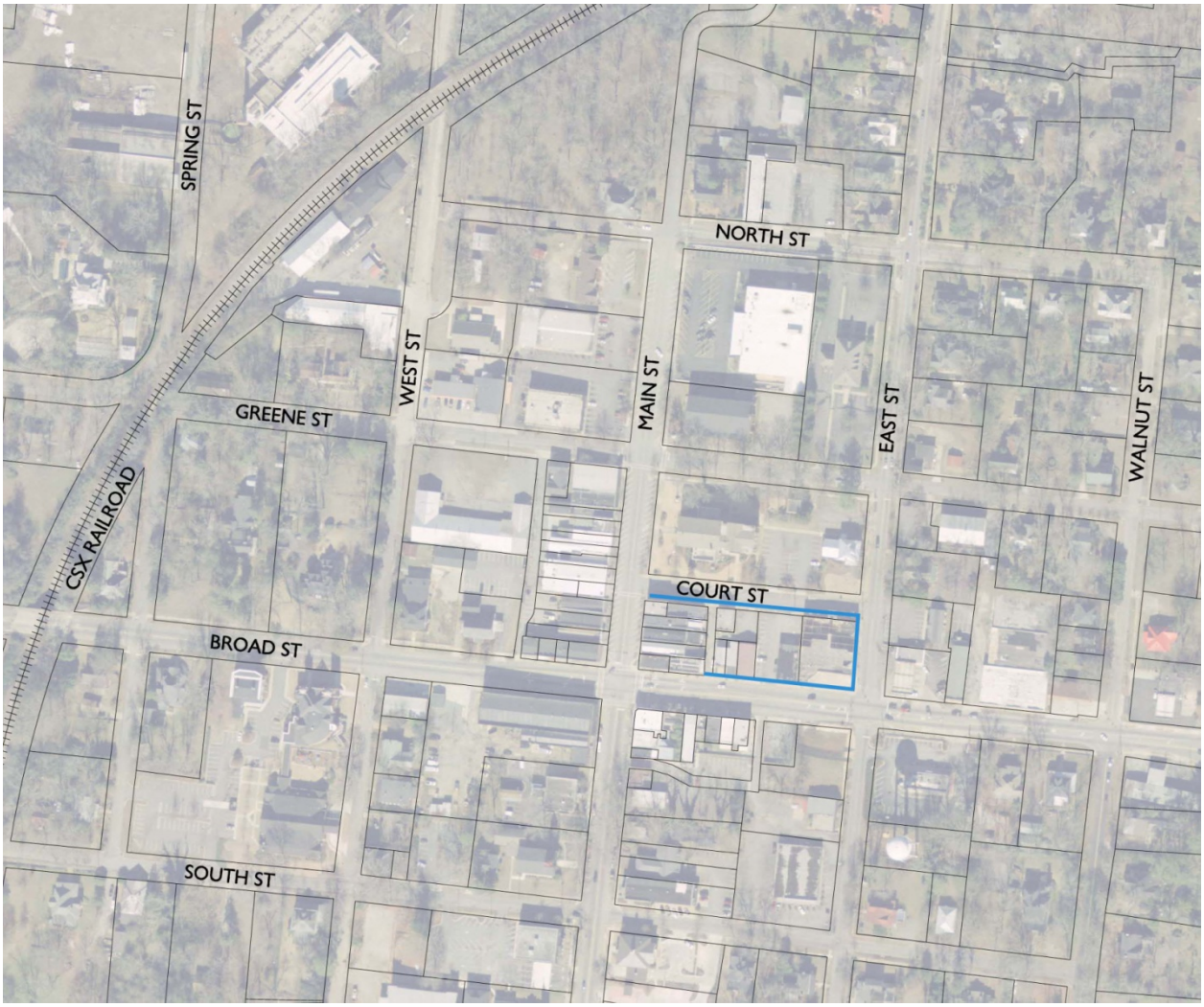


Figure 6.9 Court and Broad Street Extension

West Street Extension (Figure 6.10) – This extension will fill in a much needed gap in the existing downtown pedestrian network on West Street between South Street and Greene Street. This sidewalk should be six to eight feet wide, constructed of concrete, and contain a green space between the sidewalk and edge of road where possible.

East and Broad Street Improvements (Figure 6.11) – This recommendation will replace existing sidewalk that is in poor condition on East and Broad Streets, as well as adding new sidewalk to East, Broad and South Streets.

Priority #2 – Canaan Neighborhood Link (Figure 6.12)

This was a high priority project in the previous five-year plan and the majority of the work has been completed. However, that portion from First Street to Second Street along Walnut Street (Martin Luther King Jr. Drive) still remains to be completed.

Long Range Project Priorities

Schools Link (Figure 6.13) – This project will connect four existing educational facilities in the southern portion of Greensboro to one another and to the residential neighborhoods that surround them.

Robinson Park and Public Facilities Link (Figures 6.14a and 6.14b) – This project will connect the Greene County public service facilities on the west side of the city to the downtown. A sidewalk would also be added to the north side of Siloam Road and portions of Bush Street, providing a stronger connection between Robinson Park and the city center.

Complete Existing Sidewalk Network (Figure 6.15) – This project would assist in completing the pedestrian network in the most developed areas of Greensboro. Sidewalks are proposed to fill in gaps on East Street, First Street, Elm Street, South Street, Bush Street, West Street, Walnut Street, Greene Street, Spring Street, Chestnut Street, Laurel Avenue and Mill Street.

Pedestrian Bridge – This project would provide a pedestrian bridge across the railroad on the western edge of downtown. It would facilitate pedestrian access throughout the community and provide a connection needed between the mill community and downtown.

Additional Recommendations

Where possible, there should be a strip of green space between the road and sidewalk. This green space separation increases pedestrian safety and comfort by serving as a buffer between the vehicular and pedestrian zones. An additional benefit of this green space is that it allows space for the planting of shade and/or ornamental trees. Tree-lined streets are an essential part of the historic character of Greensboro and should be preserved and enhanced in all future development efforts.

Figure 6.10 West Street Extension

Figure 6.11 East and Broad Street Improvements

Figure 6.12 Canaan Neighborhood Link

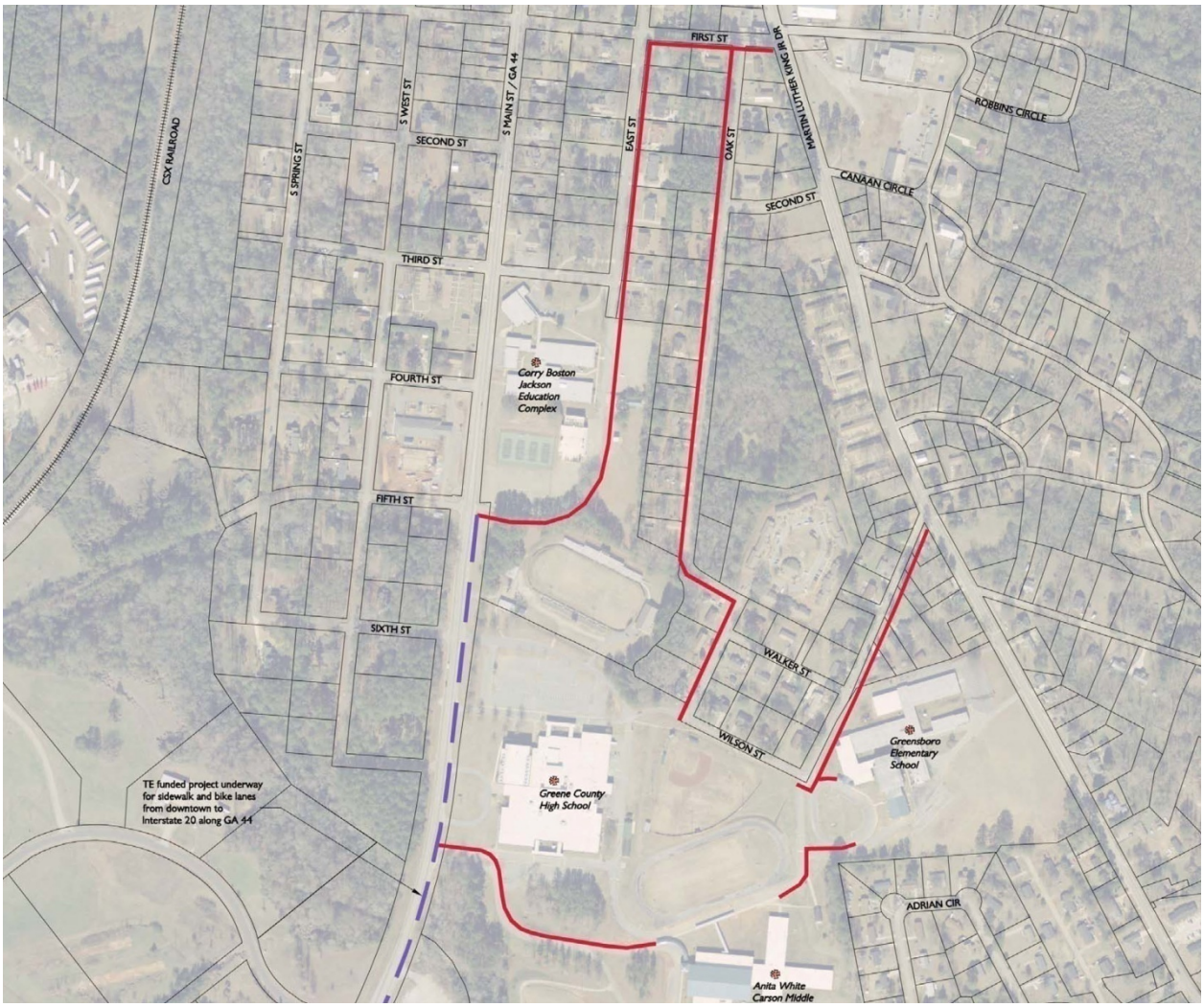


Figure 6.13 Schools Link

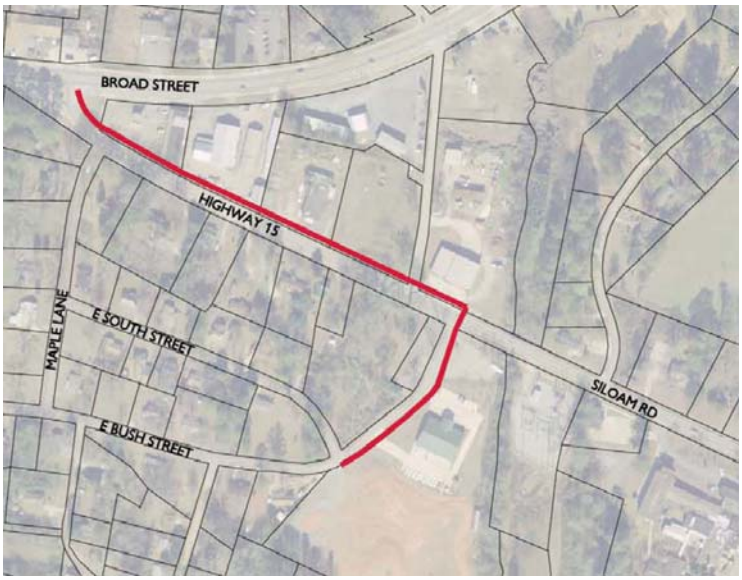


Figure 6.14a Robinson Park and Public Facilities Link

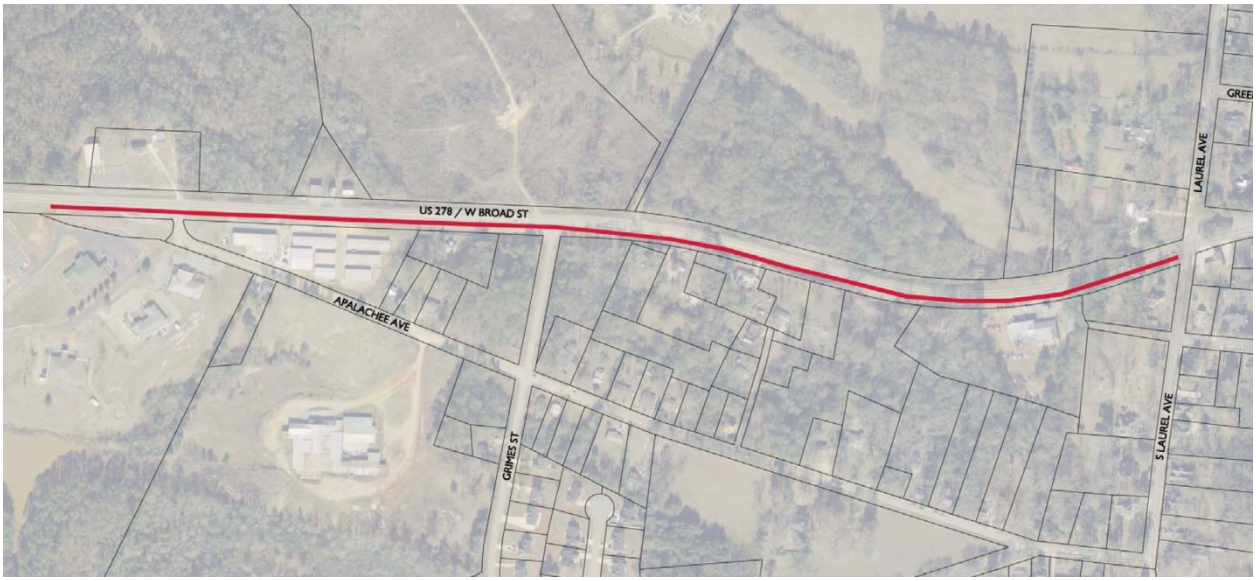
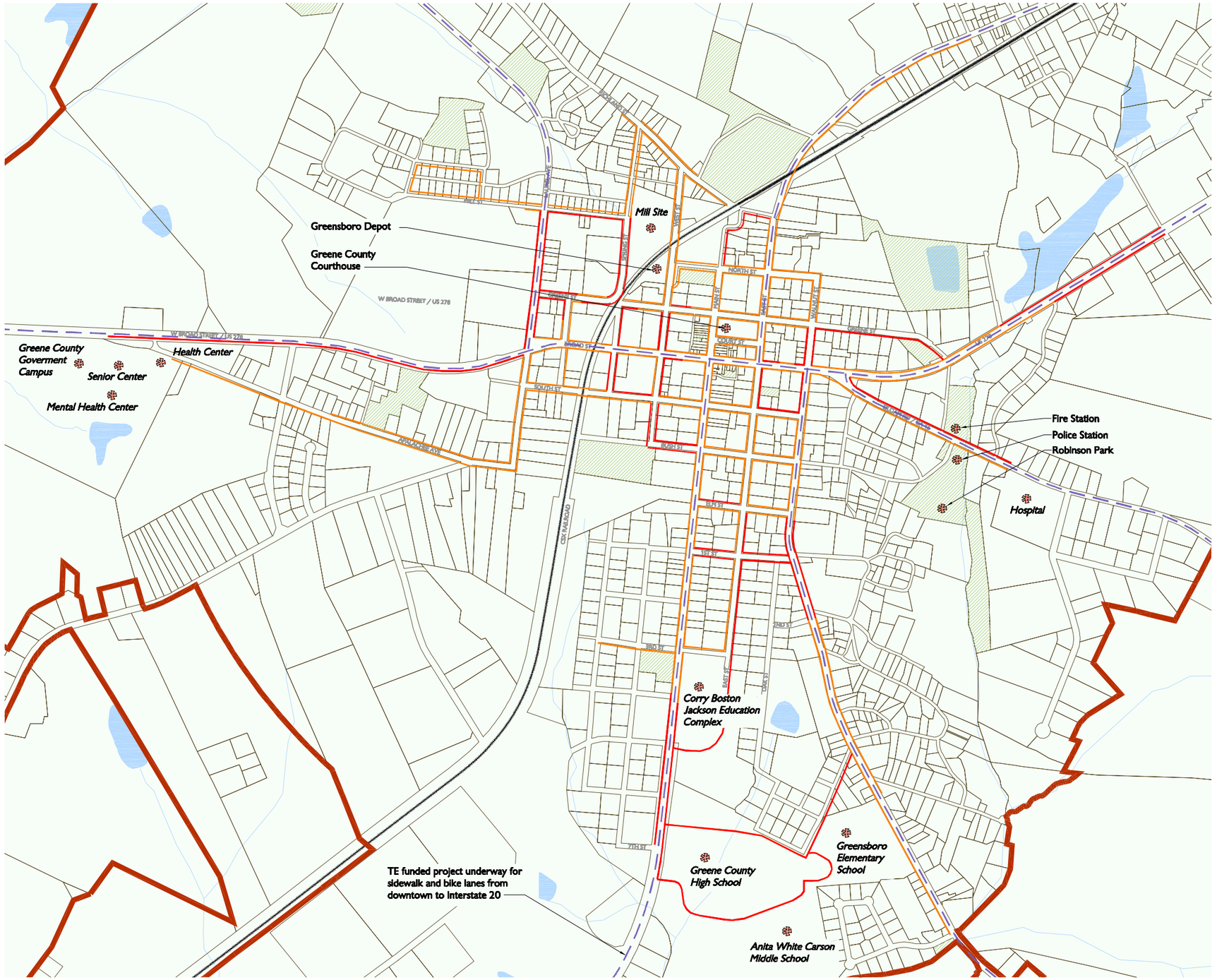


Figure 6.14b Robinson Park and Public Facilities Link

Figure 6.15 Completion of Citywide Sidewalk Network

LEGEND

- CITY-OWNED PARCELS
- EXISTING SIDEWALK
- PROPOSED SIDEWALK EXTENSION
- PROPOSED BIKE LANES (NEGRDC REGIONAL BIKE AND PEDESTRIAN PLAN - 2005)
- GREENSBORO CITY LIMITS
- RIVERS, LAKES & STREAMS
- COMMUNITY ACTIVITY NODE



EXISTING AND PROPOSED PEDESTRIAN AND BIKEWAY SYSTEM

SCALE : 1" = 1000'

Landscape Architecture - Historic Preservation
Planning - Environmental Assessment

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CITY OF GREENSBORO FIVE YEAR PLAN

GREENSBORO, GEORGIA

ProjectNo.:	07009
Scale:	1" = 1000'
Date:	10-14-08
Revisions:	
Drawn:	DL
Checked:	DJ

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EXISTING AND PROPOSED PEDESTRIAN AND BIKEWAY SYSTEM

Figure 6.16

Another character-defining feature of many of the city's sidewalks and roadways is the presence of granite curbing. Where possible, new sidewalk and streetscape projects should include granite curbing as part of their design. Locally quarried granite should be utilized, if possible, to match the character of the existing stone. Sidewalk repair projects should re-use existing granite curb sections whenever they are present. Extant historic stone drainage structures should also be preserved in any future projects.

Granite Curb and Drainage Inlet

BIKEWAYS

Currently, there are no designated bikeway amenities in the City of Greensboro. Several bike lane projects have been identified in a *Regional Bike and Pedestrian Plan* created by the Northeast Georgia Regional Development Center (NEGRDC) in 2005 and are illustrated in this plan. In addition to these projects, there is a TE-funded project currently underway that will provide pedestrian and bicycle amenities south of downtown along South Main Street (SR 44) from the downtown core southward. Currently, the length of pedestrian and bikeway system will be determined by the available budget.

In addition to portions of the regional NEGRDC bike and pedestrian system designated within the City of Greensboro, the potential trail along Town Creek utilizing the existing sewer easement and mentioned previously in the Parks, Recreation, Open Space and Cultural Facilities section of this report is another opportunity (long-range project).

CHAPTER 7
PLANNING AND ZONING-RELATED FUNCTIONS

This chapter discusses those services provided under the general heading of planning and zoning services. These services include but are not necessarily limited to: comprehensive and special area planning, zoning, annexation, historic preservation, development and subdivision review, building permits, flood plain management, geographic information systems, and engineering support.

ANALYSIS OF EXPENDITURES

The current budget for the planning and zoning department is $162,000. Budgeted expenditures, in addition to salaries and benefits of the city planner include legal/engineering services of approximately $72,000, a $5,000 allocation for geographic information systems (GIS), and a $5,000 contingency. A revenue stream is provided by the department through receipt of building permit and other fees. No significant capital expenditures are associated with the planning and zoning department.

Greene County's 2007-2008 general fund budget for the year ending September 30, 2008, reveals budgeted expenditures of $319,446 for building inspections and $213,111 for GIS, under the general government category.

ANNEXATION

Background

Municipalities in Georgia have authority to annex additional property into their city limits. While there are other methods, typically cities use the "100 percent" method, which requires that the property owners petition the city to annex. There is also a "60 percent" method, which requires approval of 60 percent of the property owners and 60 percent of the electors involved in the proposed annexation (see Article 36 of Title 36, Official Code of Georgia Annotated). Annexation is a very important consideration, since bringing new lands into the city limits can significantly affect the city's service requirements and budgets. Municipalities often seek a larger non-residential tax base, and use annexation to expand their fiscal resources.

Review of Recent Annexation Practices

Greensboro extended water and sewer services to the SR 44 and Interstate 20 interchange and beyond, in an effort to serve new commercial development there, then annexed some of the property, which will ultimately increase the city's non-residential property tax base. The annexation by Greensboro across I-20 included the "Oconee Town Center," a commercial development project proposed to consist of 540,015 square feet on approximately 71 acres. Part of that development (132,874 square feet) has already been constructed (i.e., the new Home Depot Store, completed November 2006). The project at buildout is expected to generate $107,520 in annual property tax revenues to the city and 530 employees.[11] With the exception

[11] Development of Regional Impact #1421. Information from the Northeast Georgia Regional Development Center website.

of annexing 132.678 acres on November 19, 2007,[12] Greensboro's annexations have been modest.

Results of Questionnaires

An initial questionnaire of the steering committee members revealed that several members if not all of them value greatly the small town feel and atmosphere of Greensboro. Annexation, by its very nature, works against the maintenance of a small town. In the words of one steering committee member, "If we increase in size, then we do away with what makes us unique." The initial questionnaire also asked about possible future annexations by Greensboro over the long term, and whether that was desirable. Several respondents indicated that Greensboro should annex only modestly, or a little, while others had no opinion on this issue. A second questionnaire inquired about whether a plan for annexation should be included in the five-year plan. Preparing a plan for annexation ranked second to last (46th) of 47 projects listed. We conclude from the results of the questionnaire that Greensboro should not plan for additional annexations, and that whatever annexations it does agree to undertake over the long term should be small or modest in nature.

Recommended Annexation Policies

The consulting team agrees generally with the public sentiment. Greensboro has already annexed significant lands at the interchange of Interstate 20 and SR 44, which will enable significant growth of its non-residential tax base. There are at least three reasons for recommending a cautious, measured, and limited annexation policy for Greensboro. First, residents want to keep Greensboro small and preserve its small town feel, and annexation tends to work against that objective and vision for the city. Second, with any annexation comes a number of service responsibilities (police, water, sewer, etc.) which can be costly and are not included in the current five-year plan. Third, the extension of new facilities and promoting population and employment growth in more distant parts of the city, through annexation, tends to work against the viability of infilling existing vacant sites in the city limits and can be inefficient from an economic and land use standpoint. For these reasons, the five-year plan does not call for preparation of an annexation plan. The suggested policies are articulated below.

1. Greensboro should annex only modestly during the next five years, and beyond.

2. If large-scale annexations are proposed (i.e., more than incremental additions of ten acres or less), the proposed development should be accompanied by a traffic study and other impact studies that indicate future population and employment expected to be generated by development within the annexed area, as well as provisions for developer-funded extension of infrastructure to the annexed area (at minimum, plans for funding of water and sewer line extensions).

PLANNING

Planning functions can be divided generally into two types: long-range planning and current planning. Long-range planning involves the preparation of comprehensive plans, shorter-term plans (such as this five-year plan), and special area plans. Current planning functions involve

[12] Annexation Reports for Greene County, as reported to the Georgia Department of Community Affairs. www.georgiaplanning.com/boundary/annexations/ (accessed October 16, 2008).

the administration of rezoning requests, development and subdivision plan reviews, and so forth.

Comprehensive Plan

Greensboro has participated in countywide comprehensive planning efforts with Greene County and other municipalities. The Northeast Georgia Regional Development Center (now Regional Commission) has been assigned responsibilities for comprehensive planning. The most recent comprehensive plan was completed in 2004 and is frequently cited in this five-year plan. Completion and adoption of a comprehensive plan is not absolutely a mandate for cities and counties in Georgia, but if they do not complete a comprehensive plan, they lose their "qualified local government" status and thus become ineligible to receive certain state grants and loans. For a description of those grants and loans, see Chapter 10, "Financing" of this five-year plan. In addition, even if grant and loan programs do not pre-condition applicants to be qualified local governments, some of them have criteria which weigh applications from qualified local governments more heavily (preference is given to them) than those without comprehensive plans or those which have not maintained their qualified local government status.

In 2009, Greensboro and Greene County are required to prepare a "partial plan update" to their comprehensive plans. That requirement was in lieu of a five-year update of their short-term work programs, and was mandated to bring local governments that planned under the 2004 minimum planning standards of the state closer into compliance with the local planning requirements effective May 1, 2005. This five-year plan is a major component of that partial plan update – this work was coordinated with that effort, since there is considerable overlap in terms of public participation, identification of issues, preparation of policies, and identification of programs and activities needed over a five-year period. The consultants for the five-year plan (this document) worked on some of the requirements of the partial plan update for Greensboro. However, final submission of the "partial plan update" is the responsibility of the Northeast Georgia Regional Commission, since there was a decision made by the city to coordinate its partial plan update and submit it simultaneously with the Greene County partial plan update.

Special Area Plans

As noted elsewhere in this report, Greensboro prepared streetscape plans for its downtown area. This five-year plan calls for preparation of a special area plan for the East Broad Street corridor, just east of the downtown area. That recommendation has been made for several reasons. First, the initial questionnaire of the steering committee members revealed that Broad Street was a particular concern, as are the poor use (or lack of use) of buildings along the corridor. There are a number of other concerns about negative factors that are also associated with this corridor, including a lack of sufficient retail "mass" in the downtown and the aesthetics of visual entrances to the downtown. Second, the need for such a plan was identified in the 2002 five-year plan and has yet to be implemented. Third, the East Broad corridor has been identified as an "area requiring special attention" in the partial plan update (draft) of the Greensboro comprehensive plan. Fourth, East Broad is a logical corridor to emphasize, given its proximity to Greensboro's downtown planning efforts (see Figure 7.1).

The initial recommendation in the 2002 five-year plan, to prepare an East Broad corridor redevelopment and improvement plan, was confirmed again by the steering committee in its prioritization of potential projects. The East Broad special area plan project ranked 18th of the 47 projects listed, and three of ten respondents identified it as requiring a "very high" priority.

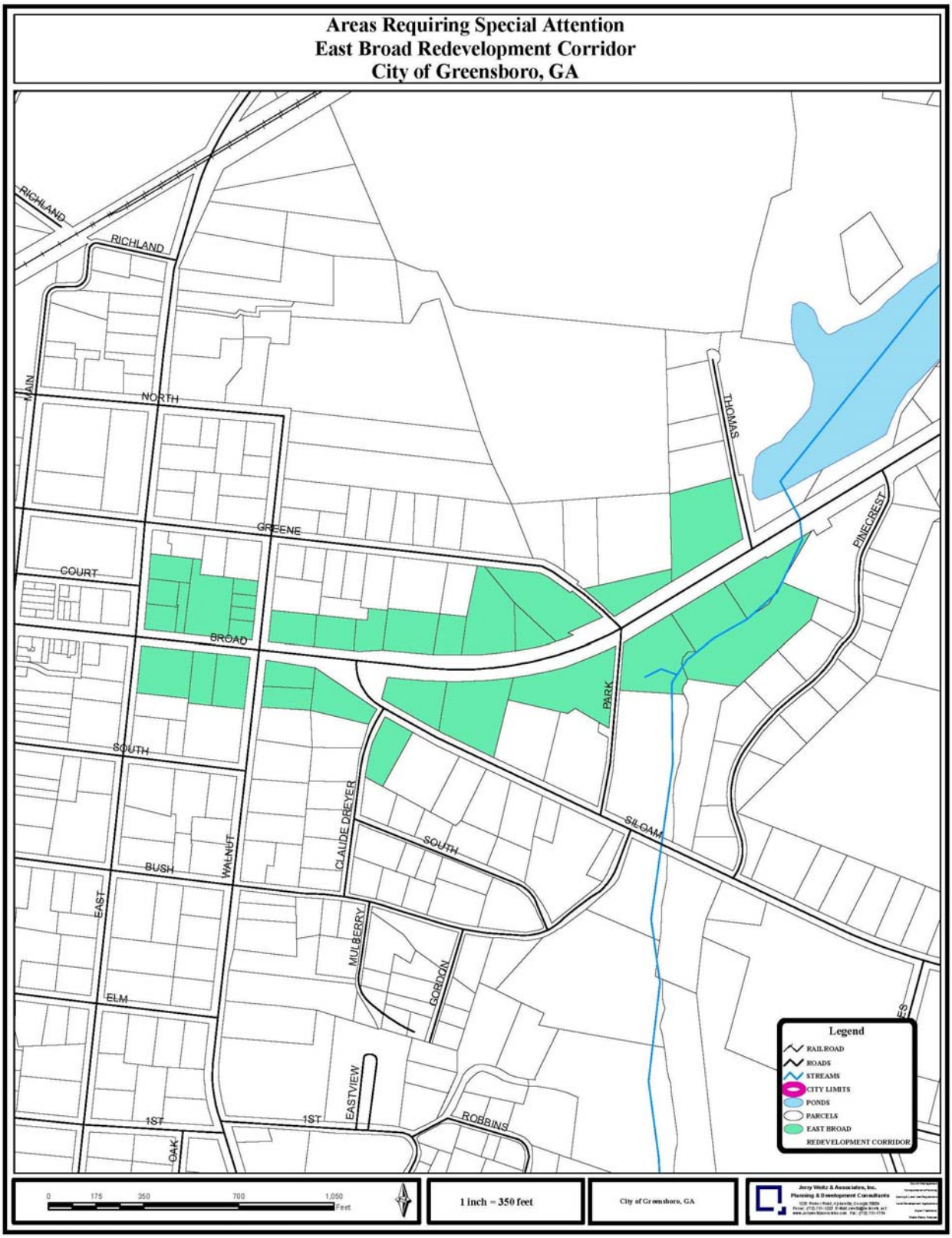


Figure 7.1 East Broad Redevelopment Corridor

Overall, it is considered a "high" priority when compared with other projects in this five-year plan.

Functional Plans

Sometimes, a comprehensive plan does not go into sufficient detail to help program detailed capital improvements. Such is the case with some facilities such as gas, water, sewer, stormwater management/drainage, and transportation. Because such master plans cover only one major segment of facilities, they are often termed "functional" plans. As noted elsewhere in this five-year plan, the preparation of a master drainage plan is recommended. While other functional plans are desirable, they are not called for in the five-year plan.

Regional Plans

In addition to any plans generated locally, it is important to acknowledge the existence of several regional planning efforts and studies by the Northeast Georgia Regional Commission. Such plans and studies include but are not limited to a regional policy or comprehensive plan (called the regional "agenda"), a "Corridor Feasibility Study for Evaluation of Potential Greenway Networks in Northeast Georgia" (June 2008), a "Transit Development Plan for Greene County" (June 2008), Northeast Georgia Regional Bicycle and Pedestrian Plan (April 2005), and a Regional Comprehensive Solid Waste Management Plan, among others.

Recommendations

1. Complete and adopt the partial plan update of the comprehensive plan in 2009.

2. Prepare and adopt a detailed redevelopment plan for the East Broad corridor.

3. Update the comprehensive plan and the five-year plan at no less than five-year intervals.

4. Integrate recommendations from regional plans and studies into local plans.

5. Integrate any functional planning efforts into the comprehensive plan.

6. Amend the comprehensive plan whenever necessary to do so but in all cases concurrent with or at least shortly after major annexations occur (e.g., 100 acres or more).

ZONING ADMINISTRATION AND PLAT AND PLAN REVIEW

The prior (2002) five-year plan recommended review and revision of the city's zoning and subdivision regulations. In 2007, the city contracted with the Northeast Georgia Regional Development Center to prepare a comprehensive revision of the zoning ordinance.[13] However, the city's subdivision regulations[14] were not updated at that time. When the city's five-year plan steering committee ranked 47 potential projects, it identified this project (rewrite of subdivision and land development regulations and construction specifications) as 30th (a medium priority).

[13] The Zoning Ordinance for the City of Greensboro, Georgia, Effective March 19, 2007.

[14] Land Subdivision Regulations, Greensboro, Georgia, December 1996.

In the consultant's opinion, after reviewing the regulations for purpose of assessing the city's implementation of the state's quality community objectives, there are several deficiencies that need correcting. Furthermore, because these regulations establish the requirements for on-site infrastructure, to the extent the requirements are deficient, Greensboro is threatened with falling farther and farther behind in its provision of basic infrastructure until these regulations are revamped. Therefore, it has been included in the five-year work program.

HISTORIC PRESERVATION

Summary of Existing Programs

The entire City of Greensboro was evaluated in the mid 1980s to identify properties and districts eligible for the National Register of Historic Places. Through this project, multiple districts and landmarks were listed on the National Register as part of a citywide thematic nomination. The accompanying map (Figure 7.2) graphically illustrates the current properties and districts on the National Register of Historic Places.

The National Register is the federal government's official list of cultural resources worthy of preservation, documented and evaluated according to uniform standards established by the National Park Service, which administers the program. Protection of historic resources, however, is not guaranteed by listing resources on the National Register. The National Register only provides protection in undertakings which utilize federal funding. Any site listed or eligible for listing on the National Register of Historic Places has to be considered in any project with federal involvement.

To ensure adequate protection additional measures at the local level or necessary. Many local governments prepare and adopt local historic preservation ordinances pursuant to state law (The Historic Preservation Act of 1980). A local preservation ordinance facilitates procedures for identifying and creating local historic districts and administering the review of building renovations or alterations to landmark properties or properties located within a local historic district. The ordinance establishes a historic preservation commission that is charged with the review of development proposals for landmark buildings or within historic districts. Greensboro has adopted only one local historic district for the downtown area, but there are many other areas outside that local district also deserving of protection. Once landmark designations or historic districts are established, it is customary to prepare documents to guide improvements to these properties or landscapes. Design guidelines provide information to guide future improvements within historic areas in a manner that is sensitive to the historic setting and promotes changes which are compatible with the historic environment.

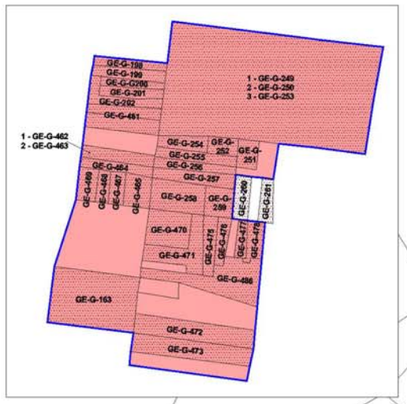
Results of Questionnaires

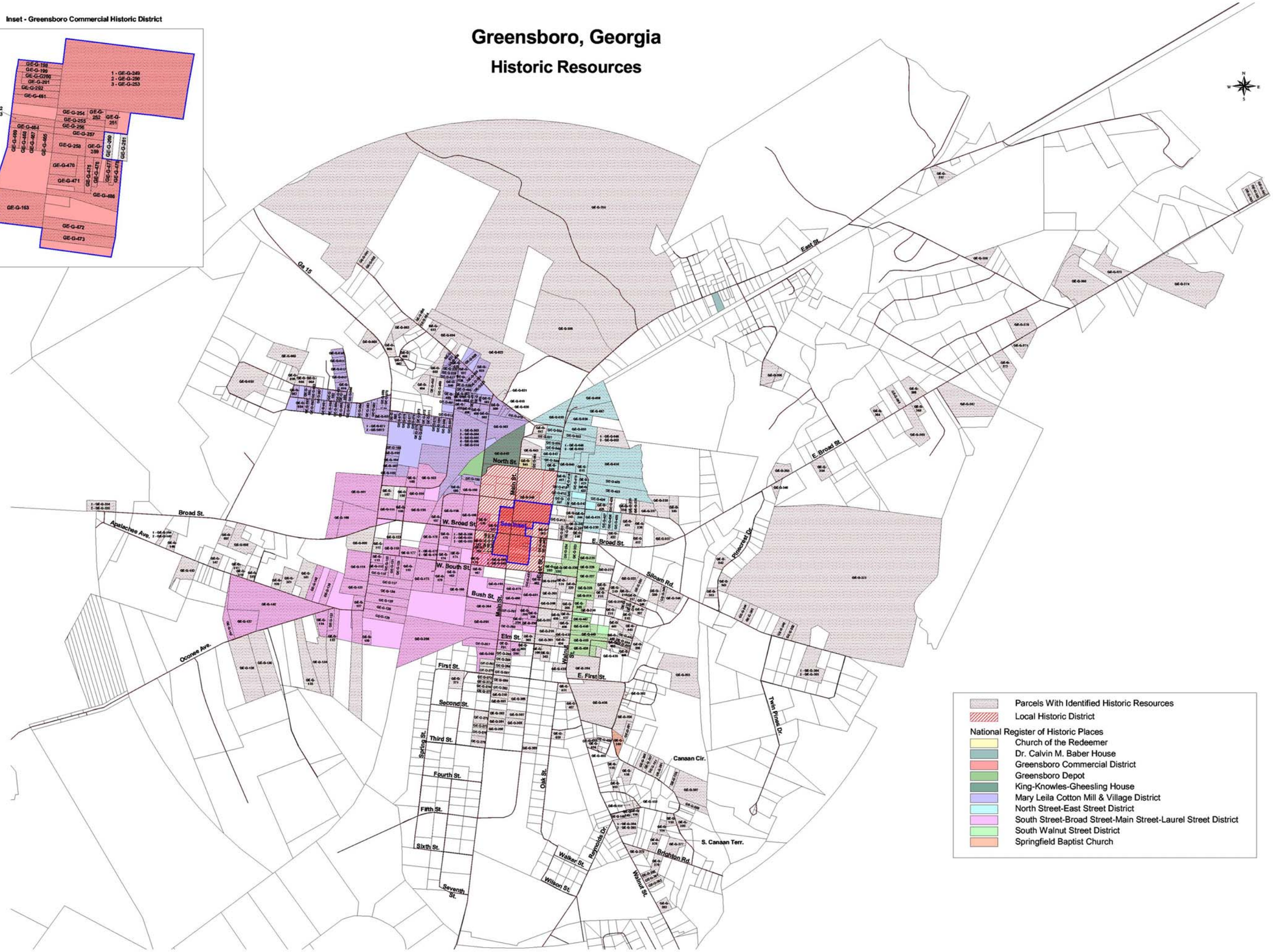
Historic architecture and charm ranked the highest in terms of what steering committee members like most about Greensboro. In response to the question on the initial questionnaire of whether "Greensboro has done an adequate/satisfactory job of protecting its historic resources," respondents gave mixed results: 5 agreed or strongly agreed, but 3 disagreed or strongly disagreed.

Greensboro, Georgia

Historic Resources

Inset - Greensboro Commercial Historic District





Parcels With Identified Historic Resources

Local Historic District

National Register of Historic Places

- Church of the Redeemer
- Dr. Calvin M. Baber House
- Greensboro Commercial District
- Greensboro Depot
- King-Knowles-Gheesling House
- Mary Leila Cotton Mill & Village District
- North Street-East Street District
- South Street-Broad Street-Main Street-Laurel Street District
- South Walnut Street District
- Springfield Baptist Church

Northeast Georgia Regional Development Center - 2001.

0.5 0 0.5 Miles

This information has been provided from general sources and is to be used only as a guide. The NEGRDC assumes no liability for its accuracy or for any decisions which the user may make based on this document.

Bending of rules/regulations (presumably including historic preservation ordinances) was listed as a factor respondents do not like about Greensboro. That latter comment probably reflects the challenges of implementing local historic district regulations, which can be difficult to apply and enforce uniformly unless there is a high level of staff involvement. And this finding may also help to explain some of the discontent with Greensboro's current historic preservation program. It is also possible that respondents are dissatisfied with the lack of geographic coverage of current local historic districts.

The project rating questionnaire asked respondents to rate several projects, including the proposal to conduct a survey of the Railroad historic district. That project ranked 23rd of 47 possible projects. Incidentally, consultants recommend not only a survey of the Railroad district, but rather a comprehensive survey of historic resources on a citywide basis, since the existing inventory is quite dated.

Surprisingly, the suggested project to "expand current National Register listings to all eligible properties" ranked very low, at 44th of 47 projects listed. It is also surprising to observe, given how important historic preservation is to the character of Greensboro, that historic preservation activities received only one vote (a third priority at that) from 10 respondents in terms of being one of the top three priorities for the five-year plan.

Recommendations

1. Prepare a comprehensive, citywide inventory of historic resources.

2. Prepare and adopt local historic districts to protect historic resources.

3. Nominate additional properties that are eligible for listing on the National Register of Historic Places.

4. Prepare and adopt design guidelines for more effective implementation of local historic district designations.

CODE ENFORCEMENT

Code enforcement is a very important function of local government. Without adequate enforcement, citizens cannot be enticed to obey local laws and rules. Some communities have gone beyond the typical mechanism of bringing code violators before the municipal judge, by instituting code enforcement boards. Cities and counties in Georgia are authorized to establish code enforcement boards pursuant to Chapter 74 of Title 36, the "Local Government Code Enforcement Boards Act (O.C.G.A. 36-74-1 et seq.). Such boards, if established, have the power to conduct hearings, and issue orders having the force of law to command whatever steps are needed to bring code violators into compliance. Greensboro may consider establishing such a board, if as in the case of other municipalities, the local court system is not sympathetic to the prosecution of code violators.

GEOGRAPHIC INFORMATION SYSTEM (GIS)

GIS has important applications in many aspects of city planning and administration. Base maps are needed for almost every planning effort. Zoning maps need to be updated and are most

easily produced using GIS. The city needs to have maps prepared of its existing water and sewer lines, as well as other municipal facilities, where possible. As noted above, Greensboro has provided a small budget allocation for GIS services. Because use of a GIS system requires annual licensing for software updates, and skilled professionals and technicians to operate, further investment in a system should be considered; however, due to certain economies of scale, Greensboro may find it is not cost effective to provide its own services and may therefore be best served by joining GIS development efforts by Greene County.

COMMUNITY DEVELOPMENT

Greensboro, as a small town, does not have staffing available beyond the city planner to engage in formal community development activities. In addition, Greensboro does not have a framework for engaging in community development activities. Increasingly, however, municipalities need to provide some guidance if they are to compete for federal/state community development block grant funds and other community development grant program funds such as the new Neighborhood Stabilization Program which was funded and underway in 2009 as a result of the national crisis involving housing foreclosures.

As a part of the “partial plan update” of the comprehensive plan, certain neighborhoods were suggested for the targeting of any community development funding that might be obtained (see Figure 7.3). As noted in the partial plan update, the areas selected for targeting are preliminary and subject to refinement over time.

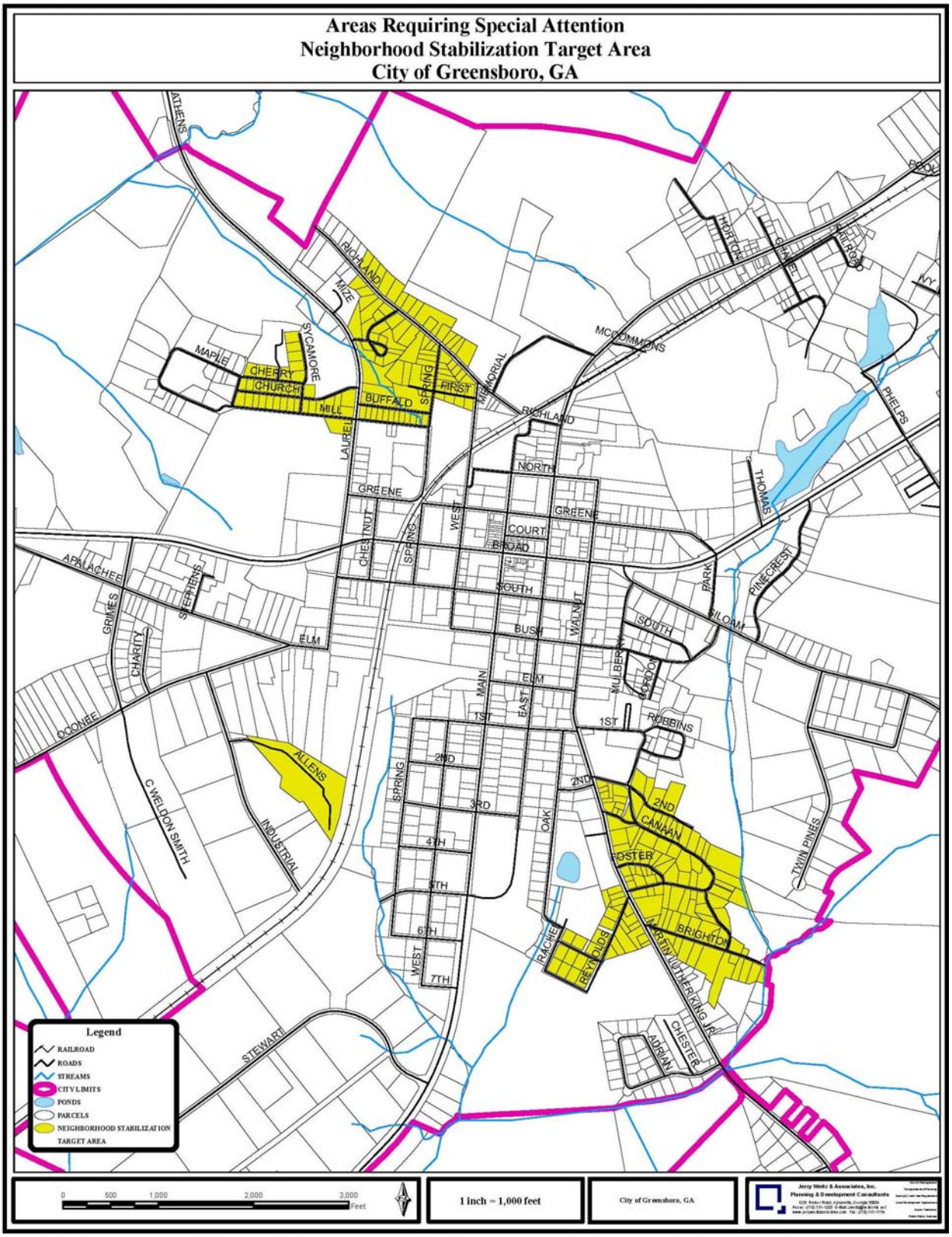


Figure 7.3 Neighborhood Stabilization Target Areas

CHAPTER 8
ECONOMIC DEVELOPMENT

Economic development is an important function of local government; however, the mechanisms for pursuing economic development usually lie outside the immediate control or purview of local government. Such is the case in Greensboro, where the Greene County Chamber of Commerce takes a lead role in economic development efforts, and the Chamber is financed in part with city general funds. In addition, the county has a development authority and the city has a downtown development authority. As a result of these participants, economic development receives a higher degree of attention than many of the facilities and services addressed in this five-year plan. Since a higher degree of every day attention is paid to economic development, we defer generally to the agencies responsible for economic development activities and our attention to economic development is brief. Furthermore, no recommendations are made here since multiple agencies are in better position to assess needs and make specific recommendations with regard to economic development.

ANALYSIS OF EXPENDITURES

Economic development in Greensboro is a significant expenditure in terms of the general fund, totaling $353,000 in the current budget year. A hotel/motel tax is collected, and anticipated revenues for the budget year were $75,000. Expenditures include operating costs for the Better Hometown Program and the Downtown Development Authority. The Chamber of Commerce provides principal economic development activities, as does the Greene County Development Authority. Greene County's 2007-2008 general fund budget for the year ending September 30, 2008, reveals budgeted expenditures of $108,524 for economic development, of which more than half ($60,000) goes to the operation of the Development Authority and a small share to the Chamber of Commerce.

ECONOMIC DEVELOPMENT FINANCING TOOLS

This section of the five-year plan provides a brief summary of various economic development financing tools which are available generally to local governments in Georgia.

Development Authority

Article 9, Section 6, Paragraph III of the Georgia Constitution authorizes the General Assembly to create development authorities to promote the development of trade, commerce, industry and employment opportunities. Chapter 62 of Title 36, of Georgia laws, the "Development Authorities Law" (O.C.G.A. 36-62-1 et seq.) further specifies the requirements for creating development authorities. Development authorities have a number of powers, including acquisition of real or personal property. As noted above, Greene County has established a development authority.

Downtown Development Authority and Better Hometown Program

A municipality may establish a downtown development authority pursuant to the Downtown Development Authorities Law (O.C.G.A. Title 36, Chapter 42, O.C.G.A. 36-42-1 et seq.), to revitalize and redevelop central business districts. Such authorities have a number of powers that can aid in its objectives, including the acquisition of real property, issuance of revenue bonds, and to serve as an urban redevelopment agency pursuant to Chapter 61 of Title 36 of

the Georgia Code. As noted above, Greensboro has established a downtown development authority.

"Downtown development area" is defined in the state's Downtown Development Authorities Law as "the geographical area within a municipal corporation designated as such by the resolution of the governing body activating the authority for such municipal corporation as modified by any subsequent resolution of the governing body of such municipal corporation" (O.C.G.A. 36-42-3(3)).

Georgia's published information on Main Street and Better Hometown Programs are surprisingly silent on what constitutes a downtown area, geographically or even conceptually. Such documentation does indicate that "Main Street is a comprehensive revitalization process that improves all aspects of a commercial district."[15] The same source refers to the "commercial district revitalization process" which would imply a concentration on commercial properties, if not an exclusive focus on them. Also, the Georgia Main Street program is based on the National Trust for Historic Preservation's "National Main Street Approach to Downtown Revitalization" which is defined as "a philosophy, a program and a proven comprehensive approach to downtown commercial district revitalization."[16] The program has been more broadly defined as follows: "The Classic Main Street Program and the Better Hometown Program (Georgia's small-town Main Street Program) are self-help community development programs designed to improve a downtown's quality of life" (Source: p. 9 of Downtown Development Program Descriptions and Level of Service, Georgia Department of Community Affairs, February 2008). Hence, anything that relates to that objective might properly be within the scope of functions of a Main Street program, though again the program descriptions clearly emphasize commercial revitalization which generally would be interpreted as precluding an extension into predominantly residential neighborhoods.

City Business Improvement Districts

Cities are authorized to establish city improvement districts pursuant to the City Business Improvement District Act (Chapter 43 of Title 36, O.C.G.A. 36-43 et seq.). Such districts are another means of restoring and promoting commercial and business activity within business districts of municipalities.

Community Improvement Districts

Article 9, Section 7, Paragraph VII of the Georgia Constitution authorizes the creation by local law of the General Assembly of community improvement districts. Purposes of such districts include street and road construction, parks, storm water, sewer, public transit, and other facilities (Article 9, Section 7, Paragraph II. Such districts are authorized to incur debt (Article 9, Section 7, Paragraph IV).

Tax Increment Financing

Tax increment financing is a technique that allows a local government or redevelopment agency to target a group of contiguous properties for improvement – a TIF district or, in Georgia, tax

[15] Georgia Main Street Program Fact Sheet 2 (2004).

[16] Downtown Development Program Descriptions and Level of Service, Georgia Department of Community Affairs, February 2008, p. 10.

allocation district – and earmark any future growth in property tax revenues in the district to pay for initial and ongoing improvements there. The growth in tax revenue is referred to as the "tax increment." Georgia authorizes use of this tool pursuant to the state constitution and Chapter 44 of Title 36, known as the Redevelopment Powers Law (O.C.G.A. 36-44-1 et seq.). Increasingly, in the metropolitan Atlanta area, cities are availing themselves of this tool to spur redevelopment.

CHAPTER 9
HEALTH, EDUCATION, WELFARE, AND SOCIAL SERVICES

Such facilities and services typically include public health (public/mental/environmental), schools, libraries, family and children services, and public housing. Greene County provides public health services, schools, and family and children services. There are only two facilities and services that are even indirectly associated with Greensboro, and both of those facilities and services (libraries and public housing) are provided by a regional authority and a special city authority, respectively. Given the general lack of direct responsibility on the part of Greensboro for services in this category of facilities and services, this chapter is intentionally limited in its contents.

LIBRARIES

Library services are provided by the Uncle Remus Regional Library System, which serves Greene, Hancock, Jasper, Morgan, Putnam, and Walton Counties. The Greene County library is located in Greensboro at 610 South Main Street.

The county's library expenses in the current general fund budget are $73,609. Greensboro contributes funds to the county library system ($28,200 in the current budget).

HOUSING AUTHORITY

Greensboro has a Housing Authority which owns several parcels of land and operates public housing complexes. The city receives a small amount of revenue from the housing authority.

CHAPTER 10
FINANCING

Cities and counties rarely have enough money to finance all necessary or desired project improvements. The city must ultimately make policy decisions on what to construct and when, which leaves some projects without funding being immediately available. In such cases, the needs are identified and outside funding sources determined (e.g., grants), if they exist. In cases where realistic funding sources are not available, unfunded project improvements are shown as "long term." Projects that are not capital facility improvements, such as ordinances and programs (e.g., adopt new historic preservation ordinances) are also shown in the five-year work program.

Local governments are increasingly looking to those who create demands to pay for facilities and services. The result is a new era where local governments are increasingly attributing the costs of facilities to the sources of demand. As local governments face ever-rising costs of facility expansion and as local taxpayers continue to be unwilling to shoulder much of the financial burden on behalf of new development, local governments will turn ever more to selecting from a smorgasbord of financial techniques (Nelson and Duncan, p 133).

REVENUE SOURCES

Hotel/Motel Tax

Greensboro collects a hotel/motel tax. Georgia law provides 23 paragraphs in O.C.G.A. 48-13-51(a) that authorize a hotel/motel tax under various conditions. City and county governments imposing such a tax are required to expend the taxes collected in strict accordance with the provisions of the specific authorizations in the Code that was cited by the local government when adopting the tax. Local governments imposing a hotel/motel tax are required by state law (as a condition of continuing authority to impose the tax) to file a Hotel/Motel Tax Report for each fiscal period during which the tax is imposed. Each local government imposing a hotel/motel tax is required to adopt a budget plan specifying how the expenditure requirements of the Georgia Code will be met [O.C.G.A. 48-13-50(a)(9)(A)]. Additionally, each local government imposing the tax is required to include in annual audited financial statements a determination as to whether the local government has complied with the applicable expenditure requirements [O.C.G.A. 48-13-50(a)(8)(B)] (Source: Georgia Department of Community Affairs).

Sales and Use Taxes

Title 48, Article 2 of the Georgia Code establishes laws for the collection of a one percent joint county and municipal retail sales and use tax. Greene County has collected a Local Option Sales Tax (LOST) since April 1, 1983. Local option sales taxes expected to be received by Greensboro in the 2008-2009 fiscal year total $780,000, or approximately 22.7 percent of general fund revenues. Greene County has also voted in Educational Local Option Sales Taxes in 1998, 2003, and 2007, with the most recent approval having expired December 31, 2007.

Title 48, Article 3, Part 1 authorizes Special County 1 Percent Sales and Use Taxes by counties, subject to the requirement of referendum approval. Greene County's voters first approved a Special Local Option Sales Tax (SPLOST) effective April 1, 1987, and successive referenda to continue the SPLOST have been approved continuously since then. The maximum period for such special local option taxing authority is five years. Such taxes may be used for roads, streets and bridges; county courthouses and countywide administrative buildings; jails and

correctional institutions; recreational and cultural facilities, water and sewer facilities; public safety facilities, airports, and hospital facilities (Sec. 48-8-111).

The SPLOST authorization by Greene County, with participation of the City of Greensboro, is considered the primary funding source for capital improvements recommended in this five-year plan. Table 10.1 provides the current, approved funding categories for Greensboro's share of SPLOST funding.

Table 10.1
Approved Distribution of SPLOST Funds
By Major Project Category
City of Greensboro

Project Category	Greensboro Allocation of SPLOST ($)
Roads, Streets, Bridges, Sidewalks	$4,311,791
Public Safety Facilities/Equipment	$900,000
Water, Sewer, Stormwater Facilities/ Equipment	$1,000,000
Administrative Facilities/Equipment	$250,000
Cultural Facilities/Equipment	$500,000

The public process followed in preparing this five-year plan resulted in a significant reordering of the city's priorities with respect to using SPLOST funds. Based on the questionnaire results, the following redistribution of anticipated SPLOST revenues is recommended (Table 10.2) in order to match the desires of the Steering Committee.

Table 10.2
Recommended Distribution of SPLOST Funds
By Major Project Category
City of Greensboro

Project Category	$ Distribution	Percent of Total
Enhancement, beautification, signage	$452,760	6.4%
Downtown projects	$720,000	10.3%
Cultural facility	$500,000	7.2%
Administration	$250,000	3.6%
Sewer	$500,000	7.2%
Water	$500,000	7.2%
Drainage	$250,000	3.6%
Parks and recreation	$1,000,000	14.4%
Sidewalks	$1,748,600	25.1%
Roads	$1,150,431	15.0%

The recommended alternative SPLOST distribution keeps administration and cultural facilities the same as that initially recommended. It introduces new categories for funding, consistent with stated priorities, for enhancement, downtown improvements, and parks and recreation. The alternative recommended distribution of SPLOST funds would provide more dollars for sidewalk improvements, delete public safety (ladder truck) as an expenditure category (assuming that alternative funding measures are available (fire impact fee and city fire tax) for that equipment purchase, and increases allocations for water and sewer repairs and replacement.

Gas Fund

As noted earlier in this plan, Greensboro distributes natural gas to customers and has a gas fund.

Water and Sewer Fund

Also as noted previously, Greensboro has a water and sewer proprietary fund, and water and sanitary sewer are accounted for separately within that fund.

Sale of Municipal Property

The city owns certain properties within the city limits. Some of the municipal properties have been used as dumps before, and so the value of these properties may be lessened by such prior use. However, the city could consider any surplus property (assuring that it is not needed and usable for public facilities called for in this plan) to be a potential source of funds for the purchase of more appropriate parcels or for major public improvements.

General Obligation Bonds

Greensboro has reportedly not used general obligation bonds as a source for capital improvement funds. However, other cities upon identification of capital improvement needs sometimes will ask the city residents to vote in a referendum to raise property taxes to cover the cost of financing long-term bonds. Such bonds are based on the full faith, credit, and taxing powers of the city and thus do not have much risk for underwriters. The interest rates paid are generally lower than revenue bonds. This five-year plan suggests that Greensboro take a bold step (one it appears to never have taken) and look toward authorizing a general obligation bond referendum to fund capital improvements, since the SPLOST funds and other city revenues are insufficient to finance all improvements recommended in the plan during the long term.

Revenue Bonds

Article 9, Section 5, Paragraph 6 of the Georgia Constitution authorizes cities and counties to issue revenue bonds as provided by general law, which are repayable out of the revenue derived from the project and do not create debt of the issuing political subdivision. Revenue bonds are an appropriate source of funding capital improvements particularly for the city's water and sewer systems, for which a dedicated revenue stream can back payment of principal on such bonds.

Intergovernmental Grants and Loans

While they have receding in many major respects, there are still federal and state grants and loan programs which can help finance capital improvements in Greensboro. The more promising grant and loan programs available currently are identified in a later section of this Chapter.

User Charges

User charges are most appropriate for facilities such as water and sewer, and other utilities such as trash collection. In other cases, such as libraries or recreation facilities, user charges may be appropriate or can be considered (though they are often not applied). This five-year plan does not recommend any additional user fees or charges to fund capital improvements, although it suggests that tap-on fees for water and sewer and other rate charges for water and sewer be sufficient (increased if necessary) to cover all anticipated future capital costs for system development and improvement.

Development Impact fees

Cities and counties in Georgia are authorized to prepare and adopt development impact fee programs pursuant to O.C.G.A. 36-71-1 et seq., the Development Impact Fee Act, which can be used to fund system improvements (roads, water and sewer, parks and recreation, public safety, and libraries) needed to serve new development. More and more local governments in Georgia are turning to this funding mechanism to help maintain levels of service as new development occurs.

Given the current poor condition of the national economy, little development is taking place in Greensboro. Development impact fees do not generate a revenue stream unless there is building taking place, since such fees are usually collected at the time a building permit is issued. Although this five-year plan acknowledges the potential of adopting impact fees, it is not considered a viable revenue source in the short-term. In the case of water and sewer facilities, the tap-on fee and regular rates can be used more easily than an impact fee program for funding future capital improvements for those facilities. However, this five-year plan does suggest that an impact fee for public safety should be developed and instituted in order to fund the proposed purchase of a ladder truck. Other facilities might be appropriately funded in part with development impact fees, at some later point in the longer term, as Greensboro experiences a new wave of development.

Special Districts

Article 9, Section II, Paragraph VI of the Georgia Constitution authorizes the creation of special districts for the provision of local government services within such districts. Fees, assessments, and taxes may be levied and collected within such districts to pay for the cost of providing services and constructing and maintain facilities. Such districts can be created by municipal ordinance or resolution, except that the local government cannot supersede laws enacted by the General Assembly for such purposes.

There are two facilities in Greensboro that might ultimately be funded in whole or part with special district revenues. One is street lighting, although the recommendation presently is to continue funded the costs of street lighting operations out of the general fund rather than establishing one or more special districts. If substantial additions to the coverage of the street lighting system (beyond that recommended in this plan) are needed, then Greensboro may choose to further consider this financing alternative. Secondly, it is recommended that the city consider establishing a special district within the city limits of Greensboro to improve fire facilities, including the eventual conversion of an all-volunteer department to a paid city fire department, which ultimately will need to consist of more than one fire station.

Tax Increment Financing

This is a financing technique that allows a local government or redevelopment agency to target a group of contiguous properties for improvement – a TIF district or, in Georgia, tax allocation district – and earmark any future growth in property tax revenues in the district to pay for initial and ongoing improvements there. This growth in tax revenue is the "tax increment."

Article 9, Section II, Paragraph VII of the Georgia Constitution authorizes the General Assembly to grant cities and counties powers to undertake and carry out redevelopment. That power includes the issuance of tax allocation bonds (i.e., tax increment financing). At the present time, this possible revenue source is not recommended, given other viable options that are now in place for funding economic development efforts in Greensboro.

GRANTS AND LOANS AVAILABLE TO QUALIFIED LOCAL GOVERNMENTS

The following summary description of state grants and loans are only available to local governments that have prepared comprehensive plans and maintained their qualified local government status. This list is prepared from the Georgia Department of Community Affairs.[17] It should be noted that the current status of each grant or loan program has not been independently verified as still available. One of these in particular, the quality growth grant program, has not been funded in the last several years. Furthermore, even if currently funded, the state's budget troubles may dictate that funds for some of these grant programs are discontinued or at least deferred.

Georgia Department of Community Affairs (DCA)

Appalachian Regional Commission Economic Development Grant Program. Provides matching grant funds to eligible applicants to support economic development projects in North Georgia.

Appalachian Region Business Development Revolving Loan Fund. Allows local downtown development authorities and industrial development authorities to make below market rate loans to qualified businesses for downtown projects. Loans may be made on a limited basis to projects outside downtown areas that do not compete with downtown uses (e.g., manufacturing).

Capital Felony Grant Programs. Reimbursement to county government general fund for expenses incurred in capital felony trials.

Community Development Block Grant (CDBG). Grant program requiring a small local match. Can assist a wide range of eligible activities, including housing improvement projects, public facilities such as water and sewer lines, buildings such as local health centers or head start centers, and economic development projects. The nation's Community Development Block Grant (CDBG) is a grant program administered by the U.S. Department of Housing and Urban Development on a formula basis for entitlement communities, and by the state Department of Community Affairs for non-entitled jurisdictions. This grant allots money to cities and counties for housing rehabilitation and community development, including public facilities

[17] Georgia Department of Community Affairs (not dated), "State Assistance Programs Available to Qualified Local Governments."

and economic development. There is much discretion on how CDBG funds can be used (within some constraints), as long as they benefit low- and moderate-income households. For instance, funds can be targeted to provide infrastructure or be directed at upgrading and expanding the affordable housing stock.

CDBG Loan Guarantee Program (Sec 108). Financing tool to assist non-entitlement governments with certain unique and large-scale economic development projects that cannot proceed without the loan guarantee.

Downtown Revolving Loan Fund. Designed to assist non-entitlement cities and counties in implementing quality downtown development projects. Loans may be used for a variety of public or private projects that involve infrastructure improvements, real estate development or redevelopment, and purchase or lease of equipment (in some cases).

Employment Incentive Program. A grant program to be used locally for loans to business or for public facility improvements (e.g. water, sewer)

Local Development Funds. Matching grants for local government development-related activities that cannot be funded from other sources. Types of activities that could be funded include: downtown development projects, public parking facilities, historic preservation projects, tourism and related marketing activities, multi-county solid waste planning and some community facilities.

Regional Assistance Program. Grants to local governments and local government authorities for multi-county activities important to regional economic development.

The Redevelopment Fund. Provides flexible financial assistance to local governments to assist them in implementing challenging economic and community development projects that cannot be undertaken with existing public sector grant and loan programs.

Quality Growth Grant Program. Provides eligible recipients with financial assistance to implement quality growth initiatives that promote better management of growth and development that enhances the quality of life in a community.

Georgia Environmental Facilities Authority (GEFA)

Water and Sewer Loan Program. Loan funds available from the Georgia Environmental Facilities Authority to cities, counties and water/sewer authorities for financing the construction of water and sewer improvements.

Solid Waste and Recycling Loans and Grants. Loan funds available from the Georgia Environmental Facilities Authority for the financing of solid waste projects, and grants for solid waste planning.

State Revolving Loan Fund.

TRANSPORTATION FUNDING

The following descriptions are summarized from the Northeast Georgia Regional Development Center's comprehensive compilation of available grant and loan programs.

Local Assistance Road Program (LARP)

This state aid program is designed to assist local governments in improving and maintaining their local road and street networks. The program is designed to help local governments improve road networks through the leveling and resurfacing of deteriorated pavement. Cities are eligible. The selection of projects is based on an engineering evaluation of need, service to be provided vs. cost, local government priority, and availability of funds.

State/Local Highway Safety Program

This program, housed in the Governor's Office of Highway Safety provides grants to assist the state and local governments in addressing highway safety deficiencies. Previous year's traffic crash data is used to evaluate a relative ranking of each jurisdiction statewide to prioritize funds.

Transportation Enhancement Program

This is a funding source available for a broad range of activities to help promote multi-modal transportation within communities. The Georgia Department of Transportation administers the Transportation Enhancement (TE) Program that provides funding for activities such as: scenic preservation, transportation aesthetics and multi-use facilities. The funding is provided through federal legislation known as the Transportation Equity Act for the 21st Century (TEA-21) and formerly known as Intermodal Surface Transportation Efficiency Act (ISTEA).

Safe Routes to School Program

The Safe Routes to Schools Program is a Federal-Aid program of the U.S. Department of Transportation's Federal Highway Administration (FHWA). The Program was created by Section 1404 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users Act (SAFETEA-LU). The SRTS Program is funded at $612 million over five Federal fiscal years (FY 2005-2009) and is to be administered by State Departments of Transportation (DOTs). The Program provides funds to the States to substantially improve the ability of primary and middle school students to walk and bicycle to school safely. The purposes of the program are: to enable and encourage children, including those with disabilities, to walk and bicycle to school to make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and to facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity (approximately 2 miles) of primary and middle schools (Grades K-8). Each State administers its own program and develops its own procedures to solicit and select projects for funding. The program establishes two distinct types of funding opportunities: infrastructure projects (engineering improvements) and non-infrastructure related activities (such as education, enforcement and encouragement programs).[18]

[18] FHWA Safety: http://safety.fhwa.dot.gov/saferoutes/overview.htm

OTHER GRANTS

Local Law Enforcement Block Grants

These are federal funds for state and local law enforcement agencies. Federal regulations provide seven purpose areas for funding. Applications are selected based on economic factors from all applications within the approved purpose areas. There is a maximum of $10,000 per applicant.

Recreational Trails Program

This funding program is administered by the Georgia Department of Natural Resources (DNR) and is for the acquisition and/or development of motorized or non-motorized trails. There is a local matching requirement of 20 percent.

Recreation Assistance Fund

These are state grants (DNR) to increase the supply of local public recreation lands and/or facilities. Funds may be used for the purchase of real property, facility development or rehabilitation of existing facilities.

Georgia Heritage Grants

This program is administered by the Historic Preservation Division of the Georgia Department of Natural Resources. It is a matching grant program to assist eligible applicants with the rehabilitation of Georgia Register-listed historic properties and related activities.

Historic Preservation Grants

These funds are also administered by the Historic Preservation Division of the Georgia Department of Natural Resources. They are reserved for certified local governments, and Greensboro meets this eligibility criterion. The grants are for conducting survey and planning grants for historic preservation and for predevelopment or development activities.

CHAPTER 11
FIVE-YEAR PLAN AND IMPLEMENTATION MEASURES

This chapter presents the specific recommendations of the five-year plan and beyond. Many different projects are shown in Table 11.1, Short-Term Work Program and Capital Improvement Program (provided at the end of this text document). The projects include not only capital improvements but also certain programs and other activities such as plans and regulations. Before presenting that information, a brief summary of major implementation actors is provided.

BOARDS, COMMISSIONS, AND DEPARTMENTS

Better Hometown Program

Greensboro is a "Better Hometown Community." The Better Hometown Program was instituted for the purposes of helping to develop downtown policy, marketing and promoting downtown, enhancing economic development through business recruitment and retention, and to help with design and rehabilitation of existing buildings. It is governed by an Executive Board and is currently housed in the Greensboro Chamber of Commerce.

Downtown Development Authority

The Downtown Development Authority and its non-profit arm, known as the Greensboro Foundation for the Future, was created to construct projects and improvements in the downtown. The city through its DDA has funded grants to several businesses for façade improvements. It was also successful in obtaining a $10,000 grant from the Georgia Department of Community Affairs' Local Development Fund (LDF) to complete parking, lighting, and landscape improvements in the alley behind the Bickers and Goodwin Building.

Historic Preservation Commission

The Greensboro Historic Preservation Commission is authorized to undertake restoration projects, and it also administers the city's historic preservation ordinance.

Housing Authority

The Housing Authority is responsible for the maintenance and improvement of the city's public housing units.

Planning Commission

The Planning Commission should be assigned authority to recommend overall policy direction with regard to the planning, zoning, and code enforcement functions of the city.

SHORT-TERM WORK PROGRAM

The city's short-term work program is provided in Table 11.1 which appears at the end of this document.

REFERENCES

Aronson, J. Richard, and Eli Schwartz. 1996. *Management Policies in Local Government Finance*, 4th ed. Washington, DC: International City/County Management Association.

Bailey, John A., Michael J. E. Sheflin, Burton W. Marsh, and Wilfred M. Post, Jr. 1986. "Transportation." In Sam M. Christofano and William S. Foster, Eds., *Management of Local Public Works*. Washington, DC: International City Management Association, 1986.

Brewer, William E., and Charles P. Alter. 1988. *The Complete Manual of Land Planning and Development*. Englewood Cliffs, NJ: Prentice Hall.

Burchell, Robert et al. *Development Impact Assessment Handbook*. Washington, DC: Urban Land Institute, 1994.

Burns, Robert B. 1988. "Planning for Community Fire Protection." In Ronny J. Coleman and John A. Granito, eds, *Managing Fire Services*, 2nd Ed. Washington, DC: International City Management Association, 1988.

Colley, B. C. 1986. *Practical Manual of Site Development*. New York: McGraw-Hill.

Daniels, Tom, and Katherine Daniels. 2000. *The Environmental Planning Handbook for Sustainable Communities and Regions*. Chicago: Planners Press

Emergency Management: Principles and Practice for Local Government, Second Ed. Washington, DC: International City/County Management Association, 2007.

Federal Highway Administration. FHWA Safety: http://safety.fhwa.dot.gov/saferoutes/overview.htm

Georgia Department of Community Affairs. Annexation Reports for Greene County. www.georgiaplanning.com/boundary/annexations/

Georgia Department of Community Affairs. March 2002. *Catalog of State Financial Assistance Programs*. Atlanta: DCA.

Georgia Department of Transportation, *Statewide Bicycle and Pedestrian Initiative – Pedestrian Facilities Design Guide*, Updated July 25th 2003.

Granito, John A., and John M. Dionne. 1988. "Evaluating Community Fire Protection." In Ronny J. Coleman and John A. Granito, eds, *Managing Fire Services*, 2nd Ed. Washington, DC: International City Management Association,1988.

Hatry, Harry P., et al. *How Effective Are Your Community Services? Procedures for Measuring Their Quality*. 2nd Ed. Washington, DC: Urban Institute and International City/County Management Association, 1992.

Listoken, David, and Carole Walker. *The Subdivision and Site Plan Handbook.* New Brunswick, NJ: Rutgers, the State University of New Jersey, Center for Urban Policy Research,1989.

Matusik, John, and Gary L. Nickerson. "Water Distribution." In *Land Development Handbook: Planning, Engineering, and Surveying*, Second Edition. The Dewberry Companies. New York: McGraw-Hill, 2002.

Nelson, Arthur C., and James B. Duncan, with Clancy Mullen and Kirk Bishop. 1995. *Growth Management Principles and Practices*. Chicago, Planners Press.

Northeast Georgia Regional Development Center. Comprehensive Plan, Greene County and Municipalities, 2004,

Northeast Georgia Regional Development Center. Development of Regional Impact #1421.

Northeast Georgia Regional Development Center. Regional Comprehensive Solid Waste Management Plan.

Parker, Dave, and Kathleen Schaefer, Updated/Revised by Champagne, Phillip C. "Design of Stormwater Management Facilities." Chapter 22 in *Land Development Handbook: Planning, Engineering, and Surveying*," 2nd Ed. New York: McGraw-Hill, 2002.

Planning and Urban Design Standards. Hoboken, NJ: John Wiley & Sons, Inc., 2006.

Somers, Donald M., Martin J. Manning, and L. Scott Tucker. Water Resources. In Sam M. Christofano and William S. Foster, Eds., *Management of Local Public Works*. Washington, DC: International City Management Association, 1986.

Springer, William S. "Storm Drain Design." Chapter 21 in *Land Development Handbook: Planning, Engineering, and Surveying*," 2nd Ed. New York: McGraw-Hill, 2002.

Tanner, J. Thomas. "Suburban Street Design." Chapter 20 of *Land Development Handbook: Planning, Engineering, and Surveying*. New York: McGraw-Hill, 2002.

The Jaeger Company. 1996. *Greensboro Streetscape Plan*. Greensboro: City.

Stover, Vergil G., and Frank J. Koepke. 1988. *Transportation and Land Development*. Englewood Cliffs, NJ: Institute of Transportation Engineers.

APPENDIX
SURVEY RESULTS

Results of Initial Questionnaire (n = 10)
November 10, 2008

Q-1. List the top three things that YOU LIKE MOST about the City of Greensboro.

	Rank 1	Rank 2	Rank 3	All Ranks
Historic architecture/ preservation/ charm	1	3	3	7
Friendly merchants/ people	2	1	1	4
Small size/ small town atmosphere	2	1	0	3
No traffic/not congested	0	3	0	3
Peace and quiet/ good climate	2	0	0	2
Mayor/ leadership	1	0	1	2
Beautification efforts/cleanliness	0	1	1	2
Downtown/ downtown atmosphere	1	1	0	2
Convenient location	1	0	1	2
Walkability	0	0	1	1
Downtown events	0	0	1	1

Q-2. List the top three things that YOU DO NOT LIKE about the City of Greensboro.

	Rank 1	Rank 2	Rank 3	All Ranks
Building disrepair/ vacancies/ blighted areas	2	1	0	3
Sidewalk disconnectivity/ extent beyond Main Street	0	2	0	2
Non-variety/ lack of retail	0	1	1	2
Illegal parking/not enough parking	1	1	0	2
Bending of rules/absence of regulation	1	0	1	2
Signs	1	0	0	1
Broad Street	1	0	0	1
Heavy trucks	1	0	0	1
Confines of downtown	1	0	0	1
Visual entrances into downtown	1	0	0	1
Poor use of buildings in town	1	0	0	1
Green St. to Mill	0	1	0	1
Lack of things to do	0	1	0	1
Lack of public restroom	0	1	0	1
Not bicycle friendly	0	1	0	1
Lack of enforcement of traffic speeds	0	1	0	1
Veazy Road	0	0	1	1
Lack of restaurants	0	0	1	1
Litter in outlying areas	0	0	1	1
Need for greenspace	0	0	1	1
Vegetation on vacant lots	0	0	1	1
Need for street repaving	0	0	1	1

Q-3. Should the size (square miles) of the Greensboro city limits increase in the long-term?

4 Yes, it should expand/increase a little.
1 Yes, it should expand/increase a lot.
1 No, the city should not expand/increase in size.
4 None of the above or no opinion.
0 Other (explain):

- If we increase in size, then we do away with what makes us unique.

Q-4. There is an adequate supply of housing that is affordable in Greensboro.

0	3	3	2	2
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

Q-5. I am concerned about the types of housing or the sizes of homes (dwellings) that can possibly be constructed on the vacant lot or lots in my neighborhood.

0	0	2	4	4
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

If you agree or strongly agree, which of the following best describes your concern(s)?

1 Larger and/or taller single-family dwellings than exist now in the neighborhood.
2 Lot sizes (in acres or square feet) that are smaller than exist now in the neighborhood.
3 The introduction of other housing types, such as duplexes, townhouses, or apartments.
3 The architecture/look of the dwellings.
4 All of the above.
1 Other (explain): _____

Q-6. The overall quality of the environment (water, air, etc.) in Greensboro is excellent.

0	1	2	5	2
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

Q-7. Current measures to protect trees from land development and cutting are adequate.

0	4	4	1	0
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

Q-8. Greensboro has done an adequate/satisfactory job of protecting its historic resources.

1	2	1	4	1
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

Q-9. In the City of Greensboro, there are adequate job/employment opportunities.

1	7	2	0	0
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

If you disagree or strongly disagree, which of the following are lacking in your opinion?

2 Retail.
2 Industry/manufacturing.
0 Government.
1 Services (professional, health, education, etc.).
5 All of the above.
0 Other (explain):

Q-10. In the City of Greensboro, there is a good/adequate mix of different land uses.

0	5	0	4	1
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

If you disagree or strongly disagree, which of the following are lacking in your opinion?

4 Commercial and/or offices.
3 Industry/manufacturing.
0 Government/institutional.
2 Single-family residential neighborhoods.
1 Multi-family (apartment/townhouse/condo).
1 Other (explain): **city parks**

Q-11. There should be areas in the city designated for redevelopment at higher densities and/or greater building heights.

4	**3**	**0**	**3**	**0**
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

If you agree or strongly agree, where (what locations), and how much more dense or taller do you support?

- I agree with any density anywhere as long as new developments meet up with the vernacular.
- Three story – Four stories (hotels)
- Three stories

Q-12. Overall, I am satisfied with the services and facilities that Greensboro provides.

0	**0**	**1**	**9**	**0**
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

Q-13. Please rate your satisfaction with the following specific city capital facilities:

City Roads and Streets

0	**2**	**0**	**7**	**0**
Very Dissatisfied	Somewhat Dissatisfied	Neutral/No opinion	Somewhat Satisfied	Very Satisfied

Sidewalks

0	**3**	**3**	**3**	**0**

Proximity/Access to City Park Facilities

2	**4**	**2**	**0**	**2**

City Park Facilities

2	**2**	**1**	**1**	**1**

Sanitary Sewer

1	**2**	**2**	**2**	**3**

Public Water

0	**2**	**1**	**4**	**3**

Drainage/Stormwater Management

0	**2**	**1**	**4**	**3**

Police

0	**1**	**1**	**6**	**2**

Fire Protection

0	**0**	**2**	**5**	**3**

Government Offices (City Hall)

Very Dissatisfied	Somewhat Dissatisfied	Neutral/No opinion	Somewhat Satisfied	Very Satisfied
1	**0**	**1**	**7**	**1**

Downtown and Streetscape Improvements

1	**3**	**2**	**2**	**2**

Q-14. I believe that one or more geographic areas of the city are not served at all, or inadequately served, by certain existing public facilities and services,

0	**2**	**4**	**4**	**0**
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

Q-15. Outside historic districts, I see a need for the city to increase its architectural or aesthetic controls on new development.

0	**1**	**1**	**4**	**4**
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

Q-16. I would characterize overall relationships between Greene County's government and the City of Greensboro's government as "excellent."

0	**4**	**3**	**2**	**0**
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

Q-17. There are one or more street intersections in the city that I consider dangerous from a safety standpoint.

0	**1**	**0**	**3**	**5**
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

Q-18. I am aware of one or more places in the city limits where the roads need to be better maintained.

0	**1**	**3**	**4**	**1**
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

Q-19. Traffic "calming" projects (e. g, physical improvement to slow and limit traffic), need to be considered in one or more places.

0	**0**	**3**	**3**	**4**
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

If you agree or strongly agree, where (what locations) are traffic calming projects needed?

- Corridors coming into town – add calming! especially Main & Broad

Q-20. If public transit were available within Greensboro and to/from important destinations, I would be likely to use the public transit system.

2	**3**	**2**	**1**	**2**
Strongly Disagree	Disagree	Neutral/No opinion	Agree	Strongly Agree

Q-21. What, in your opinion, should be the three highest priorities for improvements in the city?

	Rank 1	Rank 2	Rank 3	All Ranks
STREETSCAPES, SIDEWALKS AND BIKEWAYS	**4**	**6**	**1**	**11**
Sidewalks and/or bikeways	1	3	0	4
Additional streetscapes/ improve downtown entrances	1	2	0	3
Streetscape Main to Mill Area	1	0	0	1
Streetscape Broad to West	0	1	0	1
Streetscape Broad to Golden Pantry	0	0	1	1
Connect Mill, Cemetery, RR to downtown	1	0	0	1
DOWNTOWN PROJECTS	**2**	**2**	**4**	**8**
Parking (more)	1	1	1	3
Signage/signage for downtown	1	0	1	2
Public park/ public park downtown	0	0	2	2
Public restrooms	0	1	0	1
ROAD-RELATED PRIORITIES GENERALLY	**2**	**2**	**3**	**7**
Intersection improvements/turn signals/stop lights	1	0	1	2
Traffic calming measures	0	1	1	2
Street repaving	1	0	0	1
No big trucks	0	1	0	1
Veazy Road	0	0	1	1
OTHERS	**2**	**0**	**1**	**3**
Water/sewer infrastructure	1	0	0	1
Additional restaurants	1	0	0	1
Historic preservation	0	0	1	1

Q-22. Please submit any additional comments you would like the city to consider in planning for its future.

- The city's charm is here. Some buildings never seem to do anything to keep up their appearances – this takes away from those who do. The look (freshness, clean, neat, facades) should be more uniform. The extension of the downtown is important, through sidewalks and streetscapes and lighting.
- Sidewalks and bike lanes everywhere. Traffic calming into Greensboro in spite of DOT. Parks and walking/hiking/biking along Town Creek to Interstate 20.
- The city needs to unify its image and resources plus market strategy for recruitment of business and industry. The city needs to enhance and unify its recreational and quality of life features. The city desperately needs better signage and graphics and adequate controls and ordinances for it. The city needs to review its building and historical ordinance plus adherence to them.
- If it has not occurred to the city planners, we have public housing very visible on each of the main roads into Greensboro. Even though they have undergone some revamping, they are still unsightly public housing. We need to look into camouflaging these areas.
- We are in great need of parks, walking trails, green space and more attention needs to be paid to the main highway entries of the city, i.e., U.S. Highway 278, Highway 15 South/North, and Main Street. The entries are not becoming at all for the center of the lake community. I would like to see the historic district increased so that the beautiful homes in our community are protected from any major additions or modernizations.
- Intersection of Richland and N. East Street (dangerous intersection); traffic over bridge too fast to avoid collisions.
- Graffiti, N. Main Street, needs to be painted over.
- Broken pavement and holes, N. Main Street below Episcopal Church; city bypass needed

Steering Committee Prioritization of Projects *(n =10)*

Rank	Project Description	Very High	High	Medium	Low	None
1	Install signage and landscaping at city gateway locations *(underway)*	**6**	3	1	0	0
2	Construct cultural center in downtown area *(underway)*	**6**	2	1	0	0
3	Extend sidewalks and streetscapes in/to/from downtown	**5**	1	3	0	0
4	Add streetlights (extend current coverage in the city)	**5**	1	3	1	0
5	Provide loading/unloading zones for tour buses	**5**	0	3	2	0
6	Repair existing sidewalks where needed	4	**6**	0	0	0
7	Repair existing water lines where needed	**4**	**4**	2	0	0
8 (tie)	Information Kiosk and Wayfinding System *(underway)*	**4**	3	3	0	0
8 (tie)	City-wide clean-up/beautification program	**4**	3	3	0	0
10	Install landscaping in downtown	**4**	3	2	1	0
11	Upgrade intersections that have poor/ dangerous geometry	**4**	3	1	2	0
12	Community Center for Mill Village	**4**	2	4	0	0
13 (tie)	Establish system for ranking and prioritizing road resurfacing projects – implement road resurfacing projects	**4**	1	3	2	0
13 (tie)	Close Court Street and construct civic space	**4**	1	3	2	0
15	Complete parking needs assessment for downtown	3	**5**	2	0	0
16	Investigate and correct sight visibility problems at selected road intersections	3	**4**	**3**	0	0
17	Retrofit existing sidewalk system for access by disabled	3	**4**	1	1	0
18	East Broad corridor redevelopment and improvement plan	**3**	2	2	**3**	0
19	Prepare additional regulations for architectural control outside historic districts and consider design review in existing residential historic districts	**3**	1	**3**	2	1
20	Construct public restrooms	**3**	1	2	4	0
21 (tie)	East Greensboro Highway Bypass	**3**	1	2	2	0
21 (tie)	Implement plans and projects that provide for greenways (off-road multi-purpose trails for biking, walking, etc.)	**3**	1	2	2	0
23	Update Historic Structures Survey for entire city for potential new landmarks and expansion to existing districts	**3**	0	5	2	0
24	Extend sidewalks in appropriate areas outside downtown	**3**	1	3	3	0
25	Repair existing sewer lines as needed	2	**6**	1	0	0
26 (tie)	Prepare master drainage plan, repair drainage inlets, and install drainage improvements	2	**5**	3	0	0
26 (tie)	Water line replacement program	2	**5**	3	0	0
28	Install signs that identify the city's historic districts	2	**4**	2	1	1
29	Install safety improvements at railroad tracks and city street crossings	2	**3**	3	2	0
30	Prepare new subdivision regulations and construction specifications	2	2	**6**	0	0
31	New passive park – acquisition/development	2	2	5	1	0
32	Upgrade capacity at sewage treatment plant	2	2	**4**	1	0
33	Extend sewer lines/service in priority areas	2	2	**3**	2	0
34	Sewer line replacement program	2	1	**6**	0	0
35	Implement plans and projects that provide for bikeways	2	0	**5**	2	1
36	Active park development with Greene County	1	**5**	3	0	1
37	Install additional traffic calming where needed	1	**3**	**3**	1	1
38	Upgrade capacity at water treatment plant	1	**3**	3	2	0
39	Create park utilizing public land @ Bush St.	1	2	**7**	0	0
40	Extend water lines to unserved areas	1	2	**4**	1	1
41	Install improvements at Love Springs	1	1	**5**	1	1
42	Purchase ladder truck for fire/rescue	1	0	**6**	1	1
43	Build new City Hall or administration building	1	0	**5**	3	1
44	Expand current National Register listings to all eligible properties	0	4	**5**	0	1
45	Install improvements at cemetery	0	3	**5**	2	0
46	Prepare plan for annexation	0	2	**6**	1	0
47	Replace or recondition railroad guardrails along streets	0	2	3	**4**	0

Table 11.1
Short-Term Work Program and Capital Improvement Program, 2009-2014
City of Greensboro, Georgia

Priority No.	Category	Description	Expenditure ($) By Fiscal Year						Total ($)	Possible Funding Source(s)
			2009	2010	2011	2012	2013	2014		
NR (C)	Highways	Realign CR 39/Old Eatonton Rd @ SR 44 N of Interstate 20	1,572,000						1,572,000	
21a	Highways	East Greensboro Highway Bypass						Long range	TBD	Federal and state transportation improvement program
NR (C)	Highways	SR 44 widening						Long range	TBD	Federal and state transportation improvement program
NR (C)	Streets	Install street signs at intersections where missing	1,000	1,000	1,000	1,000	1,000	1,000	6,000	General Fund
NR (C)	Streets (Bridge)	Repair/replace bridge at Oconee Avenue/ Old Eatonton Road across CSX Railroad	1,000,000						1,000,000	Greene County Road SPLOST; improvement program (state and federal funds)
4	Streets	Install additional streetlights as shown on proposed street lighting plan	15,000	15,000	15,000	15,000	15,000	15,000	90,000	General Fund
11a	Street	Realign intersection of Reynolds and MLK Jr. Drive		125,000					125,000	SPLOST – Road allocation
11b	Streets	Realign intersection of Apalachee Ave. and Oconee Ave.						Long Range	200,000	Future Road Allocation
11b	Streets	Improve street intersections with poor geometry			100,000				100,000	SPLOST – Road allocation
13a	Streets	Pavement management and maintenance	2,500	12,500	2,500	2,500	2,500	2,500	25,000	SPLOST – Road; State (LARP)

Priority No.	Category	Description	Expenditure ($) By Fiscal Year						Total ($)	Possible Funding Source(s)
			2009	2010	2011	2012	2013	2014		
16	Streets	Investigate and correct sight visibility problems at selected road intersections	50,000		50,000		50,000		150,000	SPLOST – Road
29	Streets	Install RR crossing gate at South Street and CSX Railroad		50,000					50,000	SPLOST – Road CSX Railroad
37	Streets	Install additional traffic calming where needed						Long Range	TBD	Future Road Allocation
NR (C)	Streets	Widen Thomas Street at intersection with U.S. Highway 278			125,000				125,000	SPLOST – Road
NR (C)	Streets	Install guard rails at water crossing and Phelps Drive			20,000				20,000	SPLOST – Road
NR (C)	Streets	Extend Town Creek Boulevard to Oconee Avenue/Old Eatonton Road						Long Range	TBD	Developer at time of development
3, 24	Sidewalks	Sidewalk extension program	248,600	300,000	300,000	300,000	300,000	300,000	1,748,600	SPLOST – Sidewalk
3, 24	Sidewalks	Sidewalk extension program						Long Range	$5,328,400	GO Bond; Future SPLOST
6	Sidewalks	Repair existing sidewalks where needed		150,000	150,000	150,000	150,000	150,000	750,000	SPLOST – Sidewalk
17	Sidewalks	Retrofit existing sidewalk system for access by disabled		80,000					80,000	SPLOST – Sidewalk
1a	Beautification/ Enhancement	Install signage and landscaping at city gateway locations (see the "Priority Projects Cost Estimate" for dollar amounts)	$245,410						$245,410	General Fund

Priority No.	Category	Description	Expenditure ($) By Fiscal Year						Total ($)	Possible Funding Source(s)
			2009	2010	2011	2012	2013	2014		
1b		Install Wayfinding System (directional, pedestrian and parking signage) in the downtown. (see the "Priority Projects Cost Estimate" for dollar amounts)	$83,850						$83,850	General Fund
1c	Beautification/ Enhancement	Install native wildflower meadow plantings at I-20 / GA 44 Interchange		$123,500					$123,500	General Fund
1d	Beautification/ Enhancement	Landscaping (Phase 2)						Long Range	TBD	General Fund
8b	Beautification	Citywide clean-up and beautification program including graffiti removal	10,000	10,000	10,000	10,000	10,000	10,000	60,000	General Fund
NR (C)	Beautification	Install landscaping in front of public housing on SR 44 (S. Main St.)	5,000							General Fund; Housing Authority
NR (C)	Beautification	Consider participation in Keep Georgia Beautiful Program		X					0	City staff function
NR (C)	Beautification	Urban Forestry & Tree City USA Programs							0	City staff function
NR (C)	Downtown and Cultural Facilities	Streetscape Program – Phase III	750,000						750,000	Transpor-tation Enhancement funds, GDOT
2	Downtown and Cultural Facilities	Construct cultural center in downtown area	587,000						587,000	SPLOST; general funds
20	Downtown and Cultural Facilities	Construct public restrooms	10,000	60,000					70,000	SPLOST - Downtown
10	Downtown and Cultural Facilities	Install additional landscaping in downtown	.					Long Range	TBD	Future SPLOST
13b	Downtown and Cultural Facilities	Close Court Street and construct civic space			$400,000				$400,000	SPLOST - Downtown

Priority No.	Category	Description	Expenditure ($) By Fiscal Year						Total ($)	Possible Funding Source(s)
			2009	2010	2011	2012	2013	2014		
5, 15	Downtown and Cultural Facilities	Pave, stripe, and sign additional off-street public parking lot; configure for bus loading/unloading		100,000					100,000	SPLOST - Downtown
NR (C)	Downtown and Cultural Facilities	Acquire vacant lot east of the city's existing off-street parking lot (accessed from South Main Street) for additional parking				150,000			150,000	SPLOST - Downtown
26a	Drainage	Master drainage plan		50,000					50,000	SPLOST - Drainage
26b	Drainage	install drainage improvements per plan			50,000	50,000	50,000	50,000	250,000	SPLOST - Drainage
NR (C)**	Parks and Recreation	Re-acquire Mill Tract (Ball field) for Park; Develop park site		300,000	60,000	100,000	140,000		600,000	SPLOST – Park; CDBG
12	Parks and Recreation	Community Center for Mill Village					150,000		150,000	SPLOST – Park; CDBG
31	Parks and Recreation	New passive park – acquisition and development						150,000	150,000	SPLOST – Park
39	Parks and Recreation	Bush Street park development						100,000	100,000	SPLOST – Park
21b, 35	Parks and Recreation	Greenway (multi-purpose trail) development including bikeways						Long Range	1,300,000	General obligation bonds; RAF; LWCF
36	Parks and Recreation	Active park development with Greene County						Long Range	TBD	Future SPLOST
41	Parks and Recreation	Install improvements at Love Springs						Long Range	TBD	Future SPLOST
NR (C)	Water	Map existing water lines and service area	6,500						6,500	Water Fund
7	Water	Water line repairs	50,000	50,000	50,000	50,000	50,000	50,000	300,000	SPLOST - Water
26c	Water	Water line replacement		200,000					200,000	SPLOST – Water

Priority No.	Category	Description	Expenditure ($) By Fiscal Year						Total ($)	Possible Funding Source(s)
			2009	2010	2011	2012	2013	2014		
38	Water	Upgrade capacity at water treatment plant						Long Range	TBD	Water Fund; GO and/or revenue bonds; GEFA loan
40	Water	Extend water lines to unserved areas						Long Range	TBD	Developer pro-rata share
NR (C)	Sewer	Map existing sewer lines and service area	6,500						6,500	Sewer Fund
25	Sewer	Repair existing sanitary sewer lines as needed		200,000				200,000	400,000	SPLOST - Sewer
34	Sewer	Sewer line replacement program				100,000			100,000	SPLOST - Sewer
34	Sewer	Sewer line replacement program						Long Range	TBD	Sewer Fund; GO and/or revenue bonds; GEFA loan
32	Sewer	Upgrade capacity at sewage treatment plant						Long Range	TBD	Sewer Fund; GO and/or revenue bonds; GEFA loan
33	Sewer	Extend sewer lines/ service in priority areas						Long Range	TBD	Developer pro-rata share
NR (C)	Solid Waste Management	Participate in update of regional comprehensive solid waste management plan			X	X			0	City staff function
NR (C)	Planning and Zoning	Complete partial plan update of comprehensive plan	Funded						Funded	General fund (currently funded)
18	Planning and Zoning	East Broad corridor redevelopment and improvement plan		12,500					12,500	General fund
19	Planning and Zoning	Amendments to zoning ordinance (primarily aesthetics)		5,000					5,000	General fund
30	Planning and Zoning	Prepare new subdivision regulations and construction specifications	$10,000						10,000	General fund

Priority No.	Category	Description	Expenditure ($) By Fiscal Year						Total ($)	Possible Funding Source(s)
			2009	2010	2011	2012	2013	2014		
23	Historic Preservation	Survey of historic resources	20,000						20,000	General fund; possible grant from DNR
NR (C)	Historic Preservation	Designate additional local historic preservation districts	6.000						6.000	General fund
28	Historic Preservation	Install signs that identify the city's historic districts	5,000	5,000					10,000	General fund
44	Historic Preservation	Expand current National Register listings to all eligible properties			5,000	5,000	5,000		15,000	General fund
NR (C)	Administration	Repairs and maintenance existing city hall space			125,000			125,000	250,000	SPLOST – Administ.
NR (C)	Administration	Intergovernmental agreement with Greene County (various)	X	X					0	City Manager – Staff function
43	Administration	New City Hall						Long Range	1,000,000	General Obligation Bond
NR (C)	Administration	Vigorously pursue all available grant and loan programs	X	X	X	X	X	X	0	City staff function
NR (C)	Administration	Hold bond referendum for general obligation bonds to fund capital improvements			X				TBD	City staff function plus cost of election
NR (C)	Police	Patrol vehicle rotating annual replacement	25,000		25,000		25,000		75,000	General Fund
NR (C)	Police	Acquire satellite (decentralized) police annex near I-20 and SR 44						Long Range	0	Seek space in existing commercial center without cost
NR (C)	Police	Intergovernmental agreement with Greene County for firearms training center		X					0	City staff function
NR (C)	Court Services	Evaluate and reassess fines, court charges, and related fees	X						0	City staff function

Priority No.	Category	Description	Expenditure ($) By Fiscal Year						Total ($)	Possible Funding Source(s)
			2009	2010	2011	2012	2013	2014		
NR (C)	Fire	Establish impact fee for commercial and residential developments with occupancies above typical second-story heights	5,000						5,000	General Fund;
42	Fire	Purchase ladder truck for fire/rescue						Long Range	$900,000	Impact fee; special tax district
NR (C)	Fire	Establish special fire tax for City of Greensboro		7,500					7,500	General Fund
NR (C)	Fire	Modify Greensboro fire district to de-annex northern part (intergovernmental agreement with Greene County)			X				0	City staff function
NR (C)	Fire	Acquire land and construct Greensboro Fire Station #2 at I-20 and SR 44 interchange						Long Range	0 or TBD	Special fire tax
NR (C)	Emergency Management	Participate in update of countywide emergency management plan		X		X		X	0	City staff function

Note: NR (C) = Project not rated by Steering Committee – recommended by Consultant.
TBD = To Be Determined
** = Project came about late in the planning process and was therefore not rated or included in the empirical data. However, the Steering Committee expressed a strong desire to move this project to the top levels of the priority rankings at the final meeting.

CITY OF GREENSBORO - FIVE YEAR PLAN

The Jaeger Company

Final Cost Estimate 04.23.09

PRIORITY #1 PROJECTS

Item	*Unit*	*Unit Price*	*Quantity*	*Subtotal*	*Total*
Install Signage and Landscaping at City Gateway Locations					*$ 245,410*
Momument Style Sign with Solid Granite Base (includes landscaping, and lighting but not property acquisition or electrical service)	EA	$60,000.00	3	$ 180,000	
Post Style Sign	EA	$7,000.00	2	$ 14,000	
			Subtotal	$ 194,000	
			Contingency (15%)	$ 29,100	
			Design Fee (Construction Documents, Planting Plan and Electrical Plan (10%)	$ 22,310	
Install Wayfinding System (directional, pedestrian and parking signage) in the downtown					*$ 83,850*
Pedestrian Sign and Installation	EA	$6,000.00	7	$ 42,000	
Parking Sign and Installation	EA	$4,500.00	5	$ 22,500	
			Subtotal	$ 64,500	
			Contingency (10%)	$ 6,450	
			Final Design and Construction Administration (10%)	$ 12,900	
Install Native Wildflower Meadow Plantings at I-20 / GA 44 Interchange					*$ 123,500*
	LS	$95,000.00	1	$ 95,000	
			Subtotal	$ 95,000	
			Contingency (10%)	$ 9,500	
			Final Design and Construction Administration (10%)	$ 19,000	
Budget Summary - All Improvements					**$ 452,760**

Notes :

Provided estimates are conceptual, order of magnitude only and are not based on design drawings or plans. More detailed estimates may be needed prior to finalizing individual project budgets.

Estimates reflect current construction costs. It is recommended that up to 5% be added to account for inflation every year that a project is not constructed.

Maintenance Notes :

Landscape maintenance will be required for landscape elements at the gateway locations and for the meadow plantings at the I-20 interchange.

CITY OF GREENSBORO - FIVE YEAR PLAN
The Jaeger Company
Final Cost Estimate 04.23.09

SIDEWALK IMPROVEMENT PRIORITIES

Item	*Unit*	*Unit Price*	*Quantity*	*Subtotal*	*Total*
Priority #1 - Downtown Streetscape Improvements					*$ 1,748,600*
Greene Street Extension					*$ 447,160*
Hexagonal Paver Sidewalk, 8-10' Wide	LF	$200.00	800	$ 160,000	
Concrete Sidewalk, 8-10' Wide, with Beauty Strip	LF	$100.00	150	$ 15,000	
Benches	EA	$1,200.00	2	$ 2,400	
Pedestrian Scale Lighting (80' On Center)	EA	$6,000.00	10	$ 60,000	
Trash Receptacles	EA	$1,000.00	4	$ 4,000	
Street Trees in Grates(40' On Center)	EA	$2,000.00	20	$ 40,000	
Curb and Gutter / Minor Utility Adjustments / Grading / Misc	LF	$40.00	950	$ 38,000	
Contingency / Design / Other Fees				$ 127,760	
Broad Street Extension					*$ 127,680*
Hexagonal Paver Sidewalk, 8-10' Wide	LF	$200.00	200	$ 40,000	
Benches	EA	$1,200.00	1	$ 1,200	
Pedestrian Scale Lighting (80' On Center)	EA	$6,000.00	4	$ 24,000	
Trash Receptacles	EA	$1,000.00	2	$ 2,000	
Street Trees in Grates (40' On Center)	EA	$2,000.00	8	$ 16,000	
Curb and Gutter / Minor Utility Adjustments / Grading / Misc	LF	$40.00	200	$ 8,000	
Contingency / Design / Other Fees				$ 36,480	
Court and Broad Street Extension					*$ 467,040*
Hexagonal Paver Sidewalk, 8-10' Wide	LF	$200.00	850	$ 170,000	
Benches	EA	$1,200.00	3	$ 3,600	
Pedestrian Scale Lighting (80' On Center)	LF	$6,000.00	12	$ 72,000	
Trash Receptacles	EA	$1,000.00	4	$ 4,000	
Street Trees in Grates (40' On Center)	LF	$2,000.00	25	$ 50,000	
Curb and Gutter / Minor Utility Adjustments / Grading / Misc	LF	$40.00	850	$ 34,000	
Contingency / Design / Other Fees				$ 133,440	
West Street Extension					*$ 386,400*
Concrete Sidewalk, 8-10' Wide, with Beauty Strip	LF	$100.00	1200	$ 120,000	
Benches	EA	$1,200.00		$ -	
Pedestrian Scale Lighting (80' On Center)	LF	$6,000.00	14	$ 84,000	
Trash Receptacles	EA	$1,000.00		$ -	
Street Trees (40' On Center)	LF	$800.00	30	$ 24,000	
Curb and Gutter / Minor Utility Adjustments / Grading / Misc	LF	$40.00	1200	$ 48,000	
Contingency / Design / Other Fees				$ 110,400	
East and Broad Street Improvements					*$ 320,320*
Concrete Sidewalk, 8-10' Wide, with Beauty Strip	LF	$100.00	1200	$ 120,000	
Benches	EA	$1,200.00		$ -	
Pedestrian Scale Lighting (80' On Center)	LF	$6,000.00	8	$ 48,000	
Trash Receptacles	EA	$1,000.00		$ -	
Street Trees (40' On Center)	LF	$800.00	16	$ 12,800	
Curb and Gutter / Minor Utility Adjustments / Grading / Misc	LF	$40.00	1200	$ 48,000	
Contingency / Design / Other Fees				$ 91,520	
Priority #2 - Canaan Neighborhood Link					*$ 131,250*
Concrete Sidewalk, 6-8' Wide, with Beauty Strip	LF	$85.00	750	$ 63,750	
Benches	EA	$1,200.00		$ -	
Pedestrian Scale Lighting (80' On Center)	EA	$6,000.00		$ -	
Trash Receptacles	EA	$1,000.00		$ -	
Street Trees (40' On Center)	LF	$800.00		$ -	
Curb and Gutter / Minor Utility Adjustments / Grading / Misc	LF	$40.00	750	$ 30,000	
Contingency / Design / Other Fees				$ 37,500	
Long Range Priorty - School Link					*$ 1,650,600*
Concrete Sidewalk, 6-8' Wide, with Beauty Strip	LF	$85.00	9400	$ 799,000	
Benches	EA	$1,200.00		$ -	
Pedestrian Scale Lighting (80' On Center)	EA	$6,000.00		$ -	
Trash Receptacles	EA	$1,000.00	4	$ 4,000	
Street Trees (40' On Center)	LF	$800.00		$ -	
Curb and Gutter / Minor Utility Adjustments / Grading / Misc	LF	$40.00	9400	$ 376,000	
Contingency / Design / Other Fees				$ 471,600	

CITY OF GREENSBORO - FIVE YEAR PLAN

The Jaeger Company

Final Cost Estimate 04.23.09

SIDEWALK IMPROVEMENT PRIORITIES

Item	*Unit*	*Unit Price*	*Quantity*	*Subtotal*	*Total*
Long Range Priorty - Robinson Park Link					*$ 352,800*
Concrete Sidewalk, 6-8' Wide, with Beauty Strip	LF	$85.00	2000	$ 170,000	
Benches	EA	$1,200.00		$ -	
Pedestrian Scale Lighting (80' On Center)	EA	$6,000.00		$ -	
Trash Receptacles	EA	$1,000.00	2	$ 2,000	
Street Trees (40' On Center)	LF	$800.00		$ -	
Curb and Gutter / Minor Utility Adjustments / Grading / Misc	LF	$40.00	2000	$ 80,000	
Contingency / Design / Other Fees				$ 100,800	
Long Range Priorty - Public Services Facilities Link					*$ 700,000*
Concrete Sidewalk, 6-8' Wide, with Beauty Strip	LF	$85.00	4000	$ 340,000	
Benches	EA	$1,200.00		$ -	
Pedestrian Scale Lighting (80' On Center)	EA	$6,000.00		$ -	
Trash Receptacles	EA	$1,000.00		$ -	
Street Trees (40' On Center)	LF	$800.00		$ -	
Curb and Gutter / Minor Utility Adjustments / Grading / Misc	EA	$40.00	4000	$ 160,000	
Contingency / Design / Other Fees				$ 200,000	
Long Range Priorty - Complete Existing Sidewalk Network					*$ 2,625,000*
Concrete Sidewalk, 6-8' Wide, with Beauty Strip	LF	$85.00	15000	$ 1,275,000	
Benches	EA	$1,200.00		$ -	
Pedestrian Scale Lighting (80' On Center)	EA	$6,000.00		$ -	
Trash Receptacles	EA	$1,000.00		$ -	
Street Trees (40' On Center)	LF	$800.00		$ -	
Curb and Gutter / Minor Utility Adjustments / Grading / Misc	LF	$40.00	15000	$ 600,000	
Contingency / Design / Other Fees				$ 750,000	
Budget Summary - All Improvements					**$ 7,208,250**

Notes : Estimates do not include extensive utility work.

Provided estimates are conceptual, order of magnitude only and are not based on design drawings or plans. More detailed estimates may be needed prior to finalizing individual project budgets.

Estimates reflect current construction costs. It is recommended that up to 5% be added to account for inflation every year that a project is not constructed.

THE JAEGER COMPANY

City of Greensboro, Georgia

Five Year Plan Plan

April 2009