



2013

Town of Springdale Comprehensive Plan 2013



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The Comprehensive Plan was prepared with assistance of
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CHAPTER 1 INTRODUCTION

1.1 BACKGROUND

On April 6, 1971, the Springdale Town Council passed an ordinance creating the Springdale Planning Commission and assigning it various duties pursuant to Section 6-7-310 et seq. of the S. C. Code of Laws. Primary among its important roles is the preparation and revision of a comprehensive plan for the orderly growth of the town. Such a plan shall contain principles and policies for guiding the development of land in the town to ensure that the physical improvement of land is compatible among uses; that the transportation network is designed to facilitate the rapid and safe flow of traffic; and that utilities are provided to promote orderly use and reuse of land. The planning commission is also assigned the responsibility of developing ordinances regarding land use and environmental protection.

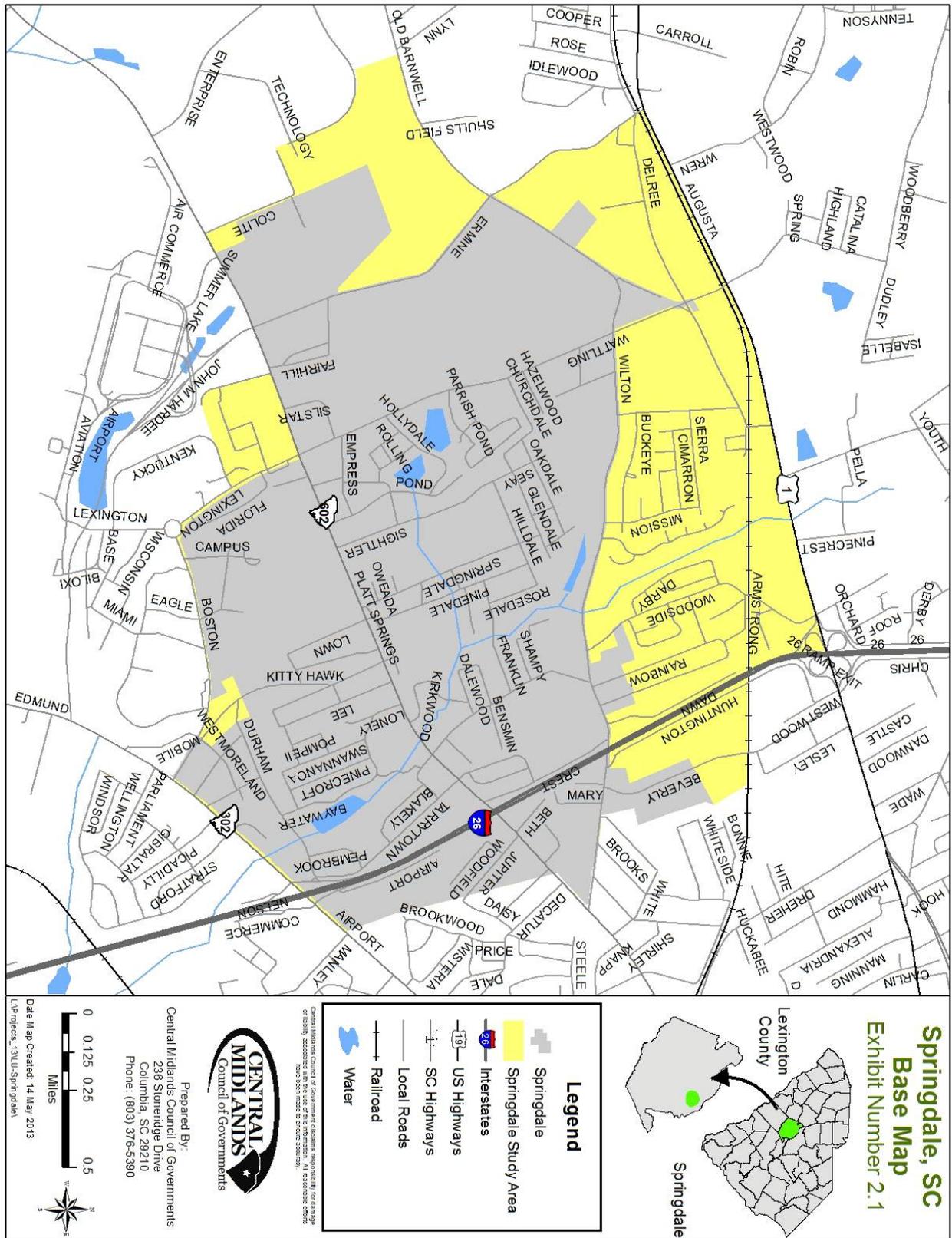
The planning commission prepared the first development plan in 1971 and recommended the first zoning ordinance to council the following year. In 1994, the state General Assembly passed the 1994 Planning Enabling Legislation setting new standards for land-use law in the state of South Carolina. That same year, the Town of Springdale Planning Commission drafted a revised comprehensive plan which subsequently was adopted by Town Council.

Section 6-29-510 of the S. C. Code of Laws requires that the comprehensive plan be reviewed at least once every five years and updated at least every ten years. The 2013 review is an opportunity for the town to evaluate the goals established in the previous plan which were put in place to address the widening of Platt Springs Road. In addition to the policy review, the purpose of the current planning effort is to establish a base line existing conditions of the town using the nine elements contained in the State Planning Enabling legislation. The plan also contains a ten year land development plan map which reflects revised plan policies for the town.

It is not the purpose of the future land use plan map to lock the town into an unyielding pattern of uses or road improvements but to suggest a guide which the planning commission and town council can use to promote orderly land development for Springdale. For example, the future land use plan map for the town may indicate that a site can be developed for business and other commercial uses. If the owner or a potential purchaser desires to build a small apartment complex on the site, then possible "downzoning" to multi-family use could be considered in light of the plan policies for land development in Springdale. The same would apply for a proposed use or reuse of a site for single family residential on a site marked for general commercial. Each case must be evaluated on its own merits and not whether on first glance it is in conflict or in accord with the long range land development map mandated by state law.

Part of the responsibility of the Town of Springdale Planning Commission is to evaluate continuously the programs and activities enumerated in the comprehensive plan to determine the impact of implementing existing planning documents. The planning commission should also review the progress the Town is making toward implementing the plan policies and long range future land use map which constitute the most important parts of the comprehensive plan. Through its periodic meetings and joint meetings with the town council as well as close coordination with the staff of

Central Midlands Council of Governments and the staff of Lexington County regarding the plan, policies, and ordinances of Lexington County, this responsibility can be met.



CHAPTER 2 EXISTING CONDITIONS

2.1 HISTORIC

Springdale is located in the eastern portion of Lexington County, near the heart of the Columbia Urbanized Area. It is almost entirely located in census tract 206.02 with only a small portion lying east of I-26 in census tract 206.01. From I-26 the town is accessed by interchanges at S.C. 302 and U. S. 1. The town borders both the Cities of West Columbia and Cayce and is adjacent to large properties owned by the Richland-Lexington Metropolitan Airport Commission, Midlands Technical College, Lexington School District #2 Wil Lou Gray Vocational Rehab, and Time Warner Cable call center. Exhibit 2.1 shows the location of Springdale in relation to other municipalities and to school districts in Lexington County. Commuting time to the city center of Columbia is approximately ten minutes.

Springdale was incorporated in 1955 to provide municipal services to a settlement that emerged geographically separated from both Cayce and West Columbia. Another reason for incorporation was to avoid eventual annexation into either of those cities. After the passage of Home Rule legislation in 1975, Springdale filed on September 14, 1976, with the Secretary of State to retain its council form of government with six councilmen and a mayor all elected at large. The re-chartering according to the terms of the Home Rule Act became effective in Springdale on July 1, 1977.

The town boundary as constituted when the town was initially incorporated in 1955 consisted of 1.67 square miles but numerous annexations since that time have enlarged the town to about 2.76 square miles in 2013.

Springdale is considering additional annexations of residential properties in cooperation with property owners who may wish to take advantage of town services such as police protection, sanitation, street lighting, street cleaning, and community based zoning to protect residential property values. Potential annexations and other changes in land development and utility services in the town make the update of the comprehensive plan a necessity.

2.2 NATURAL RESOURCES

Soils

There are no severe soil limitations imposed upon developers of single structures or major subdivisions or shopping within the town limits. Several soil types such as Johnston alluvial soils found in stream beds, Wahee sandy loam, and Pelion loamy sand have restricted development potential due to severe limitations for septic tanks and sewage lagoons as well as being a poor foundation for buildings and roadways. The location of soils with severe limitations for development can be accurately identified using the Soil Survey of Lexington County, published in 1976 by the Soil Conservation Service of the U. S. Department of Agriculture.

In many cases, soils shown as having severe limitations may still be developed using practical engineering and planning practices such as having sewerage installed to a problem site like the portion of Darby Oaks subdivision north of Springdale off S. Woodside Parkway. Platting of larger lots or increasing the extent of open spaces between residences or businesses also may mitigate

problems. Careful on-site investigation is critical with individual tracts large or small, and all factors should be considered whenever marginal acreage is clear cut and graded.

Slope

Sound development practices try to limit development on sensitive slope areas "To minimize erosion to protect habitat and reduce stress on natural water systems by preserving steep slopes in a natural, vegetated state" (LEED-ND criteria; SLL Credit 6: Steep Slope Protection). Slopes of greater than 15% are considered significant for protection from development. There are several areas in the town with slopes between 7 and 15%, mostly around the creeks in the town. There are very few areas in the town with a slope greater than 15%. Exhibit 2.2 illustrates the areas of slope 15% or greater.

Flood Hazard Areas

Certain areas inside the corporate limits of Springdale are subject to periodic flooding from heavy rains and ensuing surface runoff. Most of these flood hazard areas are along the drainage channels of Six Mile Creek and its tributaries. Areas subject to flooding are not restricted, however, to streams and creeks because natural drainage basins and areas where natural vegetation and topography have been altered by human activity are also susceptible.

On May 1, 1980, the Federal Insurance Administration issued the Flood Insurance Rate Map for the Town of Springdale as it was constituted at that time. This map, Number, 45063C0278 G, shows all areas lying in the floodways and floodplains of Six Mile Creek and its tributaries. These maps should be consulted by any developer seeking a building permit from the town because Springdale is in the regular phase of the flood insurance program which restricts development in the floodway and requires all new development in designated floodplains to be one foot above the one hundred year flood level. The town is considering changing this requirement to 2 feet which is consistent with the National Flood Insurance Programs' requirements. Copies of these flood maps are located at the Springdale Town Hall. Exhibit 2.2 illustrates the 100 year flood plain in the town as well as location of wetlands.

Endangered Plant and Animal Species

The U. S. Forest Service classifies the entire Springdale area as a longleaf-shortleaf pine ecosystem. It generally occurs on the rolling Coastal Plain where 50-80 percent of the area is gently sloping. This ecosystem is the largest in the entire region and soils are characteristically acid with subsurface clay horizons. It is characterized by forests in which 50 percent or more of the stand is loblolly pine, shortleaf pine, or other southern yellow pines. Common hardwood associates include white oak, southern red oak, post oak, sweet gum, pignut hickory, black tupelo, winged elm, flowering dogwood, red maple, and American beech. Within this ecosystem, the most notable endangered species are the American bald eagle, the migrating Arctic Peregrine Falcon and Kirtland's Warbler. Among threatened amphibians is the Pine Barrens Tree Frog.

Endangered plant species are Gallberry, Chapman's Sedge, Fraser's Sedge, Quillwort, Pond Spice, Southern Rein Orchid, and Leatherwood. These species are found in many areas of the ecosystem and any use of federal funds on grading or building projects should take into account their possible presence. Development and grading and filling of these lands further threaten these species by destroying their habitats.

There are no mineral resources of a commercial nature within the town limits so mining will not be a threat to endangered species. It is far more likely that grading and filling will be the major threat.

Natural Hazards Planning

The Town of Springdale participated in the update to the **An All Natural Hazard Risk Assessment and Hazard Mitigation Plan for the Central Midlands Region of South Carolina 2010 Update**. The plan identified the following natural hazards by priority that affect the town:

1. Flooding
2. Thunderstorms/Summer Storms with accompanying hail, wind and lightning
3. Winter Snow and Ice Storms
4. Drought/Heat Wave
5. Hurricanes
6. Tornados.

As part of the planning process, a list of implementation strategies was developed to mitigate the impact of the hazards listed above.

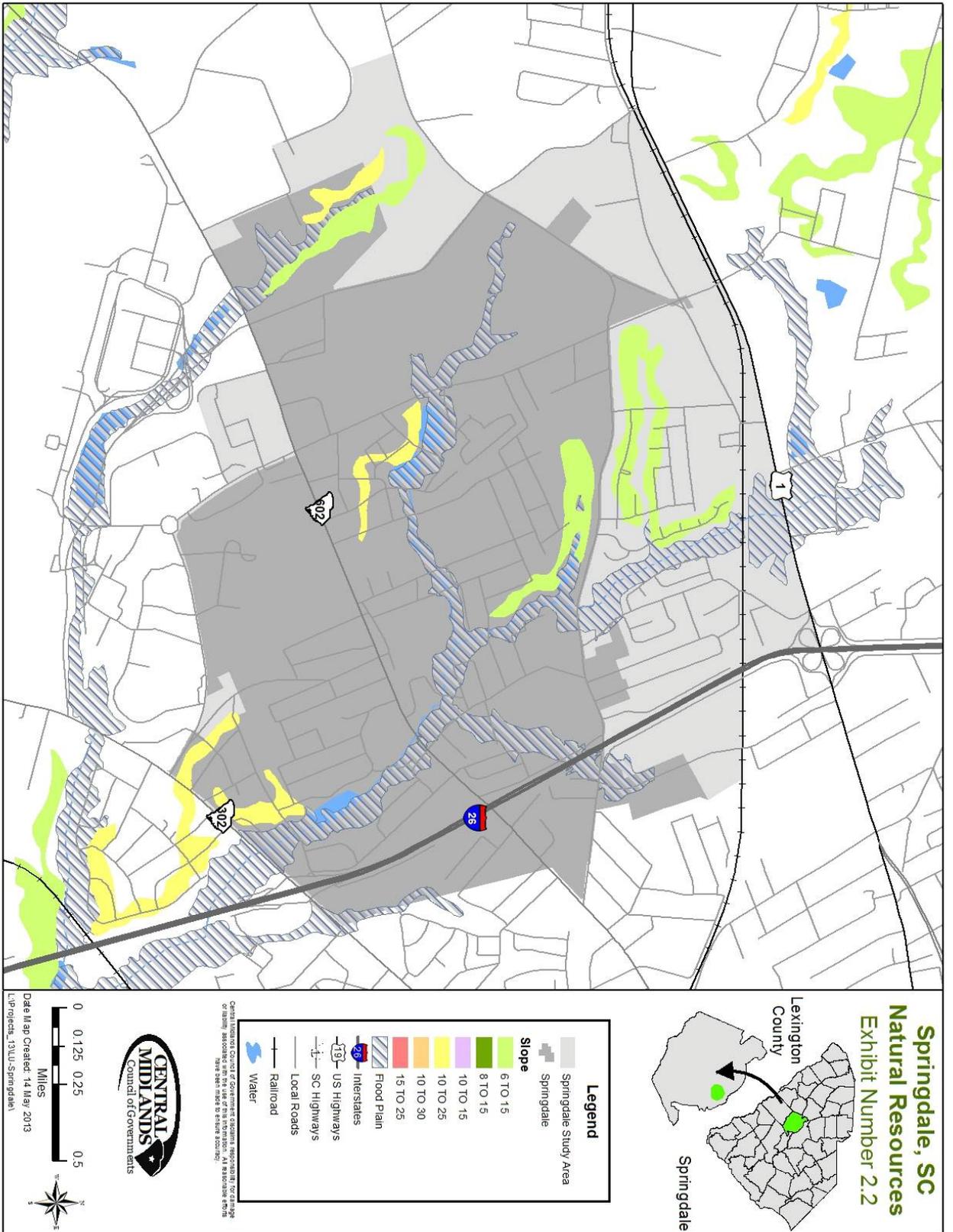
Sustainable Energy

From the fall of 2010 to the spring of 2012, Central Midlands COG participated in the development of the Sustainable Energy Plan for the Central Midlands Region. While the plan was developed to address the specific needs of Lexington County, Richland County and the City of Columbia, many of the recommendations in the plan were designed to be applicable to most of the jurisdictions in the region.

The plan addressed sustainable energy issues in four general topics:

- **Energy Efficiency:** When looking for ways to conserve energy, the first place the local governments should look is in areas they have the greatest control, specifically their facilities and policies. South Carolina lacks a statewide energy efficiency resource standard, but even in the absence of a statewide standard, there are many actions available to the Central Midlands local governments to improve the energy efficiency of the built environment.
- **Broader Initiatives:** Regional policies such as actions on land use, transportation, procurement, waste management, and drinking/wastewater while still under local government control, require a level of regional cooperation to see significant energy efficiency. The plan focuses on reducing the region's energy footprint through areas over which local government possesses considerable control and expertise but looks at the cooperative nature of these activities.
- **Renewable Energy:** Renewable energy can improve local air quality and energy security by offsetting the use of conventional energy sources and diversifying the energy portfolio. In addition, alternative energy development positively impacts the region's economic development by generating green collar jobs and keeping spending on energy within the region. The Central Midlands is blessed with a reasonably good endowment of renewable resources. Yet renewable energy projects are relatively rare.
- **Economic Development:** If local governments are successful in their efforts to reduce the energy footprints of Richland and Lexington Counties, then some green jobs will surely be

created, but other economic activity might get curtailed. Likewise, the alternative to implementing a sustainable energy plan may also cause some jobs to be created and others to be lost. On balance, pursuing energy sustainability produces greater net benefits for a local economy than the alternative.



2.3 CULTURAL FACILITIES

The Central Midlands Historic Preservation Survey, 1974, by CMRPC lists no sites or buildings of special significance. Neither does the Lexington County, S. C. Municipal Historic Resources Survey, Vol. III completed in 1982 by staff of CMRPC. This lack of notable historic structures is not surprising given the relatively recent development of the town. The Hook residence at the intersection of Wilton and Rainbow Drive dates from prior to 1900 and was erected as a one-story clapboard structure now finished with brick veneer. It is typical of the dwellings of the yeoman farmers who settled the area in the 18th century and owned the land prior to its subdivision after WWII.

Archaeological sites of note in the Town of Springdale are few with the Congaree Indians and earlier inhabitants leaving few traces of their presence. There are three small Indian sites in the town limits with several of these being near the intersection Woodhurst Lane and S. C. 302, although no site has major significance.

2.4 SOCIO-ECONOMIC DATA

The following pages contain socio-economic data for the Town of Springdale. The data and brief commentary is intended to provide a “snap-shot” of the town, giving some historical context. Projections for some of the data are provided to give some basis for decision-making. Data in this section is taken from the 2010 Census and from Central Midlands Council of Governments.

Population

In general, the Town of Springdale has a well educated, affluent and older population. The town has seen its population decrease in recent years from 3,312 in 1990 to 2,877 in 2000. Between 2000 and 2010, the town’s population decreased by an additional 241 persons to 2,636. This trend is expected to reverse over the course of the next decade with population projections predicting the population of Springdale to number around 3,161 by 2016. This projected increase is reflected in the 55 and older population. Age groups under the age of 55 are expected to continue to lose population. In 1990 the median age was 35, by 2010, the median age was 46.

The Town of Springdale has seen a decrease in its school-age population together with that of younger families with children. The majority of the town’s population (84.2%) is white; however, the ethnic composition of the town is becoming more diverse. Despite the fact that more than 60% of the town’s housing stock was constructed between 1960 and 1980, there are still sizable tracts of land for development in the town. The development of this land, plus future annexations will be the key for future population growth in the town.

With over 20% of the population having achieved at least a college degree, the relative high education attainment is reflected in the median household income of \$46,864 and average household income of \$57,131. Only 31.5% of the town is considered Low and Moderate Income according to the U.S. Census Bureau.

The tables below provide data from the three most recent Censuses for assorted population characteristics in the town.

Exhibit 2.3 Population				
	1990	2000	2010	2016 projected
Total Population	3,312	2,877	2,636	3,161
Male	1,636	1,372	1,256	1,509
Female	1,676	1,505	1,380	1,652
0-4	165	127	139	179
5-14	360	342	272	330
15-54	2021	1477	1,250	1,480
55-64	438	396	348	428
65+ US Bureau of the Census; Esri Community Analyst	327	535	627	744

Exhibit 2.4 Race				
	1990	2000	2010	2016 projected
White	3,110	2,569	2,220	2,505
Black	167	216	281	400
Other US Bureau of the Census; Esri Community Analyst	36	63	135	256

Exhibit 2.5 Household Type			
	1990	2000	2010
Family HH with Children	380	339	300
Married Couple	285	231	177
Male Hhldr-No Spouse	16	24	30
Female Hhldr-No Spouse	78	84	93
Non-family HH with Children	6	6	26
Male Hhldr-No Spouse	6	5	2
Female Hhldr-No Spouse	0	1	24
Family HH without Children	535	500	461
Married Couple	459	435	391
Male Hhldr-No Spouse	20	17	16
Female Hhldr-No Spouse	56	47	54
Non-family HH without Children	306	362	364
Male Hhldr-No Spouse	133	156	161
Female Hhldr-No Spouse	173	206	203

Exhibit 2.6 Education Attainment for Persons 25 years and older	
PreK-8	0.8%
9th-12th grade, no diploma	4.8%
High School Graduate	38.6%
Associates Degree	11.2%
Some College, no degree	23.7%
Bachelor's Degree	14.9%
Graduate Degree	5.9%
No schooling US Bureau of the Census, 2006-2010 American Community Survey	0.1%

Exhibit 2.7 Income	
Median Household Income	\$46,864
Average Household Income	\$57,131
Per Capita Income US Bureau of the Census, 2006-2010 American Community Survey	\$25,554

Exhibit 2.8 Poverty Status	
Families	27 (3.2%)
Families with children under 18	20 (5.1%)
Families with children under 6 US Bureau of the Census, 2006-2010 American Community Survey	26 (5.4%)

Exhibit 2.9 COMMUTING TO WORK				
	Estimate	Estimate	Percent	Percent
Workers 16 years and over	1,314	+/-187	1,314	(X)
Car, truck, or van -- drove alone	1,058	+/-169	80.5%	+/-7.0
Car, truck, or van -- carpooled	149	+/-73	11.3%	+/-5.3
Public transportation (excluding taxicab)	0	+/-132	0.0%	+/-3.0
Walked	17	+/-21	1.3%	+/-1.6
Other means	35	+/-33	2.7%	+/-2.4
Worked at home	55	+/-49	4.2%	+/-3.7
Mean travel time to work (minutes)	16.6	+/-1.7	(X)	(X)
2006-2010 American Community Survey 5-Year Estimates				

Economic

The town’s unemployment rate in the year 2010 was 6.6%, slightly higher than Lexington County’s average unemployment rate of 6.4%. Exhibit 2.10 below shows the year 2010 labor force population and the industries in which Springdale residents are employed. Since the town’s information shows only 84 businesses within the town, it can be inferred that a majority of residents of the town work outside of the town.

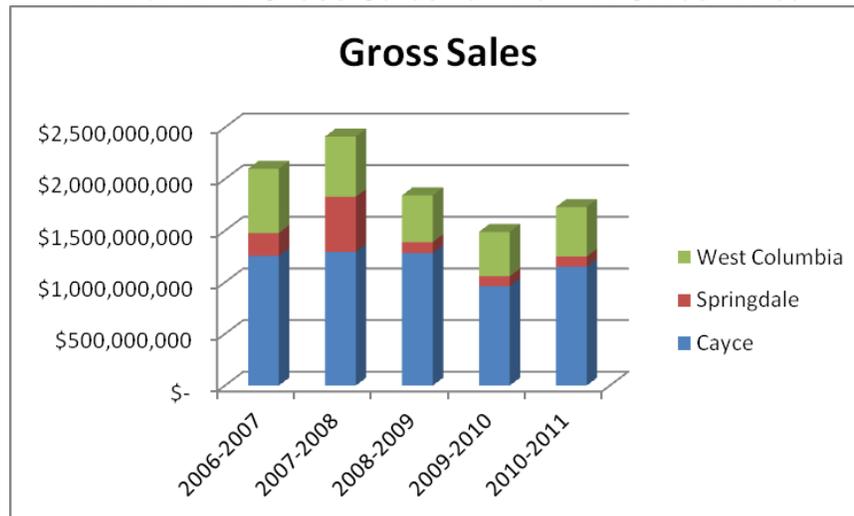
Exhibit 2.10 Labor Force by Industry	
2010 Labor force	1,303
Education and Health Care	26.8%
Professional, Scientific, Management, and Administrative Services	10.5%
General Services	9.2%
Public Administration	8.1%
Wholesale Trade	7.9%
Finance	7.8%
Manufacturing	7.1%
Transportation, Warehousing, and Utilities	5.9%
Construction	5.2%
Arts, Entertainment, and Accommodation Services	4.9%
Retail Trade	4.3%
Information	2.2%
US Bureau of the Census, 2006-2010 American Community Survey	

The retail trade area of Springdale is difficult to determine exactly because the town lies adjacent to the Cities of Cayce and West Columbia which, together with Springdale, form the "Tri-Cities"; a major retail center in and of itself. Residents of Springdale who shop in West Columbia and Cayce for many of their consumer and capital needs contribute greatly to the overall sales figures of these communities. Retail businesses on S.C. 302 in Springdale draw customers from I-26 and far beyond the town limits into western Lexington County. Businesses on Platt Springs Road and elsewhere in town draw more on the immediate Springdale area. Businesses, such as the Waffle House and Comfort Inn, are locating on S.C. 302 to take advantage of interstate access. Similarly, commercial development along US1 near the I-26 interchange is greatly increased over the past few years.

The South Carolina Department of Revenue's Research Division reports that gross sales were \$98,294,578 in the Springdale Town Limits in year 2010-2011. However, for the “Tri-City” area, the Research Division reports total the gross sales was \$1,729,687,050 in 2010-2011, of which Springdale residents certainly contributed a significant amount. Exhibit 2.11 below shows the breakdown of gross sales for each of the jurisdictions and the total for the Tri-City area.

Exhibit 2.11 Gross Sales					
	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
Cayce	\$ 1,255,532,493	\$ 1,295,503,018	\$ 1,283,708,195	\$ 963,319,449	\$ 1,150,760,037
Springdale	\$ 222,486,459	\$ 533,027,968	\$ 105,367,365	\$ 94,894,379	\$ 98,294,578
West Columbia	\$ 621,689,455	\$ 583,298,273	\$ 452,745,533	\$ 430,402,460	\$ 480,632,435
Tri-City	\$ 2,099,708,407	\$ 2,411,829,259	\$ 1,841,821,093	\$ 1,488,616,288	\$ 1,729,687,050
SC Department of Revenue					

Exhibit 2.12 Gross Sales for the "Tri-Cities" Area



SC Department of Revenue

From 2008 to 2012 there were only 7 building permits issued for businesses. The limited commercial development means that the town is still lacking in some key services. For example, there are only a few restaurants within the town and only a couple of them would be considered "casual dining", and there are no grocery stores or drug stores in the town. Springdale will continue to find its economic role as a part of the greater industrial and retail center composed of itself, Cayce, and West Columbia. Springdale can increase its economic prosperity by maximizing its interstate access, promoting its proximity to the Columbia Metropolitan Airport and the Midlands Tech campus, aggressively marketing prime commercial sites, and by cooperating with its larger sister cities that provide the utilities for the Town's commercial and residential development.

2.5 HOUSING

Exhibit 2.13 shows some basic information about the tenure and vacancy of the housing units in the town. Of particular note is that 26.5% of the housing units in the town are owned free and clear. This would be an indicator of long-term residents of the town; people who have lived in their house past the terms of their mortgage. One issue the town needs to consider is whether these units transition to rental property after the current occupants are no longer living in them.

Other noteworthy points from Exhibit 2.13 is the relatively low vacancy rate of 6.5%, which would indicate a stable community, and the relatively high renter occupied rate of 24%, indicating a strong supply of affordable housing units.

Exhibit 2.13 Housing Units By Tenure; Vacancy Status by Type		
	Units	Percent
Total	1,231	100
Occupied	1,151	93.5
Owner occupied	856	69.5
Owned with a mortgage/loan	530	43.1
Owned free and clear	326	26.5
Renter occupied	295	24.0
US Bureau of the Census, 2010		

Exhibit 2.14 shows the age of the housing units in the town. 75% of the housing units were built between 1950 and 1979. While there are about 400 acres of vacant land in the town (see section 2.7.1) new housing starts have been relatively slow. From 2008 to 2012, there were a total of 42 new single family residential permits issued with a value of \$6.8 million; however 20 of those permits were issued in 2008 as part of the Parrish Plantation development.

Exhibit 2.14 Year Structure Built	
1939 or earlier	3.0%
1940-1949	4.5%
1950-1959	14.9%
1960-1969	35.7%
1970-1979	25.2%
1980-1989	5.7%
1990-1999	3.1%
2000-2004	5.4%
2005 or later	0.7%
US Bureau of the Census, 2010	

2.5.1 AFFORDABLE HOUSING

Affordable Housing

For the purpose of this document, “affordable housing” is defined as:

Residential housing that, so long as the same is occupied by lower or very low income households, requires payment of monthly housing costs of no more than thirty percent of one-twelfth adjusted annual income.

The exhibits below depict two alternative ways to determine affordable housing thresholds for the Town of Springdale. Exhibit 2.15 is based on the median household income reported based on a 2006-2010 American Community Survey estimates. Exhibit 2.16 is based on the 2009 Census estimates for the Columbia Metropolitan Statistical Area (MSA). The mortgage amounts shown in both exhibits are based on the assumption of a 30-year mortgage at 4% interest. It should be noted

that this does not include taxes or insurance. Exhibit 2.17 shows the owner occupied values for the owner occupied housing units with a mortgage (note: this data is based on the American Community Survey estimate which is why the number of units differs from the number of units reported in Exhibit 2.12)

Based on 2010 Census Data, less than 20% of the total number of owner-occupied units with a mortgage fell in the range for low income families in the town. This number does not capture the units that are owned free and clear, not does it reflect the number of rental units in the town. Based on information provided at Zillow.com, the median list price for houses in the town on April 1st, 2013 was \$170,000. While this figure is down year-over-year (-19%) and month-over-month (-12.8%), it is up slightly quarter-over-quarter (3%). Additionally, Zillow.com indicates that as of February 1, 2013, the median rental price for the units in the town was \$710. Since Zillow.com reports the median list price for sale and rental, half the units counted fall below those dollar values numbers. Still, the median numbers are much higher than the low-income threshold for town residents and slightly higher than the income level for the MSA. The town should factor in a wider variety of housing types in future developments to maintain a supply of affordable housing units in the future.

Exhibit 2.15 Town of Springdale Income Thresholds			
Town of Springdale	Income	30% housing cost per month	Mortgage amount
Median Family income	\$25,817	\$645.43	\$135,000
Moderate (80%)	\$20,653.60	\$516.34	\$108,000
Low (50%)	\$12,908.50	\$322.71	\$67,500
Very low (30%)	\$7,745.10	\$193.63	\$40,500
Source: 2006-2010 ACS			

Exhibit 2.16 Columbia Area Income Thresholds			
Columbia MSA 2009 est	Income	30% housing cost per month	Mortgage Amount
Median income	\$48,309	\$1,207.73	\$181,000
Moderate (80%)	\$38,647.20	\$966.18	\$145,000
Low (50%)	\$24,154.50	\$603.86	\$90,000
Very low (30%)	\$14,492.70	\$362.32	\$54,000
SOURCE: 2009 Census Estimates			

Exhibit 2.17 Owner-occupied housing units with a mortgage		
	Estimate	Margin of Error
Total Owner Occupied Units with a Mortgage	480	+/-99
VALUE		
Less than \$50,000	3.8%	+/-4.5
\$50,000 to \$99,999	17.9%	+/-8.0
\$100,000 to \$149,999	22.7%	+/-10.8
\$150,000 to \$199,999	31.5%	+/-10.5
\$200,000 to \$299,999	19.8%	+/-9.7
\$300,000 to \$499,999	1.5%	+/-2.1
\$500,000 or more	2.9%	+/-3.3
Median (dollars)	155,800	+/-9,941
2006-2010 American Community Survey		

2.6 COMMUNITY FACILITIES

The community facilities element is a prerequisite for the town to adopt Land Development Regulations. Below is a description of the various community facilities in the town. Maps 4 and 5 illustrate the location of these facilities.

2.6.1 WATER, SEWER AND SOLID WASTE

Water The Town of Springdale is presently well served by water lines from the City of West Columbia. There are 810 water taps in Springdale on the water system which is operated by the City of West Columbia.

West Columbia charges higher out of city rates to Springdale residents. A contract between the Town of Springdale and the City of West Columbia grants the latter the water franchise rights within the Springdale town limits. With the purchase of small service area along a portion of Rainbow Drive and all of Rainbow Circle by West Columbia in the 1980s, all of Springdale is now served by West Columbia.

Customers are billed bi-monthly. On average, 14,000 for a Springdale resident results in a fee of \$61.14 every other month.. A consolidation study for Cayce, West Columbia, and Springdale conducted by Central Midlands in 1992 calculated that West Columbia would lose about \$192,000 yearly in revenue if Springdale were to merge with Cayce and West Columbia. Exhibit 2.18 illustrates the water lines in the town.

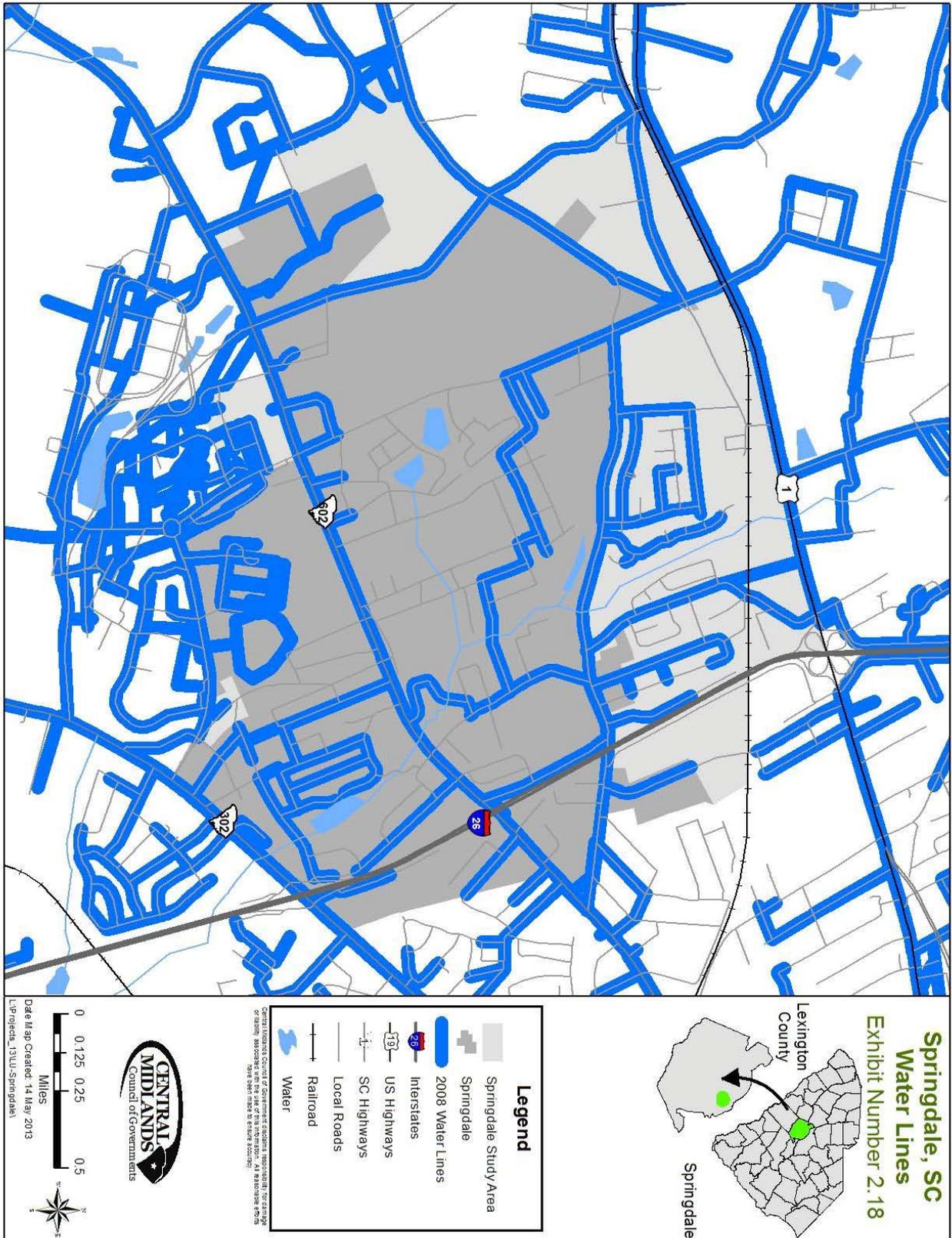
Sewer: Sewerage is the principal deficiency faced by Springdale as it debates its future growth and the management of that growth. Currently there 260 taps that have been purchased in the town, but only 118 have connected to the sewer with treatment provided by the City of Cayce.

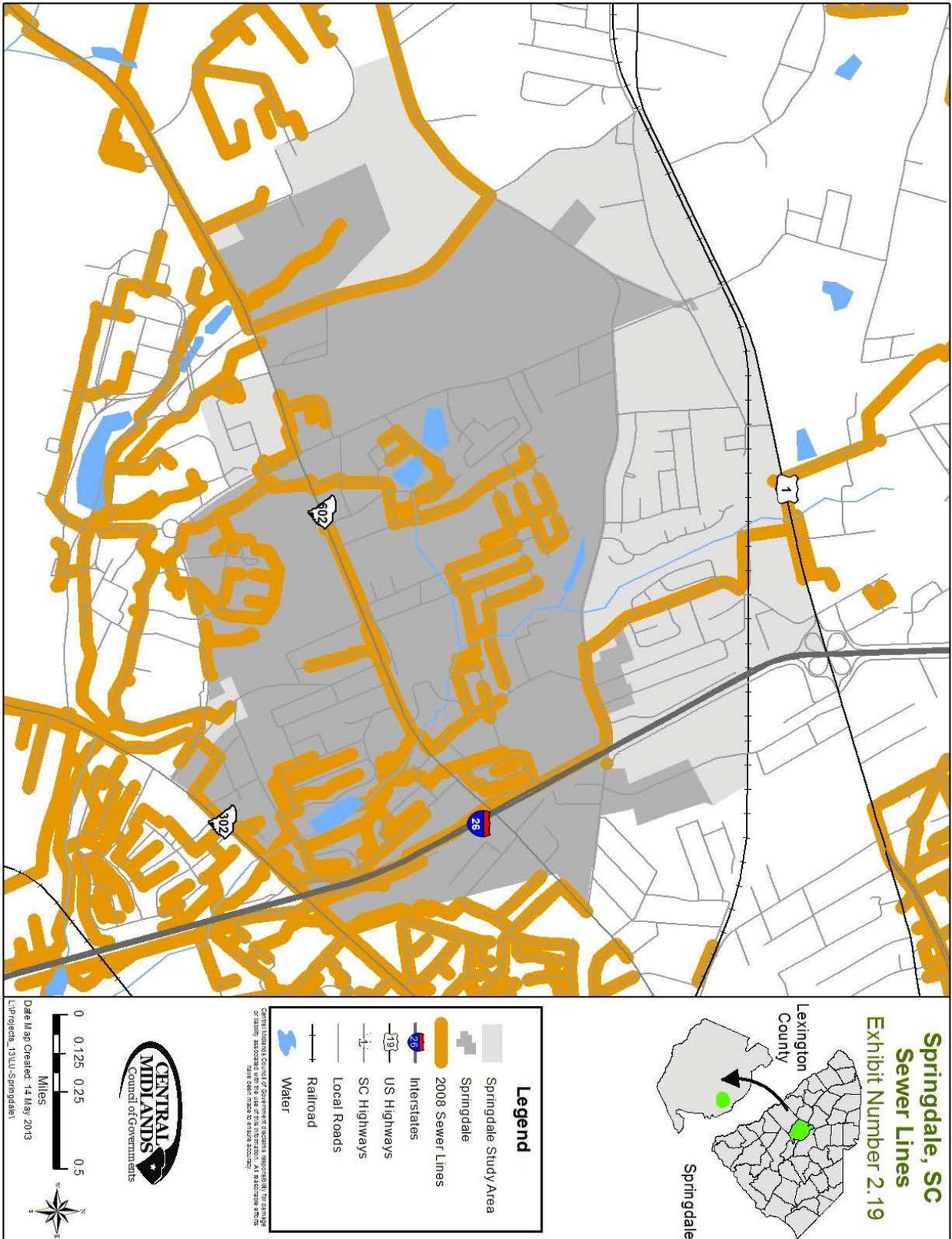
In 1980 only Forest Brook Apartments and the Shadblow subdivision were provided with sewer service by the City of Cayce. Since that time several important steps have been taken. In 1991 the town spent \$110,000 to install an 8 inch sewer main from near the intersection of Platt Springs road and Baywater (at the Forest Brook Apartments) to near the intersection of Platt Springs and Sighthler

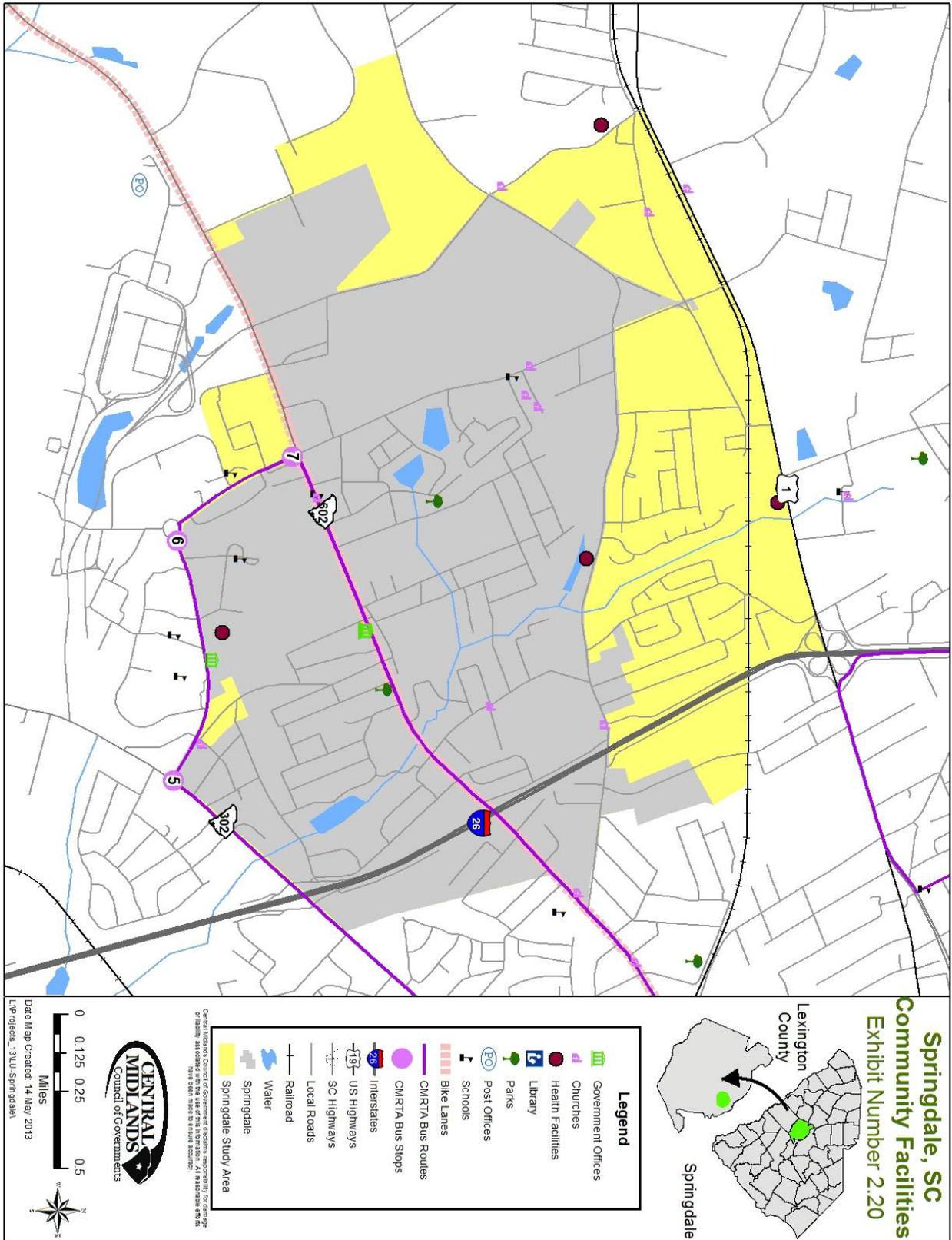
Drive. The Town Council also has investigated the possibility of installing a three phase sewer project into the "Dales" neighborhood.

It is important to note that a private sewer provider has installed a system north of Wilton Road and outside Springdale with a force main along S. Woodside Parkway, then east along Rainbow Drive to Crest Drive and then south where it connects with the Cayce wastewater collection system in Shadblow subdivision. Three new single-family developments have been built since 1985 with more than 200 lots being served by this system in Foxglen, Stonewood, and Darby Place subdivisions. Exhibit 2.19 illustrates the sewer lines in the town.

Solid Waste: The Town of Springdale collects residential solid waste, recycling and yard trash. There is on public collection of commercial garbage.







2.6.2 EDUCATIONAL, RECREATIONAL, AND CULTURAL RESOURCES

The educational, recreational, and cultural needs of the residents of Springdale are met by a variety of facilities in or near the town limits. Public Schools in the majority of town are part of the Lexington County District 2 system, although areas west of Ermine Road are part of District 1. Elementary schools are located on Wattling Road (Springdale Elementary) and on Platt Springs Road (George I. Pair). These two schools have met the K-5 needs of school children for several decades and will do so through the planning period. Fulmer Middle School on Boston Avenue provides for the educational needs of children in grades 6 through 8 and Airport High School also on Boston Avenue meets the needs of high schools students living west of I-26. The Will Lou Gray Opportunity School provides educational opportunities for disadvantaged youth from across the state in grades 9-12.

The 20,000 square foot public library on U. S. 1 in West Columbia meets the needs of the public in the Cayce, West Columbia, and Springdale area.

Recreational facilities in the Springdale area consist of Springdale Park on Sightler Drive and Felton C. Benton Park at Town Hall. The Springdale Park offers two tennis courts and playground equipment. There is also adjacent land available for potential expansion. The facility adjacent to Town Hall has been greatly improved since 1980 with investment of public funds from the Town, Lexington County, the state, and the federal government. It offers facilities for picnicking, playground equipment for pre-teens, and a spray pool. The Lexington County Recreation Commission operates the 44,000 square foot Tri-City Leisure Center on Dreher Road in West Columbia less than a mile from Springdale. It features a gymnasium, senior center, wellness center, ceramics studio, and indoor walking track.

2.6.3 PUBLIC SAFETY

Fire: Lexington County provides Fire and EMS first responder services from two stations; the Pine Grove Fire Station (one pumper truck, one tanker truck and one rescue truck) and the South Congaree Fire Station (one ladder truck, one pumper truck and one tanker truck). The Oak Grove Fire Station (one Ladder, one pumper and one rescue truck) is a secondary service provider. County wide, there are 174 paid and 145 volunteer firefighters working out of 24 stations.

Police: The Springdale Town Police Department has 12 officers, eight full-time, and four reserves. The police station is located in the town hall complex.

2.6.4 TOWN HALL STAFF

The municipal complex is located at 2915 Platt Springs Road and is comprised of three buildings. Town Hall is approximately 3,000 square feet and houses the administrative staff, council chambers and the municipal court room. The Police Department is located behind Town Hall and is approximately 2,500 square feet. The Public Works building, located behind the police department, is approximately 624 square feet. The town has 14 people on staff (three administrative personnel, eight police personnel, and three public works personnel). The town also has an attorney, a municipal judge and an associate municipal judge.

2.7 LAND USE

The fact that existing land use, zoning, and infrastructure influence development is beyond doubt. Like uses generally attract like uses. Drug stores are a good example; commonly you will see two drug stores located across the street from each other. Zoning regulates the use of land and implements the comprehensive plan. Infrastructure is essential to development; access is simply no longer enough. Established commercial areas generally attract new commercial uses; prestigious residential subdivisions are targets for new high-income residential construction; and many industrial uses seek out the same facilities and areas for development.

It is essential to have a reasonable understanding of existing land use, land use patterns, development ordinances and infrastructure in order to adequately assess future growth and development expectations. Knowledge of accepted land use conditions also helps determine the degree of departure, if any, from established patterns of growth and intensity which may be applied in presently undeveloped areas. Toward these ends, a land use and infrastructure survey, inventory and assessment are included as part of this study, together with an analysis of current zoning regulations.

2.7.1 EXISTING LAND USE

The use of land inside the town limits can be divided into several major categories: low density residential (1-4 units per acre), high density residential (five or more units per acre), public and institutional, commercial, industrial, vacant and undeveloped. Mobile home parks are shown as a separate category from the other residential districts due to the nature of the development. This section is a brief discussion of the current use of the land in each of the categories. Exhibit 2.21 below reflects the approximate acreage in each of the land use categories. Existing land use in Springdale is shown on Exhibit 2.22.

Exhibit 2.21 Existing Land Use by Category Within the Town Limits

<u>Land Use Type</u>	<u>Number of Acres</u>	<u>% of Total</u>
Single Family Residential	690	45.70
Multi-Family Residential	11.8	.78
Public and Institutional	266.8	17.66
Commercial	79	5.23
Industrial	33.3	2.20
Mobile Home	.5	.03
Recreation	.8	.05
Undeveloped	419.9	27.73
Rural	9.5	.63
TOTAL ACREAGE	1511.1	100.0

Residential Land Use

Lower density residential development in the town presently consists of stick-built single family homes and a few mobile homes inside small mobile home parks or on individual lots. The town has evolved as a series of subdivisions such as Shadblow, Beverly Oaks, Hampton Crest, and the "Dales" and by the development of individual lots for detached dwellings and duplexes.

The only major multi-family development in the town is Forest Brook Apartments containing 180 units and built in 1974. Another multi-family project at the intersection of Durham Drive and Kitty Hawk Drive and surrounded by the town limits of Springdale is Wilbur Wright Homes. This 78 unit complex built during WWII served as officers' quarters until it was converted to multi-family housing after the war. It is a possible annexation target for the town.

Mobile homes only play a small part in meeting the housing needs of the population and are presently permitted only in mobile home parks and not on individual lots. Mobile homes in individual lots are considered nonconforming uses.

Commercial Land Use

The town has two distinct business areas; one located along Platt Springs Road and one along S. C. 302. The proposed commercial activity centers will be marked on the future land use map and the intent of the plan will be to promote commercial uses in these areas. Mixed-use areas along Platt Springs Road are intended to accommodate compatible residential and commercial uses along the corridor as the area transitions from residential to commercial. The planning commission strongly recommends that the rezoning of islands of undeveloped and/or residentially zoned land to higher intensity uses not be permitted without great consideration and public notice as this could interject commercial uses into areas best reserved for lower density residential.

In Springdale today commercial uses comprise only about 7 acres or about five percent of 1,511 acres of the incorporated town. This percentage should not increase appreciably if the town annexes adjacent residential and undeveloped areas. Commercial uses are not broken down between general commercial and neighborhood commercial because these types of uses are mixed in the town where they occur. Development of zoning classifications should emphasize the buffering and setbacks between residential and commercial uses rather than use distinctions between districts in the business areas on S. C. 302 and Platt Springs Road.

There is significant commercial development adjacent to the town, including the Time Warner Cable call center and World Wide Equipment. Typically, commercial development is a net revenue gain for municipalities, so if the town can make a case that the commercial development would benefit from being annexed through services provided, it may be an area for the town to consider annexing.

Public and Institutional Land Use

The Town of Springdale possesses significant acreage of institutional or non-taxable land uses principally because of substantial annexations of public uses in previous years. Adjoining public uses such as Airport High School and Fulmer Middle School as well as the Columbia Metropolitan Airport are central place functions and attract users from around the region and increase traffic and spin-off commercial activity for businesses in the town. Institutional uses comprise 266.8 acres or 18 percent of the 1,511 acres in town.

Industrial Land Use

At present, industrial use only comprise 2% of the incorporated area in the town, limited to small operations on Old Barnwell Road and Silstar Drive where a few industries and distributional activities are located. No known industrial uses are planned within the town but the 104 acre tract west of the intersection of Ermine Road and Platt Springs will be marked for industrial development on the long range development plan.

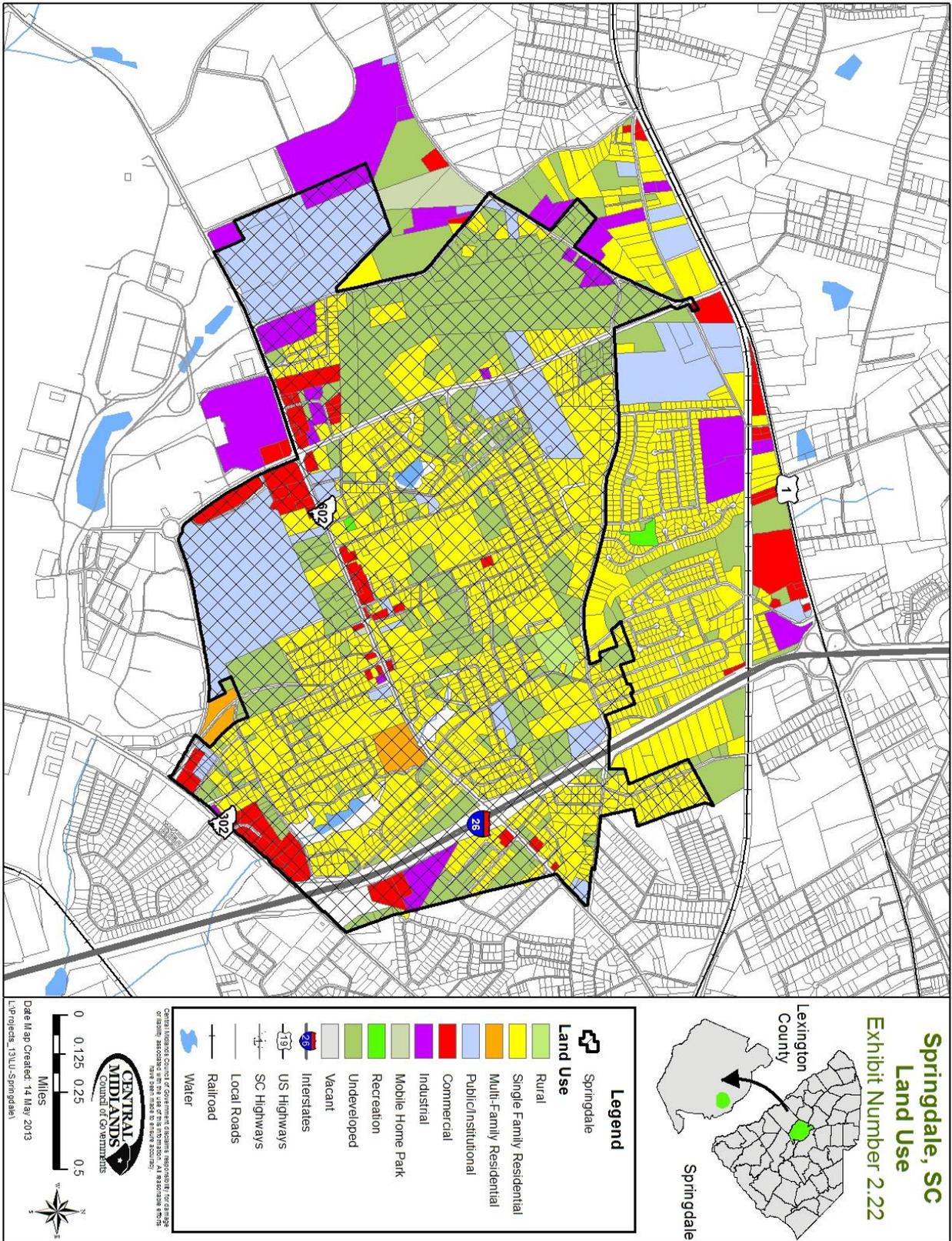
Additionally, industrial development is increasing in the areas around the Columbia Metropolitan Airport. Across Platt Springs Road from the airport cargo terminal in the Airport Enterprise Park, a 480 acre commercial/industrial park which will be completely developed over a twenty year period.

Undeveloped

At 28%, "Undeveloped" is the second most prominent use classification in the town. The parcels range from small infill lots in subdivisions to large tracts of land. Undeveloped land along Old Barnwell and Ermine Roads is among prime vacant acreage in the town, for example. Other prime undeveloped land is that with water and sewer available. Such acreage lies along S.C. 302 in a small parcel near Smile Gas and along Platt Springs Road west of Discount Tire where sewer was installed since 1991. Based on available acreage the Town of Springdale has considerable potential for growth and development within its existing corporate limits during the planning period.

Summary Remarks

The low density residential nature of most land development in Springdale induces the conclusion that Springdale will be committed to protecting its residential neighborhoods while encouraging industrial development and concentrations of commercial development in appropriate locations which do not harm its neighborhoods. The town is essentially a number of higher value single family subdivisions and will, via its planning and ordinance structure, attempt to protect them from the undesirable characteristics commonly associated with business activity.



2.7.2 ZONING

The effect of zoning regulations on future development may be more influential than the presence of existing land use. Zoning controls where, what type, and to what intensity development may occur within any given area of the town. Springdale Town Council adopted a zoning ordinance in the early 1970s that was essentially similar to the ordinances of Cayce and West Columbia but very different from the performance zoning ordinance of Lexington County.

Springdale's ordinance contains three residential zones, two commercial zones, one industrial zone as well as a planned development district, a public/institutional zoning district and a design overlay district. The three residential zones permit residential use with the R-1 district being amended in 2005 to require that the minimum lot size for single-family detached uses being 21,780 sq. ft. The R-2 zone permits duplexes and the R-3 zone is the multi-family district that also permits mobile home parks.

The C-1 general commercial zone permits a wide range of retail and service activities and excludes residential uses while the C-2 neighborhood commercial, mixed use district accommodates mixed-use buildings with neighborhood-serving retail, service and other uses along with residential uses.

The industrial zone is defined as permitting manufacturing and distributional types of uses and excludes most retail type uses. The public/institutional zone was created in 1986 because of the need to handle uses of a public nature outside the provisions of commercial and residential zones.

With seven zoning districts, the town has chosen to enforce a zoning ordinance that protects the residential areas of town but has made strides to accommodate a wider variety of commercial densities and mixed use development to serve both local and regional needs. What follows is a chart of lot size and density in each zone as they impact the existing and future use of land in Springdale.

List of Zoning Districts and Lot Size and Density Requirements

District Name	Lot size for Residential Uses Where Permitted
R-1 Single Family Residential	21,780 for all permitted units
R-2 Duplex Residential	15,000 for 1st unit, 4,000 for each additional unit
R-3 Multi-Family Residential	15,000 for 1st unit, 4,000 for the second unit and 3,000 sqft. for each additional unit
C-1 General Commercial	No minimum lot area
C-2 Transitional Commercial	Residential: 6,000 for 1st, 3,000 for 2nd, 2,000 for 3rd Non-residential: No minimum
I-1 Industrial	No minimum lot area
P-1 Public/Institutional	10,000 for all permitted units

2.8 TRANSPORTATION

Air: Air transportation is available through a number of major airlines at the Columbia Metropolitan Airport. The recently completed John Hardee Expressway improves access to the airport. There are plans to extend the John Hardee Expressway to I-26 providing direct access via a new interchange.

Within the past few years the Columbia Metropolitan Airport has taken steps to improve its facility, including a 60 acre cargo terminal, a developing 480 acre airport industrial park, renovation of the

terminal building and a parking garage. All of these improvements point to the continued expansion and enhancement of this important asset.

Highways: Springdale is fortunate to have two arterials and one interstate providing access to the town. Platt Springs Road and Highway 302 are major arterials in Lexington County providing access to the eastern portion of Lexington County and to downtown Columbia. Both also provide access to the Columbia Metropolitan Airport. Highway 302 has an interchange with I-26 which gives the town access to I-20 and I-77.

As a member of the Columbia Area Transportation Study MPO, State and Federal highway improvements are identified in the MPO's Long Range Transportation Plan. There are several road improvements in the 2035 Long Range Transportation Plan impacting the Springdale area:

- Widening Platt Springs Road from Emmanuel Church Road to Old Orangeburg Road
- Widen Emmanuel Church Road from Old Barnwell Road to W. Dunbar Road.
- Complete the John Hardee Expressway
- Intersection improvements at Old Barnwell and Ermine Roads
- Interchange improvements at:
 - I-26 at Augusta Highway (US 1)
 - I-26 at Airport Blvd (SC 302)

Another fortunate aspect about the road network in the town is that the local roads form a grid. While the grid has a limited number of nodes, the grid does help to disperse traffic by giving vehicles and pedestrians alternate routes to a destination.

Bike/Ped: There are very few sidewalks in the town. Platt Springs Road has sidewalks as a result of the recent road improvements, and only one of the neighborhoods has sidewalks. There is limited, and in some case no, pedestrian access to the schools in the town. A recent safety walk at Springdale Elementary School conducted by the Safe Routes to School Resource Center did identify some recommendations that the school is working to implement.

The only designated bike lane in the town is along Platt Springs Road.

Public Transit: Springdale is served by Central Midlands RTA, a public, fixed route system. Of the 34 fixed routes, one route provides service to the Town of Springdale. It is the route running from downtown Columbia to the Midlands Technical College Airport campus with service along Airport Boulevard and Platt Springs Road. (See Exhibit 2.20) **DART** (Dial A Ride Transit) is a public transit system which provides rides on a demand basis.

2.9 PRIORITY INVESTMENT

CURRENT LOCAL GOVERNMENT FUNDING SOURCES

General Fund

The General Fund accounts for all funding resources in the Town not otherwise devoted to specific activities. This funding source includes revenues from ad valorem taxes (real estate and personal property), licenses and permits, charges for services, intergovernmental funding, other taxes, and miscellaneous revenue and other funding sources. These funds are generally spent on general

government services, public safety, public works and utilities, and health and human services. Expenditures include, but are not limited to, salaries for department employees, supply and fuel costs, and building improvements. Capital and infrastructure are funded in part through the General Funds.

The FY 2012-2013 General Fund Budget for the Town was \$ 1,316,467

Grants

Grants represent discretionary, lump-sum funding secured by the Town for specific one-time projects.

There is no assurance that previous grant monies will be made available again in the future; however, the Comprehensive Plan assumes some growth will continue to be funded with grants.

In many cases, receiving grant monies obligates the Town to spend additional dollars to meet local match requirements for the grant received.

The Town was awarded a CDBG Grant in FY13 for demolition of slum and blight structures along Platt Springs Rd. The grant award was in the amount of \$62,000. The Town also received over \$1000 in reimbursements through the SCMIT/SCMIRF program's through MASC for the purchase of public safety equipment for police and public works. Additionally, the Town qualifies and will proceed in the future for a COPS grant for a patrolman position. The Town currently has 8 fulltime police positions of which 5 positions are patrolman. The goal is to increase the patrolman division by 2 additional officers.

Federal Highway Administration (FHWA) Guideshare

Guideshare funding is available for each of the South Carolina Metropolitan Planning Organizations (MPO) and Councils of Government (COG) for system upgrade projects. This dollar amount is calculated by taking the MPO's or COG's specific proportion of the state population and applying it to the total available funds for system upgrades. The funds are allocated in the Federal Highway Appropriation Bill.

The Town is located in The Columbia Area Transportation Study (COATS) MPO. COATS receives approximately \$18 million per year in Guideshare.

Transportation Enhancement Funds

Transportation enhancement funds are available for environmentally related activities that improve the transportation experience, including landscaping, bicycle and pedestrian facilities, historic preservation and other visual amenities related to the transportation system. These funds are administered through COATS, which currently is allocated approximately \$700,000 a year.

The town has two enhancement grants; one to fund street lights on Platt Springs Road and one to fund street lights and landscaping on Airport Boulevard. The Airport Boulevard project is in cooperation with the Cities of Cayce and West Columbia.

C-Funds

C-Funds are allocated to each County within the State by the South Carolina Department of transportation (SCDOT) for the purpose of transportation improvements. The source of the funds

is the State gasoline tax and State law requires that these improvements be tied to the transportation system and that at least 25% of the funds be spent on the state highway system. Funds are awarded through a competitive process by a committee designated by the State Legislature, referred to as the County Transportation Committee (CTC). These funds reimburse the City and County for specified projects approved by the CTC. As a result, C-Funds are restricted for specific uses and cannot be used for all capital projects. More often than not, C-Funds are used for street/road paving and repaving projects.

In FY14, the Town was awarded \$30,000 for cfunds to be used for pavement of Lonely Street, a Lexington County Rd. The property was recently listed for sale and could be developed as a mixed-use project. The road improvement was sought as an incentive for development..

Local Accommodation Tax

A local accommodation tax is levied on the rental of rooms, lodging, or sleeping accommodations. Local governments in South Carolina are authorized levying an accommodation tax of up to 7% of the gross proceeds derived by business owners renting rooms, lodging, or sleep accommodations. An accommodation tax also imposes a sales tax of up to 5% on additional guest services offered at facilities not otherwise taxed under South Carolina law (see S.C. Code of Laws, Section 12-36-920).

The town collects \$32,000 a year in accommodations tax.

POTENTIAL FUNDING SOURCES

Additional revenue sources are available to the Town for funding large-scale planning initiatives or capital improvements. Some of these sources require action by Town Council in accordance with the Code of Laws of South Carolina as amended. A summary of potential funding sources available for recommended projects in the comprehensive plan follows. Individual limitations or conditions for each option have not been reviewed for this document.

Local Improvement Districts (LIDs)

Counties and municipalities in South Carolina are authorized to create a local improvement district for capital projects. Provisions for assessing and levying property taxes in different areas and at different rates are set forth in the Code of Laws of South Carolina, Section 4-9-30(5)(a). A local improvement district links together the costs and benefits resulting from new or upgraded capital facilities. Generally, property owners in the new tax district must agree to the new assessment. Capital projects in the special benefit tax district can be bond-financed and paid over time by the benefitting property owners to expedite implementation.

Local Hospitality Tax

A local hospitality tax is levied on consumers purchasing prepared foods and beverages from vendors located within the jurisdiction enacting the tax. Counties in South Carolina are authorized levying in hospitality tax of up to 2% if approved by a majority of the governing body. This tax limit is reduced to 1% if it is not also approved by municipal governing bodies within the County (see S.C. Code of Laws, Section 6-1-700).

Real Estate Transfer Fees

A real estate transfer fee is a charge on the transfer, sale, or conveyance of real property. It is applied against the purchase price of the property, and can be restricted to certain types of capital

expenditures. The South Carolina Legislature has strictly forbidden the implementation of a real estate transfer fee without expressed authorization from the state legislature (see S.C. Code of Laws, Section 6-1-70).

State Infrastructure Bank

The South Carolina State Infrastructure Bank (SIB) selects and assists in financing major qualified projects by providing loans and other financial assistance for constructing and improving highway and transportation facilities. Funds are awarded on a competitive basis.

State Transportation Improvement Program

The State Transportation Improvement Program (STIP) is a prioritized list of transportation projects prepared by the South Carolina Department of Transportation to be implemented statewide in appropriate stages over several years. The Town of Springdale provides comment on the STIP through participation in the Columbia Area Transportation Study (COATS) the local Metropolitan Planning Organization (MPO); and through participation in the Central Midlands Council of Governments (CMCOG).

Developer In-Kind Contributions

In some instances, the owner(s) of property seeking entitlements for their land may elect during the development review process to donate right-of-way or construct certain “oversized” capital projects simply for the public good as well as to serve their development. The type and/or magnitude of these contributions vary greatly from location to location and owner to owner.

Impact Fees

Impact Fees are intended to enable new growth to pay for the services it generates a need for such as schools, recreation, and public safety. These fees are established based on the capital and operating impacts of new development and are paid by the developer or ownership interest.

Revenue Bonds

Revenue bonds are used when the town issues a bond and pledges the revenues received from services provided as payments for the debt service. This revenue is used to pay both principal and interest on the bond. While revenue bonds incur slightly higher interest costs than general obligation bonds, they do not use up the Town’s bond capacity.

General Obligation Bonds

General Obligation Bonds (GO Bonds) are backed by the “full faith and credit” of the Town, and are usually considered a safe investment for bondholders. The principal and interest on general obligation bonds are normally paid through a property tax levy.

Lease-Purchase Agreements

Lease-Purchase Agreements allow a local government to acquire capital assets by making a series of lease payments that are considered installments towards the purchase of the asset. Under a lease-purchase agreement, the local government acquires full ownership of the property covered by the lease by making all of the lease payments over the full term of the lease.

Local -option Sales Tax

There are three types of Local Option Sales Taxes. Counties are allowed the use of only two of these taxes at one time.

Local Sales Tax [section 4-10-10] was created to reduce property tax. This countywide tax is shared by county and its municipalities. It must be passed by voters in a general election year. This one (1) cent tax generates funds which lower the millage rate. This tax does not apply to transportation funding. Richland County has this tax.

Capital Project Sales Tax [section 4-10-300] pays for capital projects, including roads and bridges. This one (1) cent tax has a sunset provision of seven years or when bonds are repaid, whichever comes sooner. Projects must be listed on the ballot. It must be voted on in a general election. Capital projects for transit can be funded with this tax. Lexington County recently passed school building sales tax. Several towns and cities have also expressed an interest in this funding source to use for capital improvements in their communities.

Local Sales Tax for Transportation Facilities [section 4-37-10] generates funds to be spent on transportation projects, including transit. This tax can be any portion up to one (1) cent. Projects must be listed on the ballot in a general election. The sunset provision on this tax is any length up to 25 years or when bonds are repaid

All three of these taxes are regressive but provisions could be made to rebate part of this tax to lower income families.

CIP PROJECTS

The Town does not adopt a Capital Improvement plan as part of its budget process.

PRIORITY INVESTMENT AREAS

Intersection of Wilton Road and Walton Way: This intersection is in the northwest corner of the town. While the area could be characterized as residential, this is a large amount of undeveloped property, including both quadrants north of Wilton Road. The town's future land use map projects the area as a multi-use district with neighborhood scale commercial, personal service and institutional uses.

The intersection is signalized and has dedicated turn lanes, so it is designed to handle high traffic volumes. However, there are other infrastructure needs critical to support the projected use of the area. Those needs include, but are not limited to:

- Sewer lines
- Pedestrian cross walks
- Sidewalks
- Streetscaping
- Street furniture

Platt Springs Road: Platt Springs Road is a multi-use corridor running through the town with single family, multi-family, commercial and institutional uses. However, what characterizes the corridor the most is the large amount of undeveloped and underdeveloped land. The recent road improvements to Platt Springs Road coupled with the available land make the corridor a key area for redevelopment and a priority for infrastructure investment. Those needs include, but are not limited to:

- Expand sewer availability
- Pedestrian cross across Platt Springs Road
- Traffic-calming features on Platt Springs Road to help lower the speed limit.
- Streetscaping
- Street furniture

Airport Boulevard: Airport Boulevard is principally a commercial corridor that the town shares with the City of Cayce and the City of West Columbia. The three municipalities already are working together to beautify the corridor since it is a gateway to the region due to the access it provides to the Columbia Metropolitan Airport.

INTERGOVERNMENTAL COORDINATION

The Town has already demonstrated intergovernmental coordination through its work with the City of Cayce and the City of West Columbia in a streetscape project along Airport Blvd, but the Town works with many jurisdictions at the local, regional and state level including:

Lexington School District 2
City of West Columbia
City of Cayce
Lexington County
Central Midlands COG
Columbia Area Transportation Study (COATS)
Various State and Federal agencies

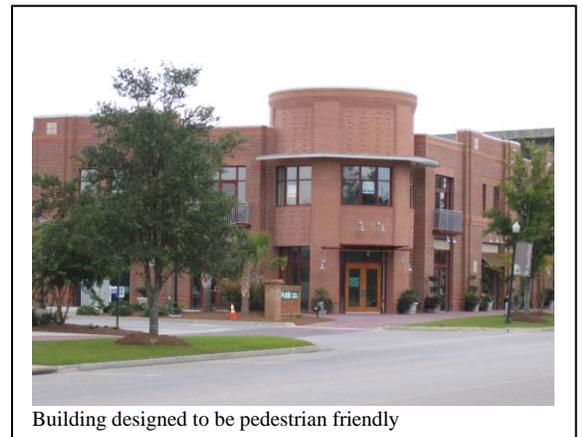
CHAPTER 3 - THE PLAN - COMPLETE STREETS

3.1 NEEDS

The Town of Springdale has most of the pieces to be an extraordinary small town in a large metropolitan area. The town's ability to grow through annexation is limited, so the focus of the should be for quality, well-planned infill/redevelopment and new development of the vacant property within the town.

The Goal of the town should support town-centered and transit and pedestrian-oriented development, with a mix of housing, commercial and retail uses, while preserving open lands and achieving other environmental goals.

The town has taken steps to preserve the residential neighborhoods while encourage appropriate and compatible development along the commercial corridors. What the town lacks is the infrastructure to link the commercial and residential districts together. For example, while the recent improvements to Platt Springs Road added a bike land and sidewalks, the type of development along the corridor plus the speed of the vehicles lessen the pedestrian-friendly characteristics of the corridor. Additionally, the five lanes of traffic on Platt Springs Road serve as a barrier for pedestrians, making it difficult to cross Platt Springs Road safely



To facilitate pedestrian access along with other forms of transportation, the town should adopt Complete Street policies designed encourage multi-modal access throughout the town and support the related development in the town.

Complete Streets are streets for everyone. They are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists, and public transportation users of all ages and abilities are able to safely move along and across a complete street. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from train stations.(www.smartgrowthamerica.org)

Complete streets policies are part of a larger principle called Universal Design, which encourages public and private development to be designed so that they are accessible to anyone regardless of age or ability. By approaching accessibility from a universal perspective, the town is able to meet many of the needs of its diverse population. Children would have safer access to schools and parks. Senior citizens would have an alternative way to travel other than an automobile. Streets would have features that are appropriate for its function and match the desired development pattern. Alternative modes of transportation would reduce the usage of fossil fuels which would help the region's air quality. The town can be more predictable with programming infrastructure improvements both internally and by outside service agencies by developing a road classification system with set design standards. The information below is taken from Creating Complete Streets at the Local Level: A Toolbox sponsored by Eat Smart Move More SC, DHECS Office on Obesity Prevention and Control and the Palmetto Cycling Coalition.

Many of the items discussed in this section are long-term goals and in some case, may not be attainable along the entire corridor, but could be achievable within the activity centers. To link the activity centers, the town should focus on good development design emphasizing compatible uses, building placement and design and landscaping to improve the character of the corridors. Harden Street in 5-Points is an example of a 5-lane segment in the region with many of the Complete Streets principles appropriate for the activity centers. Forest Drive is an example in the region of a corridor with good design principles that would link the activity centers together.



Harden Street



Forest Drive

3.2 OVERALL

Below are elements of the street that are important, but do not apply to specific design features of the street. In many cases these features link the road to the property next to it.

There are two established commercial corridors in the town, Platt Springs Road and Airport Boulevard. The town use to treat these corridors identically with similar zoning and design guidelines. In recent years however, it has become apparent that they have different characteristics and as such, need different requirements. While both carry regional traffic commuting through the town, the greater influence of residential development along Platt Springs Road give that corridor a more "local" feel despite the wide cross section and lack of pedestrian facilities such as cross walks. Improvements to the corridor should be made to enhance the "local" feel of the corridor. Consideration should be given to encourage more neighborhood-scale development that is pedestrian oriented. Street features such as enhanced sidewalks, street trees, cross-walks and bicycle facilities should be added to the corridor.

Airport Boulevard on the other had as more of a regional feel since there are more intensive commercial development, large institutional uses such as Airport High School and Midlands Technical College drawing uses from a wider area and the Columbia Metropolitan Airport accessing the corridor. The town currently is partnering with the Cities of Cayce and West Columbia to improve the appearance of the corridor.

- A. Establishing roadway's purpose:** Roadways serve different roles and have different functions within our communities. Some serve as the main corridors between downtown and suburban areas, while others feed into residential neighborhoods, and still others serve as centers of commerce and government. A roadway's purpose should be reflected in its

design and layout. Downtown streets lined with office towers, lunchtime eateries, and pedestrians along wide sidewalks function differently than arterial roads with higher speed limits, less mixed uses, and limited on-street parking. Establishing a roadway's purpose is an important step in identifying what elements of Complete Streets should be incorporated along it.

B. Sense of place: Many of the larger cities throughout South Carolina have distinctive districts that are well-known. In Columbia, these areas are the Vista and Five Points. Greenville has the West End and Main Street. Myrtle Beach has Ocean Boulevard and Kings Highway. Smaller towns across the state have historic main streets with unique architecture and long-standing business establishments. Each of these districts has a unique sense of place and identity. The elements and successes of these districts can be applied along corridors with Complete Streets elements and zoning regulations that encourage context sensitive land use design. Establishing an identity and marketing a community's roadways can increase the revenues of area businesses while promoting tourism.

C. Landscaping: Street trees and landscaping play many important roles in the environment, in local communities, and along corridors. Yet, landscaping is frequently the element that is left out of the construction and maintenance process, often due to funding limitations. When costs are estimated and funding is sought for a roadway improvement project, landscaping should never be omitted. In addition to making streets more attractive, the benefits of trees and landscaping are numerous. The list below is only a partial compilation of the positive impacts that trees and landscaping can have along corridors:

- Vertical elements, to include trees, make corridors feel narrower, thereby reducing vehicle speeds;
- Trees and landscaping provide natural stormwater management and reduce runoff of pollutants;
- Trees capture carbon dioxide and help mitigate air pollution. Street trees absorb 9 times more pollutants than distant trees;
- Trees dampen street noise;
- Trees create safer walking environments by providing a buffer between vehicles and pedestrians;
- Street trees and landscaping improve commerce. Businesses along landscaped streets experience 20% improvements in sales than urban areas without landscaping;
- Trees lower urban air temperatures and reduce the **heat island effect** in urban areas;
- Trees shield pedestrians from rain, sun, and heat, creating a more hospitable environment;
- Trees and landscaping soften and shield necessary street features such as utility boxes and light poles;
- The shade from urban street trees can lead to longer pavement life, reducing the frequency of maintenance and repaving;
- Trees and landscaping add value to nearby real estate, both commercial and residential;
- Trees and landscaped corridors alter the perception of time in travel: a treeless environment is perceived to be longer than one that is landscaped.

D. Signage: The two main types of signage that affect the appearance and function of a corridor are wayfinding and business signage. In addition to allowing for easy navigation for tourists and residents, wayfinding signage helps create a sense of place through the use of

Concurrently with the drafting of this plan, the town was considering amendments to the sign ordinance.

recurring colors, logos, or emblems. Consideration needs to be given to the appropriate placement of wayfinding signs so that they do not obstruct pedestrian, bicycle, or automotive travel. Business signage along roadways with posted speed limits of less than 35 mph should be pedestrian in scale, smaller in size, and placed lower than signage along corridors with higher posted speed limits.

E. Burying of overhead utilities: When a widening or major overhaul is proposed for a roadway, burying, or “undergrounding” utility lines should also be considered to improve the neatness of the corridor and reduce visual clutter.

F. Establishing billboard standards: Communities within South Carolina do not have much influence regulating billboards within their boundaries, a process made more difficult by a law during the 2006 South Carolina legislative session. This law, H.3381, created a special provision that now makes it very difficult and expensive for a local government to remove a badly placed, non-conforming or unsightly billboard. H.3381 requires compensation to a billboard owner that is based on the sign’s potential earnings and essentially prevents communities from enforcing appearance standards. Communities can, however, limit the placement of new billboards by establishing billboard standards as part of their zoning ordinance.

There are very few billboards in the town, and their location is appropriate for the use.

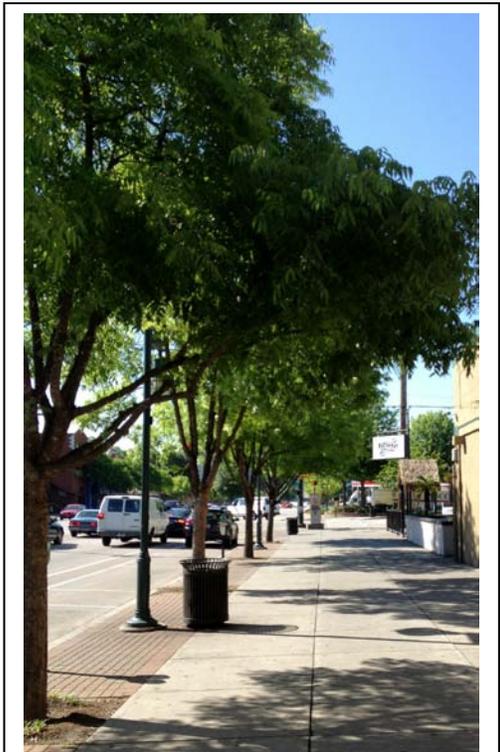
3.3 PEDESTRIAN

Making the corridor a safe place for pedestrians is important for the universal design of the corridor but helps to link all of the other aspects of the corridor together. There are many technical resources such as the Americans with Disabilities Act and The American Association of State Highway and Transportation Officials (AASHTO) guidelines for sidewalks. Below are some of the important elements to consider for making the corridor safer for pedestrians.

Certainly when Platt Springs Road was widened, the addition of the sidewalks and bike lanes were significant. The town should develop plans and guidelines that not only enhance the pedestrian activity along the corridor but help to link Platt Springs Road with the residential areas of town. Another corridor where pedestrian access is important, but facilities are lacking, is Watling Road where Springdale Elementary is located.

A. Street trees: The overall benefits of street trees along corridors are numerous, and addressed further in the previous section on landscaping.

B. Benches: Benches and other amenities such as waste receptacles along a corridor illustrate to the pedestrian that they are welcomed and expected travelers within the community. Providing benches allows pedestrians to travel at their own pace and to stop and enjoy the scenery. Benches should be located so as not to obstruct the flow of pedestrian



Wide sidewalk in 5 Points. Note the street trees and pedestrian buffer marked with pavers.

traffic along sidewalks. Ideally, benches should be placed at the back of the sidewalk, farthest away from the roadway.

- C. Sidewalks: In suburban commercial and urban settings, sidewalks should be provided on both sides of the roadway widths vary by the context and purpose of the corridor, but should not be less than 5' in residential areas and not less than 6' in commercial areas. Along corridors with high pedestrian activity, consideration should be given to providing sidewalks between 6' and 10' in width. Wider sidewalks should also be provided along downtown corridors to accommodate higher pedestrian activity, outdoor dining, and sidewalk events in front of businesses. To comply with ADA requirements, the cross slope of sidewalks should not be more than 2 percent.
- D. Pedestrian Buffers: The distance from the sidewalk to the roadway is known as the **setback distance** and is street parking, and planting strips all serve as buffers to protect pedestrians from the roadway, and when combined, maximize the safety of pedestrians. Planting strips, if landscaped with trees that will canopy at mature height, should be 8' in width to accommodate spreading roots, ensure the health of the tree, and prevent sidewalk bulges and damage. Providing a planting strip greater than 10' wide is not recommended because it disconnects the sidewalk from the road, increasing the possibility of a collision with a turning vehicle. The City of Greenville recommends an 8' planting strip between the roadway and sidewalk along both **collectors** and **arterials**.

- E. Crosswalks: Crosswalks located mid-block and at intersections should be highly visible to motorists to increase the safety of pedestrians. Enhanced pavement markings or textured surfaces, such as brick or stamped concrete are recommended material choices. Mid-block crosswalks should be appropriately signed and should not be installed on roadways with high speed limits. Curb cuts and ramp slope between the sidewalk and crosswalk should meet ADA standards.



Cross walk in 5-Points. Note the pavement markings and the island in the middle.

- F. Pedestrian Signals: Pedestrian signals should be located at all signalized intersections in commercial areas, urban centers, and near schools. In addition to these locations, other locations to consider include:

- Along wide streets where the vehicle signal does not provide an adequate pedestrian clearance interval;
- Where **split phasing** is used; and
- Where pedestrians are unable to view vehicle signals (e.g. "T" intersections).



Mid-block cross walk on Sumter Street on the USC Campus

The two main types of pedestrian signals are the walk/don't walk (replaced with the international walking man/hand symbols) and the pedestrian countdown signals, indicating

the time remaining until the vehicle signal for the street parallel to the pedestrian changes from green to yellow. In areas with high pedestrian activity at crossings of wide streets, countdown signals should always be used for the safety of both pedestrians and motorists.

Although there are five signal phasing alternatives for accommodating pedestrian crossings at signalized intersections, **concurrent timing** should be appropriate in most applications. The person responsible for signal timing, most often the city traffic engineer or the district traffic engineer with the South Carolina Department of Transportation (SCDOT), should make adjustments to phasing and timing if a need is noted, such as complaints of a short “walk” phase or increase in accidents at a particular intersection. Some intersections throughout cities across South Carolina have been outfitted with audible pedestrian crossing signals that are meant to aid blind or visually impaired pedestrians in crossing signalized intersections. The clicking sound emitted guides the person to the top of the ramp of the opposite corner, helping them safely cross the street.

- G. Pedestrian-actuated signals A **pedestrian-actuated signal** is a push button signal that activates a green signal for the street parallel to the pedestrian and a “walk” signal indicating the pedestrian may safely enter the crosswalk. Push buttons are not required to accompany the pedestrian signal at an intersection; however, to increase pedestrian safety, many South Carolina cities are installing pedestrian-actuated signals at many of their intersections. Pedestrian push buttons are to be located at the top of the intersection of the two ADA ramps, which should be located on all four corners of the signalized intersection. This location is within reach of a wheelchair pedestrian on a safe, non-sloped surface and provides uniformity across corners of intersections in all cities, making their location predictable.

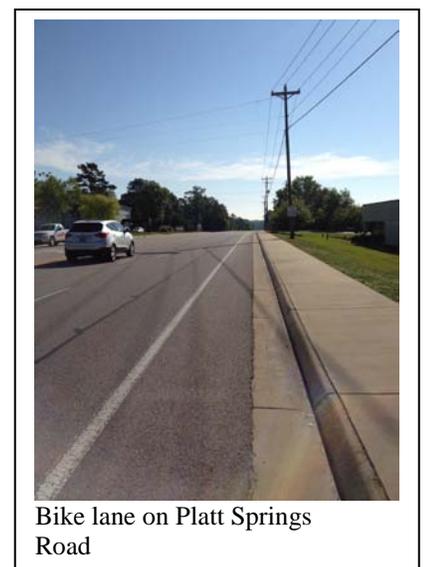


3.4 BICYCLE

Platt Springs Road has a striped area on the outside lane, but it is not marked as a "bike lane." Below are some of the features that should be considered when incorporating bicycle facilities in the corridor. While the town does not have a river front or canal or an abandoned rail line it can convert into a greenway, it does have a stream that runs through much of the town. Part of the stream has been made accessible since it runs through an apartment complex.

A. Facility types

1. Striped bike lane Striped bike lanes are marked lanes in the travel way that are for use by bicyclists. In addition to providing a safe place for people to bicycle, striped bike lanes offer other indirect benefits. They create a buffer between pedestrians and the travel-way along streets lacking planting strips. Dedicated bike facilities and the presence of bicyclists serve as a traffic calming measure by reducing vehicle speeds between 5 and 15 miles per hour. Striped bike lanes have a negligible effect on vehicle travel times and



actually improve traffic flow by regulating vehicle speeds to between 25 and 35 miles per hour, optimal speeds for many urban thoroughfares.

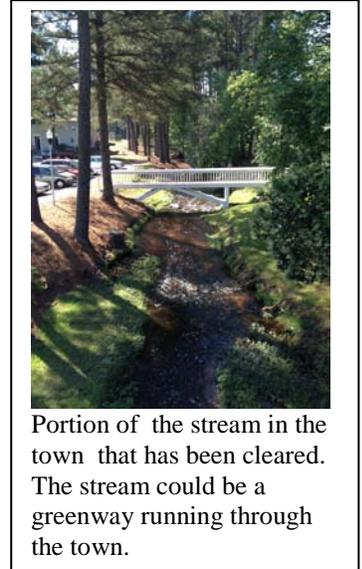
Whereas SCDOT regularly stripes bike lanes as narrow as 4', many cities throughout the United States that maintain their own roadways will not stripe a bike lane less than 5' in width. The AASHTO Guide for the Development of Bicycle Facilities recommends providing 4' bike lanes only in locations without **curb and gutter** where the area beyond the paved shoulder can provide additional maneuvering width. The Guide recommends a minimum 5' bike lane measuring from the face of the curb outward along roadways where on-street parking is prohibited. A minimum 5' bike lane is also recommended in areas with dedicated on-street parking. A 6" painted stripe should be used to separate the bike lane from the vehicle travel lane, and on roadways with on-street parking, a 4" painted stripe should also be used to separate the bike lane from parked vehicles. Some cities recommend these measurements only for roads with on-street parking. On streets where parking is prohibited, their recommendation to designate a bike lane is an 8" stripe. In areas with infrequently used on-street parking, it is particularly important to stripe both sides of the bike lane to help ensure motorists do not use this space as a travel lane. Streets as narrow as 44' can safely accommodate striped lanes for both vehicles (cars and buses) and bicycles, and they can be striped on streets that carry up to 30,000 vehicles per day.

2. Shared use lane: A shared use lane is a wider outside lane that is shared between motorists and bicyclists, often in an urban area where the road does not have a shoulder and where there is limited right-of-way. These facilities are used when there is not sufficient roadway width to accommodate a dedicated striped bike lane. The shared lane should be properly marked with a shared lane marking symbol (commonly called a "sharrow"), which is a double chevron symbol situated above a bicycle symbol. Fourteen feet is the recommended outside lane width for accommodating bicyclists and motorists.
3. Shoulders: Almost all roadways in South Carolina that are located in urban areas have curb and gutter, meaning that bicycle riding in these locations takes place in a shared-use lane or within a striped bike lane. However, many roads in suburban settings and most roads in rural settings do not have curb and gutter. In these areas a paved shoulder, where available, is the safest place for bicyclists.



In 2003, SCDOT began the first of two campaigns aimed at reducing the number of fatalities on the state's rural roadways. One of the initiatives of the Crash Reduction by Improving Safety on Secondaries (CRISOS) program is to pave a 2' shoulder along rural roads with high crash rates and severity. These

improvements benefit bicyclists because it provides an area outside the vehicle travel lane in which to ride. The other campaign, Recognize-React-Recover, was initiated in 2009 and is intended to reduce single vehicle run off-road crashes by installing rumble strips as a way to alert motorists whose attention is averted from the roadway. The goal of the installation of rumble strips to the right of the shoulder line is to make motorist aware of their vehicle's location in attempt to avoid a crash. The design of the rumble strips have been altered since the first round of installations because of the unsafe and uncomfortable effects that the depth and width have on bicyclists who ride over them.



4. Greenway: Greenways provide a dedicated, paved route separate from the roadway for use by both bicyclists and pedestrians. In some locations, greenways are located on old railroad beds (often known as Rails-to-Trails conversions) or along such features as canals and utility easements. In areas where greenway facilities are appropriate, the recommended minimum width for greenways to safely accommodate both pedestrians and bicyclists is 10' with a 2' graded area on either side. Paths with a heavy volume of users should be between 12' and 14' wide and should be striped to designate lanes for bicyclists and pedestrians if there often is a mix of users. The presence of a greenway alongside a corridor should not preclude striping a bike lane along a corridor if space allows. Often, a bicyclist will need to access a destination in the same manner a car would; therefore, they would benefit from on-road signals and other traffic control devices.

- B. Bike lane and intersections: Accommodating bike lanes at intersections can be complicated. Different road and intersection designs call for different types of striping treatments that would best protect bicyclists from collisions with vehicles. Appropriate signage, stamps, and striping should be used at intersections to alert motorists to the presence of bicyclists and anticipate their maneuvers. The Manual of Uniform Traffic Control Devices (MUTCD) is used as the standard for federally approved signs and markings for bike lanes and other bike facilities.

In regard to roads that allow on-street parking, the parking setback should be 20' to 30' to provide more room for bicyclists. Streets that have a transit stop on the near side of the intersection should provide 80' of clearance to the approach. This treatment applies to channelized, non-channelized, and "T" intersections. When dropping the outside stripe and dotting the inside stripe up to the **stop bar**, care should be given that excessive width does not appear to motorists as a right-turn lane. If this occurs, consideration should be given to also continue the outside line as a skipped dash up to the intersection. Streets with sufficient width and turn bays should set on-street parking at an appropriate distance back from the intersection to allow for stacking of right-turning vehicles. Where on-street parking ends, the solid striped bike lane should become a double skipped dash line before returning to double solid lines approximately 30' before the intersection. At the far side of the intersection, the

bike lane stripes should resume at the furthest crosswalk stripe, with on-street parking resuming 20' from the intersection.

- C. Installation of bike racks/lockers: A survey of area roadways to determine popular bike routes, heavily used transit routes, and popular destination centers will provide the locations most appropriate for installing secure bike parking. Bike racks should be located at transit stops, starting with downtown locations and expanding outward as funding allows. Popular destination centers, such as shopping malls, commercial and restaurant districts, and businesses serving colleges and universities should have ample bicycle parking. New commercial establishments that are required to meet a city's parking requirements should also be required to provide parking for bicycles. This issue can be addressed in the city or county's parking or zoning ordinance. The table below shows an example of a bicycle parking requirement that has been adopted by many cities throughout the United States. also be included:



Bike rack in 5 Points

The location of bicycle parking facilities shall be at least as convenient to the main entrance of the primary use as the most convenient automobile parking not reserved for use by people with disabilities.

Racks that support the bicycle at two points along its frame, enable the frame and at least one wheel to be secured, and prevent the wheel from tipping over are recommended features when considering appropriate rack styles. The popular “wave” style racks are not recommended because although the manufacturer intended for bikes to be secured perpendicular to the rack, riders tend to store bicycles parallel so that the frame is supported in two places. This practice reduces the storage capacity of the wave rack below the advertised capacity. The simplest, most cost effective, and most recommended design is the inverted “U” rack.

- D. Maintenance: Regular maintenance as it relates to sweeping of bike lanes is imperative for safety and continued use. Broken glass, yard waste, and other road debris often accumulates in the bike lane. Along residential streets without a bagging ordinance for yard debris, residents pile debris in the roadway, often in the area where bicyclists ride. This practice forces bicyclists to travel further into the vehicle lane, which may result in increased conflicts between motorists and bicyclists.

3.5 TRANSIT

Transit is an important mode of transportation for a wide cross-section of people. For teenagers, it can be their first mode of independent extended trips, taking them to school, work, or meeting friends. For young adults, it can provided transportation for those who cannot afford a car or do not want to own a car; and for seniors, it can provide transportation for those who can no longer drive a vehicle. Below are some of the features that should be considered when incorporating transit in the corridor.



Bus shelter on Blossom Street with bench and waste receptacle

- A. Bus stop shelters: Shelters equipped with a bench should be provided as a place of refuge from the heat and inclement weather conditions for transit riders waiting at dedicated stop locations.
- B. Pedestrian-scale lighting: Lighting that is of appropriate scale for pedestrians should be provided to illuminate transit stops for safety, wayfinding, and aesthetic purposes. Providing similar style lighting along the corridor and across the community will serve as a visually pleasing amenity.
- C. Route maps showing frequency of service An easy-to-navigate transit system can ensure that riders find their way between destinations. Illustrating the extent and frequency of transit service within an area to residents enables them to become a **choice rider**; that is, residents who have other means of transportation to reach their destinations, but elect to use their community's transit system.

D. Waste receptacles: These should be located at all transit stop locations to help keep the corridor clean and free of litter. The installation of a single type and color of receptacle will contribute to the sense of place along the corridor.

E. Benches: Providing benches at all transit stop locations will provide a place of respite for waiting transit riders. Along with shelters, benches create an inviting environment for existing transit users and can serve as a desired amenity for choice riders to use public transit rather than driving their personal vehicle.

F. Street trees: Locating street trees at or near bus stop locations provide shade and cooler temperatures for waiting transit riders. More benefits of street trees are listed under the section addressing overall recommendations for corridors.

G. Secure bike racks: Transit riders can arrive at stop locations by bicycle and may not need their bicycle once they reach their destination. Providing bike racks at transit stop locations allows transit riders a secure place to lock up their bicycle until they later retrieve it. In downtowns or along heavily travelled corridors, it might be necessary to provide additional racks if it is noted that these amenities experience frequent use.

In recent years, transit service providers in South Carolina have been installing bike racks on their fleets of vehicles, which allow transit riders to bicycle to their final destination once they reach their transit stop. Some transit providers in the state have not installed bike racks on their entire fleet and should explore pursuing available grants to purchase additional racks so that every bus can accommodate bicyclists. Combining mode-shares allow both bicyclists and transit users to maximize the extent of their travel and is a win-win situation for all.



CMRTA bus stop on Platt Springs Road



Bump-out at an intersection in 5-Points.

3.6 VEHICLE

Vehicle features focus on making the vehicles fit appropriately within the corridor based on the characteristics of the corridor. In many cases, the corridor is "auto-centric" even in areas where it is not appropriate. Below are some of the features that should be considered to incorporate vehicles appropriately in the corridor.

- A. **What are road diets:** For years, engineers and planners have been recommending widening roads in order to increase capacity and accommodate an increase in the number of vehicles. What the results have shown, however, is that by increasing capacity, the problem of congestion does not go away. Drivers who would take alternate routes before a roadway was widened return to the newly widened roadway, and the effect of many drivers taking this same approach results in a traffic problem that is not alleviated. Wide streets also negatively affect the building height-to-width ratio, a key element in establishing a sense of place and creating inviting corridors for all roadway users.

The most common use of a road diet involves reducing the number of through travel lanes for vehicles (usually from 4 lanes to 2 lanes), providing a two-way left turn lane in the center, and striping either on-street parking or bicycle lanes. Providing a two-way left turn lane removes turning vehicles from the travel lane, thereby reducing rear-end collisions and improving overall traffic flow. This type of road diet can successfully be implemented on roadways with volumes as high as 19,000 vehicles per day. Narrowing lane widths to introduce multimodal facilities along a corridor is another road diet method.



5-lane segment of Forest Drive. The landscaping, smaller setbacks and the planted strip between the sidewalk and the road contribute to a more pedestrian-friendly environment.

- B. Contrary to wide-held belief, wider travel lanes only marginally increase traffic capacity along roadways. However, they do create barriers for pedestrians, discourage crossings for transit connections, and encourage higher vehicle speeds. AASHTO guidelines allow for a minimum 10' travel lane along low speed (design speeds of 35 mph or less with **operating speeds** of 25 mph to 30 mph) urban collector streets. Minimum vehicle lane widths should never be used in conjunction with minimum parking and/or bike lane widths. Lower speed urban arterials should be striped as 10' to 12' travel lanes, with collectors striped as 10' to 11' travel lanes (not including the gutter pan). In any downtown or commercial setting, wider lanes between 13' and 15' should only be allowed for short distances to allow for maneuvering by larger vehicles, such as buses.



In comparison, the 5-lane segment of Platt Springs Road has no visual clues to the drivers that vehicle speeds should be reduced.

- C. **Parking facilities:** Parking maximums, rather than parking minimums should be established, as many current standards call for an excessive number of parking spaces to be

provided for commercial establishments. In cities looking to spur downtown redevelopment, the elimination of parking requirements altogether should be explored.

- D. **Appropriate vehicle speeds:** Cities should implement standards that better regulate vehicle speeds to provide a safer environment for bicyclists and pedestrians, and reduce congestion by creating a more uniform traffic flow. In downtown or commercial areas, posted speed limits should not be greater than 35 mph and are recommended to be between 25 mph and 30 mph. The **design speeds** of these roadways should be only 5 mph higher than the posted limit. Many roadways have **posted speed** limits much lower than the intentional or unintentional design speed. The tendency of greater vehicle speed along these corridors results from too wide lane widths, excessive overall roadway widths, and lack of facilities and amenities that can serve as traffic calming measures. Narrowing lane widths, landscaping, and altering curb lines (such as bulb-outs at intersections) can all help achieve lower vehicle speeds along corridors.

3.7 RECOMMENDATIONS

3.7.1 CORRIDOR RECOMMENDATIONS

The recommendations of the plan developed to implement the Compete Streets principles expressed above will be grouped based on corridor types. By grouping the recommendations by corridor type, greater consideration is given to how the recommendations impact each other to ensure they are appropriate to the context of the corridor. The recommendations are linked the Future Land Use Map shown in Exhibit 3.1.

- A. **Minor Arterial:** Arterials are designed to carry large volumes of traffic and higher speeds. The traffic is normally controlled by traffic signs and traffic signals.
1. **Platt Springs Road:** The corridor has experienced significant change over the decade with the widening from 2-lanes to 5-lanes. Development and redevelopment as a result of the widening has been slow to come to the corridor, possibly due to the lack of infrastructure along portions of the corridor, but probably due to the economic recession. The discussion about how to encourage development along the corridor has evolved from activity nodes in the previous plan to incorporating those activity nodes within complete streets guidelines for the corridor.
 2. **Airport Boulevard:** Unlike Platt Springs Road, where the development pattern is not set, Airport Boulevard is an intensive, auto-centric corridor. The town already is in the process to improve the appearance of the corridor with landscaping. The town should continue to refine its design guidelines, signage and landscaping ordinances to improve the characteristics of the corridor. Additionally, continued code enforcement to ensure that the requirements are met and maintained will be necessary.
 3. **Walting Road/Lexington Dr.:** This corridor is the north/south connection between Platt Springs Road and US1 to the north and Platt Springs Road to Boston Avenue to the South. The northern segment has a residential character. The intersection with Platt Springs Road is commercial, and the southern segment is more institutional with Midlands Technical College. Due to the mix of residential,

commercial and educational uses (Springdale Elementary on Watling Road and Midlands Tech. on Lexington Avenue), this corridor has a high potential for multi-modal trips.

4. **Boston Avenue.** This corridor links Lexington Avenue, via the "traffic circle" to Airport Boulevard. As with, Lexington Avenue, the characteristic is predominantly institutional due to Airport High School and the Wil Lou Gray Opportunity School.

B. Collector: Collector streets carry traffic from the local streets to the arterials. They are typically characterized by relatively low speed limits and traffic volumes.

1. **Commercial:** Currently there are no collector streets that are primarily commercial in nature. In the event that a commercial collector street is ever established in the town, great care should be taken to consider how that street would look and function. Given the relatively low speed limit and volume, it is likely that the collector would be two-lane with narrow travel lanes. Since it is designed to connect the local street with arterials, it should support bike and pedestrian movements, either with a combination of sidewalks and bike lanes or a shared path. Uses along the corridor should be a mix of residential and neighborhood-scale commercial, with appropriate institutional uses included. These uses should be designed to accommodate bike and pedestrian trips.
2. **Residential:** There are a few residential collector streets in the town. They serve to carry traffic from the local streets to the arterials such as Watling Road and Platt Springs Road. Rainbow Drive and Kitty Hawk Drive are example of these residential collector streets. Creating a bike and pedestrian friendly connections with these collector streets would help facilitate alternative transportation trips from the residential areas to the commercial corridors.

C. Local: Local streets primarily are designed to provide access to abutting property and are designed for minimum speeds and volumes. Examples of local streets include Dalewood Drive and Palo Verde Drive. Shared lanes (sharrows) capable of allowing safe travel of bikes and pedestrians to the collector streets should be sufficient for the local streets. In new developments, the town should consider requiring sidewalks in lieu of sharrows when feasible.

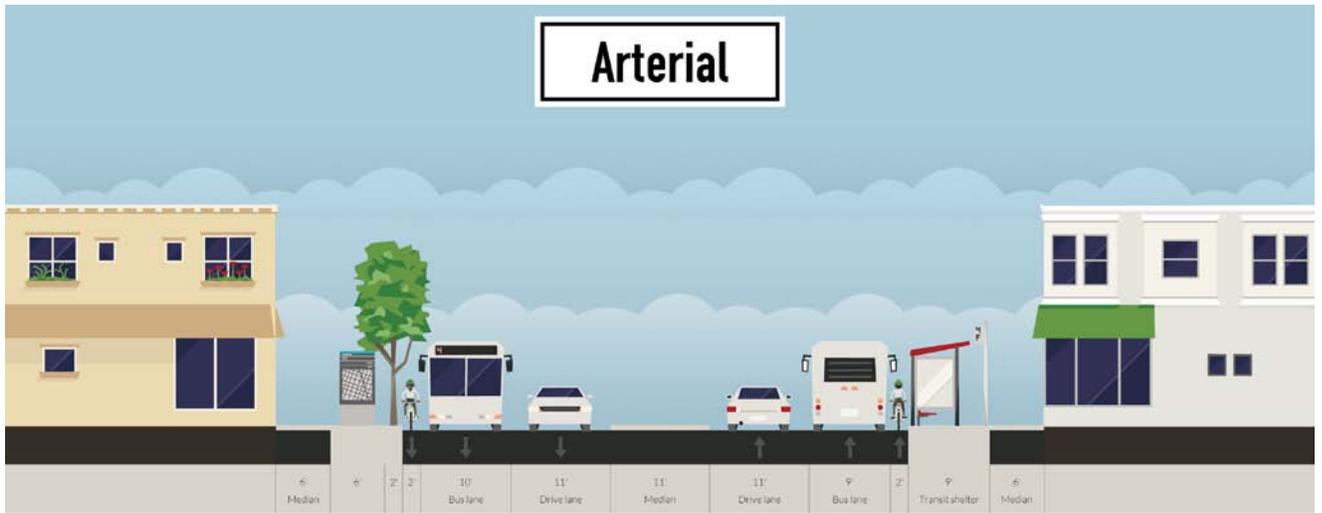
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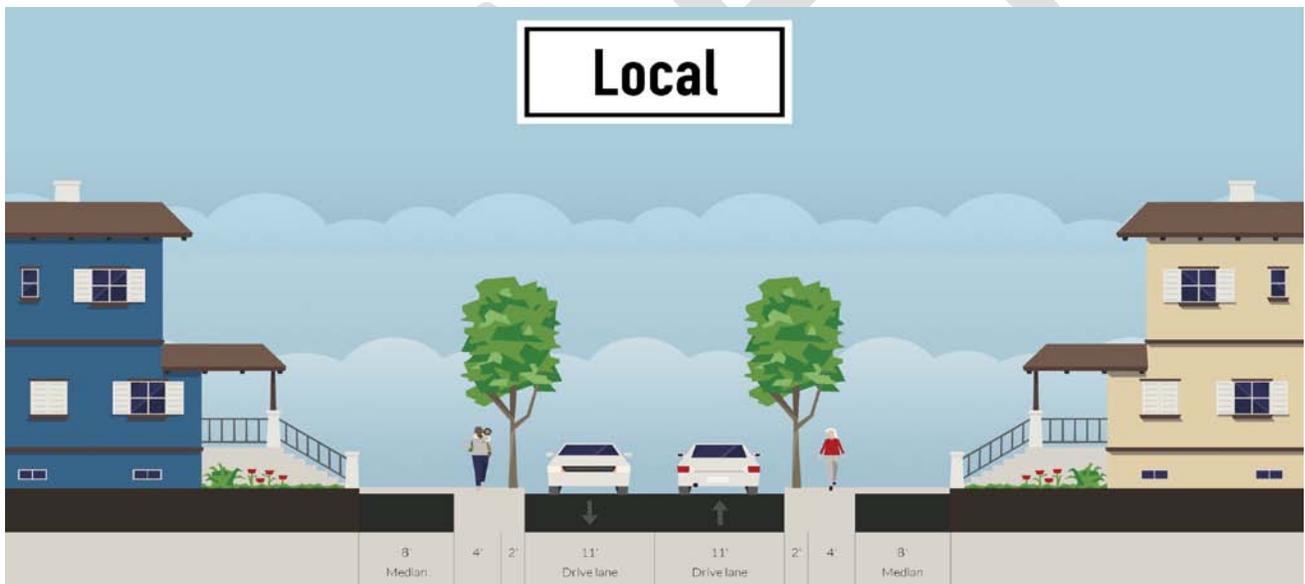
	Minor Arterial			Collector		Local	
	Platt Springs Road	Airport Boulevard	Watling Road/Lexington Ave.	Boston Ave	Commercial	Residential	Local
Overall	<p>Implement standards of the activity nodes in table below. Along the corridor between the activity nodes, the town should continue to implement the design guidelines. Material should be developed to assist applicants in the design guideline process. The development along the corridor should have interconnected parking areas or rear alleys to facilitate trips along the corridor, as well as bike and pedestrian facilities to accommodate those trips.</p>	<p>Implement and enforce design, sign and landscaping requirements suitable for the auto-centric corridor. The development along the corridor should have interconnected parking areas or rear alleys to facilitate trips along the corridor, as well as bike and pedestrian facilities to accommodate those trips.</p>	<p>The corridor should remain a principally a low to medium density residential development and compatible institutional with a regional commercial node at the intersection with Platt Springs Road. The future land use map also identifies and neighborhood activity center at the intersection with Wilton Road. Neighborhoods and other development along the corridor should be interconnected to facilitate short trips ease congestion along the corridor.</p>	<p>This corridor should remain a principally institutional due to Airport High School and the Wil Lou Gray Opportunity School. It terminates at the Airport Boulevard which is a commercial corridor and part of the regional activity node. Development along the corridor should be interconnected to facilitate short trips ease congestion along the corridor.</p>	<p>This corridor should be a 2-lane road with neighborhood scale commercial and institutional uses. The development along the corridor should have interconnected parking areas or rear alleys to facilitate trips along the corridor, as well as bike and pedestrian facilities to accommodate those trips.</p>	<p>The current residential collectors in the town serve single family residential development. However, residential collectors can serve a wide variety of residential densities along with appropriate institutional uses. Neighborhoods and other development along the corridor should be interconnected to facilitate short trips ease congestion along the corridor.</p>	<p>The current local streets in the town serve single family residential development</p>

Central Midlands Council of Governments

<p>Pedestrian</p>	<p>Redesign sidewalks to include buffer area between the sidewalk and the curb. Add pedestrian cross walks with pedestrian actuator and specialized pavement markings as part of the activity nodes. Install landscaping, pedestrian lighting and street furniture to provide a safe and comfortable place to walk.</p>	<p>Continue to work with the City of Cayce and City of West Columbia to install pedestrian lighting and landscaping along the corridor.</p>	<p>Install sidewalks with a pedestrian buffer between the sidewalk and the travel lane, landscaping, pedestrian lighting and street furniture to provide a safe and comfortable place to walk. Install pedestrian crosswalks with pedestrian actuator and specialized pavement at key points along the corridor, including near the Springdale Elementary and MTC.</p>	<p>Install pedestrian crosswalks with pedestrian actuator and specialized pavement at key points along the corridor, including near the schools.</p>	<p>The corridor should include sidewalks or a shared path. The development along the corridor should be designed to accommodate pedestrian trips.</p>	<p>The corridor should include sidewalks or a shared path. The development along the corridor should be designed to accommodate pedestrian trips. The town should designate a safe walking route through the town and install wayfinding signs to direct pedestrians to key destinations such as schools, parks and commercial districts</p>	<p>In newer residential development, sidewalks should be required. In existing developments, The town should designate a safe walking route through the town using sharrows and install wayfinding signs to direct pedestrians to key destinations such as schools, parks and commercial districts</p>
<p>Bicycle</p>	<p>Include bike racks at civic locations. Require bike racks as part of development in the activity nodes</p>	<p>No recommendations at this time.</p>	<p>Install a 4 foot paved shoulder to accommodate bicyclists</p>	<p>Install a 4 foot paved shoulder to accommodate bicyclists</p>	<p>The corridor should include bike lanes or a shared path. The development along the corridor should be designed to accommodate bike trips.</p>	<p>The corridor should include bike lanes or a shared path. The development along the corridor should be designed to accommodate bike trips. The town should designate a safe biking route through the town and install wayfinding signs</p>	<p>The town should designate a safe biking route through the town using sharrows and install wayfinding signs to direct cyclists to key destinations such as schools, parks and commercial districts</p>

						to direct cyclists to key destinations such as schools, parks and commercial districts	
Transit	Work with the CMRTA to include bus shelters, benches and waste receptacles to the existing bus stops.	Work with the CMRTA to include bus shelters, benches and waste receptacles to the existing bus stops.	Work with the CMRTA to include bus shelters, benches and waste receptacles to the existing bus stops.	Work with the CMRTA to include bus shelters, benches and waste receptacles to the existing bus stops.	Work with the CMRTA to include transit stops near the intersection with arterials.	Work with the CMRTA to include transit stops near the intersection with arterials.	N/A
Vehicle	Work with SCDOT and COATS to develop a "road diet" plan. Potential Elements include: - narrower travel lanes - landscaped median -intersection bump outs - speed limit reduction -on-street parking	Work with SCDOT on the redesign of the I-26 interchange to ensure that it is context sensitive.	Work with SCDOT and COATs to develop context sensitive road improvements when they are necessary.	Work with SCDOT and COATs to develop context sensitive road improvements when they are necessary.	Work with SCDOT and COATs to develop context sensitive road improvements when they are necessary.	Work with SCDOT and COATs to develop context sensitive road improvements when they are necessary.	N/A





3.7.2 ADDITIONAL RECOMMENDATIONS

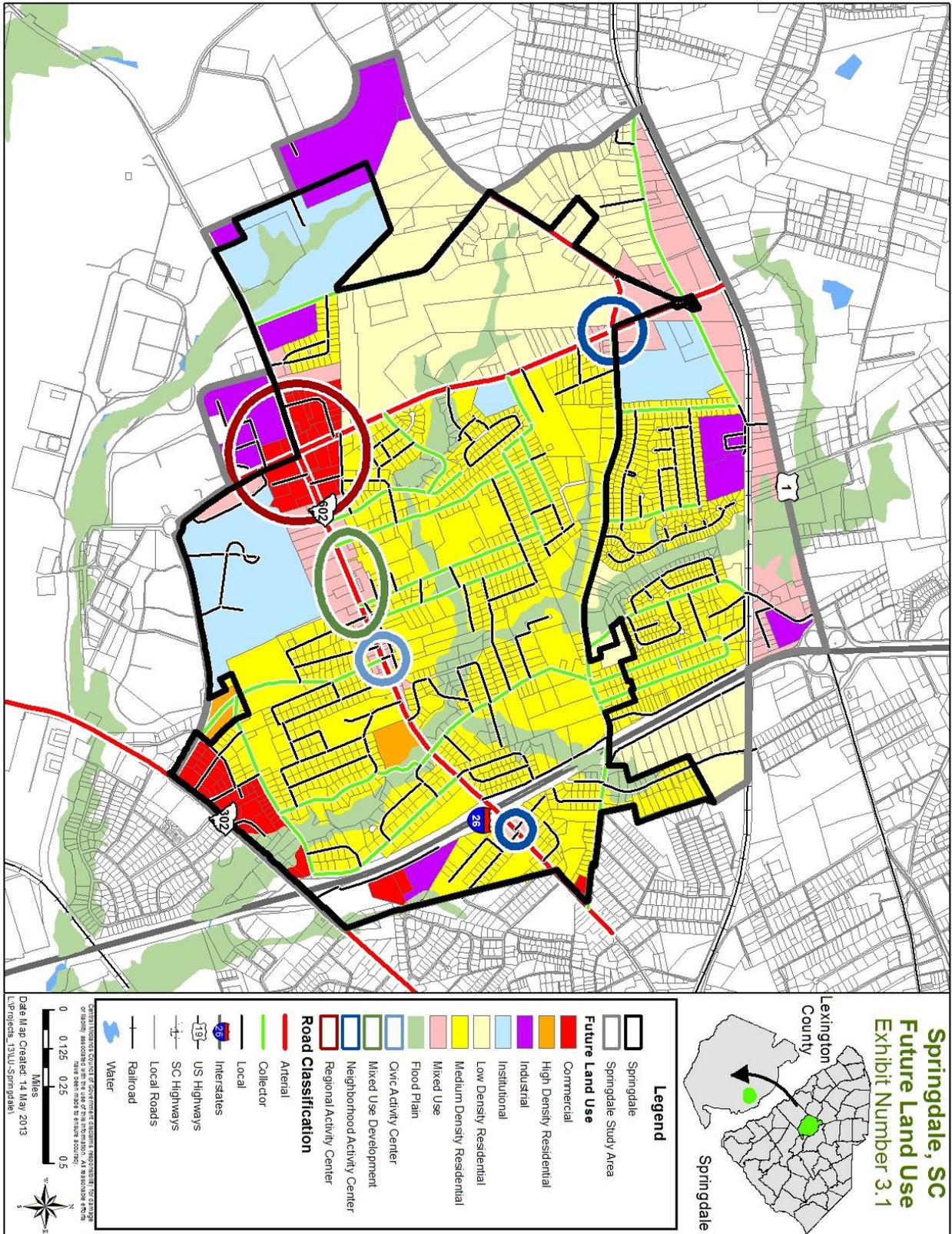
In addition to the corridor recommendations detailed above, the town should implement the broader recommendations listed below

1. Population:
 - A. Develop a marketing campaign that can be sent to potential annexation areas and developers
2. Natural Resources
 - A. The town should implement the recommendations identified in the An All Natural Hazard Risk Assessment and Hazard Mitigation Plan for the Central Midlands Region of South Carolina, 2010 Update
 - B. Identify and implement priority recommendations from the 2013 Sustainable Energy Plan for the Midlands Region.
 - C. Develop a greenway plan for the creek running through the town as illustrated on the Future Land Use Map
 - D. Develop incentives in the zoning ordinance to encourage developers to provide additional open space amenities beyond the minimum requirements
3. Housing
 - A. Strengthen and take necessary actions to increase enforcement of all town codes
 - B. Ensure that infill developments are compatible with existing neighborhood character
 - C. Amend the town code to establish density bonus or alternative incentives for the provisions of public and private amenities
 - D. Create options for density bonus or other incentives for provision of affordable housing units
 - E. Establish options and incentives to encourage redevelopment of existing aging and obsolete housing
4. Community Facilities
 - A. Participate in county and regional studies to explore transportation alternatives that best serve the residents of the town
 - B. Plan for additional staffing of Police Department as needed to ensure that the ratio of officers to population in the services area is at or above the national standards
 - C. Encourage the grouping of public facilities in prospective growth areas to create visible activity centers
 - D. Explore the development of a funding mechanism to relocate utility lines underground
 - E. Ensure that utility lines are located underground in potential growth areas
 - F. Emphasize conversion to underground utilities during system upgrades
 - G. Create a Recreation Master Plan with an emphasis on promoting inclusion that all residents and neighborhoods are served
 - H. Encourage public participation in planning of park facilities
 - I. Publicize existing recreational opportunities through extensive outreach programs
 - J. Evaluate the adequacy of land development and zoning regulations and recreation impact fees in providing new parks and open spaces and develop additional or alternative mechanisms if necessary

- K. Continue to work with local educational institutions for joint use of recreational facilities locate on their campuses
- L. Explore the feasibility of developing a community swimming pool
- 5. Land Use: The town should amend its zoning ordinance to implement the recommendations for the Activity Nodes listed below:
 - A. Promote alternative housing types within existing higher density neighborhoods, transition areas from less to more intense uses, designate redevelopment areas and designate areas long major corridors.
 - B. Review and revise development standards that affect the scale of structures in residential areas, including, but not limited to building heights and setbacks, so that they provide compatibility with existing residential neighborhoods character while accommodating current building practices and potential future needs
 - C. Review and revise the zoning ordinance and land development regulations to ensure that infill development is compatible with existing neighborhood character.
 - D. Revise the zoning ordinance and land development regulations to encourage mixed-use development, patio homes, townhouses and other types of housing to provide alternative housing options.
 - E. Develop standards for small lot single family infill houses to encourage owner occupancy.
 - F. Revise the zoning ordinance to ensure that adequate protection are provided between new higher density residential development and existing single family neighborhoods.
 - G. Locate primary shopping areas on arterials and transit routes
 - H. Review and revise existing commercial zoning districts to ensure that uses allowed are compatible with the intent and location of the design guidelines, district and surrounding land uses.
 - I. Evaluate the landscaping regulations periodically to ensure increased tree cover.
 - J. Maintain and publicize a detailed database of available vacant property in the town.
 - K. Develop and implements standards for the activity centers listed below

Activity Centers	Recommendations
<p>Regional Node - Location for the highest intensity commercial and institutional uses intended to serve the region. Motor vehicles are the predominant mode of travel to the node, but development should be designed to accommodate other modes of travel.</p>	<p>In addition to the corridor standards listed above, the town should develop standards to implement the following:</p> <ul style="list-style-type: none"> • Establish density bonuses or other incentives for the provision of public amenities above what is already minimally required • Create options for alternative incentive programs to encourage innovative and creative land development • Create standards that encourage transit oriented development as a method of encouraging the use of public transit. • Establish standards for sidewalks, bikeways and street lights in new developments that require linkages/connections to existing infrastructure along all public rights-of-way.

	Possible uses include a grocery store, drug store, bank, chain casual dining restaurant, regional sports park, and big-box retail
Neighborhood Node - Location designed for smaller scale commercial, institutional and higher density residential development.	<p>In addition to the corridor standards listed above, the town should develop standards to implement the following</p> <ul style="list-style-type: none"> • Establish density bonuses or other incentives for the provision of public amenities above what is already minimally required • Review and revise the zoning ordinance and land development regulations to ensure that infill development and new development are compatible with the existing neighborhood character • Revise the zoning ordinance and land development regulations to encourage mixed-use development, patio homes, townhouses and other types of housing to provide alternative housing options. • Establish standards for sidewalks, bikeways and street lights in new developments that require linkages/connections to existing infrastructure along all public rights-of-way. <p>The types of commercial and institutional uses should address the needs of the nearby residential communities that are within walking and biking distance. Possible uses include specialty food markets, barber shop/hair dresser, tailors/dress makers, book stores, and cafes.</p>
Civic Node - With Town Hall and the park as a focus, this is the civic heart of the town. It's central location makes it easy for anyone in the town to access. When considering additional civic uses, this area should be considered first	In addition to the corridor standards listed above, the town should develop standards to implement the following



Corridor Standards				
Task	Responsible Parties		Completion Date	
Develop standard	Staff, Planning Commission Town Council		Long Term	
Additional Recommendations				
Task	Responsible Parties		Completion Date	
1A	Staff, Town Council		Mid-term	
2A	Staff, Planning Commission Town Council		Mid-term	
2B	Staff, Planning Commission Town Council		Mid-term	
2C	Staff, Planning Commission Town Council		Long Term	
2D	Staff, Planning Commission Town Council		Mid-term	
3A	Staff, Town Council		Continuous	
3B	Staff, Planning Commission Town Council		Continuous	
3C	Staff, Planning Commission Town Council		Short Term	
3D	Staff, Planning Commission Town Council		Mid-term	
3E	Staff, Planning Commission Town Council		Long Term	
4A	COATS, Staff, Town Council, County Council		Continuous	
4B	Staff, Town Council		Continuous	
4C	Staff, Planning Commission Town Council		Continuous	
4D	Staff, Town Council		Long Term	
4E	Staff, Planning Commission Town Council		Continuous	
4F	Staff, Town Council		Continuous	
4G	Staff, Planning Commission Town Council		Long Term	
4H	Staff, Planning Commission Town Council		Continuous	
4I	Staff, Planning Commission Town Council		Continuous	
4J	Staff, Planning Commission Town Council		Mid-term	
4K	Staff, Planning Commission Town Council		Continuous	
4L	Staff, Planning Commission Town Council		Long Term	

5A	Staff, Planning Commission, Design Review Board, Town Council	Short Term
5B	Staff, Planning Commission, Design Review Board, Town Council	Short Term
5C	Staff, Planning Commission, Design Review Board, Town Council	Short Term
5D	Staff, Planning Commission, Design Review Board, Town Council	Short Term
5E	Staff, Planning Commission, Design Review Board, Town Council	Short Term
5F	Staff, Planning Commission, Design Review Board, Town Council	Short Term
5G	Staff, Planning Commission, Design Review Board, Town Council	Continuous
5H	Staff, Planning Commission, Design Review Board, Town Council	Short Term
5I	Staff, Planning Commission, Design Review Board, Town Council	Short Term
5J	Staff, Planning Commission, Design Review Board, Town Council	Continuous
5K	Staff, Planning Commission, Design Review Board, Town Council	Short Term