

## **2016 SOUTHWEST COUNTY SECTOR PLAN**



### **KNOXVILLE • KNOX COUNTY METROPOLITAN PLANNING COMMISSION**



# **Southwest County Sector Plan**

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### SOUTHWEST COUNTY SECTOR Executive Summary

The Southwest County Sector is 64.6 square miles in size. The sector is suburban/rural in character, well-served by county infrastructure systems, and home to wellestablished, healthy neighborhoods and many thriving businesses. The Sector Plan for this area includes land use, community facilities, green infrastructure, historic resources, and transportation plan recommendation. Summary recommendations are organized into 5-year and 15-year implementation stages. The sector plan recommendations reflect observations of data trends, projects implemented since 2005 (the last sector plan update), and public input resulting from an online survey and public meeting comments. City and county sectors vary widely regarding character, population, development activity, and rate of growth. For the Southwest County Sector, population growth has increased steadily. From 2000 to 2010 the sector population grew by 30,469, which is the highest growth rate to other sectors. The sector is anticipated to continue to grow between 1,753 and 1,909 people each year.

Over 50% of the sector's population has a college degree. The median household income for the sector is \$88,127, compared to \$47, 270 in Knox County. Most people that live in the sector are employed in



the health care and social assistance field (14%). Those people that live outside the sector, but work in the sector are employed mostly in retail trade (27%).

Since 1990, the total number of residential dwellings in the sector grew by 53 percent by adding 12,956 units. Detached dwelling units comprises the largest share of all housing unit types with 80% or 22,451 units. From 1990 to 2000 the sector averaged 62 new units a month. In the subsequent decade (2000 to 2010), numbers dropped an average of 45 units a month. According to the Knox County Property Assessors Office over 90% of the residential buildings are good to excellent condition.

The citizens expressed a desire to accommodate growth in areas where there is infrastructure available and not introducing higher intensity non-residential uses in low density residential areas. As a result, the Southwest County Sector Plan recommendations are structured to address redevelopment strategies to preserve and enhance existing neighborhoods, and improve aesthetics and infrastructure. The sector plan identifies mixed use districts with differing scales and functions. Rather than creating new centers and corridors, the Southwest County Sector Plan recommends strengthening existing ones.

People were concerned about the traffic on Northshore Drive and the continued development of the southeastern portion of the sector. In addition, people expressed their desire to have a continuous greenway along Northshore Drive. There was interest in developing new zoning tools and regulations that address traffic impact studies, new development standards for conservation subdivisions, protecting the hillsides, developing a small office planned zone, and better standards for landscaping and lighting.

### Southwest County Sector: Knox County Commission and Knoxville City Council Districts



## Section 1: Background Report

The Southwest County Sector covers the area of Knox County and the City of Knoxville west of Bearden High School and south of Interstate 40 (excluding the Town of Farragut), and also includes the Lyons Bend area south of Northshore Drive. The plan was last updated 11 years ago, and resulted in adoption by the Knoxville City Council and the Knox County Commission in November 2005. In January 2010 the Southwest County Sector Plan was amended through the adoption of the *Knoxville-Knox County Park, Recreation and Greenways Plan.* 

#### **COMPREHENSIVE PLANNING PROCESS**

Comprehensive planning in Knoxville and Knox County can be viewed as a series of plans that start with regional geographies and broad goals and objectives and gradually address smaller areas of the city and county in more detail and with greater specificity. An overview of these plans are outlined below.

The Metropolitan Planning Commission (MPC), under state law, is directed to create a comprehensive plan to provide recommendations for:

- Roads, and other transportation systems
- Parks and other public property
- The general location and extent of public utilities, including sanitation and water;
- The general character and location of community areas and housing development;
- Uses of land for trade, industry, housing, recreation, agriculture, and forestry; and
- Appropriate zoning relating to the land use plan, outlining permitted uses and the intensity of those uses, such as height and locations of buildings on their parcels

**The Growth Plan** (*The Growth Plan for Knoxville*, *Knox County, and Farragut, Tennessee*), adopted in 2000, was mandated under the Tennessee Growth Policy Act (Public Chapter 1101), and requires city and county governments to prepare a 20-year Growth Plan for each county. At a minimum, a growth plan must identify three classifications of land:

- Urban Growth Boundaries (UGB) must be drawn for all cities and towns. Land within the UGB must be reasonably compact, but adequate to accommodate all of the city's expected growth for the next 20 years
- Planned Growth Areas (PGA) must be reasonably compact, but large enough to accommodate growth expected to occur in unincorporated areas over the next 20 years.
- Rural Areas are to include land to be preserved for farming, recreation, and other non-urban uses.

**The General Plan** (*The Knoxville-Knox County General Plan 2033*), adopted in 2003, is the official 30-year comprehensive plan for Knoxville and Knox County that outlines a long-range vision and policy framework for physical and economic development. The plan includes the Growth Plan, twelve sector plans, corridor and small area plans, and system-wide plans.



**Sector Plans** provide a detailed analysis of land use, community facilities, and transportation for 12 geographic divisions in Knox County. The focus is to take goals contained in the General Plan and draft a sector plan that is to guide land use and development over a 15-year period. Also included is a five-year plan with recommended capital improvements and other implementation programs.

**Corridor Plans** primarily cover land use and transportation recommendations along existing transportation corridors. These plans are more detailed than sector plans because they have a smaller geographic area. Recommendations often deal with economic development, aesthetics, and public safety.

**Small Area Plans** are neighborhood-based and address more detailed concerns like revitalization or special environmental considerations. These plans are developed as a result of some immediate development pressure on the area and are usually requested by the elected bodies.

**The One Year Plan** is required by City Charter. The Charter requires the annual preparation and adoption of a one year comprehensive development plan covering the entire city. Fifteen-and five-year development plans (sector plans) are prepared to provide policy guidance on long and mid-range development issues and as a guide to development of the One Year Plan. The One Year Plan is specifically designed to be the basis for land use regulations and short-term public improvements.

**System-Wide Plans** cover specific systems such as greenways and parks, hillside and ridge top protection, and major road plans.

All plans are developed through citizen participation, including workshops, surveys, and public meetings. Plans are adopted by the Metropolitan Planning Commission, Knoxville City Council, and Knox County Commission and serve as a basis for zoning and land use decisions.

#### **OVERVIEW OF SECTOR CHANGES**

The 2005 Southwest County Sector Plan proposed several objectives including land use updates to align development efforts in regard to land use, environmental protection, transportation, and community facilities. The following is an overview of the major changes in the sector since the 2005 sector plan update:

#### **Parks and Greenway Improvements**

• 2015

A 900-foot, multi-use asphalt trail with a bridge that spans Little Turkey Creek is completed to connect the McFee Greenway with the Wentworth Subdivision Greenway (located in Farragut).

#### • 2014

The Appalachian Mountain Bike Club (AMBC) partners with Knox County to build the county's first beginner trail within Concord Park, and other trails are in the works. AMBC continues to improve trail features within Concord Park.

#### • 2012

Carl Cowan Park improvements are made including splash pad, and new playground equipment.

#### • 2012

Concord Park adds a four-acre dog park, with separate spaces for large and small dogs, featuring stone and grass run areas, dog wash station, dog swimming area and jumping dock, paved ADA accessible trails, water fountain, and public restrooms.

#### • 2008

McFee Park (located in Farragut) opens. The park includes restrooms, parking area and walking trails.

#### • 2007

The City of Knoxville and Knox County opens Ten Mile Creek Greenway, our community's first joint city/county greenway. The greenway extends along Ten Mile Creek for 1.2 miles from the Cavet Station Greenway in the Northwest City Sector into the Southwest County Sector and terminates at the Carmike Wynnsong 16 Theater in Cedar Bluff.





#### Land Use Changes

• 2014

Northshore Elementary School opens in Northshore Town Center.

• 2013

The former Goody's headquarters on Parkside Drive becomes fully occupied with Kimberly Clark and South College.

• 2011

Neighborhood commercial node at Northshore Drive and Choto Road intersection begins to develop.

• 2011

Expansion of commercial node at Kingston Pike and Cedar Bluff Road begins to develop.

• 2009 Goody's headquarters on Parkside Drive closes.

• 2007

Northshore Town Center starts to develop with new residential at the rear of the site.



#### **Transportation Improvements**

• 2015 I-140 interchange improvements at Westland Drive.

• 2015

The addition of a westbound auxiliary lane on I-40 between 1-40 and Lovell Road.

• 2014

Roundabout built at the intersection of Northshore Drive and Choto Road.

• 2013

I-140 interchange improvements at Northshore Drive.

- 2008 Northshore Roundabout at Concord Road opens.
- 2009-2010
- S. Gallaher View Road is widened; sidewalks are added.

#### **Community Profile**

#### Population

In 2010, there were 70,459 people living in the Southwest County Sector, or 16 percent of Knox County's total population. Over the last twenty years (1990 to 2010), the sector grew around 7 percent annually.

Individuals 45-64 years old account for the larger age group, nearly tripling from 8,383 people in 1990, to 22,312 people in 2010. Baby Boomers (45 to 64 years) comprise this group, increasing from a 20 percent share of the sector plan population in 1990, to 31 percent in 2010.

Table 1. Southwest County Sector Population by Age and Sex					
Years of Age	1990	2000	% Change 1990-2000	2010	% Change 2000 -2010
Under 5	3,061	3,486	13.8	4,026	15.4
5-19	8,785	12,950	47.4	15,408	18.9
20-34	8,372	8,524	1.8	9,388	10.1
35-44	8,366	10,605	26.7	10,339	-2.5
45-64	8,383	15,537	85.3	22,312	43.6
65+	2,881	5,317	84.5	7,833	47.3
TOTAL	39,990	56,419	41.0	70,459	24.8
Male	19,595	27,767	41.7	34,444	24.0
Female	20,395	28,652	40.4	36,015	25.6

According to the U.S. Census Bureau, 2008-2012 American Community Survey 5-Year Estimates, 64,014 people or 89.8 percent of the sector is one race and white. Across all county sectors, the Southwest and Northwest sectors have the two most diverse populations based on race. The population of the other four county sectors is over 90 percent one race and white.

Table 2: Southwest County Sector Population by Race				
Race	Estimate	Percent		
One Race	70,261	98.6		
• White	64,014	89.8		
Black or African American	2,663	3.7		
American Indian and Alaska Native	82	0.1		
• Asian	3,218	4.5		
Native Hawaiian and Other Pacific Islander	45	< 0.1		
Some Other Race	329	0.4		
Two or More Races	964	1.3		
U.S. Census Bureau, 2008-2012 American Community Survey 5-Year Estimates				

An estimated 19,704 households or 74.7 percent are families and of those families 9,204 or 46.7 percent have children under 18 years old. The sector includes 5,358 or 20.4 percent of the households with individuals 65 years and over. The Southwest Sector has the second lowest percentage (20 percent) of households with individuals 65 years and over, when compared to the six county sectors (Northwest County has the lowest at 18.1 percent). The average household size is 2.69, which is the highest of the six county sectors.

Table 3: Southwest County Sector Population by Household			
Households by Type	Estimate		
FAMILY HOUSEHOLDS (FAMILIES)	19,704		
With own children under 18 years	9,204		
Husband-wife family	17,262		
• With own children under 18 years	7,842		
Male householder, no wife present	464		
With own children under 18 years	248		
Female householder, no husband present	1,978		
With own children under 18 years	1,114		
NONFAMILY HOUSEHOLDS	6,646		
Householder living alone	5,802		
• 65 years and over	1,683		
TOTAL HOUSEHOLDS	26,350		
Households with individuals under 18 years	9,646		
Households with individuals 65 years and over	5,385		
U.S. Census Bureau, 2008-2012 American Community Survey 5-Year Estimates			

The population that is 25 years and over has a high educational attainment, 10,773 or 22% of this population have a graduate or professional degree. Among the six county sectors, this sector contains the most people with a graduate or professional degree.

#### Table 4: Southwest County Sector Population by Educational Attainment

r upulation by Luutational Attainment				
Educational Attainment	Estimate	Percent		
Less than 9th grade	570	1.1		
9th to 12th grade, no diploma	817	1.7		
High School graduate (includes equivalency)	6,573	13.7		
Some college, no degree	9,293	19.4		
Associate's degree	3,068	6.4		
Bachelor's degree	16,667	34.8		
Graduate or professional degree	10,773	22.5		
Population 25 years and over	47,761	100		
U.S. Census Bureau, 2008-2012 American Community Survey 5-Year Estimates				

The median household income for the sector is \$88,127, compared to \$47,270 in Knox County. There are 3,111 households in this sector that make \$200,000 or more, representing 11.8 percent of all households in the sector. This sector ranks the highest in percentage of households making \$200,000 or more, all of the other county sectors have less than 4 percent of households making this amount.

Table 5: Southwest County Sector Households by Income and Benefits				
Income and Benefits	Estimate	Percent		
Less than \$10,000	597	2.2		
\$10,000 to \$14,999	450	1.7		
\$15,000 to \$24,999	1,505	5.7		
\$25,000 to \$34,999	1,589	6.0		
\$35,000 to \$49,999	2,290	8.6		
\$50,000 to \$74,999	4,227	16.0		
\$75,000 to \$99,000	4,203	15.9		
\$100,000 to \$149,000	5,410	20.5		
\$150,000 to \$199,000	2,968	11.2		
\$200,000 or more	3,111	11.8		
Total Households 26,350 100				
U.S. Census Bureau, 2008-2012 American Community Survey 5-Year Estimates				

In the last twenty years, Knox County's population increased by 29 percent to 432,226 in 2010. A closer look reveals the county balance accounted for the bulk of the growth, increasing from 45 percent share of Knox County total population in 1990, to 53 percent in 2010. Knoxville's population only grew five percent since 1990, to 178,874 residents in 2010, while the county balance increased 53percent for a total of 253,352 in 2010. For every person added in the City, almost 10 people were added to the county balance. Farragut grew 62 percent with a population increase of 3,484. Knoxville had a population increase of 9,113. The annual growth rate from 1990 – 2010 was 2.1 percent in Knox County, 2.4 percent in Farragut, and 0.3 percent in the City of Knoxville.

Table 6. Knox County Population						
Area	1990	%	2000	%	2010	%
City of Knoxville	169,761	50.6	173,890	45.5	178,874	41.4
Town of Farragut	12,802	3.8	17,720	4.6	20,676	4.7
County Balance	153,153	45.6	190,422	49.9	232,676	53.9
KNOX COUNTY	335,749		382,032		432,226	

A closer look at the county sector populations show where growth occurred in the County Balance. Compared to other sectors, the Southwest County ranked first in population growth adding 30,469 residents from 1990 to 2010. During this period the Northwest (27,580 residents) and Southwest (30,469 residents) County Sectors accounted for 65 percent of 89, 376 people added, signifying growth primarily occurred in western Knox County.

	Table 7. Population Growth by County Sector						
Rank	Sector	1990	2000	2010	Net Growth 1990-2010		
1	Southwest	39,990	56,419	70,459	30,469		
2	Northwest	49,422	62,864	77,002	27,580		
3	North	32,391	42,557	49,754	17,363		
4	Northeast	18,982	21,816	27,386	8,393		
5	South	17,759	19,236	20,988	3,229		
6	East	12,357	13,313	14,699	2,342		
	TOTALS	170,912	216,205	260,288	89,376		

In 1990, the sector accounted for 11.9 percent of Knox County's population, in 2000 the share grew to 14.7 percent, and in 2010 the share grew to 16 percent, so if past history is used to project population forward then in 2030 the population would account for about 20 percent. Out-year projections are using University of Tennessee's Center for Business and Economic Research (CBER) population projections for Knox County. However, there are many factors that would likely affect this growth scenario, such as new school facilities, available land for suitable development, and any changes affecting Knox County's overall growth.

What can Southwest County expect to see in the future? Three population projections are shown for the sector, providing totals for 2015, 2020 and 2025. The projections are based on factors inherent to the sector such as historical growth rates, share of Knox County's total population,



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and the Knoxville Regional Transportation Planning Organization's travel demand model. These three projections assume underlying factors will continue in the future.

The Low Growth projection results in the addition of 9,254 new residents to the sector from 2010 to 2020, an increase of 13 percent. The Low Growth scenario uses Knox County population projections from the Center for Business and Economic Research (CBER) at The University of Tennessee as control totals. Historically, the percent share of Knox County residents that reside in the Southwest County Sector has grown by about 2 percent each decade. This share was applied to CBER's countywide population totals for 2015, 2020, and 2025 to determine the Low Growth scenario for Southwest County.

From 2010 to 2020, the Moderate Growth projection results in a 24 percent increase in population, or 17,534 new residents, while the High Growth projection adds 19,131 people, a 22 percent increase. The Moderate and High Growth projections use Southwest County's annual historical growth rates from 1990 to 2010 (Moderate) and 2000 to 2010 (High). These annual growth rates are applied to the 2010 total population for the sector and carried out each subsequent year to 2025.

In summary, from 2010 and 2025 the Southwest County could potentially add between 1,753 and 1,909 people each year. However, there are many factors that can influence projections such as changes in the local economy, infrastructure, schools, and market conditions.

#### **Priority Populations**

Priority Populations are neighborhoods characterized by above-average concentrations of socioeconomic stress. Conditions such as poverty, unemployment, and chronic disease occur at rates that exceed levels measured for the general population of the Knoxville metropolitan area.

Specifically, 22 socioeconomic measures, or indicators, identify Priority Populations. Indicators were selected based on input from the PlanET Equity Team and references in Knox County's Health Impact Assessment and Centers for Disease Control publications. Data for each indicator are assembled at census tract geography to represent neighborhoods and small communities. Indicators are organized in three themes – Opportunity, Accessibility, and Vulnerability – and Priority Populations are shown within each. A composite score that combines the three themes provides a summary look at the area's Priority Populations.

#### **Opportunity Indicator**

Ten income and education measures comprise the Opportunity theme:

- 1. Population in poverty: Percentage of population living below poverty
- 2. Household income: Median household income
- Households with public assistance income: Percentage of households with cash public assistance or Food Stamps/ SNAP benefits
- Access to living-wage jobs: Number of jobs earning more than \$3,333 per month, based on MIT Living Wage Calculator for average family of 2 adults and 1 child in the Knoxville metropolitan area
- 5. Unemployment rate: Percentage of population 16 years of age and older in the civilian workforce, currently unemployed
- 6. Housing plus transportation costs: Percentage of household income spent on housing and transportation costs.
- 7. Elementary school children eligible for free/reduced price lunch: Percentage of public elementary school children eligible for free or reduced price lunch.
- 8. Adults without high school education: Percentage of population 25 years of age and older without a high school diploma/GED.
- 9. College-age population enrolled in college: Percentage of population 15-24 years of age enrolled in college or graduate school.
- 10. Preschool-age population enrolled in preschool: Percentage of population 3 and 4 years of age enrolled in preschool.

All census tracts within the Southwest County Sector are rated "high or very high" within the Opportunity theme.

#### Accessibility Indicator

Six measures related to infrastructure and the builtenvironment comprise the Accessibility theme:

- 1. Access to physical activity centers: Proximity to parks, recreation centers, greenways, and other facilities
- 2. Active-transportation commuters: Percentage of commuters walking or bicycling to work
- 3. Public transit commuters: Percentage of commuters taking public transit to work

- 4. Households with no vehicles: Percentage of households with no vehicles available
- 5. Modified Retail Food Environment Index: Out of the total number of food retailers considered healthy or less healthy in a census tract, the mRFEI represents the percentage that are healthy
- 6. Children with limited access to healthy food: Weighted mRFEI score for children's access to healthy food

The lowest ranking census tract in the Southwest County Sector is tract 57.12 with a "very low" accessibility rating, the tract is bound by Westland Drive, Wallace Road, Northshore Drive, and Ebenezer Road .

#### Vulnerability Indicator

Vulnerable populations were enumerated by six measures:

- 1. Persons with disabilities: Percentage of civilian noninstitutionalized population with a disability
- 2. Minority population: Percentage of population that is non-White and/or Hispanic/Latino
- 3. Persons with limited English proficiency: Percentage of population 5 years of age and over that speak English less than "very well"
- 4. Children: Percentage of total population under 18 years of age
- 5. Seniors: Percentage of total population 65 years of age and over
- 6. Single-parent households: Percentage of family
- households headed by single-parent with children under 18 years of age

The two lowest-rated census tract when it comes to Vulnerability are tracts 58.09 and 58.13, both located in the Town of Farragut.

#### Priority Population Composite Score

The Priority Population was compiled using the average scores for each of the three themes and were summed for each census tract, The lower the comprehensive score for a tract, the higher the priority of that tract. All the census tracts within the Southwest County Sector rated a "moderate priority," which is the best rating.



### **Southwest County Sector: Priority Populations - Opportunity Indicator**

Southwest County Sector Plan 9



### Southwest County Sector: Priority Populations - Accessibility Indicator



### Southwest County Sector: Priority Populations - Vulnerability Indicator

Southwest County Sector Plan 11

### **Southwest County Sector: Priority Populations - Composite Score**



#### Employment

In 2013, approximately 32,622 residents living in the Southwest County Sector were employed with the majority (27,414) commuting to a place of employment located outside the sector. The largest employer of people living in the Southwest County was Health Care and Social Assistance with 4,590 residents, while Retail Trade (4,057) and Educational Services (3,605) were second and third, respectively.

The number of jobs located in the Southwest County Sector was 33,261 with the bulk of workers (28,053) commuting to the sector from a place of residence outside the sector. Retail Trade was the largest industry with 9,154 jobs, while Accommodations and Food Services followed with 6,506. Only 5,208 people actually work and live in the Southwest County, or 19 percent of the 33,261 jobs in the sector.

Table 8. Southwest County Sector Employment, 2013					
Northern American Industry Classification System (NAICS)	Live in Sector	% Share	Work in Sector	% Share	
Agriculture/Forestry/Fishing	54	0.2	56	0.2	
Mining/Quarrying/Oil/Gas	36	0.1	12	0.0	
Utilities	105	0.3	86	0.3	
Construction	940	2.9	679	2.0	
Manufacturing	2,464	7.6	249	0.7	
Wholesale Trade	1,701	5.2	1,021	3.1	
Retail Trade	4,057	12.4	9,154	27.5	
Transportation/Warehousing	854	2.6	642	1.9	
Information	851	2.6	651	2.0	
Finance/Insurance	1,512	4.6	2,087	6.3	
Real Estate/Rental/Leasing	401	1.2	445	1.3	
Professional/Scientific/Technical Services	3,388	10.4	1,892	5.7	
Management of Companies/Enterprises	488	1.5	146	0.4	
Administrative/Support/Waste	2,246	6.9	3,277	9.9	
Educational Services	3,605	11.1	308	0.9	
Health Care/Social Assistance	4,590	14.1	3,632	10.9	
Arts/Entertainment/Recreation	393	1.2	606	1.8	
Accommodation/Food Services	3,088	9.5	6,506	19.6	
Other Services (excludes Public Administration)	958	2.9	1,583	4.8	
Public Administration	891	2.7	229	0.7	
TOTAL		100.0		100.0	
II & Concus Pureau On The Man Application & LEUD Origin Destination Employment Statistics 201					

U.S. Census Bureau, On The Map Application & LEHD Origin-Destination Employment Statistics, 2013



Figure 3. Southwest County Sector Employment Inflow/Outflow



#### **PUBLIC FACILITIES AND INFRASTRUCTURE**

#### Libraries

Residents of this sector are served by the Farragut Branch Library, located at 417 N. Campbell Station Road and Cedar Bluff Branch Library, located just outside the sector at 9045 Cross Park Drive.

#### Schools

The Southwest County Sector is served by fourteen public schools, including five elementary schools, one intermediate school, four middle schools, and four high schools. Eight schools are physically located in the sector, marked with an asterisk (\*) in Table 9. Total enrollment numbers for the Southwest Sector show an increase over the past ten years. The changes in enrollment are due to natural increase in young families and redistricting caused by new school facilities in the school system, such as Northshore Elementary (2013) and Hardin Valley Academy (2008)

Table 9. Enrollment of Schools Servicing the Southwest County Sector Population				
School Name	2005	2015		
A.L. Lotts Elementary *	1,075	858		
Blue Grass Elementary *	770	611		
Farragut Elementary *	892	972		
Northshore Elementary *	0	942		
Rocky Hill Elementary	700	736		
Sequoyah Elementary	394	487		
Farragut Intermediate *	944	1,069		
Bearden Middle	1,121	1,192		
Farragut Middle *	1,255	1,389		
Karns Middle	1,135	1,472		
West Valley Middle *	1,115	1,225		
Bearden High	1,991	2,046		
Farragut High *	2,332	1,741		
Hardin Valley Academy	0	1,952		
West High	1,488	1,345		
TOTAL	13,643	17,550		

\* Indicates schools located inside the sector plan boundary



The Knox County Board of Education makes decisions regarding school construction and maintenance. Currently, the capital improvement program for almost all Knox County's schools revolves around maintenance and upgrading of existing facilities, such as a school's electrical, heating, and cooling systems.

#### **Parks and Greenways**

There are 1,010.85 acres of parks within the Southwest County Sector boundaries (See the Parks, Recreation and Greenway Plan map). The largest of these are Concord Park (549.5 acres), which is considered a District/ Regional Park. The Town of Farragut plans its own parks and greenways, these resources include Anchor Park, Campbell Station Park, Parkside Greenway, Grigsby Chapel Greenway, McFee Greenway, and Campbell Station Greenway. A brief description of the park and greenway assets within the sector are listed below. Admiral Farragut Park features a 9-hole disc golf course, nature trails, and shoreline for fishing. The park has water access for both paddling and fishing. A halfmile nature trail winds through the woods to connect with Carl Cowan Park. The trail provides hikers with scenic views of the river from multiple rocky ledges.

Anchor Park is located in the Town of Farragut and features a fishing pond with two fishing piers, softball field, multi-use athletic fields, pavilion, walking trail, playground, horseshoe pit, and volleyball court. The park parallels the Turkey Creek Greenway which winds alongside several subdivisions offering several miles for walking and running.

**Campbell Station Park** is located in the Town of Farragut, beside the Farragut branch library. The park contains mulched and asphalt trails, public art, two picnic pavillions, restrooms, an outdoor classroom, and open space.



**Carl Cowan Park** is surrounded by the Tennessee River on three sides. As a result, the park provides opportunities for paddling and fishing. On the land side, there are sport fields, basketball and tennis courts, playgrounds, a splash pad and both paved and natural surface trails. From the north side of the park, the nature trail winds through the wood, connecting to Admiral Farragut Park.

**Concord Park** is a regional park that has many facilities – both on land and water. Concord Park covers both sides of Northshore Drive and has separate entrances

for various activities. The park features paved greenway trails for walkers and runners, and miles of single track for hikers, cross-country runners and mountain bikers. The park contains a popular dog park. There are two parcels (112.5 acres) to the northeast that are part of the park, but they have no facilities and are inaccessible by land.



The east side of Concord Park contains an in-line hockey, the skate park, soccer fields and a walking trail. The paved Parkey Strader Loop circles the soccer field and offers a lakeside bench at its midway. Directly across the street hosts the junior golf course, tennis courts, mountain bike/hiking trails, dog park, and the marina. The next entrance on the left, provides a boat ramp and a shoreline spur trail that wanders over to a prime spot for fishing and enjoying a picnic.



On the west side of the park, further down Northshore Drive, park facilities include sporting fields for soccer and softball plus the entry for the boat launch.

The Cove at Concord has facilities for paddling, fishing, and swimming along a beach. On land there is a playground, volleyball and shoreline walks. During the warm months, the River Sports Cove store is open for canoe and kayak rentals.

In 2016, Knox County Parks hired a contractor to install improvements to the Cove and they started work. The work entails removing the old dilapidated sidewalk and installing a new sidewalk that is handicap accessible. Last year a jetty was installed to help control waves that were eroding the beach.

**Mayor Bob Leonard Park** is a located in the Town of Farragut. This mega sports complex supports both athletic and recreational activities. The park hosts ten playing fields, all but one having lights, along with concessions and restrooms. The park also includes a sand volleyball court with three nets and a playground, all surrounding a wetland with a trail, boardwalk and observation deck. There are 4 paved greenway trails that loop sections of the park, depending on where and how far you'd like to walk or run. Both the greenway and the playground are ADA accessible.

**McFee Park** is a located in the Town of Farragut. The park features many sustainable features, such as solar panels, permeable pavers, LED lighting, bioswales, and rain gardens. The park also features many recreational amenities, such as walking trails, two lighted fields, a splash pad and playground area that is ADA accessible. There are picnic facilities and restrooms. The McFee Greenway parallels McFee Road offering a connection to the park.

There are many other parks that are mainly natural areas with little to no facilities and they include Keller Bend, Lakefront Road, Badgett Road, Wrights Ferry Road, Lyons Bend Road, Houser Road, Turkey Creek, and Dunn Park.

Table 10. Southwest County Sector Park Acreage			
Park Classification	Acreage		
Neighborhood	29.08		
Community	111.07		
District/Regional	606.06		
Private/Quasi Public (Total)	.98		
Open Space/Natural Area	263.66		
TOTAL ACREAGE	1,010.85		
Acres Close-to-home Parks/1,000 population	2.29		

**Campbell Station Greenway** is located in the Town of Farragut. It is comprised of a series of scenic loops through the Campbell Station Park, winding alongside North Turkey Creek and through the woodsy park. Most of the trails are lighted. The greenway connects to sidewalks that wind over to the Farragut Primary School where you can also connect with the Grigsby Chapel Greenway.

**Carl Cowan Greenway** is comprised of a series of paved loops that wind through Carl Cowan Park, circumventing the playground and soccer fields.

**Grigsby Chapel Greenway** is located on Grigsby Chapel Road in the Town of Farragut. Running east to west, it serves as a neighborhood connector for the many subdivisions, condos and apartments north of this road. It makes a southbound connection to Campbell Station Greenway with an additional quarter of a mile segment located behind the Farragut Primary School.

**McFee Greenway** is located in the Town of Farragut. This 1.5 mile stretch of paved greenway parallels McFee Road. The greenway provides a safe route for residents of Bridgemore, McFee Manor and the Cottages at Pryse Farm subdivisions to walk, bike or run over to McFee Park.

**Parkside Greenway** runs parallel to I-40 from Lovell Road to the sidewalk on the northwest portion of Parkside Drive. This is a shared cooperative with the Town of Farragut and Knox County Parks and Recreation.



**Ten Mile Creek Greenway** begins outside the sector at Walker Springs Road (just west of Walmart)and runs parallel to Ten Mile Creek, hence the name. The greenway passes by Walker Springs Park which offers a 0.3 mile connector trail to the greenway in addition to a great start location. From the Park's greenway connection, heading east winds over to Gallaher View Road to connect with the Cavet Station Greenway that runs north to Middlebrook Pike and its sidewalk system. Westbound, the greenway winds through the woods, crossing Bridgewater Road under I-40, before terminating with the Southwest County Sector at the Carmike Wynnsong Theater.

**Turkey Creek Greenway** parallels the southern edge of I-40, skirting the scenic Turkey Creek Wetland, the largest wetland area in Knox County. Beginning at Lovell Road, the greenway runs behind the Turkey Creek Shopping Center, connecting to the road's sidewalk system and offers several connections to access the stores and restaurants along the way. Greenway connects with the Parkside Greenway in the Town of Farragut.

#### **Public Safety**

Law enforcement is provided by the Knox County Sheriff's Department and the City of Knoxville Police Department. Rural Metro Fire Department (RMFD) and the City of Knoxville Fire Department provide fire protection within this sector. RMFD stations service the majority of the area.

#### **Public Utilities**

Water and sewer services are provided primarily by First Utility District (See the Existing Wastewater Service and Existing Water Service maps). The Knoxville Utility Board (KUB) also serves some of the eastern portions of the sector. Generally, sewer services can be extended if contractors and builders will incur the costs. Electricity is purchased from the Tennessee Valley Authority and is available throughout the sector, primarily by Lenoir City Utilities Board. KUB provides electricity in some portions of the sector east of Ebenezer Road. Natural gas is available in most of the sector, and is provided by KUB.

### Southwest County Sector: Existing Water Service



### Southwest County Sector: Existing Wastewater Service



### Southwest County Sector: Roadway Classification and Traffic Congestion



#### TRANSPORTATION

The *Major Road Plan for the City of Knoxville and Knox County* was adopted by MPC, City Council, and County Commission in 2004 and updated in 2011. It views each road as part of the overall transportation system and identifies its functional classification (such as freeways and arterial roads). It assigns right-of-way requirements based on the purpose and function of the road, future road improvements, future pedestrian improvements, traffic counts, and anticipated development. The recommendations contained in the Major Road Plan are brought forward into the sector plan.

#### Sidewalks

Sidewalks are one of the most highly requested items when residents discuss their neighborhoods, but are extremely expensive to retrofit. It is strongly encouraged to install them with new development. When roads are widened or new roads are constructed by the County or the Town of Farragut, sidewalks must be added if state or federal transportation dollars are to be used. The presence of sidewalks can be seen on the Sidewalk, Greenway, and Transit Route map.

Most of the roadways in this sector do not have sidewalks. A few main streets with sidewalks include Concord Road, Kingston Pike, Parkside Drive, S. Peters Road, Ebenezer Road, and Westland Drive.

The Town of Farragut requires pedestrian facilities as part of their subdivision regulations, but Knox County currently has no such requirements. MPC may choose to require sidewalks and this is more likely to occur within the Parental Responsibility Zones (PRZ) adjacent to public schools, where parents are responsible for getting their children to school if they live within 1 mile of the elementary school or 1.5 miles if the child attends a middle school or high school.

In 2014, Knox County commissioned the development of a *Walk-to School Prioritization Analysis and Improvement Concept Plans* for areas around Knox County Schools. The plan outlines pedestrian improvements around Blue Grass Elementary School and West Valley Middle School.



Improvements for Blue Grass Elementary School included crossing islands on Ebenezer Road at the intersections of Nubbin Ridge Road, Highbridge Road, Gatwick Road, and Grenada Boulevard. Additional recommendations included a "walking school bus", improved pedestrian signalization at Ebenezer and Bluegrass Road, and a new pedestrian connection between Vale View Road and Bluegrass Road as part of future redevelopment in the area.

Improvements for West Valley Middle School included rapid flashing beacons with buttons and warning signs at the intersection of Shady Bend Lane and George Williams Road and at the intersection of Engert Road and George Williams. Also, the plan recommended upgrading existing pedestrian facilities at the intersection of George Williams Road and Millstone Lane including ADA-compliant pedestrian signal heads, pushbuttons, and curb ramps.

Other recommendations included constructing a crossing island in the two-way left lane of George Williams Road at Bramblewood Lane, a possible trail between the South Cedar Bluff neighborhood (Elkmont Road) and Bramble Lane, and development of a neighborhood route and encouragement plan for the South Cedar Bluff neighborhood.

#### **Bicycle Lanes and Greenways**

Bicycle lanes currently exist on Campbell Station Road between the school access to Farragut High School and Parkside Drive. Most roads in the sector do not support riding bicycles due to a lack of shoulders, high speeds, and/or medium to high traffic volumes. New roads and road widening projects must include bike lanes. Concord Road, which is expected to be widened in the near future, will include bike lanes and a greenway between Turkey Creek Road and Northshore Drive.

In the Town of Farragut, Grigsby Chapel Greenway provides more than 2 miles of asphalt trails connecting subdivisions, condos, and apartments, and a ¼ mile segment connects to Farragut Primary School. Turkey Creek Greenway is nearly 2 miles connecting subdivisions and Anchor Park. Parkside Greenway is 2 miles of trail connecting Campbell Station Road to the Turkey Creek shopping areas and Lovell Rd. Many other shorter greenways exist in the Town of Farragut within and between subdivisions. The presence of greenways can be seen on the Sidewalk, Greenway, and Transit Route map.

#### Transit

The Knoxville Area Transit (KAT) is the largest provider of public transit in the Knoxville region. KAT focuses its service within the City of Knoxville. Since the majority of this sector lies within unincorporated Knox County, the vast majority of the sector is not served by traditional bus service. Residents' ability to use transit is limited to the Cedar Bluff area within this sector which is serviced Knoxville Area Transit's (KAT) Route 11 - Kingston Pike and Route 16 - Cedar Bluff Connector. The location of these two routes can be seen on the Sidewalks, Greenways, and Transit Routes map.

In addition, Knoxville-Knox County Community Action Committee (CAC) and the East Tennessee Human Resource Agency (ETHRA) serve Knox County providing demand response transit services. While most of their service is geared towards people needing medical services and helping those persons with disabilities, they do provide general public transit service trips for any purpose. Demand response service is typically defined as using accessible mini-buses or wheel chair lift equipped vans. The passenger makes an advanced appointment to be picked up.

### Southwest County Sector: Sidewalks, Greenways, Transit Routes, and PRZs



#### **ENVIRONMENTAL CONSTRAINTS**

#### Topography

The Knoxville Knox County Hillside and Ridgetop Protection Plan is the result of the Joint City/County Task Force on Ridge, Slope and Hillside Development and Protection. The plan was adopted in 2011 and 2012 by the Knoxville City Council and Knox County Commission, respectively. It defines a Hillside and Ridgetop Protection Area (HRPA) as having slopes of 15 percent or greater, restricting the density of development to preserve and protect ridges and hillsides within Knox County. By protecting these areas, stormwater runoff is reduced and riparian areas are maintained. Sloped areas have greater susceptibility for soil slippage and failure. Many of the soils along slopes are considered unstable, and removal of vegetation that secures soil promotes further slope failure. Public safety is also a concern in relocating the intensity of development.

The *Knoxville Knox County Hillside and Ridgetop Protection Plan* recommendations (as of 2012) regarding steep slopes and hillsides is to restrict development on slopes greater than 15 percent and along streams and rivers.

The Southwest County Sector has ridgelines running southwest to northeast across potions of the sector and shaping how development takes place over time. The highest elevations within the sector are found at Cedar Bluff and the west end of Black Oak Ridge, near Watt Road and Interstate 40. Other topographic constraints can be seen along the Tennessee River (See the Environmental Constraints map).

#### **Flood Prone Areas**

Most of the runoff from this sector flows south to the Tennessee River, carried primarily by Fourth Creek, Ten Mile Creek, Sinking Creek, Turkey Creek, and Little Turkey Creek. According to FEMA the principal flooding sources in the Southwest County Sector are Ten Mile Creek and Sinking Creek, Turkey Creek and North Fork Turkey Creek, Little and Turkey Creek.

#### Table 11. Hillside and Ridgetop Protection Plan Policies\*

#### LOW DENSITY RESIDENTIAL

Density limits within the Hillside and Ridgetop Protection Area (HRPA):

- 15 25 percent slope = two houses per acre in the low density residential areas; one house per acre in agricultural and rural residential areas
- 25 40 percent slope = one house per two acres
- 40+ percent slope = one house per four acres
- Ridgetops are generally the more level areas on the highest elevations of a ridge. Because the shapes of Knox County ridges are so varied, the ridgetop area should be determined on a case-by-case basis with each rezoning and related development proposal.

#### MEDIUM DENSITY RESIDENTIAL AND OFFICE DEVELOPMENT within the HRPA that extends into the 15 to 25 percent slope should only be considered:

- If the slope is closer to 15 percent and the building footprint does not exceed 5,000 square feet per one acre
- If the slope is closer to 25 percent and the building footprint does not exceed 5,000 square feet per two acres
- All proposals should be subject to the approval of a use on review and site plan by the Knoxville Knox County Metropolitan Planning Commission

#### **COMMERCIAL DEVELOPMENT**

within the HRPA that extends into the 15 to 25 percent slope:

• Slope restoration and reforestation of cut-and-fill areas should be accomplished to minimize the long term impact to water quality and lessen forest canopy loss

#### **HEIGHT OF NEW BUILDINGS** within the HRPA:

• Limit to 35 feet

\* Please note that this is not a complete list of the policies from the Knoxville-Knox County Hillside and Ridgetop Protection Plan, as adopted by Knox County Commission, Resolution RZ-12-1-101 on January 23, 2012 Ten Mile Creek flows from north to south near the western edge of Knoxville, draining an area of about 16 square miles. The drainage from the entire basin flows into an active sinkhole system located about 3,000 feet west of the intersection of Ebenezer Road and the Southern Railway tracks. From there, the water flows underground through an interconnected cave system and finally discharges as a spring at the head of Sinking Creek embankment of Fort Loudoun Lake. Its average slope is 20 feet per mile. Ten Mile Creek is joined at mile 2.84 by Sinking Creek, its main tributary. *(Ogden Environmental and Energy Services, 2000)* 

Turkey Creek drains an area of 24.8 square miles and flows into Fort Loudoun Reservoir. Turkey Creek has an average fall of about 25 feet per mile. From Interstates 40-75 to its mouth, the slope averages 47 feet per mile.

Little Turkey Creek is the western most major creek where the headwaters start at Everett Road and flow south to the Tennessee River.

Continuing urban development has increased the flood potential and floods which occurred many years ago could differ in magnitude, should they occur today. Little Turkey Creek and Ten Mile Creek are impaired streams. Little Turkey Creek impairments include the loss of biological integrity due to siltation. Ten Mile Creek impairments include habitat loss due to alteration in streamside or littoral vegetative cover, loss of biological integrity due to siltation, and Escherichia coli. See the Watersheds and Impaired Steams map for their locations.

#### **Water Quality**

As more people have moved into the County, the corresponding development of buildings, roads and other areas has changed the natural hydrologic characteristics of County watersheds and streams. Figure 5 illustrates how impervious cover and urbanizing drainage systems results in increased runoff to creeks and rivers. As areas urbanize, roof and pavement now covers areas that once allowed rain water to infiltrate into the ground, thus increasing the volume of stormwater runoff that is delivered to local streams. The result is that local streams must carry more water, at a faster rate and for a longer amount of

### **Southwest County Sector: Environmental Constraints**



time. Consequently, stream beds and banks that cannot tolerate these changes begin to erode, often significantly widening the stream and sometimes moving its location altogether. Stream bank erosion is also a contributor of sediment to local streams and lakes, resulting in a decrease in water quality and aquatic habitat.

Stormwater runoff from development can impact Knox County streams in other ways. Rain water falling on buildings, roadways and construction activities can become contaminated with sediments, suspended solids, nutrients phosphorous and nitrogen, metals, pesticides, organic material and floating trash. These pollutants are then carried into local streams. Unlike sanitary wastewater and industrial wastewater, most stormwater is not treated prior to entering streams. Pollution of stormwater runoff must be prevented at the source.

Prior to the late 1990s, the Knox County stormwater management program focused almost exclusively on street and lot drainage control (e.g., ditches, culverts and detention ponds). This was the case in most small and medium-sized communities in the United States, where the conveyance of stormwater runoff quickly and safely away from developed



Areas where land use and activities generate stormwater runoff with higher contaminant concentrations than are typical in stormwater are referred to as hot spots. (Illustration from the publication, Low Impact Development by the University of Tennessee, Knoxville, Landscape Architecture Program)

areas and roadways was the only stormwater-related priority. Across the nation, Federal, state and local government priorities have expanded over time with the recognition that this narrow focus contributes to the deterioration and loss of natural drainage ways, floodplains, riparian areas and other water resources, all of which are valuable for drainage control and water quality management. Knox County's program now has a more comprehensive charge, which is the management of stormwater quantity and quality. For more information you can see Knox County's Stormwater Management Plan (http://www.knoxcounty.org/stormwater).

### Southwest County Sector: Watersheds and Impaired Streams



#### **Agricultural Soils and Greenbelt Program Parcels**

Knox County is home to the Food Policy Council which was created in 1982. This group works to address issues regarding food systems planning such as cost, availability, distribution, access and health of the local food supply in Knoxville and Knox County.

Public health impacts, such as rates of obesity, diabetes and heart disease have demonstrated strong correlations with lack of access to healthy affordable food. The Knox County Health Department, the City of Knoxville and other organizations have been working to address the problem of "food deserts," which are areas where populations are challenged by low income and poor access to a supermarket or large grocery store. While the majority of US Department of Agriculture (USDA) designated "food deserts" are within city sectors, the more rural and suburban areas of Knox County offer opportunities to retain and develop the local agricultural economy by preserving prime soils for farms and farming.

The Southwest County Sector is suburban in nature with only 26 percent of the existing land use designated as Agriculture/Forestry/Vacant Land. Currently, 31 percent of land (13,167 acres) in the Southwest County is considered prime farmland or locally important soils. The State of Tennessee's Greenbelt Program applies to parcels where the property owner has elected to limit the use of land to agriculture or forest production practices. By doing so, a landowner's property tax is based on the value as farm or forest land and not on market value for residential or commercial purposes. The Greenbelt program does not guarantee permanent farmland protection; owners can opt out and redevelop after paying rollback taxes. In the Southwest County sector, 13 percent of land is protected under the Greenbelt program.

Another option for landowners is to use agricultural conservation easements and/or conservation subdivision development to preserve local farmland.



### Southwest County Sector: Agriculture Soils and Greenbelt Program Parcels



#### LAND USE AND DEVELOPMENT TRENDS

#### **Existing Land Use**

Existing land use refers to the actual use of land based on its observable characteristics. It describes the predominant use that takes place in physical or observable terms (e.g., farming, shopping, manufacturing, vehicular movement, etc.). The existing land use classification definitions ONLY apply to this existing land use section.

As of 2015, Southwest County Sector land use is mainly comprised of single family residential at 28 percent of the total acreage. The second largest acreage is agriculture/forestry/vacant at 26 percent (See the Existing Land Use map).

#### Agriculture/Forestry/Vacant:

Includes land that is used for agricultural or forestry purposes. This classification also incorporates vacant land that is not used in conjunction with adjacent parcels, and includes single family residential on ten or more acre lots.

#### **Commercial:**

Includes land uses that have sales and services, not including personal services such as real estate and banking services, which are classified under office.

#### Industrial/Manufacturing:

Includes all manufacturing and assembly uses. This category is used as a catch-all for uses commonly found in industrial areas, excluding wholesale/warehousing.

#### **Multifamily Residential:**

Includes residential developments commonly associated with development that is denser than single family development, including condominiums, planned unit development, mobile home parks, group quarters, and multifamily housing.

#### Office:

Typical office uses should be categorized here including those that are primarily office-use in character. The use includes some uses that may sometimes be considered commercial uses, such as banks and real estate offices. Use this category as a catch-all designation for all office-type uses.

#### **Private Recreation:**

Includes cultural or natural exhibition, amusement, recreation activities (ex. private golf courses), resorts, and camps.

#### **Public Parks:**

Includes public parks, public golf courses, and public nature preserves (ex. Forks of the River Wildlife Management Area, House Mountain State Natural Area and Seven Islands State Birding Park).

#### Public/Quasi Public Land:

Includes government owned land, religious institutions, public gathering places, educational services, cemeteries, and museums.

#### Right of Way/Open Space:

Includes public rights of way that have no major structures.

#### **Rural Residential:**

Includes residential uses that are located on two (2) to ten (10) acre parcels.

#### Single Family Residential:

Includes residential uses that are located on two (2) or less acre parcels.

#### Transportation/Communication/Utilities:

This is a catch-all category comprising transportation, communication, and utilities for essential facilities.

#### Under Construction/Other Uses:

Includes uses under construction, contract construction, and other uses that cannot be categorized.

#### Water:

Includes permanently watered areas such as lakes, rivers, large sink holes, and creeks.

#### Wholesale and Warehousing:

Wholesaling is an intermediate step in the distribution of merchandise. Wholesalers either sell or arrange the purchase of goods to other businesses and normally operate from a warehouse or office. They may be located in an office building or a warehouse. Unlike retailers, their warehouses and offices have little or no display of merchandise.

Warehousing includes storage facilities for general merchandise, refrigerated goods, and other warehouse products. They provide the facilities to store goods but do not sell the goods they handle. They may also provide a range of services related to the distribution of goods, such as labeling, breaking bulk, inventory control and management, light assembly, order entry and fulfillment, packaging, pick and pack, price marking and ticketing, and transportation arrangement.

Table 12. Southwest County Sector Ex	cisting Land Us	se, 2015
Land Use Categories	Acres	% Share
Agriculture/Forestry/Vacant Land	10,730.24	26%
Commercial	1,270.34	3%
Industrial (Manufacturing)	66.37	<1%
Multifamily Residential	936.31	2%
Office	564.50	1%
Private Recreation	717.42	2%
Public Parks	1,022.16	2%
Public/Quasi Public Land	907.04	2%
Right of Way/Open Space	4,081.20	10%
Rural Residential	3,615.85	9%
Single Family Residential	11,652.11	28%
Transportation/Communications/Utilities	133.39	<1%
Under Construction/Other Uses	8.32	<1%
Water	5,686.93	14%
Wholesale and Warehousing	45.63	<1%
TOTAL		100.0



### Southwest County Sector: Existing Land Use





#### **Residential Building Permits**

The Southwest County added 3,097 residential units between 2005 and 2015 (Residential Buildings Permits New Construction map). Single dwelling units accounted for 87 percent, or the vast majority of all new construction with 2,711 units. Attached housing was second with 269 units. Compared to all new residential building activity across Knox County by sector, the number of residential units in the Southwest County accounted for 17 percent of all sectors combined.

#### Table 13. Southwest County Sector **Residential Building Permits - New Construction, 2005 - 2015** % Share of All % Share Residential Type Number Sectors 2,711 87 **Detached Dwelling** 22.6% Multi-Dwelling 104 3 5.7% Mobile Home 13 1 1.2% Attached Dwelling 269 9 10.1% 100 TOTAL 3,097 17.6%



#### **Non-Residential Building Permits**

Southwest County registered 422 non-residential building permits issued for new construction, or 29 percent of all sectors combined.

Table 14. Southwest County Sector Non-Residential Building Permits - New Construction, 2005 - 2015				
Non-Residential	Number	% share of All Sectors		
Commercial	422	29%		
Industrial	0			
TOTAL	422			





#### **Residential Subdivisions**

From 2005 to 2015, Southwest County converted 1,966 acres into 161 new residential subdivisions and 2,412 lots. The sector also accounted for 17.8 percent of all residential subdivision lots compared to all county sectors.

Table 15. Southwest County Sector Residential Subdivision Permits, 2005 - 2015						
Area	Southwest County All County Sectors Share (%)					
Subdivision acreage	1,966.8	9,479.1	20.7%			
Subdivisions	161.0	903.0	17.8%			
Number of Lots	2,412.0	12,838.0	18.8%			

#### Housing

Since 1990, the total number of residential dwellings in the Southwest County grew 53 percent by adding 12,956 units. Single dwellings comprise the largest share of all housing unit types with 80 percent or 22,451 units. From 1990 to 2000, the Southwest County averaged approximately 62 new units a month. In the subsequent decade (2000 to 2010), numbers dropped for an average of 45 units a month.



Table 16. Southwest County Sector Housing Unit Types						
Unit Type	1990	2000	Net Change 1990 -2000	2010*	Net Change 2000-2010	
Detached Dwelling	12,051		5,626	22,451	4,744	
Multi-Dwelling	1,521	2,592	1,071	2,919	327	
Mobile Home	390	337	-53	318	-19	
Attached Dwelling	942	1817	875	2,172	355	
TOTAL	14,904		7,519	27,860	5,437	

\*Based on U.S. Census Bureau 2008 - 2012 American Community Survey, 5-Year Estimate
## **Southwest County Sector: Building Permits for New Construction**



Southwest County Sector Plan 31

## **Building Conditions**

The source of the following information is compiled from the 2013 Knox County Property Assessor's data. MPC tabulated the total number of buildings by building conditions in the sector to show general patterns and percentages regarding existing stock.

## Commercial – Industrial Buildings:

The majority of commercial and industrial buildings are rated as "fair/average" or "good/very good/excellent." There are 5 parcels that contain buildings rated as "poor," they are located along Kingston Pike and the boat docks on Duncan Road. These patterns of conditions are depicted on the "Commercial and Industrial Building and Conditions" map.

Table 17. Southwest County Sector Commercial-Industrial Building Conditions (2013)		
Building Conditions	Number of Structures	Total Square Feet
Poor	5	12,431
Fair/Average	535	7,314,134
Good/Very Good/Excellent	492	6,653,874

Source: Knox County Property Assessor

## **Residential Buildings:**

The patterns of conditions are depicted on the Residential Building Conditions map. The majority of residential structures are rated as "good/very good/excellent" or "fair/ average." Less than one percent (134 units) are on parcels that are rated "unsound/very poor/poor."

# Table 18. Southwest County SectorResidential Building Conditions, 2013

Building Conditions	Dwelling Units	Apartment Building	Mobile Home
Unsound/Very Poor/Poor	110	0	24
Fair/Average	2,117	25	128
Good/Very Good/Excellent	20,518	115	10

Source: Knox County Property Assessor





## Southwest County Sector: Commercial and Industrial Building Conditions - 2013



## Southwest County Sector: Residential Building Conditions - 2013





## **Growth Policy Plan**

The unincorporated area of Knox County makes up the majority (63 percent) of the sector. Town of Farragut represents 26 percent, and the City of Knoxville represents 11 percent. The main areas that have been incorporated as part of the City of Knoxville include areas along Kingston Pike, Peters Road, Parkside Drive, Westland Drive, Northshore Drive, I-140 (Pellissippi Parkway) and small portions on Lyons Bend Road.

Table 19. Southwest County Sector, Growth Plan Areas and Municipalities				
Area	Acreage	% of Sector		
Knox County - unincorpora	ted area			
Urban Growth Boundary	1,816.9	5%		
Planned Growth Area	12,598.5	33%		
Rural Area	9,384.7	25%		
Town of Farragut	9,855.9	26%		
City of Knoxville	4,316.7	11%		
TOTALS	37,972.7	100%		



Within the Southwest County Sector's unincorporated area, the designated Planned Growth Area makes up 33 percent, the Rural Area comprises 25 percent, and the Urban Growth Boundary represents 5 percent. In the past ten years, 83.9 percent of residential building has occurred within the Planned Growth Area of this sector. The southwestern portion of the sector will likely handle more growth in the coming years, where there are still large tracts of land that are designated as Planned Growth Area.

Table 20. Southwest County Sector Residential Building Permits by Growth Area, 2005 -2015			
Permit Type	Urban Growth	Planned Growth	Rural Growth
Detached Dwelling	1.1%	84.8%	14.2%
Multi-Dwelling	0.0%	98.8%	1.2%
Mobile Home	0.0%	54.5%	45.5%
Attached Dwelling	10.4%	68.9%	20.7%
Growth Area % Share	1.8%	83.9%	14.4%



# Southwest County Sector: Growth Policy Plan



# Section 2: Land Use, Community Facilities, Green Infrastructure, Historic Resources, and Transportation Plans

## **LAND USE PLAN**

The 15-Year Land Use Plan is a basis for growth and conservation in the Southwest County Sector Plan. The land use recommendations and policies put forth in this plan are used by the Metropolitan Planning Commission, City Council and County Commission for decision making with regard to development and land use (including rezonings and plan amendments).

## LAND USE PLANNING METHODOLOGY

Five steps were used to develop the proposed land use:

#### 1. Standard Land Use Classifications Conversion:

In 2007, MPC developed a standard land use classification table to use in all 12 sectors. The table includes descriptions, location criteria, and recommended zoning for each proposed land use classification (See Appendix B). In developing the proposed land use map, the older land use classification used in 2005 was converted to the new standardized land use classification being used in all sector plans.

#### 2. Slope Protection and Stream Protection Areas:

In recent years, MPC started to identify Hillside and Ridgetop Protection Areas and Stream Protection Areas as environmental overlay areas in sector plans. Without an underlying sector plan land use designation, review of rezoning and other applications became difficult and confusing. As a result, Hillside and Ridgetop Protection and Stream Protection Areas have been converted to environmental overlay areas with underlying sector plan land use designations.

#### 3. Knoxville/Knox County 2033 General Plan:

Adopted in 2003, the plan serves as the official 30-year comprehensive plan for Knoxville and Knox County, providing a vision and framework for sector plan development. Several policies set forth in the General Plan are used to guide the Southwest County Sector Plan recommendations. An example is General Plan Development Policy #4: Understand the Building Blocks: Neighborhoods, Districts, Corridors and Communities in the Region. The sector plan recommendations emphasize the importance of accommodating future growth on commercial corridors through vertical mixed use development.

### 4. Citizen Input:

Through the community input process, citizens voiced concern about pedestrian safety throughout the sector, but particularly parks and greenways, encroaching commercial development, traffic congestion, and the need for better development standards.

## 5. Knoxville/Farragut/Knox County Growth Policy Plan:

Adopted in 2001, this plan required city and county governments in Knox County to prepare a 20-year Growth Plan in accordance with the Tennessee growth management law Public Chapter 1101. Growth is guided by three classifications of land designated in the plan which are Rural, Urban Growth, and Planned Growth areas. Each classification is defined by policies that determine the extent development may occur.

Citizens attended an open house meeting that was held on August 23 at the Northshore Elementary School.



## **Southwest County Sector: Land Use Plan**



## LAND USE CLASSIFICATIONS

Table 24 compares the standardized land use classifications by acreage from the existing sector plan and the proposed land use acreage in 2016. Some of the changes in acreage were a result of reassigning approximately 14,331 acres of Slope Protection Area and Stream Protection Area to another land use classification in 2016.

Table 21. Proposed Land Use Acreage Comparison			
Land Use Classification	Existing Sector Plan	2016 Sector Plan	
Slope Protection Area <sup>1</sup>	8,044.7	-	
Stream Protection Area <sup>1</sup>	6,286.9	-	
Agricultural Conservation <sup>2</sup>	-	137.3	
Agricultural <sup>2</sup>	-	521.8	
Rural Residential <sup>2</sup>	-	8,045.0	
Low Density Residential	10,114.2	12,580.9	
Medium Density Residential	440.9	359.8	
Medium Density Residential/Office	17.7	75.8	
Office	412.4	561.3	
General Commercial	1,589.6	763.9	
Neighborhood Commercial	32.3	47.1	
Community Commercial <sup>2</sup>	-	104.1	
Regional Commercial	-	196.3	
Civic/Institutional	155.3	312.1	
Public Parks and Refuges	808.9	958.1	
Other Open Space	62.0	161.8	
Mixed Use Neighborhood Center <sup>2</sup>	-	3.6	
Mixed Use Community Center <sup>2</sup>	-	141.4	
Mixed Use Special District	-	684.2	
L	1	1	

1. Slope Protection Areas and Stream Protection Areas are now environmental overlay areas with underlying land use designations.

2. This is a new land use designation that was not used in the 2005 sector plan land use designations.



Penrose Farm on Nubbin Ridge Road

## AGRICULTURAL AND RURAL RESIDENTIAL

## Agricultural (AG)

This land use classification includes farmland in the county's Rural Area as designated in the Growth Policy Plan. This classification was combined with Rural Residential (RR) in the 2005 sector plan.

## Agricultural Conservation (AGC)

This land use classification includes farmland that is



a includes farmland that is conserved through land trusts. The Penrose Farm located at 8444 Nubbin Ridge Road is the only area designated this land use because of the existing conservation easement placed on it which limits future development of the site. This classification was not available for use when the 2005 sector plan was produced.



Riverview Family Farm on Prater Lane

## • Rural Residential (RR)

This land use classification includes areas for very low density residential and conservation/cluster housing subdivisions in the county's Rural Area as designated in the Growth Policy Plan. This land use classification was combined with Agriculture (AG) in the 2005 sector plan.

## RESIDENTIAL

## Low Density Residential (LDR)

This classification includes primarily residential uses at densities of less than six dwelling units per acre (city) and less than five dwelling units per acre (county).

## • Medium Density Residential (MDR)

This classification includes primarily residential uses at densities from 6 to 24 dwelling units per acre (city) and 5-12 dwelling units (county).

## • High Density Residential (HDR)

This land use is primarily characterized by apartment development at densities greater than 24 dwelling units per acre.

## Medium Density Residential (MDR/Office)

Office and medium residential uses typically have similar development characteristics: scale of buildings, areas devoted to parking, yard spaces and location requirements (on thoroughfares). In areas designated MU-MDR/O, either use can be created. These uses provide a buffer to low density residential areas, particularly when located adjacent to a thoroughfare or as a transition between commercial uses and a neighborhood

## OFFICE AND BUSINESS/TECHNOLOGY

## Office (O)

This land use classifications includes business and professional offices and office parks

Right: West Emory Presbyterian Church is a Civic Institutional land use Below: Neighborhood Commercial on Northshore Drive

## **RETAIL AND RELATED SERVICES**

## Neighborhood Commercial (NC)

This classification includes retail and service-oriented commercial uses intended to provide goods and services that serve the day-to-day needs of households, within a walking or short driving distance. Neighborhood commercial uses may also be accommodated within neighborhood centers.

## Community Commercial (CC)

This land use classification allows retail and service oriented development, including shops, restaurants, and "big box" retail stores; typical service areas include 20,000 to 30,000 residents. This category was not available for use when the 2005 sector plan was produced.

## • Regional Commercial (RS)

This classification includes retail and service-oriented development that meets the needs of residents across Knox County and surrounding areas. Development typically exceeds 400,000 square feet. Regional commercial uses may also be considered in Regional Centers. The only area designated as RS is the Turkey Creek shopping center development. This land use classification was not available for use when the 2005 sector plan was produced.

## General Commercial (GC)

This category includes previously developed strip commercial corridors providing a wide range of retail and service-oriented uses. Such a land use classification and related zoning should not be extended because of adverse effects on traffic-carrying capacity, safety and environmental impacts. Redevelopment of commercial corridors, including mixed use development, should be accommodated under planned or design-oriented zones.

## PUBLIC, PARKS AND OPEN SPACE AND

## • Public Parks and Refuges (PP)

This classification contains existing parks, wildlife refuges or similar public or quasi-public parks, open spaces and greenways. It also contains quasi-public spaces, which are owned by civic or related organizations. Location criteria is not needed relative to large components of the park system, like community, district and regional parks and refuges; these areas are generally established through capital expenditures or land transfers from state or federal governments.

## Civic Institutional (CI)

Land used for major public and quasi-public institutions, including schools, colleges, the university, churches, correctional facilities, hospitals, utilities and similar uses.

## • Other Open Space (OS)

Uses include cemeteries, private golf courses, and similar uses.





## MIXED USE AND SPECIAL DISTRICTS

### Neighborhood Center Mixed Use (MU-NC)

These are the least intense of the proposed mixed use districts. Residential densities of 5 to 12 dwelling units/ acre are appropriate within the area. Locations at the intersection of a local street and thoroughfare are generally most appropriate. The surrounding land uses should primarily be planned for low or medium density residential. The buildings of these centers should be designed with a residential character and scale to serve as a complement to the surrounding neighborhoods. This category was not available for use when the 2005 sector plan was produced.



#### Community Center Mixed Use (MU-CC)

This center is envisioned to be developed at a moderate intensity with a variety of housing types (8 to 24 dwelling units per acre). The core of the district, with predominant commercial and office uses, should be ¼ mile of higher intensity residential uses (such as townhouses and apartments). The district should be located within a ¼ mile radius of an intersection of the thoroughfare system (collector/arterial or arterial/arterial intersection). In addition to sidewalks, the district should be served by transit. Redevelopment of vacant or largely vacant shopping centers are consideration for these centers.

## Mixed Use Special District (MU-SD)

These districts may be specifically designated to address issues such as urban design, pedestrian and transitoriented development and vertical mixed use. Such area may include older portions of the city and county where redevelopment and/or preservation programs are needed to revitalization purposes. The category was not available for use when the 2005 sector plan was produced.

## Mixed Use Special District SWCO-1

### **KINGSTON PIKE/PARKSIDE DRIVE/PETERS ROAD**

The Kingston Pike, Parkside Drive, and Peters Road district is characterized by a mixture of horizontal land uses including, commercial, office, and warehousing. The district is highly accessible by an interconnected road system and has direct access to Interstate 40/75 and 140. The district is also served by Knoxville Area Transit (KAT) bus service via Kingston Pike – Route 11 and Cedar Bluff Connector – Route 16. The district is mostly built out and consists of older retail big box development and old plazas that have an abundance of off-street parking spaces. The built environment in this area is largely consist of impervious surfaces, consisting mostly of rooftops and pavement.

In the future, this district could serve as an important area to accommodate population growth. The district has the potential to provide alternative urban housing choices. Today, mixed use housing is primarily found in downtown Knoxville. The separation from single-family housing makes this an ideal area to grow into an urban mixed-use area.

### Windsor Square to Sinking Creek

In the future, this area could accommodate more urban style multiple story mixed-use development (life-style center) with commercial development below and office and residential above. The buildings could orient towards the streets and the parking area would be to the side or behind the buildings. The streets should be designed as more urban complete street with on-street parking, street trees, sidewalks, designed for slow speed traffic circulation.

#### West of Windsor Square

The area is characterized by smaller lots and less retail establishments. The parcels would have to be consolidated in this area to provide a planned mixeduse development. The areas could serve as an adjacent employment for new nearby residents. The area is already home to Jewelry Television which expanded its headquarters recently, adding 70,000 square feet and investing approximately 40 million dollars to its Parkside Drive location.



Redevelopment opportunity area near the Ten Mile Creek Greenway

#### East of Sinking Creek

The district is also characterized by smaller lots. The end of Ten Mile Creek Greenway is adjacent to this area. Redevelopment should include the extension of the greenway to the south, and greenway connections incorporated into any future development. The old golf driving range located across Ten Mile Creek could make an ideal place for multi-family residential that could be connected to the existing greenway.

#### **Recommended Uses**

General Commercial (GC), Office (O), High Density Residential (HDR), and Community Mixed Use Centers

#### **Transportation Improvements**

- Expand KAT transit service, if higher intensity mixed use development occurs
- Ensure sidewalk system is incorporated into new development
- Establish on-street parking into any new mixed use development with new or improved streets

#### **Community Facilities**

- Extend Ten Mile Creek Greenway to the south along Sinking Creek and to the east and west through future redevelopment
- New parks should be developed, if housing is added to this area

### **OTHER LAND USE RECOMMENDATIONS**

## Landscaping and Lighting Ordinance

There is a need to develop landscape and better lighting standards for screening parking lots and buffering from higher intensity uses from adjacent residential uses. This ordinance should be developed to address environmental issues, such as stormwater runoff and diversity of landscape material.

## **Off-Street Parking Standards**

There is a need to revise the parking standards to reduce the amount of parking required, allow permeable surfaces, requiring landscaping, better manage stormwater, and incorporate pedestrian access through parking lots.

#### **Planned Office Zone**

Currently there is no planned office zone. This new zone could be used when abutting neighborhoods or when there are site development concerns. This new zoning district should not allow apartments.

#### **Small Lot & Cluster Rural Residential Zone**

A new zone should be created that encourages rural residential uses, while still conserving such assets as hillsides and farms. Housing in new subdivisions could be clustered to conserve land.

## **Conservation Subdivisions**

Conservation subdivisions are characterized by clustering residences on smaller lots that would not otherwise be allowed in order to protect open space, agriculture, or sensitive natural resources. Conservation subdivisions allow for the same number of residents under current zoning with the potential offer of a greater density (density bonus) to encourage this type residential development.

Savings typically are seen in development costs due to less road surface, shorter utility runs, less grading and other site preparation costs. Municipalities also experience lower long-term maintenance costs for some of the same reasons. The preserved land may be owned and managed by a homeowners association, a land trust or the municipality.



## **Rural Retreat Zone**

MPC Staff gets frequent calls from citizens inquiring about legally establishing rural retreats/event facilities in rural settings, primarily in the Agricultural zoning district. MPC staff is proposing amendments to the Knox County Zoning Ordinance to establish parameters and definitions for rural retreats, as well as establishing guidelines for regulation and approval of these uses in the Agricultural and possibly other zoning districts.

A possible definition of retreat is a facility owned and operated by a non-governmental entity for the purpose of providing a rural setting in which temporary lodging, camping and/or conferences, meeting and event facilities are provided with or without compensation.

## Large Lot Agricultural Zone

The County has one agricultural zoning classification that permits both residential and farm uses. Some community's separate these uses into two distinct zones to accommodate the unique differences between residential uses and farm uses. By increasing the minimum lot size for agricultural uses, farmland could be preserved.

## **Transfer of Development Rights Program (TDR)**

Allows a community to transfer the development potential in an area where growth is restricted to a separate receiving area where roads, utilities, and other infrastructure already exist, making it appropriate for



Event venue facilities at Riverview Family Farm on Prater Lane

growth. Farmland and open space is preserved and growth is targeted to areas where infrastructure such as higher capacity roads and sewers are in place. Through the program, developers purchase development rights to build in a "receiving area," which is an area(s) that is targeted for growth, and those funds are used to permanently preserve land in the "sending area" (for example farmland). This allows a community to accommodate growth, while preserving open space and farmland in a manner that is fair and equitable for all landowners.

## Private, Federal and State Agricultural and Conservation Programs

Work with land trusts and agricultural officials, to assist property owners with programs to conserve land within the Southwest County. Examples vary from programs such as Legacy Parks (local program), Foothills Land Conservancy (regional program), The Land Trust for Tennessee (state program), American Farmland Trust (national program), and U.S. Department of Agriculture's Farm and Ranchland Protection Program (national program).

#### **Growth Policy Plan Update**

One of the recommendations in the Growth Policy Plan is to review the plan every three years and amend as necessary. It has been 16 years since the plan was formally adopted with no review or changes to the boundaries. As a result, development continues to encroach into the Rural Area designation.

## **Southwest County Sector: Community Facilities Plan**



## **COMMUNITY FACILITIES PLAN**

This section is directed to public facilities that are needed for community growth and provided in a manner relative to the conservation of scenic, historical, and environmental assets.

The community facilities plan incorporates recommendations from the following sources:

- Community input
- Knox County Parks & Recreation Department staff interviews
- Southwest County Sector Plan (2005)
- Knoxville Knox County Park, Recreation, and Greenways Plan (2011)
- Knoxville Regional Transportation Planning Organization, Long Range Regional Mobility Plan 2040 (2013)
- Knox County Department of Engineering and Public Works, Walk-to-School Prioritization Analysis and Improvement Concept Plans - Phase 2 (2014)

## Parks, Greenways and Recreation Facilities

Some of the county's best park resources are in this rapidly growing area. These include Concord and Carl Cowan Park. The Town of Farragut also manages several attractive parks.

The greatest needs are connections in the greenway trail system and the creation of neighborhood parks. Parks and greenways have not kept pace with subdivision development in the Southwest County. The population of this sector is growing faster than other sectors in Knox County.

Below and above left: Dunn Park at S. Peters Road and Cedarbrook Lane should be developed to meet the needs of the surrounding community.



Above and below, right: Potential location for a pocket park on the vacant parcel at Ebenezer Road and Bexhill Drive







#### **Recommendations for Parks:**

#### Pocket Parks

In areas where acquisition of neighborhood parks are difficult because of development patterns, look to acquire land for smaller parks (less than 5 acres). Explore acquisition of the vacant parcel at Ebenezer Road and Bexhill Drive for a pocket park. Encourage development of pocket and neighborhood parks as part of planned residential developments.

#### Neighborhood Parks

Acquire space for new neighborhood parks (5 to 10 acres each) in the general vicinity indicated on the plan map: Fox Canton Park, George Williams Park and Nubbin Ridge Park. Develop a plan for Dunn Park with facilities that meet the needs of the surrounding community. Look to incorporate future neighborhood parks along the Kingston Pike/Parkside Drive/Peters Road Mixed Use District.

#### West Valley Middle School/Park Expansion

Acquire 10 to 20 acres to create a community park while protecting the floodplain, cave, and creek as environmental resources. Amenities could include playfields, courts and trails.

#### • Tennessee Valley Authority Lands

Develop a plan for Knox County to investigate the utilization of Tennessee Valley Authority lands along the river edge, including developing an interconnected trail.

#### Concord Park

Develop an access point for the currently non-accessible eastern portion of Concord Park, near Pellissippi Parkway.

### Recommendations for Greenways/Greenway Connectors:

#### • Knox County Greenway Routing Plan

Develop a Knox County greenway routing plan that would look into alignment of high priority greenways. There is a need to have a detailed plan, in order for Knox County Parks and Recreation staff to seek easements for future greenways.

• Concord Park/Northshore Greenway Connector Work with Loudon County and the Town of Farragut to provide a greenway system running from the west county line through Concord Park or along Northshore Drive to the proposed Pellissippi/I-140 Greenway.



#### • Northshore Greenway

Develop a contiguous greenway from Lakeshore Park to the Loudon County line, generally following Northshore Drive.

- Pellissippi/Interstate 140 Greenway Create a connection to the regional trail network, including those of Blount County.
- Ten Mile Creek Greenway Extension

Continue the existing greenway along Sinking Creek from I-40 south to West Valley Middle School and connecting through Dunn Park.

• Turkey Creek Greenway Extension Use the floodway to provide a trail from the existing Parkside Greenway to Concord Park protecting the natural environment. Also, connect the Turkey Creek to the north across I-40/75, connecting to the Oak Ridge Greenway (along Pellissippi Parkway).

#### • Greenway Connectors

Northshore Drive, Westland Drive, Bluegrass Road, Canton Hollow Road and Nubbin Ridge Road are the most significant roads that should be improved to safely accommodate both pedestrians and bicyclists.

#### West Valley Middle School

Construct an improved pedestrian trail to connect the south Cedar Bluff neighborhood to the school via Bear Creek Lane.

Town of Farragut

Additional greenways are being planned and developed by the Town of Farragut.

## **Schools and Libraries**

Schools and libraries are well distributed in the sector. Anticipated growth trends do not point to the need for additional schools or libraries. The Knox County School Board and Knox County Library Board will concentrate on facility maintenance programs for the foreseeable future and should consider the following recommendations voiced by the public:

- Investigate the need for a new branch library and senior center
- Look into expanding the Farragut library
- When locating schools, acquire enough acreage for future expansions

## **Southwest County Sector: Green Infrastructure**



## **GREEN INFRASTRUCTURE PLAN**

Green infrastructure represents the natural resources to promote environmental, social, and economic well-being. These elements include streams, wetlands, forests, parks, greenways, along with the recommended incorporation of low impact development techniques. Benefits include clean air and water, increased property values, and healthier citizens.

The goals set forth in this section are:

- To connect residential areas to natural areas and community facilities such as schools or parks
- Balance development and conservation
- Foster the use of development practices that reduce stormwater runoff and protect water quality
- Preserve open space and natural areas

# The Green Infrastructure Plan incorporates recommendations from the following:

- Community Input
- Knoxville Knox County Parks, Recreation and Greenways Plan (2010/2011)
- Southwest County Sector Plan (2005)
- Knoxville Knox County Hillside and Ridgetop Protection Plan (2011/2012)
- Knoxville Knox County Tree Conservation & Planting Plan (2007)

## Existing Policies Related to Green Infrastructure

## **Floodways and Floodplains**

The Federal Emergency Management Agency (FEMA) Flood Insurance Study maps that designate boundaries for floodways (100-year and 500-year floodplains), streams and rivers were adopted by the City and County as part of their flood prevention ordinances. "Open-type" uses (such as parks, parking lots, and golf driving ranges) are allowed within the floodway, however, the clearing of vegetation is limited within water quality (riparian) buffer zones around streams. Structures are only allowed in the floodway if extensive stormwater modeling proves that there is no effect to the 500-year floodplain. The "no-fill line", which established halfway between the FEMA floodway and 100-year floodplain, does not allow any type of fill or new construction that reduces flood storage capacity (for example, a parking lot can be constructed but the asphalt cannot be higher than the current ground elevation). New structures are allowed within the FEMA 100-year and 500-year floodplain but they must be approved by the City or County engineering department and certified that all habitable floors are one foot above the 500-year flood elevation and the foundation is designed to ensure the unimpeded movement of floodwaters.

#### **Stormwater Best Management Practices**

Stormwater Best Management Practices (BMP's) address the need to manage water quality sources that include bioretention areas, wetland enhancement and porous paving systems. BMP's help to control stormwater pollution and reduce soil erosion and sedimentation in streams and other waterways. These practices are found in Knox County's Stormwater Management Manual and the City of Knoxville Best Management Practices Manual. These manuals were included as part of the National Pollutant Discharge Elimination System (NPDES) which requires large and medium-sized cities/ counties to obtain a NPDES permit for municipal storm water systems. In order to be compliant with federal and state regulations, both the City and County need to incorporate best management practices to ensure that growth is accommodated in an environmentally responsible manner.

## **Hillsides and Ridgetops**

The *Knoxville/Knox County Hillside and Ridgetop Protection Plan* contains development policies to encourage low density residential development on steeper slopes and recommends minimizing clearing and grading.

## **Agricultural Areas**

The *Growth Policy Plan* has a rural designation to conserve agricultural resources. Additionally, under the Tennessee Greenbelt Law, famers may elect to request a property tax reduction. Finally, Tennessee has a right-to farm law, which allows farmers the opportunity to farm even though development may be encroaching nearby.

## Schools, Parks, and Greenways

The Knoxville/Knox County Park, Recreation and Greenways Plan identifies existing and proposed greenways and parks. Proposed parks are generally located in areas that are currently underserved. The proposed greenways make connections to parks, schools, libraries, and other points of interest. The Knoxville/Knox County Minimum Subdivision Regulations also allow MPC to consider dedication of up to ten percent of the subdivision's acreage to education or park land.

## **Streets and Highways**

*The Knoxville/Knox County Tree Conservation and Planting Plan* recommends various transportation corridor strategies to designate scenic routes in rural settings, along with changes to arterials by creating public and private planting programs for roadside trees and parking lot landscaping.

## Recommendations

- Promote the conservation of farmland and the continuation of farming by working with the U.S. Natural Resource Conversation Service's Farm and Ranchland Protection Program, allowing farmers to create a legacy of farming while being compensated for their development rights.
- Support initiatives to connect the green infrastructure assets along Sinking Creek, Ten Mile Creek, and Turkey Creek. This could include public matching funds for acquisition and fostering private sponsorship to acquire easements and trail development.
- Work with public land owners, county parks and recreation, and other non-profit organizations to help establish pedestrian and bicycle connections via greenway connectors (such as sidewalks, bike paths and trails) between neighborhoods, schools, parks and greenways in the Southwest County Sector.
- Identify the most productive soils for personal and community gardening by working with home owners and community groups. The Green Infrastructure map shows that there are many areas within the rural area that have good agricultural soils; additional information can be found through UT Extension Service and the U.S. Department of Agriculture (USDA).
- Work with the City and County Departments of Parks and Recreation and the State of Tennessee to pursue that portion of real estate transfer taxes dedicated to wetland and park purchases.

## **Southwest County Sector: Historic Resources**



## **HISTORIC RESOURCES PLAN**

The Knox County Historic Zoning Commission is responsible for reviewing applications to alter, demolish or relocate properties protected by historic overlay. The Commission also reviews proposed new construction in historic districts, recommends the designation of historic properties and reviews proposed National Register of Historic Places nominations.

The historic resource plan includes recommendations for properties identified from these sources:

- Historic Resources Inventory
- MPC Historic Preservation files
- Community input

The goals for historic preservation program are fourfold:

- Encourage preservation of all buildings that are on the National Register of Historic Places.
- Support additional National Register nominations for historically significant properties.
- Collaborate with non-profits and property owners to develop strategies to stabilize and restore historic resources.
- Update the historic resources inventory for the county.

The overall recommendation for preservation of historic resources is to support National Register nomination and/or HZ Zoning Overlay for those properties not already designated.

#### **Historic Overview**

Scattered among the hundreds of new homes are architectural vestiges of the area's agricultural and mining history. These include the large farmhouses located along early roads and in the Village of Concord which was once the center of the marble industry. Many of these resources, several of which are antebellum, have been protected with historic zoning overlays or have been recognized with nomination to the National Register of Historic Places. Shortly after Tennessee became a state in 1796, the first settlers began to move into the western reaches of the county. Tensions ran high between the Cherokees, who were already living in the area, and settlers as Native American hunting grounds were encroached upon. The settlers established small "stations" near forts where they could gather forces during times of conflict. Most of these stations developed along the Kingston Pike route since it was the major transportation link for east/west travel through Knox County. Several of the station settlements grew into communities including Campbell's Station, Ebenezer and Lovell (originally "Loveville").

Many large homes of prominent landowners were built in the communities established along Kingston Pike. A few of these antebellum Federal-style houses remain today and are listed in or eligible for the National Register of Historic Places. Within the Ebenezer community, the c. 1840 Kennedy-Baker-Walker-Sherrill House at 9320 Kingston Pike is situated on a parcel of land within a recent commercial development complex and was restored for re-use in 2016 for offices. Other historic properties that were associated with the early settlement of the Ebenezer area are the Glenmary estate, Statesview, and the Ebenezer Mill. The Glenmary estate, located at 8800 Westland Drive, also known as Maple Grove Inn, was constructed around 1825 and is eligible for the National Register. At the time of this plan update, this estate is in jeopardy due to development pressures in the area. The Statesview house, located at 600 South Peters Road, was built in the early 1800s and is listed on the National Register. It was the home of Charles McClung, an early Knoxville settler who surveyed the original town site. The nearby Ebenezer Mill, also National Registerlisted, was built c. 1870, replacing a much earlier mill associated with Statesview. The John Campbell-Matt Russell House located at 11235 West Point Drive and the Avery Russell House at 11409 Kingston Pike are associated with the founder of Campbell's Station.

The early development of the Lyons Bend area off Kingston Pike included many large lots with estate properties sloping down to the Tennessee River. Some of these large parcels remain under one ownership while others have been subdivided over the past two centuries. Several of these homes feature the Tudor Revival style. The Bean House, located on Lyons Bend Road, includes a barn and springhouse, and illustrates a typical river-settlement pattern. The early river development pattern of large rural lots is still present today in much of the southern portion of Southwest County, especially within the peninsulas accessed via Toole's Bend and Keller Bend roads. The former Eastern State Psychiatric Hospital complex at 2616 Toole's Bend Road includes structures built between 1880 and 1930.

Two additional antebellum National Register structures located within Southwest County include the Maxwell House and the Boyd-Harvey House. These houses are located near Northshore Drive. Robert Maxwell, a local farmer, completed the Maxwell House in 1886. The house was built around an earlier post and beam house likely dating back to the 1830s. Thomas Boyd, one of the creators of the East Tennessee Georgia railroad, constructed a home in c. 1837 at 1321 Harvey Road in the Federal style. The house was later sold to the Harvey family.

The historic Village of Concord was built between 1850 and 1940. The combination of river transportation with the railroad made Concord a regional transportation center. In the 1880s, Concord became the center of a large marble business. None of the buildings associated with the marble industry in Concord remain today because the valley within which they were located was flooded by TVA in the 1940s. Some of the commercial buildings and many of the original homes remain and retain their historical features. The village of Concord is listed in the National Register of Historic Places, and portions were designated as a local historic district with a zoning overlay in 2001.



Avery Russell House 11409 Kingston Pike, Farragut c. 1835

The Avery Russell House, also called the Martin-Russell House is a Federal-style two story brick structure which was built by Samuel Martin as an inn around 1835 on the site of David Campbell's 1787 blockhouse. Just before the Civil War, the inn was sold to Avery Russell, who then used it as a family residence. During the Battle of Campbell's Station in 1863, the house served as a temporary hospital. It remained in the Russell family for six generations. Although it has had several alterations, the house remains an example of rural East Tennessee architecture. It is listed on the National Register of Historic Places. More recently, the surrounding context of the house has been threatened by redevelopment pressures. Façade easements could assist in its preservation.



**Bean Homeplace** Lyons Bend Road c. 1830 Two story log significant as an example of river settlement patterns.



**Boyd-Harvey House** 1321 Harvey Road 1820s-1830s

The Boyd-Harvey House was designed in the Federal style and constructed by Thomas Boyd, Jr., and is listed on the National Register of Historic Places. Both the original house and the later rear wing are constructed of brick. The house has a hip roof, and the rear wing has a gable roof. In 1995, the home still had two separate staircases: one leading to the front of the house and one leading to the rear of the house.



Concord Road House c. 1910

This two-story frame house and outbuildings illustrate early settlement in the Concord area.









**Concord Road/Hackney Mill District** 1850-1925

This district includes mill and work of Winfrey Brothers who were stone masons, as well as an important area dairy farmhouse (from the Seven Oaks Dairy), significant also for its architecture.

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## **Concord Village Historic District**

NE corner of Concord Road and Lakeridge Drive c. 1850s-1940s

Founded and platted in 1854, it was the combination of the existing river transport with the railroad that made Concord a regional transportation center. In the 1880s it was home to a large marble business. None of the buildings associated with the marble industry remain today, since they were flooded by TVA in the 1940s. Some of the commercial buildings and many of the original homes remain and still retain their historical features.



**Ebenezer Mill** 411 Ebenezer Road

c. 1870

This mill has both industrial and architectural significance, and is one of the few remaining mills representative of a once strong milling industry in Knoxville during and after the Civil War. The mill was previously listed on the Knox County Historic Register and has been added to the National Register of Historic Places.



Glenmary (a.k.a. Maple Grove Inn) 8800 Westland Drive

## c. 1825

This two-story house with Federal with Georgian influences may have been the home of Reverend Samuel Graham Ramsey, Presbyterian minister and teacher. The property is currently threatened by private development pressures.



John Campbell-Matt Russell House 11235 West Point Drive c. 1820 Two-story brick Federal in design showing early settlement

along Kingston Pike. The two-story brick house of Federal design was built by John Campbell, son of David Campbell who was the founder of Campbell's Station.



Courtesy of Knox County Public Library, McClung Historical Collection



Kennedy-Baker-Walker-Sherrill House 9320 Kingston Pike 1849

This house is located at the western edge of a commercial tract of approximately 100 acres. It is within a designated historic overlay surrounded by urban development. The house is a two-story brick, three-bay Federal style residence built in a T-plan shape. A one-story brick wing with a gable roof and a corbelled brick cornice was added to the west elevation of the north façade c. 1859 by Dr. William J. Baker. The house has been restored and adaptively re-used as office space.

## **Lyon's Bend Historic District** Lyon's Bend Road

c. 1925

The Witchwood Mansion is included among the Tudor Revival houses of this National Register Historic District, likely a product of Barber and McMurray Architects. The district is an excellent example of 1920s large-lot, uppermiddle-class development. This district includes an early water wheel.



**Maxwell-Kirby House** 8671 Northshore c. 1830; 1886

The Maxwell House was first constructed around 1830 as a two-story timber frame structure; extensive remodeling and additions in 1886 changed the effective construction date to 1886. When the Maxwell house was first constructed, Lowe's Ferry Road was located nearby and provided access to it. The 1886 changes were made by a descendant of the original owner, Robert Maxwell, who was a farmer. The house is located near a spring where extensive Indian activities occurred.



**Scarborough House** 10835 Westland Drive c. 1901

This one-and-a-half story, fram house with standing seam metal roof illustrates early settlement patterns.



**Statesview** 600 S. Peters Road early 1800s

Statesview is an early seventeenth century house built by Knoxville architect Thomas Hope and rebuilt in the early 1820s following a fire. Statesview was originally the home of surveyor Charles McClung (1761–1835). Following McClung's death, newspaper publisher Frederick Heiskell (1786–1882) purchased the house and estate, which he renamed "Fruit Hill." The house is listed on the National Register of Historic Places for its architecture and political significance. The house is privately owned.

## **TRANSPORTATION PLAN**

Transportation recommendations are based on previously adopted plans and studies, including the *Long Range Regional Mobility Plan 2040*. Roadway and sidewalk recommendations from the mobility plan and public input are presented below. The recommendations from the mobility plan include the horizon year (proposed year project would be completed).

Prior to implementation of any proposed projects, there should be opportunities for additional public input to address issues of impacts related to adjacent land use, neighborhood protection, and environmental and cultural resource protection. These are principles that are important in the development of a transportation system. It is vital to develop and maintain a transportation network that is accessible, provides mobility to all residents, and does not adversely impact the environment.

## Roadways

Table 25 shows transportation projects from the Knoxville Regional Transportation Planning Organization (TPO) and Knox County's *Transportation Improvement Program* for Fiscal Years 2014-2017.

Table 26 lists currently under-construction or proposed roadway projects in the Southwest County Sector by the Tennessee Department of Transportation (TDOT), City of Knoxville, and Knox County. These projects are from the *Long Range Regional Mobility Plan 2040*.

In 2015, Knox County Engineering completed the *Strategic Transportation Plan Needs Assessment Report*, identifying roads in need of improvement based on the number of crashes, road width and average daily traffic. The report identified the top 25 with recommendations and cost estimates provided. Six roads in the Southwest County Sector are listed in the top 25. Canton Hollow Road was number 1. Others included were Ebenezer Road at number 7, South Gallaher View Road - ranked 11, Lyons Bend Drive - ranked 17, Wrights Ferry Road - ranked 18, and N. Watt Road ranked19.

### Recommendations

In addition to the projects listed in the tables and transportation plan map, the following are additional transportation projects to consider based on community input:

- Complete traffic study on Northshore Drive
- Widen Northshore Drive from I-140 to the Loudon County line and include the installation of bike lanes/ greenways and sidewalks (in the short-term, bridges need to be widened)
- Fix the offset on Northshore Drive, just east of Falcon Pointe Drive
- Improve, widen, increase capacity of Northshore Drive from Concord Road roundabout to Harvey Road
- Improve railroad underpass at Boyd Station Road and Harvey Road intersection
- Look for opportunities to use roundabouts as a means of intersection improvements
- Include street tree plantings as part of road projects
- Improve regulations for what triggers a traffic impact study, look to have a "cumulative traffic impact study"
- Investigate adding a turn lane for southbound traffic on Ebenezer Road for Bluegrass Elementary School
- Address speeding on Ebenezer Road

Tab	Table 22. KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION (TPO) • TRANSPORTATION IMPROVEMENT PROGRAM, FY 2014-2017 PROJECTS WITHIN THE SOUTHWEST COUNTY SECTOR			
Project Name	Project Description	Project Location	Agency	
Kingston Pike Sidewalk in Farragut	Construction of 2,050 linear feet of sidewalk along south side of Kingston Pike (SR-1) between Old Stage Road and Virtue Road	Old Stage Road to Virtue Road	Town of Farragut	
Everett Road/I-40 Greenway	Construction of 8 foot wide greenway from Everett Road to the existing terminus of the Grigsby Chapel Greenway at the rear of Berkely Park subdivision	Everett Road to Grigsby Chapel Greenway at Berkeley Park subdivision	Town of Farragut	
Old Stage Road/ Kingston Pike Greenway Connector	Construction of an 8 foot asphalt greenway from the north side of Kingston Pike near Everett Road, under the existing Kingston Pike bridge over Little Turkey Creek to Way Station Trail, just north of its terminus near Old Stage Road	Old Stage Road to Kingston Pk. near Everett Road	Town of Farragut	
Kingston Pike/Campbell Station Road Intersection Improvements	Widen to allow an additional left turn lane for eastbound motorists turning onto northbound Campbell Station Road	Kingston Pike and Campbell Station Road	Town of Farragut	
Concord Road	Widen 2-lanes to 4-lanes including pedestrian and bicycle improvements (See Figure 4)	Turkey Creek Road to Northshore Drive	Town of Farragut/Knox County/TDOT	

In addition to the above listed projects that are shared by Knoxville Regional TPO and Knox County Department of Engineering and Public Works, four other projects are budgeted through the Knox County Capital Improvement Plan:

• Canton Hollow Road improvements

- Ebenezer Road and Gleason Drive intersection Improvements
- George Williams Road and Cedar Bluff Road pedestrian improvements
- Parkside Drive road widening

Table 23. KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION (TPO) • 2040 LONG RANGE MOBILITY PLAN • PROJECTS WITHIN THE SOUTHWEST COUNTY SECTOR					
Jurisdiction	Project Name	Project Location	Length (miles)	Project Description	Horizon Year
Farragut/Knox County	Concord Road Widening	Turkey Creek Road to Northshore Drive	1.5	Widen 2-lane to 4-lane with median, bike lanes, and sidewalks (See Figure 4)	2019
Knox County	Parkside Drive Widening	Mabry Hood Road to Hayfield Road	1.1	Widen 2-lane to 4-lane with continuous center turn lane	2019
Farragut	Union Road Reconstruction	Saddle Ridge Road to Brochardt Boulevard	0.7	Reconstruct existing 2-lane facility	2019
Knoxville	Cedar Bluff Road Intersection Improvements	Cross Park Drive to Peters Road	0.4	Intersection and operational improvements	2024
Farragut	I-40/75 at Campbell Station Road Interchange Improvements	Interchange at Campbell Station Road	0.0	Reconfigure existing interchange to improve capacity, safety, and operations.	2024
Knox County	Westland Drive Reconstruction	Morrell Road to Ebenezer Road	2.7	Reconstruct 2-lane section	2024
Knox County	Northshore Drive (SR 332) Reconstruction	Morrell Road to Ebenezer Road	3.5	Reconstruct 2-lane section	2024
Knox County	Northshore Drive (SR 332) Reconstruction	Pellissippi Parkway (I-140) to Concord Road (SR332)	4.5	Reconstruct 2-lane section	2024
Farragut	Kingston Pike (US 11/70/SR 1) at Campbell Station Road Intersection Improvements	Intersection with Campbell Station Road	0.4	Construct additional eastbound and northbound left turn lanes	2024
Farragut	Turkey Creek Road New Road and Bridge Construction	Brixworth Boulevard to Boyd Station Road	0.4	Construct new 2-lane bridge and approaches to Turkey Creek Road with intersection of Boyd Station Road and Virtue Road	2029
Knox County	I-40/75 at Watt Road Interchange Improvements	Interchange at Watt Road	0.0	Reconfigure existing interchange to improve safety and operations	2029
Farragut	Virtue Road Reconstruction	Boyd Station Road to Kingston Pike (US 11/70/SR 1)	1.4	Reconstruct 2-lane roadway to two 12' lanes with 4' bike lanes, curb and gutter, and sidewalk/greenway	2034
Farragut	Kingston Pike (US 11/70/SR 1) Widening	Smith Road to Campbell Station Road	1.4	Widen 5-lane to 7-lane	2034
Knox County	Westland Drive Reconstruction	Northshore Drive (SR332) to Pellissippi Parkway (I-140)	1.7	Reconstruct 2-lane section	2034
Farragut	Everett Road Reconstruction	Snyder Road Extension to Kingston Pike (US 11/70/SR 1)	2.1	Reconstruct 2-lane section	2040
Farragut/Knox County	McFee Road/Harvey Road Railroad Underpass Improvements	McFee Road to Harvey Road over railroad	0.1	Construct new road or widen railroad underpass	2040
Knoxville/Farragut/Knox County	I-40/75 Widening	I-40/I-75 Interchange to Lovell Road (SR 131) Interchange	6.7	Widen 6-lane to 8-lane	2040

Please Note: This list may include unfunded projects. As a result, the horizon year can shift.



## Southwest County Sector: Planned Roadway Improvements



## **Complete Streets**

Complete streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities are able to safely move along and across a complete street. Complete streets type policies are in place for the Knoxville Regional Transportation Planning Organization (TPO), Tennessee Department of Transportation (TDOT), and the City of Knoxville.

Greenways, sidewalks, transit facilities, and bicycle lanes are elements of complete streets. Future bicycle and pedestrian systems, as represented in the *Knoxville Knox County Parks, Recreation, and Greenways Plan*, could be implemented to bring a more complete street approach to the sector. As roads are improved, those bicycle and pedestrian facilities should be constructed.

Considerations for more detailed road designs regarding complete streets should include:

- Canton Hollow Road
- Concord Road
- Ebenezer Road
- Kingston Pike
- Northshore DriveParkside Drive
- Peters Road
- Westland Road

## Sidewalks

Priority areas include Parental Responsibility Zones (PRZ) where students do not have bus service to and from school. In 1993, the Knox County Board of Education established guidelines for PRZ's in Knox County. These guidelines state that for elementary schools, students within an area of one mile from the school by the shortest route will not be provided transportation services by Knox County Schools. For middle and high schools, PRZ's are one and 1.5 miles, respectively.

Residents and citizens voiced concern at public meetings over the lack of sidewalks. Participants in the online survey listed 'more sidewalks and pedestrian paths/ bike trails where they do not exist today' as the highest transportation priority, with 'improved safety near schools' as second highest priorities. The sector plan recommends sidewalks and pedestrian paths be made where placement and connectivity are feasible.



Complete streets are roadways designed and operated to enable safe, attractive, and comfortable access and travel for all users.

Sidewalks are part of the residential development at the Northshore Town Center.



# Section 3: Five- and Fifteen-Year Improvement Plan

The improvement plans recommend projects and programs to be implemented for the first five and the next ten years following plan adoption. The 5-year plan should be reviewed annually in preparing the capital improvements program (CIP).

Project or Program	5-Year	15-Year	Responsible Agency
LAND USE			
Create a new planned office zone	Х		City/County/MPC
Develop a landscaping and lighting ordinance	Х		City/County/MPC
Update the Off-Street Parking Standards	X		City/County/MPC
Create a new agricultural zone in the county to protect farmland and rural landscapes	Х		City/County/MPC
Develop a small lot and cluster rural residential zone	X		City/County/MPC
Update the subdivision ordinance to include conservation subdivisions as a development alternative, sidewalk, and connectivity standards	Х		City/County/MPC
Update the Growth Policy Plan	X		City/County/Farragut/MPC
Develop a rural retreat zone	Х		County/MPC
COMMUNITY FACILITIES			
Develop pocket parks and neighborhood parks and open spaces in planned residential developments	Х		County
Enhance Dunn Park	Х		County
Create new parks if planned mixed use area along Kingston Pike, Parkside Drive, and Peters Road redevelops into vertical mixed use with a residential component		х	County/City
Develop a plan for Knox County to investigate the utilization of Tennessee Valley Authority lands along the river edge for parks and trails		Х	County
West Valley Middle School/park expansion	Х		County
Develop an access point for the currently non-accessible eastern portion of Concord Park, near Pellissippi Parkway		Х	County
Develop a Knox County Greenway routing plan		Х	County
Ten Mile Creek Greenway extension		Х	County
Concord Park/Northshore Greenway connector	Х	Х	County
Turkey Creek Greenway expansion	Х	Х	City/County/Farragut
Pedestrian Improvements for West Valley Middle School	Х		County
Northshore Greenway	Х	Х	City, County, TDOT
GREEN INFRASTRUCTURE			
Adopt a conservation subdivision development ordinance for the preservation of farmland and/or open space	Х		City/County
HISTORIC PRESERVATION			
Update the inventory of historic resources in the Southwest County Sector	Х		County/MPC

TRANSPORTATION			
Canton Hollow Road: 2-lane construction	Х		County
Concord Road: Widen 2-lanes to 4 lanes with median, bike lanes, and sidewalks from Turkey Creek Road to Northshore Drive	X		City
Parkside Drive: Widen 2-lanes to 4 lanes with continuous turn lanes from Mabry Hood Road to Hayfield Road	Х		County
Cedar Bluff Road: Intersection and operational improvements	Х		City
Westland Drive: Reconstruct 2-lane section		Х	County
Northshore Drive (SR-332): Reconstruct 2-lane section from Pellissippi Parkway (I-140) to Concord Road (SR 332)		Х	TDOT/County
Northshore Drive (SR-332): Reconstruct 2-lane section from Morell Road to Ebenezer Road		Х	TDOT/County
I-40/75 at Watt Road Interchange improvements: Reconfigure existing interchange to improve safety and operations		Х	TDOT/County
Sidewalk improvements for Blue Grass Elementary	X		County
Pedestrian improvements for West Valley Middle School	Х		County
Improve, widen, increase capacity of Northshore Drive from Concord roundabout to Harvey Road	X		County
Complete traffic study on Northshore Drive	Х		County
Improve regulations for what triggers a traffic impact study; look to have a "cumulative traffic impact study"	X		County
Investigate adding a turn lane for southbound traffic on Ebenezer Road for Bluegrass Elementary School	X		County
Improve railroad underpass at Boyd Station Road and Harvey Road		Х	County/Railroad

## **APPENDIX A: Public Participation**

The public input process for the development of this plan included five sector plan meetings, three homeowners association meetings (Council for West Knox County, Westland West, and Falcon Pointe), and a online survey that had two hundred thirty-eight respondents.

#### **PUBLIC MEETINGS SUMMARY**

**Round One**: In 2016 MPC staff held sector plan meetings on May 5 at Northshore Elementary School and May 9 at West Valley Middle School.

Staff gave a presentation and was available at land use, community facilities, and transportation stations with maps and supporting material. People were encouraged to leave and send in comments.

MPC staff attended meetings for the Council for West Knoxville Homeowners Inc. on April 5, Westland West Homeowners Association on June 2, and Falcon Pointe Homeowners Association on June 27. At these meetings there was concern about plan implementation and the status of project recommendations.

Sector plan elements such as community facilities, land use, and transportation were discussed. Below is a brief summary of the comments received.

#### Land Use

- Need impact fees for new development
- Need to redevelop larger commercial areas such as Kingston Pike, North Peters Road and Parkside Drive
- Need better development standards for new development

   buffers, lighting, landscaping, and street requirements
- Concerned about potential commercial development at the intersection of Westland and I-140/Pellissippi Parkway and Northshore Drive and Choto Road
- Need to stay committed to Northshore Town Center
- Plenty of commercial options within a short drive without having to provide new commercial development in neighborhoods

#### **Community Facilities**

- Need to have more neighborhood (close-to home) parks
- New larger development should be required to provide open space

- Need to develop Dunn park as a neighborhood park
- Look to develop a small park at Bexhill Drive and Ebenezer Road
- Need for sidewalks as part of new developments
- Need a greenway along Northshore Drive
- Need to improve access to TVA properties

#### **Transportation**

- Add more roundabouts, bike lanes, trees, medians, and sidewalks
- Need to look improving Northshore Drive
- Need to address speeding along Ebenezer Road
- Need to address the new offset on Northshore Drive just east of Falcon Pointe Drive
- · Roads continue to get more congested in the area

**Round Two:** Additional sector plan meetings were held on August 1 at Northshore Elementary School and August 4 at West Emory Presbyterian Church.

Staff gave a presentation and was available at land use, community facilities, and transportation stations with maps and supporting material. People were encouraged to leave and send in comments.

Sector plan elements such as community facilities, land use, and transportation were discussed. Below is a brief summary of the comments received.

#### **Community Facilities**

- Promote sustainability and energy efficiency
- Promote facilities that foster healthy communities
- Address community facilities that foster a sense of community (pocket parks and linear parks)

#### Land Use

- Protect steep slopes/streams
- Adopt design standards
- Encourage conservation subdivisions
- More open space
- Better connectivity no single access points to developments
- Northshore Town Center future development needs to follow the master plan

#### Transportation

- Encourage more opportunities for walking and bicycling
- Require walking trails to be built as part of a subdivision or site plan
- More landscaping in the rights-of-way

**Open House Meeting:** An open house meeting was held on August 23 at Northshore Elementary School to review the final sector plan recommendations. People were encouraged to interact with staff and indicate where they lived, what they loved about Southwest County, and to prioritize plan recommendations. Below is a ranking (listed high to low) of what people thought should be the most important plan recommendations:

- 1. Northshore Drive (SR-332) reconstruct 2-lane section from I-140 to Concord Road (SR-332)
- 2. Improve, Widen, increase capacity of Northshore Drive from Concord roundabout to Harvey Road
- 3. Adopt a conservation subdivision development ordinance for preservation of farmland and/or open space
- Complete traffic study on Northshore Drive. Also, improve regulations for what triggers a traffic impact study, look to have a "cumulative traffic impact study"
- 5. Concord Road Widen 2-lanes to 4 lanes with median, bike lanes, and sidewalks from Turkey Creek Road to Northshore Drive
- 6. Create a new agricultural zone on the county to protect farmland and rural landscapes
- Update the subdivision ordinance to include conservation subdivisions as a development alternative and sidewalks and connectivity standards
- 8. Develop a Landscaping Ordinance
- 9. Northshore Drive (SR-332) Reconstruct 2-lane section from Morrell Road to Ebenezer Road
- 10. Enforce Hillside Plan
- **11.** Create a new planned office zone
- **12.** Update the Off-Street Parking Standards
- **13.** Develop pocket parks and neighborhood parks and open spaces in planned residential developments
- 14. Turkey Creek Greenway Expansion

- **15.** Develop a plan for Knox County to investigate the utilization of Tennessee Valley Authority lands along the river edge for parks and trails
- Develop an access point for the currently nonaccessible eastern portion of Concord Park, near I-140/Pellissippi Parkway
- 17. Pedestrian Improvements for West Valley Middle School
- **18.** Improve railroad underpass at Boyd Station Road and Harvey Road

Most of the people that attended the meeting were from the Choto area and people liked the following aspects of living in Southwest County:

- Living close to everything
- Quiet
- Beautiful
- Opportunities for outdoor activities
- Great schools
- Water/lakes
- Neighbors
- Bike trails

#### **ONLINE SURVEY SUMMARY**

The survey contained fifteen questions regarding land use, community facilities, and transportation. The Choto Peninsula community area had the highest participation rate (52%). This community is bounded by Farragut to the north, Tennessee River to the south, Loudon County to the west, and Concord Road to the east. Below is a brief summary of the survey results.

#### Land Use

- Most respondents believe there is "too much" growth in this portion of Knox County, but rate the quality of life in this area "excellent"
- People support commercial development of Kingston Pike, Parkside Drive, Peters Road, and along I-140/ Pellissippi Parkway
- The majority of people feel there are "no services lacking"
- Most people are concerned about the amount of commercial development at Choto Road and Northshore Drive

#### **Community Facilities**

- The most used park in the sector is Concord Park
- People feel strongly that there should be a greenway along Northshore Drive

- There is a need for enhancing our existing parks
- There is need to develop more neighborhood parks and greenways

#### Transportation

- The highest rated transportation recommendation is to "provide sidewalks and pedestrian paths/bike trails where they do not exist today"
- Most people want less congestion on Westland Drive, Northshore Drive, and Kingston Pike
- Most people want wider shoulders on Westland Drive and Northshore Drive

## **APPENDIX B: Land Use Classifications**

AGR	AGRICULTURAL and RURAL RESIDENTIAL LAND USE CLASSIFICATIONS			
AGRICULTURAL (AG) AGRICULTURAL CONSERVATION (AGC) This includes farmland in the county's Rural or Planned Growth Areas as designated in the Growth Policy Plan. Undeveloped tracts with the best soils for agriculture are considered as the primary areas for agricultural conservation (AGC).	<ul> <li>Location Criteria:</li> <li>Farmland in the Rural and Planned Growth Areas as designated in the Growth Policy Plan</li> <li>Land where soils are designated as prime or locally important by the U.S. Department of Agriculture are considered for agricultural conservation (AGC)</li> </ul>	Recommended Zoning and Programs:County's Rural and Planned Growth AreasAdditionally, conservation easement and related programs should beconsidered to preserve prime farmland.Other Zoning to Consider:A or PR at densities of one dwelling unit per acre or less if dwellings areclustered in one portion of a subdivisionNew Zone Opportunity:County: AC (Agricultural Conservation) is proposed for AgriculturalConservation (AGC) areas, allowing agriculture and one dwelling unit per30 acres, minimum.		
<b>RURAL RESIDENTIAL (RR)</b> Very low density residential and conservation/cluster housing subdivisions are typical land uses.	<ul> <li>Location Criteria:</li> <li>Rural areas characterized as forested (tree covered), especially on moderate and steep slopes</li> <li>Sites adjacent to agricultural areas (AG or AGC) where conservation/cluster housing subdivisions may be appropriate</li> </ul>	Recommended Zoning and Programs:County's Rural Area: OS, E, RR, or PR at densities of one dwelling unit per acre ifdwellings are clustered in one portion of a subdivisionOther Zoning to Consider:A or PR in the Growth Plan's Rural Area at densities of up to 3 dwellingunits per acre or less if dwelings are clustered in one portion of asubdivisionNew Zone Opportunity:County: Rural Residential, with densities of one dwelling unit per acre or less		
<b>TRADITIONAL NEIGHBORHOOD RESIDENTIAL</b> (TDR) This land use is primarily residential and is characterized by neighborhoods where a mix of detached and attached houses, sidewalks, smaller lots and alleys have typically been or are to be created. Densities in the range of 4 to 8 dwelling units per acre are typical.	<ul> <li>Location Criteria:</li> <li>Neighborhoods where lots are typically less than 50 feet wide, and usually have sidewalks and alleys. This area is essentially the 19th and early 20th century grid street neighborhoods of Knoxville.</li> <li>City's Urban Growth Area or county's Planned Growth Areas where neighborhood or community mixed use development is identified (see Mixed Use and Special Districts section)</li> </ul>	Recommended Zoning and Programs:City: R-1A or RP-1 [with an Infill Housing (IH-1), NeighborhoodConservation (NC-1) or Historic (H-1) Overlay]; TND-1County's Planned Growth Area: PROther Zoning to Consider:City: R-1, R-1A and RP-1 (without overlays), R-2County's Planned Growth Area: RA, RB and PR (with conditions for sidewalks, common open spaces and alleys)New Zone Opportunity:City: Residential zones based on lot sizes less than 7,500 square feet County: TND zone		
<b>LOW DENSITY RESIDENTIAL (LDR)</b> This type of land use is primarily residential in character at densities of less than 6 dwelling units per acre (city) and less than 5 dwelling units per acre (county). Conventional post- 1950 residential development (i.e. large-lot, low-density subdivisions) and attached condominiums are typical.	<ul> <li>Location Criteria:</li> <li>Land served by water and sewer utilities and by collector roads</li> <li>Slopes less than 25 percent</li> </ul>	Recommended Zoning and Programs: City: R-1, R-1E and RP-1 at less than 6 dwelling units per acre County's Planned Growth Area: RA, RAE and PR at less than 5 dwelling units per acre Other Zoning to Consider: City: R-1A and A-1 County: A and RB New Zone Opportunity: City: Residential zones based on lot sizes greater than 7,500 square feet and 75 feet or greater frontage		

<b>MEDIUM DENSITY RESIDENTIAL (MDR)</b> Such land uses are primarily residential at densities from 6 to 24 dwelling units per acre (city) and 5 to 12 dwelling units per acre (county). Attached houses, including townhouses and apartments are typical. Mobile home parks are another form of this land use.	<ul> <li>Location Criteria:</li> <li>As transitional areas between commercial development and low density residential neighborhoods</li> <li>Site with less than 15 percent slopes</li> <li>Along corridors that are served by or proposed to be served by transit, with densities proposed to be above 12 dwelling units per acre and to be served by sidewalks</li> </ul>	Recommended Zoning and Programs: City: R-2, R-3 and R-4 (within the 19th and early 20th century grid street neighborhoods of Knoxville, accompanied by an IH-1, NC-1 or H-1 overlay); otherwise, R-1A, RP-1, RP-2 or RP-3. Densities above 12 dwelling units per acre should be within ¼ mile of transit service with sidewalk connections to transit service. County's Planned Growth Area: PR, densities above 12 dwelling units per acre should be within ¼ mile of transit service with sidewalk connections to transit service; Other Zoning to Consider: City's Urban Growth Boundary: R-2, R-3 and R-4 New Zone Opportunity: County: RB at 6 or more dwelling units per acre may be considered with use on review
<b>HIGH DENSITY RESIDENTIAL (HDR)</b> This land use is primarily characterized by apartment development at densities greater than 24 dwelling units per acre.	<ul> <li>Location Criteria:</li> <li>On major collector and arterial streets, adjacent to regional shopping and major office districts (office sites allowing four or more stories); these sites must be identified in sector or small area plans</li> <li>Within the CBD or its adjacent areas, such as portions of the Morningside community</li> <li>Relatively flat sites (less than 10 percent slopes)</li> <li>Along corridors with transit and sidewalks</li> </ul>	Recommended Zoning and Programs: City: C-2, RP-2 and RP-3, R-3 and R-4 (within the 19th and early 20th century grid street neighborhoods of Knoxville, accompanied by an IH-1, NC-1 or H-1 overlay) Other Zoning to Consider: TC-1 and TC (if higher density residential is part or a mixed-use project) New Zone Opportunity: City: Form-based codes (e.g. South Waterfront)
<b>MEDIUM DENSITY RESIDENTIAL/OFFICE (MDR/O)</b> Office and medium residential uses typically have similar development characteristics: scale of buildings, areas devoted to parking, yard spaces and location requirements (on thoroughfares). In areas designated MU-MDR/O, either use can be created. These uses provide a buffer to low density residential areas, particularly when located adjacent to a thoroughfare or as a transition between commercial uses and a neighborhood.	<b>Location Criteria:</b> • See Medium Density Residential (MDR) criteria	<b>Recommended Zoning and Programs:</b> City: RP-1, RP-2, RP-3 County: PR <b>Other Zoning to Consider:</b> City: O-1, O-2 County: OB

OF	OFFICE and BUSINESS/TECHNOLOGY LAND USE CLASSIFICATIONS					
<b>OFFICE (O)</b> This land use includes business and professional offices and office parks.	<ul> <li>Location Criteria:</li> <li>Low intensity business and professional offices (less than three stories) may be transitional uses from commercial or industrial uses to neighborhoods</li> <li>Generally level sites (slopes less than 15 percent)</li> <li>Access to major collector or arterial streets, particularly within one-quarter mile of such thoroughfares</li> <li>Highest intensity office uses (development that is four or more stories), should be located in close proximity to arterial/freeway interchanges or be served by transit</li> </ul>	Recommended Zoning and Programs: City: O-1, O-2, O-3 County's Planned Growth Area: OA, OC, PC (with covenants) Other Zoning to Consider: In areas that are identified in sector plans exclusively as office land uses, OB New Zone Opportunity: City: Office zone should be created that requires site plan review County: Office park zone should be created that requires site plan review				
<b>TECHNOLOGY PARK (TP)</b> This land use primarily includes offices and research and development facilities. The target area for such development has been the Pellissippi Technology Corridor. Additional districts could be created in other areas of the city or county. The development standards that are adopted by the Tennessee Technology Corridor Development Authority should be used for such districts.	<ul> <li>Location Criteria:</li> <li>Within the Technology Corridor or subsequent areas designated for Technology Park development</li> <li>Sites near freeway interchanges or along major arterials</li> <li>Water, sewer and natural gas utilities available</li> </ul>	<b>Recommended Zoning and Programs:</b> City: BP-1 County's Planned Growth Area: BP and PC (with covenants limiting uses to research/development) <b>Other Zoning to Consider:</b> EC (with limitations to require office and research/development uses)				

	RETAIL and RELATED SERVICES LAND USE CL	ASSIFICATIONS
<b>RURAL COMMERCIAL (RC)</b> This classification includes retail and service-oriented commercial uses intended to provide rural communities with goods and services that meet day-to-day and agricultural-related needs.	<ul> <li>Location Criteria:</li> <li>At the intersection of two thoroughfares (arterial or collector roads)</li> <li>Rural commercial nodes should generally not exceed more than 300 feet in depth and lots and not extend more than 300 feet away from the intersection</li> </ul>	<b>Recommended Zoning and Programs:</b> County's Rural Area: CR <b>Other Zoning to Consider:</b> CN
<b>NEIGHBORHOOD COMMERCIAL (NC)</b> This classification includes retail and service-oriented commercial uses intended to provide goods and services that serve the day-to-day needs of households, within a walking or short driving distance. Neighborhood commercial uses may also be accommodated within neighborhood centers (see Mixed Use and Special Districts).	<ul> <li>Location Criteria:</li> <li>Generally located at intersections of collectors or arterial streets at the edge of or central to a neighborhood</li> <li>New NC should not be zoned for or developed within ½ mile of existing commercial that features sales of day-to-day goods and services</li> <li>Automobile-oriented uses (e.g. gas stations or convenience stores) should be located on arterial street at the edge of neighborhood</li> <li>Should not exceed the depth of the nearby residential lots and not extend more than a block (typically no more than 300 feet) away from the intersection</li> </ul>	<b>Recommended Zoning and Programs:</b> City: C-1 County's Planned Growth Area: CN <b>Other Zoning to Consider:</b> SC-1
<b>COMMUNITY COMMERCIAL (CC)</b> This land use includes retail and service-oriented development, including shops, restaurants, and what has come to be known as "big box" retail stores; typical service area includes 20,000 to 30,000 residents. Community commercial uses may also be considered within community centers (see Mixed Use and Special Districts).	<ul> <li>Location Criteria:</li> <li>Locate at intersection of arterial streets</li> <li>Sites should be relatively flat (under 10 percent slope) and with enough depth to support shopping center and ancillary development.</li> <li>Vehicular and pedestrian connections should be accommodated between different components of the district (e.g. between stores, parking areas and out-parcel development)</li> <li>Infrastructure should include adequate water and sewer services, and major arterial highway access</li> <li>Community commercial centers should be distributed across the city and county in accordance with recommended standards of the Urban Land Institute</li> </ul>	<b>Recommended Zoning and Programs:</b> Because of traffic and lighting impacts (potential glare) and buffering needs of surrounding interests, 'planned zones' should be used. City: SC-2, PC-1 and PC-2. County's Planned Growth Boundary: PC or SC <b>Other Zoning to Consider:</b> As infill development within areas already zoned C-3, C-4, C-5 and C-6 (City), and CA, CB and T (County)

<b>REGIONAL COMMERCIAL (RS)</b> This land use includes retail and service-oriented development that meets the needs of residents across Knox County and surrounding areas. Development typically exceeds 400,000 square feet; malls have been a typical form and 'life-style centers' (e.g. Turkey Creek) are examples of regional-oriented commercial uses. Regional commercial uses may also be considered in Regional Centers (see Mixed Use and Special Districts).	<ul> <li>Location Criteria:</li> <li>Flat sites (under 10 percent slope)</li> <li>Locate near interstate interchanges with major arterial highway access</li> <li>Water, sewer, natural gas utilities and stormwater systems should be capable of handling the development</li> <li>Vehicular and pedestrian connections should be accommodated between components of the development</li> </ul>	Recommended Zoning and Programs: Because of the magnitude of the traffic and environmental impacts, planned zones should be used. City: SC-3, PC-1 and PC-2 County's Planned Growth area: PC Other Zoning to Consider: As infill development within areas already zoned C-3, C-4, C-5 in the City CA, CB and SC in the County
<b>GENERAL COMMERCIAL (GC)</b> This includes previously developed strip commercial corridors providing a wide range of retail and service- oriented uses.Such land use classification and related zoning should not be extended because of the adverse effects on traffic-carrying capacity, safety and environmental impacts. Redevelopment of commercial corridors, including mixed use development, should be accommodated under planned or design-oriented zones.	<b>Location Criteria:</b> • Existing commercial areas	Recommended Zoning and Programs: City: C-6 and PC-1 County's Planned Growth Area: PC C-3, C-4, C-5, SC-1, SC, CA and CB for infill commercial development in areas previously zoned for commercial uses New Zone Opportunity: County: Corridor design overlays, if designated as special districts (see Mixed Use and Special Districts)

## MIXED USE and SPECIAL DISTRICTS

## A NOTE ABOUT MIXED USE AND SPECIAL DISTRICTS

There are several types of mixed-use areas: neighborhood, community and regionally-scaled districts and urban corridors. Mixed Use areas can be developed with higher intensity uses because of infrastructure and ability to sustain alternative modes of transportation. Development plan review is crucial. These areas should typically be created with sidewalks. Shared parking may be considered. Automobile and truck-dependent uses, such as heavy industrial, distribution and highway-oriented commercial uses should not be located in neighborhood, community and regional mixed-use centers. There are likely to be several distinctions between types of mixed use designations. Each Sector Plan and the One Year Plan will have a separate section which outlines the intent of each mixed use district and the development criteria for the district.

<b>MIXED USE</b> <b>NEIGHBORHOOD CENTER (MU-NC)</b> These are the least intense of the proposed mixed use districts. Residential densities of 5 to 12 dwelling units per acre are appropriate within the area. Locations at the intersection of a local street and thoroughfare are generally most appropriate. The surrounding land uses should primarily be planned for low or medium density residential. The buildings of these centers should be designed with a residential character and scale to serve as a complement to the surrounding neighborhoods.	<ul> <li>Location Criteria:</li> <li>Flat terrain (slopes generally less than 10 percent)</li> <li>Currently served by or planned to be served by sidewalks</li> <li>The location does not include auto and truck-oriented uses such as industrial, strip commercial and warehouse/distribution uses unless the proposal calls for a redevelopment of such areas</li> <li>At the intersection of a local street and throughfare</li> <li>Next to low or medium density residential</li> </ul>	<b>Recommended Zoning and Programs:</b> TND-1 <b>New Zone Opportunity:</b> Other form- or design-based codes
MIXED USE COMMUNITY CENTER (MU-CC) These centers are envisioned to be developed at a moderate intensity with a variety of housing types (8 to 24 dwelling units per acre). The core of the district, with its predominant commercial and office uses, should be within ¼ mile of the higher intensity residential uses (such as townhouses and apartments). The district should be located within a ¼-mile radius of an intersection of the thoroughfare system (a collector/arterial or arterial/arterial intersection). In addition to sidewalks, the district should be served by transit. Redevelopment of vacant or largely vacant shopping centers are considerations for these centers.	<ul> <li>Location Criteria:</li> <li>Flat terrain (slopes generally less than 10 percent)</li> <li>Areas currently served by or planned to be served by sidewalks</li> <li>The location does not include auto and truck-oriented uses such as industrial, strip commercial and warehouse/distribution uses unless the proposal calls for a redevelopment of such areas</li> <li>Within a ¼-mile radius of an intersection of the thoroughfare system (a collector/arterial or arterial/arterial intersection)</li> <li>Commercial/office core should be within ¼ mile of the higher intensity residential uses (e.g. townhouses and apartments)</li> </ul>	<b>Recommended Zoning and Programs:</b> TC-1, TC <b>New Zone Opportunity:</b> Other form- or design-based codes

<b>MIXED USE</b> <b>REGIONAL CENTER (MU-RC)</b> These are envisioned to be highest intensity mixed use centers. These districts should be served by sidewalk and transit systems and be located on a major arterial, adjacent to an Interstate highway or adjacent to downtown. Housing densities in the core of such districts can be 24 or more dwelling units per acre. Downtown Knoxville's Central Business District is a regional mixed use center.	<ul> <li>Location Criteria:</li> <li>Flat site (generally less than 10 percent slopes)</li> <li>Currently served by or planned to be served by sidewalks</li> <li>The location does not include auto and truck-oriented uses such as industrial, strip commercial and warehouse/distribution uses unless the proposal calls for a redevelopment of such areas</li> <li>On a major arterial, adjacent to an interstate highway or adjacent to downtown</li> </ul>	<b>Recommended Zoning and Programs:</b> C-2 in the Central Business District (Downtown); TC-1, TC or new form-based codes (and regulating plans) for other community and regional centers <b>New Zone Opportunity:</b> An adaptation of C-2 for the 'Downtown North' area (Central City Sector) should be created. Other form- or design-based codes
MIXED USE URBAN CORRIDOR (MU-UC) Several street corridors within the city have potential for redevelopment with a mix of retail, restaurants, office and residential uses. Commercial cores should be created at points (nodes) along these corridors, allowing a vertical mix of uses (for example, shops at ground level and apartments above); such nodes should not be more than four blocks long.	<ul> <li>Location Criteria:</li> <li>Corridors should have sidewalks, transit services, street trees and related beautification</li> <li>Capable of sustaining on-street parking along corridor or along side streets</li> </ul>	<b>Recommended Zoning and Programs:</b> City: Form-based or design-based codes (e.g. South Waterfront)
<b>MIXED USE</b> <b>SPECIAL DISTRICT (MU-SD)</b> This can include designations to address urban design, pedestrian and transit-oriented development and vertical mixed use in designated areas. The areas may include older portions of the city or county where redevelopment and/or preservation programs are needed for revitalization purposes.	Location Criteria: • Case-by-case analysis is recommended	<b>Recommended Zoning and Programs:</b> TND-1, TC-1, TC, especially in greenfield areas, or form-based or designed- based codes as noted in the Sector Plan and One Year Plan for each of these districts.
MIXED USE SPECIAL CORRIDOR (MU-CD) These can include designations to address urban design and environmental concerns along commercial or industrial corridors (where overlays for aesthetic reasons or sidewalks may be recommended, like the Chapman Highway corridor). Other potential corridor designation could include rural/farmland conservation areas.	<b>Location Criteria:</b> • Case-by-case analysis is recommended	<b>Recommended Zoning and Programs:</b> Should be noted in the Sector Plan and One Year Plan for each of these districts

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LIGHT INDUSTRIAL (LI) HEAVY INDUSTRIAL (HI) HEAVY INDUSTRIAL (HI) MINING (HIM) Typically older industrial areas used for the manufacturing, assembling, warehousing and distribution of goods. Light industrial uses include such manufacturing as assembly of electronic goods and packaging of beverage or food products. Heavy industrial uses include processes used in the production of steel, automobiles, chemicals, cement, and animal by- products and are viewed as clearly not compatible with areas designated for residential, institutional, office and retail uses. Quarry operations and asphalt plants are a particular form of heavy industrial, generally located in rural areas.	<ul> <li>Location Criteria:</li> <li>Existing industrial areas</li> <li>Within one mile of an interstate interchange with access via standard major collector or arterial streets</li> </ul>	Recommended Zoning and Programs: City: I-1, I-2, I-3 and I-4 (infill development, using those zones, may be appropriate); C-6, PC-2 and County's Planned Growth Boundary: LI; EC zone should be used in future development Other Zoning to Consider: County: I (Industrial) zoning should be used in cases involving rezonings to accommodate mining activities and should be accompanied by buffering and other conditions to protect adjacent property owner. PC, LI, I and CB may be considered for infill industrial development. New Zone Opportunity: City: A new planned, industrial zone should be created that requires site plan review to address environmental and transportation issues and surrounding community concerns.
<b>BUSINESS PARK TYPE 1 (BP-1)</b> Primary uses are light manufacturing, office and regionally- oriented warehouse/distribution services in which tractor- trailer transportation is to be a substantial portion of the operations. A zoning category which requires site plan review is expected in the development or redevelopment of such areas. Site plans shall address landscaping, lighting, signs, drainage, and other concerns that are raised in the rezoning process. Substantial landscaped buffers are expected between uses of lesser intensity, particularly residential, office and agricultural uses.	<ul> <li>Location Criteria:</li> <li>Relatively flat sites (predominant slopes less than 6 percent) out of floodplains</li> <li>Relatively large sites (generally over 100 acres)</li> <li>Away from low and medium density areas or where truck traffic would have to go through such areas</li> <li>Areas with freeway and arterial highway access (generally within two miles of an interchange)</li> <li>Rail access is a consideration</li> <li>Can be served with sewer, water and natural gas</li> </ul>	<b>Recommended Zoning and Programs:</b> City: I-1, C-6, PC-2 or a new Planned Industrial Park zone County's Planned Growth and Rural Areas: EC <b>Other Zoning to Consider:</b> PC
<b>BUSINESS PARK TYPE 2 (BP-2)</b> Primary uses are light manufacturing, offices, and locally- oriented warehouse/distribution services. Retail and restaurant services, developed primarily to serve tenants and visitors to the business park can be considered. A zoning category which requires site plan review is expected in the development or redevelopment of such areas. Site plans must include provisions for landscaping, lighting and signs. Substantial landscaped buffers are necessary between uses of lesser intensity, particularly residential, office and agricultural uses.	<ul> <li>Location Criteria:</li> <li>Relatively flat sites (predominant slopes less than 6 percent) out of floodplains</li> <li>Relatively large sites (generally over 100 acres)</li> <li>Away from low and medium density areas or where truck traffic would have to go through such areas</li> <li>Freeway and arterial highway access (generally within two miles of an interchange)</li> <li>Rail access is a consideration</li> <li>Can be served with sewer, water and natural gas</li> </ul>	<b>Recommended Zoning and Programs:</b> City: I-1, C-6, PC-2 or a new Planned Industrial Park zone County's Planned Growth and Rural Areas: EC <b>Other Zoning to Consider:</b> PC

# PARK, PUBLIC INSTITUTIONAL, OTHER OPEN SPACE & ENVIRONMENTAL PROTECTION LAND USE CLASSIFICATIONS

<b>PUBLIC PARKS AND REFUGES (PP)</b> This classification contains existing parks, wildlife refuges or similar public or quasi-public parks, open spaces and greenways. Quasi-public spaces are owned by civic or related organizations. Location criteria is not needed relative to large components of the park system, like community, district and regional parks and refuges; these areas are generally established through capital expenditures or land transfers from state or federal governments.	<ul> <li>Location Criteria:</li> <li>Neighborhood parks, squares and commons should be within ¼ mile of residents in the traditional residential areas (particularly the 19th and early 20th century grid street neighborhoods of Knoxville) and within ½ mile of residents within the balance of the city and county's Planned Growth area.</li> <li>Greenways should be located along or within the flood plains of streams and rivers/reservoirs. Other potential locations include ridges and utility corridors.</li> </ul>	Recommended Zoning and Programs: City: OS-1 County: Planned Growth Area - OS, E and OC ; Rural Area - OS, E Other Zoning to Consider: Other zones that allow parks and open space as permitted uses. New Zone Opportunity: A zone should be created to designate parks, schools and similar institutional lands for both city and county jurisdictions.
<b>CIVIC/INSTITUTIONAL (CI)</b> Land used for major public and quasi-public institutions, including schools, colleges, the university, churches, correctional facilities, hospitals, utilities and similar uses.	<ul> <li>Location Criteria:</li> <li>Existing public uses, other than parks and greenways</li> <li>Quasi-public uses of two acres or more</li> </ul>	Recommended Zoning and Programs: City and County: O-1, O-2, or OC in rural areas Other Zoning to Consider: Other zones that allow civic/institutional as permitted uses. New Zone Opportunity: A new zone should be created for such uses.
<b>OTHER OPEN SPACE (OS)</b> Include cemeteries, private golf courses, and similar uses	<ul> <li>Location Criteria:</li> <li>Existing cemeteries, private golf courses and private open spaces</li> </ul>	Recommended Zoning and Programs: City: OS-1 County's Planned Growth and Rural Area: OS, E and OC Other Zoning to Consider: A-1, and A New Zone Opportunity: A new zone should be created to designate parks, schools and similar institutional lands.
<b>WATER (W</b> ) Typically includes the French Broad River, Holston River, Tennessee River (Fort Loudoun Lake), and Clinch River (Melton Hill Lake)	Location Criteria: • Rivers, TVA reservoirs	<b>Recommended Zoning and Programs:</b> City: F-1 County: F
<b>MAJOR RIGHTS-OF-WAY (ROW)</b> Generally, the rights-of-way of interstates and very wide parkways and arterial highways		

