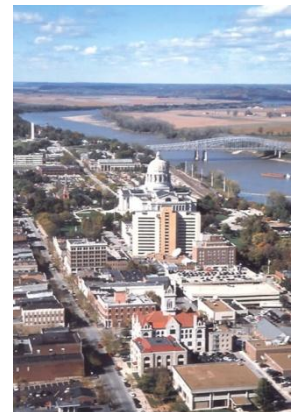


The Master Plan for Cole County, Missouri



James Pona & Associates

Approved by Commission Order
December 20, 2010



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CM
Deputy
Cole Co. Clerk

COURT ORDER

STATE OF MISSOURI
COUNTY OF COLE

October Term, 2010

In the County Commission of said County on the 20th day of December in the Year of Our Lord, 2010,
the following, among other proceedings, were had:

WHEREAS, the County of Cole has actively encouraged coordinated growth through a formal planning process as allowed by the Revised Statutes of Missouri, and

WHEREAS, Cole County does currently have a master plan that was last update more than 30 years ago, and a revision of such master plan is allowed for under RSMO Chapter 64.815, and,

WHEREAS, the County of Cole seeks to promote the health, safety, convenience, prosperity and general welfare of the inhabitants, to ensure efficient expenditure of public funds, and conserve the natural resources of the county, with a master plan that represents the most current framework of the county, and

WHEREAS, a revision of the current Master Plan for Cole County has been prepared citizens of Cole County and others, and

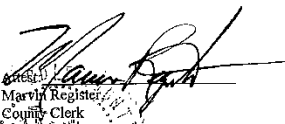
WHEREAS, the Cole County Planning Commission at their regular meeting held December 14, 2010, has reviewed the revised Master Plan for Cole County and has unanimously recommended that the *2010 Master Plan for Cole County, Missouri*, be adopted subject to the attached recommended text corrections, by the Cole County Commission, and

WHEREAS, the Cole County Commission recognizes that the *2010 Master Plan for Cole County, Missouri*, is an advisory document and may be altered or revised by the Commission at any time, and

WHEREAS, the Cole County Commission held a public hearing on the *2010 Master Plan for Cole County, Missouri* on December 20, 2010, as required by state law, and

NOW, THEREFORE, BE RESOLVED THAT THE COMMISSION FOR THE COUNTY OF COLE APPROVES AND ADOPTS THE *2010 MASTER PLAN FOR COLE COUNTY, MISSOURI*, TO BE IN EFFECT ON THE 20th DAY OF December, 2010.

(Attached to this Court Order is a copy of the *2010 Master Plan for Cole County, Missouri*)


Marvin Register
County Clerk


Marc Ellinger
Presiding Commissioner


Jeff Hoelscher
Eastern District Commissioner


Chris Wrigley
Western District Commissioner



1. INTRODUCTION

1.1. BACKGROUND - WHY A NEW MASTER PLAN FOR COLE COUNTY?

A significant amount of development has taken place in the County during the last four decades. The County's last comprehensive plan was prepared in 1977 and is well beyond the typical ten to twenty year horizon for such plans.

A comprehensive master plan serves many purposes, including the following:

- To gather important information on past and present conditions
- To study existing and changing land uses
- To look at the County in both a regional and broader context
- To identify potential future needs
- To analyze and prioritize those needs
- To guide implementation of plan recommendations

The changes in Cole County have been substantial. Extensive suburbanization of unincorporated areas around Jefferson City has occurred. The cities of St. Martins, Wardsville and Taos have steadily increased in population and development. This growth has increased the need for roads, schools, parks, fire protection, water supply and other infrastructure.

The comprehensive planning process provides a framework for continued growth and development in Cole County.



1.2. SUMMARY OF THE PLANNING PROCESS

The planning process was undertaken between May of 2009 and September of 2010. First, an analysis of existing conditions was completed, which included a review of the County's history as well as an analysis of demographics, the environment, land use, economy, transportation, and public facilities. This information can be found in Chapters 2 through 8. The entire process occurred in close coordination with the Cole County Zoning Advisory Committee and the Cole County Department of Public Works.

The public engagement strategy for this process had several components, including: A citizen questionnaire mailed to 500 randomly selected County residents to solicit input regarding County needs; public forums; and informational postings on the Cole County website. The first public forum was held on November 4, 2009 as a part of the existing conditions analysis.

Information, findings and public input obtained to date were used to draft the Master Plan for Cole County. The Plan identifies area locations for future residential, commercial and industrial development, improvements to the transportation system, and needs for other facilities such as parks, public buildings and schools. The Plan was presented and discussed at a second public forum on May 25, 2010. Based on the results of that process, including numerous meetings of the Zoning Advisory Committee, it was ultimately finalized.

We believe this process will result in the development of the most effective plan for Cole County – a true blueprint for the County's future that can be implemented during the coming years.

The Cole County Commission	Zoning Advisory Committee
Marc H. Ellinger, Presiding Commissioner	Kris Ballage, Co-Chairperson
Chris Wrigley, Western District Commissioner	Dick Peerson, Co-Chairperson
Jeff Hoelscher, Eastern District Commissioner	Gary Oberkrom
	Rick Spencer
	Rick Muldoon
	Dave Braun
	Art Ehrhardt
Planning Commission	Project Consultant
Duane Amos, Moreau Township	James Pona, AICP, Project Principal
Dick Peerson, Marion Township	Malcolm Drummond, AICP, Project Manager
Doug Kliethermes, Liberty Township	Hilary Murphy, AICP, Planner, Assistant Project Manager
Michelle Gerstner, Clark Township,	Mark Abbott, PhD., Planner
Carolyn Loethen, Osage Township	Paul Kohl, Mapping and GIS Services
Lanette Gooch, Jefferson Township	
Technical Committee	
Kris Ballage, Co-Chair, Zoning Advisory Committee	
Dick Peerson, Co-Chair, Zoning Advisory Committee	
Michelle Gerstner, Clark Township, Cole County Planning Commission	
Larry J. Benz, PE, Director, Public Works	
Shannon Kliethermes, Planner	



2. HISTORY

2.1. ROOTS IN THE EARLY 1800's

Cole County has a rich history. Written records extend back to the early 1800's when families from Kentucky and Tennessee moved to the area. It became a County in 1820, named after Captain Stephen Cole, a renowned pioneer settler and builder of Cole's Fort in Boonville, that achieved prominence during the War of 1812.

2.2. STEADY GROWTH

The County grew steadily. Principal economic assets forming the basis for its historical development included: Hardwood forests; agriculture including wheat, corn, oats, barley, hay; a variety of fruits; and large deposits of coal and lead for a robust mining industry. These products could easily be moved on the Missouri River forming the County's northern boundary and on the partially-navigable Osage along its eastern edge.



1. Early image of Cole County.

Source: *Cole County Historical Society website.*

2.3. DESIGNATION AS THE STATE SEAT

In 1821 the County's population was approximately 1,300. Its principal city, Jefferson City, became the seat of Missouri government in 1826. When it was admitted to the Union, Congress granted four sections of land for the state seat. The constitution limited its location to be within 40 miles above or below the mouth of the Osage.



2.4. EARLY SUBDIVISION DEVELOPMENT

The first subdivision of lots and street layout was undertaken by Major Elias Barcroft, who had been appointed County surveyor. In the early 1820's there were approximately 30 households in Jefferson City. Several residents, including Major Josiah Ramsey, Jr., and William Jones, operated taverns in the city. By 1840 the County's population was 9,286, but then declined in 1850 to 6,696 due to the creation of Moniteau County and the loss of some lands previously in Cole County. By 1860, however, the County's population had grown to over 9,700.¹

Railroads played a prominent role in the County's history and development. Principal among these was the Missouri Pacific (now Union Pacific) that still operates along the Missouri riverfront at the County's northern border. The Chicago and Alton railroad operated a line in the southern part County, and the Missouri, Kansas, and Texas (MKT or Katy) rail line operated in the County as well.

2.5. TODAY'S CHARACTER – INFLUENCED BY THE PAST

Cole County's present-day character has been strongly influenced by this historic fabric. The County has continued to grow and develop in areas within and around Jefferson City. Its economy, though it continues to be diverse, is now substantially supported by public sector employment.

¹ Sources: "Cole County History," <http://coleCounty.org/cole1/cole/History.htm>; and "Cole County Missouri," http://www.livingplaces.com/MO/Cole_County.html

3. DEMOGRAPHICS

3.1. OVERVIEW

Cole County is a mature and stable political jurisdiction. Unlike many other Missouri counties, it has not experienced dramatic upturns or downturns in recent years. While it has not witnessed rapid growth over the last twenty five years, few areas have lost population and most have seen modest growth. All indicators point to a similar pattern in the future. While state demographers do not anticipate substantial population increase in the next 20 years, they do expect the rate of growth in the County to match that of the state.

During recent years, Cole County has maintained a rough balance between being an urban as well as a rural jurisdiction. Jefferson City, the suburbs, the incorporated towns, and the rural portions of the County have grown at virtually the same pace over the last decade.

The composition of County households has also remained virtually unchanged in recent years. The racial/ethnic and family type make-up of the community has remained constant. The only significant demographic shift in recent years has been in age. The County experienced a significant drop in the number of residents aged 35-44 and a rather dramatic increase in those between 55 and 64.

As in past years, Cole County residents have maintained a good quality of life and the County retains this appeal. The median household income is higher than that for the state as a whole with a smaller percentage of the population living in poverty. Even with the current recession, unemployment is lower in the County than the state average. Cole County residents are generally healthy. The crime rate is low. The schools remain strong. Similarly, housing continues to be



considered both a good value and affordable. The overall housing stock is in good condition with few units vacant.

3.2. POPULATION

Population Trends The latest population estimate (2007) for Cole County by the U.S. Census Bureau is 74,313—which is approximately 17% higher than it was in 1990. While this is a rather modest rate of growth—1 percent per year—it has been evenly dispersed over the County. However, the 2007 population estimate is 4.1% higher than the County's year 2000 population. If this rate of growth continues, then its post-1990 growth rate will have declined to .34% per annum.

As the following chart shows, when the County's 15 census tracts are divided into regional quadrants, all four quadrants had roughly the same rate of growth between the last two decennial censuses. Although the southeast portion of the County lagged somewhat behind, growth was generally evenly distributed throughout the County.

What is also noteworthy is that of the 15 census tracts, only three experienced a drop in population. Two of these were in older parts of Jefferson City close to the Missouri River and were statistically insignificant. The only significant drop took place in the far northeastern corner of the County.

2. Population Change by Census Tract

Quadrant	Tract #	1990	2000	% Change 1990-2000
Northwest	108	5548	7350	32.5%
	109	6504	6281	-3.4%
	206	4141	4564	10.2%
Quadrant Sub-total		16,193	18,195	12.4%
Southwest	203	3139	3437	9.5%
	204	5233	5932	13.6%
	205	2523	2658	5.6%
Quadrant Sub-total		10,895	12,027	10.4%
Northeast (City)	101	2528	4009	58.6%
	102	1917	1890	-1.4%
	103	4917	5094	3.6%
	105	4649	4715	1.4%
	106	3180	3513	10.5%
	107	6840	8770	28.2%
Quadrant Sub-total		24,031	27,991	16.5%
Southeast	201.98	4124	3421	-17%
	202	2811	3529	25.5%
	104	5525	6234	12.8%
Quadrant Sub-total		12,460	13,184	5.8%
Total		63,579	71,397	12.3%

U.S. Census: 1990 & 2000 (SF1 Files)

Some census tracts include portions of both Jefferson City and non-incorporated areas. They were categorized by whether they were primarily one or the other.

Another notable population trend in the County since 1990 is that the ratio among the percentage of residents who live in Jefferson City, the seven incorporated towns, and the non-incorporated areas has remained virtually unchanged since 1990. As the chart below indicates, the population of the County remains fairly evenly divided between those living in Jefferson City and those who live outside the city limits.



What is also interesting is that the distribution of non-Jefferson City population continues to be roughly the same over the last seventeen years. The towns represent approximately 6% of County population whereas the non-incorporated areas have just fewer than 40%.

3. Urban vs. Non-incorporated Population Growth

Area	1990	2000	2007
Cole County Total	63,579	71,397	74,313
Jefferson City	35,481	39,636	40,564
% of Countywide Population	55.8%	55.5%	54.6%
St. Martins	717	1,023	1,116
Wardsville	513	976	979
Taos	802	870	858
Russellville	869	758	729
St. Thomas	263	287	283
Lohman	154	168	163
Centertown	356	257	250
Small Town Total	3674	4,339	4,378
Small Town as % of Countywide Population	5.8%	6.1%	5.9%
Non-incorporated	24,424	27,422	29,371
Non-incorporated as % of total	38.4%	38.4%	39.5%

Population Projections and Scenarios The Missouri State Office of Demography has projected that Cole County's rate of growth over the next 20 years will be just over .6% per year. This is a fairly significant drop in the growth rate of just over 1% per year during the last 17 years. The primary rationale for this projection is the aging of the County's population which mirrors a similar trend statewide.

4. Current Population Estimates and Projected Rate of Growth for Cole County

Year	2000	2005	2010	2015	2020	2025	2030	% Change 2000-2030
Cole County	71,397	72,398	74,620	76,979	79,333	81,571	83,583	17%
Missouri	5,596,687	5,781,293	5,979,344	6,184,390	6,389,850	6,580,868	6,746,762	21%

Missouri Office of Demography (2009)

High Growth Scenario – Geared to More Job Development

Although the state anticipates modest growth for the County over the next twenty years, there are factors which could influence this projection by 10% or more in either direction. A high growth scenario would be predicated upon a reversal of the aging of the County's population. During this decade, the median age of Cole County has jumped from 35.5 to 37.2. This has come about not only because of an increase in the number of seniors, but a significant drop in young adults between the ages of 25-44. This trend could be reversed, for example, if the area was able to generate more jobs to retain this key age group. The most likely source of job growth is with the state. An overall improvement in the state's economic climate and/or other changes could generate a significant increase in public sector and related jobs in the northern portion of the County that would stimulate a corresponding increase in the population.

Low Growth Scenario – Driven by Zero or Negative Job



Growth

Conversely, the County could experience a period of no job growth or a drop in jobs. Since the State is the largest employer in the County, this low growth scenario is based on shrinkage of state government over the next twenty years. If the number of state jobs would continue to decline, it would become harder and harder to attract and retain young adults—who are in their prime child rearing years—especially young professionals. Because of the multiplier effect of government jobs, any loss of state jobs would mean a corresponding loss of total employment for the County.

3.3. HOUSEHOLD CHARACTERISTICS

Just as Cole County's population has remained constant, so too has the composition of its households.

3.3.1. Racial/Ethnic Composition The racial ethnic composition of Cole County is essentially the same now as it was in 2000. Both African-American and White segments of the County saw their percentage of the population increase by .5% due to a decrease in the number of residents who categorized themselves as something other than African-American, Asian, or White. As a result, the percentage of Cole County residents who reported themselves as African-American went to 10.4% in 2008 with the White portion of the population increasing to 87.6%.

The greatest percentage increase among any racial/ethnic group was for people of Asian descent. The percentage increase for this group was 57%. However, Asian-Americans continue to be a small segment of the Cole County community comprising only 1.3% of the population. The only other significant ethnic segment of Cole County's population is the Hispanic community which claims multiple racial

identities. The Census Bureau estimates that there are 1,378 Hispanics—or 1.9%--of the Cole County community.

5. Cole County Racial Composition

Racial Identification	2000	2008	% of 2008 Total
African-American	7,084	7,764	10.4
Asian	625	979	1.3
White	62,158	65,124	87.6
Other	1,530	446	6.0
Total	71,397	74,313	100.0

U.S. Census: 2000 (SF1)/2008 (2008 Population Estimates)

3.3.2. Household Composition by Type The composition of Cole County's household by household type is reflective of Missouri and the rest of the United States. Married couples with and without children under 18 are the largest group of households comprising just over half the households in the County. The next largest household type is single person households. This too is not surprising considering the large number of seniors in the County and the likelihood of one senior outliving his or her spouse. The percentage of single parent households in Cole County is slightly lower than national average (6.8% vs. 7.2% respectively).



6. Cole County Households by Type

Household by Type	# Households	% Households
Single Person	7,752	28.7
Unrelated Multiple Adults	1,348	5.0
Married Couple	7,633	28.2
Married with Children	6,720	24.8
Single Parent with Children	1,826	6.8
Other	1,761	6.5
Total Households	27,040	100

U.S. Census: 2000 (SF1)

3.3.3. Age Composition The most noteworthy characteristic of Cole County's population is the age distribution of the residents and trends. Using information from the 2000 census and the latest bureau estimates, there are four focal points as discussed below that have important ramifications.

The first is the age group between 5 and 14. This is the age cohort of children in elementary and middle school. Between 2000 and 2008, the Bureau of the Census estimates that this drop decreased in number by almost 4%. While this is not a huge drop, it indicates that families with school age children are leaving the County when these children reach school age. This is especially significant considering that the number of children under 5 actually increased by approximately 8%. The second focal point is the drop in the number of young adults between 25 and 44, particularly for those age 35 to 44, which decreased by 13%. This is important because it indicates that a group which should be one of the most stable segments of the population is leaving the County in significant numbers. The decrease in this segment would also partially explain the decrease in the 5-14 group since the group 25 and 44 represent the bulk of the potential child rearing population.

On the other hand, the third focal point in the census data is the remarkable increase in the number of "near elderly" or

those between the ages of 55 and 64. A fairly large number of this age group is moving into the County after becoming “empty-nesters” but before reaching retirement age.

The fourth or last focal point is reflective of national trends, but is still worthy of comment. As with the rest of the country, Cole County has an increasing number of seniors over 85. This group will increasingly have special housing and medical needs that will have a significant effect on County resources.

7. Cole County Age Composition: 2000-2008

Age Range	2000	2008	% Change
Under 5	4,658	5,008	7.5
5-14	9,680	9,313	-3.8
15-24	9,925	10,197	2.7
25-34	10,829	10,408	-3.9
35-44	12,237	10,611	-13.3
45-54	10,272	11,028	7.4
55-64	5,715	8,803	54.0
65-74	4,170	4,617	10.7
75-84	2,802	2,968	5.9
Over 85	1,109	1,360	22.6
Total	71,397	74,313	4.1
Median Age	35.5	37.2	4.8

U.S. Census: 2000 (SF1)/2008 (2008 Population Estimates)

3.3.4. Household Income Cole County is a relatively prosperous area. Not only is its present median household income almost 9% higher than the state median, it also has a significantly lower percentage of residents living below the poverty line compared to the statewide rate (10.9% vs. 13.3%). (American Community Survey: 2007). Moreover, as the chart below indicates, while Cole County does not have as large a proportion of its residents in the top income quintile (\$91,705 in 2009 dollars) as either Missouri or the United States, it has a larger percentage in this category than either in the second and third quintiles (currently



\$36,000 to \$91,705: U.S. Census Bureau: 2007).

8. Percentage of Households by Income Range

Income Range	Cole County	Missouri	United States
Under \$20,000	19.9	24.1	22.1
\$20,000-39,999	25.8	28.3	23.1
\$40,000-59,999	22.3	20.2	19.7
\$60,000-99,999	23.9	18.7	20.6
\$100,000-149,999	5.5	5.8	7.7
\$150,000-199,999	0.9	1.4	2.2
Over \$200,000	1.7	1.6	2.4
Median	\$42,924	\$37,924	\$41,994

U.S. Census 2000 (SF3)

3.4. SOCIAL CONDITIONS

Cole County is a desirable place to live. It offers a safe, healthy environment. There is relatively little crime. The schools are satisfactory. There is an adequate supply of housing in good condition that is relatively affordable. On virtually every social indicator, Cole County compares favorably with the rest of Missouri.

3.4.1. Health Cole County residents are generally healthy and have healthy lifestyles. Only 17% of the adult population smokes cigarettes compared to 23% statewide. Cole County has a relatively low rate of alcohol consumption, with only 4.2% of Cole County adults self-reporting heavy alcohol use. While 33.4 % of Cole County residents are considered overweight, this compares favorably with the state average of 36.2%. Out of 115 Missouri counties, Cole County ranks 104th in terms of heart-disease related deaths. The only two categories where Cole County ranks higher the state average in terms of mortality rates are for breast cancer and automobile-related accidents. The age adjusted rate of breast cancer among Cole County women is 20.1/100,000 vs. the state rate of 16.0. The age adjusted

mortality rate per 100,000 for traffic accidents is 23.4 in Cole County and 19.7 statewide. (Missouri Department of Health and Senior Services: 2003-2007 Community Data Profiles).

9. Cole County Health Status Indicators

Indicator	Percentage Cole County	Percentage Missouri
Pct Reporting Health as Fair or Poor	12.8	16.9
Pct with no Health Care Coverage	5.8	12.3
High Blood Pressure	30.3	28.5
High Cholesterol (35 years or older)	27.7	37.3
Diabetes	9.1	7.2
Never had a Mammogram	6.5	13.4

MU Extension Social and Economic Profile, Cole County (2003)

3.4.1. Crime Cole County is a relatively safe community. Compared to other rural or mixed counties in Missouri, Cole County has an average crime rate for personal and property crimes. Although theft-related crimes have increased slightly during the last year due to the economic downturn, it has not been dramatic. Moreover, while crime is somewhat concentrated in certain neighborhoods inside Jefferson City, in Westview Heights and east of Randall northwest of the city



limits, there are no real pockets of crime in Cole County (Interview with Cole County Sheriff Department).

10. Crimes in Cole County

Crime	2008	2009-through May
Part I: Personal		
Murder/Manslaughter	0/0	0/0
Robbery	3	2
Aggravated/Simple-Assault	40/229	11/105
Rape	3	6
Part II: Property		
Burglary	152	58
Larceny-Theft	327	71
Auto theft	17	3

Cole County Sheriff's Department FBI Data

Cole County also has an average rate for Part II or so-called victimless crimes. Traffic accidents and fatalities are a relative concern due to the heavy volume of traffic and excess speeds on the major highways leading in and out of the Lake of the Ozarks region, but alcohol-related traffic violations are not particularly high in the County. Drugs are not an exceptional problem for Cole County, but the Sheriff's office reports that it is quite aggressive in combating it. However, methamphetamine abuse is an issue as it is in many rural counties. (Interview with Cole County Sheriff's Department.)

3.4.2. Education Cole County compares quite favorably with the rest of Missouri in terms of the percentage of adults who have a college degree (27.4% vs. 21.6%). Moreover, while the County's high schools had a slightly lower graduation rate than the rest of Missouri in 2007, Cole County has a lower percentage of adults who do not have a high school diploma than the rest of the state (14.7% vs. 18.7%) (American Community Survey: 2007). All four Cole

County school districts are accredited, however, both Cole I and Cole V did not meet their targeted Missouri Academic Progress exam scores in either Communication Arts or Mathematics mandated by the No Child Left Behind Act in 2008.

11. Cole County School Enrollment

Population 3 years and over enrolled in school	18,780
Nursery school, preschool	828
Kindergarten	715
Elementary school (grades 1-8)	7,807
High school (grades 9-12)	4,723
College or graduate school	4,707

U. S. Census: American Community Survey (2007)

12. Cole County School Districts: Academic Performance

District	2008: K-12 Enrollment	2008 Attendance Rate:	2008 MAP: Proficient and above (Comm. Arts):	2008 MAP: Proficient and above (Math.):
Blair-Oaks	903	96.1	53.6%	54.1 %
Cole R-I	698	95.1	41.9 %	41.1%
Cole R-V	334	93.0	32.1%	25.0 %
Jefferson City	8,196	94.1	51.3 %	51.2 %

Mo. Department of Elementary and Secondary Education: 2008 Annual Report Card



3.4.3. Housing According to the American Community Survey, there are 32,071 housing units in Cole County. The majority are single family structures that are in good repair, according to a windshield survey conducted for this study. Only 9.7% of the units are vacant compared to a statewide rate of 12.3% (American Community Survey: 2007). Moreover, Cole County compares favorably with the state in terms of obsolete units. Only .1% of the units in this group lack in-door plumbing as compared to .4% throughout Missouri (American Community Survey: 2007).

There are relatively few mobile homes in Cole County. Only 4% of Cole County housing units are in this category compared to a statewide rate of 7.1% (American Community Survey: 2007). Based on visual observation during the existing land use reconnaissance, however, a significant number of these units may be substandard or show visual indications of blight.

Although Cole County has a slightly lower rate of homeownership compared to all counties statewide (67.8% vs. 70.3%), it compares quite favorably when compared to other communities that have a balance of urban and rural populations. Likewise, even though median value of owner-occupied structures is slightly less than statewide (\$123,800 vs. \$131,000), the higher cost of living in the St. Louis and Kansas City areas skews this average (American Community Survey: 2007). When the major metropolitan areas are taken out of these calculations, housing values in Cole County compare quite favorably with the rest of the state.

Housing is more affordable for renters in Cole County than it is for renters through the rest of Missouri. Average gross rent in Cole County is \$536/month compared to \$623/month statewide. As a result, a higher percentage of

renters in Cole County are able to find affordable housing. The Census Bureau defines affordable housing as housing that costs less than 30% of household income. While the lack of adequate affordable housing is still a problem in Cole County, the County compares favorably with the rest of Missouri in terms of this shortage. Roughly a third of renters (33.3%) Cole County renters pay more than 30% of their income in rent compared to almost a half (46.1%) throughout Missouri (American Community Survey: 2007).

13. Cole County Housing Composition by Type

Housing Type	Units	Percentage of Total
Single Family Detached	21,438	67.5
Single Family Attached	864	2.7
Two Family	2,100	6.6
Three or Four Family	2,334	7.3
Multi-Family	3,755	11.9
Mobile Home	1,273	4.0
Total Units	31,764	100.0

U.S. Census: American Community Survey (2007)

Housing construction in the 1960-1979 and 1980-1999 time frames were very similar at 9,765 units during the earlier twenty-year period and 10,486 in the more recent period. Average annual construction activity consisted of 488 units in the earlier period compared to 402 in the latter period.

The annual average number of housing units built during the entire thirty-year period between 1960 and 1990 was 506 units. The 2000-2007 annual average was 402 units. Thus, housing construction in the County is down by about twenty percent in the recent period.



14. Taos Subdivision



15. Cole County Housing: Year Structure Built

Years Built	Units	Percentage of Units
2000-2007	3,213	10.1
1980-1999	10,486	33.1
1960-1979	9,765	30.7
1940-1959	4,849	15.2
1939 or Before	3,451	10.9
Total	31,764	100.0

U.S. Census: American Community Survey (2007) Environment and Natural Resources

4. ENVIRONMENT AND NATURAL RESOURCES

4.1. INTRODUCTION

The physical environment defines Cole County's visual character. It is also a major factor in the determination of future growth, development, and conservation potential. Principal components include topography, water resources, and vegetation, and they can greatly influence land use patterns. Consequently, the physical environment provides direction as to where future growth may be appropriate and where it should be avoided. (Refer to Graphics 29 and 30.)



16. Environment - Field

4.2. PHYSICAL ENVIRONMENT



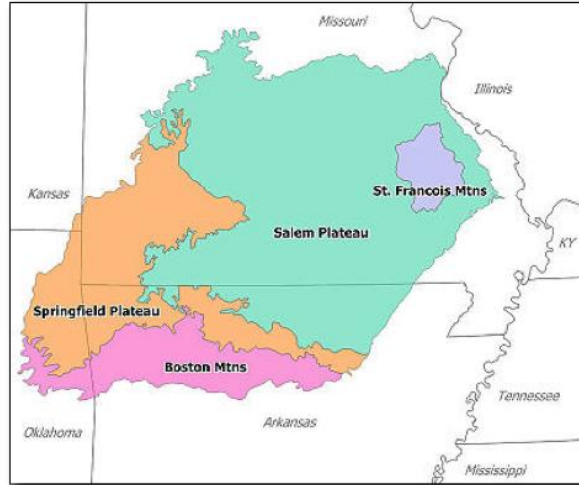
17. Location of Cole County Missouri

Source: "Cole County, Missouri." Wikipedia, The Free Encyclopedia.

4.2.1. Location Cole County is situated near the geographical center of the State of Missouri and located on the south bank of the Missouri River.



4.2.2. Physiography Cole County is on the northern edge of the Ozark Plateau. The Ozark Plateau is a physiographic, geologic, and cultural highland region of the central United States that covers much of the southern half of Missouri and an extensive portion of northwest and north central Arkansas, northeast Oklahoma, and the very southeast portion of Kansas.



18. Ozark Plateau with Physiographic Sub-Sections

Source: "The Ozarks." Wikipedia, The Free

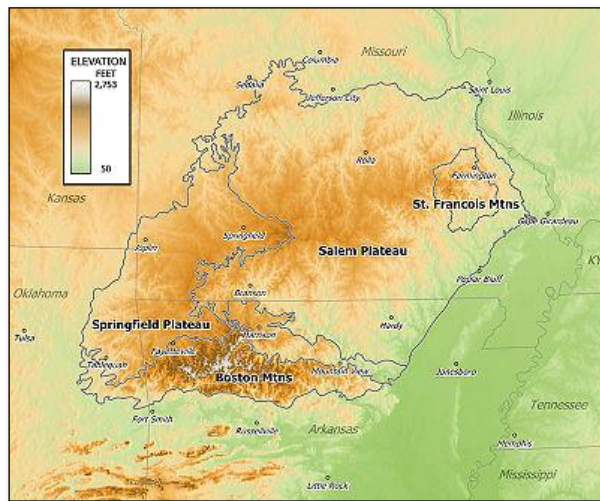
Although sometimes referred to as the Ozark Mountains, the region is actually a high and deeply dissected plateau. Geologically, the area is a broad dome around the Saint Francois Mountains. The Ozark Highlands area, covering nearly 47,000 square miles, is by far the most extensive mountainous region between the Appalachians and the Rocky Mountains.

The Ozark Plateau consists of four primary physiographic sections—the Springfield Plateau, the Salem Plateau, the Saint Francois Mountains, and the Boston Mountains. Cole County falls within the Salem Plateau.

4.2.3. Topography Topography is mostly gently rolling, except in the Boston Mountains, along the escarpments separating the Springfield and Salem Plateaus, and the Saint Francois Range where it is rugged. Karst features such as springs, streams, sinkholes, and caves are common in the limestones of the Springfield Plateau and abundant in the

dolostone bedrock of the Salem Plateau and Boston Mountains.

Missouri is known as "The Cave State" with over 6000 recorded caves (second to Tennessee); the majority of these caves are found in the Ozark counties.



19. Topography of Cole County and Surrounding Region

Source: "The Ozarks." Wikipedia, The Free Encyclopedia.

The Ozark Plateaus aquifer system affects groundwater movement in all areas except the igneous core of the St. Francois Mountains.

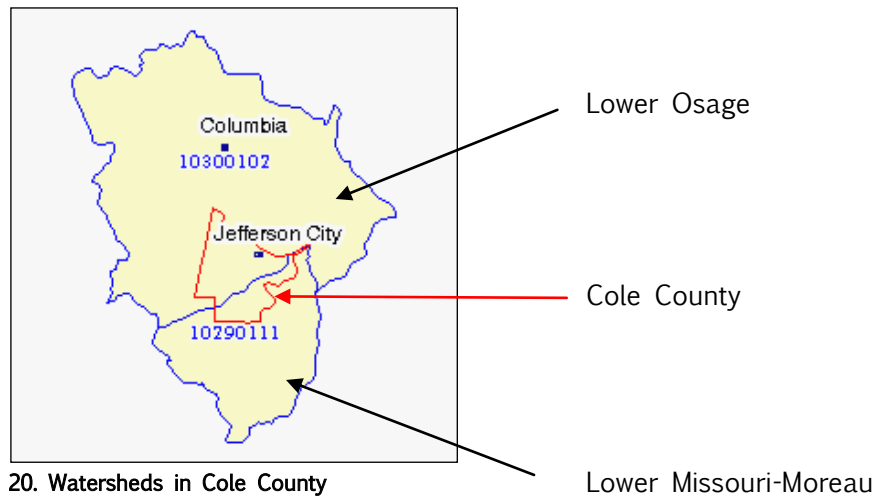
Geographic features unique to the Ozarks, particularly in Missouri, include limestone and dolomite glades—grasses and forbs in shallow soil on exposed bedrock in sloping, otherwise heavily forested areas.

4.2.4. Geology Cole County geology is dominantly dolomite, limestone, and some sandstone making central Missouri similar to the rest of the state's geology. The addition of water to the Cole County geology gives the region karst topography. By definition the karst environment means that subsurface water moves quickly. Caves, underground streams, and sinkholes can be found in Cole County. Karst can be a significant factor in development areas, and will be further examined in the plan chapter.



4.3.1. Water Resources Cole County has an area of approximately 399 square miles, approximately eight square miles of which is water (1.91%).

4.3.2. Watersheds Cole County crosses two major watersheds, the Lower Osage and the Lower Missouri-Moreau.



20. Watersheds in Cole County

*Source: "Surf your Watershed" U.S.
Environmental Protection Agency.*

One way to determine the health of a watershed is to use the "Clean Water Act Comparative Ranking" (CWACR) system which provides a way to compare the water quality of one area with another. The system ranks states, counties, and watersheds by the number of impaired waterbodies or the percentage of surface waters with impaired or threatened uses*. The rankings for both watersheds that cross Cole County, the Lower Osage and the Lower Missouri-Moreau, are found below.

(*An impaired or threatened waterbody is any waterbody that is listed in Section 303(d) of the Clean Water Act. A waterbody is considered impaired if it does not attain water quality standards. Standards may be violated due to an individual pollutant, multiple pollutants, thermal pollution, or

an unknown cause of impairment. A waterbody is considered threatened if it currently attains water quality standards but is predicted to violate standards by the time the next 303(d) list is submitted to EPA. The 303(d) list is a comprehensive public accounting of all impaired or threatened waterbodies, regardless of the cause or source of the impairment or threat.)

Lower Osage Watershed

According to State of Missouri and EPA data, the CWACR for the Lower Osage watershed indicates that the percentage of “Surface Waters with Impaired or Threatened Uses” is ten percent of surface waters within the watershed and the “Number of Impaired Waterbodies” is forty percent of waterbodies in the watershed.

Lower Missouri-Moreau Watershed

The CWACR for the Lower Missouri-Moreau watershed indicates that the percentage of “Surface Waters with Impaired or Threatened Uses” is forty percent of surface waters within the watershed and the “Number of Impaired Waterbodies” is seventy percent of waterbodies in the watershed.

4.3.3. Rivers *Missouri River* The Missouri River, which forms the northern border of Cole County, drains approximately one-sixth of the water runoff in the United States and is the longest river in the country. The Missouri was once considered one of the “most diverse and dynamic ecosystems in all of North America.” Flood control

structures, power plants, and other engineering projects have profoundly changed the course of the river since Lewis and Clark first traversed the river in the early 1800's.



Historically, the river has been the source of significant flood damage in the County due to the high number of urban centers that are in such close proximity. This association coupled with the low relief of the County makes flood-related hazard mitigation planning particularly important. New techniques for accomplishing this are available and will be explored in the plan chapter.

21. The historic Missouri River is the longest river in the country and drains one-sixth of its water runoff.
(Photo: JPA.)

In recent years increasing debate over the future of the Missouri River has taken place throughout the seven states it runs through. Some areas would like to see the river used for more recreational purposes and less commercial traffic. Other parties are more interested in environmental impacts. Still others have entirely different agendas for the river. Whatever the U.S. Army Corps of Engineers, the overseer of the river, decides to do, Mid-Missouri and specifically Cole County will feel the impact. Missouri will feel the impacts of river management farther upstream. If river flow is increased to allow more barge traffic or decreased for environmental purposes, these actions affect Cole County.

Osage River The Osage River, which establishes the eastern boundary of Cole County, is a tributary of the Missouri River that measures 500 miles in length. The Osage is one of the larger rivers in the State of Missouri and drains an area of 15,300 square miles that is mostly rural. Its watershed includes an area of east central Kansas and a large portion of west central and central Missouri where it drains northwest areas of the Ozark Plateau.



22. Photo of Osage River Entering Missouri River

Source: Wark, Jim. "A Delightful Prospect". *Discovering Lewis & Clark*.

The Osage is impounded in two major locations at the Harry S. Truman Reservoir and the Lake of the Ozarks. The Osage joins the Missouri River approximately 15 miles east and downstream of Jefferson City.

Moreau River The Moreau River is formed by the union of North Moreau Creek and South Moreau Creek and empties into the Missouri River just south of Jefferson City. The river's watershed is approximately 584 square miles and the river has an average discharge of 381 cubic feet per second.

4.3.4. Streams According to the Cole County Soil and Water Conservation District, there are 1,144 miles of streams in Cole County, 75 percent of which flow intermittently. Fifty-three miles of streams in Cole County are classified as

“gaining streams”, meaning that groundwater discharges contribute significantly to the stream flow volume.

4.3.5. Lakes There are four lakes in Cole County that are greater than 10 acres in size and they include BinderLake, Twehous Lake, Lake Carmel, and Dove Lake.

Binder Lake

Binder Lake is a 134-acre lake located in Binder Park.



23. Binder Lake. (JPA photo)

Twehous Lake

Twehous Lake, located in the middle of Taos, is a 41-acre reservoir.

Lake Carmel

Lake Carmel, located approximately six miles southeast of Russellville (air distance) covers approximately 38 acres.

Dove Lake

Dove Lake is about one mile west of Twehous Lake, also in Taos is almost 17 acres in size.

Quail Valley Lake

Quail Village Lake is located north of Route C and west of Highway 54.

Brazito Lake

Brazito Lake is located on West Brazito Road approximately 5 miles west of Highway 54.

According to County data, there are eleven additional lakes in the County that are less than ten acres in size. These lakes include Scott Lake (8.9 acres), Anderson Lake (8.7 acres), Winegar Lake (8.2 acres), Henley Lake (7.2 acres), Patterson Lake (7.2 acres), Woodward Lake (5.9 acres), Lake Calaradean (4.9 acres), Teds Lake (4.6 acres), Hough Park

Lake (4.2 acres), Lakewood Estates (4.2 acres), and Forest Lake (2.7 acres.) A twelfth lake, Renns, has been drained and is no longer functioning.

4.3.6. Floodplains The 100-year floodplain within Cole County is generally located along the Missouri, Osage, Moreau Rivers as well as along North and South Moreau Creek. The Missouri River floodplain is by far the largest in this system. Due to the fact that the County's floodplain data is older and does not reflect more recent development, and given broader systemic impacts associated with climate change, floodplain mapping for the purposes of this plan is very general and is intended to provide only a very general understanding of where flooding might occur. Detailed floodplain mapping should be consulted when determining whether a specific area of Cole County falls within the floodplain. Such mapping is available from the Federal Emergency Management Agency (FEMA).

Development in the floodplain should be discouraged due to the potential risk to public safety and property damage. The Missouri River has also been designated as an endangered river by one authority (American Rivers), in large part due to the regulation of flow by the dams and non-point agricultural runoff. This designation potentially means that flooding impacts could be exacerbated in Cole County because of contaminants such as fertilizers and other agricultural products. The damming of the river also means that should there be a dam failure upstream, Cole County could suffer more heavily without adequate controls in place.

4.3.7. Water Quality According to the Clean Water Act Status Report for Cole County, the percentage of surface waters within the County with reported problems was two



percent of the County total. The report identified the following eleven waterbodies as waterbodies with “reported problems”:

1. Bynum Creek
2. Cedar Creek
3. East Brush Creek
4. Hinkson Creek
5. Kelly Branch
6. Manacle Creek
7. North Moreau Creek
8. Osage River
9. Rocky Fork
10. Stinson Creek
11. Straight Fork

Leading pollutants were reported to include sediment, salinity, total dissolved solids, chlorides, and low dissolved oxygen /organic enrichment. Leading sources of these pollutants are as follows: municipal point sources (36%), resource extraction (36%), urban runoff/storm sewers (9%), and other (18%).

According to Section 303(d) of the 1972 Clean Water Act, states are required to develop lists of impaired waters (waters that do not meet water quality standards even after point sources of pollution have installed the minimum required levels of pollution control technology). The law requires that these jurisdictions establish priority rankings for waters on the lists and develop what are known as Total Maximum Daily Load, or TMDLs, for these waters. According to the United States Environmental Protection Agency (USEPA), a TDML is “a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and an allocation of that load among the various sources of that pollutant.”

Cole County lakes and streams on the “303(d) list” include 129 miles of the Missouri River, 82 miles of the Osage River, and two smaller recreational lakes, Hough Park Lake and McKay Lake.

The Missouri River is on the 303(d) list due to point and nonpoint sources of chlordane. There are numerous private drinking water wells, 52 public drinking water wells and 43 community drinking water wells.

Hough Park Lake, McKay Lake and the Osage River are on the 303(d) list due to excess levels of mercury.

4.3. NATURAL LANDCOVER

The natural landcover in the County can be further broken down into seven specific categories listed in the table below. These categories are described in further detail after the table.

24. Cole County Natural Landcover Types

Landcover	Approximate Acreage	Approximate Percentage of Land within Cole County
Barren or Sparsely Vegetated	175	0.07%
Cropland	29,979	11.98%
Grassland	96,192	38.44%
Forest	90,562	36.19%
Open Woodland	1,777	0.71%
Wetlands	5,906	2.36%
Open Water	12,762	5.10%

4.3.1 Barren or Sparsely Vegetated Land Barren or sparsely vegetated lands within the County include minimally vegetated areas such as bluffs, quarries, and natural expanses of rock, mud, or sand. There are approximately



175 acres of barren of sparsely vegetated land within the County, comprising .07 percent of the total land in the County.

4.3.2 Cropland This landcover category includes row, close-grown, and forage crops that consist mainly of corn, soybeans and wheat. The County is currently comprised of approximately 29,979 acres of cropland that constitutes 11.98 percent of the County's natural landcover.

Over the past seven to ten years there has been a significant change in the cropland and grassland acre percentages in Cole County. Approximately 60 percent of the cropland acres have been changed to grassland acres. This is thought to mainly be due to fact that many croplands have been enrolled in the U.S. Department of Agriculture's Conservation Reserve Program (CRP) Conservation Reserve Program (CRP). (The CRP program encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover. Farmers receive an annual rental payment for the term of the multi-year contract.)

Because the first round of the 10-year enrollments in the program is coming to an end, and with the increased demand for ethanol, it is expected that a large portion of this acreages will likely change back to cropland in the near future. This will generate both positive and negative impacts. It will have a readily positive outcome on the County's agricultural-based economy, but it will also negatively affect the environment. For example, if it is conservatively assumed that 60% of the County's existing 96,000 acres of grassland coverage (about 57,000 acres) were to be converted to

actively-managed croplands, this would result in a significant increase in pesticide and chemical-laden runoff.

Currently the majority of the farms in the County are privately owned with the average farm size at 170 acres.

Irrigation in the County occurs mostly in the Osage and Missouri River bottoms where both stream water and shallow irrigation wells are being used.



4.3.3 Grassland Grasslands include land dominated by native warm season or non-native cool season grasses. There are approximately 96,192 acres of grassland found in the County which accounts for 38.44 percent of the County. There are more grasslands than any other type of natural landcover in the County, followed by forest at 36.19 percent. Should the CRP grasslands described in the previous section be converted to crop production, then it will become increasingly important to more actively manage the remaining grasslands so they can help to mitigate the negative public health effects related to increased pesticide and agricultural chemical usage resulting from increased crop production.

4.3.4 Forest Land designated as forest within the County contains more than 60 percent tree cover and includes deciduous and/or evergreen trees. There are approximately 90,562 acres of forest land in the County totaling 36.19 percent of the acreage in the County. Of this 36.19 percent forest, approximately 33.28 percent is deciduous trees and approximately 2.91 percent is evergreen.

Tracts of forest are small and require special management to maintain suitable conditions for production of timber, water quality, recreation and wildlife habitat.

4.3.5 Open Woodland Open woodland includes land with less than 60 percent tree cover of deciduous woody/herbaceous vegetation. Within the County there are approximately 1,777 acres of open woodland; this comprises 0.71 percent of the land within the County.

4.3.6 Wetlands The wetlands classification includes both woody-dominated and herbaceous-dominated wetland with semi-permanent or permanent flood waters. There are approximately 5,906 acres of wetlands in the County accounting for 2.36 percent of the total County land.



25. Environment - Stream

Most of the wetlands within the County occur within the Marion Bottoms Conservation Area. There are other wetlands scattered throughout the County primarily occurring at various locations along the Missouri, Osage, and Moreau rivers and the North Moreau and South Moreau creeks.

4.3.7 Open Water There are 12,762 acres of open water in the County, which includes rivers, lakes, ponds, and other open water areas. Open waters make up 5.10 percent of the land in Cole County.



26. Summary of All Landcover Types in Cole County

Landcover	Approximate Acreage	Approximate Percentage of Land within Cole County
Impervious Surfaces	522	2.10%
High Intensity Urban	851	0.34%
Low Intensity Urban	6782	2.71%
Barren or Sparsely Vegetated	175	0.07%
Cropland	29,979	11.98%
Grassland	96,192	38.44%
Forest	90,562	36.19%
Open Woodland	1,777	0.71%
Wetlands	5,906	2.36%
Open Water	12,762	5.10%
TOTAL		100%

4.4. WILDLIFE

The Missouri Department of Conservation (MDC) has taken a non-traditional approach to fish and wildlife conservation in the state that is known as “All Wildlife Conservation”. All Wildlife Conservation is about conserving all plants and animals as well as the natural systems they depend on. Instead of focusing on single species, All Wildlife Conservation considers entire natural communities and “nurtures the conditions that nurture the parts.” By the time many species are listed as “endangered” it is often too late and/or too costly to save the species. All Wildlife Conservation helps prevent species from becoming listed as threatened or endangered in the first place.

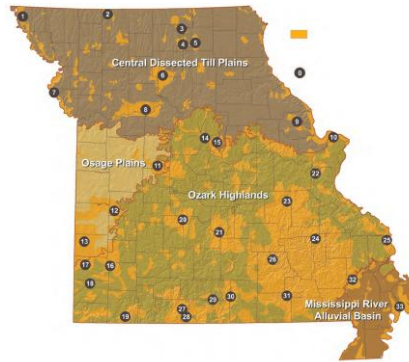
The MDC has identified four “ecoregions” within the state of Missouri that produce different types of wildlife. These ecoregions are as follows:

- Central Dissected Till Plains
- Osage Plains
- Ozark Highlands
- Mississippi River Alluvial Basin

Cole County falls within the Ozark Highland Ecoregion (Refer to Graphic 27). MDC has identified four “Priority for ‘All Wildlife’ Conservation” areas in Cole County which are depicted on the “Environmental Features & Conservation Opportunities” map found in this document.

These areas were identified through the Comprehensive Wildlife Strategy process that was undertaken by each state in

2005 to protect wildlife and the natural systems on which they depend. Following congressional guidelines, the Missouri Department of Conservation worked with federal and state agencies, communities, organizations and local citizens to identify high-quality places where efforts should be concentrated.



27. Ecoregions in the State of Missouri.
Source: “Conserving All Wildlife in Missouri – A Directory of Conservation Opportunity,” MDC. 2005.

4.5. CLIMATE

Average daily high temperatures in Cole County are in the mid to high 80s during the summer months and in the high 30s to mid 40s during the winter (see Table 28 below). The average monthly precipitation in Cole County is 3.3 inches with an annual average of 32.75 inches of precipitation, approximately ten inches of which will be snowfall.



28. Cole County Average Monthly Climate Summary

Month	Average Maximum Temperature (F)	Average Minimum Temperature (F)	Average Total Precipitation (in.)
January	38.6	17.7	1.65
February	45.1	22.2	2.02
March	55.9	31.7	3.17
April	66.6	41.9	3.71
May	75.3	52.1	4.85
June	83.9	61.4	4.11
July	89.4	66.3	3.71
August	88.3	64.1	3.46
September	80.4	55.0	3.46
October	69.5	43.3	3.31
November	54.8	32.6	3.53
December	42.8	22.4	2.59
Average	65.88	42.56	3.30

Source: www.weather.com

29. Insert Environmental Constraints and Conservation Opportunities
Map



30. Insert Existing Parks, Conservation Lands and Trails Map



5. EXISTING LAND USE

5.1. INTRODUCTION AND METHODOLOGY

As a starting point in this section of the study, existing land uses such as farm and rural homes, homes in subdivisions, public and semi-public facilities, commercial and industrial uses have been surveyed and mapped. (Refer to Existing Land Use Map at the conclusion of the report – Figure 96.) Each of these uses is described and analyzed below. The Cole County Department of Public Works and the mapping consultant generated base maps showing existing roads, parcel lines, lot lines, railroads, power lines, rivers, lakes and other features that were used to conduct the land use survey. In addition, aerial photos U.S. Geological Survey (USGS) maps were also used for additional perspective and information including topographic contours, buildings, lakes, wooded areas, utility rights-of-way, parks, schools, hospitals and churches.

The consultants traveled all paved roads and some gravel roads to record existing land uses.

5.2. BUILDING TRENDS

5.2.1. Building Permit Trends An analysis of the annual construction of new houses and placement of manufactured housing provides an understanding of growth trends in the County as shown on Table 31. The annual permits for single family and multiple family units for the years 2000 through 2007 are shown on this table. It is noted that the date a permit is issued and date a house is completed can vary from six to nine months.



31. Annual Building Permit Trends, Cole County Unincorporated Area

Year	Single Family	Multiple Family	Manufactured Homes	Commercial
2000	154	30	21	24
2001	216	26	12	16
2002	181	17	7	16
2003	216	9	14	22
2004	221	11	18	19
2005	162	12	15	14
2006	164	10	11	9
2007	133	5	9	9
Total	1,447	120	107	129
Total Residential Units = 1,803				

During the years 2000 through and including the year 2006, the number of residential permits for single family units ranged from 154 to a high of 221 units in the year 2004. The total for this seven year period was 1,314 units, with an average of 187 housing units per year. There was an average of 15 multiple family units in the same seven year period. Manufactured housing was about the same at 14 units per year. The year 2007 was affected by national trends and the recession. Commercial permits started at a high of 24 buildings in the year 2000 and then declined to 9 units in 2006.

5.3. LAND USE CATEGORIES

Cities and rural areas have historically gone with the grouping and segregation of land uses. Commercial uses were located in front of Main Street, sometimes at the railroad station. Originally customers were able to do all their shopping within one walkable area. Homes were built

around this center and homeowners did not want commercial uses near their homes. Industrial uses usually were located further away from residential uses, sometimes along a rail spur on the edge of town, avoiding conflicts of noise and smoke near residential areas. Schools, parks and other public and semi-public uses were welcomed within the residential and commercial areas. This arrangement was eventually preserved in deed restrictions and later in building and subdivision regulations.

The following generalized land use categories were used during the land use survey and for the Existing Land Use Map.

1. Rural. Farmsteads, crop land, pastures, residences, woodlands and vacant land.
2. Residential. Residential Units on lots in a community or in a subdivision, including vacant lots in a community or subdivision.
3. Public Facilities and Public Buildings. Parks, schools, churches, hospitals, cemeteries, Semi-Public Golf courses and other open spaces.
4. Commercial. Buildings or land used for any business activity, including retail, restaurant, office or service uses.
5. Industrial. Manufacturing of any product, warehousing open storage of materials or products and any use that creates off-site noise, vibration, smoke or odors beyond the limits of the site.

5.4. EXISTING LAND USE PATTERNS

The rural areas of Cole County represent approximately 91% of the County's total land area. Farmsteads, croplands, pastures and wooded areas dominate these unincorporated



areas. For the purposes of this land use analysis the term “planning area” excludes the incorporated areas of Jefferson City, St. Martins and the seven smaller cities, towns and villages. In order to gain a clearer understanding of existing land uses in adjacent unincorporated areas, however, maps have been included which graphically depict generalized land use in the incorporated areas.

5.4.1. Residential Development Jefferson City has expanded six miles to the east, north of Highway 50 and about four miles to the west along Highway 50 and Old Lohman Road. Jefferson City and the smaller cities cover some 35 square miles (about 9%) of the County’s total land area of just over 400 square miles.

The “Residential” areas of Cole County, are generally located in subdivisions within a large suburbanized area surrounding Jefferson City. This area starts at Highway 179 at Cole Junction, extends along Wade road north of Elston to the west edge of St. Martins, then southwesterly to Highway 54 at Monticello Road, finally crossing Route B to the Osage River. St. Martins, Wardsville and Taos are all within this suburban area of the County.

The remaining “rural areas” of the County include Centertown, Russellville, Lohman and St. Thomas and comprise less than twenty subdivisions. There are no residential subdivisions in the west section of the County – on a north/south line from Marion, to Lohman and to Eugene. There are four subdivisions in the area north of Eugene, and four more are located along Highway 54 between Monticello Road and Eugene.

Residential lots along rural roads were not counted as subdivisions. Many of these parcels range in size from one

to ten acres. They usually front on paved roads and most of them are in the County's "Suburbanized area".

There are several areas south of the "Suburban area" that have clusters of lots of one to ten acres arranged in linear fashion. These are found along Tanner Bridge Road, Route E and Route B north of Osage Creek, and along the Highway 54 corridor, usually on roads within a mile of an intersection.

5.4.2. Commercial Development Within the foregoing defined "Suburban Area" and "Rural Area", there are a total of 85 commercial uses, not located in any of the seven cities. In addition, there are 28 commercial uses in the Business 50 corridor from the Jefferson City limits to the entrance to Binder Park. There are also 20 industrial uses.



32. Commercial Retail Area

Most of the commercial uses in the rural areas are at the intersections of numbered Highways. It is apparent that the land uses in Cole County are very orderly and generally compatible.

The Business 50 corridor extends from the Jefferson City Limits at rainbow drive to South Binder Lake Road, a distance of two miles. The frontages on this area are predominantly commercial, with over thirty businesses. There are sixteen industrial uses that are all in the category of light industrial. Four residential subdivisions have entrances from Business 50. This includes Lakeview Heights Drive; Ravenwood Drive; Gateway Drive, into a large subdivision that extends north to Rainbow Drive; and Veil of Tears Drive. There are a few single family homes and three trailer courts in this two mile stretch of Highway 50. The limits of the City



of St. Martins extend to the west edge of Binder Park and abut the Business 50 corridor in this unincorporated area of Cole County.

The commercial uses in the seven incorporated cities will be briefly reviewed in later sections of this report.

5.4.3. Industrial Development There is a relatively limited amount of industrial development within the Cole County Planning Area and outside of the seven cities. The locations follow:

- | | |
|---------------------------------------|----|
| • Southwest edges of Jefferson City | 6 |
| • Along Business 50 | 16 |
| • East side of Russellville | 3 |
| • Along Highway 54-near intersections | 3 |
| • Highway 50 east to Osage Bridge | 7 |

The above listing totals 35 industrial uses. There is also a sand quarry south of Wardsville on the Osage River, and a number of abandoned quarries throughout the County Planning Area. Most of the uses are light industrial – service industries and warehouses. These uses typically do not create any significant off-site noise, smoke or vibration. Nor do most of them generate significant and concentrated amounts of truck traffic as is common with heavy industrial uses.

The pattern of industrial uses in Cole County is primarily single-site in nature rather than in industrial parks or other groupings of multiple sites. There are many potential sites at intersections along the Highway 54 and Highway 50 corridors that are would be suitable for industrial development.

5.5. AN OVERVIEW OF LAND USES IN INCORPORATED CITIES

As previously discussed and in order to gain a clearer understanding of existing land uses in unincorporated areas that are adjacent to the cities, towns and villages of Cole County, this section provides an overview of land usage within these jurisdictions.

Existing land use within the seven cities, towns and villages are an integral part of the County. They generally contain activity generators such as convenience stores, gas stations, churches serving large and dispersed congregations and local school district facilities. Most of the public parks in Cole County are located in these cities. Often, ball fields operated by the Lions Club and other fraternal organizations are also sited in or near the cities. The following sections briefly summarize the land uses within each city, town and village.

5.5.1. Centertown This city is located at the west edge of the County on Highway 50. Its limits extend south of Highway 50 to Kings Chapel Road on the north, a distance of nearly two miles. The center of the city is at Broadway Street (Route U) and Lookout Trail, with a dozen businesses. The National Guard Armory is on North Monroe Street, with the City Park Just to the north. An American Legion Post is located on Route U south of the commercial area. Centertown had a population of 257 in the Year 2000. (Refer to inset from map provided by Cole County Public Works.)



33. Centertown

5.5.2. Lohman Lohman extends for nearly a mile



34. Lohman Mill



along Route D in the west County Area, with West Lohman Road passing through the north edge of the City. The population in the year 2000 was 168. All but one of the City's Commercial uses front on Main Street (Route D). Most of the residential uses are in a 12 block area around the commercial center, with 10 houses to the south. There is one church in town, and four large commercial uses south of Lohman at the intersection of Route D and Route C.

Lohman has a number of historic buildings, including the Farmers Bank of Lohman that is still in business. Most of the historic structures are in the old town 12 block area, between Elm Street and Walnut Street.

5.5.3. Russellville There are seven incorporated cities in the County in addition to Jefferson City. The City of Russellville is the most complete city, with a full range of residential, commercial, public and industrial uses. The City has 14 blocks with a population of 758 in the year 2000.

There are 23 commercial buildings, 15 light industrial buildings and 15 public and semi-public facilities. This includes a grade school and a secondary school, a City Hall, Post Office, fire station, a small park, a large park, seven churches and a cemetery.

Russellville has direct access to Jefferson City on Highway C, with connections to Highway 179 and Highway 54. Route U extends to the north to Highway 50, Route AA to the south and Route V to the west.

Russellville is a compact city, with almost all the land uses connected in the southwest quarter of the city limits. It is three-fourths of a mile wide (east-west) and one mile north-south, with about 25 blocks. There are 12 commercial uses

in the center business area, a post office and two churches. There are also eight commercial uses along Route C. A grade school and a park are on the south side with the Secondary School on a large site on the west edge of the City, on Route C. Most of the industrial uses are along Route C, with three industrial uses to the east of Old Route C.

5.5.4. St. Martins This city is a suburb of Jefferson City, consisting of large lot subdivisions with higher value homes. St. Martins is located along the north side of Highway 50 and west of Binder Lake. Its major connection to Highway 50 is the interchange at Lomo Drive – Route T. The 2000 population of 1,023 – making it the largest of the cities outside of Jefferson City.



35. St. Martins Church

The few commercial uses are located on Old Highway 50 at Lomo Drive, with the City Hall and a Fire Station in the area. WREN has a substation office complex east of Lomo Drive on Highway 50. There are also three industrial uses in this area.

On the west edge of St. Martins there is a second interchange with Highway 50, with Henwick Lane, which extends eastward along the north side of Binder Lake into Jefferson City.

St. Martins Church is on a large site a few blocks west of Lomo Drive. A small park is in the center of the City on Verdant Lane. The Knights of Columbus have a large facility at the north end of Lomo Drive near Henwick Lane.

5.5.5. St. Thomas St. Thomas is located in the center of a



bend of the Osage River, with the only connection to Cole County provided by a bridge across the river for Route B. There are only two other roads in the area – Upper Bottom Road on the west side of Route B and Lower Bottom Road on the east side of Route B.

The City limits of St. Thomas extend approximately one-half mile east-west and three-fourths of a mile north-south. Most of the land uses are in a nine-block area centered on Route B. There are six commercial uses, a church and eighty residential lots in the City. The Knights of Columbus have a facility at the south edge of town on Route B.

A section of the City limits extends north along Route B for about 4000 feet, at one lot deep on both sides of the road. There are thirty parcels in this corridor and three lanes intersecting with Route B. The 2000 population of the City was 287.

5.5.6. Wardsville Located on Route B extending from Highway 54 in Jefferson City, Wardsville is in a large suburbanized area of the County. The population of the City has increased from 976 in the year 2000.

There are many homes along Route B, Route M to the east and Route W to the south. Platted subdivisions in Wardsville are as follows:

- | | |
|------------------------|---------|
| • Grandview Drive - | 27 lots |
| • Van Loo Lane - | 8 lots |
| • Evergreen Lane - | 10 lots |
| • Somerset Lane - | 10 lots |
| • Pebble Creek Drive - | 11 lots |
| • Steeplegate Court - | 15 lots |
| • Cobblestone Court - | 17 lots |

- Pine Ridge Road - 10 lots
- Glendale Ct./South OaksDr./Whippoorwill Ct. – 33 lots
- Deer Haven - 98 lots on eight streets

These ten subdivisions have a total of 239 lots. They range in size from 2.5 acres in Deer Haven to one-half acre in Grand Valley.

There are a very limited number of commercial uses in Wardsville due to the good access to commercial facilities in Jefferson City. There are three uses at the main intersection of Routes B, M and W. This includes a gas station/convenience store, a restaurant, a car wash and a vacant store building. There is also a new bank at the intersection of Route B and Friendship Road.



36. Church in Wardsville.

St. Stanislaus Church is the focal point of Wardsville – and its spire can be seen from many rural roads in the area. The Blair Oaks High School on Route B and Falcon Lane, with a large twenty-acre site. The Falcon Athletic complex is north of the High School on Falcon Lane. The Osage Fire Station is on Route W a few blocks south of Route B. A cemetery is located to the west of the main intersection on Route B. The Missouri Conservation Department has a large facility on the east side of Route B along the Osage River.

The north-south distance of the City limits is four miles. The south City Limits is located on the banks of the Osage River for about one mile. Castle Rock Road extends south from Route M to a small subdivision just outside of the City Limits. The north city limit line of Wardsville is 300 feet south of the Jefferson City line on Route B.



5.5.7. Taos The City of Taos is located in the eastern area of the County less than one mile from Highway 50. The major access point on the east is at the interchange of Highway 50 and Route M. Stoney Gap Road extends from Route M to Highway 50 at the Osage River area. Route M extends west to Wardsville and Route B into Jefferson City.



37. Taos

Taos had a population of 870 in the year 2000. There are three large subdivisions on the Taos city limit line that are part of the “community”. Sunrise Drive and Edward Street north of Route M have about 70 lots. The area south of Helias Drive down to and including St. Francis Drive has 60 lots, and the Village Road area has 17 lots, for a total of nearly 150 lots.

The Bradford Court subdivision has over 50 lots ranging in size from one to one and one-half acres. The homes in this subdivision are very large and some of the most impressive in the County. Twehous Lane has four large lots on the lake with larger homes. Some of the early housing is located around the city’s original center at Route M and Schoolview Drive. There are four commercial uses in this town center area.

St. Francis Xavier Church is the focal point of Taos and is visible from the roads approaching the city. It is in the city center. The Knights of Columbus and playground is a block away on the south side of Route M. The St. Francis Xavier School is across the street on the north side of Route M. Osage Fire Station Number 1 is on the north side of Route M at Shamrock Road.



5.5.8. Towns and Villages There are sixteen small towns or villages throughout Cole County that often have only ten to twenty homes. A commercial uses were also noted. The largest of these is the town of Eugene, off Highway 54 at the southwest County line. These entities are a part of the land use pattern in the County and serve as a focal point for surrounding rural areas.

Marion

Marion is located on Highway 179 in the northwest corner of Cole County. There are a few houses and a vacant commercial building. The Missouri Conservation Department has a four square mile (\pm) wildlife area with a boat launch and parking lot in Marion.

Elston

Elston is located on Route T one mile north of St. Martins. The older part of the town north of the railroad tracks is laid out in square residential blocks with 50 \pm foot wide lots. A new church is situated at the corner of Route T and Elston Road, and a rental storage business is on Third Street. There are two trailer parks south of the tracks.

Scott

Scott is located two miles east of Elston on Scott Station Road, near the railroad tracks. There are 50 \pm lots in the Gray's Creek Valley Acres Subdivision, with a few completed houses.

Plummer

Plummer is located where the Old Lohman Road connects to Route D, a half-mile south of Highway 50. There are ten houses, a church and an industrial use in Plummer.

Scrivner

Scrivner is at the junction of five roads, including Scrivner Road, Dawson Road, Gully Road, Scrivner (SE) and North Branch Road. There is one house at this intersection on a ten-acre parcel, with nearby houses on larger lots.

Brazito

Brazito extends along the west side of Highway 54, with three crossing lanes with the highway. West Brazito Road is at the middle crossing. There are seven commercial uses on Pleasant Hill Road which is a frontage road along Highway 54. There is a church on the corner of West Brazito Road and the frontage road. A Cole County Fire Station is also on this road, as is a MoDOT facility where Route E crosses Highway 54. There are over twenty large acre residential parcels along West Brazito Road west of Highway 54.

Honey Creek

Honey Creek is located two miles east of Highway 54 on Honey Creek Road. There are a dozen homes in the area, some on larger one to three acre lots. The Immanuel Lutheran Church is on Tannerbridge Road in the center of this area.

Hickory Hill

Hickory Hill is located on the southwest side of Highway 54 United Spur crossing, about two miles north of Eugene. There are over 50 large platted residential lots ranging in size from two acres to fifteen acres. About half of the lots have an existing house.

Eugene

Eugene is the largest of the towns in Cole County. Having once been incorporated, it elected to dis-incorporate in 1998. It is located on Highway 17 a mile south of Highway 54. There are over 20 blocks of residential, with a population of over 300. Four commercial uses are located on or near



Highway 17. A Cole County Fire Station is located on the north edge of town on Highway 17. The large school complex on Highway 17 nearer Highway 54 occupies a 44 acre site. At the Highway 54 interchange there are seven commercial uses. The Country Club north of Highway 54 on Redfield Drive includes a Club House, an 18-hole golf course, 46 residential lots and two lakes.

Henley

Henley is located four miles east of Eugene at the terminus of Route H, a half mile north of the south boundary of Cole County. There are about a dozen houses and two commercial buildings.

Osage Bluff

Osage Bluff is located on Route B a few miles south of Wardsville close to the Route B bridge across the Osage River. There are a dozen homes in the area. The Hidden Valley Subdivision is just to the south of Osage Bluff.

Osage Bend

Osage Bend is on Route W four miles south of Wardsville in the big bend of the Osage River. There are several homes at the intersection of Route W and Osage Bend Road. Route W ends here. The church at this intersection is the dominant structure in Osage Bend.

Osage City

Osage City is located in the far northeast corner of the County on the Osage River as it turns into the Missouri River. The town consists of ten city blocks with houses and trailers on individual lots. There are four commercial uses and a vacant industrial structure. Osage City is unincorporated.

Schubert

Schubert is a place located at Route J and the Highway 50 interchange. There are twenty homes along Route J north of the interchange and three commercial uses and one industry south of the interchange.

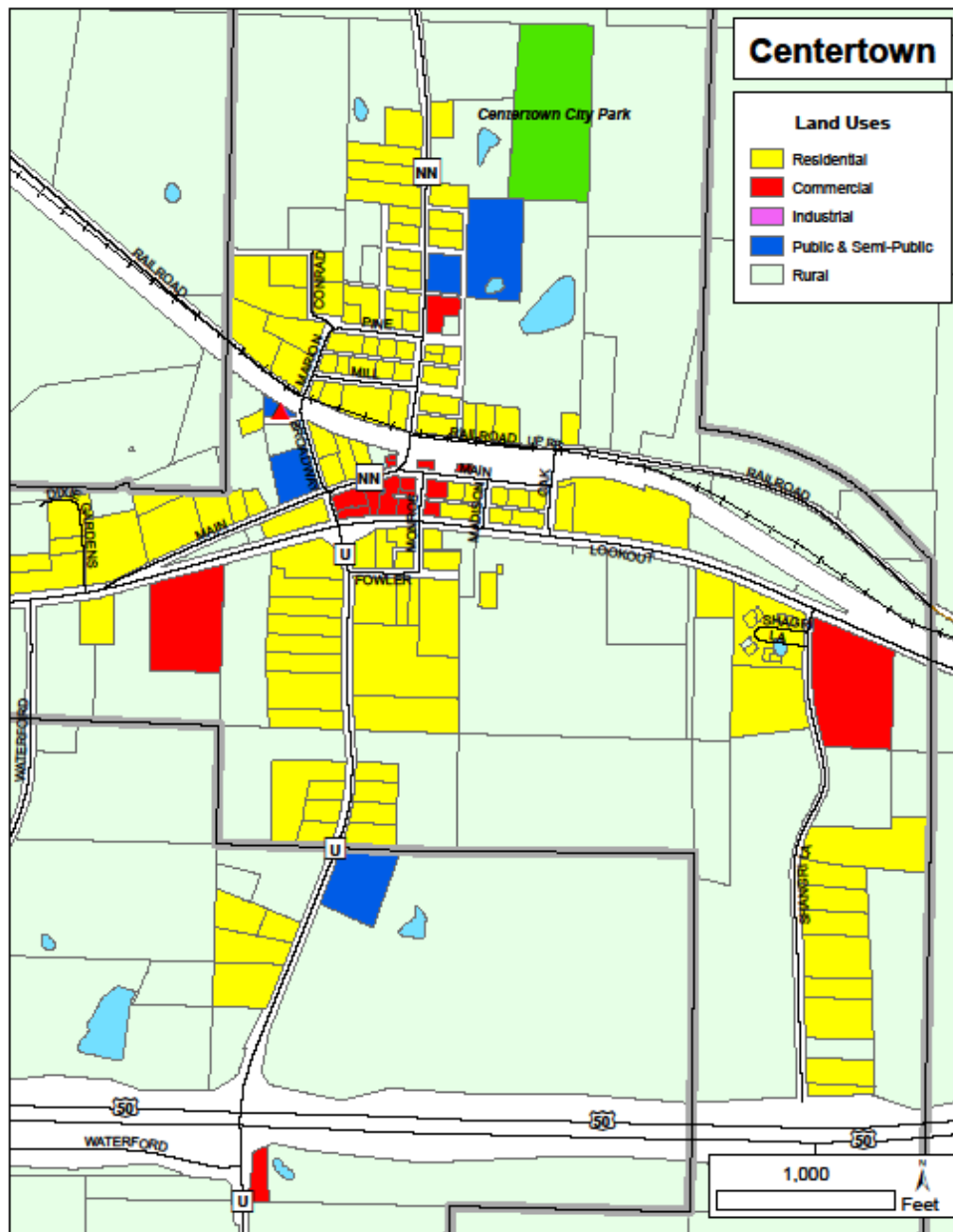
5.5.9. Lake Developments The Quail Valley Lake development is located on Route C, a half mile south of the Jefferson City Limits, on Foxdale Drive, Canteberry Drive and Covey Lane. There are 112 residential lots, with 39 lots that have lake frontage. There is a community park on the lake at Foxdale Drive.

The residential lake project on West Brazito Road includes a large lake (Lake Carmel) and over 180 residential lots. Fifty lots have houses, of which 15 have been built in the last three years. The development includes one hundred acres (\pm) and is one-half mile long - north-south. There are five interior streets with residential lots, with eight lots fronting on West Brazito Road. The lake is 2000 feet North-south, with a southwest bay at 1000 feet long. The dam is on the east side of the lake, with Old Forge Road along the top of the dam, providing excellent views of the lake.

In the concluding phase of this study, a proposed Land Use Plan will be prepared for the unincorporated portion of Cole County that reflects the work described herein. It will also reflect outcomes from the rest of the existing conditions analysis and from the public engagement process.

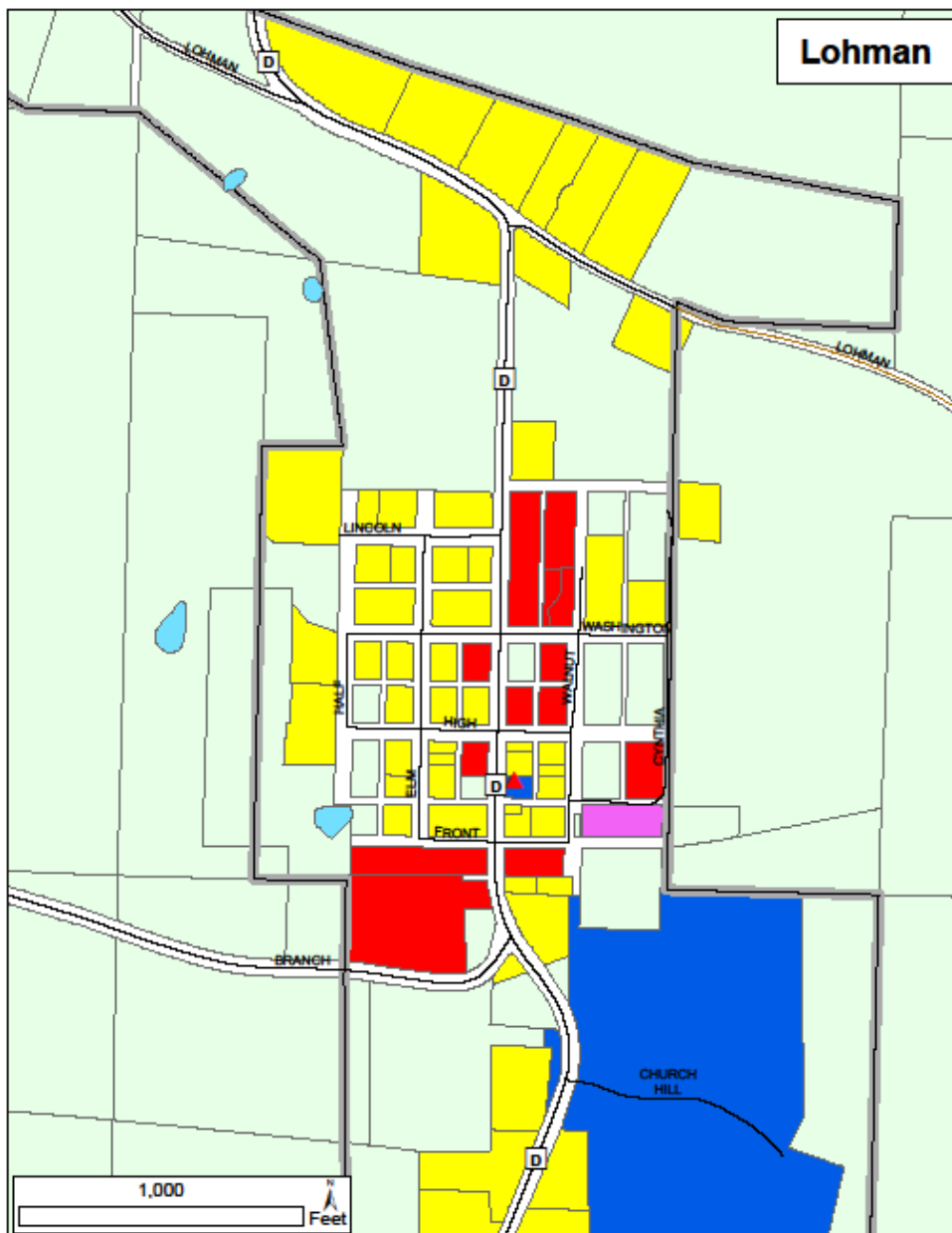


38. Centertown



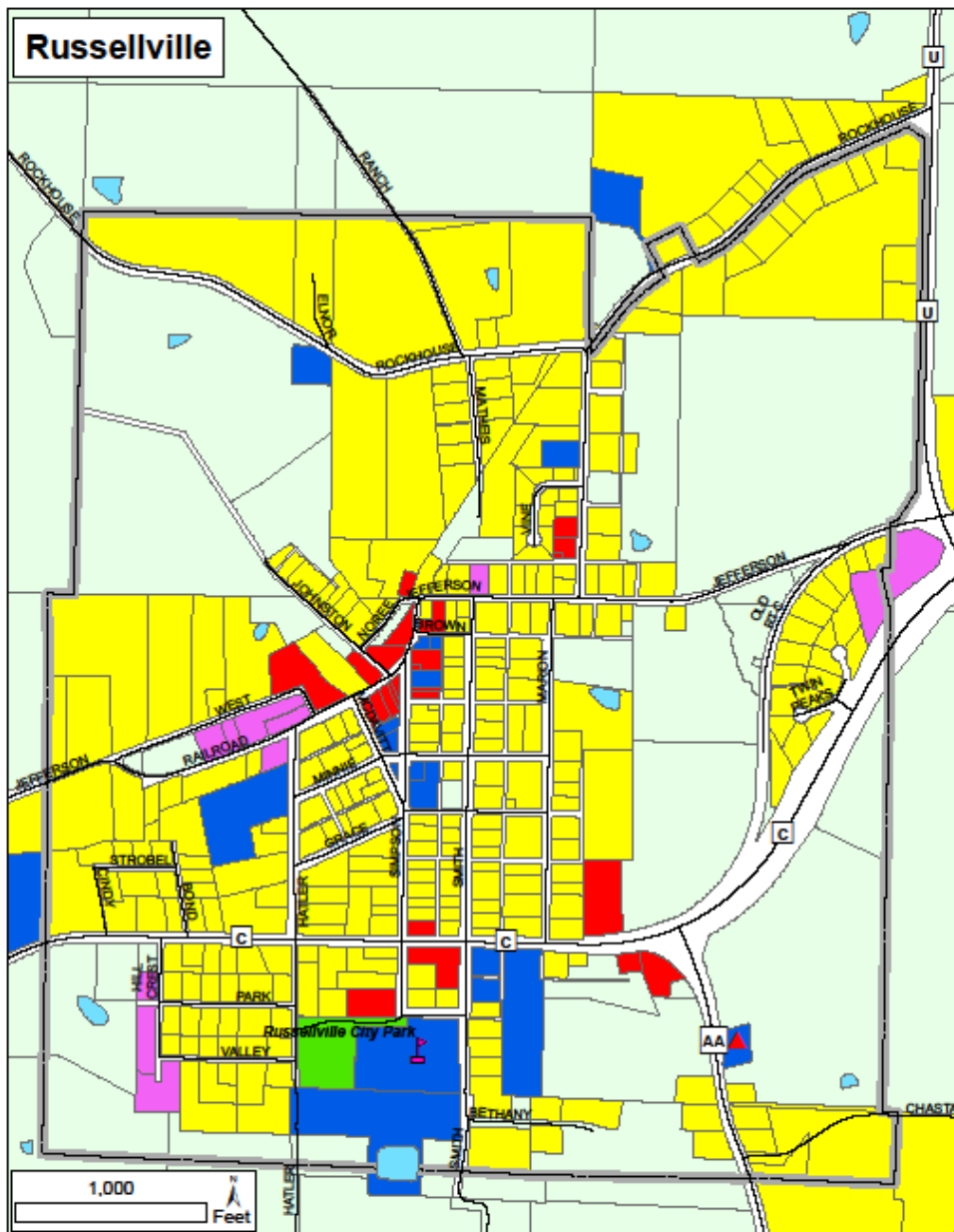


39. Lohman



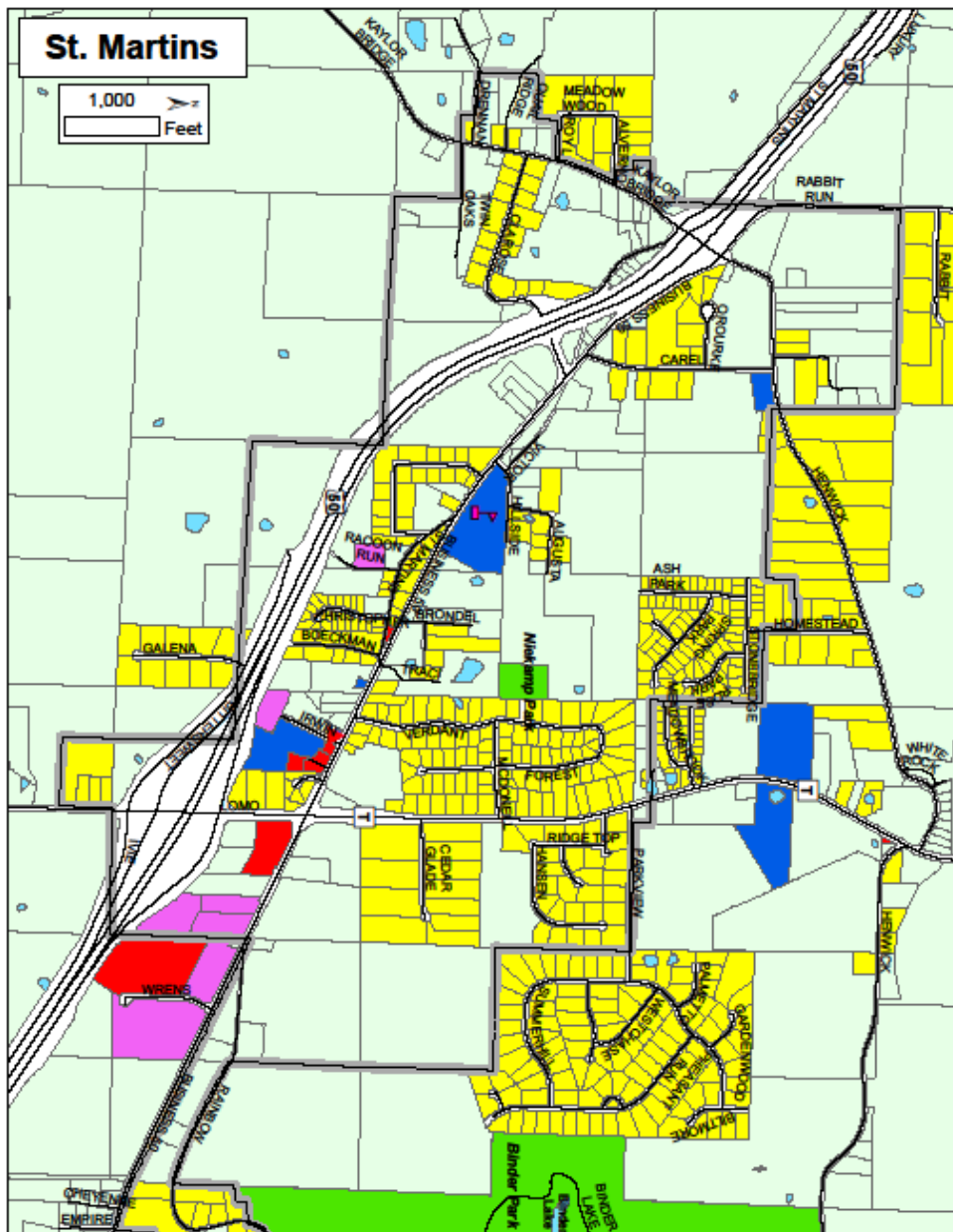


40. Russellville



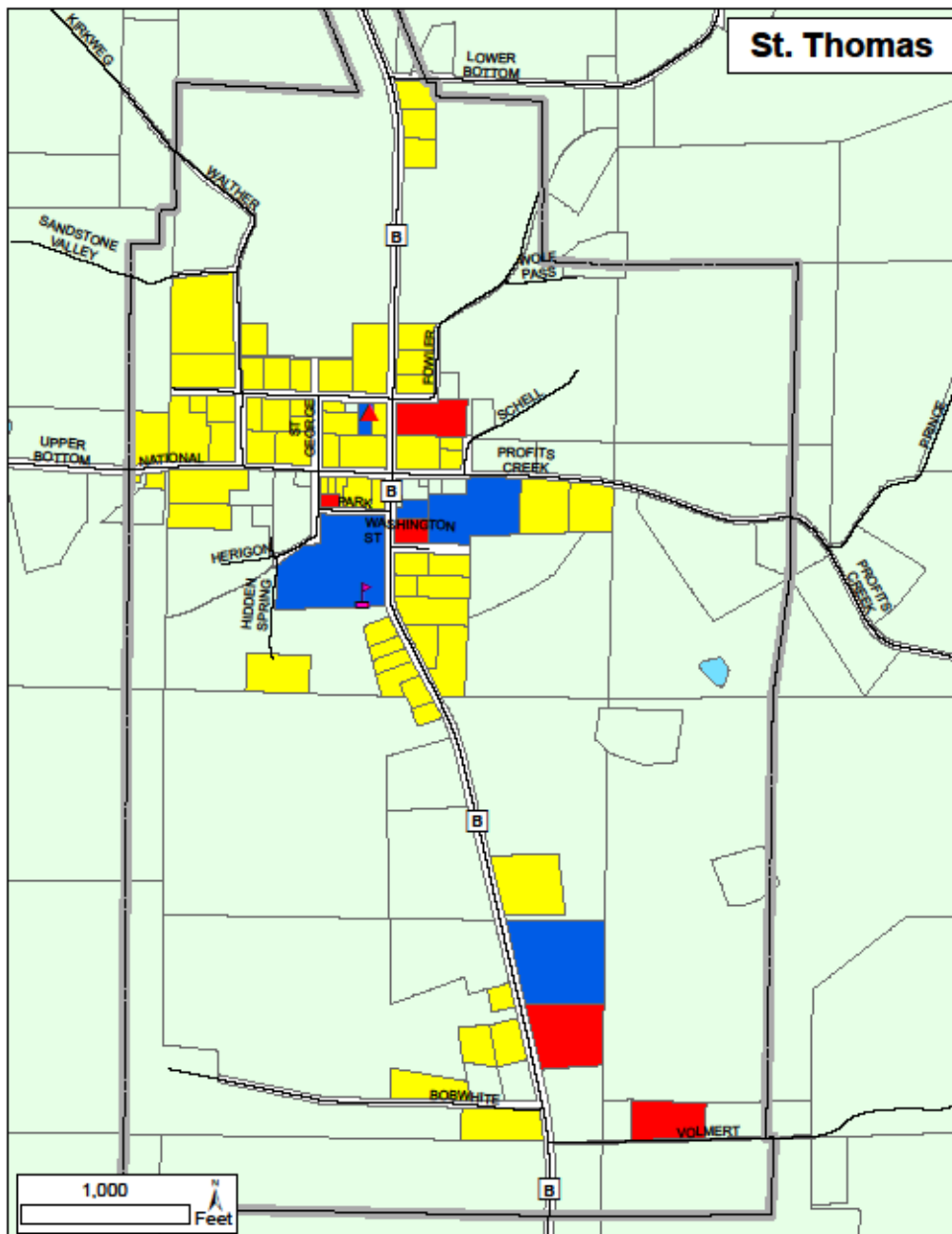


41. St. Martins



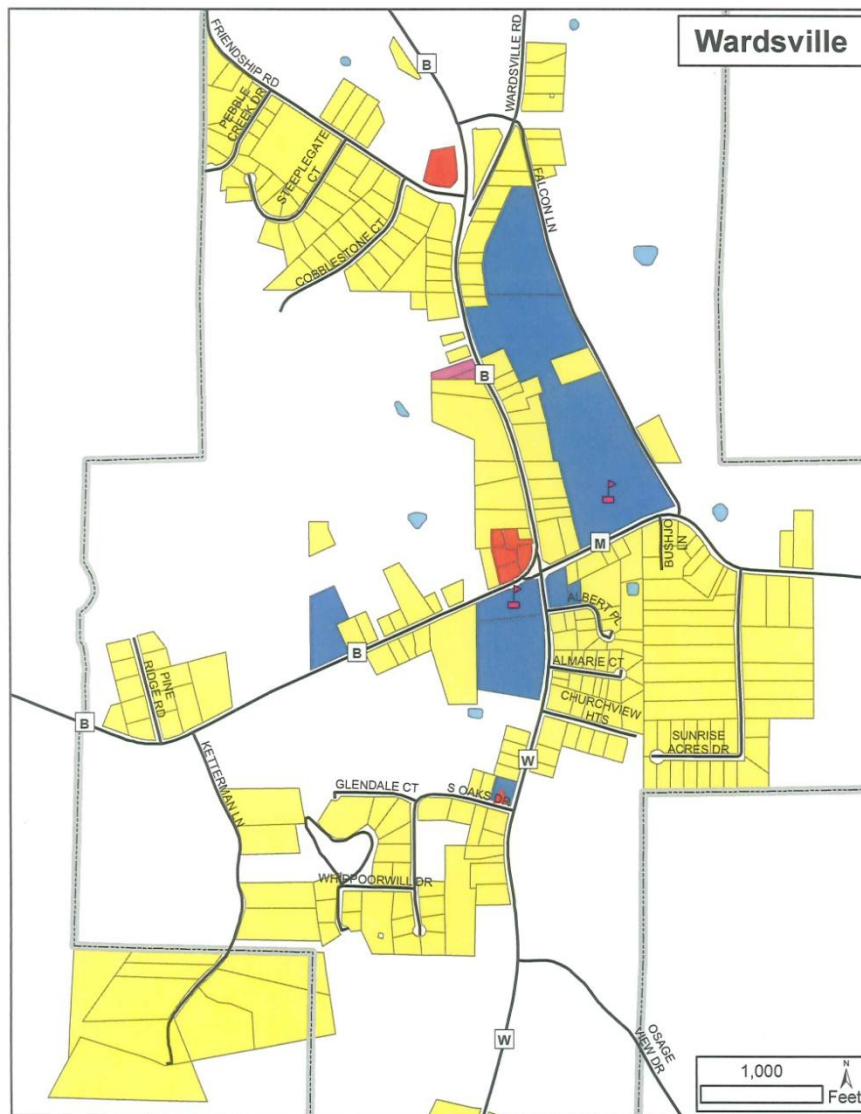


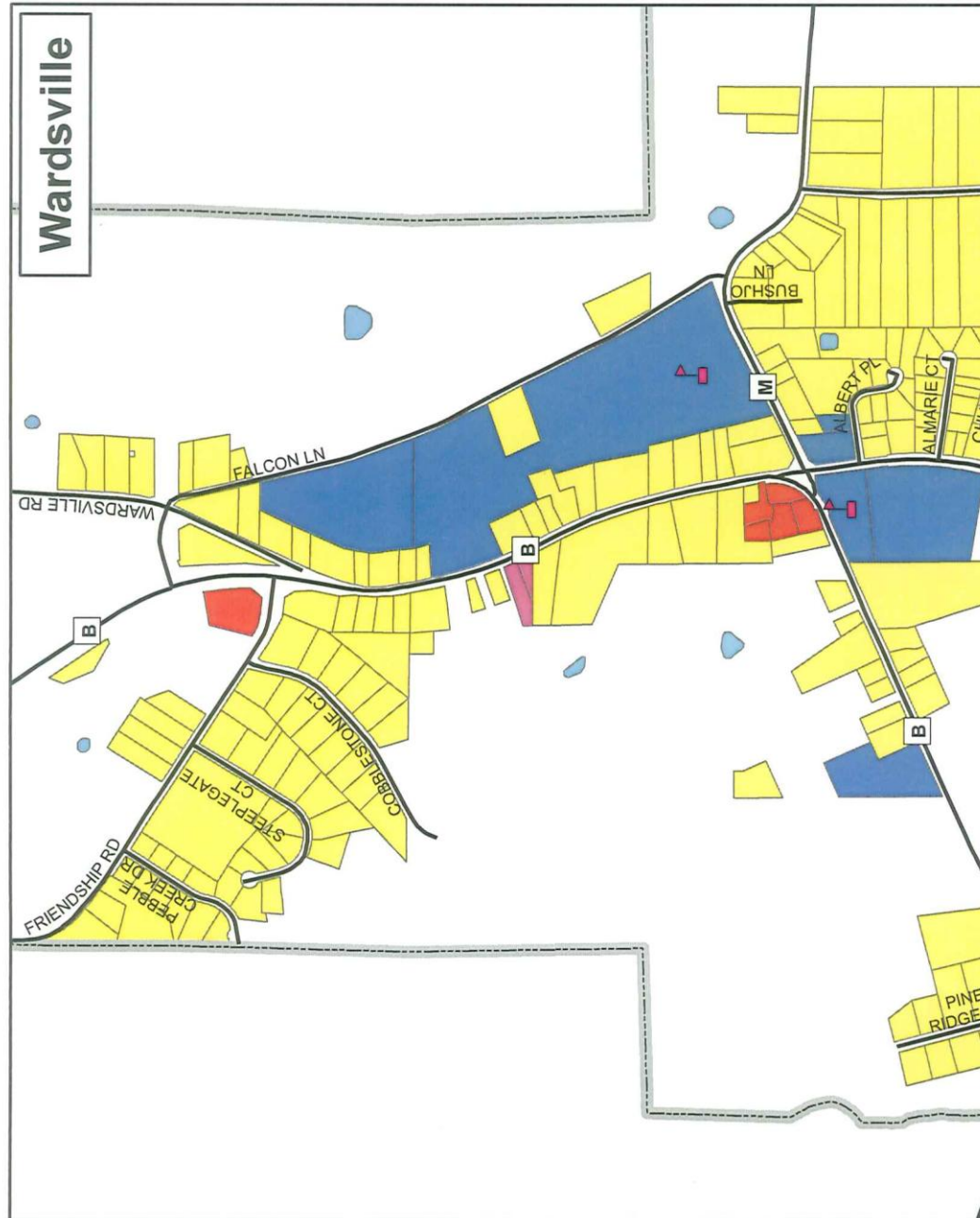
42. St. Thomas





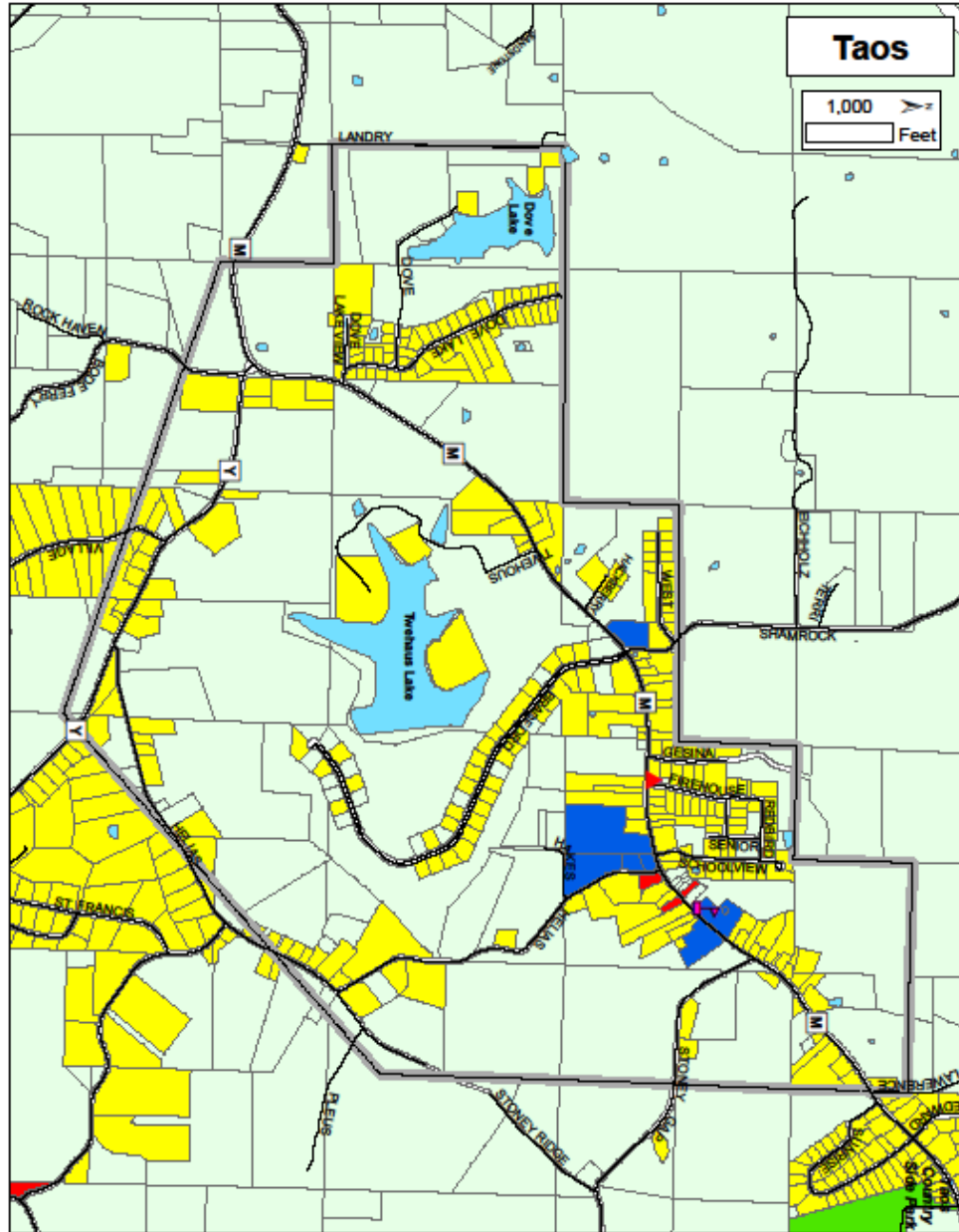
43. Wardsville







44. Taos

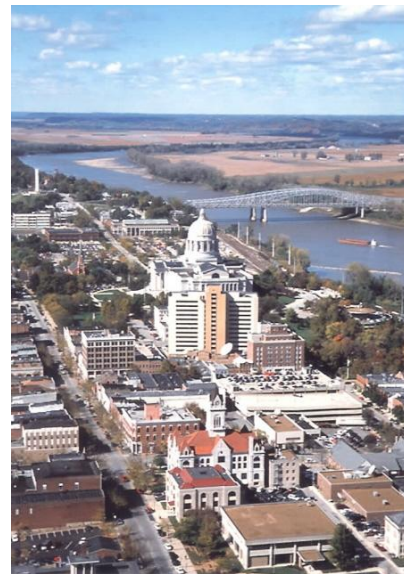




6. ECONOMIC CONDITIONS

6.1. OVERVIEW

Cole County's economy is oriented around state and local government, light manufacturing, retail, consumer services and institutional activities. Most of the economic base is situated either inside or the periphery of Jefferson City. While by area Cole County is primarily rural, there is not a significant amount of agriculture in the County except for cattle farms. Most farmers do not pursue farming full time and generate less than \$100,000 per year (U.S. Census: 2000). During the last ten years, the economy has experienced slow, but stable, growth. Because of the dominance of the public sector in the economy, Cole County has fared relatively well during the recent recession. Although retail sales are down and there have been a few layoffs and plant closures, unemployment is less than the state average. One indicator that the economy may be improving is that local realtors report a recent increase in residential sales. (Realtor interview)



45. Most of the County's economic base is located in Jefferson City.

Image Source: Jefferson City Chamber of Commerce website.

6.2. BUSINESS COMPOSITION

Because the state capital is situated in Cole County, it is not surprising that state government is the dominant economic activity in the County. The State of Missouri not only has the bulk of its executive and legislative offices located in Jefferson City, the city and environs also hosts numerous related activities such as consultants, lobbyists, and legal services. Moreover, because of the number of employees that the state hires either directly or indirectly, state government is a powerful economic multiplier. Due to the fact that the large number of state employees all need housing, medical care, prepared/non-prepared food, the presence of the state government is going to stimulate a great deal of support activity.

In addition to state government, federal and local governments are also a major segment of the County's economic base. The federal government, the postal service, the City of Jefferson, and the government of Cole County itself all are major generators of economic activity in the County either directly or indirectly.

Non-governmental institutions are another major generator of economic activity in the County. The County has several large medical facilities, as well as, four school districts, and one state university. All of these institutions are major employers and contractors.

Cole County also has a significant private sector. In addition to the large number of retail and construction businesses which support the large number of governmental workers, Cole County has an active light industrial sector. *Scholastic Magazine* has been steadily growing in recent years and has established a national presence. While *Johnson Controls*, a supplier of foam car seats has been forced to shut down due to the recent downturn in the automotive industry



nationally, *ABB Power* and *Unilever*, although affected by the recent recession, remain thriving firms.

46. Cole County Businesses By Naics Category: 2000

Industry	Number of Firms
11 Agriculture, Forestry, Fishing, and Hunting	15
21 Mining	5
22 Utilities	11
23 Construction	278
31 Manufacturing	54
42 Wholesale Trade	140
44 Retail Trade	474
48 Transportation and Warehousing	47
51 Information	76
52 Finance and Insurance	232
53 Real Estate and Rental and Leasing	173
54 Professional and Technical Services	305
55 Management of Companies and Enterprises	2
56 Administrative and Waste Management Services	166
61 Educational Services	85
62 Health Care and Social Assistance	347
71 Arts, Entertainment and Recreation	61
72 Accommodation and Food Services	184
81 Other Services, except public administration	620
92 State Government	394
TOTAL	3669

Source: Longitudinal Data Base by NAICS Sectors for Cole County Year 2000,
www.missourieconomy.org

6.3. BUSINESS PROJECTIONS

The current recession makes predicting in which business sectors growth might take place difficult. While there has been some population growth in recent years—especially on the eastern flank of Jefferson City and around Wardsville—virtually all retail activity is down due to the economic downturn. Businesses which have been particularly hard hit

have been “discretionary” retail businesses like car dealerships and restaurants (Chamber of Commerce interview). New retail activities that might thrive would include such “non-discretionary” businesses such as discount stores and groceries.

Even with the current economic downturn, government at all levels will continue to have a major presence in the economy. While government itself may not expand, it may be forced to “outsource” more and more activities. Therefore, businesses which serve government may be well-positioned to expand. Health care reform, for example, may stimulate those businesses which provide computer and medical record support (Chamber of Commerce interview). In the short term, the Recovery Act may stimulate the construction industry.

The success of Scholastic Publishing and the fact that the Missouri edition of the New York Times is printed in Columbia may indicate that printing could develop into more and more of a niche for semi-rural communities that have lower labor costs than large metropolitan communities (Chamber of Commerce interview). The presence of an excellent workforce and good access to transportation facilities may also stimulate Cole County to develop more small light manufacturing companies that specialize in consumer products (Chamber of Commerce interview). The new emphasis on healthy eating and the “slow food movement” may also lead to a resurgence in small farming in the County due to the abundance of land ideally suited to produce crops.

One stimulant of economic growth which is often over-looked in Cole County is Lincoln University. A recent study performed by the Missouri Department of Economic Development showed that Lincoln University was directly responsible, as of 2000, for 433 jobs and had an indirect



impact of generating another 138 ancillary jobs in Cole County. These ancillary jobs were found in the Trade (66 jobs earning \$14,435 per job), Service (50 jobs earning an average of \$23,628) and Finance, Insurance, and Real Estate (11 jobs earning an average of \$27,768 per job). These jobs were the direct product of goods and services produced by households who had one or more members employed at the university.

6.4. EMPLOYMENT

6.4.1. Employment Composition State government is both the largest employer, as well as, largest generator of revenue in Cole County. A third of all Cole County resident employees work for state government. Not surprisingly, the second largest employment category in the County is retail and food service. These workers are necessary to service the large number of state workers. The same is true of construction. In addition to building and maintaining the large number of governmental and institutional facilities in the community, construction workers in the County build homes for employees who work in those facilities.

Another major segment of the labor force is comprised of workers who work for medical and educational institutions. The two major hospitals and the Jefferson City School District by themselves employ over 20% of Cole County workers.

The last major source of employment in Cole County is manufacturing, wholesaling, and transportation/warehousing. These traditional industrial employers employ just under a fifth of all the workers in the private sector.

47. Cole County Employment By NAICS Classification: 2000

Industry	Average Employment
11 Agriculture, Forestry, Fishing, and Hunting	NA
21 Mining	31
22 Utilities	218
23 Construction	2,554
31 Manufacturing	3,411
42 Wholesale Trade	1,347
44 Retail Trade	7,259
48 Transportation and Warehousing	859
51 Information	957
52 Finance and Insurance	2,125
53 Real Estate and Rental and Leasing	291
54 Professional and Technical Services	1,426
55 Management of Companies and Enterprises	456
56 Administrative and Waste Management Services	1,935
61 Educational Services	2,130
62 Health Care and Social Assistance	4,974
71 Arts, Entertainment and Recreation	698
72 Accommodation and Food Services	2,891
81 Other Services, except public administration	1,533
92 State Government	16,659
TOTAL	51,754
Federal Govt.	565
State Govt.	16,810
Local Govt.	2,536
Private Industry	31,994

Source: Longitudinal Data Base by NAICS Sectors for Cole County Year 2000,
www.missourieconomy.org



48. Ten Largest Employers In Cole County: 2008

Employer	Number of Employees
State Of Missouri	17,931
Scholastic	1,800
Capital Region Medical Center	1,432
St. Mary's Health Center	1,200
Jefferson City Public Schools	1,106
Central Bank	738
Learfield Communications	650
RR Donnelley	650
City Of Jefferson	624
ABB Power T&D Company	570

Source: Jefferson City Area Chamber Of Commerce, www.jcchamber.org

6.4.2. Rate of Unemployment Over the last decade, Cole County has had an unemployment rate either lower or comparable to that of the state of Missouri.

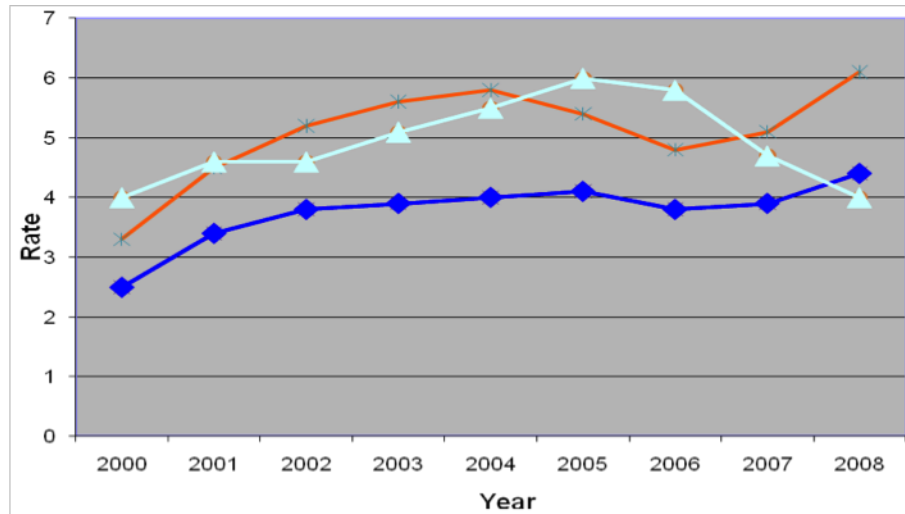
49. Cole County Unemployment Rate by Year

Year	Cole County	Missouri	United States
2008	4.4	6.1	4.0
2007	3.9	5.1	4.7
2006	3.8	4.8	5.8
2005	4.1	5.4	6.0
2004	4.0	5.8	5.5
2003	3.9	5.6	5.1
2002	3.8	5.2	4.6
2001	3.4	4.5	4.6
2000	2.5	3.3	4.0

Dept. Of Labor-Bureau of Labor Statistics. www.bls.gov/cps

50. Unemployment Statistics for 2000 Through 2008

(Line colors: Cole County-blue; Missouri-white; United States-brown)



During the recent recession, unemployment has jumped significantly in the County. During the past 4 months the labor force in Cole County has fluctuated between a high of 39,470 in February 2009 to a low of 39,055 in April 2009. However, as the chart below indicates, unemployment in Cole County may have peaked.

51. Cole County Unemployment: 2009

Month	Labor Force	Employment	Unemployment	County Rate
January	39,418	39,946	2,472	6.3%
February	39,470	39,860	2,610	6.6%
March	39,399	36,551	2,848	7.2%
April	39,055	36,863	2,192	5.6%

Source: Missouri Economic Research and Information Center, www.missourieconomy.org



6.5. REAL ESTATE TRENDS

The real estate market in Cole County has reflected state and national trends during the last two years. There has been a sharp downturn both in new construction and sales. As a result, real estate values have dropped in response. However, County realtors indicate that both sales and new construction may be picking up (Interview with local realtor).

6.5.1. Commercial and Institutional Development Although there has been a slowdown in new commercial and institutional development, there were three major new developments in recent years. These were:

- A new state penitentiary
- A new National Guard facility
- A new Walmart Super Center

All three developments are located just east of Jefferson City. The chart below gives the aggregate number of commercial permits issued by the County.

52. Cole County Commercial Building Permits by Year

2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
24	16	16	22	19	14	9	9	5	134

Source: Cole County Building Department: 2008

6.5.2. Residential Patterns Most of this decade has been a boom period for Cole County real estate. Since 2000, there have been just under 12,000 (11,968) sales of residential properties. (Interview with Cole County Chamber of Commerce). Between 2000 and May 2008, the median housing price jumped 37% increasing from \$97,200 (U.S. Census 2000: SF3) to \$132,690 (Interview with Cole County Chamber of Commerce). However, the national recession and

housing slow-down have affected Cole County, as well. The median sales price in Cole County dropped to \$130,262 in May of this year (Interview with Cole County Chamber of Commerce). But a decrease of less than 2% is much lower than the rest of Missouri and in the United States where in some areas, housing prices have dropped by more than 50%.

However, the recent economic down turn has affected new construction more adversely than either housing values or sales. As the chart below indicates, construction of new single family homes dropped by 43% between 2006 and 2008.

53. Cole County Residential Permits by Year

Structural Type	2000	2001	2002	2003	2004	2005	2006	2007	2008
Single-family	154	216	181	216	221	162	164	133	93
Multi-family	30	26	17	9	11	12	10	5	8
Manufactured Home	21	12	7	14	18	15	11	9	9
Additions	35	42	42	60	50	43	49	35	38

Source: Cole County Building Department: 2008

It would appear that the housing market has bottomed-out, based on reports from local realtors that sales have picked up during the last two months prior to this analysis. Moreover, new residential construction was observed during windshield surveys.

7. TRANSPORTATION

7.1. INTRODUCTION AND OVERVIEW

The transportation system in Cole County has surface, water and air components. The surface transportation component is comprised of road and rail infrastructure, while the water component is primarily oriented toward the movement of bulk commodities through a towboat-barge system, with some recreational boating. Air transportation consists of one general aviation facility. This section of the report describes each component. Refer also to the transportation map (Figure 64) at the conclusion of the section.

7.2. SURFACE TRANSPORTATION

Roads. The road portion of the surface transportation system is managed by three separate jurisdictions: The Cole County Department of Public Works, the Missouri Department of Transportation (MoDOT), Jefferson City, and other local jurisdictions. Jefferson City's street system alone encompasses more than 250 miles of roads, many of which connect to Cole County's road system.

7.2.1. Roads Maintained by Cole County Cole County Public Works manages and maintains the greatest proportion of roads in the County with more than 940 lane-miles under its jurisdiction. This network includes concrete, asphalt and gravel roads. The following table summarizes the mileage in the County's road network by type of road and in road mileage rather than lane mileage:



54. "Cole County Public Works manages more than 940 lane-miles of roadway within the County."

55. Roads Maintained by Cole County

Type of Road	Miles of Road
Concrete	12
Asphalt	265
Chip Seal	20
Gravel	167
Total	464

Maintenance of pavement, bridges, drainage and the entire road right-of-way are important elements of the County's overall mission to assure that the system functions at maximum efficiency. Traffic management is another key part of the mission. Elements of traffic management include street signs, regulatory signs, and snow and ice control.

The County's road improvement projects are partially underwritten through a one-half cent sales tax that has been consistently renewed by voters since its initial enactment in 1986.

Another transportation function performed by the Department of Public Works is the design, regulation and acceptance of subdivision streets. The Department provides detailed right-of-way, design and/or improvement standards for such streets as shown in the table below:

The department also administers the County's Neighborhood Improvement Program (NIP), of which street improvements are a central component.

In order to allocate its resources efficiently, the County prioritizes road improvements by assessing the following: a) Average Daily Traffic (ADT); b) Road classification; c) Road maintenance history; d) Priority indexing, and e) Other considerations. Each is described in greater detail below:



Average Daily Traffic

ADT counts are undertaken by Cole County Public Works and by MoDOT on their respective road systems in order to assess service levels. Intersection locations are identified and counts made periodically to assess whether and to what degree traffic volume has increased

Road Classifications

Cole County's road classification system is described below:

Type I – Arterials. Arterials connect centers of population and economic activity with each other and with the State of Missouri road system. They occur at reasonable regular intervals to collect traffic from roads of lesser importance, and carry relatively heavy corridor traffic - either present or potential. Average Daily Traffic levels (ADT's) are generally 1000 vehicles or greater.

Type II – Collectors. These roads collect traffic from local roads, carrying it to arterials. Collectors also serve minor population centers that not connected by arterials. ADT's are typically 300 or greater.

Type III – Local Roads. Local roads provide direct access to adjacent private land uses. They either terminate at dead-ends or, if continuous, are relatively short in length and serve areas of low population. ADT's are typically in the range of 100 or less.

Road Maintenance History

The County maintains historical records on each road in its system in order to track service life and costs.

Priority Indexing

The County budgets improvements through five-year capital improvements programs using a priority index equation and a points system for various factors as follows:

- ADT Factor. 0-60 (0 points); 61-100 (2 points); 101-150 (4 points); 151+ (6 points)
- Functional Classification Factor. Type I roads (4 points); Type II roads (2 points); Type III roads (0 points)
- Maintenance Factor. Maintenance rating times 2. Low-to-high maintenance rating (0 points to 5 points)

Other Considerations

- Savings resulting from combined projects
- Bridging improvements over two or more budget years
- Density in certain fully-developed older subdivisions
- Regional balance

Traffic volumes on Cole County's road system have increased where intensified development or population growth has occurred, and this has been concentrated in areas surrounding Jefferson City.

7.2.2. Roads Maintained by Other Jurisdictions The Missouri Department of Transportation (MoDOT) maintains U.S. Highway 54 (pictured), a multilane divided highway that provides Cole



56. U.S. Highway 54.

County with a direct connection to I-70 to the north. Other MoDOT-maintained roads include U.S. 50 and 63, State Highway 179, and Routes B and C.

Jefferson City maintains most of the roads within its city limits. Similarly, the seven incorporated communities of Russellville, Taos, St. Martins, Wardsville, Centertown, St. Thomas, and Lohman maintain their own local road systems.

7.3. RAILROADS

Union Pacific operates a heavily used rail corridor through Cole County. Located adjacent to the Missouri River, it also provides Amtrak passenger service to residents the County.



57, 58, L-R: Amtrak's Jefferson City Depot, and coaches.

A rail line also extends from Jefferson City generally westward through St. Martins and on through other communities to the west of Cole County line.

All active railroad lines are federally regulated. They are required to notify the federal Surface Transportation Board (STB) when they intend to change the status inactive, or when they subsequently move to abandon a line. Although the heavily used Union Pacific main line is expected to

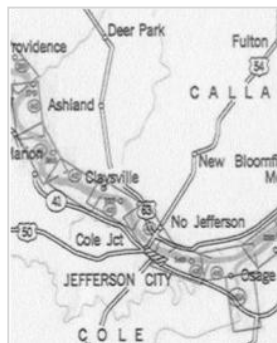
remain active for the foreseeable future, both lines should be monitored for any potential changes in status that could affect the County's transportation infrastructure especially as it relates to passenger rail service and to the movement of bulk commodities. Any elimination of rail service would of course impose greater demands on other transportation modes, especially the road system.

There is another reason to monitor the status of these lines. Across the country, many railroad corridors are used as recreational trails either through reclamation following deactivation ("rail-banking"), or where an active corridor has sufficient width to safely allow for a joint "rail-with-trail" operation. The State of Missouri is one of only a few state-level jurisdictions in the country to have successfully acquired and developed a long-distance rail corridor - the nearby Katy Trail - for this purpose through rail-banking. This process enables de-activated rail corridors to be put to good use as recreational trails, while preserving their rights of way to allow for reactivation as rail transportation corridors.

7.4. WATER TRANSPORTATION

The Kansas City District of the U. S. Army Corps of Engineers (USACE) manages the portion of the Missouri River that borders Cole County.

Waterborne transportation on the Missouri River consists primarily of commercial navigation in the form of barge traffic. There is also some recreational boating activity primarily related to fishing. (Refer to navigation chart.)



59. Navigation chart - Missouri River at Jefferson City.

Image: USACE



60. Missouri River and the new Highway 54 Bridge at Jefferson City.

Image Source:
<http://bridgehunter.com/mo/cole/jefferson-city/>



The USACE manages a system of dams and reservoirs along the river in conformity with its water control plan. The plan is a part of Corps' *Missouri River Mainstem Reservoir System Master Water Control Manual*, which was most recently revised in 2006.

For a number of years the river has been the subject of considerable debate and controversy between upriver and downriver jurisdictions. This relates to competing upriver needs associated with water for agriculture and drinking, and downriver commercial navigation needs.

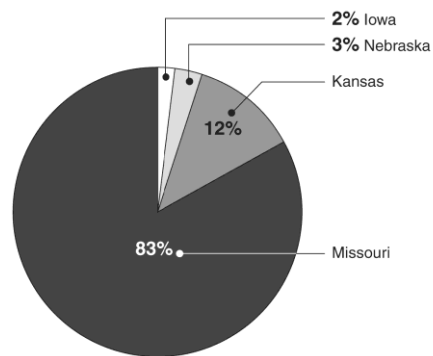
According to a study produced by the General Accounting Office (GAO), the river's navigation role serves four of the eight states adjacent to it: Missouri, Iowa, Kansas and Nebraska. The GAO study looked at activity between 1994 and 2006. It found that, of all of the commodity tonnage moved on the Missouri River during the study period, 83 percent (100,183,464 tons) originated and/or terminated in Missouri. Kansas accounted for 12 percent (14,171,543 tons), Nebraska 3 percent (3,279,355), and Iowa 2 percent (2,578,890) of total tonnage. Tonnage shipped per year over the 13-year period ranged between 6.9 million and 9.7 million.

The majority of commodities shipped consisted of sand and gravel, which amounted to 84 percent (about 91.3 million tons) of the total tonnage. Slightly more than half of this was transported only one mile or less. Thirty-one percent was moved 2-9 miles, and 14 percent transported 10 miles or more.

Other commercial products accounted for only 14 percent of the total tonnage shipped during the Corps' 1994-2006 study period. This included 5.2 million tons in food and farm

products, 4 million tons of chemicals, 3 million tons of petroleum, 2.5 million tons of primary manufactured goods, 346,460 tons of crude material, and 14,663 tons of manufactured equipment. Waterway improvement material, with 2.2 million tons, accounted for 2 percent of the total tonnage during this period.² (Refer to the two graphics from the GAO – Figures 61 and 62.)

61. Shipping Tonnage on the Missouri River by State – 1994-2006

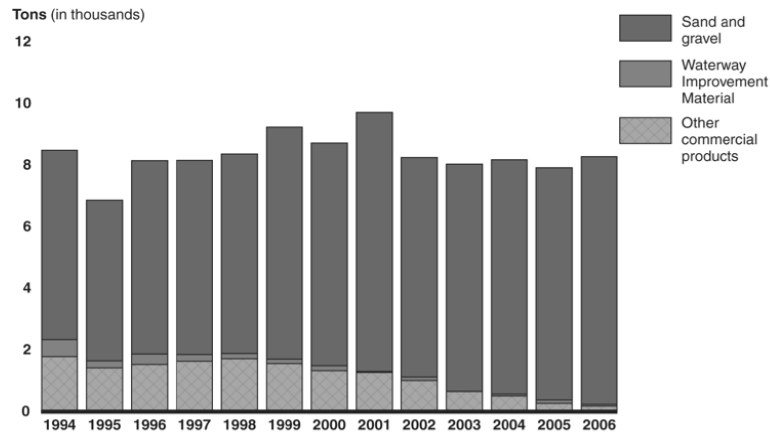


Source: GAO analysis of Corps Waterborne Commerce Statistics data.

² “Data on Commodity Shipments for Four States Served by the Missouri River and Two States Served by Both the Missouri and Mississippi Rivers;” in a January 15, 2009 letter from Anu K. Mittal, Director, Natural Resources and Environment, to Senator Byron L. Dorgan, United States Senate.



62. Shipping Tonnage on the Navigable Portion of the Missouri River - 1994-2006



Source: GAO analysis of Corps Waterborne Commerce Statistics Center data.

Commodity Shipments on the Navigable portions of the Missouri River - 1994-2006.

Barge traffic is at its heaviest between Spring and Fall, when most tonnage – and 80% of all farm-related cargo according to one source – is shipped. Nevertheless, barge traffic volumes on the river have been characterized by one source as being relatively light. The report cited a Revised Draft Environmental Impact Statement (RDEIS) issued by the USACE indicating that the value of commercial shipping was less than \$7 million annually at the time (c. 2000). The report also cited a National Academy of Sciences (NAS) report indicating the value was closer to \$3 million.

The issue of the river's function as a transportation conveyance also relates to discussions about the prospects for dam reforms that would enable the generation of hydropower along the river, thereby inhibiting commercial navigation. Proponents of hydropower believe it has a considerably stronger potential for positive economic impact

on adjacent jurisdictions than the waterborne shipping of sand, gravel and agricultural commodities.³

At least for the near term, the Missouri River's transportation role will continue to be related to the movement of commodities by barge; however, the amount of this activity in terms of volume is expected to remain modest.

7.5. AIR TRANSPORTATION

Cole County has one major airport, Jefferson City Memorial Airport. Though located across the river in Calloway County, it is operated and administered by Jefferson City's Department of Community Development - Airport Division.

(Historically, at least two small airfields also functioned within Cole County. However, they are no longer operational.)



63. Jefferson City Memorial Airport.

Image Source: Jefferson City Memorial Airport web site.

Jefferson City Memorial Airport is one of the state's top ten busiest facilities. The city estimates that it generates annual economic impact ranging from \$15 to \$20 million. A wide variety of military, corporate, and general aviation aircraft are based and/or maintained at the airport. The facility is also a home base of operations for many state government flight departments. No commercial airline flight service is offered. The nearest such service is located at Columbia Regional Airport.

³ "Missouri River Dam Reforms and Navigation;" www.edf.org/documents/2233_MissouriDamNavigation.pdf.



7.6. CONCLUSION

In the plan to be described in Sections 10 to 14 of this document (beginning on page 118), transportation-related recommendations will be made to support build-out of the future Land Use Plan. These improvements will address both existing and new roads.



64. Existing Transportation Infrastructure



8. PUBLIC FACILITIES

Cole County offers an extensive range of public facilities to its citizens, as described in the following paragraphs. Refer also to the Existing County Property map at the conclusion of the section (Figure 74).

8.1. PARKS

There are nine major Parks in Cole County listed below as follows. Also refer to the table at the end of the section.

8.1.1. Binder Park Just west of St. Martins is the largest park in the County, Binder Park, which totals almost 687 acres in size. Binder Park adjoins Joseph C. Miller Park. A key feature of the park is a 150-acre lake. Other features include an 18-hole frisbee golf course and a mountain bike trail with a series of loop trails for riders of differing abilities. Cole County Jaycee Park and Lake.



65. Binder Park

8.1.2. County Park County Park, a 68½-acre park, is located just outside the southern border Jefferson City on the west end of the city. Cole County and The Department of Conservation cooperate in the management of the 7.3 acre lake which includes a disabled-accessible fishing dock and a restroom. The park itself contains athletic fields, picnic tables, and a hiking trail.

8.1.3. Joseph Miller Park Joseph Miller Park is located just south of and contiguous to Binder Park. It is 64½ acres in size.



8.1.4. Taos Country Side Park Just east of Taos is Taos Country Side Park. The park is approximately 38½ acres in size.

8.1.5. Centertown City Park Centertown City Park is located in the northern section of Centertown and covers almost ten acres. Park facilities include a ball field with night lighting, parking facilities, and a restroom. The northern portion of the park is wooded.

8.1.6. Niekamp Park Located in the heart of St. Martins is Niekamp Park which is 4½ acres in size.

8.1.7. Russellville City Park Russellville City Park, located near the southern border of Russellville, is almost three acres in size.

8.1.8. Loethen Park Loethen Park is located about two miles southeast of St. Martins and is just under an acre in size.

8.1.9. Brooks Park Brooks Park is located about three miles east of St. Martins and is almost an acre in size.

66. Cole County Parks

Park Name	Approximate Acreage
Binder Park	686.7
County Park	68.5
Joseph Miller Park	64.5
Taos Country Side Park	38.6
Centertown City Park	9.7
Niekamp Park	4.5
Russellville City Park	2.9
Loethen Park	0.8
Brooks Park	0.8
TOTAL ACREAGE	876.9

8.2. CONSERVATION AREAS

There are nine major Missouri Department of Conservation areas in Cole County totaling more than 6,000 acres, as described below.

8.2.1. Marion Bottoms Conservation Area The 2,997-acre Marion Bottoms Conservation Area is located in the northwestern corner of Cole County about six miles north of Centertown. The area is surrounded by the Missouri River to the north, east, and south, providing six miles of river frontage. The conservation area contains primarily wetlands with some forest. Camping is permitted in designated area with no amenities and there is access to fishable lakes, ponds, as well as Moniteau Creek the previously mentioned Missouri River. Other activities include canoeing, hiking, hunting, and horseback riding.



The site was acquired by the Conservation Department in 1996, bought in part with funds provided by the federal government after the 1993 flood to negotiate purchase of flood prone land in order to lessen the chance and severity of future floods.

8.2.2. Smoky Waters Conservation Area The 1041-acre Smoky Waters Conservation Area is located in the northeast corner of Cole County and actually falls within both Cole and Osage Counties. This conservation area is primarily forest. Features include the historic area, Dodds Island, and access to both the Missouri River and the Osage Rivers. Activities in the area include fishing, hunting, and boating and there are two parking lots in the area.

8.2.3. Scrivner Road Conservation Area Scrivner Road Conservation Area is located about three miles south of Russellville and is approximately 919 acres in size. The conservation area is a former cattle farm that was extensively grazed and logged, but is now managed for wildlife and public recreation and is primarily old fields with forest and cropland.

The 8-acre Winegar Lake is a central feature of the area which also includes more than two miles of South Moreau Creek frontage and the 8.5-mile Moreau Creek trail system that provides access to most of the area.

Camping is permitted in designated area but there are no facilities. There is a target shooting range that offers a shotgun range, and 25-, 50-, and 100-yard rifle and pistol ranges as well as a parking lot and a restroom. Other activities include canoeing, fishing, hiking, hunting, and horseback riding.

8.2.4. Smith (Roger V. & Viola Wachal) Conservation Area

Roger V. and Viola Wachal Smith Conservation Area is located 2 miles north of Centertown and is approximately 517 acres in size. The area is mostly forest and provides access to Turtle Creek, an intermittent stream. Activities in the area include camping with no amenities, hiking, and hunting and there are three parking lots in the area.

8.2.5. Binder Community Lake Conservation Area

Binder Community Lake Conservation Area is located in Binder Park (just east of St. Martins) on the northeast edge of Binder Lake. The 223-acre area's facilities include a boat ramp, two docks, a disabled-accessible fishing jetty, a restroom, and a shorebird viewing area. Camping and RV camping is also available with pavilions, picnic shelters, and tables. Activities in the area include hiking and biking (trail for both), boating, and fishing.

8.2.6. Pikes Camp Access

Pikes Camp Access is a 170-acre area located one mile south of Wardsville. The area provides access to the Osage River with a boat ramp, a parking lot, and camping is in designated area with no amenities except for a restroom. Other activities include canoeing, fishing, and hunting.

8.2.7. Honey Creek Access

Honey Creek Access is located about four miles east of Wardsville and is about 84 acres in size providing access to Honey Creek and the Moreau River. Facilities in the area include a boat ramp, camping in designated area with no amenities and activities include canoeing, fishing, and hunting.



8.2.8. Stringtown Bridge Access Located about two miles east of Lohman, Stringtown Bridge Access is a 50-acre forested area bordering the Moreau River. The area is served by a parking lot and activities in the area include canoeing, fishing, and hunting.

8.2.9. Mari-Osa Access Mari-Osa Access, located approximately three miles east of Taos, is primarily forest and woodland and provides access to the Osage River. Facilities at the area include a boat ramp and camping in designated area with no amenities except for fire rings and a restroom.

67. Cole County Major Conservation Areas

Park Name	Approximate Acreage
Marion Bottoms Conservation Area	2997
Smoky Waters Conservation Area	1041
Scrivner Road Conservation Area	919
Smith (Roger V. & Viola Wachal) Conservation Area	517
Binder Conservation Land	223
Pikes Camp Access	170
Honey Creek Access	84
Stringtown Bridge Access	50
Mari-Osa Access	28
TOTAL ACREAGE	6029

8.3. TRAILS AND GREENWAYS

8.3.1. Katy Trail The Katy Trail is a 185-mile rails-to-trails conversion of the Missouri-Kansas-Texas-Railroad (nick-named the KATY). The Missouri Department of Natural Resources acquired the right-of-way after Congress passed the National Trails System Act which allowed railroad corridors to be “rail-banked” for future transportation use and used on an interim

basis for recreational trails. (Rail-banking is described in more detail in the transportation section of this report.)The North Jefferson trailhead of the Katy Trail is located north of the Missouri River from Jefferson City. Many Katy Trail riders visit Jefferson City availing themselves of limited bicycle accommodations on the Missouri River Bridge. Some Jefferson City hotels and beds and breakfasts also offer shuttle service to and from the trail.

8.3.2. Trails and Greenways There are a number of trails and greenways in Cole County. A major trail (previously described) exists in Binder Park, and there is a loop trail in County Park.

Jefferson City itself has a 7.4-mile greenway trail system that receives heavy usage (see image)

(Research on other existing trails in Cole County continues. Results will be summarized in the final report.)



68. Jefferson City Trail

Image Source: Jefferson City website

8.4. PUBLIC SCHOOLS

8.4.1. Overview As a group, Cole County has an excellent school system. While the Russellville (R-I) and Eugene (R-V) systems have struggled to meet state and federal academic standards, all of the systems are accredited, appear to have adequate physical facilities, have an appropriate number of certified staff, and possess sufficient revenue.

From a planning perspective, enrollment trends for the County are mixed. Blair-Oaks has been experiencing explosive growth and is projected to have continued growth for some time. On the other hand, Jefferson City and Russellville have had very stable enrollments in grades K-12 and are expected to continue to have virtually flat



enrollments for the foreseeable future. Eugene, though, has seen a small drop in enrollments over the last five years and its enrollment is projected to continue to drop between now and 2011.

69. Cole County Comparative School District Profiles

District	# Schools	2007 Certified Staff	2007 Enrollment	2007 Assessed Valuation	2006 Receipts/Expenditures	2006 Average Classroom Instructor Salary	2006 Average Expenditure per Student
Blair-Oaks R-II	2	70	903	\$85,066,021	\$5,796,841/ \$7,801,198	\$33,135	\$7,355
Cole Co. R-I	3	88	722	\$48,278,394	\$6,378,078/ \$6,847,663	\$30,937	\$8,209
Cole Co. R-V	2	68	725	\$58,475,789	\$5,926,531/ \$7,073,478	\$32,060	\$7,923
Jefferson City	15	633	8196	\$1,165,297,795	\$73,125,659 / \$68,546,654	\$44,127	\$9,699
Totals	22	859	10,546	\$1,357,117,999	\$91,227,109 / \$90,268,993	-----	-----

Missouri Department of Elementary and Secondary Education: District Profiles (2007)

8.4.2. District Profiles *Blair-Oaks (R-II)* At present, Blair-Oaks is the second fastest growing district in the state of Missouri. Over the last 5 years, it has experienced a growth in enrollment of almost 49%. But despite the challenges that have come from this dramatic rate of growth, over 50% of Blair-Oaks students scored proficient or above on the state MAP tests last year and is only one of six districts out of 524 in the state where district students have met federal No Child Left Behind goals every year since the standards were

introduced. (DESE District Profiles + Interview with District Superintendent)

To keep pace with this growth, Blair-Oaks has undertaken an ambitious expansion campaign in recent years. During this last academic year, the district just opened a \$5.9 million new middle school which drew two grades from the elementary and high schools each and is designed to accommodate over 100 additional students. In 2006, both the elementary and high schools had major expansions which included a new major athletic complex. The district anticipates the eventual need for either a new high school or a elementary school, coupled with renovation or conversion of some existing facilities.

70. Blair-Oak Enrollment Trends and Projections: 2006

History				Projections				
Grade	2004	2005	2006	2007	2008	2009	2010	2011
K	42	45	40	44	42	45	47	42
1	36	47	51	42	46	44	47	50
2	33	43	43	53	44	48	46	49
3	27	37	52	49	61	51	55	53
4	36	34	42	61	58	72	60	65
5	37	41	41	48	69	66	82	68
6	43	38	49	45	53	76	73	90
7	54	48	43	55	51	60	85	82
8	39	59	56	47	60	55	65	92
9	81	75	100	100	84	107	98	116
10	66	83	77	102	102	86	109	100
11	76	66	80	76	101	101	85	108
12	71	77	67	81	77	102	102	86
Totals	641	693	741	803	848	913	954	1001

Missouri Department of Elementary and Secondary Education: District Profiles (2007)

Russellville (R-I) Russellville is a very stable district in terms of enrollment, academic achievement, and physical/financial resources. As the chart below indicates, the district had less than a 5% rate of growth during the last 5 years and is



projected to have less than that in the near future. (DESE District Profiles)

Academically, Russellville is performing satisfactorily. While it did not meet its annual proficiency target rates in either communication arts or mathematics for the last year reported, the district was within 10% of both target rates for 2008. Moreover, although the district has a lower graduation rate than the state average, Russellville graduates have a higher rate (58%) than the state average for entering a four year college or university. (DESE District Profiles)

Due to its stable enrollments, Russellville's basic physical plant should be adequate for the near future. Russellville has an acceptable expenditure per student rate. It also has a very good student-to-classroom teacher ratio. Somewhat of a concern is the district's level of assessed valuation. Of the four districts, Russellville has the lowest level both in absolute terms, as well as, per student enrolled. (DESE District Profiles)

71. Cole County R-I Enrollment Trends And Projections

History				Projections				
Grade	2004	2005	2006	2007	2008	2009	2010	2011
K	54	48	47	51	49	53	56	49
1	55	57	48	50	55	53	56	60
2	54	57	58	48	50	55	53	56
3	54	61	54	62	51	53	59	57
4	51	51	71	57	65	53	56	62
5	59	53	50	72	58	66	54	57
6	58	62	55	50	72	58	66	54
7	50	61	62	57	52	75	60	68
8	66	53	62	62	57	52	75	60
9	53	74	56	67	67	62	56	81
10	65	51	69	53	64	64	59	53
11	57	60	50	66	51	61	61	56
12	47	57	56	48	64	49	59	59
Totals	723	745	738	743	755	754	770	772

Missouri Department of Elementary and Secondary Education: District Profiles (2007)

Eugene (R-V) The Eugene district is experiencing a number of challenges at present. In terms of enrollment, enrollment has dropped by only by 3% over the last five year. However, the state estimates that enrollment will drop by another 7% over the next two years. (District Profiles)

Academically, the district has had trouble meeting its state and federal test targets during the last two years for both communication arts and mathematics. Moreover, while the district has an excellent graduation rate and a slightly higher than state average ACT composite for graduates taking the ACT exam, the district has a very low rate for graduates entering any type of post-graduation education at any level. In addition, although expenditures per student are fairly comparable to most state districts, district expenditures exceeded district receipts for the last year reported by the Department of Elementary and Secondary Education. (District Profiles.)



72. Cole County R-V Enrollment Trends and Projections

History				Projections				
Grade	2004	2005	2006	2007	2008	2009	2010	2011
K	46	52	46	49	48	51	54	48
1	51	40	47	43	47	45	48	51
2	55	52	40	46	42	46	44	47
3	54	57	50	40	46	42	46	44
4	48	52	61	49	39	45	41	45
5	59	51	49	59	48	38	44	40
6	50	58	58	50	60	49	39	45
7	61	46	61	58	50	60	49	39
8	53	62	49	63	59	51	62	50
9	69	66	72	56	72	67	58	71
10	74	68	71	73	57	73	68	59
11	73	74	69	69	71	56	71	66
12	52	73	74	68	68	70	55	70
Totals	745	751	747	723	707	693	679	675

Missouri Department of Elementary and Secondary Education: District Profiles (2007)

Jefferson City Jefferson City is three times larger in terms of enrollment than the other three districts combined. It serves students not only in Jefferson City, but in peripheral areas to both east and west of the city. As a large, metropolitan school district, Jefferson City is faced with both challenges and opportunities that come with its size and diversity.

Jefferson City's enrollment has been remarkably constant over the last few years and is expected to continue. Between 2002 and 2007, the district's enrollment decreased only .4% and is expected to grow less than 1.5% between 2007 and 2011. (District Profiles)

Although some schools and some demographic groups have not met state and federal academic targets, Jefferson City schools have exceeded test targets by a wide margin over the last two years. Moreover, while Jefferson City graduation rate is more than six per cent lower than the state average

(79% vs. 85.2%), Jefferson City graduates score a comparable ACT composite to other state graduates (22.0 vs. 21.6). Jefferson City graduates are also more likely to attend a post graduate educational institution than their state-wide counterparts (74% vs. 70.2%) (DESE District Profiles)

Because of its stable enrollment pattern, the district's emphasis has been on improving existing facilities rather than on constructing new ones. The district just completed improvements that resulted from a \$33 million bond issue that was used mainly to upgrade school media centers to meet state standards. In addition, \$5.2 million was used for the football stadium. At present, the district has no plans for other capital improvement projects apart from regular maintenance upgrades. (Interview with District Superintendent)

Jefferson City also compares favorably with the other three Cole County districts and the state in terms of per student expenditure rate and the relationship between receipts and expenditures.



73. Jefferson City Enrollment Trends And Projections

History				Projections				
Grade	2004	2005	2006	2007	2008	2009	2010	2011
K	651	597	632	645	621	664	703	622
1	649	645	639	607	659	635	679	719
2	642	634	627	628	597	648	625	668
3	606	637	652	627	628	597	648	625
4	596	622	623	649	624	625	594	645
5	635	613	616	630	656	631	632	600
6	668	636	595	612	626	652	627	628
7	655	676	650	599	616	630	657	631
8	652	666	672	656	604	622	636	663
9	673	719	759	727	709	653	673	688
10	678	673	654	760	728	710	654	674
11	601	575	635	574	667	638	623	574
12	522	517	514	563	509	592	566	553
Totals	8228	8210	8268	8277	8244	8297	8317	8290

Missouri Department of Elementary and Secondary Education: District Profiles (2007)

74. Insert Existing County Property, Fire Stations, and Schools Map



9. SUMMARY OF PUBLIC ENGAGEMENT DURING THE PLAN PROCESS

9.1. PUBLIC FORUM COMMENTS

Upon completion of Phase I the consulting team presented their findings at a public forum on November 4, 2009. Approximately 20 people were in attendance at the forum. After the formal presentation, the consulting team invited members of the audience to give their ideas for the plan to individual team members that were situated at “topic” tables including: 1) Land Use and Transportation, 2) Environment and Recreation, and 3) Social and Economic Issues. Residents in attendance offered many valuable suggestions. Those that were voiced the most often were as follows:



75. November 4, 2009 Public Forum.

- **Build by-pass around Jefferson City:** Several residents suggested that development on the southeastern flank of Jefferson City was making the construction of a Highway 50 bypass a necessity if this section of the County was going to continue to grow.
- **Stop flood plain development west of Jefferson City:** One member of the audience was quite vocal about the need for the County to be more vigilant in the prevention of development in the flood plain west of Jefferson City. He noted that several building permits had been issued there in recent years.



Improve Route B: Another transportation issue raised at the input session was the need to improve Route B. A number of residents remarked that the Route has substantial traffic due to a dog food plant in Osage County and needed to be widened.

- **Construct convention/community center:** The most salient public facility need cited by the residents was the desire to have a combination community and convention center in the County. At present they argued, there is no adequate meeting place in the County. What was proposed was a new facility that could provide meeting space for public meetings (such as the public forum) and would be large enough for small conventions.

9.2. SURVEY RESULTS

In the summer of 2009, the consulting team generated a survey to help solicit resident input concerning what they perceived the most pressing issues facing Cole County were and what kind of place they wanted Cole County to become. In order to obtain a representative sample of all the County residents, the County planning commission randomly mailed out 500 surveys. Of the mailed surveys, 69 were returned. The greatest number of respondents was between the ages of 51 and 65 (29) and were either salaried professionals (22) or retired (25). The respondents were relatively evenly divided



76. Survey Form

between male (37) and female (32) and between Jefferson City suburbs (35) and rural areas (28).⁴

Significantly, the majority of the respondents felt that over the last ten years Cole County had either improved somewhat (43) or significantly (8). Only 5 people reported that the County had declined somewhat. No one responded that the County had declined significantly.

In the next section of the survey, respondents were asked to rank the three greatest assets of the County and the three greatest challenges. In terms of the County's assets, churches and religious institutions were clearly seen by the respondents as the County's #1 asset, but closely followed by schools and residential communities.

Not surprisingly considering the economic of the last three years, survey respondents listed job opportunities as the #1 challenge facing the County. The needs of the schools, the lack of recreational/cultural opportunities, and the state of the County's infrastructure were also listed frequently as major challenges.

In the last section of the survey, respondents were given the opportunity to fill in an open-ended question where they were asked what initiatives they wanted to see in the County in the next year, 5 years, and 20 years.

Within the next year, the primary desire was the re-development of the former prison site.

Over the next five years, residents listed transportation improvements as their number 1 concern. A number of residents wanted to see more good industrial jobs, the

⁴ Because the scope of the plan does not include Jefferson City, Jefferson City residents were not surveyed.



County's infrastructure improved, another public high school, as well as better law enforcement and emergency services.

For the twenty-year horizon, the idea that was suggested the most often by a slight margin was the desire for a County pool and community center. Schools, jobs, and roads were listed by more than one respondent. Building a new park, adding pedestrian and bike lanes along roadways, and facilitating the acquisition of a minor league sports team were also expressed needs.

Please refer to Appendix B for more information on the public involvement process.

10. ENVIRONMENTAL ELEMENT

10.1 INTRODUCTION

During the planning and public involvement process, it became readily evident that Cole County and its residents recognize that there is significant value in the County's natural resources including its land, air, water, and visual appeal. There is also a widespread understanding and appreciation of the County's prominence as the location of the State Seat and the role that Jefferson City and its surrounding urbanized area play in its economy and quality of life.

These factors are essential elements in the County's character and the following environmental element supports them. Accordingly, the County will make every effort to conserve open lands in their natural state when appropriate and to protect natural resources within this dual context.

The public benefits of conserving open lands in their natural state include, but are not limited to, the following:

- Preservation of open space
- Preservation of agricultural land
- Preservation of rural community character
- Protection of water quality
- Protection of air quality
- Conservation of wildlife habitat
- More efficient public service delivery at lower taxpayer cost

Refer to the attached map (Figure 77). Based on these considerations, and on the analysis of existing conditions in



previous sections, the following environmental goals and action items have been established.

10.2 ENVIRONMENTAL GOALS AND ACTION ITEMS

Environmental Goal 1. (E1.) Preserve the County's rural character, especially in non-urbanizing areas, including natural areas, wildlife habitat and other open space.

- Adopt regulations that direct new growth and development to the County's Urban Area (as shown on the Future Land Use Map.)
- Adopt regulations providing incentives for conservation subdivision design including conservation easements. They should explore the following as appropriate:
 - Retention of rural road sections
 - Smaller lots
 - Lots facing/backing to open space
 - Innovative solutions to parking and garages
 - Trail access points within neighborhoods
 - Rain gardens
- Adopt regulations allowing County development proposals that fall within the Urban Area to be processed on a fast-track schedule or given review priority.
- Adopt regulations that discourage urban development in the County's Rural Area (as shown on the Future Land Use Map.)

Environmental Goal 2. (E2.) Protect the County's rich

agricultural legacy.

- Adopt regulations that incentivize conservation subdivision design (as mentioned above) within the County with provisions allowing conservation easements (through land trusts) to remain in agricultural production.
- Promote the continuation of responsible farming operations by making it more economically feasible for farmers – small and large - to keep their land in production.
- Consider adopting a “Right to Farm” resolution whereby residential communities developing near agricultural operations understand and accept the rights and responsibilities of producers, along with potential impacts that are associated with living near agricultural operations.

Environmental Goal 3 (E3.) Protect and preserve the County’s natural waterways and water resources. Establish regulations requiring that jurisdictional waterways (streams shown in blue on United States Geological Survey (USGS) maps) are protected and maintained in their natural state.

- Establish regulations that require new development to meet appropriate lot line setbacks from water resources, establishing greenways along banks.
- Review current subdivision regulations to ensure that the most current “best storm water management practices” are implemented in order to reduce flow velocity and improve water quality. (Practices include reducing or eliminating curbs and gutters and direct



pipng to streams, substituting swales, berms, rain gardens and other water management techniques.)

- Improve water quality and stream bank stabilization in the waterways and streams of the County. Apply appropriate management techniques to reduce and/or eliminate sediment and to reduce water velocity through the use of appropriate storm water management practices.
- Establish regulations requiring new development to preserve and protect vegetation along aquatic corridors (see Appendix for definition)[HMM1], establishing vegetated buffer or wetland zones.

Environmental Goal 4 (E4.) Protect local watersheds and protect and promote the recharging of ground water.

- Facilitate compliance with current Federal regulations and best management practices (BMPs) regarding watershed protection and restoration by updating and enforcing the County's regulations to support these BMPs.
- Consider the amount and location of impervious cover (see Appendix for definition) proposed with new development and strive to reduce the amount of impervious cover related to new development.
- Establish regulations that prevent the direct piping of stormwater runoff into waterways.
- Ensure that the County's stormwater management practices strive to attain the following goals:

- Maintain groundwater quality and recharge
 - Reduce stormwater pollutant loads
 - Protect stream channels
 - Prevent increased overbank flooding
 - Safely convey extreme floods
- Prepare County landscaping standards requiring the use of native plant species that provide deep root systems and promote water detention for all types of plant species including turf grass.

Environmental Goal (E5.) The County will take measures to prevent soil erosion and inhibit the delivery of sediment into waterways.[HMM2]

- Facilitate compliance with current Federal regulations and best management practices (BMPs) regarding erosion and sediment control; update the County's Erosion and Sediment Control Plan as necessary, to support these BMPs.
- Require new development to provide stormwater quantity and quality management to adequately protect streams from stormwater erosion when there are no storm sewers within a reasonable distance of the development site.
- Ensure that the following ten elements are a part of all erosion and sediment control plans.
 - Minimize needless clearing and grading
 - Protect waterways and stabilize drainageways
 - Phase construction to limit soil exposure and compaction
 - Protect steep slopes and cuts



- Install perimeter controls to filter sediments
- Employ advanced sediment settling controls
- Certify contractors on erosion and sediment control plan implementation
- Adjust erosion and sediment control plans at the construction site
- Assess erosion and control practices after storms
- Require storm water velocity reduction at site discharge points
- Provide stormwater quality management for all construction sites
- Provide channel protection storage volume requirements

Environmental Goal 6 (E6.) Continue to protect, to the greatest extent possible, people and property within the County from flooding.

- Regulate the amount of allowable pervious coverage in all new development
- Adopt regulations that strongly discourage development in the floodplain, excluding river cabins.
- Encourage compatible recreational uses in the floodplain.

Environmental Goal 7 (E7.) Take measures to protect and improve the County's air quality

- Adopt plans and regulations that promote contiguous urban development that will result in an efficient urban development pattern less urban sprawl and therefore

less commuting and the subsequent air pollution.

- Develop a program to encourage alternative modes of transportation (e.g., biking, walking, transit where available).

Environmental Goal 8 (E8.) Create environmental corridors (interconnected networks of permanent natural areas, open space, and scenic or other resources) throughout the County.

- Initiate advanced planning and identification of existing and potential environmental corridor linkages within the County.



- Explore the possibility of intergovernmental open space agreements to protect corridors across municipal boundaries within the County.
- Use environmental corridors to maintain open space transition areas between communities.
- Consider these corridors for the development of non-motorized trails as appropriate.

Environmental Goal 9 (E9.) Preserve and enhance the visual environment in Cole County.

- Adopt broad commercial corridor design guidelines addressing setbacks from roadways and other considerations.
- Adopt commercial development design guidelines, addressing the need for aesthetics and containment of strip malls.
- Adopt residential design/architectural guidelines to maximize aesthetics adjacent to the public right-of-way (e.g., providing for uniform set-backs, managing the proliferation of front-facing garages, etc.).
- Provide incentives for the redevelopment of underutilized and/or blighted parcels.
- Prepare signage regulations including highway corridors.
- Preserve the County's dark nighttime sky by regulating outdoor lighting fixtures while promoting safety and conserving energy.

- Promote and or provide incentives for “green design” for new construction, especially County buildings.



77. Insert Environmental Map



11. FUTURE LAND USE ELEMENT

11.1 OVERVIEW

This Future Land Use element was prepared for Cole County as a result of the extensive existing conditions analysis that was conducted previously and described in sections 1 through 8. The element also reflects outcomes from the November 4, 2009 public forum and the County survey (refer to section 9 for more information regarding public engagement).

The Future Land Use Map shows the proposed locations for future agricultural, residential, commercial, public and semi-public, and industrial land uses throughout the unincorporated areas of the County's 399 square miles. The map accounts for growth over the next twenty years to the year 2030 and serves as a basis for the other major elements of the Master Plan which include environment, transportation, and public facilities (including public, buildings, schools, parks, and other public open space).

The Future Land Use Map (Figure 87) becomes an official document upon its adoption by the County Commission. It can also be amended by the County Commission. [HMM3] The map essentially divides the unincorporated portion of the County into two distinct areas, an "Urban – Established Communities Area" and a "Rural Area".

The "Urban Area" is located mostly in the northern area of the County and it is designated for future residential subdivision development as well as commercial and industrial development. The "Rural Area" is located primarily in the south and west areas of the County and is designated for farmsteads (including single-family homes associated with them) wooded areas and other large expanses of open space.



11.2 FUTURE LAND USE GOALS

A series of general future land use goals were used to guide decisions regarding the location and arrangement of the various types of land uses throughout the County. The end result was the preparation of this Future Land Use Plan element and its accompanying map. The goals are listed below:

LU 1. Future Land Use Goal 1. Preserve the rural areas of the County including open fields, croplands, woodlands, and open spaces.

LU 2. Guide urban development to minimize urban sprawl in the existing rural areas of the County.

LU 3. Provide for the expansion of the urbanizing areas of St. Martins, Jefferson City, Wardsville, and Taos into adjacent areas of the County.

LU 4. Encourage contiguous urban development that will result in a more efficient urban development pattern and a more cost-efficient urban public infrastructure system.

LU 5. Encourage contiguous urban development within the seven incorporated cities.

LU 6. Encourage new residential development to locate in proximity to existing commercial areas in order to promote shorter travel distances, a reduction in pollution, and less fuel consumption.

LU 7. Encourage the concentration of urban uses to create efficiencies in the extension of water lines, sewer lines, electric and other infrastructure.

LU 8. Provide provisions that generally separate residential uses from commercial and industrial uses to preserve the quality and value of residential areas – while allowing for the possibility of mixed use development at certain locations as appropriate.

LU 9. Develop measures that encourage the preservation of rural areas such as conservation subdivision design, conservation easements, subdivisions with minimum lot sizes, and requirements for the provision storm water controls, including requirements for the provision of both linear and conventionally-sited open space (see the Environmental Element of the Master Plan for more details).

LU 10. Provide for a sufficient amount of commercial and industrial land so that future businesses have a variety of site selection options.

LU 11. Encourage the preparation of detailed commercial and industrial plans along highly visible highway corridors, including but not limited to Highway 54, Highway 50 East, Highway 50 West and Business Highway 50 corridors., Highway 179,, Routes B and C.

LU 12. Recognize the importance of environmental preservation in the location of various future land uses.



11.3 FUTURE LAND USE PLAN

The intent of the future land use plan is to guide future development, grouping it by compatibility. In most instances residences and businesses would not be grouped together because their infrastructure and service needs are generally incompatible. This is because the scale, aesthetics, lighting, parking, and noise characteristic of typical commercial and retail uses can have a negative impact on residential land uses.

However, the need for separation of residences from uses that could generate negative impacts may be irrelevant in some areas, such as an area where residents might like to live within close proximity to work destinations, stores and desirable locations. Such an area would have to permit these uses in what is referred to as a mixed-use district. Therefore, this plan also suggests that some locations within Cole County – particularly along some commercial corridors – could be appropriate for mixed-use development.

As previously indicated, the land use map divides the entire County into two major areas: An Urban-Established Communities (Urban-EC) area and a Rural Conservation (RC) area. Open space has also been provided for in this area.

This approach will eliminate the spread of growth and sprawl that has occurred in other urbanizing counties, thereby helping to conserve and protect Cole County's historical character while simultaneously promoting and enabling growth. It will also enable the County to strategically focus its resources within a more contained area as well as maintain its existing efforts in the Rural area.

The two areas and the land uses that are proposed for each are described in greater detail below. They are also depicted on the Future Land Use Map.

11.3.1. The Urban-Established Communities Area (Urban-EC)

The Urban-EC area encompasses about 80 square miles around Jefferson City – extending from and including St. Martins on the west, then along a line from Route C eastward to the Osage River south of Wardsville. This area includes most of the subdivisions in Cole County and the larger incorporated cities of St. Martins, Wardsville and Taos. This area could accommodate all of the County’s future growth for decades.

There are many economic advantages in encouraging urban growth within this area, including:

- Less travel time to work and other destinations for the residents in this area.
- A net reduction in fuel consumption coupled with cleaner air.
- Lower infrastructure and public service costs.
- Ample room remaining for open space.
- Schools, parks and other activity centers in closer proximity and more easily accessible.
- More cost-efficient fiber optic and cable installations.

The existing highway system in the Urban-EC area should be sufficient to accommodate the future population. Highway 179, Route B, and Route C have been improved and rerouted to accommodate up to 10,000 vehicles per day and current usage is far below that capacity.



Residential subdivisions within the Urban-EC area should have a wide range of lot sizes, from 10,000 square feet to 3-5 acres (such as in the Bradford Court subdivision in Taos), and perhaps 10 to 20-acres. Many new subdivisions will in all probability be developed in incorporated cities within the Urban-EC area. Both Wardsville and Taos have a significant amount of vacant land available for such development. St. Martins is close to an extensive concentration of commercial facilities on Highway 50 West. Also, St. Martins and Wardsville have a short commute to employment opportunities within Jefferson City. Taos is only five miles east of Wardsville and offers a relatively short commute to Jefferson City. A longer trip is required from Wardsville and Taos to the commercial-retail uses along Highway 50 West.

It is probable that some potential homebuyers will want a ten or twenty-acre parcel with no intention of farming. It is also advantageous to allow for the development of duplexes, townhouses and apartment buildings. The expansion of housing choices such as these would provide important opportunities for aging homeowners who desire to downsize, as well as for younger residents seeking affordable starter housing.

Finally, each of the aforementioned lot sizes and housing types should have appropriate buffering so that, for example, people who choose three-, five-, ten-acre or larger parcels are not adjacent to small lot subdivisions, townhomes or apartments.

11.3.2. Urban-EC Area Uses

The existing land use categories documented in Chapter 5 include five broad types: (1) Rural, (2) Residential, (3) Public and Semi-Public, (4) Commercial and (5) Industrial. The

purpose of that analysis was to identify existing patterns and concentrations of development in the County.

The Land Uses in the Urban – EC area, not including incorporated cities or the Highway corridors, would include the following.

- Residential uses on single lots or in subdivisions. This would include all types of residential uses – whether single buildings or subdivisions. Uses include single-family dwellings, two-family units and multiple family units – apartments and group homes. (Schools, parks, public buildings, semi-public uses, places of worship, public utility buildings and structures, as well as farmsteads and all agricultural uses would be allowed by right.)
- Retail, office, service uses, places of worship and public utility buildings and structures and commercial activities of all types, schools, parks, public buildings, semi-public uses, as well as farmsteads and all agricultural uses.
- Light industrial, warehousing, service uses and similar uses that do not create off-site noise, vibration, light, smoke, odors or other pollution.

11.3.3. The Rural Area

The Rural Area of the Land Use Plan includes all of the remaining areas of the County – to the south and west. It is the largest area in the Plan comprising about 300 square miles of the County's total area of 399 square miles. This area is predominantly a rural-farm area. There are several existing subdivisions and two residential-lake developments. Also the Highway 54 West corridor and the Highway 50 West corridor pass through this area.



This area is a prime example of relatively natural landscape – a setting of open fields, pastures, croplands and wooded areas. The terrain is slightly hilly with elevation differences of approximately 200 feet, providing almost unending vistas. The farmsteads in this Rural Area are usually far apart with a few intervening houses on smaller parcels. Small watercourses pass among the hills – with small bridges across the larger creeks. Many of the farmhouses are accessed from a one lane drive or road – frequently disappearing into a wooded area. In some places, there are barns, silos and other farm buildings close to a County road.

The County roads within the Rural Area of the Land Use Plan vary in type of surfacing. The numbered highways are paved with two lanes and gravel shoulders. There are many gravel roads primarily in the south part of the County. In some instances, a road is paved for a short distance and then becomes a gravel road.

The historic character and pastoral quality of the Rural Area would be negatively affected if subdivision developments were allowed to be scattered throughout the area. They would look out of place and interrupt the rural quality of the area. While the land acquired for such subdivisions may cost less than in more urbanized areas, the subsequent developments would negatively impact historic character and would require intensive infrastructure investment in roads, utilities and services. Commutes to work and for shopping would also be more costly for residents of those subdivisions, further offsetting the initially lower purchase cost of a home in a rural subdivision.

11.3.4. Rural Area Land Uses

- Farmsteads and traditional agricultural uses.

- Single-family residential on lots of not less than three to five acres.
- Schools, parks, public buildings, semi-public uses, places of worship and public utility buildings and structures.

11.3.5. Corridor Land Use Plans

The major highway corridors including but not limited to Highway 54, Highway 50 East, Highway 50 West and Business Highway 50, require more specialized land use planning. For example, Highway 54 has a long stretch of over 15 miles that is in the “Rural Area” of the Land Use Plan. The Rural Area does not include commercial and industrial uses. Therefore these corridors will require a more detailed and specific land use plan encompassing options for commercial, industrial, mixed use, and transit oriented development - TOD. (Please refer to the special corridor plan maps – Figures 78–84 - located at the end of Section 11.3.5.)

Appendix B provides background information on several important land use techniques including mixed uses and TOD.

- **The Highway 54 Corridor.**

The Highway 54 corridor extends from the Jefferson city limits at Highway 179 southwestward to the County line in the Eugene area. This corridor is 14.4 miles long. The section from Jefferson City is 7 miles long and the section from West Brazito Road to the Cole County line is 7.4 miles long.

In the “Urban Planning Area” from Highway 179 to the Moreau River there are about twenty commercial, industrial or public land uses. In the “Rural Planning Area” almost all the commercial, service and industrial uses are concentrated in Brazito or in the Eugene



area. This area is predominantly rural in character. Therefore, it is proposed that commercial, industrial, and other specialized land uses within the Corridor should be primarily concentrated at four “crossroad” intersections described in the following sections.

The Route CC Crossroad

Commercial sites are proposed for the Route CC Crossroad on both sides of the road. The only access to the proposed commercial area on the south side of Highway 54 would be from Shepherd Hills Road. This site backs up to the Moreau River and would provide river views from office buildings. Neighorn Branch flows through this area and could reduce the area below the 45 acres shown on the Land Use Plan as commercial.

The Monticello Crossroad

This area is located on the southeast side of Highway 54, Goller Road on the north and the Moreau River on the south. Access to this area could be from Goller Road without a new crossing on Highway 54. The terrain in this area is fairly level. The Land Use Plan shows 50 acres of Commercial, with the remaining 100 acres for industrial.

The Brazito Crossroad

This area is located on the east side of Highway 54, between Windy Hill Road (north) and Tanner Bridge Road (south). Access would be from the above roads and one small road in the center of this area. A total of 40 acres is proposed for commercial and 200 acres for industrial. The land here is nearly level with grades of less than five percent.

The Eugene Crossroad

This Eugene area is somewhat unique in that commercial areas on Highways 54 and 17 are a small part of a much larger area. It includes the golf course and residential development on the north, the former town of Eugene one-half mile to the south and the High School creates a significant urban area.

A fifty-acre commercial area is shown on the land use plan between Highway 54 and Penny Hollow Road. A new outer road from Highway 17 to Penny Hollow Road would provide prime access to commercial uses. A larger industrial area is proposed just south of the commercial area. It could contain 250 acres for industrial, with the same access as the commercial area. The topography in this area has slopes of five to ten percent, thus the commercial and industrial sites would require some grading.

The Highway 54 Corridor includes a total of 235 acres of commercial and 550 acres of industrial. This would provide businesses with a wide choice of sites and locations along this corridor, which is the most visible corridor with a greater volume of traffic.

- **Highway 50 East Corridor**

This highway corridor extends from the bridge over the Osage River (County Line) for a distance of five miles to the Jefferson City Limits. Both the north and south sides along Highway 50 East contain a substantial amount of vacant land suitable for development. Primary access to this area is provided by the interchange in Schubert, to Route J on the north side and Route M on the south side. The commercial center of Taos is a mile and a half south of Highway 50.



The most appropriate use of the vacant land along this corridor would be for offices, research, warehouse, and light industrial uses.

The terrain in this area has elevations between 500 and 700 feet with grades ranging from five percent to twenty percent. Existing sites have been graded out for the fifteen existing commercial and industrial uses. They are grouped at the Schubert and Big Meadows Road crossings. Access to the area on the south side of the three-mile stretch from the Osage bridge to Schubert is currently available along Stoney Gap Road. There are several flat areas near Stanford Creek. There is over 400 acres in this area suitable for commercial and industrial uses.

The area between Schubert and the Jefferson City Limits is located along both sides of Liberty Road. Some portions have the five to twenty percent slopes common to the overall area. There is a significant amount of level land in the Rising Creek watershed. This area contains over 400 acres. The City of Taos is located one mile south of Liberty Road, so the commercial-industrial area shown on the Land Use Plan is limited to 1,000 feet north of the Taos City Limits. The 100-acre area on the north side of Highway 50 is proposed for commercial.

The area on the north side of Highway 50 east of Lisletown Road is in the Osage River flood plain. Between Lisletown Road and Route J there are four roads with scattered residential areas. Also, a large subdivision with a lake is on the west side of Route J. Therefore, all of the area north of Highway 50 is shown as rural and residential on the Land Use Plan.

- **Highway 50 West Corridor**

This corridor extends from the city Limit Line of St. Martins westerly to the County Line, passing through the south city limits of Centertown. The most significant opportunity for a Land Use Plan in this area could be an Industrial Park on the south side of Highway 50 fronting on Nine Hills Road on the west edge of this area. The area would include 14 larger parcels, generally ranging in size from 40 to 80 acres. The entire area would be one mile square with 640 acres. The east edge would be one-half mile from the St. Martins city limit line. All of this part in St. Martins is residential.

A commercial area is shown on the Land Use Plan at Highway 50 and Murphy Ford Road. All four corners are proposed as commercial, extending north to Lookout Trail. There are three commercial uses and one industrial use at this intersection. The Union Pacific Railroad tracks are located on the north side of Lookout Trail. A commercial area is also located at the intersection of Highway 50 and County Route U. This area is not within the Centertown City Limits.

The remaining areas along this corridor are proposed as Rural Areas.

- **Business 50 West Corridor**

The Business 50 West planning area extends from the entrance to Binder Park (South Binder Lake Road) on the west to the off-ramp and overpass on Highway 50 on the east – a distance of 7,000 feet or 1.3 miles.

Within the properties fronting on the highway there is a significant mixture of land uses, including commercial, industrial, three trailer courts, two churches and several single-family homes. The area is a prime example of a mixed strip commercial area.



There are also some very sound and valuable uses adjacent to the Business 50 West frontage. Binder Park has a one-half mile of frontage on the highway, with 1,200 feet in the study area. There are five residential subdivisions on the north side with access from Rainbow Drive. Two of these subdivisions have streets connecting to Business 50 West.

The plan for this corridor proposes a substantial change in the land use patterns. Ultimately, the area would contain only commercial and industrial uses, with the two churches remaining. This would provide a greatly improved area for the County, St. Martins and Jefferson City.

There are six vacant parcels in the area that can be used for commercial. The three trailer courts do not meet current standards adopted by many cities and counties. In some cases the units are not properly maintained and are on very small parcels. As the area improves, the land could become more suitable for commercial uses.

The few homes fronting on the highway are sound units – but could eventually be used for small offices or businesses.

The residential subdivisions contain sound housing and could benefit from the upgrading of the area. The Veil of Tears Drive, Ravenwood Drive and Lakeview Heights Drive have over 100 residences.

The County could initiate a streetscape improvement project, with landscaping and trees at appropriate locations, street lighting, better curbs and gutters and require hard surface parking area.

- **Highway 179, Route B and Route C**

Significant highways in Cole County include Highway 179, Route B and Route C. The three corridors are interconnected at the south city limit of Jefferson City, and are particularly important because of this relationship.

Highway 179 starts at its intersection with Highway 54 and travels northwest and west through unincorporated areas of the County, generally near the Missouri River bluffs and on to the County line northwest of Marion. There are few subdivisions and houses along this route. The old prison farm is located along the highway and there are also some commercial uses.

Route B also starts at the Highway 54 intersection as a continuation of Highway 179. After travelling eastward for a mile it extends southward through Wardsville and on through St. Thomas and the south County line. Route B's accessibility to Jefferson City is a factor in the historical development of Wardsville.

As with the two previous roads, Route C also begins at Highway 54. This route is the longest in the County, extending 15 miles westward to Russellville. There are many large subdivisions along the first five miles of Route C and in the Scruggs area, and some commercial uses at the Lohman intersection.

The Highway 179, Route B and Route C corridors are a potentially ideal setting for a County community center as well as a mix of commercial and industrial land uses. A detailed study of this area should be prepared in the future to determine traffic access, utility needs, and specific sites appropriate for future development.



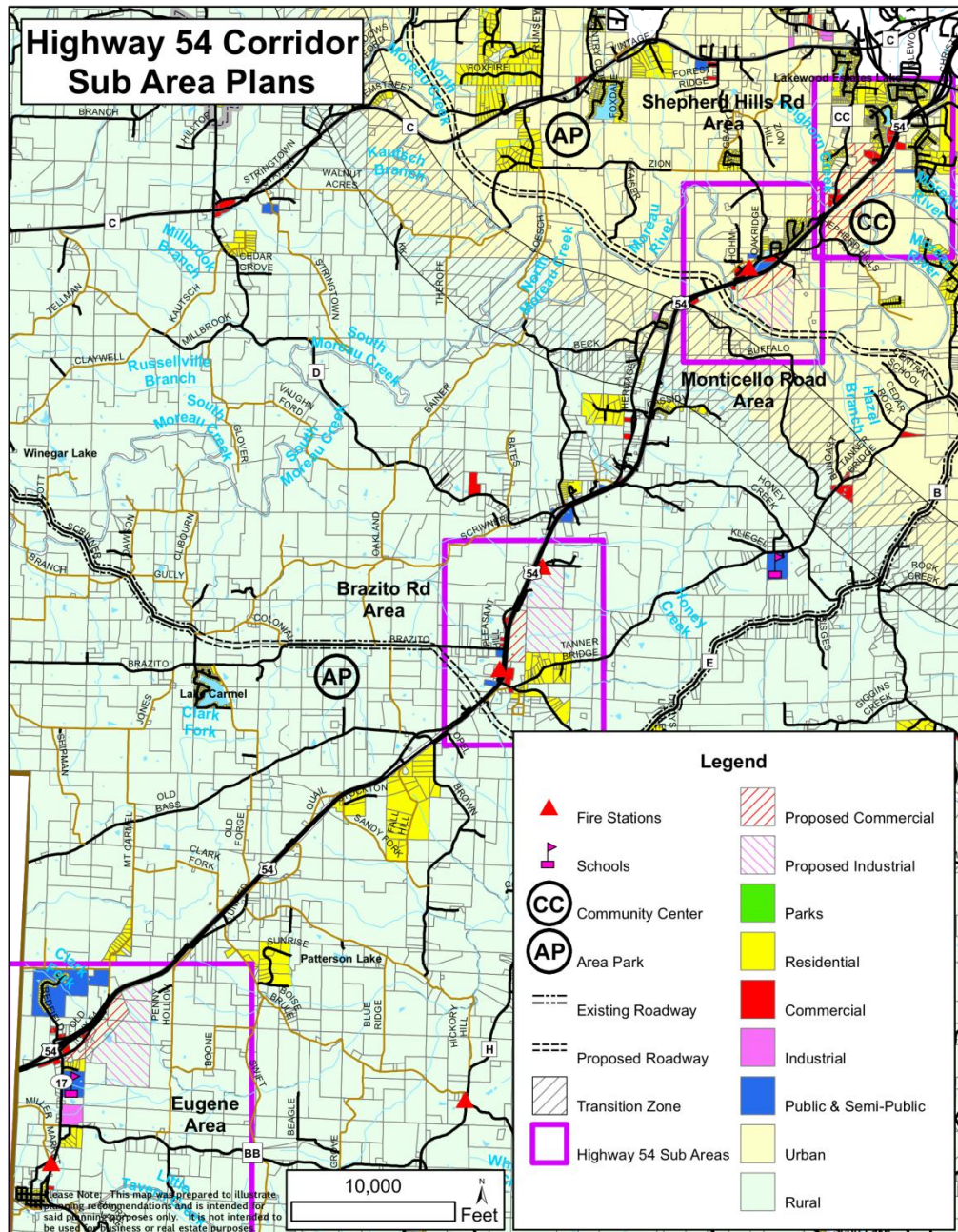


Plate 1

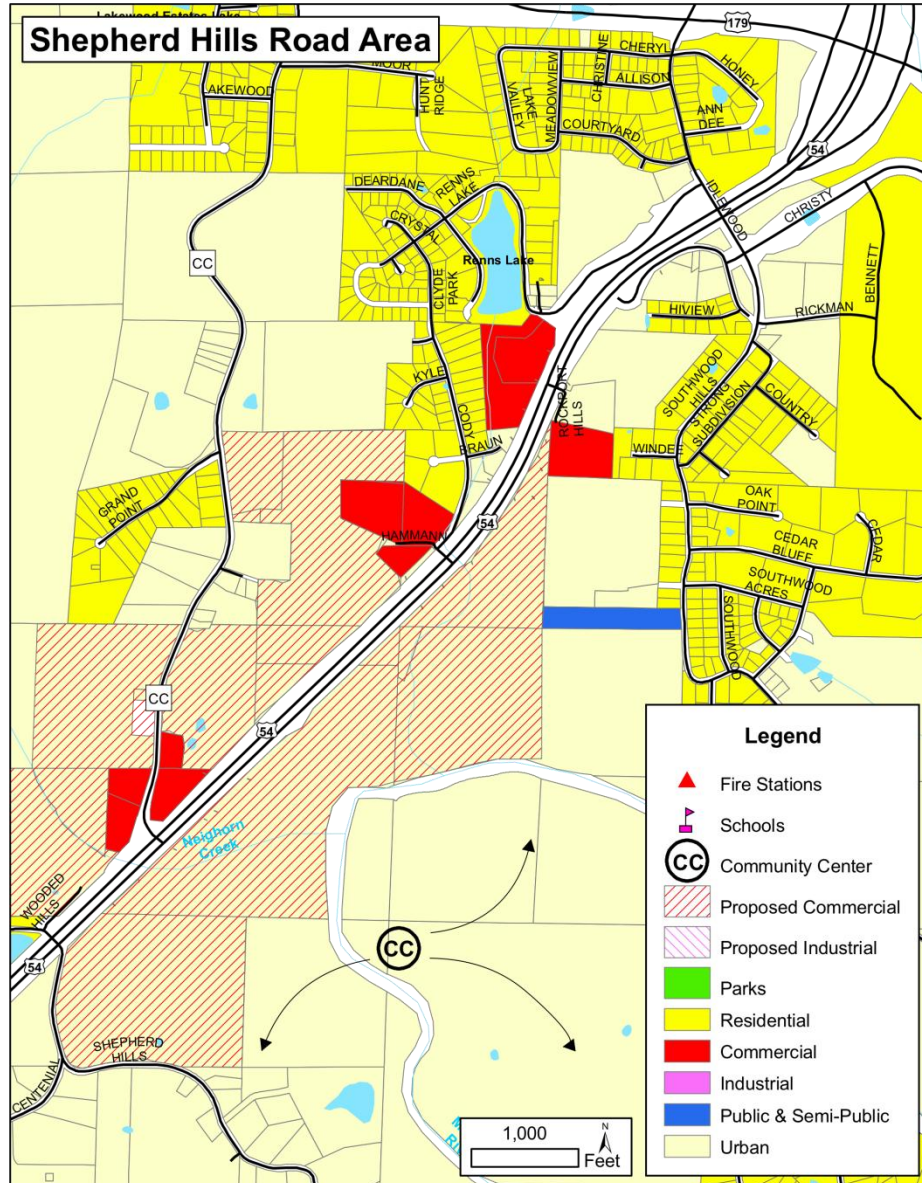


Plate 2

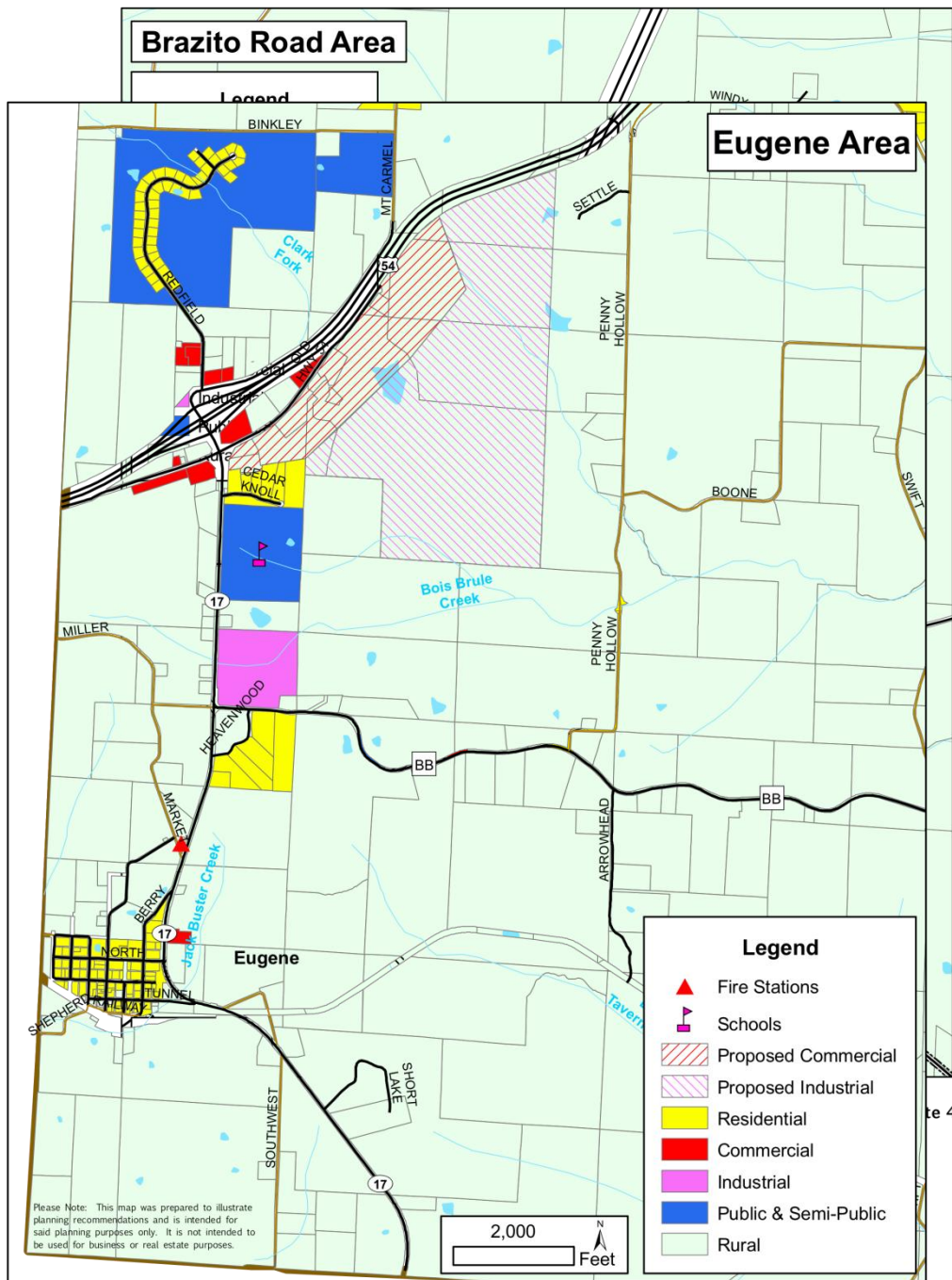


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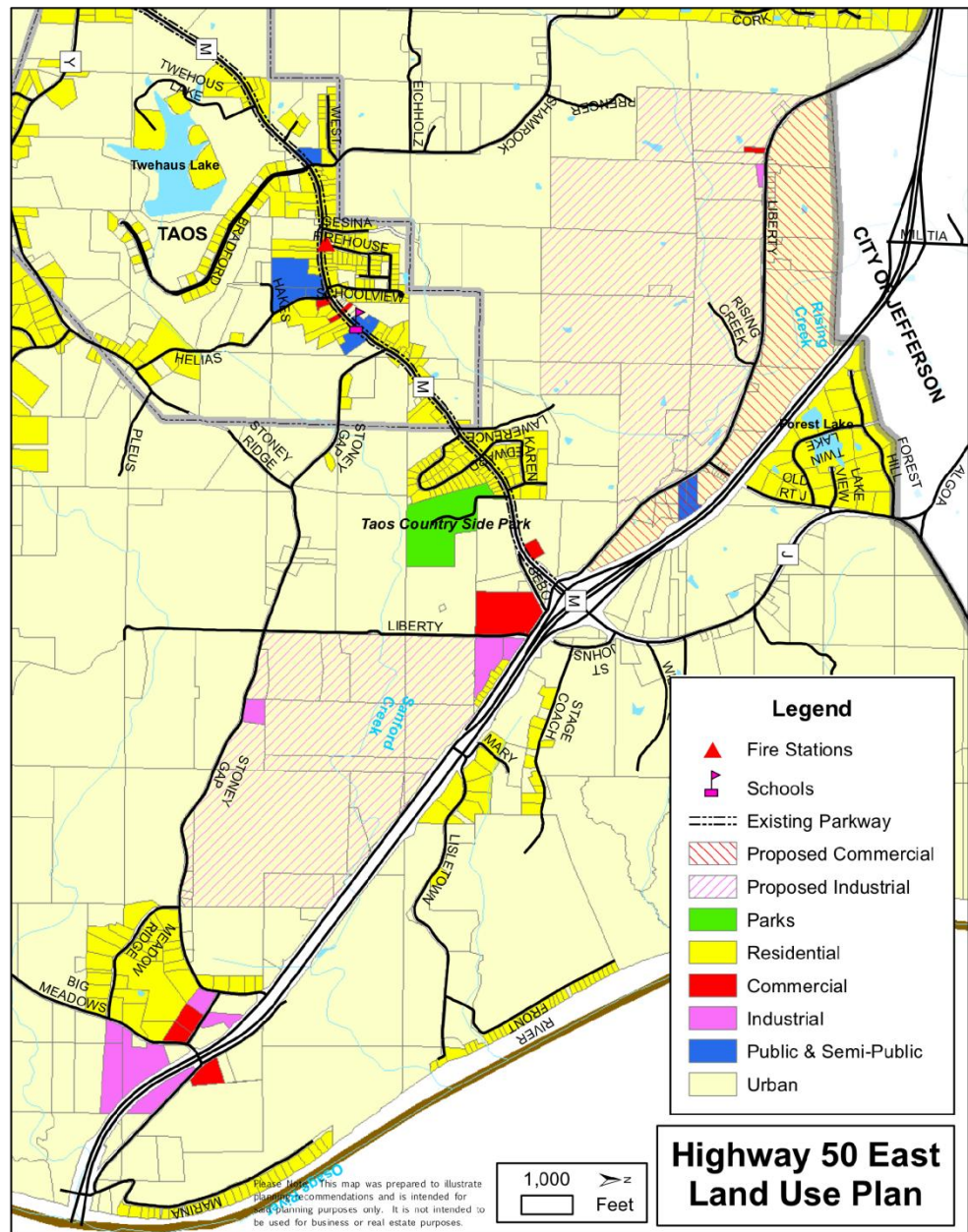


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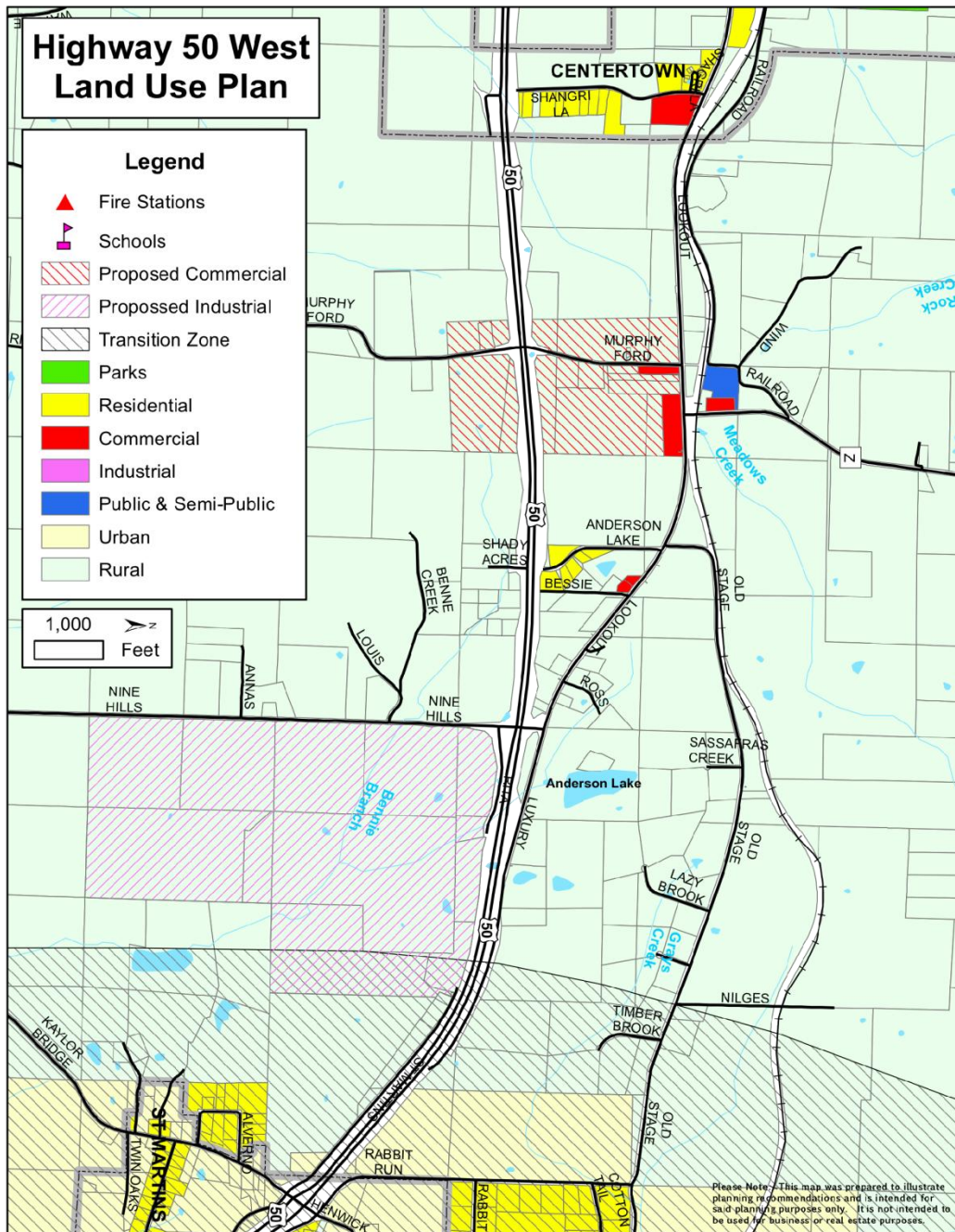
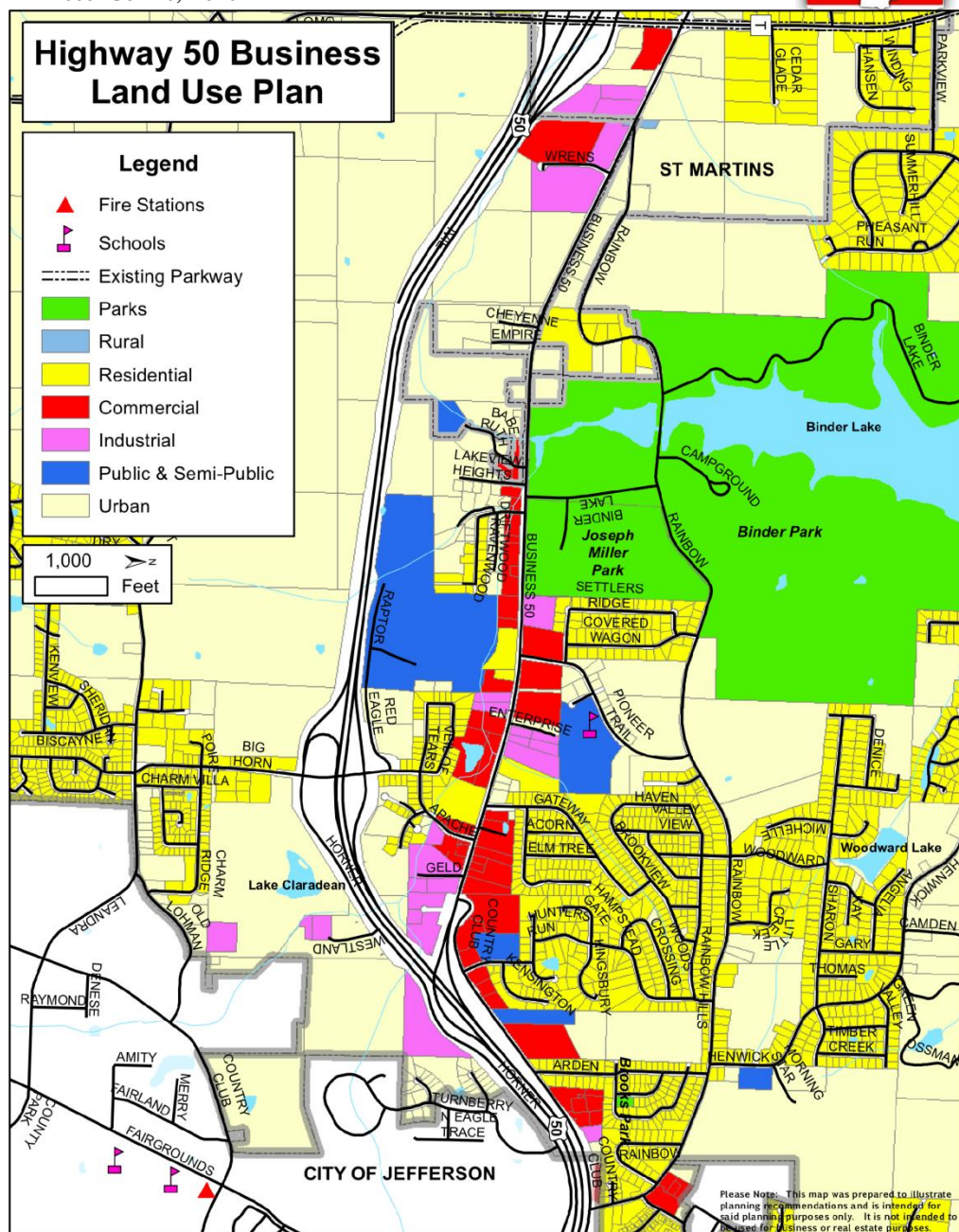


Plate 7



James Pona & Associates

11.3.6. Summary of Proposed Land Uses

The land use proposals for the four highway corridors placed almost all of the abutting property in the rural land use category. Some parcels with proper highway access, visibility from the highway, and fairly level terrain were recommended for commercial and industrial uses. The following is a summary of the acres of land proposed for commercial and industrial use (figure 85). Update table w 179 Rt B Rt C; add Business 50 West Corridor.

85. Area in Acres

Corridor	Commercial	Industrial	Total
Highway 54	185	550	735
Highway 50 East	150	800	900
Highway 50 West	60	160	220
Highway 50 Business	tbd	tbd	tbd
Highway 179, B & C	tbd	tbd	tbd
Total	395	1,510	1,855

The Business 50 West corridor plan would not provide any significant change in the amount of land in commercial or industrial use. While a few residential parcels and the small acreage trailer courts would provide some increase in commercial – it may not occur within the twenty-year time frame of this Comprehensive Plan.



11.3.7. Analysis of Future Land Use Needs

The foregoing summary of the amount of land proposed for commercial and industrial uses should be adequate for future demand. It has been developed based on experience with a number of projects in different regions of the country. (Also refer to the table below – Figure 85 - that provides information on the amount of land typically needed for commercial and industrial uses.)

86. Future Land Use Need

Land Use Category	Approximate Acreage Per 100 Population
Commercial Uses	1.66
Industrial Uses	4.96

Accordingly, a population of 1,000 persons would typically require 16 acres of commercial land. A population of 10,000 would need 160 acres of commercial land in order to be properly served. For the industrial category, populations of 1,000 and 10,000 persons would require 49.6 and 496 acres respectively.

The Cole County estimate of population for the year 2030 is 83,583, as indicated in the Existing Conditions Analysis - a 17 percent increase from the present population. This represents a population increase of 12,186 persons.

Using the ratio of 1.66 per 100 persons of population for commercial uses, it is estimated that the entire County will require 202 acres for such development. If half of this were to locate in the Unincorporated area- there would be a total need for approximately 101 acres for commercial land.

In order to provide a variety of sites for new business, there should be a wide choice for a developer or business. Most land use plans provide a ratio of 4 to 1 of land to actual use. A similar ratio is used for industrial uses.

The land use plan has 395 acres shown in the Highway Corridors (10.5.5 above check reference number). With half in the unincorporated area there is a need for 101 acres. Thus the 395 acres to 101 acres is a 4 to 1 ratio. The land use plan provides 1,510 acres of industrial land. The actual need of 496 acres provides about a 3 to 1 ratio (1,510-496). This assumes about a fourth of new industry will locate in Jefferson City.

11.3.8. Land Use Development in the Incorporated Cities

There is a substantial amount of vacant land within the boundaries of the seven incorporated cities for future development. Some landowners of the larger tracts may not want to develop their property, or sell it to a developer. Various properties may become available in future years. There is also the possibility that landowners on the fringes of the cities may want to sell or develop the property for urban uses. These areas would come under the jurisdiction of the County.

The County Land Use Plan includes the following objectives.

- All properties within the Urban Area (see 10.3.1) are proposed for future residential development and farmsteads. Commercial and Industrial Uses are allowed where indicated in the Land Use Plan.
- All properties in the Rural Area are proposed for farmsteads, agricultural uses, single-family lots of not less than five acres and public facilities. Properties that abut incorporated areas may be approved by the County Planning Commission for subdivisions that have

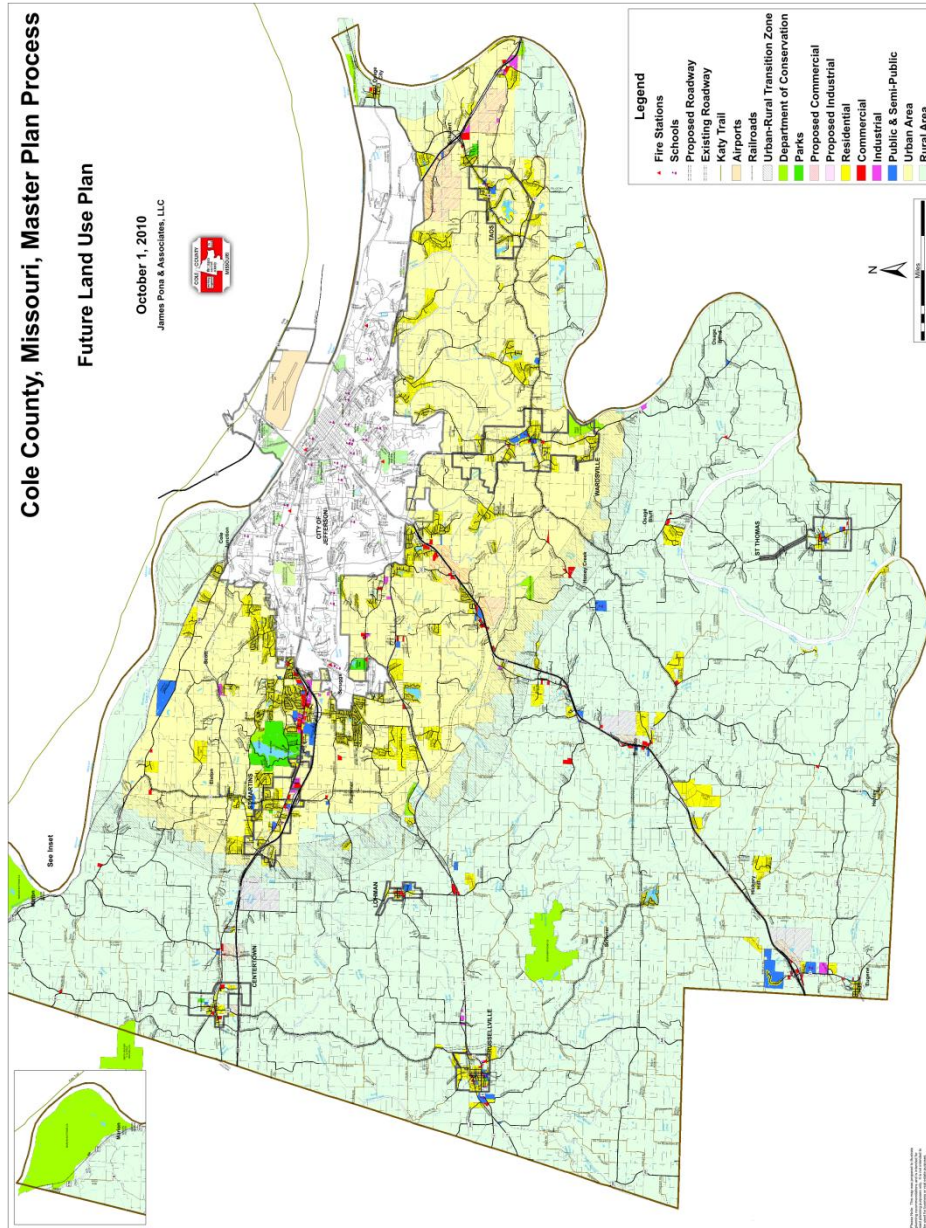


lots of less than five acres.

- Commercial and industrial uses within the Rural Area are allowed along highways as shown in the Corridor Plans.

87. Future Land Use Plan

(A full-size version of the map can be found on the inside rear cover of this book)





12. TRANSPORTATION ELEMENT

12.1.INTRODUCTION

The transportation system in Cole County is the responsibility of the County Department of Public Works, MODOT, and the incorporated cities. These agencies have continued to improve the road network in the County over the past years. The efforts should be continued and expanded, as a quality road network is essential for future growth. The following section identifies the transportation plan for the portion of the system managed by Cole County.

The recommendations are not insubstantial. They should be carried out regularly – preferably on an annual basis - rather than be postponed over a period of years, and resources budgeted as available to meet this level of effort. The implementation horizon is twenty years. (Refer to map, Figure 92)

12.2.TRANSPORTATION GOALS AND ACTION ITEMS

12.2.1. (T1.) Provide improved east-west travel options, both to complement north-south mobility and to lay a transportation infrastructure for the County's economic future. Two new roads are proposed (they are described in a subsequent section):

- Cole County Parkway
- Southwest Beltway

12.2.2. (T2.) Coordinate County road improvements with the incorporated cities and with MODOT.

- Encourage landowners on existing gravel roads to use the County program to pave their roads.



- Continue to review and monitor with MoDOT traffic levels at all State Highway crossings as traffic volumes increase. Provide for a Cole County Parkway through the urbanizing areas of the County, to extend from St. Martins on the west to Taos and Highway 50 on the east.
- Promote programs to preserve recognized scenic vistas at key locations along County roads, utilizing special incentives.

12.2.3. (T3.) Assure continued safe travel as traffic increases, with additional traffic controls:

- Install traffic controls as appropriate.
- Establish visual setbacks at highway intersections for both safety and aesthetics.

12.3.SURFACE TRANSPORTATION

Roads, transit and railroads comprise the areas surface transportation system, with roads comprising the most intensively travelled component. The key recommendations for the County portion of the system include two roads. Principal recommendations for the State-maintained roads involve key crossing points for County and other roads. The most significant changes will occur within the highway system maintained by the State and the County. Modification of Highway 54 and Highway 50 are proposed as well.

12.3.1. State Roads

- Highway 54

This divided four lane limited access highway extends from Jefferson City to the Lake of the Ozarks. The section within Cole County extends from the Highway

179-Route B Interchange Southwesterly to the Cole County Line-a distance of 15.8 miles. There is one full interchange with an overpass bridge in the Eugene area near the County Line.

There are 28 “at grade” crossings on Highway 54 in the following locations.

1. Southwood Hill Road
2. Cody Drive
3. A private drive
4. Route CC
5. Shepherd Hills Road-Wooden Hills Lane
6. Monticello Road-Goller Road
7. Monticello Road-South
8. Twin Bridges Road
9. Heritage Highway-Buffalo Road
10. A private drive
11. Cassidy Road (to Heritage Highway)
12. Rilius Lane
13. Tonia Lane (Trailer Court)
14. Honey Creek Road
15. New Church Road
16. Route D
17. Old Ridge Road (and a private drive, west side)
18. Pleasant Hill Road
19. West Brazito Road
20. Route E
21. Gray Road
22. Old Bass Road-Brown Road
23. Fall Hill Road-Fall Hill Spur
24. Quall Road-Sandy Fork Road
25. United Road-Farm View Road



26. Clark Fork Road-United
27. Penny Hollow-Road
28. Highway 17-Mount Carmel Road

These 28 crossings of Highway 54 occur about every one-half mile. Drivers on these roads must wait for break in traffic to make right turns and in some instance stop in the center medium to make left turns. These grade crossings could pose a problem in the future as traffic volumes increase. Many of these existing crossings are providing Highway 54 access for one farmstead or for five to ten residences. Access to these properties could be altered, with a parallel service road for a short distance access through an adjacent parcel on Highway 54 or access to larger tracks fronting on other roads. Properties for consideration for this procedure are as follows.

- Gray Road

There are three parcels in the west side of Highway 54 in Gray Road that connects to the north and south bound lanes of the highway. These parcels could be acquired to improve traffic flow. The single property on the west side of Highway 54 could connect to Route E.

- Clark Fork Road-United Spur and the Penny Hollow Road-Penny Hollow Lane Crossings.

These two at grade crossings of Highway 54 can only be eliminated by a full interchange midway between the Highway 17 Interchange (Eugene) and West Brazito Road to the north. Such an interchange probably would not be practical during this 20 year Comprehensive Plan. An interchange near West Brazito Road will be addressed in another section of this report.

Twin Bridges Road to Heritage Road

This property's south edge is within 200 to 300 feet from Heritage Road. A connection could be placed in the Highway 54 right-of-way (Item 3 in the foregoing list).

- A Private Drive on the East Side of Highway 54

This property could be connected to a twenty-acre parcel at the end of Magnolia Way. (Item 10)

- Rilius Lane

This 100 acre plus property could be connected to Honey Creek Road along the property line of five parcels. (Item 12)

- Small Parcel West Side of Highway 54

This parcel is opposite Old Ridge Road. A driveway could connect this parcel to Pleasant Hill Road.

- Highway 50 East

This divided for lane highway extends from the Jefferson City Limits just east of Militia Drive to the Osage River Bridge, a distance of 4.3 miles. A complete diamond interchange is located at Route J which extends southwesterly to the City of Taos. Another complete interchange is located at Militia Drive in Jefferson City.

There is a surface crossing of Highway 50 East at Big Meadows Road on the south and on Marina Road. Lisletown Road also has a Highway 50 crossing located 3000' east of the full interchange at Route J, as does Shamrock Road. Although it is unlikely that another full interchange would be warranted on this four-mile stretch of Highway 50, increased traffic conflicts at these locations suggest the potential for



an outer road which could eliminate some of the concerns.

- Highway 50 West

This highway extends from the west city limit of Jefferson City to the County Line west of Centertown. The first interchange provides on and off access with Business 50 West, which is the main street for a business/industrial area and access to Binder Park.

A full interchange connects with Big Horn Drive/Veil of Tears Drive. Red Eagle Drive from Veil of Tears drive provides access to the MODOT Offices.

The next full interchange is located two miles further west in St. Martins, with the overpass connecting to Route T and Route D.

An at grade intersection a mile and one half further west connects to Henwick Lane and Kaylor Bridge Road in St. Martins. Business 50 West/St. Martins Boulevard ends at Henwick and this grade crossing.

The next five miles of Highway 50 West, from Henwick Lane to the west County Line, has five at grade crossings, or one every mile. This includes

- 1) Nine Hills Road
- 2) Shady Acres Road
- 3) Murphy Ford Road
- 4) Route U (into Centertown)
- 5) North Waterford Road-Murphy Ford Road

The full length of Highway 50 is limited access at the five foregoing intersections.

- Highway Bridges

There are 49 bridges within Cole County that are included the MODOT Bridge Inventory (January 2008). Nearly all of these bridges were built after 1950, with the exception of the following older bridges.

88. Older Bridges in Cole County

Bridge	Year Built	Crossing
Moniteau Creek Road	1915	Moniteau Creek
Rock House Road	1932	Moniteau Creek Tributary
Frog Hollow Road	1915	Wear's Creek
Old Forge Road	1930	Clark Fork
N. Teal Bottom Road	1930	White Oak Creek
High Street	1949	Wear's Creek
Liberty Road	1927	Rising Creek



12.3.2. County Highways

As previously discussed, two new County highways are proposed in order to meet transportation needs and to help stimulate future economic growth. One will connect the Taos and Wardsville area to the south and western sections of the County. The second route will establish a major corridor to the south and west areas of the County.

- The Cole County Parkway

This highway would generally be located within sections of existing highway right of way and in completely new right-of-way. It would start at Highway 179 and Route T, following Route T, following Elston and St. Martins, crossing Business 50 to Highway 50 West, with a grade separation. It would follow Lomo Drive for a short distance, then curve southeasterly into the intersection of Meadows Ford Road and Old Lohman Road. The Parkway would extend along Meadows Fork Road to Scruggs Station Road.

New right-of-way would be required from Scruggs Station Road to Route B west of Wardsville at Tanner Bridge Road-a distance of approximately 10 miles. This new route would cross Hemstreet Road, Route C and Loesch Road (gravel), then would travel parallel to the Moreau River for a mile, crossing the Moreau River to Highway 54 just north of Buffalo Road. It would cross Highway 54 on a new grade separation and then cross the Moreau River in two places, extending to Tanner Bridge Road and Route B.

This section of the proposed Cole County Parkway would be the most scenic, as there are no residential

subdivisions along this entire section and the area affords scenic vistas of the Moreau River. The area would be an ideal location for high-end residential development. The right-of-way in this section should be 100 to 200 feet in width to provide room for a vegetative buffer. It could also accommodate multipurpose trails crossing the Moreau River section on narrow wooden bridges. Conservation easements along the edges of the right-of-way could be used as a technique to preserve open land, cropland and wooded areas. The easements could be encouraged through the provision of tax incentives.

The Parkway would continue along Route B into Wardsville, then follow Route M for about five miles into Taos and then along Route M to Schubert at Highway 50 West. Due to the narrow street on Route M in the Taos business center, the walking and biking trail could extend around the northern edge of Taos on a narrow 15 to 20 foot right-of-way.

Some of the sections of the Parkway between Route C on the west and Route B on the east would be located in some of the Moreau River flood plain. The Parkway would either be closed during flooding as are some of the other paved roads in the County, or protected by earth berms or levees.

The multipurpose trail on the Parkway could be extended in nearby areas, such as along Henwick Lane to Binder Park, a distance of about one-half mile. In Wardsville, a separate trail could extend to the Pikes Camp Access on the Osage River, providing the potential for overnight camping opportunities for scouting organizations and for the general public.

- Southwest Beltway



This proposed beltway would extend from Centertown, through Russellville and Brazito to Wardsville, a distance of 37 miles, with three new segments as follows.

89. Southwest Beltway Segments

Segment	Length (Miles)
Centertown to Russellville (Route C)	10
Russellville to Brazito (Highway 54)	15
Brazito to Wardsville (Route B at Tanner Bridge Spur)	12
Total Mileage:	37

- ◆ The Southwest Beltway would connect to the Cole County Parkway at the Route B-Tanner Bridge Spur one mile west of the Wardsville City Limits.
- ◆ This proposed beltway would require a very limited amount of new right-of-way a total of only 4.5 miles compared to 10 miles for the Cole County Parkway. The new sections would be located in the following places.

90. Southwest Beltway – Estimated New Right-of-Way

Segment	Length (Miles)
East side of Russellville to Route AA	1.5
Road to Brazito Lake from Scrivner Road to West Brazito Road	1
West Brazito Road to Route E	2
Total Mileage:	4.5

- ◆ The proposed Southwest Beltway would start at Highway 54 in Centertown and use existing Route U to Russellville. It would extend along a new right-of-way a few hundred feet east of the city limit line and connect to Route AA just south of the city. The route would then run on Scrivner Road to Blackburn Road at West Brazito Road. A new one-mile right-of-way would be used to connect to West Brazito Road.
- ◆ The beltway would extend along West Brazito Road for a mile, then turn southeasterly-crossing Highway 54 to Route E. Ultimately a full grade separation would be required at this interchange. It would then continue on Route E for four miles to its intersection with Route B a mile north of Osage Bluff. It would conclude with following Route B to Tanner Bridge Spur-connecting with the Cole County Parkway just west of Wardsville.
- Cole County Highway System
 - ◆ The County currently has 464 miles of roads, of which 297 are surfaced. The Cole County Parkway and the Southwest Beltway would add 15 miles to this system; which would increase it to 312 miles.
 - ◆ Acquisition of a new right-of-way should begin in the future, with emphasis on the Parkway sections from Route C to Route B. The Parkway will provide “frontage” for properties that are not on any road and have to maintain private drives or roads. This could reduce the cost of right-of-way acquisition. A goal of completing the Cole County Parkway by the year 2020 would require the acquisition and construction of less than a mile a year. Another



approach would be to have MODOT create these routes as State routes along with Routes B and C.

12.3.3. River Transportation

As indicated in section 7.4, the Kansas City District of the U.S. Army Corps of Engineers (USACE) manages the portion of the Missouri River bordering Cole County.

For the near term, the County should support continued use of the river as an artery for the transportation of bulk commodities and as a venue for recreational boating and fishing.

On a longer timeline, the County should form associations with the state and other entities bordering the river to monitor developments regarding competing needs in upstream states and any corresponding efforts to alter the river's flow. In this way it can be more informed and perhaps play a substantive role in evaluating options for the river's future.

12.3.4. Travel Distances

Jefferson City and Cole County are located 31 miles south of I-70 on Highway 54. This is an advantage for the area in terms of economic development. Growth in the entire County is occurring along the U.S. Interstate Highway System. The City-County distances to the St. Louis Area, and Kansas City Area and Interstate 44 are shown on the following table.

91. Travel Distances from Jefferson City-Cole County

Highway Designation & Trip	Miles
Highway 54-North to Interstate 70	31
Interstate 70 to Interstate 270	78
Total Trip Distance:	109
Highway 63-North to Columbia at Interstate 70	29
Interstate 70 to Kansas City	119
Total Trip Distance:	148
Highway 50 East-Interstate 44	82
Interstate 44 to Interstate 270	29
Total Trip Distance:	111
Highway 63-South to Interstate 44-Rolla	64

12.3.5. Transit

The Jefferson City Transit Development Plan-2006 included a section on New Service Areas. The needs analysis looked at three areas in the City and the County, including:

- 1) West along Highway 50
- 2) The Algoa area in the eastern part of Jefferson City
- 3) Southwest generally along U.S. 54 and Highway 179



However, the report states that these areas do not have a need for transit or with population densities that would justify transit service.

12.3.6. Railroads

The Union Pacific operates a heavily used rail corridor through Cole County as described in Chapter 1 of this report. Another Union Pacific rail line extends through St. Martins. An old Rock Island rail line (not active) also exists in the southern portion of the County including the Henley and Eugene areas. They should be monitored and, if rail operations are discontinued, they should be considered for use under federal rail-to-trail provisions.

12.3.7. Water Transportation

The U.S. Army Corps of Engineers manages the portion of the Missouri River that borders Cole County. Waterborne Transportation consists primarily of commercial navigation in the form of barge traffic. The movement of commodities by barge is expected to remain modest. However, in the northeast Algoa area, there is a site for major industrial development that may require port service. A port facility at this location would provide a substantial economic development asset for the County.



92. Insert Transportation Element Map



13. PUBLIC FACILITIES

13.1. GOALS AND OBJECTIVES

13.1.1. (PF1.) Completion and operation of the new County Jail.

13.1.2. (PF2.) Expand facilities at the County Public Works facility for additional equipment storage.

13.1.3. (PF3.) Continued study of needs within the Fire Districts as new development takes place in the rural areas and the incorporated cities.

13.1.4. (PF4.) Consideration of fire protection for new commercial and industrial uses in the Highway 54 and Highway 50 corridors.

13.1.5. (PF5.) The development of a new community center to serve residents in the County, Jefferson City, and the incorporated cities.

13.1.6. (PF6.) Develop two new County area parks – each with a broad range of recreational facilities.

13.1.7. (PF7.) The expansion of school facilities in the Blair Oaks School District.



13.2. PUBLIC BUILDINGS

Cole County public buildings represent a major investment, after highways and roads. There are four buildings in or near the County Courthouse in downtown Jefferson City and the Public Works facilities on Monticello south of Jefferson City off of Highway 54.

13.2.1. Courthouse

The Cole County Courthouse at 301 High Street was built in 1896. It was 16,448 square feet of floor area in four stories. It is an impressive building in a city with many public buildings. A jail was built in 1935, with 8,000 square feet of floor area in three stories. The Annex Building, at 311 East High Street was erected in 1960, as a bank and now houses County offices. A new jail is under construction across the street from the County Courthouse, and no additional needs are envisioned.

13.2.2. Public Works Department

The Cole County Public Works Department has a large site between Monticello Road and Highway 54. The office and storage building was erected in 1983. This one story building has a total of 16,128 square feet of floor area. There are 70 parking spaces. In 1989 a storage/garage was built with a total of 6,240 square feet. That same year a Storage/Cinder-Salt dome was constructed. In 1995, a Material Storage building was erected close to the main office and storage building. The site has ample space for parking of various types of equipment, and for expansion if needed. The department also operates radial facilities in Centertown and in Brazito.

13.2.3. County Health Department

The Cole County Health Department is located at 1616 Industrial Drive. The building has 7,932 square feet-built in 1984-with two stories.

13.2.4. The Michael W. Prenger Family Center

The Michael W. Prenger Family Center at 408 Stadium Boulevard is one of the larger County buildings, with 14,011 square feet on one level. It is an ample site with 35 parking spaces.

13.2.5. Fire Stations

The Regional West Fire District has five stations. The Centertown Station is located on Railroad Street in the center of town one block from Route NN. The St. Martins Station is located on Business Highway 50 one block from Lomo Drive. A third fire station in the District is located at the junction of Route N and Route NN, and a fourth station is located on Highway 179 two miles west of the intersection of Highway 170 and Scott Station Road. The fifth station is the Business 50 and Veil of Tears Drive station.

The Russellville Fire District has a station in the City of Russellville on the east side of town. It is on Route AA, a few hundred south of Route C. A second District station is in the small town of Lohman, five miles to the east. It is located on Route D in the center of town. Russellville also has a small station located in Enon on Route A.

The Cole County Fire District is the largest district with seven stations although one – along state Route H in Mary's Home – is located in Miller County and services both Cole and Miller Counties. Another is located across from the Cole County Public Works Department on Monticello Road, while a third station is on Pleasant Hill Road south of its intersection with West Brazito Road and Highway 54. A fourth station is



located along County Park Road north of its intersection with Rockridge Road. The fifth fire station is located in the former Town of Eugene (no longer incorporated). The sixth station is at St. Thomas.

The Osage Fire District has stations in Wardsville, Taos, and Osage Bend. The Wardsville station is on Route W a block south of the Route B-Route M intersection. The Taos station is on Route M in the older section of town, a block east of Shamrock Drive. This section has good access across Highway 50 at the Route M interchange. The Osage Bend Station is situated on Osage Bend Road at Club Ground Road in an area nearly surrounded by the Osage River. The St. Thomas fire station is at the intersection of Route B and Upper Bottom Road in the center of the town. This area is somewhat isolated from the rest of the County, with the Osage River on three sides and the Route B Bridge as the only access to this area.

93. Summary of Fire Stations

Fire District	Area Served	Number of Stations
Regional West	Northwest	5
Russellville	Southwest	3
Cole County	Central/Highway 54	6
Osage	Eastern	2
Total:		17

13.3. AREA PARKS

Two area parks are proposed for the Urbanized Area, one in the east area near Wardsville or Taos and a second area park in the St. Martins or Route C area. A third area park is proposed for the “rural areas”, to the south and west area of the County. The location of these parks should be based on a study of available sites and thus are not shown in a specific location on the attached map (Figure 94).

Each area park should have a site of about ten acres with a fairly level site. It would also be desirable to have each park connected to a trail(s). There should be a wide range of recreational facilities in these parks. The following are some of the facilities that should be considered for these two area parks.

- Softball field with bases and backstop.
- Large multi-purpose field with goal pylons.
- Tennis courts.
- Volley ball courts.
- Swings, slides, merry-go-rounds and similar active use equipment.
- A tot-lot area with similar equipment for small children.
- Picnic area with a Pavilion and a dozen picnic table/grill combinations, in a wooded area.
- A park building with a ranger office, restrooms, and storage area.
- Parking lot for 100 cars, with gravel-grass spaces.



- Bicycle racks.

13.4. COMMUNITY CENTER

A new Community Center is proposed to serve all the residents in the County. Such a facility should be centrally located with close proximity to restaurants and motels. This suggests a location in the Highway 54 area near Highway 179 and Route B. There are a number of vacant parcels in this general area.

The building could be 10,000 square feet in area, with a design to allow a 10,000 square foot addition in the future. There should be at least 3 parking spaces per 1,000 square feet. A 20,000 square foot building would need 60 parking spaces for most activities. For antique and auto shows, etc., a second parking area (gravel and grass) for cars and trucks should provide an additional 200 to 300 spaces. Some types of shows (farm equipment or motor homes) require an outdoor exhibit area – of 5 or more acres. The total area should be about 15 acres including the above areas and site setbacks.

The range of activities could include meeting space for organizations and businesses that require larger space than available in most commercial facilities. The Community Center should be designed so that portions could be used to allow smaller/larger spaces. Antique, auto, boat, book, crafts, dog, farm, garden, gun, home, toy, and other types of shows will require the entire space and at times outdoor space as well. A lobby, office, restrooms, and storage space would require about 1,000 square feet.

The County Community Center would complement the City of Jefferson's planned conference center, the location of which has been discussed in the downtown vicinity.

13.5. SCHOOLS

A moderate amount of population growth is expected in the City and County during the next twenty years. With the exception of the Blair-Oaks District, school enrollments will remain fairly level. Two of the four school districts in the County have plans for new facilities.

13.5.1. Blair-Oaks School District R-II

Over the past five years, Blair-Oaks has experienced an increase in school enrollments of almost 49 percent. The district recently opened a \$5.9 million new middle school which is already full as of the 2010-11 school year. The mobile units in existence during the data collection phase of this process are no longer present. The district is in need of either a new elementary school or a new high school in the future. Some renovations or conversions would also take place with the new construction.

13.5.2. Jefferson City School District

This district is three times larger in terms of enrollment than the other three districts combined. It includes the City and a large part of the unincorporated areas of Cole County. The district's enrollment has been fairly constant. The 723 freshman student enrollment of 2007 is projected to be 675 upon graduation in 2011.

The district is studying the desirability/feasibility of a second high school. The existing high school could be modified with better facilities and the second new school could be tailored for a lower enrollment. This plan follows the national concept that smaller high schools are more appropriate.



13.5.3. Eugene and Russellville School Districts

Enrollments at both the Eugene and Russellville School Districts, are projected to be currently at 675 and 772 respectively for the 2011 school year, are essentially stable and expansions are not anticipated.

13.5.4. Parochial and Other Schools

The Catholic schools in the City and County include St. Peter, St. Joseph, Immaculate Conception in Jefferson City, St. Martins in St. Martins, St. Stanislaus in Wardsville, St. Francis Xavier in Taos, and St. Thomas in St. Thomas.

There are also two Lutheran schools, Trinity in Jefferson City and Immanuel in the Honey Creek area. Calvary Lutheran High School has been accredited since the 2006-2007 school year.

In addition to these schools, there are several other Christian schools in Cole County, including Bible Baptist Christian Academy with a full grade school, Concord Christian School, with grades K-6, and Lighthouse Preparatory Academy, a Christian prep school in Jefferson City with grades 6-12 that was established in 2007.

The Moreau Montessori School also operates within the County.

14. IMPLEMENTATION STRATEGY

The implementation of the Cole County Comprehensive Plan should be carried out over the next twenty years – from 2010 to 2030. State Statutes call for an updating of the Comprehensive Plan every ten years. This implementation strategy calls for a five-year capital improvement program and the consideration of zoning controls to work in tandem with Cole County's existing subdivision regulations. These two types of development regulations are in place in most cities and in some counties in Missouri. The program also includes the use of scenic easements.

14.1.CAPITAL IMPROVEMENT PROGRAM

14.1.1. A Capital Improvement Program usually includes four major elements including,

- The proposed project
- The responsible agency or unit of government
- The estimated cost of the project
- The method of funding the project

In some instances a project may require the involvement of several government jurisdictions such as a city-County joint project or a County-state joint project. All types of public facilities are included in a Capital Improvement Program.

14.1.2. Proposed Capital Improvement Program for Cole County

The proposed Capital Improvement Program includes three projects as shown on Table 1. Year One – 2011 through Year Five – 2015 would involve the acquisition of the right-of-way for the proposed Cole County Parkway, which will extend from Route B just west of Wardsville to an interchange on



Highway 50 in St. Martins. The length of this proposed route is ten miles, with 8.4 miles of new right-of-way and 1.6 miles of existing roads – in three segments. The right-of-way would average 100 feet in width, varying from 50 feet to 150 feet. A mile long section of right-of-way at a width of 100 feet would equal 12 acres. (The cost for each year would be the lineal feet multiplied by 100 feet of right-of-way width, divided by 43,560 square feet per acre equals acres in the lineal section.)

In Year One (2011), the 8,600-foot section, at a width of 100 feet, would contain 860,000 square feet, divided by 43,560 (square feet per acre) would equal 19.7 acres. At a cost of \$5,000 per acre, this sections land acquisition cost would be \$97,500.

Year Two (2012) would be calculated at 8,100 lineal feet times 100 feet in width, which equals 810,000 square feet, divided by 43,560 square feet (per acre) equals 18.6 acres. At \$5,000 per acre the acquisition cost would be \$93,000. The same formula is used for years three, four, and five.

The Cole County Public Works Department would be responsible for this project. If the State Highway Department would consider this highway to be similar to Highway 179, Route C, and Route B, it could be the responsible agency and the source of funding. The advantage of this is that annual state funds could be used. This would avoid the interest that Cole County must pay to spread the cost over twenty years.

With the acquisition complete in the 2011 to 2015 time frame, construction on the Parkway could commence in 2016. The 8.4 miles of new highway could probably be completed within two to three years, it constructed by MODOT. If the County constructs the highway, it may use annual

appropriations to complete a segment every year. This would take a much longer period of time.

The Southwest Beltway would probably be considered during the later years of the twenty-year Comprehensive Plan time frame. This route could be designated with signs for its entire length. The Russellville bypass route could be accommodated on Route C. The Scrivner bypass could use Blackburn Lane and West Brazito Road. The West Brazito/Highway 54 bypass could use West Brazito Road, Highway 54 for one block, then Route E to Route H.

95. Cole County Capital Improvement Program - Highways

Year	Proposed Project	Responsible Agency	Estimated Cost	Method of Financing
One-2011	Cole County Parkway-Acquisition Tanner Bridge to Moreau River 8,600 feet-19.5 acres	Cole County Public Works	\$97,500	General Obligation Bonds-Property Tax
Two-2012	Moreau River to Highway 54 8,200 feet-18.6 acres	Cole County Public Works	\$93,000	General Obligation Bonds-Property Tax
	15 acre site for the Cole County Community Center	Cole County Park Department	\$75,000	General Obligation Bonds-General Fund
Three- 2013	Highway 54 to Kaiser Lane 7,500 feet-17.2 acres	Cole County Public Works	\$87,500	General Obligation Bonds-Property Tax
Four- 2014	Kaiser Lane to Route C 11,500 feet-26.4 acres	Cole County Public Works	\$132,000	General Obligation Bonds-Property Tax
	10 acre site for a County Area Park	Cole County Park Department	\$50,000	General Obligation Bonds-General Fund
Five-2015	Route C to Highway 50 (two sections)	Cole County Public Works	\$101,000	General Obligation Bonds-Property Tax



14.2.SCENIC EASEMENTS

Preserving the scenic qualities of the “Rural Area” should be a major goal of the Comprehensive Plan. The intent of the plan is to allow only agricultural and rural uses here. As previously stated, commercial and industrial uses are not proposed for the Rural Area of the south and west areas of the County.

As an additional measure, two types of “Scenic Areas” are proposed along the numbered highways in the Rural Area. A Category One Scenic Easement would have a 600-foot setback from the road and would preclude any building of structures – other than fences. This Category One Scenic Easement could include crops, pastures, wooded areas, orchards and other green elements. The County could provide an annual tax relief measure as an incentive for this type of easement.

A Category Two Scenic Easement would allow any type of farm structure, but not a farmstead home, as well as all green uses allowed in Category One. A lesser tax relief measure could be used as an incentive.

Another measure that would contribute to scenic preservation in the Rural Planning Area would be to require minimum parcel dimensions. The subdivision regulations could be amended to require a minimum threshold lot width for parcels fronting on a County Road. Also a minimum threshold lot depth would encourage adequate setbacks for structures away from a road. A minimum lot width of 400 is appropriate to preserve vistas and rural character. A lot or parcel with minimum dimensions of 400 feet in width and 500 feet in depth would result in a parcel of 200,000 square feet or 4.6 acres.

This would prevent a line of houses on narrow lots, which interrupts rural views and creates an appearance of a typical subdivision street. Under this proposal, a 160-acre farm could have six parcels on a County road ($6 \times 400 = 2,400$). A one-mile frontage could have 12 lots, regardless of the size of parcels – 40 acre, 160 acre, etc. This procedure in the subdivision regulations could be further applied to private roads from a County road to a farm residence. Many such private roads have names – leading to one residence. In some cases, the landowner has sold a site for one or more homes. The foregoing proposal for a 400 by 500 foot parcel could apply to “farm entrance roads” of over 1,320 feet in length (one-fourth of a mile). These lot width and depth provisions would significantly contribute to preserving the rural character of the Rural Planning Areas.

14.3.LAND DEVELOPMENT REGULATIONS

Cities and Counties in Missouri have adopted different types of regulations regarding the development of land within their jurisdiction. Building codes, housing codes, subdivision regulations and zoning regulations have been adopted to provide a uniform standard of development. These regulations are intended to protect the general welfare of the citizens.

14.3.1 Subdivision Regulations

The existing Cole County Subdivision Regulations require all landowners of land less than five-acres within the County to apply for plat approval of any division of their property into two or more parcels. The landowner must have a plat prepared by a licensed surveyor showing the property lines of all proposed parcels. The plat must be approved by the County Planning Commission and filed with the County Recorder of Deeds.



14.3.2 Zoning Regulations

The Revised State Statutes of Missouri include provisions that allow counties to adopt zoning regulations. The intent of this type of regulation is to protect property from adverse uses on adjoining tracts of land. For example, it would protect residential and agricultural areas from the development of commercial and industrial uses that could have an adverse affect on the value and enjoyment of the use of a home or a farm. New commercial and industrial uses can locate in preapproved sites without conflict with nearby residential and agricultural areas.

A zoning regulation includes a Zoning District Map that divides the County into agricultural, residential, commercial and industrial districts. Each zoning district has its own requirements for lot sizes, setbacks, building heights, and others as applicable.

The zoning regulations are administered by a planning commission composed of residents of the County. In Cole County the County Commission could adopt the zoning regulations and approve all changes to the ordinance and zoning district map. The County Planning Commission would review changes, special use permits, or variations and forward them with recommendations to the County Commissioners. The County Commission may or may not follow the recommendation of the Planning Commission. Any landowner can apply for a change in the designation of his/her land on the Zoning District Map. The types of Zoning Districts in a County usually including the following:

- Rural-agricultural areas
- Single family residential

- Multiple family residential
- Local Commercial
- Highway Commercial
- Light Industrial
- Heavy Industrial
- Mixed Use Overlay

The zoning regulations would apply only to the unincorporated areas of Cole County.



15. CONCLUSION

Significant land use, transportation, and related changes have occurred in Cole County, Missouri since the County's last master plan was written more than thirty years ago. As a result, the Cole County Commission directed the development of a new master plan.

The ensuing planning process, resulting in the formulation of this new Master Plan for Cole County, Missouri, was carefully guided by a Master Plan Advisory Committee (Advisory Committee) under the direction of the County's Planning Commission working closely with the Cole County Public Works Department, other officials, and a team of consultants.

The process began with intensive data collection and analysis focusing on the County's context – its demographics, existing land use, economy, transportation infrastructure, and public facilities. The process was complemented by a countywide survey soliciting input from residents and businesses. The resulting Draft Report on Existing Conditions was the subject of a public forum held on November 4, 2009. At this forum, attendees were asked to provide input on the findings of the draft report and more specifically on land use, transportation, and public facility needs for the County's future.



96. November 4, 2009 Public Forum

The Existing Conditions Report, survey responses, and the input received at the public forum became the basis for the formulation of the new Master Plan for Cole County (hereinafter referred to as Master Plan or Plan). A draft of the Plan was presented to the Advisory Committee, and



subsequently at a Public Forum on May 25, 2010, which included intensive discussion on plan goals, objectives, priorities and recommendations.

Detailed review of the Master Plan by the Advisory Committee continued after the Public Forum, in an effort to address all comments and to perfect the document for final presentation to the Planning Commission and the Cole County Commission.

This plan is intended to be a guide for the County's development in the future. Upon the review and anticipated adoption of the Master Plan by the Cole County Commission, it will become the official plan of the County. With the subsequent implementation of its recommendations, coupled with periodic monitoring and adjustment necessitated by relevant new information, the new Cole County Master Plan will help to ensure that the County continues to meet the land use, transportation, and infrastructure needs of its citizens and businesses for the foreseeable future.