Comprehensive Plan

Logan County, Ohio

By

Logan County Soil & Water Conservation District

324 C.R. 11

Bellefontaine, Ohio 43311

Phone 937-593-2946/Fax 937-592-3350

LUC Regional Planning Commission

P.O. Box 219

East Liberty, Ohio 43319

Phone 937-666-3431/Fax 937-666-6203

luc-rpc@rrohio.com

Logan County Commissioners

117 E. Columbus Ave.

Bellefontaine, OH 43311

Phone 937-

Jack Reser, John Bayliss, David Knight

August 14, 2007

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER ONE

INTRODUCTION

1.1 Problem Statement

The last update of the Logan County Comprehensive Plan was completed in 1996 hence making it outdated in its ability to fulfill the needs of the County and local government officials. In addition, local Townships are looking for guidance in managing increases in population and housing in the region that will inevitably continue to sprawl outwards from the Columbus Metropolitan Region.

The Plan update was initiated by the Logan County Commissioners in 2004 with their decision to have both the Logan-Union-Champaign (LUC) Regional Planning Commission and the Logan County Soil & Water Conservation District lead the planning effort. A "Task Force" made up of local agency officials was to lead the effort. This Task Force included representatives from the following agencies:

- LUC Regional Planning
- Logan County Soil & Water Conservation District
- Logan County Trustees Association
- Logan County Mayors Association
- Logan County Community Improvement Corporation (CIC)
- Logan County Engineer
- Logan County Commissioners
- OSU Extension
- Logan County Water Pollution Control District
- City of Bellefontaine

The Commissioners decided to plan in a "Two Phase" Process. Phase 1 is what you find here – a cursory update of demographics and resource analysis, transportation plan, and goals & objectives. Phase 2 allows for local jurisdictions

to enter into their own planning process through the producing of a Plan that incorporates their own visions, goals, and needs. Phase 2 can be performed jointly with neighboring jurisdictions or alone.

It is important to note that the goals and objectives found in Chapter 5 were formulated based on feedback from the Task Force as well as the two public meetings that were held as part of this planning process. Therefore, be assured that this Plan included public input and consensus, which forms the basis of Chapter 5. Overwhelmingly, preserving rural character through controlled development was the main concern of the community. Residents place a high value on their small town, country atmosphere. In addition, they like the peacefulness and quietness of the areas of the County in which they reside. Above all, local officials need to keep this priority in mind when making local decisions.

1.2 Significance of Study

The most significant reason for the update of the Logan Comprehensive Plan is to improve the quality of life for its residents and to make it an attractive place to live and work. The Logan County Plan will be used as a means to guide local policy and development while at the same time protecting the physical environment and managing growth. The County wishes to ensure that its residents maintain what is most valuable to them – their rural environment.

This Plan is relevant in advising local government officials concerning overall future development, land use decisions, infrastructure and transportation planning, and political and fiscal administration. In addition, the Plan is substantially essential in protecting community necessities such as the safety, health, and welfare of the citizenry. Also, it addresses the importance of economic development in assuring that residents have jobs, income, and resources in which to live as well as the necessary local services to provide for their physical and social needs.

The Comprehensive Plan developed here is meant to be a pro-active document in fulfilling County needs and improvements. Rather than reacting to possible future problems, the intent of the Comprehensive Plan is to provide

possible solutions to problems before they occur and to brainstorm and tackle existing challenges. Hence, planning is an attempt to lessen both the unfamiliar and unpredictable. The Plan guides change while recognizing the practical needs and familiarity in which citizens find comfort. In addition, the Comprehensive Plan takes into account differing views among residents, government officials, political interests, business owners, and other community parties in an effort to create cooperation in the planning process that everyone can benefit from.

1.3 Summary of Chapters

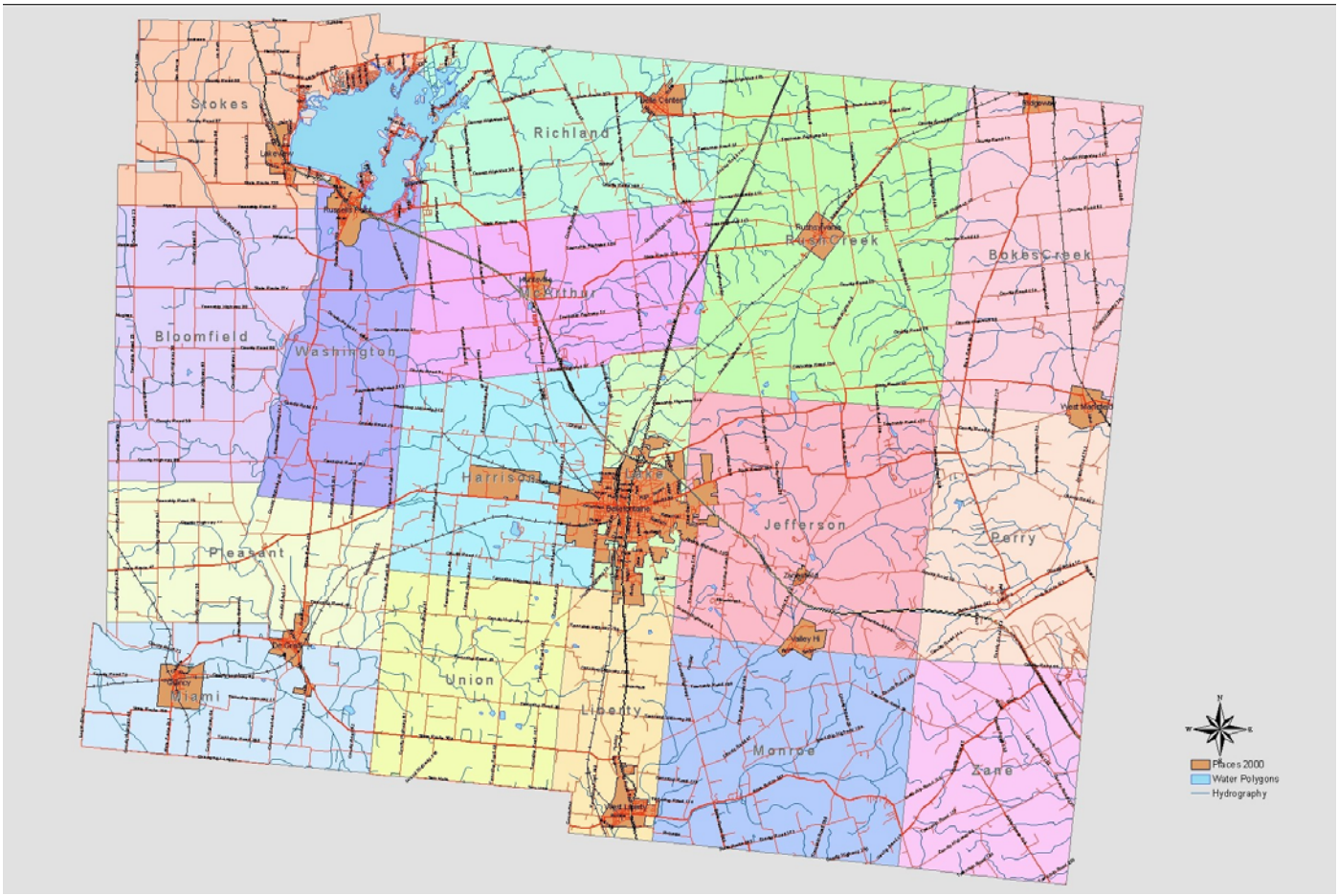
Below is a summary of the chapters contained in the Logan County Comprehensive Plan.

- *Chapter 1* provides a brief overview and introduction of the Plan and presents the purpose and background of the study.
- *Chapter 2* defines the Logan County study area as well as providing a brief community profile of the County.
- *Chapter 3* discusses the methodology and analysis used in the research of the Logan County planning process.
- *Chapter 4* presents the problem analysis and resource inventory. It provides demographic, economic, and housing trends, and portrays the structure of local government, community facilities, infrastructure, and natural and historic resources. In addition, the Logan County Transportation Plan.
- *Chapter 5* includes the goals and objectives for Logan County.
- *Chapter 6* includes the Indian Lake Case Study produced through the planning process.

CHAPTER TWO

LOGAN COUNTY
STUDY AREA

2.1 Logan County Study Area



Logan County is located in the west central part of Ohio. The County seat is Bellefontaine. Other incorporated areas of the County include: Belle Center, DeGraff, Huntsville, Lakeview, Quincy, Rushsylvania, Russells Point, Valley Hi, West Liberty, West Mansfield, and Zanesfield. Other unincorporated areas of the County are: East Liberty, Middleburg, Lewistown, Middleburg, Pickrelltown, Logansville, Bloom Center, Santa Fe, New Richland, and Big Springs. Major

transportation routes through the County include US 33 and US 68, which intersect just north of Bellefontaine.

2.2 Community Profile

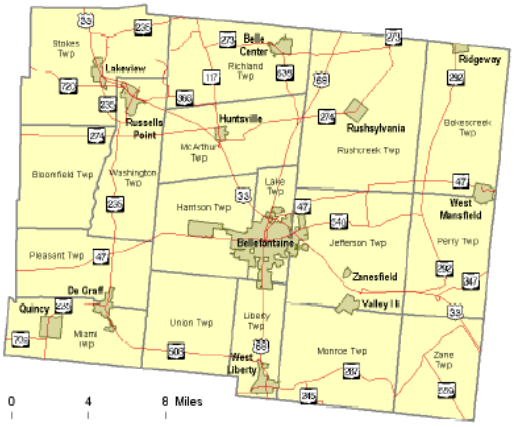
Ohio County Profiles

Prepared by the Office of Strategic Research

OHIO DEPARTMENT OF DEVELOPMENT

Logan County

Established: Act - March 1, 1818
2004 Population: 46,616
Land Area: 458.5 square miles
County Seat: Bellefontaine City
Named for: Colonel Benjamin Logan, Indian Wars



Taxes

Taxable value of real property	$741,885,220
Residential	$522,473,060
Agriculture	$90,565,690
Industrial	$40,936,660
Commercial	$87,909,810
Mineral	$0
Ohio income tax liability	$27,378,432
Average per return	$1,244.87

Land Cover

	Acres
Total	299,083.3
Urban (open impervious surfaces)	2,556.5
Agriculture/Open Urban Areas	235,415.2
Shrub/Scrub	3,987.5
Wooded	48,572.3
Open Water	5,213.2
Non-forested Wetlands	2,989.8
Barren	348.9

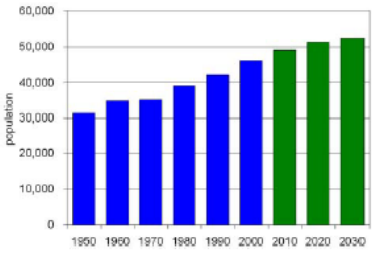
Largest Areas

	Census 2000	Estimate 2004
Bellefontaine city	13,069	13,034
Stokes twp UB	4,293	4,318
Washington twp UB	2,326	2,345
Jefferson twp UB	2,012	2,075
West Liberty village	1,813	1,776
Rushcreek twp UB	1,648	1,758
Richland twp UB	1,648	1,685
Harrison twp UB	1,599	1,641
Russells Point village	1,619	1,570
McArthur twp UB	1,495	1,550

UB: Unincorporated Balance

Total Population

Census				Estimated	
1800		1900	30,420	2001	46,032
1810		1910	30,084	2002	46,319
1820	3,159	1920	30,104	2003	46,519
1830	6,440	1930	28,981	2004	46,616
1840	14,015	1940	29,624		
1850	19,162	1950	31,329	Projected	
1860	20,996	1960	34,803		
1870	23,028	1970	35,072	2010	49,042
1880	26,267	1980	39,155	2020	51,343
1890	27,386	1990	42,310	2030	52,502
		2000	46,005		



Agriculture

Land in farms (acres)	224,000
Number of farms	1,040
Average size (acres)	215
Total cash receipts	$53,069,000
Per farm	$51,028

Communications

Television stations	0
Radio stations	2
Daily newspapers	1
Circulation	10,370

Starting and Active Businesses	2000	2001	2002	2003	2004
Business starts	96	106	94	109	93
Active businesses	928	945	960	965	984

Residential Construction	2000	2001	2002	2003	2004
Total units	260	250	213	193	285
Total valuation (000)	$25,957	$25,906	$24,963	$24,531	$33,090
Total single-unit bldgs	246	250	213	193	208
Average cost per unit	$102,100	$103,624	$117,197	$127,106	$144,741
Total multi-unit bldg units	14	0	0	0	77
Average cost per unit	$59,992	$0	$0	$0	$38,753

Major Employers

Adecco SA	Service
Asahi Glass Co Ltd/AGC America Inc	Mfg
Bellefontaine City Bd of Ed	Gov't
Dana Glacier Daido America LLC	Mfg
Honda Motor Co Ltd	Mfg
Mary Rutan Hospital	Service
Nash-Finch Co	Trade
Siemens AG	Mfg

Source: Ohio Department of Development Office of Strategic Research

1960 34,803
1970 35,072
1980 39,155
1990 42,310
2000 46,0
2010 49,042
2020 51,
2030 52,502

CHAPTER THREE

METHODOLOGY

3.1 Methods of Analysis

Data that was gathered for analysis and inventory in Chapter Four of this Comprehensive Plan was formatted and generated into tables and graphs to show trends and patterns using spreadsheets in the Microsoft Excel software program. These graphs include various forms of pie and bar charts as well as tables that were used to display information and the progression of such over time.

Mapping and GIS (Geographic Information Systems) services were implemented as part of this Plan as tools to portray the spatial and location variations of specific socio-economic, environmental, and demographic data sets relevant to this Comprehensive Plan. LUC Regional Planning Commission using the ArcGIS software program performed this task.

The use of GIS in planning can be an important tool. It can be used for both inventorying and visualizing spatial data. GIS itself is a mapping program that allows the user to store, analyze, and display data that is spatial in nature. For purposes of this Logan County Plan, GIS was used mainly to display various layers of data in the form of maps. For example, in Chapter 4, you will find zoning, land use, and soil maps to name a few. In addition, GIS was used to analyze and exhibit the transportation networks in the County. In all, the Logan County maps are presented as user-friendly sources to display data that is easy for the reader to understand.

3.2 Data Sources

Most of the data used in the Problem Analysis and Resource Inventory section (Chapter 4) of this Comprehensive Plan was taken from the U.S. Census Bureau. Sources of data are quoted at the bottom of each table and graph in this Plan.

CHAPTER FOUR

PROBLEM ANALYSIS
AND
RESOURCE INVENTORY

4.1 Introduction

Analyzing existing patterns and conditions in the community by means of a “Problem Analysis and Resource Inventory” is a necessary part of a plan. It is essential to study or access the existing conditions before determining what direction to take, and how to get to the desired future. This was the case for Logan County. It was necessary to evaluate Logan County’s current situation in order in assess future goals and objectives.

Most of this part involves gathering and analyzing data. In the case of this Plan, most of the data was taken from the U.S. Census Bureau. Additional data was obtained from the Logan County Engineer and the Logan County Auditor’s Offices. The process that was used is outlined below:

1. Identify the areas where data is needed
2. Assemble all previous reports that were performed in regards to Logan County
3. Gather all pertinent data for the subject areas already identified by use of internet
4. Analyze the data and transfer to charts, figures, and maps
5. Provide text to describe patterns and analysis

The areas that were identified as pertinent and necessary to study were demographic trends and patterns, economic trends and patterns, natural and historic resources, community facilities and infrastructure, housing characteristics, local government and community services, land use, and finally fiscal analysis.

4.2 Demographic Trends and Patterns

4.2.1: Population Growth Trends

Logan County has experienced a population growth of 16.79% over the past two decades. The 39,155-population figure of the County in 1980 increased to 46,005 by the year 2000, as per the 2000 Census. **Figure 4.1** shows the County's population growth over the past few decades. The County's population growth rate between 1980-1990 was 8.03%, and between 1990-2000, it was 8.73%. In contrast Ohio's population has grown by 0.46% during 1980-1990 and 4.67% during 1990-2000, with a cumulative growth rate of 5.12% over the past two decades. The County's population has grown at more than three times the population growth rate of the State. The figure also shows the projected population growth for Logan County in 2010 and 2020. These projections figures have been obtained from Ohio Department of Development's Office of Strategic Research.

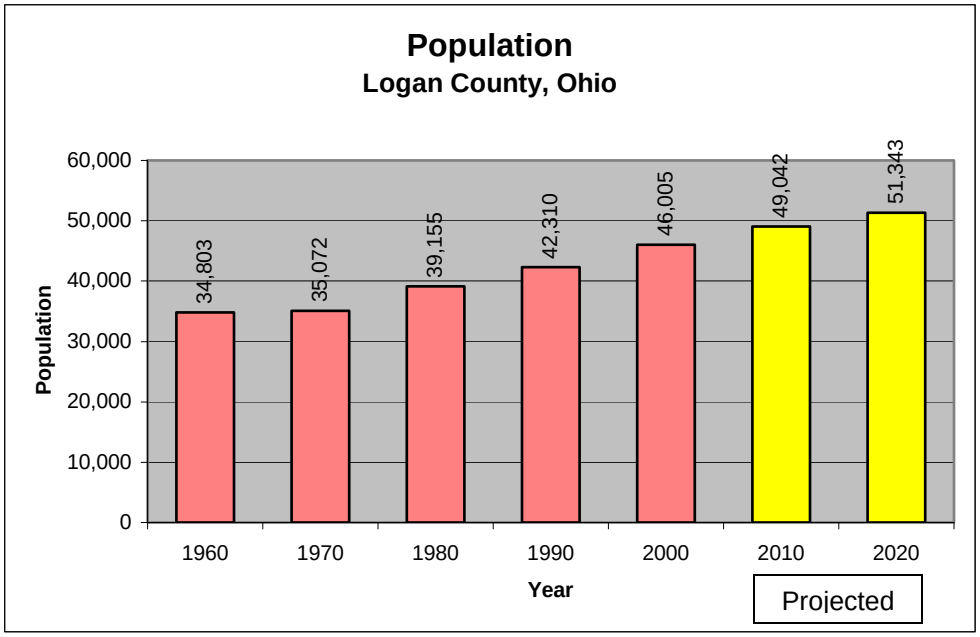


Figure 4.1: Population

Source: US Census Bureau

As seen in **Table 4.1**, with the exception of BokesCreek and Miami Townships, the remaining townships in the County have experienced an increase in population. The total number of households in the County has increased from 15,952 in 1990 to 17,956 in 2000, and the number of people living in these households has increased by 3,110 over the past decade.

Table 4.1:- Population by Township.
Source: US Census Bureau

	1960	1970	1980	1990	2000	% change in population 1990-2000	2005
Bloomfield	445	429	403	395	419	6.08%	443
Bokescreek	1488	1320	1354	1417	1308	-7.69%	1378
Harrison	1322	1492	1706	2077	2093	0.77%	2151
Jefferson	1479	1528	1807	2104	2946	40.02%	3020
Lake	11619	11436	12134	12227	12492	2.17%	12428
Liberty	2242	2462	2858	2999	3126	4.23%	3103
McArthur	1309	1328	1693	1746	1949	11.63%	1992
Miami	2194	2166	2251	2352	2352	0.00%	2334
Monroe	744	678	925	1274	1503	17.97%	1581
Perry	992	933	872	905	1022	12.93%	1081
Pleasant	672	694	887	889	1082	21.71%	1133
Richland	1832	1872	2015	2132	2455	15.15%	2488
Rushcreek	1817	1588	2075	1944	2191	12.71%	2286
Stokes	2740	3337	4157	4991	5367	7.53%	5411
Union	625	609	674	668	787	17.81%	834
Washington	2568	2626	2776	3486	3945	13.17%	3902
Zane	715	574	568	704	968	37.50%	1015
Total Population	34803	35072	39155	42310	46005	8.73%	46580

Table 4.1 also shows that Jefferson and Zane Townships experienced the most significant increase in population, with Jefferson Township recording a 40.02% increase in its population, and Zane Township experiencing a 37.50% increase. These population increases may be a result in part, to the influence of Honda of America Manufacturing. For the past 25 years Honda has been expanding its operations in Ohio. As a result, many new employees have relocated to Logan & Union Counties. Zane Township is located across US 33 from Honda's TRC research facility about 10 minutes drive from Honda's manufacturing facilities.

Table 4.2:- Population by Village.
Source: US Census Bureau

	1960	1970	1980	1990	2000	% change in population 1990-2000	2005
Belle Center	949	985	930	796	807	1.38%	796
Bellefontaine	11424	11255	11888	12142	13069	7.63%	13009
DeGraff	969	1117	1358	1331	1212	-8.94%	1174
Huntsville	511	475	489	343	454	32.36%	430
Lakeview	1,008	1026	1089	1056	1074	1.70%	1097
Quincy	668	686	633	697	734	5.31%	703
Ridgeway	448	379	388	378	354	-6.35%	98
Rushylvania	601	526	610	573	543	-5.24%	529
Russells Point	1111	1104	1156	1504	1619	7.65%	1557
Valley Hi	0	15	60	217	244	12.44%	239
West Liberty	1522	1580	1653	1613	1813	12.40%	1760
West Mansfield	791	753	716	830	700	-15.66%	697
Zanesfield	288	272	269	183	220	20.22%	209

As can be seen in **Table 4.2 the** City of Bellefontaine has grown steadily over the past few decades. Between the periods of 1990-2000, the City experienced a population growth of 7.63%. The most significant population growth was experienced by Village of Huntsville at 32.36%. Another significant change we see is the change in the population of Village of Zanesfield, which experienced a 20.22% increase in the population during the 1990-2000 period.

4.2.2: Age Group Trends

As seen in **Figure 4.2** the number of females has exceeded the number of males in the County for the past 20 years.

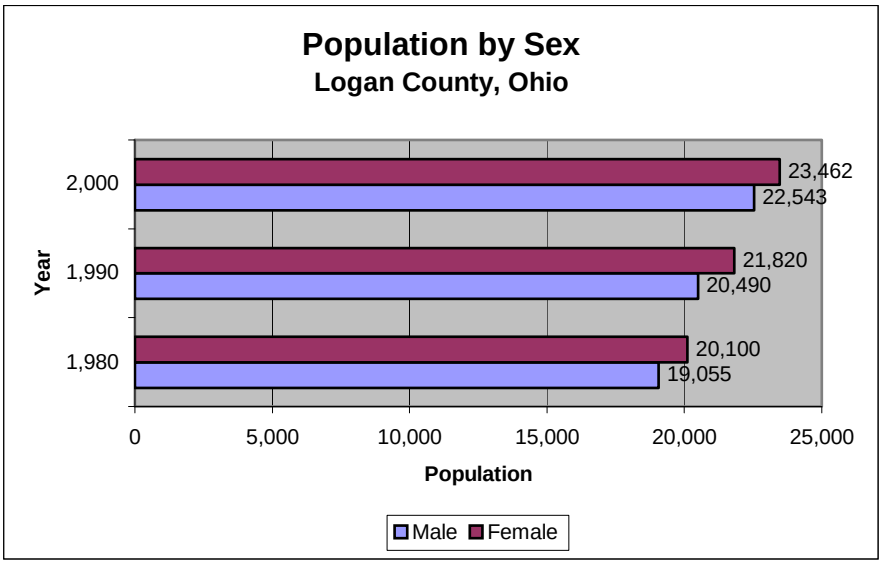


Figure 4.2: Population by Sex

Source: US Census Bureau

The median age of women is 37.9 years, while that of the males is 36 years (US Census Bureau, 2000).

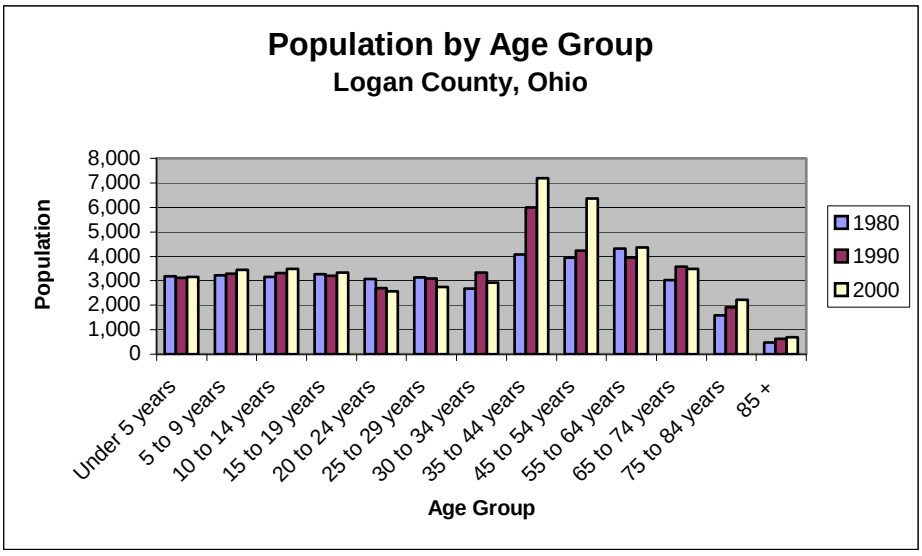


Figure 4.3: Population by Age Group

Source: US Census Bureau

Figure 4.3 shows the population of the County over the past three decades by age groups. The median age of the population is 36.9 years or nearly 37 years **(Table 4.3)**. According to the 2000 Census the largest age group is 34 to 44 years, which is 15.62% of the total population, **(Figure 4.4),** followed by the 45 to 54 years age group, which makes up 13.84% of the total population in 2000. Age groups 20-24, 25-29 and 30-34 have been experiencing a decline over the past decade.

Table 4.3:- Population by Age Group, Logan County, Ohio
Source: US Census Bureau

Age	1980	1990	2000	% of Population
Under 5 years	3,189	3118	3169	6.89%
5 to 9 years	3,217	3281	3453	7.51%
10 to 14 years	3,158	3313	3494	7.59%
15 to 19 years	3,263	3194	3342	7.26%
20 to 24 years	3,064	2696	2576	5.60%
25 to 29 years	3146	3102	2745	5.97%
30 to 34 years	2690	3341	2921	6.35%
35 to 44 years	4072	5992	7188	15.62%
45 to 54 years	3947	4224	6367	13.84%
55 to 64 years	4,320	3943	4355	9.47%
65 to 74 years	3,026	3570	3485	7.58%
75 to 84 years	1,591	1913	2223	4.83%
85 +	472	623	687	1.49%
	39,155	42310	46005	100%
Median Age	31.0		36.9	

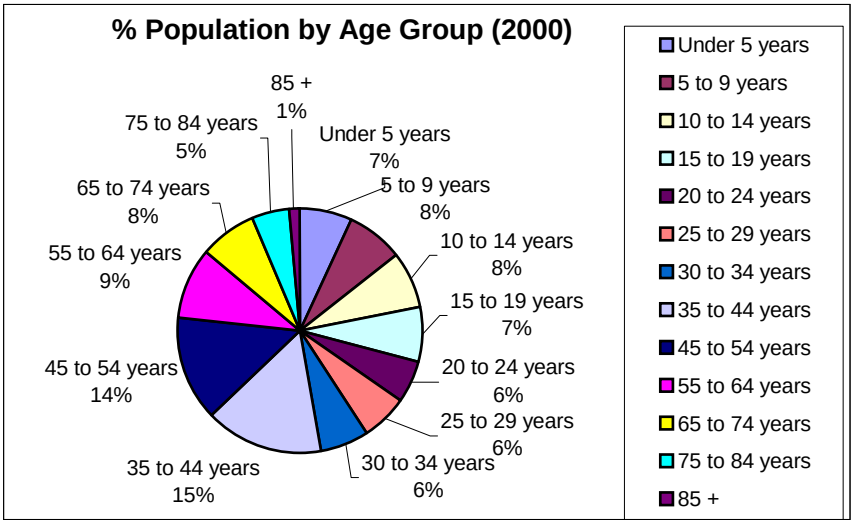


Figure 4.4: % Population by Age Group (2000)

Source: US Census Bureau, 2000

4.2.3: Maritial Status

According to the 2000 census of Logan County, currently married residents 15 years or older make up 65.98% of the population. **Figure 4.5** shows that 18.48 % Logan County residents 15 years or older have never been married, 5.99% are Divorced, 8.63% are Widowed, and 0.91% are Separated.

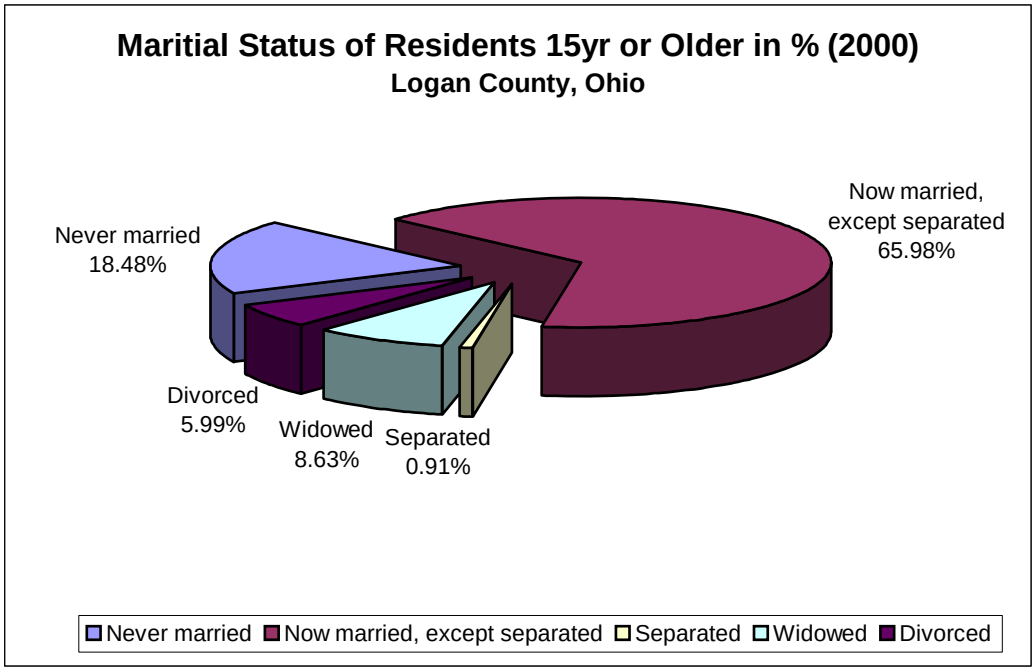


Figure 4.5: Marital Status of Residents 15 years or Older in % (2000)

Source: US Census Bureau, 2000

Table 4.4: Maritial Status (2000)
Source: US Census Bureau, 2000

Status	Logan County	Ohio
	%	%
Never married	18.48	26.35
Now married, except separated	65.98	54.55
Separated	0.91	1.55
Widowed	8.63	6.9
Divorced	5.99	10.6

4.2.4: Education

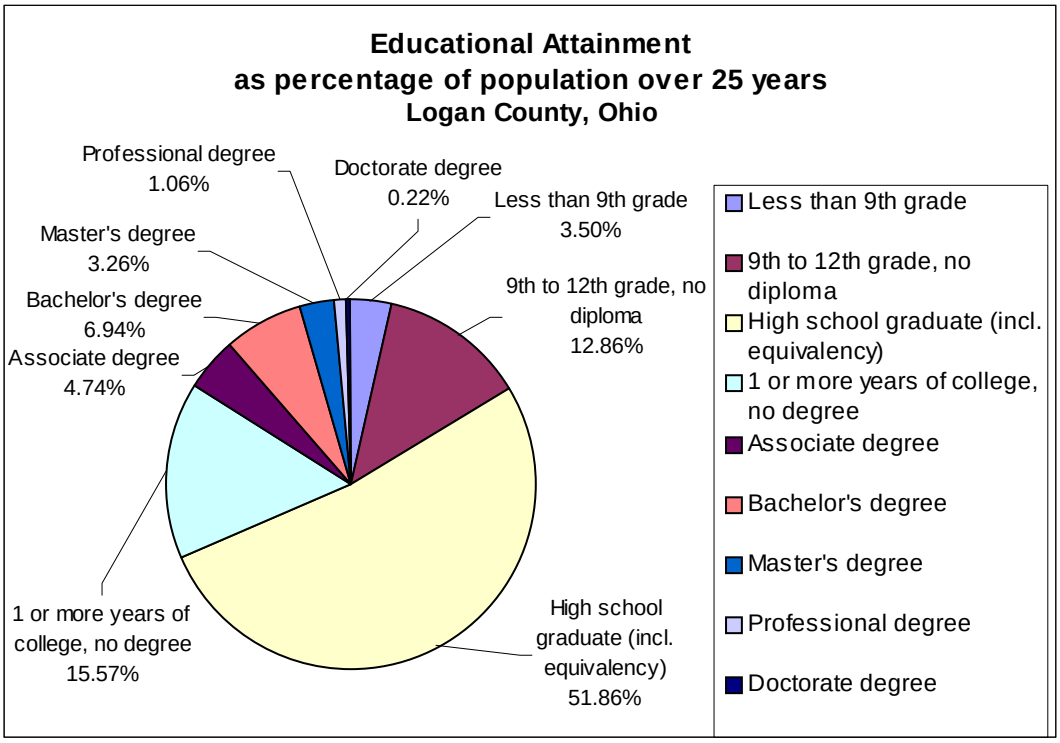


Figure 4.6: Educational Attainment as % of population over 25 years

Source: US Census Bureau, 2000

Figure 4.6 above shows the educational attainment as percentage of population over 25 years of age in Logan County. 51.9% of population, over 25 years of age, has a High School Diploma. 4.7% has an Associate's Degree, 6.9% has a Bachelor's Degree, 3.3% has a Master's Degree, and 1.1% has some Professional Degree, and 0.2% has a Doctorate Degree.

4.2.5: Race

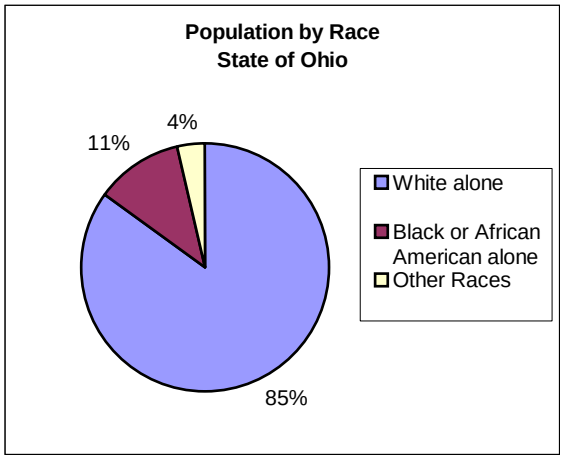


Figure 4.7: Population by Race State of Ohio

Source: US Census Bureau, 2000

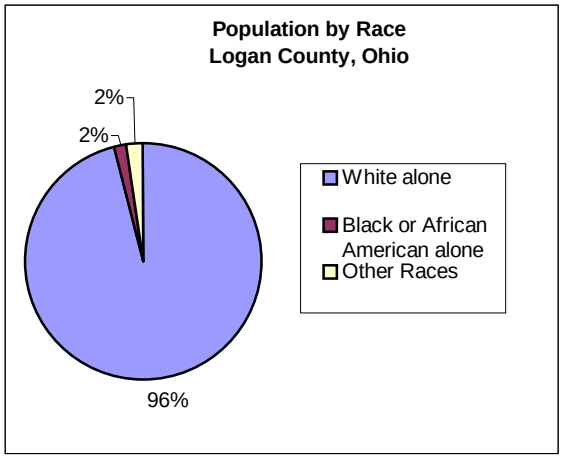


Figure 4.8 Population by Race Logan County

Source: US Census Bureau, 2000

The two figures above; **Figure 4.7** & **Figure 4.8** show the racial population breakdown in Ohio and Logan County, Ohio. The State of Ohio is more diverse as compared to Logan County. The white population makes up 85% of Ohio's total population and 96% of Logan County's population. 2% of the total population of the County is black or African American (786), and the remaining 2% comprise of other races such as American Indian & Alaska Natives (94), Asians (185), Hawaiian and other Pacific Islanders (13) and some other races (694).

4.3: Economic Trends and Patterns

4.3.1: Income and Occupation

Table 4.5 Median household income in 1999 Source: US Census Bureau, 2000	
Township	**Dollars**
Bloomfield	59,167
Bokes Creek	46,750
Harrison	49,569
Jefferson	51,058
Lake	37,094
Liberty	46,701
McArthur	47,750
Miami	39,511
Monroe	49,063
Perry	48,438
Pleasant	41,016
Richland	48,884
Rush Creek	43,897
Stokes	34,482
Union	47,321
Washington	33,420
Zane	51,974
Logan	41,479
Ohio	40,956

Table 4.5 shows that the Median Household income of Logan County ($41,479) is greater than that of the State of Ohio ($40,956). Amongst the 17 Townships in Logan County, Bloomfield ($59,167) and Zane ($51,974) are the two townships with the highest Median Household Income. Lake, Miami, Stokes and Washington Townships have lower median incomes than the County and the State.

Table 4.6 below shows that the unemployment rate of Logan County (3.69%) is lower than that of the State of Ohio (4.96%). The lower percentage of residents with a higher education could be attributed to the high number employment opportunities, and the rural nature of the economy in the region.

Table 4.6: Employment Status (2000), Logan County & State of Ohio Source: US Census Bureau, 2000				
	Logan County		Ohio	
Employment Status	**Number**	**%**	**Number**	**%**
Population 16 years and over	**35,139**	**100**	**8,788,494**	**100**
In labor force	23,416	66.6	5,694,708	64.8
Armed forces	8	0	9,918	0.1
Civilian labor force	23,408	66.6	5,684,790	64.7
Employed	22,544	64.2	5,402,175	61.5
Unemployed	864	2.5	282,615	3.2
Percent of civilian labor force	3.7	(X)	5	(X)
Not in labor force	11,723	33.4	3,093,786	35.2
% of Unemployment	**3.69**		**4.96**	

Table 4.7a: Household Income in 1999 (% Households) Source: US Census Bureau, 2000										
Income	**Bloomfield**	**Bokescreek**	**Harrison**	**Jefferson**	**Lake**	**Liberty**	**McArthur**	**Miami**	**Monroe**	**Perry**
Less than $10,000	4.67	3.52	5.37	3.36	10.64	5.92	5.52	8.19	1.18	1.50
$10,000 to $14,999	0.67	4.88	4.24	4.27	7.48	3.95	4.28	6.57	6.43	2.01
$15,000 to $19,999	6.00	5.66	6.64	6.21	6.89	5.29	5.93	7.27	2.54	6.77
$20,000 to $24,999	7.33	10.94	6.64	7.02	7.03	4.13	4.14	7.73	2.54	4.26
$25,000 to $29,999	0.00	7.42	7.77	3.46	7.20	8.97	3.59	7.15	7.11	1.00
$30,000 to $34,999	10.00	6.25	4.24	5.09	8.10	7.80	10.21	7.27	10.32	5.26
$35,000 to $39,999	7.33	2.34	6.50	7.12	7.77	6.10	5.52	6.34	5.41	7.02
$40,000 to $44,999	1.33	7.62	3.67	6.21	5.60	5.65	6.07	7.38	4.57	15.04
$45,000 to $49,999	6.67	3.91	5.65	5.60	4.41	5.65	6.62	4.96	11.17	7.77
$50,000 to $59,999	6.67	12.11	14.41	14.14	10.77	10.22	11.86	10.15	10.49	11.53
$60,000 to $74,999	22.00	18.16	16.10	9.87	9.64	15.61	16.00	12.92	14.72	18.30
$75,000 to $99,999	6.67	10.35	16.24	16.79	8.33	12.65	10.34	5.42	20.47	11.28
$100,000 to $124,999	16.67	6.25	0.85	4.58	2.83	4.57	7.86	4.38	1.18	4.76
$125,000 to $149,999	4.00	0.59	0.00	2.95	1.50	1.26	0.69	2.65	1.02	0.00
$150,000 to $199,999	0.00	0.00	1.69	1.02	1.07	0.27	1.38	0.58	0.00	2.76
$200,000 or more	0.00	0.00	0.00	2.34	0.72	1.97	0.00	1.04	0.85	0.75

Table 4.7b: Household Income in 1999 (% Households) Source: US Census Bureau, 2000									
Income	**Pleasant**	**Richland**	**Rushcreek**	**Stokes**	**Union**	**Washington**	**Zane**	**Logan**	**Ohio**
Less than $10,000	12.16	5.95	5.05	13.30	4.76	13.24	2.84	8.53	9.15
$10,000 to $14,999	6.38	4.36	5.46	8.70	0.00	6.01	5.97	6.09	6.42
$15,000 to $19,999	0.91	6.84	4.23	6.72	2.20	7.29	1.14	6.14	6.44
$20,000 to $24,999	4.86	5.85	3.96	6.93	4.40	9.10	3.41	6.50	6.92
$25,000 to $29,999	7.90	3.96	9.02	6.54	9.16	8.57	9.94	6.82	6.79
$30,000 to $34,999	3.95	4.76	4.37	8.44	6.96	7.76	4.83	7.29	6.78
$35,000 to $39,999	11.85	4.06	9.02	5.94	9.16	5.66	2.56	6.56	6.22
$40,000 to $44,999	7.90	8.72	10.93	6.20	6.23	7.06	4.83	6.51	5.92
$45,000 to $49,999	7.60	6.74	4.51	5.85	10.26	3.62	5.97	5.45	5.21
$50,000 to $59,999	6.99	13.48	11.61	9.51	7.69	6.36	21.59	10.79	9.59
$60,000 to $74,999	12.77	11.99	12.98	10.16	17.22	9.80	14.49	12.02	10.77
$75,000 to $99,999	8.81	13.58	10.52	7.19	12.45	7.00	11.93	10.08	10.00
$100,000 to $124,999	7.29	4.96	5.74	3.40	4.76	4.78	8.81	4.17	4.50
$125,000 to $149,999	0.61	1.68	2.60	0.86	4.76	1.52	1.70	1.49	2.00
$150,000 to $199,999	0.00	3.07	0.00	0.17	0.00	2.10	0.00	0.99	1.60
$200,000 or more	0.00	0.00	0.00	0.09	0.00	0.17	0.00	0.58	1.71

Table 4.7c: Household Income in 1999 (% Households) Source: US Census Bureau, 2000						
	Belle Center	**Bellefontaine**	**De Graff**	**Huntsville**	**Lakeview**	**Quincy**
Total:	333	5,290	460	165	447	271
Less than $10,000	22	576	53	16	55	31
$10,000 to $14,999	25	395	35	6	38	18
$15,000 to $19,999	21	385	29	6	43	29
$20,000 to $24,999	26	412	38	8	48	29
$25,000 to $29,999	9	381	40	15	21	25
$30,000 to $34,999	15	424	36	16	23	15
$35,000 to $39,999	22	411	34	15	29	21
$40,000 to $44,999	23	307	27	17	25	12
$45,000 to $49,999	28	256	13	9	24	15
$50,000 to $59,999	36	514	37	19	38	27
$60,000 to $74,999	44	469	49	20	48	24
$75,000 to $99,999	40	442	28	7	41	12
$100,000 to $124,999	12	145	24	6	12	6
$125,000 to $149,999	6	81	12	5	2	5
$150,000 to $199,999	4	55	3	0	0	2
$200,000 or more	0	37	2	0	0	0

Table 4.7d: Household Income in 1999 (% Households) Source: US Census Bureau, 2000						
	Rushsylvania	**Russells Point**	**Valley Hi**	**West Liberty**	**West Mansfield**	**Zanesfield**
Total:	192	714	175	643	282	98
Less than $10,000	10	123	4	45	13	2
$10,000 to $14,999	14	78	12	42	12	2
$15,000 to $19,999	4	68	9	53	19	16
$20,000 to $24,999	10	62	9	36	39	10
$25,000 to $29,999	13	53	10	61	25	9
$30,000 to $34,999	15	28	34	51	16	0
$35,000 to $39,999	12	41	5	42	8	8
$40,000 to $44,999	22	73	6	51	19	3
$45,000 to $49,999	22	13	30	16	11	9
$50,000 to $59,999	16	71	20	76	39	17
$60,000 to $74,999	29	48	15	77	38	14
$75,000 to $99,999	16	28	18	67	28	8
$100,000 to $124,999	7	12	3	12	12	0
$125,000 to $149,999	2	4	0	8	3	0
$150,000 to $199,999	0	9	0	3	0	0
$200,000 or more	0	3	0	3	0	0

Table 4.7a and **Table 4.7b** show that the highest percentage of households falls in the $60,000 to $74,999 category. $50,000 to $99,999 category makes up 32.89% of the entire County's households. These figures are similar to those for the State of Ohio. **Table 4.7ca** and **Table 4.7d** show the number of households in each income group for the Villages and City of Bellefontaine in Logan County.

Figure 4.9 shows that 32.02% of the County's residents 16 years or older are employed in the Production, Transportation and Material Moving occupations. Another 22.6% are in the Management, Professional and Related occupations, and 21.1% are in the Sales and Office occupations. If we compare

the figures for Logan County and the State of Ohio, in **Table 4.8** we find that the Production, Transportation and Material moving occupations sector doesn't reflect the State closely. In fact, the figures for this sector in Logan County (32.02%) are nearly 1.5 times that of the State (19%).

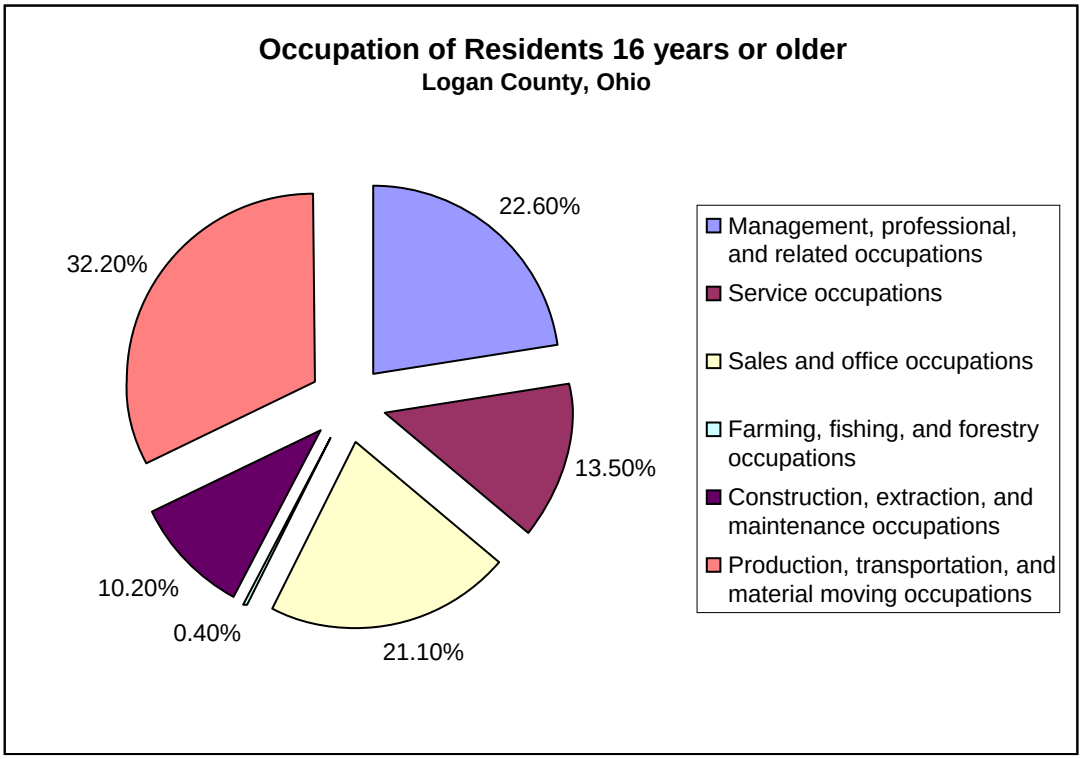


Figure 4.9: Occupation of Residents 16 years or older

Source: US Census Bureau, 2000

Table 4.8: Occupation of Residents 16 years or over
Source: US Census Bureau, 2000

OCCUPATION	Logan County	Ohio
Management, professional, and related occupations	22.6	31
Service occupations	13.5	14.6
Sales and office occupations	21.1	26.4
Farming, fishing, and forestry occupations	0.4	0.3
Construction, extraction, and maintenance occupations	10.2	8.7
Production, transportation, and material moving occupations	32.2	19

Figure 4.10 below shows that 32.35% of the industries in Logan County are of the Manufacturing type, and another 4.4% are Transportation and Warehousing and Utilities related. Together these two industries represent

36.75% of all the industries in the County. **Table 4.9** shows the percentage of different industries in Logan County and the State of Ohio.

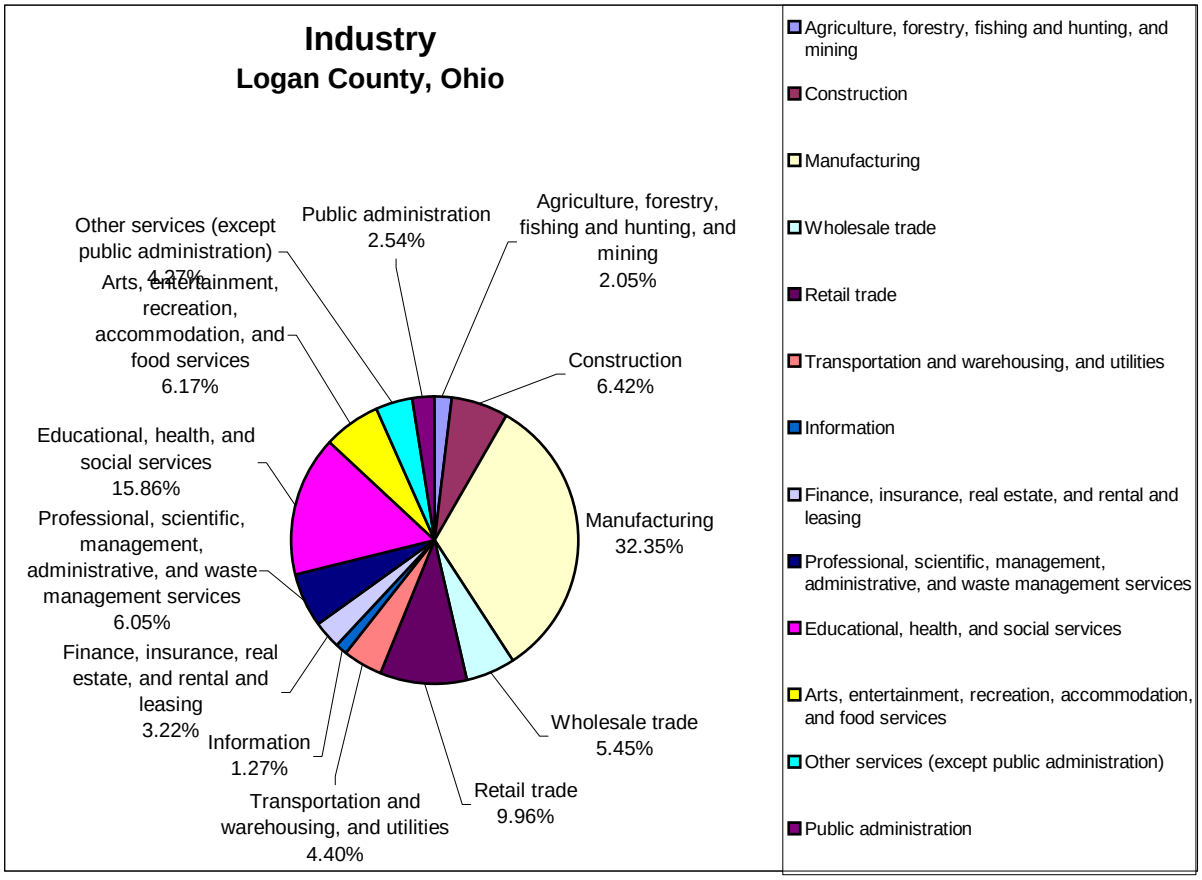


Figure 4.10: Industry

Source: US Census Bureau, 2000

Table 4.9: Industry
Source: US Census Bureau, 2000

INDUSTRY	Logan County	Ohio
	%	
Agriculture, forestry, fishing and hunting, and mining	2	1.1
Construction	6.4	6
Manufacturing	32.4	20
Wholesale trade	5.4	3.6
Retail trade	10	11.9
Transportation and warehousing, and utilities	4.4	4.9
Information	1.3	2.4
Finance, insurance, real estate, and rental and leasing	3.2	6.3
Professional, scientific, management, administrative, and waste management services	6	8
Educational, health and social services	15.9	19.7
Arts, entertainment, recreation, accommodation and food services	6.2	7.5
Other services (except public administration)	4.3	4.5
Public administration	2.5	4.1

4.3.2: Poverty Status

Table 4.10 shows that there are 897 families (7.1%), that fall below the poverty line. 646 of these families have children 18 years or younger, which is 10.1% of all families. **Figure 4.11** shows that the poverty level for individuals, for whom poverty status is determined, has been decreasing since 1980. In 1999, 9.3% of individuals were below the poverty level as compared to 11.1% in 1980. As per **Figure 4.11** the percentage of individuals below the poverty level in the year 1999, in Logan County (9.3%), is lower than that in the State of Ohio (12.54%) for the same year.

Table 4.10: Poverty Status in 1999 (below poverty level)
Source: US Census Bureau, 2000

Families	**897**	**%**
Percent below poverty level		7.1
With related children under 18 years	646	
Percent below poverty level		10.3
With related children under 5 years	380	
Percent below poverty level		16
Families with female householder, no husband present	**505**	**(X)**
Percent below poverty level		29.8
With related children under 18 years	449	
Percent below poverty level		36.3
With related children under 5 years	272	
Percent below poverty level		52.5
Individuals	**4,186**	9.3
Percent below poverty level		9.3
18 years and over	2,689	
Percent below poverty level		8.1
65 years and over	506	
Percent below poverty level		8.5
Related children under 18 years	1,398	
Percent below poverty level		11.8
Related children 5 to 17 years	897	
Percent below poverty level		10.2
Unrelated individuals 15 years and over	1,391	
Percent below poverty level		20

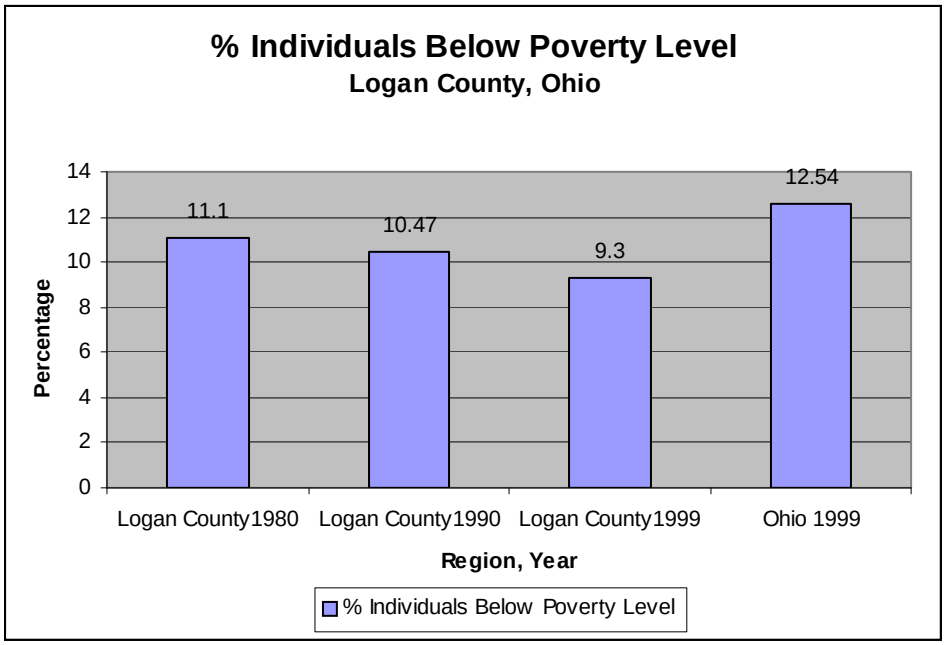


Figure 4.11: % Individuals below Poverty Level

Source: US Census Bureau

4.4: Housing Characteristics

4.4.1: Housing Values

In **Table 4.11** we see that the Median Housing Unit value in Logan County ($88,300) is $15,400 less than that in State of Ohio ($103,700). Jefferson, Bloomfield, Monroe, Union, Zane and Harrison Townships, have a Median Housing Unit value higher than that in the State of Ohio. Jefferson Township tops the chart with a median housing unit value of $134,500. These Townships adjoin the City of Bellefontaine. As per **Table 4.12,** about 24.6% of houses in Logan County fall in the $100,000 to $149,999 category.

Table x4.11: Owner Occupied Housing Unit Value in Median Dollars (2000) of Townships, Logan County, Ohio
Source: US Census Bureau, 2000

Township	# Owner Occupied Housing Units	Median (Dollars)
Bloomfield	52	132,500
Bokes Creek	323	80,100
Harrison	438	107,600
Jefferson	595	134,500
Lake	2,831	81,400
Liberty	770	98,000
McArthur	433	94,500
Miami	511	71,900
Monroe	244	119,000
Perry	273	96,200
Pleasant	154	91,500
Richland	607	85,500
Rush Creek	411	80,300
Stokes	1248	83,800
Union	166	113,900
Washington	856	75,400
Zane	199	108,700
Logan	10,113	88,300
Ohio	2,613,123	103,700

Table 4.12: Median Housing Unit Value (dollars), Logan County, Ohio Source: US Census Bureau, 2000		
	Number	**%**
Specified owner-occupied housing units	**10,113**	**100**
VALUE		
Less than $10,000	10	0.1
$10,000 to $14,999	7	0.1
$15,000 to $19,999	64	0.6
$20,000 to $24,999	67	0.7
$25,000 to $29,999	100	1
$30,000 to $34,999	119	1.2
$35,000 to $39,999	216	2.1
$40,000 to $49,999	594	5.9
$50,000 to $59,999	653	6.5
$60,000 to $69,999	1,026	10.1
$70,000 to $79,999	1,257	12.4
$80,000 to $89,999	1,137	11.2
$90,000 to $99,999	897	8.9
$100,000 to $124,999	1,488	14.7
$125,000 to $149,999	1,006	9.9
$150,000 to $174,999	602	6
$175,000 to $199,999	310	3.1
$200,000 to $249,999	266	2.6
$250,000 to $299,999	130	1.3
$300,000 to $399,999	82	0.8
$400,000 to $499,999	40	0.4
$500,000 to $749,999	16	0.2
$750,000 to $999,999	10	0.1
$1,000,000 or more	16	0.2
Median (dollars)	88,300	

Table 4.13 shows the age of housing units in Logan County. About 60% of housing units in Logan County were constructed more than 30 years ago.

Table 4.13: Age of Housing Units, Logan County, Ohio		
YEAR STRUCTURE BUILT	**Number**	**%**
1999 to March 2000	470	2.18%
1995 to 1998	1,480	6.86%
1990 to 1994	1,645	7.63%
1980 to 1989	2,250	10.43%
1970 to 1979	2,997	13.89%
1960 to 1969	2,392	11.09%
1940 to 1959	4,132	19.16%
1939 or earlier	6,205	28.77%
Total	21571	100.00%

4.4.2: Household Characteristics

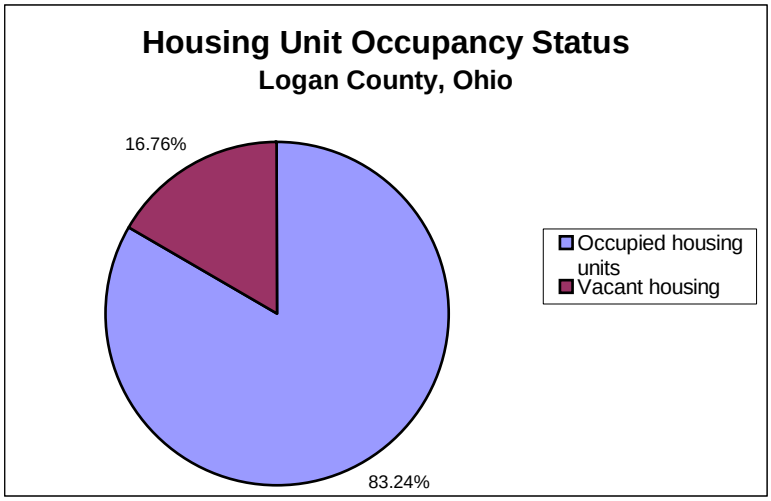


Figure 4.12: Housing Unit Occupancy Status

Source: US Census Bureau, 2000

The total number of housing units in Logan County, in 2000 was 21,571 (**Table 4.14**). Out of these 83.24%, (17,956) units are occupied, and 16.76% are vacant units. Of the occupied housing units, about 75.83%, (13,580) units are Owner Occupied units, while the remaining 24.37% are Renter Occupied units.

Table 4.14: Housing Unit Occupancy and Tenure
Source: US Census Bureau, 2000

	1980		1990		2000	
OCCUPANCY STATUS	Number	Percentage	Number	Percentage	Number	Percentage
Total housing units	**18,549**	**100**	**19,473**	**100**	**21,571**	**100**
Occupied housing units	14,261	76.88	15,952	81.9	17,956	83.2
Vacant housing units	4,288	23.12	3,521	18.1	3,615	16.8
TENURE	Number	Percentage	Number	Percentage	Number	Percentage
Occupied housing units	**14,261**	**100**	**15,952**	**100**	**17,956**	**100**
Owner-occupied housing units	10,928	76.63	11,689	73.3	13,580	75.6
Renter-occupied housing units	3,333	23.37	4,263	26.7	4,376	24.4

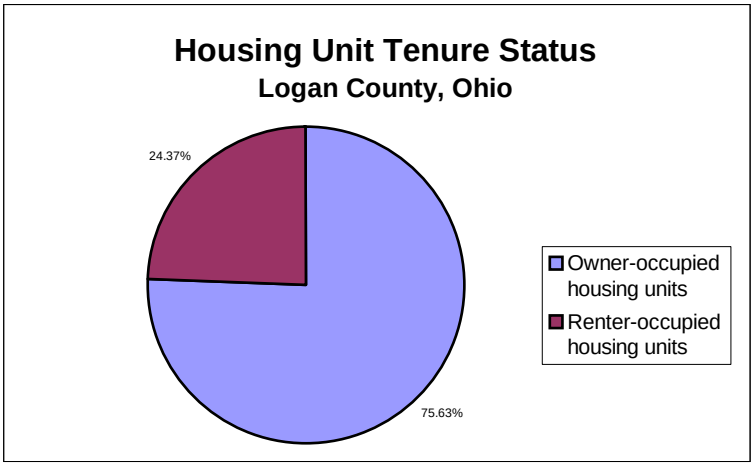


Figure 4.13: Housing Unit Tenure Status

Source: US Census Bureau, 2000

As shown in **Figure 4.14,** the housing occupancy rate has steadily grown over the past two decades in Logan County. In 1980, 76.88% of the total housing units were occupied, while in 2000, this number had risen to 83.2%.

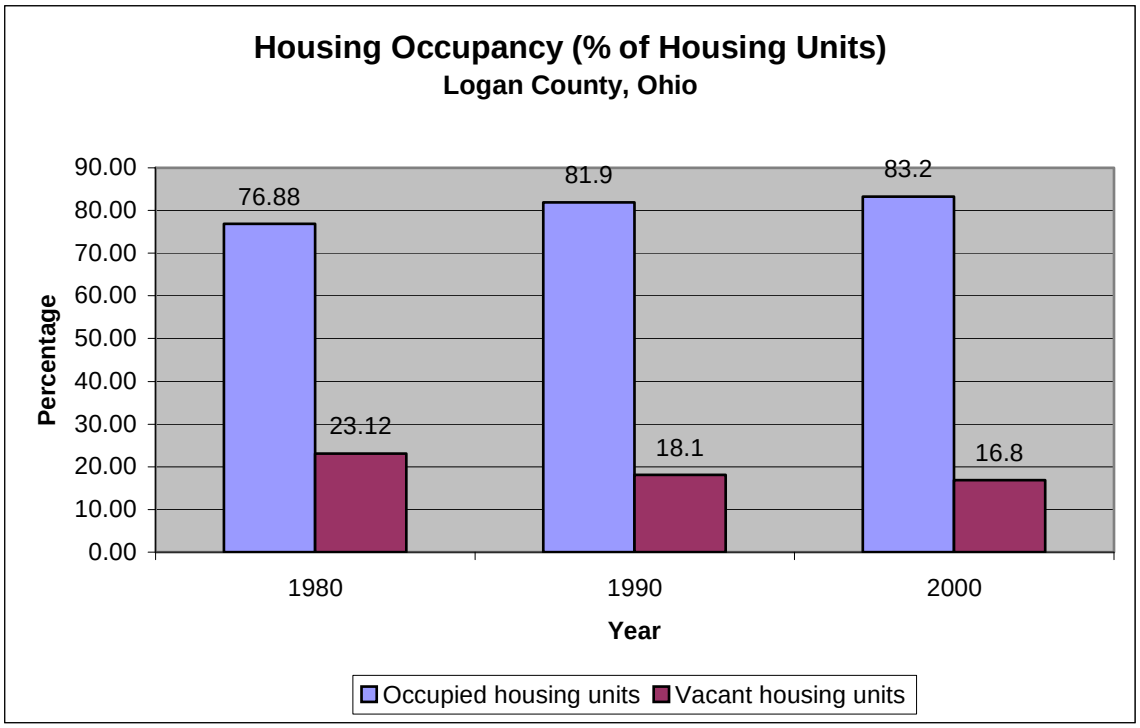


Figure 4.14: Housing Occupancy (% of Housing Units)

Source: US Census Bureau, 2000

Table 4.15: Building Permit Data Source: US Census Bureau, 2000		
Year	**# of Permits**	**Construction Cost**
1990	302	$13,348,700
1991	357	$14,321,670
1992	279	$12,879,500
1993	328	$16,175,230
1994	324	$20,369,670
1995	307	$18,236,432
1996	346	$21,300,713
1997	347	$25,421,880
1998	413	$27,201,721
1999	442	$26,558,925
2000	408	$26,827,469
2001	440	$28,847,602
2002	400	$28,106,063
2003	423	$28,826,115

Table 4.15 above, shows the Building Permit data for Logan County over the period of 1990-2003. For the years of 2001-2003, each year averaged about $28 million that had been invested in construction activities in the County.

4.5: Schools

Five school districts serve Logan County. These are Bellefontaine City, Benjamin Logan Local, Indian Lake Local, Riverside Local and West Liberty – Salem Local School Districts.

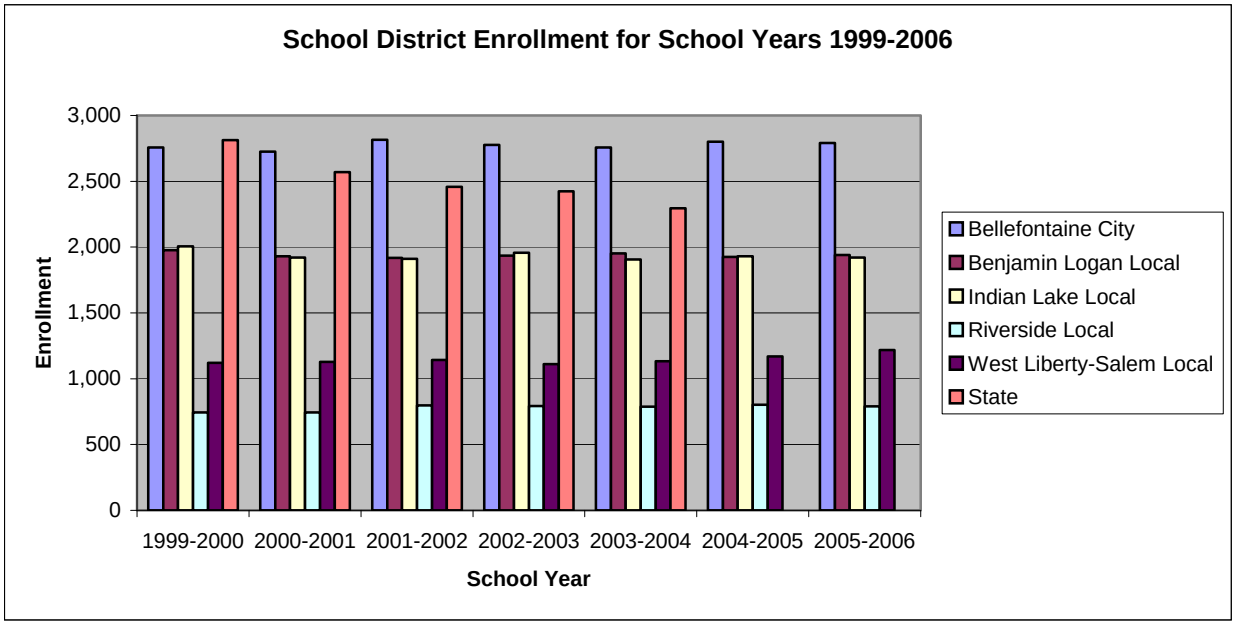


Figure 4.15: School District Enrollment for School Years 1999-2004

Source: Ohio Department of Education

Figure 4.15, shows the enrollment in these School Districts over a period of seven school years, from 1999 to 2006. Enrollment has been more or less the same for each school district over the past five school years.

Table 4.16 below, shows the total expenditure per student by each of these five School Districts, and the State of Ohio, over the past seven school years. As can be seen from the table, the expenditure per student for all of the School Districts was lower than the average expenditure per student in the State of Ohio over all of the past seven school years.

Table 4.16 Expenditure per Pupil for School Years 1999-2006

Source: Ohio Department of Education

Reporting District	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
Bellefontaine City	$6,551	$6,703	$6,920	$7,218	$7,798	$8,119	$8,219
Benjamin Logan Local	$5,847	$5,506	$6,127	$6,771	$7,093	$7,918	$8,161
Indian Lake Local	$6,029	$6,631	$6,907	$7,418	$7,626	$7,818	$8,208
Riverside Local	$6,562	$6,908	$6,285	$7,523	$7,768	$7,968	$8,506
West Liberty-Salem Local	$6,352	$6,943	$7,265	$7,835	$7,713	$8,123	$7,892
State	$7,057	$7,602	$8,073	$8,441	$8,768	$9,051	$9,355

Table 4.17: Type of Expenditure for School Years 1999 – 2004

Reporting District	Expenditure Type	2003-2004	2002-2003	2001-2002	2000-2001	1999-2000	2004-2005	2005-2006
Bellefontaine City	Administrative	12.70%	12.90%	12.10%	12.10%	11.60%	$975	$992
	Building Operations	16.10%	17.20%	16.40%	15.70%	16.30%	$1,261	$1,293
	Staff Support	2.90%	2.70%	2.00%	2.30%	3.00%	$263	$270
	Pupil Support	8.70%	9.10%	11.40%	11.70%	10.00%	$691	$734
	Instructional	59.70%	58.00%	58.10%	58.20%	59.00%	$4,929	$4,930
Benjamin Logan Local	Administrative	14.30%	14.20%	13.80%	10.70%	10.80%	$1,233	$1,252
	Building Operations	22.40%	23.10%	21.60%	22.50%	20.90%	$1,778	$1,800
	Staff Support	1.40%	1.10%	0.50%	0.40%	1.00%	$154	$177
	Pupil Support	8.00%	7.20%	10.80%	10.70%	11.20%	$616	$634
	Instructional	53.90%	54.30%	53.30%	55.60%	56.10%	$4,137	$4,298
Indian Lake Local	Administrative	11.40%	10.70%	11.40%	10.50%	11.20%	$860	$1,016
	Building Operations	20.90%	23.50%	21.20%	21.00%	20.70%	$1,586	$1,661
	Staff Support	2.30%	1.80%	1.60%	1.20%	0.80%	$213	$171
	Pupil Support	9.40%	9.10%	11.40%	12.20%	11.70%	$760	$800
	Instructional	56.00%	54.80%	54.40%	55.10%	55.60%	$4,399	$4,560
Riverside Local	Administrative	11.20%	10.80%	11.10%	10.80%	10.00%	$861	$1,024
	Building Operations	20.40%	20.10%	15.00%	16.40%	16.60%	$1,496	$1,506
	Staff Support	0.60%	0.40%	0.20%	0.50%	0.40%	$30	$37
	Pupil Support	8.40%	7.50%	9.60%	9.70%	9.90%	$700	$797
	Instructional	59.50%	61.20%	64.20%	62.60%	63.20%	$4,881	$5,142
West Liberty-Salem Local	Administrative	13.70%	12.90%	14.70%	15.40%	12.30%	$1,161	$1,013
	Building Operations	19.80%	22.00%	18.80%	20.10%	19.80%	$1,659	$1,661
	Staff Support	1.90%	2.30%	1.80%	2.00%	1.30%	$160	$148
	Pupil Support	10.40%	11.30%	14.80%	13.60%	13.90%	$864	$927
	Instructional	54.30%	51.60%	49.90%	49.00%	52.60%	$4,279	$4,143
State Average	Administrative	12.50%	12.40%	11.90%	11.50%	11.90%	$1,156	$1,143
	Building Operations	18.90%	19.20%	19.00%	19.60%	19.20%	$1,689	$1,779
	Staff Support	2.90%	2.70%	2.50%	2.30%	2.10%	$272	$293
	Pupil Support	10.20%	10.20%	11.20%	11.00%	11.00%	$914	$935
	Instructional	55.50%	55.60%	55.30%	55.50%	55.90%	$5,020	$5,205

Bellefontaine City SD spent $7,789, Benjamin Logan Local SD spent $7,093, Indian Lake Local spent $7,626, Riverside Local spent $7,768, and West Liberty – Salem Local spent $7,713, per student enrolled, as compared to the State average of $8,768, for the school year 2003-2004.

Table 4.17, shows the different types of expenditures as percentage of total expenditures, for each school district and the average for the State of Ohio over the past five school years. The greatest percentage of expenditures for all school districts for the school year 2003-2004 was Instructional Expenditures.

Table 4.18: Revenue per Pupil for School Year 2003 – 2004
Source: Ohio Department of Education

	Source of Funding	Percentage of Total
Bellefontaine City	Local	36.50%
	State	55.40%
	Federal	8.20%
Benjamin Logan Local	Local	43.40%
	State	52.50%
	Federal	4.10%
Indian Lake Local	Local	54.00%
	State	38.80%
	Federal	7.30%
Riverside Local	Local	27.30%
	State	68.30%
	Federal	4.40%
West Liberty-Salem Local	Local	39.10%
	State	57.40%
	Federal	3.50%
State Average	Local	46.00%
	State	46.50%
	Federal	7.50%

Table 4.18 shows the source of funding for the five school districts and average for the State of Ohio, for the school year 2003-2004. The highest percentage funding for all school districts, except Indian Lake Local SD, comes from the State. Indian Lake Local SD gets its biggest share of funding from local sources. Federal funding for Benjamin Logan Local, Riverside Local and West Liberty – Salem Local School Districts is way below the state average Federal Funding of 7.5%.

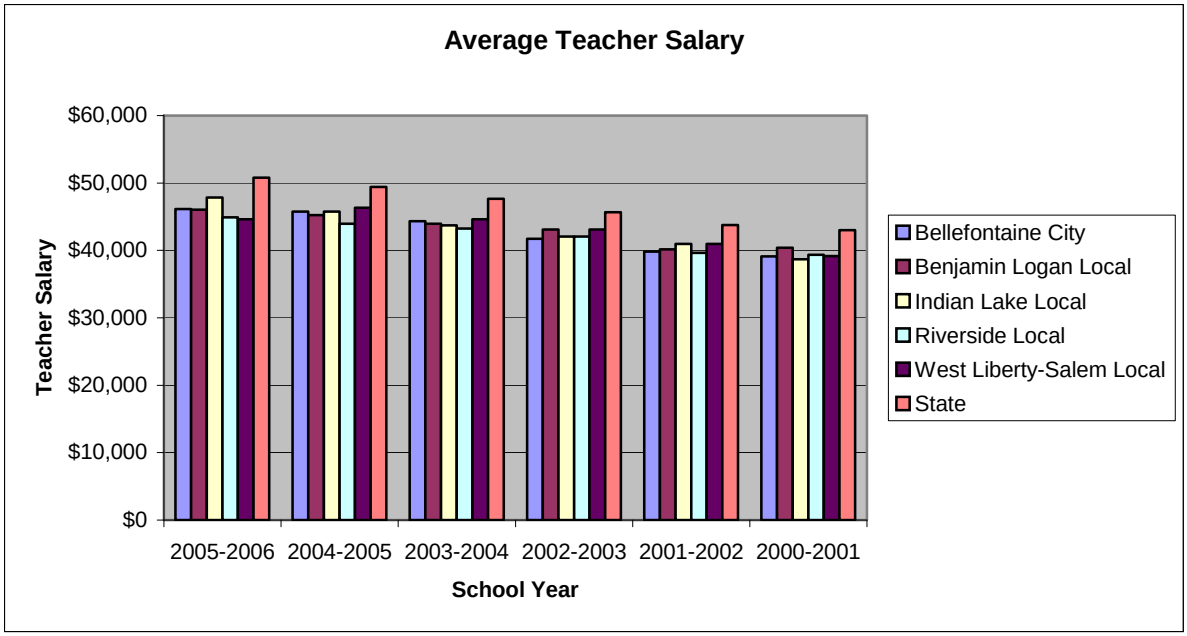


Figure 4.16: Average Teacher Salary

Source: Ohio Department of Education

Figure 4.16, shows the average salary of teachers in each of the School Districts and the average salary of teachers in the State, for the past four school years. The average salaries are fairly similar across the school districts but are below the State average. For the 2003-2004 school year, the State average is around $3000 more than average salaries in any of the School Districts.

Table 4.19 Number of Students per Teacher
Source: Ohio Department of Education

Reporting District	2005-2006	2004-2005	2003-2004	2002-2003	2001-2002	2000-2001	1999-2000
	Students per Teacher	Students per Teacher	Students per Teacher	Students per Teacher	Students per Teacher	Students per Teacher	Students per Teacher
Bellefontaine City	15.7	15.1	15.7	15.4	16	17.2	16.9
Benjamin Logan Local	16.1	17.3	17.8	18.1	18.9	20.5	20.4
Indian Lake Local	16.4	15.2	15.4	15.2	16.6	18.2	18.2
Riverside Local	15.2	15.3	15.8	15.1	16.3	15.6	15.5
West Liberty-Salem Local	16.6	15.7	15.5	15.3	16	16.8	16.9
State	18.6	18.5	18.5	16.5	16.9	18	18.1

Table 4.19 shows the number of students per teacher in each of the School Districts, and the State of Ohio. The Number of students per teacher for

each of the five School Districts is lower than the State average of 18.5 students per teacher.

Table 4.20: Graduation Rate
Source: Ohio Department of Education

District	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004
Bellefontaine City	85.60%	86.70%	84.70%	89.20%	90.80%
Benjamin Logan Local	89.60%	87.80%	94.20%	95.30%	88.30%
Indian Lake Local	80.10%	75.00%	84.60%	81.00%	82.60%
Riverside Local	93.80%	94.20%	96.70%	96.60%	91.70%
West Liberty-Salem Local	95.60%	92.30%	93.50%	95.80%	90.00%
State Average	78.50%	84.70%	91.40%	89.30%	88.20%

Table 4.21: Honors Graduation Rate
Source: Ohio Department of Education

District	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004
Bellefontaine City	17.30%	29.30%	22.60%	25.60%	19.20%
Benjamin Logan Local	10.90%	10.90%	3.90%	2.80%	12.50%
Indian Lake Local	13.90%	20.70%	18.20%	23.40%	21.80%
Riverside Local	13.10%	12.20%	15.30%	26.30%	12.70%
West Liberty-Salem Local	10.80%	12.50%	17.20%	15.40%	26.40%
State Average	14.20%	13.70%	11.20%	13.30%	11.60%

Table 4.20 and **Table 4.21,** show the Graduation and Honors Graduation Rates. In the academic year 2003-2004, Indian Lake SD with a graduation rate of 82.6%, was the only School District below the State average graduation rate of 88.2%. The other school districts all had higher graduation rates than the State average. On the other hand, Indian Lake had the second highest Honors Graduation rate of 21.8%, the highest being West Liberty Salem School District, with 26.4%. All the school districts had higher Honors Graduation Rates in comparison to the State average of 11.6%.

In 1998-1999, the Ohio Department of Education started grading its district's schools by assigning a grade to each school every academic year. These grades were assigned based on the number of performance targets achieved by the school out of a total possible 27 targets. In academic years 2001-2002 and 2002-2003, there were 22 targets defined, and in the 2003-2004 school year the maximum possible targets were 18. The range of state performance targets includes Grades 4,6,9 and 12 proficiency test results in five subject areas, namely Citizenship, Mathematics, Reading, Writing and Science

as well as district attendance and graduation rates. The school district can be assigned the following grades in descending order: Excellent, Effective, Continuous Improvement, Academic Watch and Academic Emergency.

Table 4.22a: District Rating
Source: Ohio Department of Education

2003-2004		Indicators				
Reporting District	**Rating**	**Met Count**	**Applicable Count**	**Met %**	**Performance Index Score**	**AYP Status**
Bellefontaine City	Continuous Improvement	9	18	50.00%	85.6	Not Met
Benjamin Logan Local	Effective	13	18	72.20%	91.3	Met
	Continuous Improvement					
Indian Lake Local	Continuous Improvement	10	18	55.60%	86.3	Not Met
	Academic Watch					
Riverside Local	Continuous Improvement	7	18	38.90%	85.5	Met
West Liberty-Salem Local	Effective	14	18	77.80%	92.7	Met
	Continuous Improvement					
2002-2003		**Indicators**				
Reporting District	**Rating**	**Met Count**	**Applicable Count**	**Met%**	**Performance Index Score**	**AYP Status**
Bellefontaine City	Continuous Improvement	8	22	36.40%	80.1	Not Met
Benjamin Logan Local	Effective					
	Continuous Improvement	14	22	63.60%	84.1	Not Met
Indian Lake Local	Continuous Improvement	11	22	50.00%	85.8	Not Met
	Academic Watch					
Riverside Local	Continuous Improvement	12	22	54.50%	83	Met
West Liberty-Salem Local	Effective	18	22	81.80%	92	Met
	Continuous Improvement					

Table 4.22a and **Table 4.22b** show the ratings of the five School Districts in Logan County for the past 5 academic years. For the three academic years, from 1999-2002, none of the five School Districts met the AYP (Adequate Yearly Progress) Status. For the school year of 1999-2000, Indian Lake Local School District schools performed more poorly and were graded Academic Watch. Although this School District has been graded as Continuous Improvement for the past two academic years, it has not been able to meet the AYP Status in the

past 5 school years. For the 2003-2004 school year, Benjamin Logan Local and West Liberty Salem School Districts were rated as Effective and had met the AYP Status.

Table 4.22b: District Rating
Source: Ohio Department of Education

2001-2002		Indicators				
Reporting District	**Rating**	**Met Count**	**Applicable Count**	**Met %**	**Performance Index Score**	**AYP Status**
Bellefontaine City	Continuous Improvement	13	22	59.10%	--	Not Met
Benjamin Logan Local	Effective	18	22	81.80%	--	Not Met
	Continuous Improvement					
Indian Lake Local	Continuous Improvement	11	22	50.00%	--	Not Met
	Academic Watch					
Riverside Local	Continuous Improvement	14	22	63.60%	--	Not Met
West Liberty-Salem Local	Effective	19	22	86.40%	--	Not Met
	Continuous Improvement					
2000-2001		**Indicators**				
Reporting District	**Rating**	**Met Count**	**Applicable Count**	**Met %**	**Performance Index Score**	**AYP Status**
Bellefontaine City	Continuous Improvement	17	27	63.00%	--	Not Met
Benjamin Logan Local	Effective					
	Continuous Improvement	18	27	66.70%	--	Not Met
Indian Lake Local	Continuous Improvement	17	27	63.00%	--	Not Met
	Academic Watch					
Riverside Local	Continuous Improvement	20	27	74.10%	--	Not Met
West Liberty-Salem Local	Effective					
	Continuous Improvement	18	27	66.70%	--	Not Met
1999-2000		**Indicators**				
Reporting District	**Rating**	**Met Count**	**Applicable Count**	**Met %**	**Performance Index Score**	**AYP Status**
Bellefontaine City	Continuous Improvement	14	27	51.90%	--	Not Met
Benjamin Logan Local	Effective					
	Continuous Improvement	16	27	59.30%	--	Not Met
Indian Lake Local	Continuous Improvement					
	Academic Watch	12	27	44.40%	--	Not Met
Riverside Local	Continuous Improvement	15	27	55.60%	--	Not Met
West Liberty-Salem Local	Effective					
	Continuous Improvement	20	27	74.10%	--	Not Met

4.6 Natural and Historic Resources

4.6.1 Topographic Features

The Indiana and the Ohio Till Plain section influence Logan County. The Wisconsin glacier influences this topography of the land. There is a complex pattern throughout the county of ground moraines that have been laid down on the land from the Glacier. The western edge, northwest, northeast and southwest corners dominantly are parts of a nearly to gently sloping topography where the major differences show up along the streams and on the Beehive moraine that bisects the northwest corner.

These areas are dominated by distinctively different soil types; refer to the Logan County Soil Survey for these descriptions. As we move inward from these areas the topography varies from nearly level to very steep. The steep areas tend to arc around a “bedrock high” near Bellefontaine. These moraines are deposits or accumulations of soil and rock and each area have specific soils that are unique to these areas.

Logan County is drained by two river systems, the Great Miami River Basin in the western two thirds of the county and the Scioto River Basin in the eastern third. The Upper Great Miami River has two sub-basins; the Upper Miami River and the upper Mad River. The Upper Miami River basin includes a projection called McKees Creek which drains from near the center of Logan County. The northern portion of the Upper Miami River begins from four smaller stream tributaries coming together forming Indian Lake. The area around Indian Lake is considered flood plain soils and flat terraces that contain soils that are characteristic of those conditions.

The Upper Mad River Basin drains areas clear from the east-central part of the county to the south central edge. This is the beginning of a large glacial outwash plain that extends southward into Champaign County. There are many out-wash

areas caused by the glacier which are seen as low terraces along associated flood plains. Specific soil types are characteristic to these areas also each have limitations for certain uses of the land.

Four main tributaries of the Scioto River are in the Scioto River Basin in the eastern third of the county. These tributaries are Big Darby, Bokes, Mill and Rush Creeks. Also in this basin is a sizeable lakebed area northeast of the village of East Liberty. As in other areas of the county, characteristic soils are found in flood plains, terraces and lakebed regions of this area.

Logan County is very unique with the diversity of topography within the county ranging from very flat topography supporting very poorly drained soils to very steep topography supporting such land uses as a"ski slope and soils very gravelly and with shale/limestone out-crops. This is characterized by four stone quarries in operation within the county. With the unique glacial background the county also occupies areas of organic deposits called "muck" soils. These are usually pockets of deep to very deep highly organic soils, poor drainage, unstable conditions and usually a lack of suitable drainage outlets.

All of the above characteristics make Logan County a challenge to many different land-uses and limitations that need to be considered during the decision-making period. The Logan Soil Survey is a very good document to research and will assist landowners in their decision making processes.

4.6.2 Soils

The general soil map enclosed in this publication shows the map units that have distinct patterns of soils and of relief and drainage. Each map unit within a grouping is a unique natural landscape. The general soil map provides a broad perspective of the soils and landscapes in the survey area. It provides a basis for comparing the potential of large areas for general kinds of land use. Areas that are, for the most part, suited to certain kinds of farming or to other

land uses can be identified on the map. This resource map will also demonstrate areas of soils having properties that are distinctly unfavorable for certain land uses and these can be located on the map.

Because this map is of such small scale it will not show the specific kind of soil at a specific site. Thus it is not suitable for planning the management of a farm or field or for selecting a site for a road, building or structure. The kinds of soil in any one map unit differ from place to place in slope, depth, stoniness, drainage, or other characteristics that affect their management.

In reviewing the generalized soil maps there are individual soils that are characteristic of the flood plains along rivers and streams. Examples of these soils would be Ag-Algiers, Lp-Lippincott, EmA- Eldean, WeA- Wea, Sh-Shoals, So-Sloan soils. These are obvious areas that are typically prone to flooding and land use choices should reflect these characteristics.

On the more rolling topography of the county area are completely different soil types with much different material make-up. These soils can be well-drained and they can also be very poorly drained. The soil differences can be a result of a stronger clay texture in the surface profile versus a more loamy texture.

The general soils map gives the planner or land user a general perspective of soil types within the county and the more detailed soil maps found in the Logan County Soil Survey used for defined site evaluation.

Logan County soils are very diverse across the county and therefore this makes land use planning very crucial in evaluating sites for a specific purpose. With proper analysis of the soil maps and a clear understanding of the soil characteristics sound land use decisions are achievable.

4.7 County Facilities and Infrastructure

4.7.1 Introduction

A good transportation network is essential for the growth of the community. A good road and rail network is vital for unrestricted movement of people and goods. The Logan County Transportation Plan provides an overview of the road and rail network in Logan County and addresses the issues associated with the transportation network in the County.

4.7.2 Roadways

Roadways are the backbone of every community. They are crucial in connecting the community to neighboring areas and providing access to its services and industries. Access to neighboring counties, cities, and interstate highway systems is very important for the County and its residents. Two of the major thoroughfares in Logan County are U.S. Highway 33 and U.S. Highway 68. Route 33 runs east west across the County. Route 68 runs north south across the County and passes through West Liberty and the City of Bellefontaine. These two highways intersect in Bellefontaine towards the northern edge of the City. Other state highways which facilitate movement across Logan County, are: S.R. 274 in the northern part of the County, S.R. 508 in the south, S.R. 47 in the middle, S.R. 235 in the west, and S.R. 292 in the east. Route 47 and U.S. 33 connect the County to Interstate 75 to the west. Route 68 connects the County to Interstate 70 in the south near Springfield. In addition to the above-mentioned highways, there are many State, County, and Township highways, which provide access within the County.

The existing road system in Logan County is classified into several categories depending on many criteria, such as, traffic volumes, importance of the roadway in the region, etc. Logan County roads are classified under the functional classification system for rural areas. Logan County road classification is based on the classification system described in the Federal Highway

Administration publication *Highway Functional Classification: Concepts, Criteria, and Procedures*. It is as follows:

- Rural roads consist of facilities outside or urban areas. The names provided for the recognizable systems are principal arterials (roads), minor arterials (roads), major and minor collectors (roads), and local roads.

Rural Principal Arterial System

The rural principal arterial system consists of a network of routes with the following service characteristics:

1. Corridor movement with trip length and density suitable for substantial statewide or interstate travel.
2. Movements between all, or virtually all, urban areas with populations over 50,000 and a large majority of those with populations over 25,000.
3. Integrated movement without stub connections except where unusual geographic or traffic flow conditions dictate otherwise (e.g., international boundary connections or connections to costal cities),

In the more densely populated states, this class of highway includes most (but not all) heavily traveled routes that might warrant multi-lane improvements in the majority of states; the principal arterial system includes most (if not all) existing rural freeways.

The principal arterial system is stratified into the following two design types: (1) freeways and (2) other principal arterials. U.S. 33 is a Rural Principal Arterial route in Logan County.

Rural Minor Arterial System

The rural minor arterial road system, in conjunction with the rural principal arterial system, forms a network with the following service characteristics:

1. Linkage of cities, larger towns, and other traffic generators (such as major resort areas) that are capable of attracting travel over similarly long distances.
2. Integrated interstate and intercounty service.
3. Internal spacing consistent with population density, so that all developed areas of the state are within reasonable distances of arterial highways.
4. Corridor movements consistent with items (1) through (3) with trip lengths and travel densities greater than those predominantly served by rural collector or local systems.

Minor arterials, therefore, constitute routes the design of which should be expected to provide for relatively high travel speeds and minimum interference to through movement. U.S 68 North of Bellefontaine is a Rural Minor Arterial System in Logan County.

Rural Collector System

The rural collector routes generally serve travel of primary intra-county rather than statewide importance and constitute those routes on which (regardless of traffic volumes) predominant travel distances are shorter than on arterial routes. Consequently, more moderate speeds may be typical. To define rural collectors more clearly, this system is sub-classified according to the following criteria:

- Major Collector Roads: These routes (1) serve county seats not on arterial routes, larger towns not directly served by the higher systems, and other traffic generators of equivalent intracounty importance, such as consolidated schools, shipping points, county parks, and important mining

and agricultural areas; (2) link these places with nearby larger towns or cities, or with routes of higher classifications; and (3) serve the more important intra-county travel corridors. S.R. 235, S.R. 47, C.R. 1 and C.R. 130 are Major Collector Roads in Logan County.

- Minor Collector Roads: These routes should (1) be spaced at intervals consistent with population density to accumulate traffic from local roads and bring all developed areas within reasonable distances of collector roads; (2) provide service to the remaining smaller communities; and (3) link the locally important traffic generators with their rural hinterland. C.R. 91 is a Minor Collector Road in Logan County.

Rural Local Road System

The rural local road system, in comparison to collectors and arterial systems, primarily provides access to land adjacent to the collector network and serves travel over relatively short distances. The local road system constitutes all rural roads not classified as principal arterials, minor arterials, or collector roads.

The highway systems developed using these criteria are generally expected to fall within the percentage ranges shown below. The range of percentages of rural collectors represents the total length of both major and minor collector roads and applies to the statewide rural roadway totals. The percentages in particular counties may vary considerably from the statewide average.

Table 4.23: Road Percentage by Class

Source: Highway Functional Classification: Concepts, Criteria, and Procedures.

System	***Percentage of Total Rural Road Length***
Principal arterial system	*2 - 4%*
Principal arterial plus minor arterial system	*6 - 12%, with most States falling in 7 - 10% range*
Collector road	*20 - 25%*
Local road system	*65 - 75%*

Figure 4.17shows the functional classification of roads in Logan County. This data was obtained from the Logan County Engineer's Office. As can be seen from the map, U.S. 33, and U.S. 68 south of Bellefontaine are classified as principal arterial roads. Route 68, north of Bellefontaine, is a minor arterial. Most of the County Highways fall under the collector road classification. **Table 4.24** lists the major and minor collector roads in Logan County. As per the County Engineer, the roads in the county are classified based on the ADT (Average Daily Traffic) and their importance in the region. The road classification in Logan County resembles the percentage figures of different classes, as listed in **Table 4.23** above.

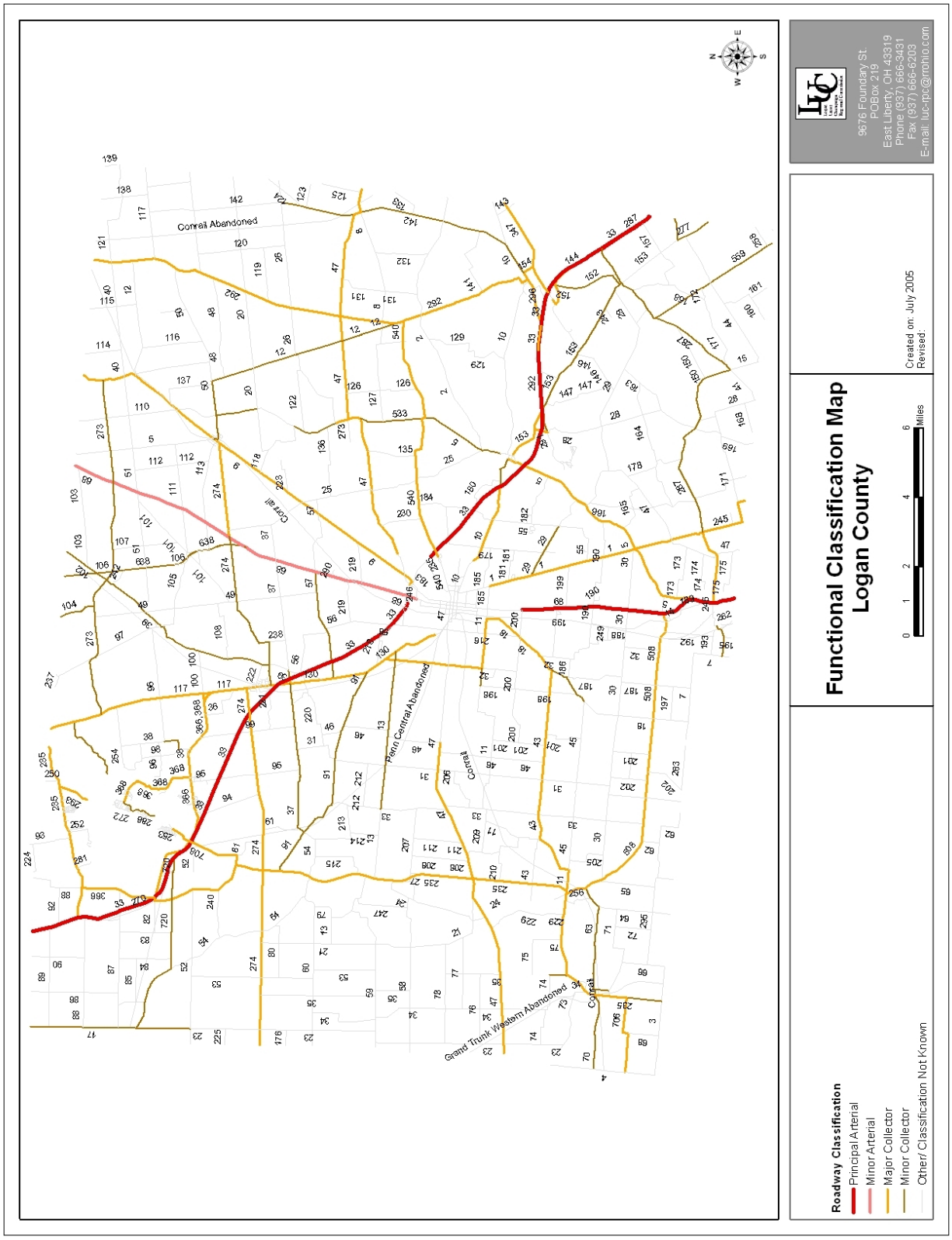


Figure 4.17: Functional Classification Map

Table 4.24: Collector Road Classification in Logan County Source: Logan County Engineer's Office
Major Collectors
C.H. 1
C.H. 5 - U.S. 68 to South corporation line of Zanesfield, S.R. 47 to C.H. 26 East
C.H. 9 - S.R. 47 to South corporation line of Rushsylvania
C.H. 10 - East corporation line of Bellefontaine to U.S. 33, S.R. 292 to C.H. 154
C.H. 11 - S.R. 235 to C.H. 43, C.H. 32 to C.H. 18
C.H. 18 - C.R. 43 to C.H. 11
C.H. 28 - C.H. 291 to U.S. 33
C.H. 32 - C.R. 11 to C.H. 130
C.H. 37 - C.H. 130 to U.S. 33
C.H. 43 - C.H. 11 to C.H. 18
C.H. 130
C.H. 144 - C.H. 144A to S.R. 287
C.H. 153 - Zanesfield corporation line to S.R. 292
C.H. 154
C.H. 144A
Minor Collectors
C.H. 5 - Zanesfield corporation line to C.H. 118, C.H. 20 to corporation line of Rushsylvania
C.H. 10 - U.S. 33 to corporation line of Zanesfield, C.H. 154 to C.H. 142
C.H. 11 - T.R. 198 to T.R. 32
C.H. 12 - S.R. 292 to C.H. 50
C.H. 13 - T.R. 33 to C.R. 130
C.H. 17 - C.H. 23 to C.H. 87
C.H. 18 - T.R. 45 to C.H. 43
C.H. 24 - DeGraff corporation line to S.R. 47
C.H. 29 - C.H. 1 to T.R. 55
C.H. 35 - S.R. 235 to S.R. 47
C.H. 37 - C.H. 61 to C.H. 130**,** U.S. 33 to C.H. 39
C.H. 38 - S.R. 366 to C.H. 96
C.H. 39 - T.R. 108 to corporation line of Belle Center
C.H. 50 - C.H. 5 to C.H. 12 S
C.H. 54 - C.H. 91 to C.H. 61
C.H. 57 - C.H. 130 to U.S. 68
C.H. 63 - C.H. 64 to S.R. 508
C.H. 70 - C.H. 4 to S.R. 235
C.H. 91 - S.R. 235 to C.H. 130
C.H. 142 - C.H. 10 to C.H. 26
C.H. 152 - C.H. 153 to C.H. 144
C.H. 153 - C.H. 28 to S.R. 287, C.H. 277 to Union County line
C.H. 277
C.H. 286

4.7.3 Aviation

At the time the Logan County Comprehensive Plan of 1996 was being written, the existing airport was deemed incapable of handling the growing needs of air transportation and air cargo in the region. As a result of the increase in industrial development in the region, a need for a new airport, which could accommodate executive jets, air cargo facilities, and resolve the issues relating to nearby land uses, was needed. The new Bellefontaine Municipal Airport is located just off of State Route 47, on the western fringe of the city. The airport is only three years old and has one runway 5,000 feet long. This airport is capable of handling executive jets and a host of other, smaller aircrafts. On an average the airport handles 6-8 flights per day. The air cargo coming into this airfield is generally for the Honda plants. The airport gets 2 cargo flights every day, and handles 6-8 skids of cargo per day. As the airport is fairly new, it meets all the present passenger and cargo needs of the region. Although the airport is fairly new, as air traffic increases, and the size of aircraft utilizing increases, it will become necessary to accommodate this commercial and industrial traffic by increasing the length of the runway to 6,000 feet.

4.7.4 Railroad

Four railroad lines service Logan County. Two companies, CSX Transportation Inc. and Indiana & Ohio Railroad Inc., operate two railroad lines each in the County. One of the lines operated by CSX passes through the City of Bellefontaine and connects it to the villages of Rushsylvania and Ridgeway in the north, and Sidney, Ohio, and the Villages of DeGraff and Quincy in the southwest. The other CSX line passes through the Villages of Ridgeway and West Mansfield in the northeastern corner of the County. One of the lines operated by Indiana & Ohio Railroad Inc. passes through the Village of Quincy in the southwestern corner of the County. The other West Central Ohio Port Authority rail line connects the City of Bellefontaine to Springfield in the south. These rail lines play an important role in connecting the industrial and agricultural facilities of Logan County to different parts of the State and beyond. **Figure 4.18** shows the aviation and rail network in Logan County.

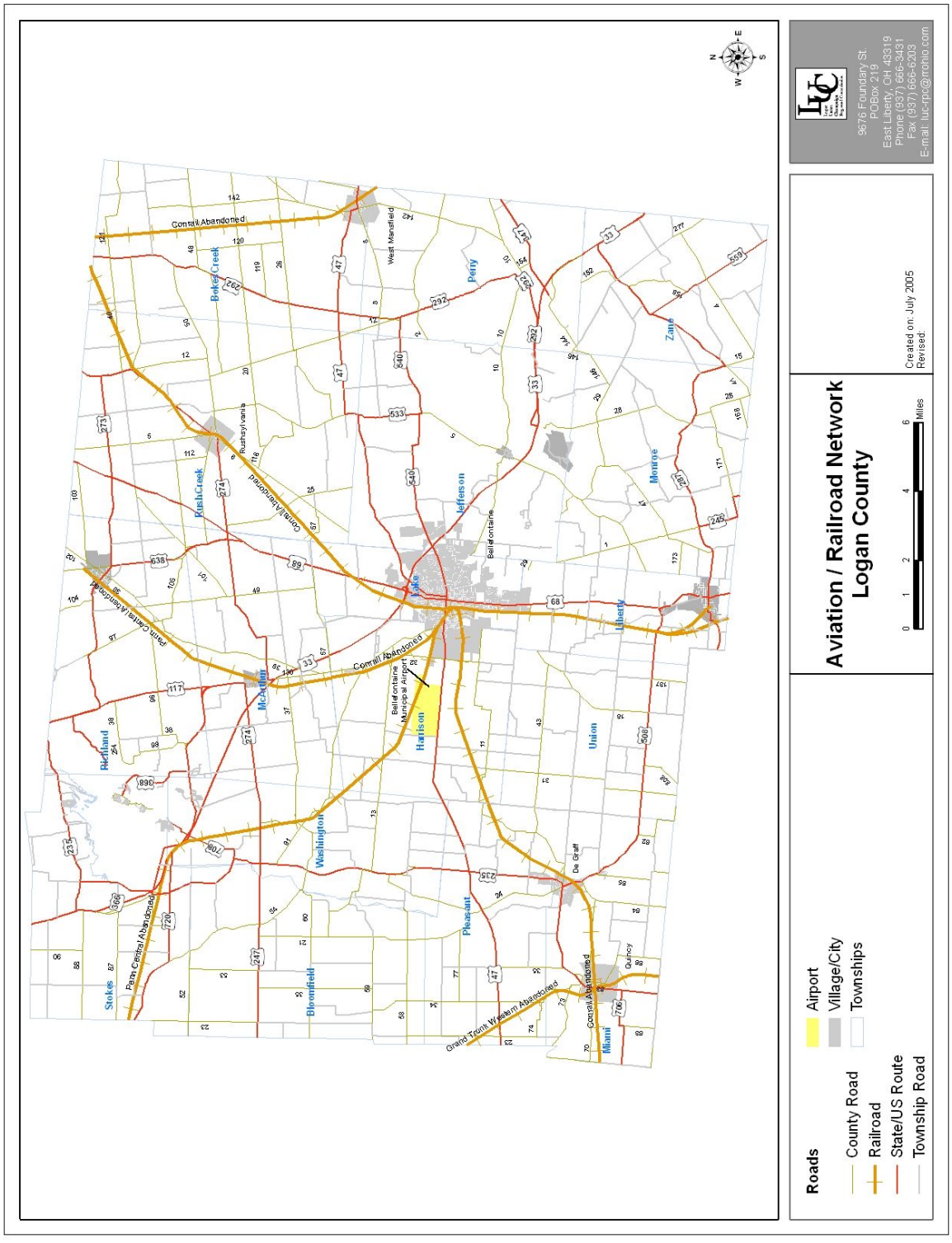


Figure 4.18: Aviation and Railroad Network

Source: Logan County Engineer's Office

4.7.5 Funding for Roadway Improvements

In 1997, it was determined that 127 miles of the roads in the County were in poor condition. So in 1997, in order to improve the road network in Logan County, a five-year 0.5% sales tax was put on ballot and approved by the voters. This revenue was used in funding road safety improvement projects and resurfacing of our high traffic count roads. The goal of this sales tax program for the years 1997-2002, was to improve the safety conditions on the roadways of Logan County. The base budget for Logan County Engineer's Office comes from license plate fees and gas tax revenue. Since the sales tax was approved, it has contributed the highest amount of dollars to the Engineer's Office budget. In 2002 & 2006 respectively, the sales tax was put on ballot once again. The voters again approved the 0.5% sales tax each time. The aim of this five-year sales tax is to improve the road network in Logan County with more weight given to road condition.

Table 4.25: Revenues for Logan County Engineer's Office
Source: Logan County Engineer's Office

Source	2000	2001	2002	2003	2004	2005
Sales Tax (Earmarked for Capital Improvement)	$2,134,714.98	$2,164,793.50	$2,317,693.06	$2,343,017.77	$2,366,634.37	$2,472,931.10
Auto Registration	$1,539,561.29	$1,549,000.76	$1,584,188.37	$1,604,586.06	$1,580,133.36	$1,545,603.70
Ohio Gas Tax	$1,378,130.41	$1,385,530.99	$1,387,402.05	$1,528,787.76	$1,867,715.87	$2,098,616.19
Other (Fines, Sales, Inspections)	$193,025.95	$198,748.68	$218,747.52	$254,580.33	$190,548.36	$241,752.82
General Fund	$260,000.00	$260,000.00	$201,281.98	$260,000.00	$260,000.00	$113,457.38
Grants and Solid Waste Funds	$50,000.00	$0.00	$80,000.00	$50,000.00	$50,000.00	$50,000.00
Federal Aid for McColly Covered Bridge	$518,640.00	$0.00	$0.00	$0.00	$0.00	$0.00
TR157 Reconstruction-State Grand and Midwest Express Share	$0.00	$156,524.60	$43,475.40	$0.00	$0.00	$0.00
Total $ amount	$6,074,072.63	$5,714,598.53	$5,832,788.38	$6,040,971.92	$6,315,031.96	$6,522,361.09

Table 4.25 and **Table 4.26** show the revenues and expenditures for Logan County Engineer's Office from 2000-2005. As can be seen, sales tax, auto registration, and Ohio gas tax, make up the top three sources of revenue for the Engineer's Office. The highest expenditure by the Engineer's Office has been on the Road Department (operation, materials, purchased services) and Sales Tax Improvements (Roads, Bridges, Townships).

Table 4.26: Expenditures for Logan County Engineer's Office
Source: Logan County Engineer's Office

	2000	2001	2002	2003	2004	2005
Road Department (Operation, Materials, Purchased Services)	$1,314,744.30	$1,178,722.86	$1,523,918.54	$1,941,782.77	$2,308,123.24	$1,997,729.84
Sales Tax Improvements (Roads, Bridges, Townships)	$1,867,982.73	$1,697,151.70	$1,945,572.80	$2,209,043.52	$2,343,451.29	$4,096,362.21
Engineering and Administration	$716,826.73	$785,611.28	$713,410.27	$687,299.93	$660,172.19	$655,277.01
Bridge Department (Operation, Materials, Purchased Services)	$385,802.61	$485,446.77	$504,158.82	$328,166.20	$376,920.72	$281,668.03
Traffic Department (Operation, Materials, Purchased Services)	$218,496.81	$167,550.06	$199,268.40	$245,793.66	$260,410.84	$273,671.91
Map Room (Operation, Materials, Purchased Services)	$100,797.91	$108,595.90	$111,871.47	$117,954.00	$123,916.70	$132,089.71
Equipment Maintenance/Operation and Building Operations	$267,491.58	$251,636.05	$294,523.81	$0.00	$0.00	$0.00
New Salt Storage Facilities	$0.00	$186,444.60	$134,100.84	$0.00	$0.00	$0.00
Rehabilitation of Covered Bridge (Local Match)	$58,853.22	$0.00	$0.00	$0.00	$0.00	$0.00
Bond Retirement (New Garage)	$118,045.00	$120,445.00	$117,530.00	$115,971.75	$115,077.38	$113,457.38
Equipment Purchases	$198,387.72	$192,016.45	$197,700.10	$175,274.00	$157,182.18	$292,228.34
Total $ Amount	**$5,341,127.74**	**$5,173,620.67**	**$5,742,055.05**	**$5,821,285.83**	**$6,345,254.54**	**$7,842,484.43**

The current sales tax generates roughly $2.3 million each year for road improvement projects. Of this $2.3 million, 13.5% of the money is provided to the Townships for resurfacing, bridges, and chip-seal projects. Other than the sales tax, the Engineer's Office also applies for various state and federal grants to fund its projects. Federal aid has been obtained for bridge replacements, resurfacing roads, pavement marking programs, guardrail replacement, sign inventory, and pavement inventory. The Engineer's Office also applies for Ohio Public Works

Commission Grants (known as Issue 2). These grants aid in supplementing the income for road network improvement. Over the past three years, the state gasoline tax has increased by 2 cents each July. This fuel tax has been directed to the state, counties, townships, and municipalities for road and bridge maintenance. The portion of the fuel tax that used to support the State Highway Patrol has been redirected to support these transportation improvements. These funds are projected to provide roughly an estimated $900,000 for each county and $37,954 for each township in 2007. This $900,000 will allow Logan County to reconstruct approximately 13.2 miles of road each year.

4.7.6 Past and Current Road Improvement Projects

The 1997 inventory of the County Highway System showed that 127 miles of the highways in Logan County were in poor condition. By the end of fiscal year 1999-2000, the Engineer's Office had resurfaced 65 miles of the highways in the County. **Table 4.27** shows the roadway improvement costs for the past six years. In 1999, 34.7 miles of highways were resurfaced at a cost of roughly $2.4 million and 9 bridges were replaced at a cost of $446,533. However, due to traffic and poor weather conditions, it was estimated that 50% of the County highway system was still in poor or very poor condition. Twenty-three percent (23%) of the 303 bridges in the County were posted with weight restrictions or closed. The County had 29 bridges impassable by school buses due to weight restrictions. At the end of fiscal year 2000-2001, Logan County still had 70 bridges rated less than 50. Bad bridges were, and still are, a major problem for the movement of goods and services. Five bridges were closed permanently in 2000-2001.

Table 4.27: Road Improvement Costs, Logan County
Source: Logan County Engineer's Office

	2000		2001		2002	
	Distance (Miles)/ Number	Cost	Distance (Miles)/ Number	Cost	Distance (Miles)/ Number	Cost
Resurfacing		$1,049,372.28	43.25	$1,217,268.93	24	$1,648,715.68
Chip & Seal	0	$0.00	41.83	$186,957.89	41.83	$169,354.49
Bridges Replaced	6	$555,159.43	8	$627,434.51	6	$843,277.10
Bridges Rehabilitated	1	Included above	1	Included above	3	Included above
Culverts Replaced			0		0	
	2003		**2004**		**2005**	
	Distance (Miles)/ Number	Cost	Distance (Miles)/ Number	Cost	Distance (Miles)/ Number	Cost
Resurfacing	40	$1,772,146.05	41	$1,936,315.75	46	$2,538,015.00
Chip & Seal	43	$241,747.07	76	$315,501.78	65	$430,069.65
Bridges Replaced	7	$611,231.63	9	$667,534.08	6	
Bridges Rehabilitated	3	Included above	0	Included Above	0	
Culverts Replaced	47	Included above	100	Included above	44	Included above

In September 2001, construction work on a new salt and grit storage facility was started. This facility was estimated to hold 1,000 tons of salt and an additional 1,000 tons of mixed salt and grit.

Figure 4.19 shows the pavement surface type of Logan County roads. Nearly all of the chip-sealed roads have hot-mix asphalt concrete surface below them. Except for very small sections of S.R. 47, S.R. 245, and S.R. 274, the State Highways in Logan County are in good or fair condition.

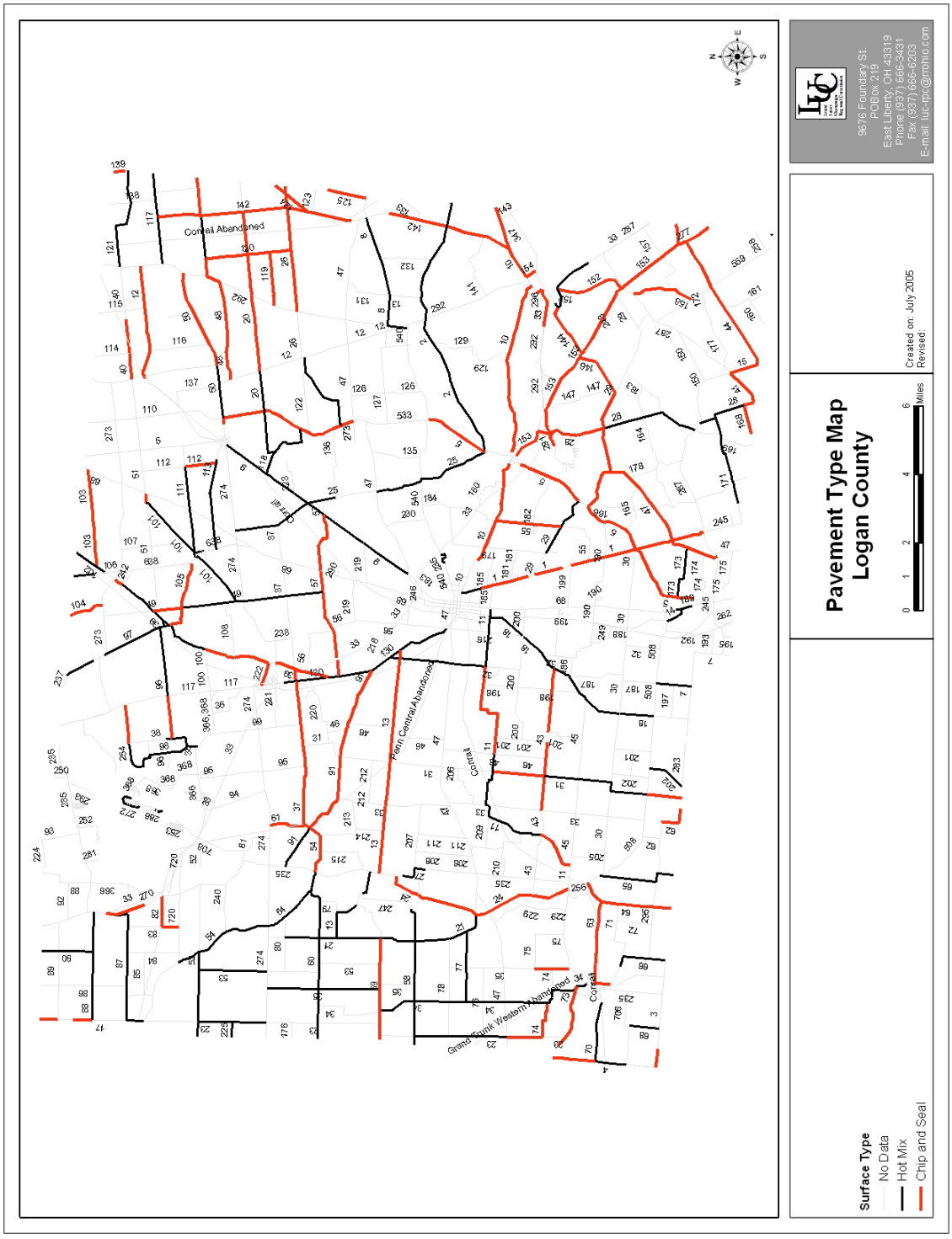


Figure 4.19: Pavement Type Map

Source: Logan County Engineer's Office, 2005

4.7.7 Future Road Improvement Projects

Heavy traffic, structurally deficient bridges, and access control are the major issues with the Logan County road network. The roads around the Honda plants, NEX and MEI experience a lot of heavy truck traffic in addition to the passenger vehicle traffic. This heavy truck traffic takes a toll on the roads in these regions causing the pavement conditions to deteriorate rapidly. Add to this, a couple of bad winter seasons, and the result is a roadway, which fails before its expected life. **Figure 4.20** shows the average daily traffic (ADT) on Logan County roadways. Routes U.S. 33 and U.S.68, including the State Routes around Indian Lake, experience the most vehicular traffic in the County.

In 2005, the Engineer's Office resurfaced 45.7 miles of County Highways, chip-sealed 65 miles of County Highways, replaced 6 bridges, and replaced more than 44 culverts. In 2006, the Engineer's Office plans to resurface 25 miles of roadway, chip-seal 32 miles of pavement, and replace 11 bridges.

Access control is another important issue with the County Highways. The County Engineer is anticipating the future formation of a committee to establish Access Management Regulations for the County.

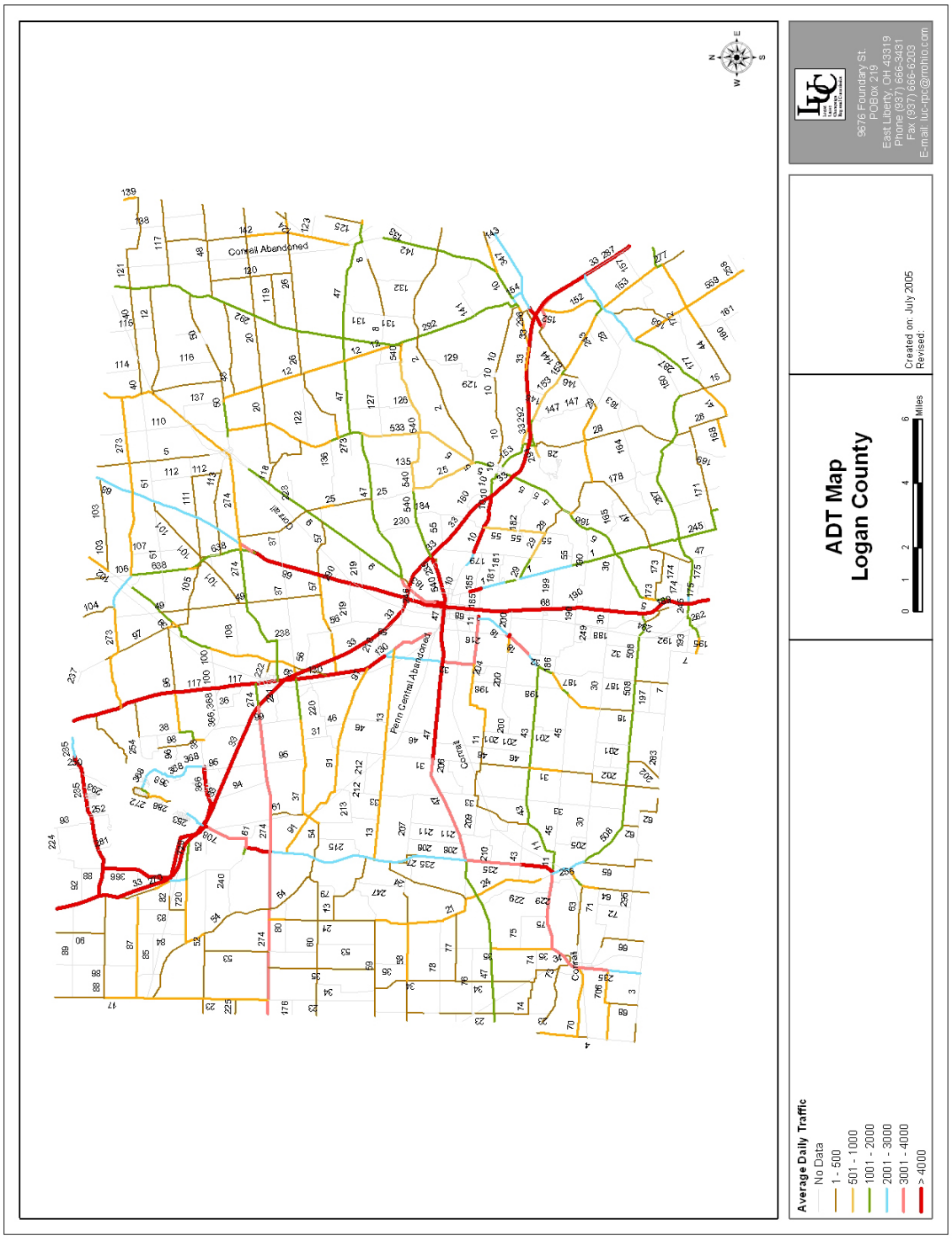


Figure 4.20: Average Daily Traffic (ADT) Map

Source: ODOT, District 7 Office, 2005

Ohio Department of Transportation is responsible for maintaining the State Highways in Logan County. **Table 4.28** shows the proposed road improvements from 2006-2009. **Figure 4.21** shows the location of these proposed projects on the Logan County map.

Table 4.28: Ohio Department of Transportation - Proposed Projects
Source: Ohio Department of Transportation – District 7

Road	Scope of Work	Estimated Cost	Start Date
368-2.02	Bridge Painting	$70,877.00	04/01/08
245-3.99	Bridge Replacement	$165,000.00	01/01/07
235-2.22	Bridge Replacement	$1,250,000.00	10/01/07
273-3.29/10.53	Replacement	$320,000.00	10/01/07
274-3.19/4.78	Replacement	$1,365,987.00	01/01/08
708-2.18	Replacement	$547,500.00	01/01/08
33-10.69	Replacement	$305,520.00	10/01/08
33-25.63	Resurfacing	$2,700,000.00	01/01/07
68-5.77	Resurfacing	$4,805,000.00	06/06/07
117-0.00	Resurfacing	$450,000.00	09/26/07
235-19.49	Resurfacing	$475,000.00	09/26/07
366-5.94	Resurfacing	$375,000.00	09/26/07
245-2.11	Resurfacing	$350,000.00	10/01/07
638-0.00	Resurfacing	$300,000.00	01/01/08
68DA-0.10	Resurfacing	$100,000.00	04/01/08
273/366-0.00/0.00	Resurfacing	$250,000.00	10/01/08

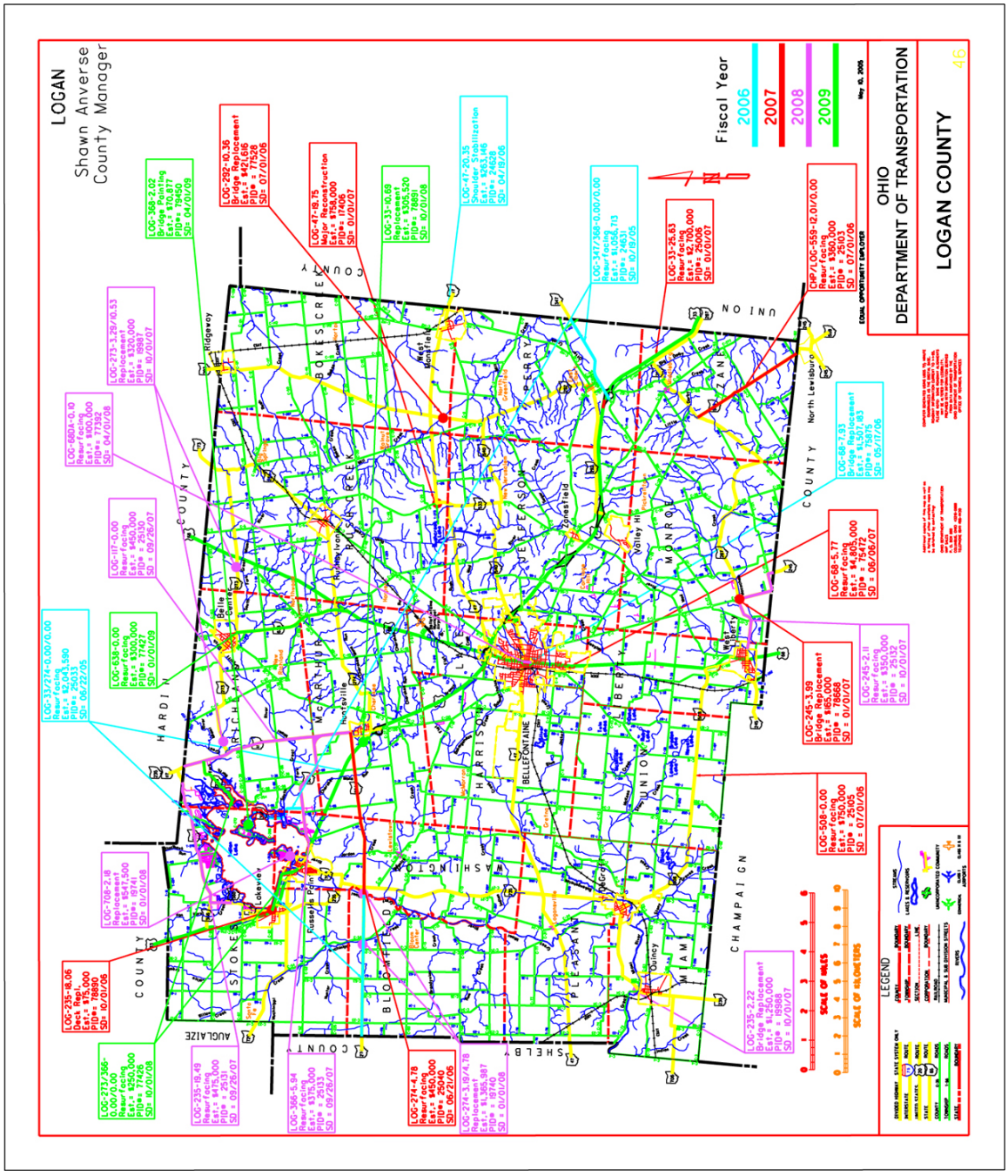
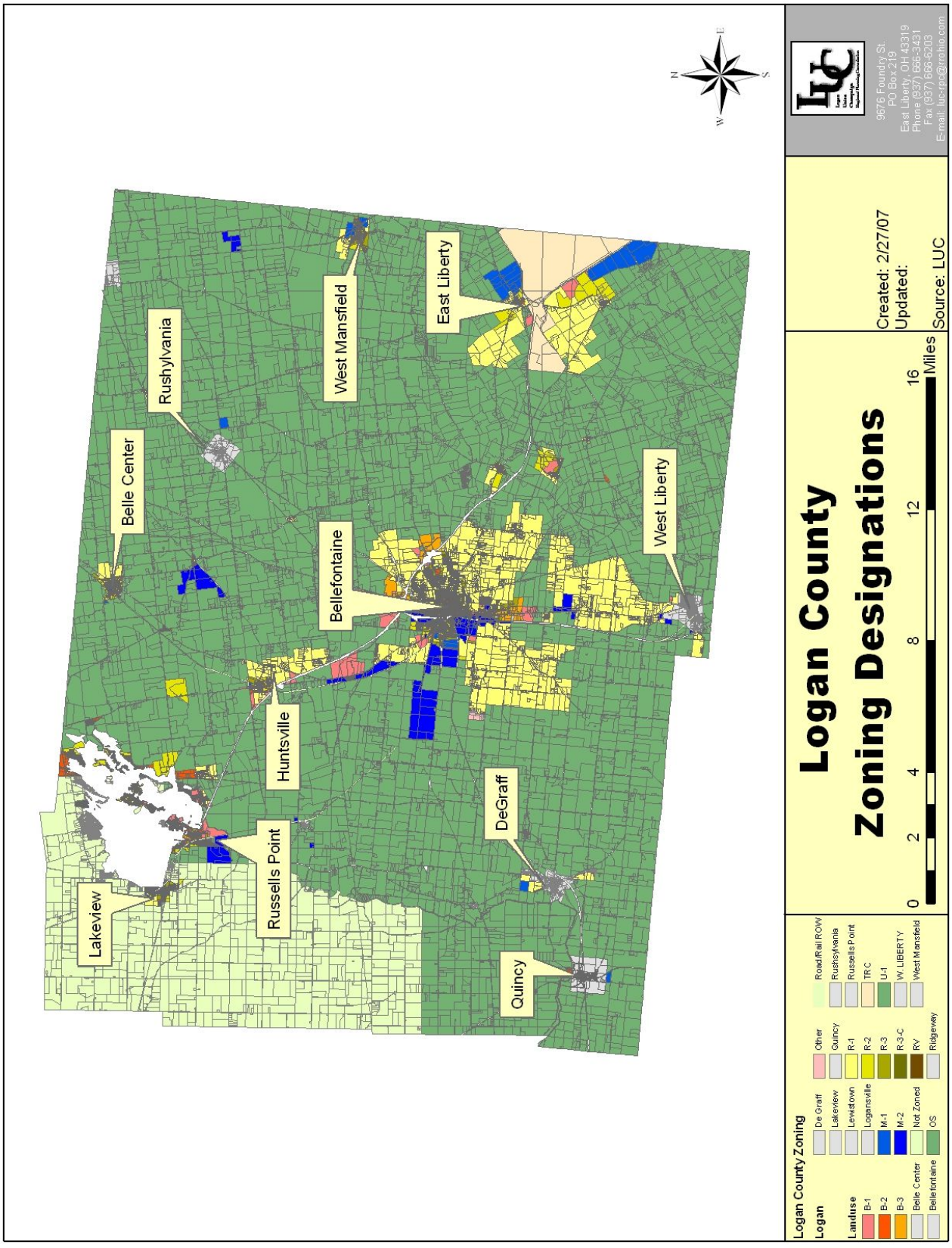


Figure 4.21: Ohio Department of Transportation: Proposed Projects: 2006-2009

4.8 Land Use


Logan County
Zoning Designations
Created: 2/27/07
Updated:
Source: LUC
0 2 4 8 12 16 Miles
Logan County Zoning
Logan
De Graff
Lakeview
Lewistown
Logansville
Belle Center
Bellefontaine
Other
Quincy
Rushsylvania
Russells Point
W. LIBERTY
West Mansfield
Ridgeway
Landuse
B-1
B-2
B-3
M-1
M-2
Not Zoned
OS
R-1
R-2
R-3
R-3-C
RV
TRC
U-1
Road/Rail ROW
Lakeview
Rushylvania
Belle Center
Huntsville
Russell Point
Bellefontaine
West Mansfield
East Liberty
West Liberty
DeGraff
Quincy
N
S
E
W
9676 Foundry St.
PO Box 219
East Liberty, OH 43319
Phone (937) 666-3431
Fax (937) 666-6203
E-mail: luc-rpc@ruralnet.com

4.8.1 Business

There are two different business zoning districts throughout Townships in Logan County. The first of these districts is the Service Business District, designated B-1. The purpose of the Service Business District is to provide land for sales, service and repair establishments which require highway orientation or larger tracts of land not normally available in local business districts; do not contribute to the design of a unified business canter; depend on drive-in business; and require a location along or near major thoroughfares and intersections. Generally, permitted uses in the service business district include: Food processing; Veterinary animal hospital or clinic; Kennel; Offices; Gasoline service station; Shopping-type retail; Eating & drinking establishments; Service business; Personal services; Commercial recreation; Transient lodgings; Wholesale & warehousing; Single & multi-family dwellings; Public & quasipublic uses. The purpose of the B-2 Local Business District is to provide land for small convenience-type retail and personal service establishments and service businesses offering convenience-type goods and services for the daily needs of the people in the general area. Permitted uses generally include: Convenience-type retail; Personal services; Offices; Service business; Eating & drinking establishments; Commercial recreation; Single-family dwellings; Public & quasi-public uses; Farm implement sales & service.

4.8.2 Manufacturing & Industrial

Logan County Townships have two different types of manufacturing districts: M-1 and M-2. The purpose of the M-1 Light Manufacturing District is to encourage the development of manufacturing and wholesale business establishments which are clean, quiet, and free of hazardous or objectionable elements such as noise, odor, dust, smoke, or glare; operate mostly within enclosed structures and generate little industrial traffic. This District is further designed to act as a transitional use between heavy manufacturing uses and other less intense business and residential uses. In M-1 Light Manufacturing Districts, permitted uses generally include: Light manufacturing & directly related

offices & retail sales; Public quasi-public uses; Service business; Farm implement sales & service. The second type of Manufacturing and Industrial District is the M-2 Heavy Manufacturing District. The purpose of this District is to provide land for major manufacturing, processing, storage, warehousing, mineral extraction, research and testing facilities, and similar operations. These activities may require large sites, extensive community services, have large, open storage and service areas, and generate greater industrial traffic than in a Light Manufacturing District. Permitted uses generally include: Light & heavy manufacturing & related offices; Wholesale & warehousing; Printing and publishing; Public quasi-public uses; Supply yard.

4.8.3 Residential

The three different residential districts in Logan County include: R-1 Low-Density Residential; R-2 Medium-Density Residential; R-3 High-Density Residential District. The purpose of the R-1 District is to provide land for low-density development of single-family homes. The purpose of the R-2 District is to provide land for medium-density development of single and multi-family dwellings. The R-3 High-Density Residential District is reserved for the development of high-density single and multi-family dwellings.

4.8.4 Undeveloped/Agricultural

In Logan County, there is a U-1 Rural Undeveloped District zoning designation, which is how the majority of the land in the County is zoned. The intention of the U-1 District is to provide land, which is suitable or used for agriculture, conservation, very low-density residential and public and quasi-public purpose. Permitted uses in this district generally include Agriculture and Single-Family Residential.

4.9 Safety Services

There are 13 different fire districts that provide fire and emergency medical services to Logan County. These include: The Allen Township Fire Department in Union County serving Zane township; The Bellefontaine Fire Department serving Lake, Harrison and part of Jefferson Township; The Bokes Creek Fire Department serving Bokes Creek Township; The DeGraff Fire Department serving Miami and Pleasant Townships; The Huntsville Fire serving McArthur Township; The Indian Lake Joint Fire District Serving Washington Township; The Jackson Center Fire Department in Shelby County serving a portion of Bloomfield Township; The Lakeview Fire Department serving Stokes Township; The East Liberty Fire Department Serving Perry Township; The Quincy Fire Department serving Miami and Pleasant Townships; The Richland Township Fire Department serving Richland Township; The Rush Creek Fire Department serving Rush Creek Township; The West Liberty Fire Department serving Monroe, Union and Liberty Townships; The Tri-Valley Fire Department serving Jefferson Township. Logan County's law enforcement needs are met Countywide with the Logan County Sheriff's Office, which is aided by local police departments in Bellefontaine, West Liberty, DeGraff and Russells Point. The Marysville Post of the Ohio State Patrol also serves Logan County.

CHAPTER FIVE

GOALS AND OBJECTIVES
PLAN RECOMENDATIONS AND ACTION ITEMS

5.1 Introduction

Chapter 5 of this Plan includes the goals and objectives for the future of Logan County. A *goal* is a long-term purpose toward which programs or activities are ultimately directed. An *objective* is a specific, measurable, or quantifiable end that is achieved and marks the progress towards a goal. A singular objective or series of objectives may be identified for each goal. In addition, these objectives are not exclusive of one goal and may be used for focusing progress towards many goals.

Technology, population fluctuation, social and economic needs, and the desire for quality of life affect every individual on a daily basis. These factors also have a direct impact on land use. Land use planning provides for an informed and organized process for decision-making. The task of meeting the needs of today must be tempered with the respect to the needs of the future. The consequences of losing land to urban sprawl may seem insignificant but the resulting domino effect of that land transfer will likely resonate through time. Land is a valuable finite natural resource that is often taken for granted so a balance must be struck to incorporate varying land uses in appropriate areas of Logan County. The following goals and objectives reflect land use visions that aim to preserve, protect, and enhance Logan County.

The Comprehensive Plan is only useful if it is put into action. The adoption of the Plan by the County should be the beginning of a long-term planning effort.

5.2 Administration

Goal:

- Enhance the quality of life for residents of Logan County, and protect the health, safety and welfare of Logan County residents.

Objectives:

1. Continue to support local and County agencies who address land use and growth and development issues.
2. Continue to evaluate and improve the emergency services of the County.
3. Support quality tourist activities in all areas of the County.

Goal:

- Improve communications with Logan County residents.

Objectives:

1. Expand County Commissioner's annual report.
2. Conduct an Annual County Meeting to update residents of plans for the coming year and a summary of the previous year.
3. Maintain and update County website to keep residents informed of happenings.

Goal:

- Improve communications among County officials, employees, and public service providers.

Objectives:

1. Continue to hold quarterly meetings of County officials.

Goal:

- Ensure Comprehensive Plan participation and furtherance of plan recommendations.

Objectives:

1. Reconvene Comprehensive Plan Task Force annually for reevaluation.
2. Market "Phase 2" of the Comprehensive Plan by visiting Townships and Municipalities to buy in to planning efforts at the local level.

5.3 Economic Development

Goal:

- Provide Housing opportunities appropriate to resident needs and preferences.

Objectives:

1. Encourage residential growth in or near city and village growth centers and incorporated areas with existing infrastructure services or where such service can be extended.
2. Coordinate housing initiatives on a countywide basis.
3. Utilize Community Housing Improvement Study (CHIS) completed in 2005.
4. Encourage adequate housing for all income and age groups.

Goal:

- Continue to attract manufacturing operations, while planning for the environment and the future of Logan County.

Objectives:

1. Encourage growth in already developed areas that can support the necessary infrastructure of manufacturing operations such as the U.S. 33 Honda Corridor and Indian Lake Industrial Park.
2. Manage retention and expansion efforts that enhance growth and employment opportunities. Utilize incentives to attract growth at appropriate locations.
3. Review site design proposals to manage more intensive uses through buffering, screening and environmental management practices.
4. Manage retention and expansion efforts that enhance growth and employment opportunities. Utilize incentives to attract growth at appropriate locations.
5. Inventory sites and buildings that are available for development.

Goal:

- Manage commercial development and services to meet resident needs.

Objectives:

1. Support the grouping of commercial business at appropriate sites that minimize traffic congestion.
2. Target commercial growth to and near incorporated centers that have existing infrastructure services.
3. Encourage small-business development and “Mom and Pop” neighborhood commercial growth to municipal villages to maintain their small-town atmosphere.
4. Market small business educational programs through existing Chamber of Commerce and Logan County Community Improvement Corporation programs.

5. Inventory sites and buildings that are available for development.

5.4 Zoning & Land Use

Goal:

- Encourage well-managed growth that preserves the rural character of Logan County.

Objectives:

1. Produce and update Logan County Land Use Map to guide development and target opportunities and constraints.
2. Direct development in areas, which can be served by sanitary sewer, water, and roadways.
3. Encourage stronger partnerships and relationships among local government agencies regarding land use, water and sewer services, and transportation.
4. Update and strengthen Logan County subdivision regulations to ensure technical compliance and review with partnering agencies.
5. Target growth and development in incorporated areas with urban services (Villages/Cities) to contain sprawl. Infill development in appropriate incorporated areas and villages.
6. Encourage “clustered” development through subdivisions rather than road-frontage development.

Goal:

- Preserve farmland and open space while promoting a stable local agricultural economy.

Objectives:

1. Support state legislative changes that regulate large-scale livestock operations/mega-farms.
2. Support the family farm through local educational programs regarding estate planning, drainage issues, and conservation easements. Provide technical assistance on farm management and finances.
3. Encourage the growth and sustainability of Logan County Land Trust.
4. Encourage major subdivision development and clustering of housing while at the same time discouraging “strip” development along road frontage.
5. Work with LUC Regional Planning Commission to incorporate new rules via SB 115 in defining review of lots over 5 acres.
6. Offer LUC Agricultural Zoning Model Text to local Township officials.
7. Support and encourage the Agricultural Easement Purchase Program through the Ohio Department of Agricultures Clean Ohio Fund. Market to local landowners and provide technical assistance in applying to the program.

8. Research and educate local officials and landowners on such programs as conservation, overlay districts, and conservation easement programs.

Goal:

- Achieve sustainable land use.

Objectives:

1. Promote no till and other management practices.
2. Promote soil suitability as a factor in considering land use.
3. Designate prime agricultural lands that are protected from non-agricultural uses.

Goal:

- Protect agricultural lands.

Objectives:

1. Advocate and promote Agricultural Security areas.
2. Promote estate planning that includes Agricultural Security Areas.
3. Encourage diversified farm operations.
4. Apply provisions of current farm bill and promote USDA programs that help protect soil, water and related resources.
5. Require suitable sub-surface outlets as needed to provide adequate on-lot drainage and recommend permanent maintenance.

Goal:

- Preserve natural physical features of Logan County.

Objectives:

1. Work with local government and private sector to protect unincorporated areas from commercial and urban growth on sites that cannot sustain long-term growth pressures.
2. Purchase easements through the Clean Ohio Ag Easement program and/or promote donating agricultural or conservation easements through the Logan County Land Trust.
3. Develop financial incentives to promote Agricultural Security Areas.

Goal:

- Protect and enhance water quality traversing agricultural areas.

Objectives:

1. Develop comprehensive nutrient management plans for livestock operations.
2. Inform farm operators of the consequences of preferential flow.
3. Discharge excess water using appropriate BMPS into waters of the state.
4. Promote no till and other management practices.
5. Promote farm bill practices that enhance water quality (waterways, wetlands, riparian areas, stream corridors).

Goal:

- Preserve streams wooded areas, groundwater aquifers, environmentally sensitive land, endangered species, and historical values.

Objectives:

1. Require a vegetative buffer appropriate to site needs and concerns from top of bank of streams, tributaries and/or ditches, enroll buffer into Conservation Easement.
2. Apply stream bank stabilization as needed.
3. Restrict development on land within the FEMA 100-year floodplain.
4. Complete a comprehensive county stream inventory assessing stream and riparian area capacity and watershed changes.
5. Require a vegetative buffer around sinkholes. Enroll buffer into Conservation Easement.
6. Lay the groundwork for a countywide stream management program.

Goal:

- Define guidelines for all development plans that require management practices that reduce negative consequences of the development, i.e. storm water, erosion, and water quality.

Objectives:

1. Establish reasonable management practices that address specific issues relevant to site development.
2. Require suitable sub-surface outlets as needed to provide adequate drainage, which will be placed on county maintenance.
3. Require a secondary water quality treatment practice on commercial development sites for runoff water storage and filtration, such as wetlands, which will be placed on county maintenance. Logan Soil and Water will provide recommendations.
4. Incorporate storm water control features that manage storm flow discharge and have increased containment volume and longer discharge time in order to reduce downstream impact.
5. Educate local government officials and the public on the new County/State Household Sewage Treatment Rules.

Goal:

- Encourage up-to-date subdivision and zoning regulations.

Objectives: Incorporate text in local zoning regulations planned unit developments/planned districts. Integrate and

1. Update local zoning regulations to address such issues as adult entertainment, nuisance abatement, telecommunications towers and wind turbines.
2. Encourage local zoning updates with LUC Regional Planning Commission to provide consistency in local zoning regulations.
3. Create and implement local nuisance and maintenance procedures to mitigate problems of junk. Develop and coordinate with

Prosecutor, Health Department, LUC Regional Planning, Sheriff, and local zoning inspectors.

4. Encourage the update and strengthening of Logan County Subdivision Regulations to ensure technical compliance and review with partnering agencies.

Goal:

- Collect and record land use data that currently reflects land use status.

Objectives:

1. Apply Geographical Information System (GIS) technology to map current land use.
2. Designate prime agricultural lands that are protected from non-agricultural uses
3. Expand the countywide GIS in order to best observe and define current and future land uses.

Goal:

- Educate the public of land use issues.

Objectives:

1. Continue to fund, support and facilitate youth and adult education programs regarding agricultural and land use issues and concerns.

5.5 Transportation & Infrastructure

Goal:

- Provide safe and efficient vehicular circulation within the county and access to and from regional and national markets.

Objectives:

1. Continue to improve roads and widen bridges to accommodate all vehicles.
2. Prioritize road improvements based on the “Transportation Plan” portion of this Plan in Chapter 4.
3. Provide and plan for the safe and efficient movement of people and goods.
4. Ensure transportation routes adequately serve all areas in the county.
5. Communicate regularly with ODOT/Ohio Department of Transportation District 7 regarding high traffic intersections and state highway road improvements.

Goal:

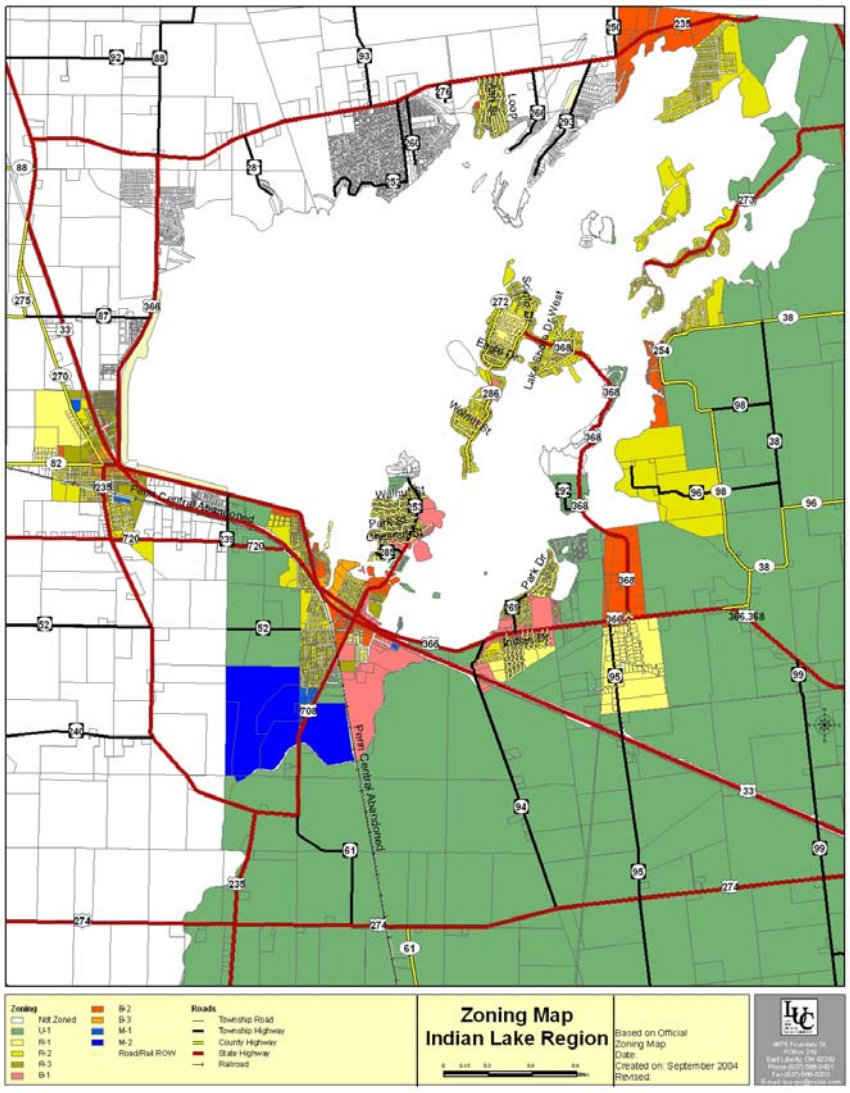
- Improve drainage problems in the County.

Objectives:

1. Explore the producing of a County-wide drainage plan with the Soil & Conservation District in harmony with the Logan County Engineer.
2. Explore the incorporation of House Bill/ HB 25 Drainage Regulations.

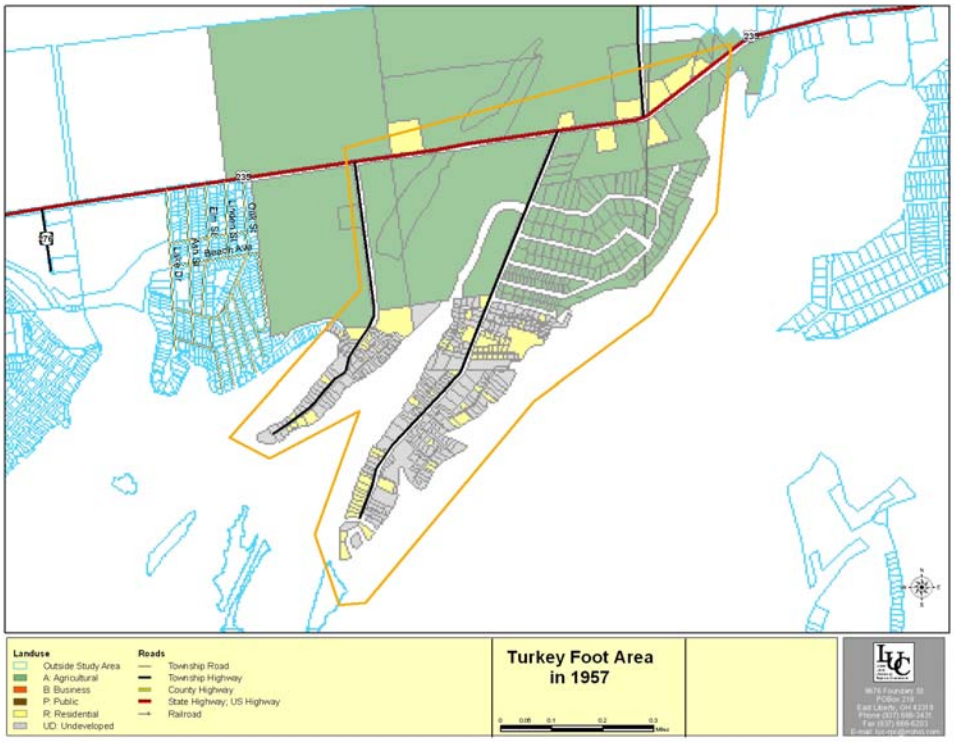
CHAPTER 6
INDIAN LAKE AREA CASE STUDY

In conjunction with the Logan County Soil and Water Conservation District, LUC performed a case study of several areas around Indian Lake to show how the area has grown and developed from 1956 to 1996. The data provided below is an example of what can be provided in Phase 2 of the Logan County planning process. What follows is sample information from that case study.

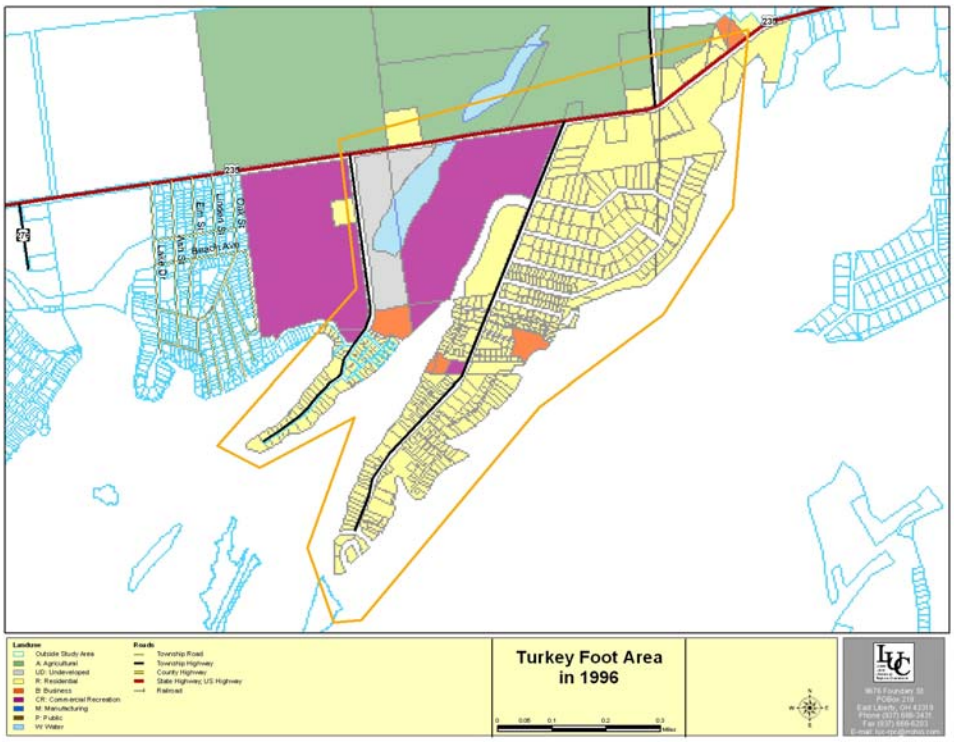


The above map shows the current Zoning of the Indian Lake area.

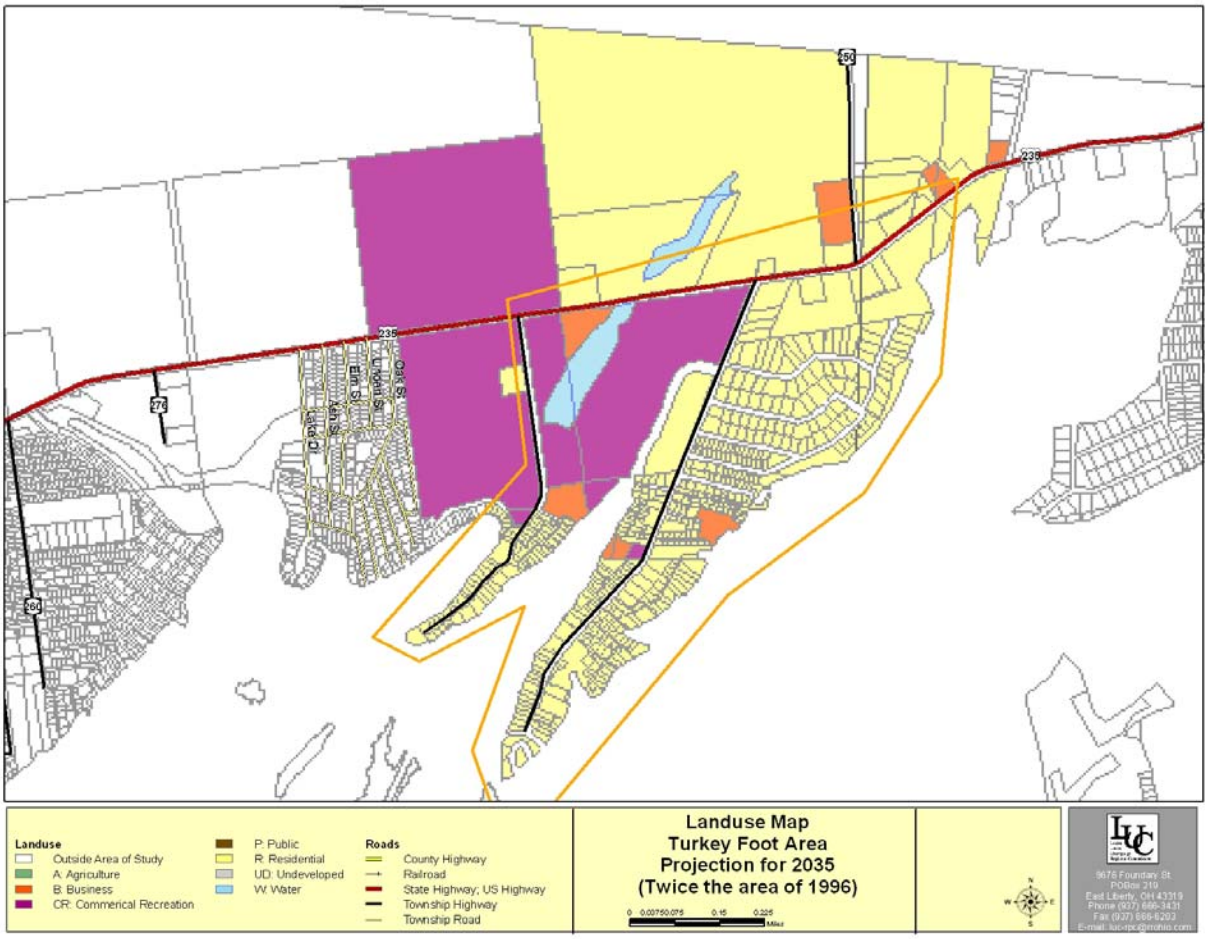
TURKEY FOOT AREA



Land use in the Turkey Foot area in 1957.



Land use in the Turkey Foot area in 1997.

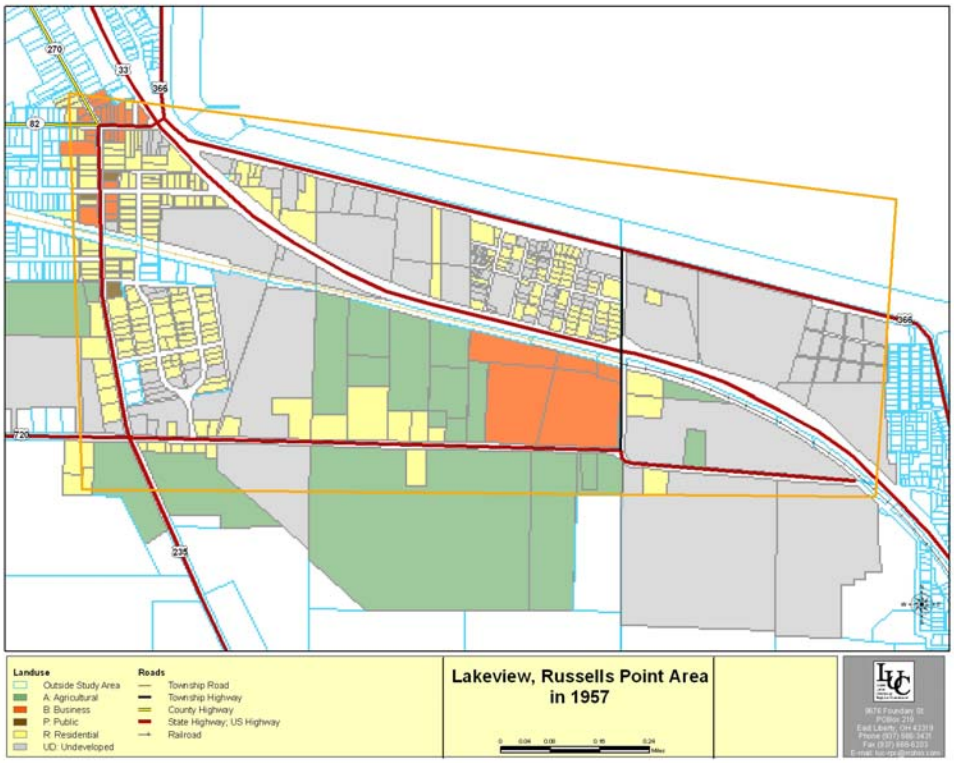


Projected Land use in the Turkey Foot Area in 2035.

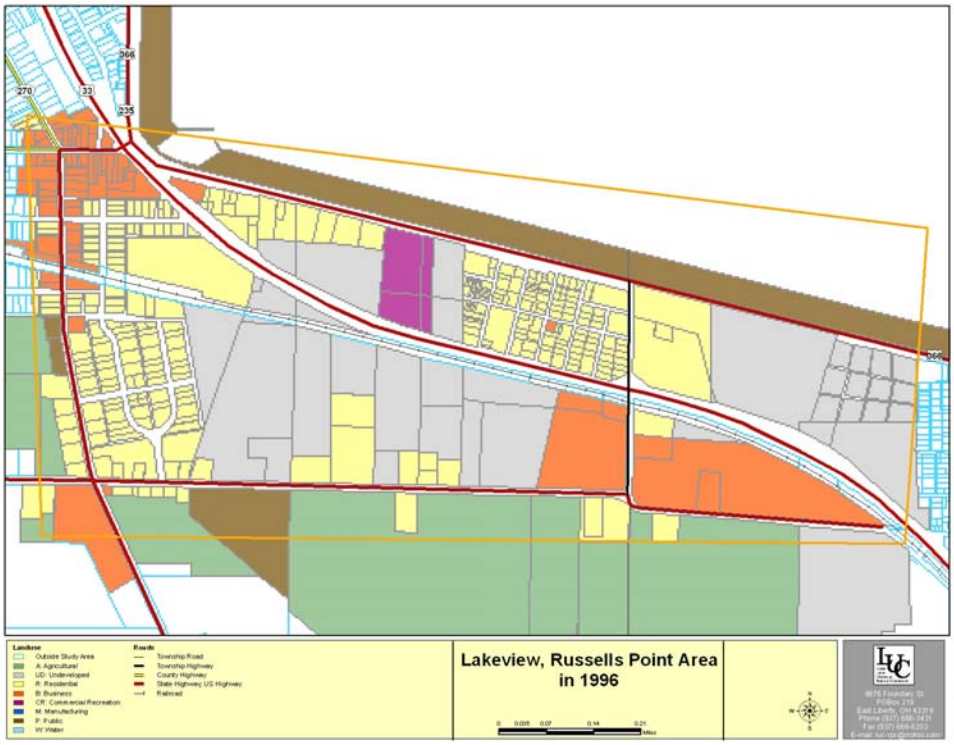
Turkey Foot Area				
	1957		1996	
	Acres	%	Acres	%
BUILT	24.45	6.23	168.74	43.03
OPEN	367.74	93.77	223.45	56.97
	392.19		392.19	

Land development in the Turkey Foot area over a 39 year time period.

LAKEVIEW AND RUSSELLS POINT AREA



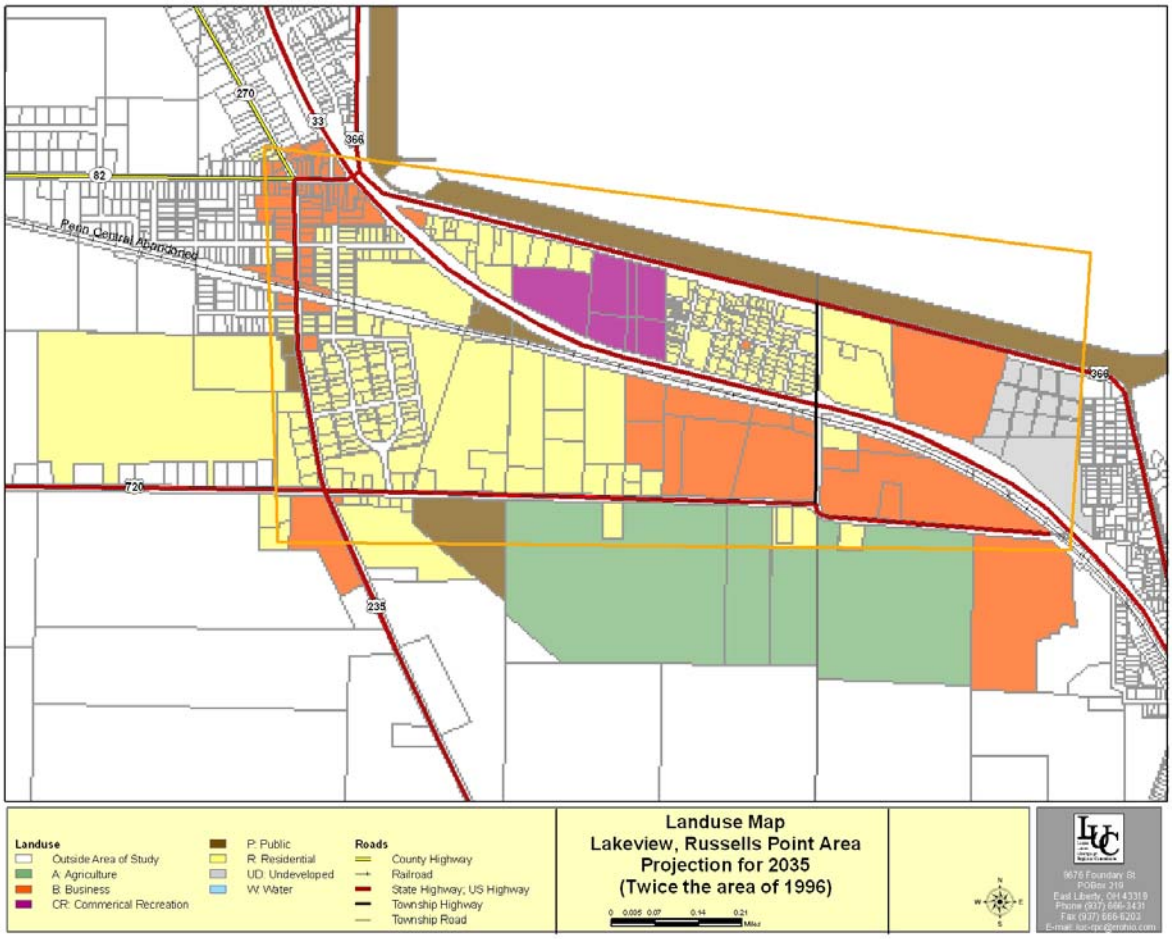
Land use in the Lakeview and Russells Point Area in 1957.



Land use in Lakeview and Russells Point Area in 1996.

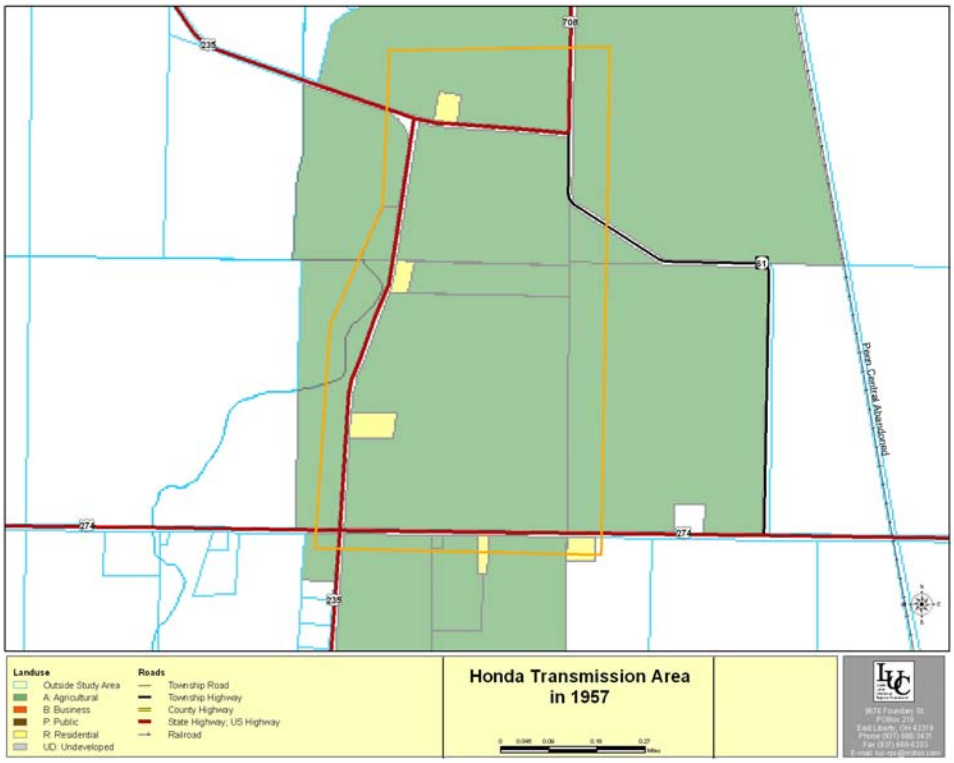
Lakeview, Russells Point Area				
	1957		1996	
	Acres	%	Acres	%
BUILT	92.99	16.70	242.52	43.55
OPEN	463.89	83.30	314.36	56.45
	556.88		556.88	

Land development in the Lakeview and Russells Point over a 39-year period.

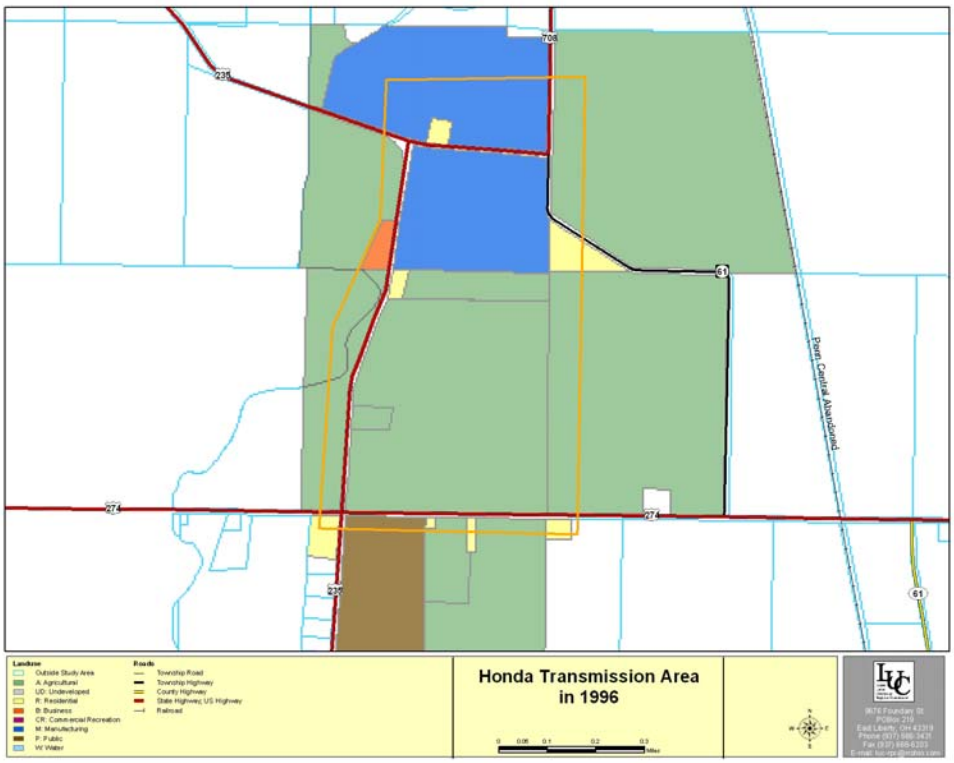


Projected land use in the Lakeview and Russells Point area in 2035.

HONDA TRANSMISSION AREA



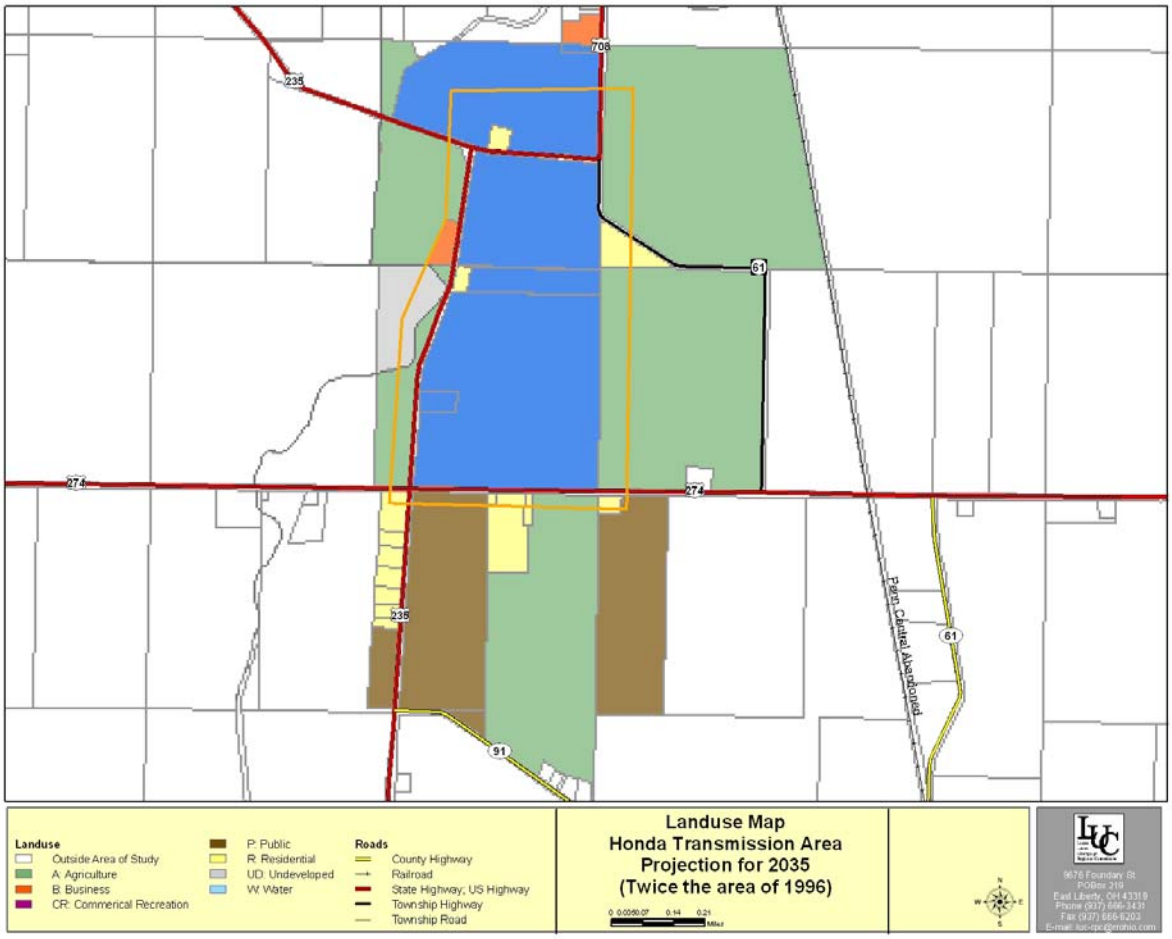
Honda Transmission land use in 1957.



Honda Transmission land use in 1996.

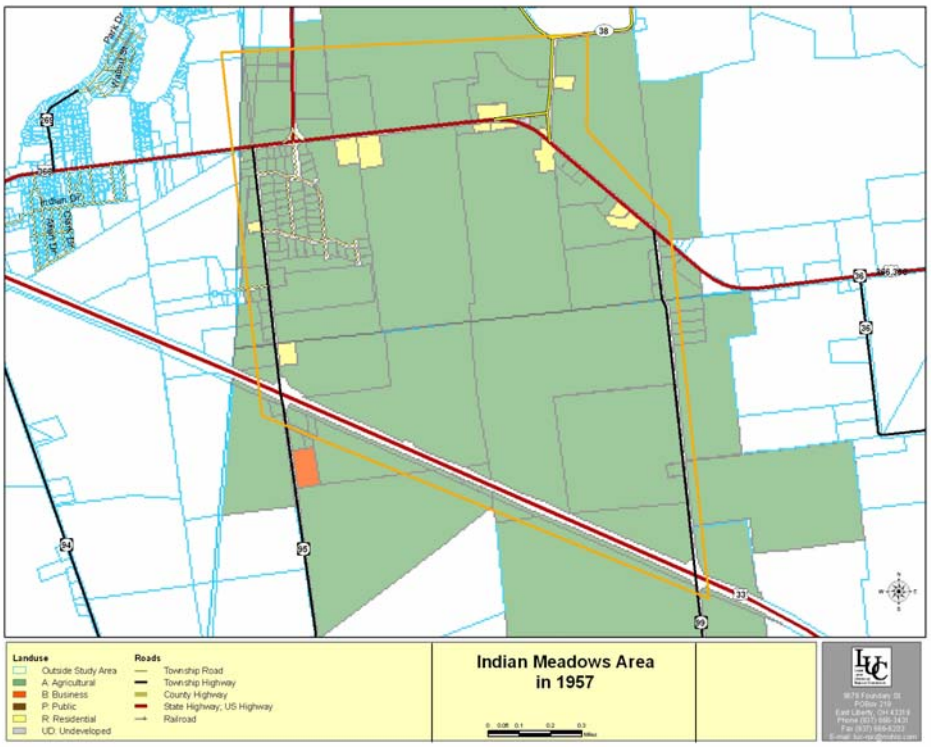
Honda Transmission Area				
	1957		1996	
	Acres	%	Acres	%
BUILT	7.64	1.06	184.22	25.49
OPEN	715.02	98.94	538.44	74.51
	722.66		722.66	

Land development in the Honda Transmission Area over a 39 year-period.

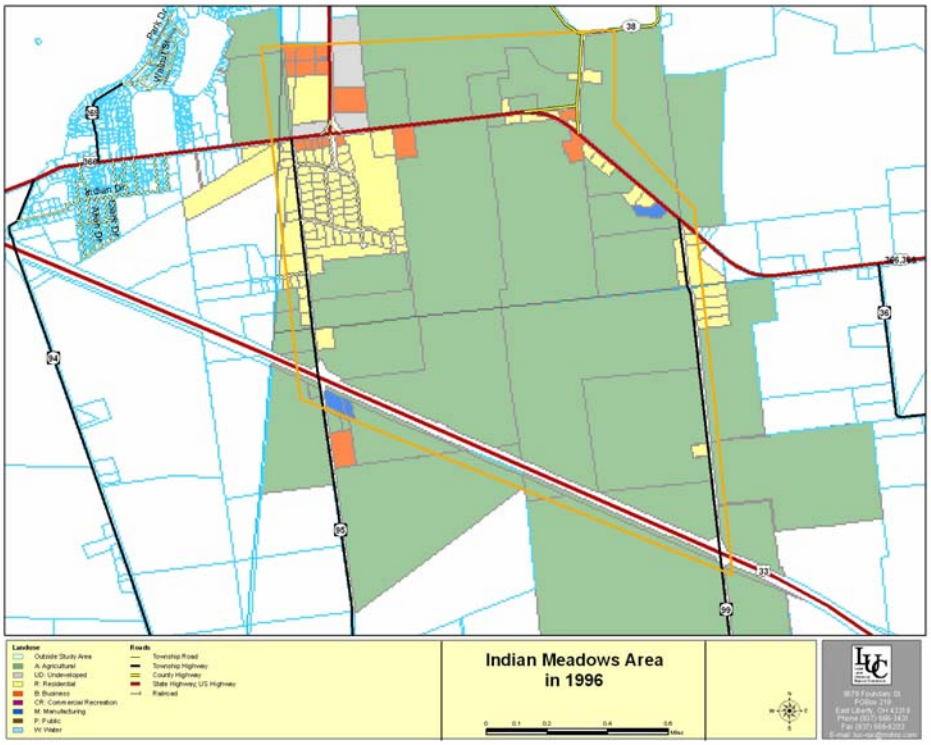


Projected land use in the Honda Transmission area in 2035.

INDIAN MEADOWS AREA



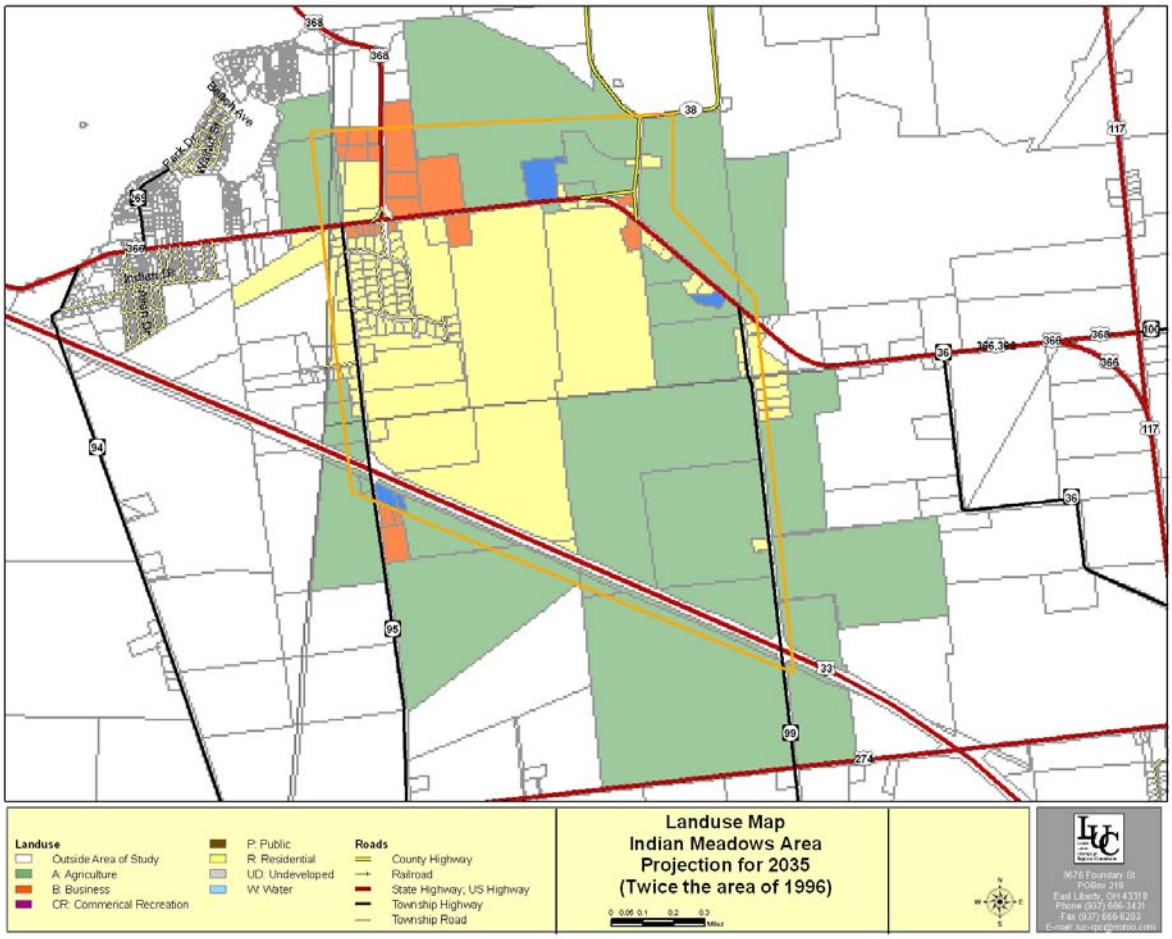
Land use in the Indian Meadows area in 1957.



Land use in the Indian Meadows area in 1996.

Indian Meadow Area				
	1957		1996	
	Acres	%	Acres	%
BUILT	32.14	1.52	212.12	10.02
OPEN	2084.33	98.48	1904.35	89.98
	2116.47		2116.47	

Land development in the Indian Meadows area over a 39-year period.



Projected land use of the Indian Meadows area in 2035.