Madison County I-55 Corridor:
3.0 Market & Economic Analysis

Commercial Development - Pin Oak Corporate Park

3.1 Background

Building upon past regional government and planning efforts, Madison County, the City of Edwardsville, the Village of Glen Carbon, and TheAlliance for Edwardsville and Glen Carbon have targeted a portion of Interstate 55 for a comprehensive planning study. This analysis is part of the overall planning process and provides insight into market forces and trends that will affect growth in this corridor in the future. The goal of this analysis is, primarily, to describe the economic conditions affecting this area and to identify the prospective intensity of this development over the next 20 year period.

The I-55 Corridor study area is mostly agricultural land with some scattered residential and commercial uses located within it. This area is already experiencing growth pressures as housing and institutional uses move eastward from Edwardsville and Glen Carbon.

Given the recent history of population growth in both Glen Carbon and Edwardsville, it is not unusual for an area such as the I-55 Corridor to be experiencing increased development pressure. A great deal of land within the study area has already been purchased by developers for future residential developments and other parcels have been targeted by investors for commercial uses. This signals that the time to shape the direction of this growth is now. The cooperation between the four above mentioned entities is a positive indication that this area will develop within a coordinated land use plan and will generate public revenues as a productive place for all concerned.

Development within the study area will likely include residential, commercial/retail, and institutional uses. It is not anticipated to be attractive for industrial or distribution/warehouse activities.

Recent Residential Development - Vicksburg Commons

Regional Office Development: Edwardsville and Glen Carbon are already heavily populated by an executive class labor force that is well educated and represents a great deal of business and civic leadership. The I-55 Corridor is well suited to offer opportunities for this labor force to reduce commuting times by offering desirable sites close to home but within easy highway access to airports, other business centers, and regional entertainment and recreation attractions. Pin Oak Corporate Park is setting a high standard for regional office development on a par with the I-64/U.S. 40 corridor in St. Louis County and the technology corridor on I-64/U.S. 40 in St. Charles County. Moreover, as the county seat and the home of a major university, Edwardsville—and, by extension, Glen Carbon—already has a classic foundation for developing more professional offices not unlike the long term trends in Clayton, Missouri and surrounding communities.

Residential Development: Residential development will be most affected by population growth within areas immediately east of, and likely to be annexed to, Edwardsville and Glen Carbon. This population growth will increase the number of households in the communities and require more housing units. The quality of the Edwardsville School District, which includes the Village of Glen Carbon, and the reputation of the two municipal governments are reasons that more families have been drawn to the area over the past decade. This growth will put pressure on both the schools and housing stock.

Commercial & Retail Development: Commercial development within the I-55 Corridor has been limited to convenience type retail near the major I-270/I-55 interchange, storage facilities and various other marginal uses within site of the highway, and the development of the Hortica headquarters building in the Pin Oak Corporate Park at I-55 and IL Route 143. This study projects various trends to determine how much further commercial development should occur in the study area. It also addresses how much commercial development might be attracted to induce more favorable economic and fiscal impacts.

Retail Development - IL 159 Strip Retail Center

Institutional Development: Population growth will drive the demand for various institutional uses such as schools, recreational parks and facilities, fire protection stations, churches, libraries, etc. The Edwardsville School District has already constructed

Institutional Development - Liberty Middle School

Liberty Middle School along Goshen Road in the study area and the Edwardsville YMCA has purchased land to the south of the school for a new recreation facility. It is expected that the area will see continued development of institutional uses.

3.2 Methodology

Understanding this very large study area and its opportunities in a market economy requires a multi-stage information gathering process. In this case, six major sources of information were used:

1. *Review of the site area including on-site visits, review of available mapping materials and data available from the county mapping office, and observations about traffic flow and access.*
2. *Review of past studies and plans for the areas and for the broader Edwardsville/Glen Carbon area to understand how the cities have viewed this area in the past.*
3. *Analysis of statistical information on the demographics and economy of the Edwardsville/Glen Carbon area to identify important forces and opportunities.*
4. *Interviews with over two dozen civic and business leaders, land owners and residents in Edwardsville/Glen Carbon and Madison County, both in person and by telephone. These interviews included community representatives and selected property owners and land developers within Madison County.*
5. *Detailed discussions with city and county planning and economic development staff.*
6. *Four discussions with the local government committee organized to oversee the study and to provide focused community input.*
7. *Five public meetings, to obtain comments, suggestions, and insights from the general public about the problems and opportunities within the study area.*

3.3 Economic Analysis

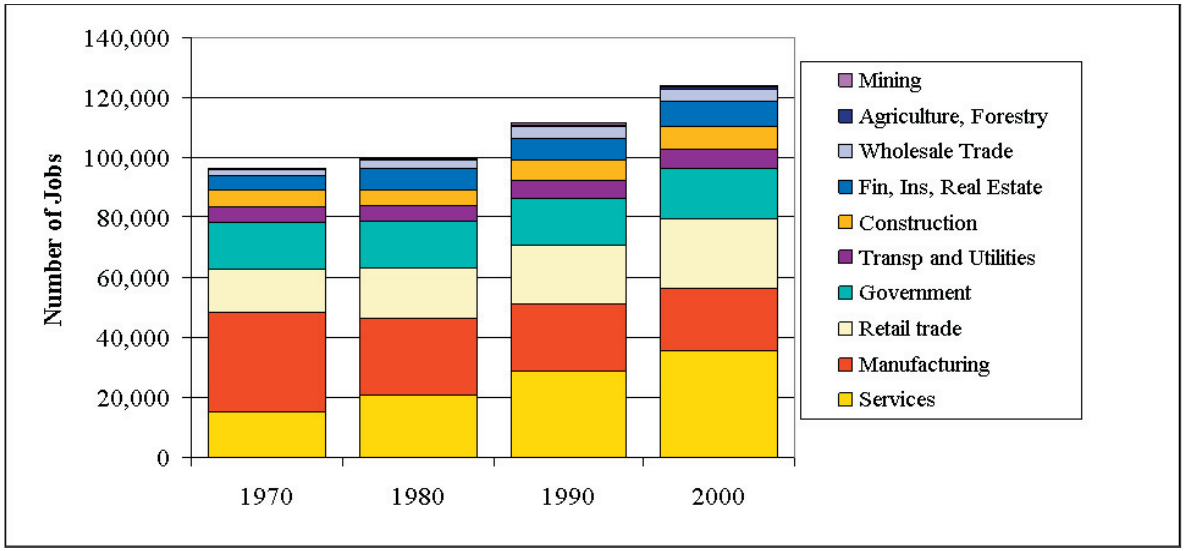
The number of jobs located in Madison County has been growing over the past 30 years with the vast majority of new jobs being created in the services sector. Traditionally, cities such as Alton, East Alton, Wood River, Roxana, South Roxana, Hartford, and Granite City, were concentrated in the manufacturing sector.

These "river cities," however, have experienced a decline in both manufacturing and oil refinery activity which has negatively impacted household incomes and contributed to net population and job decreases in these communities. On the other hand, the "bluff communities" such as Collinsville, Edwardsville, and Glen Carbon have experienced positive shifts in their populations, indicating, in part, a move of jobs to the area.

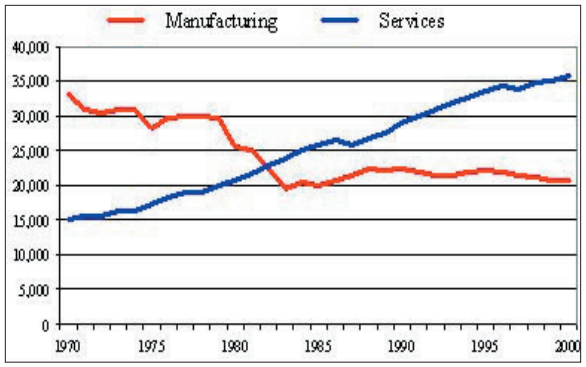
Between 1970 and 2000, jobs located in Madison County increased from about 96,600 to 124,000, and growth rate of about 28%. On the down-side of this growth is that jobs in metropolitan St. Louis increased by 49%, so Madison County lost ground in the greater St. Louis job market. The addition of some 28,600 jobs over those 30 years represented only about five percent of all metro job growth. Madison County's share of jobs in the region decreased from 8.9% in 1970 to 8.6% in 2000.

Meanwhile, there has also been a significant shift in the types of jobs created in Madison County The 1970s were particularly hard on the manufacturing sector, including oil refineries, with almost 7,500 such jobs lost from the county in that decade alone. Subsequent decades witnessed continued decline, albeit at a slower pace. Meanwhile, jobs in the county increased in number as different sectors took hold.

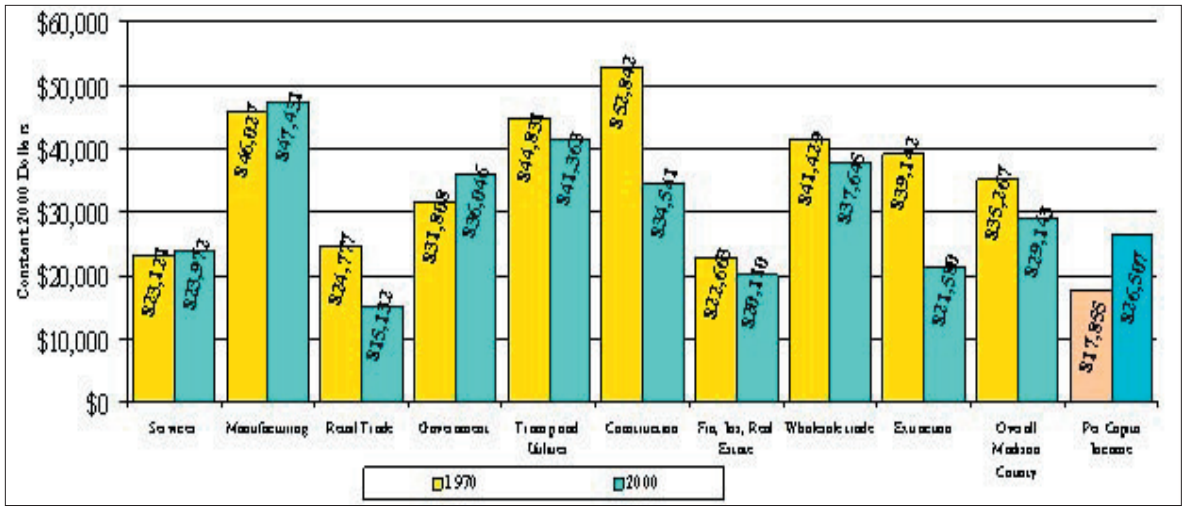
- *Manufacturing was comprised of 33,000 jobs in 1970, or a little over one-third of all jobs in Madison County (34.2%). By 2000, manufacturing had declined to 20,700 jobs (a 37% loss) and represented just one-sixth (16.7%) of all jobs.*
- *Meanwhile, the services sector (which includes such sub sectors as health care, professional services, and many others) grew 137% from 15,000 jobs in 1970 to 35,600 in 2000.*
- *Growing at a more rapid rate than the country as a whole were retail trade jobs (up 58% over those 30 years), construction (39%), wholesale trade (94%), and agriculture services, forestry and fishing (401%). The last two categories, however, only made up approximately four percent of the county's jobs in 2000.*
- *Decreases in jobs were only in manufacturing (-37% over 30 years). Although other job categories, such as construction, in the 1980s, and wholesale trade in the 1990s lost some jobs in those decades, they were able to show an overall gain between 1970 and 2000.*



Employment Trends by Sector in Madison County, 1970 - 2000



Employment Shifts from Manufacturing to Services in Madison County, Total Full and Part-Time Jobs



Annual Personal Income per Job in Madison County, 1970 - 2000

Even while the number of jobs was growing, however, real personal income generated by each job in Madison County has declined, on average. Adjusting for inflation using the nation's Consumer Price Index, the average job in Madison County generated $35,200 in personal income in 1970 (stated in 2000 dollar values), but a lesser $29,100 in 2000. Of the nine major sectors shown on the graph, three experienced increases in income per job while six had decreases.

Very importantly, the rapidly expanding services sector actually had a slight increase in income per job, but both averages (for 1970 and 2000) were less than the county's overall average because of the strong income strength of the manufacturing sector.

Another bright spot is that the declining number of manufacturing jobs is actually yielding higher paying jobs in that sector. On the other hand, there are many fewer of them. In 1970, the manufacturing sector generated 44% of all personal income while providing 34% of all jobs. While the number of manufacturing jobs declined to 17% by 2000, income generated by that sector declined to only 27% as the pay-per-job increased. Income per job in the sector actually increased by 3%.

One troubling note is the decline in the average personal income per job in the construction sector. Since 1970, the average wage has declined 34.6% to $34,400, but the overall sector has seen a 300% increase in the total number of jobs. This alone could explain the relatively large drop in the overall average income per job in Madison County.

Another issue of concern—or opportunity, if addressed properly—is illustrated by the last two sets of bars on the above graph. The far right-hand set shows per capita income of residents of Madison County while the set to the immediate left show the average income per job of people employed in Madison County. The discrepancy suggests that the income from relatively good paying jobs in the county is not remaining in the county. Per capita income of residents is markedly below the average income of the jobs in the county.

An opportunity for continued growth in Madison County, therefore, is to create communities that are appealing to the higher income workers in the county. The bar chart suggests that a great deal of the income earned within the county is taken to other counties as the labor force commutes home. And this shift is not replaced by higher paying jobs held by Madison County residents in other counties.

3.4 Demographic & Household Income Shifts

While job counts are not available for the City of Edwardsville or the Village of Glen Carbon—nor for any other subareas of Madison County—population movements are indicative of many other shifts that have affected the Edwardsville - Glen Carbon area. These shifts will continue to affect land use choices to be made for the I-55 Corridor.

During the 1990s, the population of Edwardsville Township, a geographic area that includes a portion of the study area as well as the two municipalities, grew at a rate that rivaled the well-known pace of growth in St. Charles County, Missouri. Moreover, the rate of growth in the township was more than twice the growth rate of the entire United States.

Population increased from 26,600 to 33,700 in Edwardsville Township in the 1990s (up 26.5%) while the increase in the rest of Madison County was from 222,600 to 225,200 (up just 1.1%). Edwardsville, itself, grew 43.2% while Glen Carbon grew 35.0%, though some of these municipal growth rates are affected by annexations of previously unincorporated developments.

The Edwardsville/Glen Carbon growth is coming from surrounding communities as well as from outside the county. This is evident in the population growth in the community compared to the growth overall in the county. Madison County residents are shifting from one location to another – for instance, from the "river cities" to the "bluff communities" – in a quest to find newer housing and desirable schools, among other reasons. Interviews of local residents and home builders have confirmed that this shift within the county is occurring.

	1990 Census	2000 Census	Percent Change	Compound Annual Growth Rate
United States	248,709,873	281,421,906	13.2%	1.2%
Madison County	249,238	258,941	3.9%	0.4%
Edwardsville Twp	26,665	33,731	26.5%	2.4%
Edwardsville	14,579	20,874	43.2%	3.7%
Glen Carbon	7,731	10,440	35.0%	3.0%

Comparative Population Changes, 1990 - 2000

3.5 Projections and Assumptions

As this analysis shows, strong population growth is anticipated to continue for at least the next 20 years.

Projections of population, new households, and housing types form the basis on which the commercial demand analysis and the land capacity analysis are performed, projecting results over a period of the next 20 years.

The principal aim of this report is to assess the land use capacity of the I-55 corridor. To that end, a reasonable projection of housing units is necessary to properly estimate the potential tax base and commercial development, which will indicate the potential land use capacity of the area. Population projections inform household projections, which drive the housing unit projections. The process and assumptions necessary for deriving the projections are documented in this chapter.

The base for the population projections, therefore, is the 2000 Census for Edwardsville and Glen Carbon. Accordingly, the 2000 population of Edwardsville was 20,800 and of Glen Carbon was 10,400, meaning that the total on which the population projections are based is 31,200.

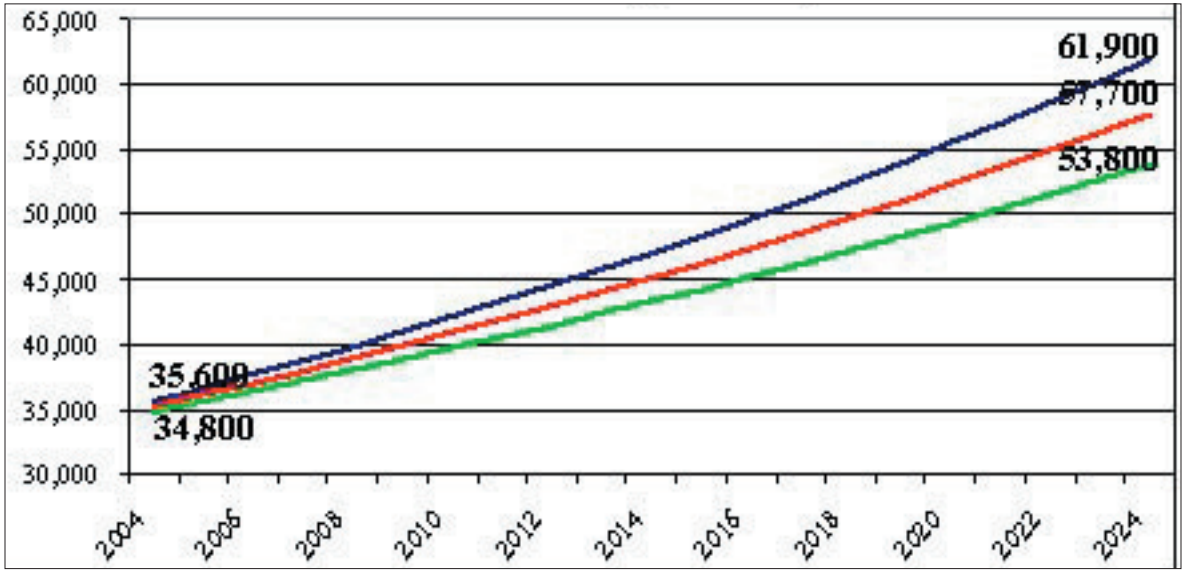
Projections inherently lack precision, so to best capture the potential population growth of the study corridor three scenarios are used. In each scenario, the population of Edwardsville and Glen Carbon is increased by a particular growth percentage.

Scenario A Aggressive: Scenario A growth rates are based on interpolations and extrapolations of various projections contained in the above referenced plans and reports. As it turns out, most of those projections assume a fairly constant and strong rate of growth consistent with the 1990's rate that slightly exceeded 3.0% per year. But it seems more likely that the rate will slow somewhat over the next 20 years to better reflect the incremental increases in population moving forward, versus the large increases in population at the beginning of the growth spurt. The compound annual growth rate (CAGR) projected for the I-55 corridor area in this scenario, therefore, is assumed to be right at 3.0% percent. *Populations live in housing units and an occupied housing unit is called a household. Thus, populations create households, which drive the demand for housing units.*

Scenario B Average: In this scenario, growth reflects rates cited in the Edwardsville Growth and Demographics Report of November 1998 and in the Glen Carbon Comprehensive Plan of 1996, which are slower than Scenario A and which were determined before the availability of the 2000 Census. The Edwardsville Growth and Demographics Report cited an Edwardsville report that predicted an average annual growth rate of 2.5% between 1998 and 2010. A separate report predicts the growth of Glen Carbon at an average annual growth rate of 2.9% between 1998 and 2010. By weighing the growth rates to reflect that Edwardsville's population is twice that of Glen Carbon, the CAGR for Scenario B is inflated at 2.6% for each of the years between 2004 and 2024.

Scenario C Moderate: This scenario reflects a reasonable estimate that falls below the aggressive and average scenarios. By weighing the growth rates to reflect that Edwardsville's population is twice that of Glen Carbon, the CAGR for which Scenario C is inflated at 2.2% for each of the years between 2004 and 2024. The purpose of this relatively slow rate of growth is to illustrate the potential effects of a marked reduction in the pace at which the communities of Edwardsville and Glen Carbon expand their populations.

The aggressive Scenario A yields a 2024 population of about 61,900, more than double the estimated 39,900 in 2000, or 35,600 estimated for 2004. The moderate Scenario C, on the other hand, yields a 2024 population of 53,800, about 8,100 less than Scenario A. The average Scenario B results in a population of about 57,700 in the year 2024. Thus, over the next 20 years, there may be between 19,000 and 26,300 more residents than in 2004. *As cited in the Growth Committee Report: Executive Summary, the Glen Carbon Comprehensive Plan, August 1998, predicts the average annual growth rate of 2.9% for Glen Carbon.*



Population Projections for Edwardsville and Glen Carbon (Combined)

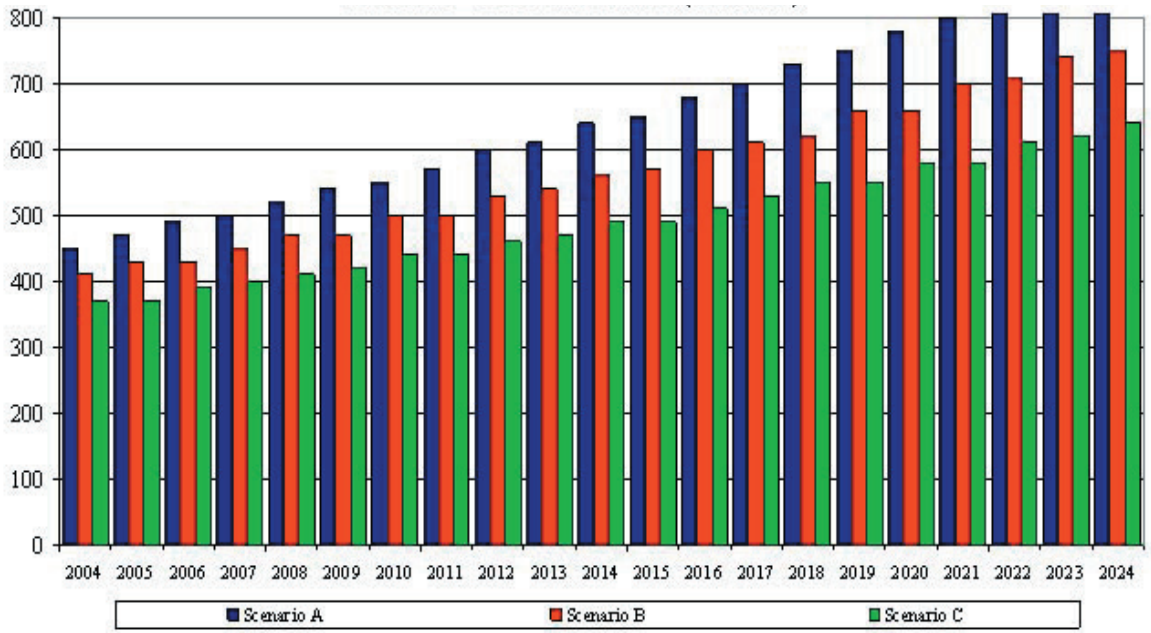
3.6 Household Projections:

As with the population projections, it is assumed that the relationships between population and households in Edwardsville and Glen Carbon drive the study corridor. From the 2000 Census, the gross population per household (pphh) in Edwardsville was 2.69 and in Glen Carbon it was 2.60. For the two cities combined, the weighted average was 2.66 gross pphh.

The U.S. Department of Commerce, Census Bureau projects that the national average household size will continue to decrease between 2000 and 2010 at somewhere between -0.005 pphh and -0.006 pphh per year. This report assumes that the rate of decrease in household sizes in the I-55 Corridor will parallel national trends.

The more rapid annual household size decrease of 0.006 pphh per year is most appropriate for the I-55 corridor because it implies that households are being formed at a slightly faster rate, which means that projections of new households will be relatively aggressive. Thus, the corridor plan will not under estimate the need for residential and related land.

For example, the base of 2.66 in 2000 will decrease at the annual rate of 0.006 resulting in a gross pphh of 2.64 in 2004, decreasing to 2.59 in 2014 and further to 2.54 in 2024.



Populations of Net Additions of Households, Edwardsville and Glen Carbon Combined

Annual household projections were generated dividing the annual population projections for Scenarios A, B, and C by the annual gross household size associated with each year. The one-year difference between the numbers of households represents the net new household projections for each year, as illustrated in the next graph.

For example, in Scenario A, the net new households projected for the district in 2004 total 490 while the net increase in Scenario C would be 370. For the year 2014, Scenario A projects the net new addition of households would be 660 while Scenario C would show few net additions of 510.

Between 2004 to 2014 period, total household growth in the district would be 5,800 units under Scenario A and 4,410 under Scenario C. These net additions would only increase further into the future based on the population projections and the continued decrease in gross population per household. *Simply dividing the total population by the number of households. This is a "gross" pphh because it doesn't subtract populations that are not in households such as group quarters or institutionalized populations. In light of the population projections available, however, it is best to use the gross ratio because the projections do not distinguish group quarters or institutionalized populations.*

Annual Net Additions of Households by Scenario

Year	*A*	*B*	*C*
2004	*450*	*410*	*370*
2005	*470*	*430*	*370*
2006	*490*	*430*	*390*
2007	*500*	*450*	*400*
2008	*520*	*470*	*410*
2009	*540*	*470*	*420*
2010	*550*	*500*	*440*
2011	*570*	*500*	*440*
2012	*600*	*530*	*460*
2013	*610*	*540*	*470*
2014	*640*	*560*	*490*
2015	*650*	*570*	*490*
2016	*680*	*600*	*510*
2017	*700*	*610*	*530*
2018	*730*	*620*	*550*
2019	*750*	*660*	*550*
2020	*780*	*660*	*580*
2021	*800*	*700*	*580*
2022	*830*	*710*	*610*
2023	*860*	*740*	*620*
2024	*890*	*750*	*640*
TOTAL	*13,610*	*11,910*	*10,320*

3.7 Housing Unit Projections

To assess future housing pressures on the study area, it is important to estimate the types of housing units the new households will occupy. For the purpose of this analysis, housing units fall into one of four categories, defined as:

- *Detached, Single-Family: Free standing single-family homes of all sizes.*
- *Attached, Single-Family: Townhouse and duplex single-family homes.*
- *Apartment: Structures with two or more units.*
- *Other: Trailers and mobile homes.*

It is also important to estimate a vacancy rate. Inevitably, some housing units are vacant at any one time such that the number of housing units is greater than the number of households which count only the number of occupied units. Census 2000 provides vacancy rates only by tenure: housing intended for owner occupants and housing intended for renter occupants. For purposes of this report, the owner vacancy rate is applied to the two single family categories listed above and the renter vacancy rate is applied to the apartment and other categories. Again using a blend of Edwardsville and Glen Carbon, Census 2000 measured these vacancy rates:

- *Homeowner vacancy rate 1.4%*
- *Rental vacancy rate 6.2%*

It is assumed that these vacancy rates will prevail, on average, over the course of the projections contained in this analysis.

To project the number of each of the housing unit types, the housing unit proportions by type for base year 2000 were determined. The final proportion of housing units is determined by weighting the housing proportions from Edwardsville and Glen Carbon according to the total number of housing units. These are shown below.

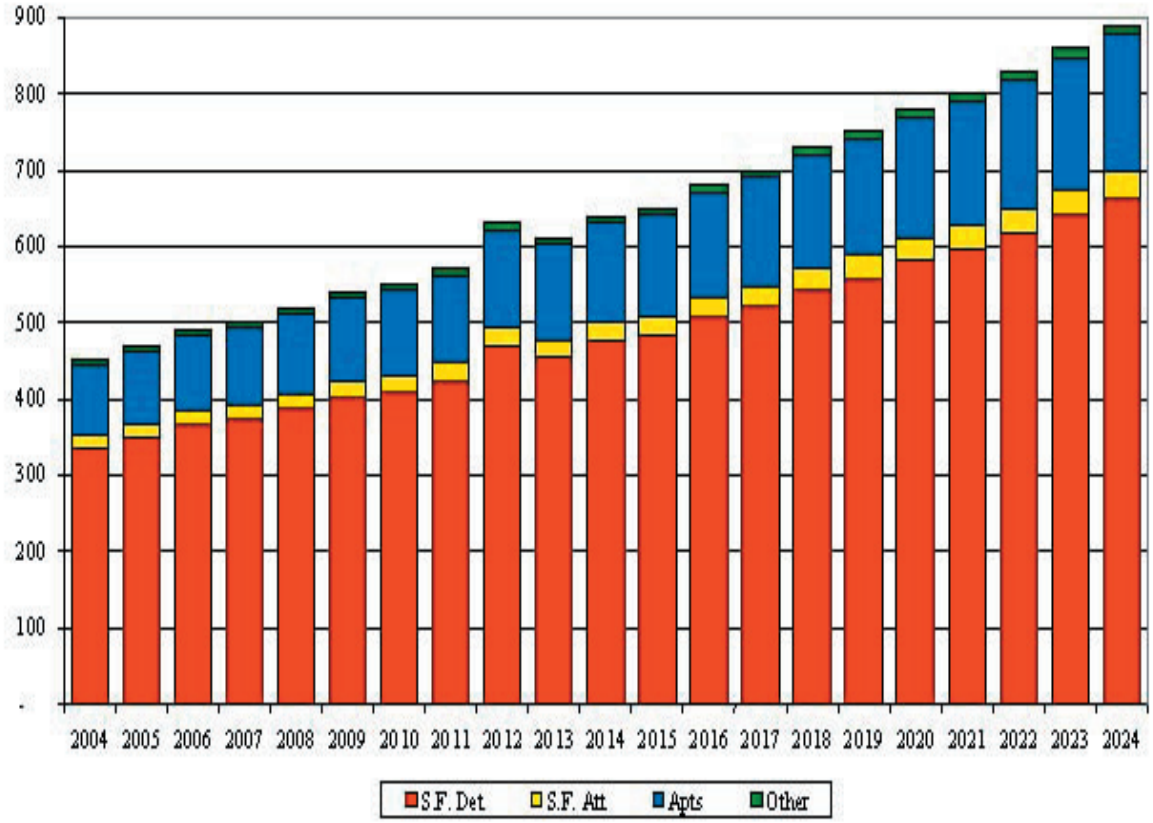
Projected Proportions of Added Housing by Type I-55 Corridor

Detached, Single-Family	*74.5%*
Attached, Single-Family	*3.8%*
Apartment	*20.3%*
Other	*1.4%*
TOTAL	*100.0%*

That is, of all the housing unit projections, almost three quarters (74.5%) will be assumed as single family detached units, 3.8% will be attached single family units, 20.3% will be apartments, and 1.4% will be considered “other.”

The annual growth in housing unit types for each scenario is shown on the following graphs. Data tables are provided in the appendix.

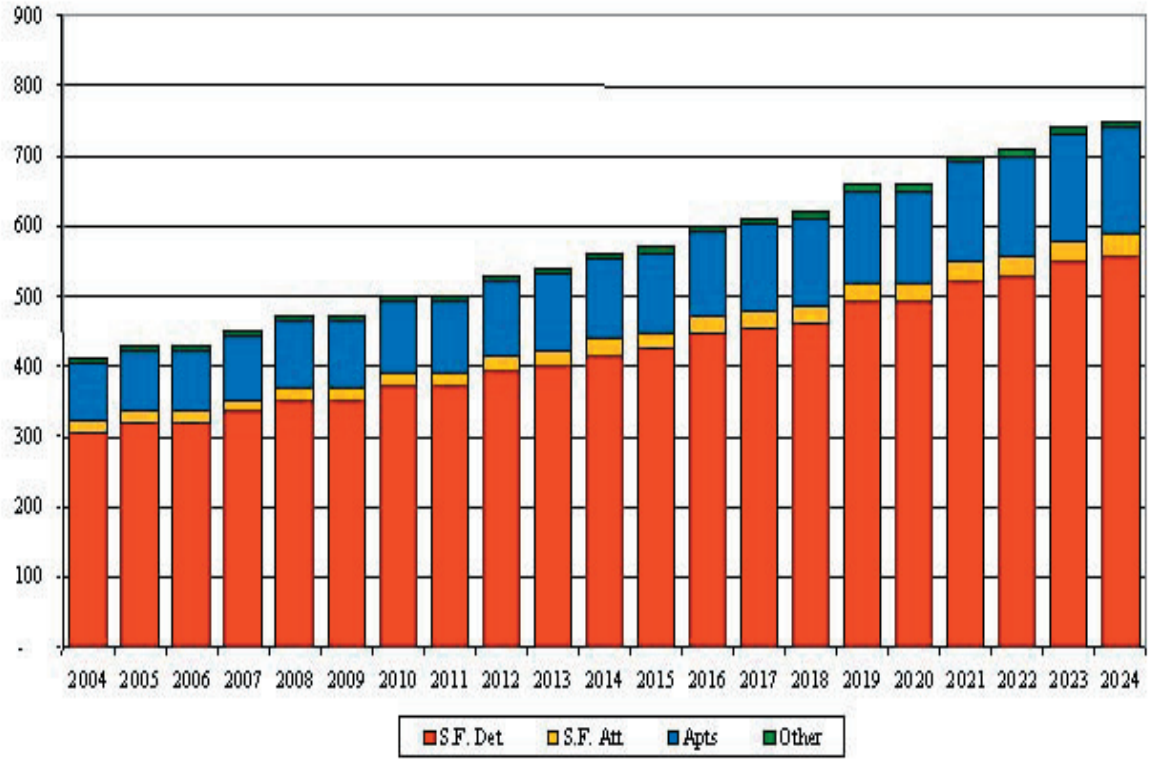
Madison County i55 Corridor



Housing Unit Projections by Type for Scenario A

	S.F. Det	S.F. Att	Apts	Other	Total
2004	335	17	91	6	450
2005	350	18	95	7	470
2006	365	19	99	7	490
2007	373	19	102	7	500
2008	387	20	106	7	520
2009	402	21	110	8	540
2010	410	21	112	8	550
2011	425	22	116	8	570
2012	469	24	128	9	600
2013	454	23	124	9	610
2014	477	24	130	9	640
2015	484	25	132	9	650
2016	507	26	138	10	680
2017	522	27	142	10	700
2018	544	28	148	10	730
2019	559	29	152	11	750
2020	581	30	158	11	780
2021	596	30	162	11	800
2022	618	32	168	12	830
2023	641	33	175	12	860
2024	663	34	181	12	890
TOTAL	**10,162**	**518**	**2,769**	**191**	**13,610**

Housing Unit Projections by Type of Scenario A

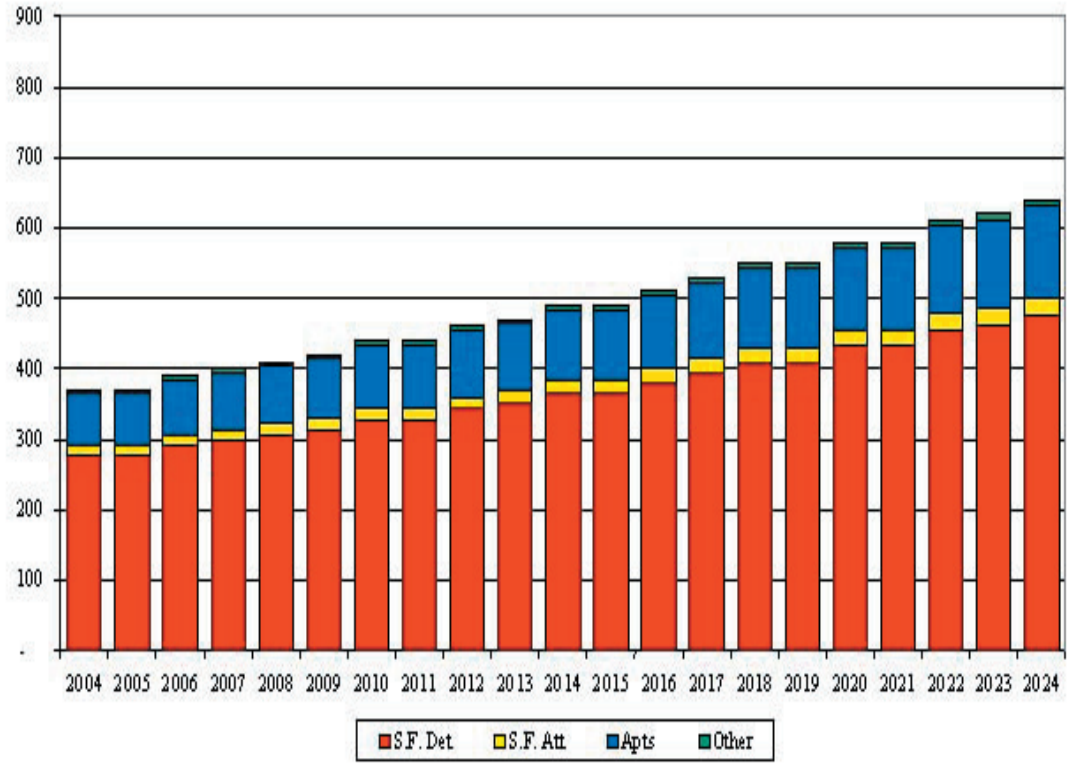


Housing Unit Projections by Type for Scenario B

	S.F. Det	S.F. Att	Apts	Other	Total
2004	305	16	83	6	410
2005	320	16	87	6	430
2006	320	16	87	6	430
2007	335	17	91	6	450
2008	350	18	95	7	470
2009	350	18	95	7	470
2010	373	19	102	7	500
2011	373	19	102	7	500
2012	395	20	108	7	530
2013	402	21	110	8	540
2014	417	21	114	8	560
2015	425	22	116	8	570
2016	447	23	122	8	600
2017	454	23	124	9	610
2018	462	24	126	9	620
2019	492	25	134	9	660
2020	492	25	134	9	660
2021	522	27	142	10	700
2022	529	27	144	10	710
2023	551	28	150	10	740
2024	559	29	152	11	750
TOTAL	**8,873**	**453**	**2,418**	**167**	**11,910**

Housing Unit Projections by Type of Scenario B

Madison County i55 Corridor



Housing Unit Projections by Type for Scenario C

	S.F. Det	S.F. Att	Apts	Other	Total
2004	276	14	75	5	370
2005	276	14	75	5	370
2006	291	15	79	5	390
2007	298	15	81	6	400
2008	305	16	83	6	410
2009	313	16	85	6	420
2010	328	17	89	6	440
2011	328	17	89	6	440
2012	343	17	93	6	460
2013	350	18	95	7	470
2014	365	19	99	7	490
2015	365	19	99	7	490
2016	380	19	104	7	510
2017	395	20	108	7	530
2018	410	21	112	8	550
2019	410	21	112	8	550
2020	432	22	118	8	580
2021	432	22	118	8	580
2022	454	23	124	9	610
2023	462	24	126	9	620
2024	477	24	130	9	640
TOTAL	**7,688**	**392**	**2,095**	**144**	**10,320**

Housing Unit Projections by Type of Scenario C

In light of these employment and demographic shifts, an approach to a redevelopment strategy for the three target areas may be to consider regional kinds of uses—endeavors that appeal to the larger Madison County (and beyond) market. When combined with the traffic flows to and through the three areas, this appeal to a regional market is reinforced.

3.8 Land Demand

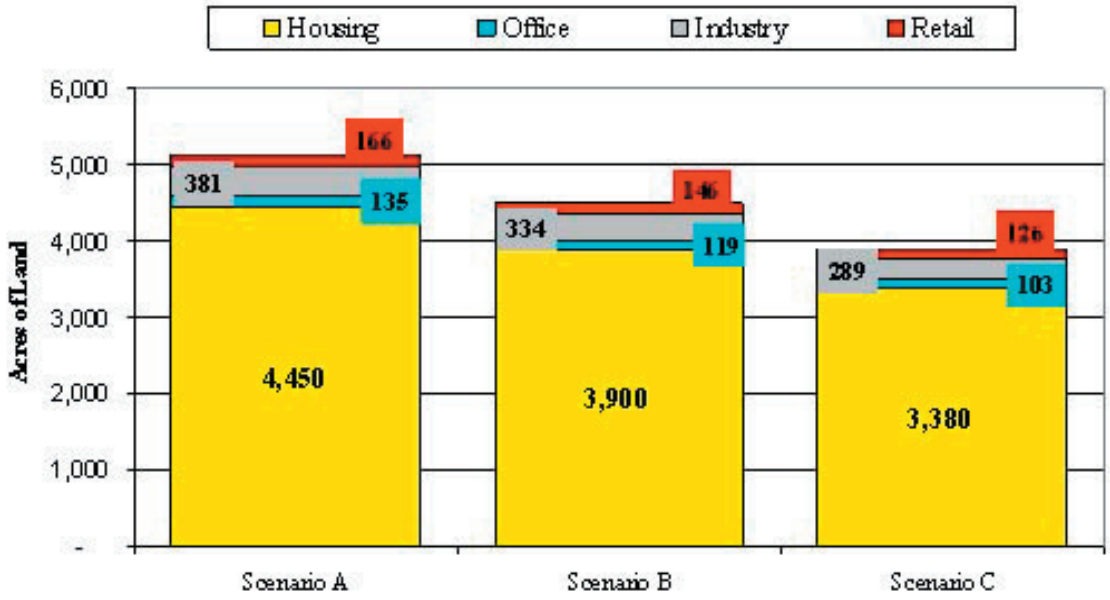
Using the previous estimates of population and household growth in the area, along with some assumptions about office, industrial, and retail requirements as they relate to household growth, the amount of land needed for development can be projected.

The following chart (Land Absorption Projections) illustrates the amount of acreage needed for housing, commercial, industrial and retail needs generated by the projected household growth in the area.

For scenario A, an aggressive approach to household projections yields an overall land requirement of approximately 5,800 acres, or just over nine square miles, for the 20-year horizon. It should be noted that this is just for the previously cited categories housing, office, industrial, and retail.

In order to account for additional space requirements for various institutional and public uses such as needed churches, parks, roads, libraries, fire protection stations, open space and parks, etc., the estimated required acreage should then be as much as doubled. This does not mean that all such land will be consumed in the 20-year horizon of the projections, but that the plan should assign a sufficient amount of land for such uses. This will provide ample flexibility in the plan for creation design solutions and locations for development to suit changing market needs. This would yield a requirement over 20 years of approximately 11,600 acres, or approximately 18 square miles.

This amount of land would take up approximately 90% of the current study area.



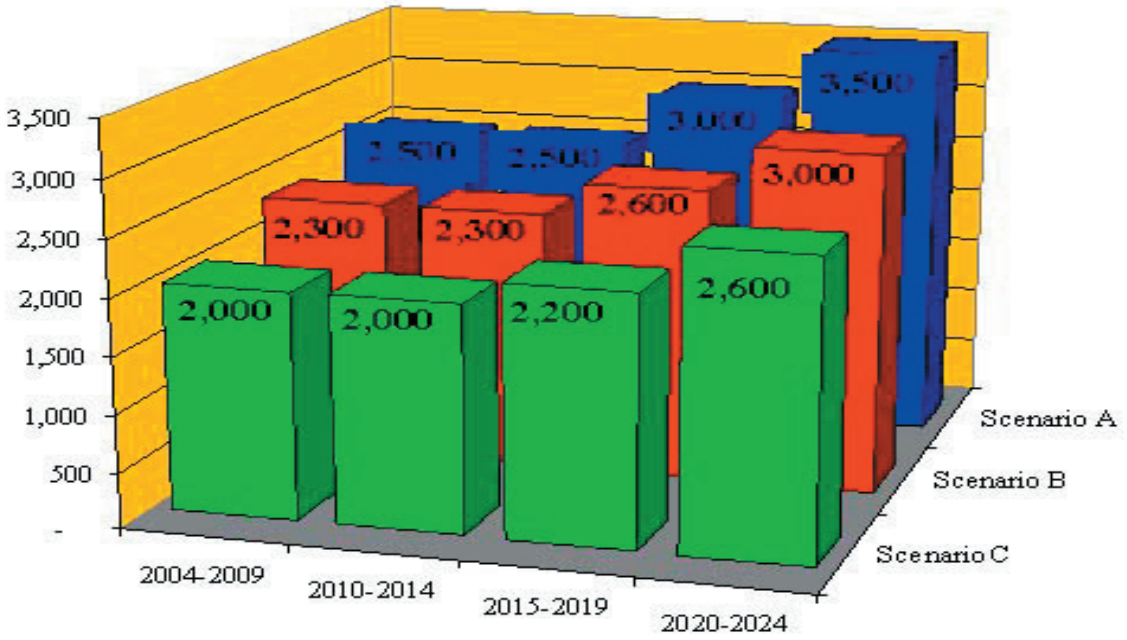
Land Absorption Projections, 2004 - 2005

For scenario B, an average approach to household growth yields an overall acreage requirement of approximately 5,100 acres over 20 years. Again, this is only for the previously mentioned categories and not for any public or institutional uses. Doubling the required acreage for scenario B yields 10,200 acre need. This translates to about 16 square miles needed for future growth.

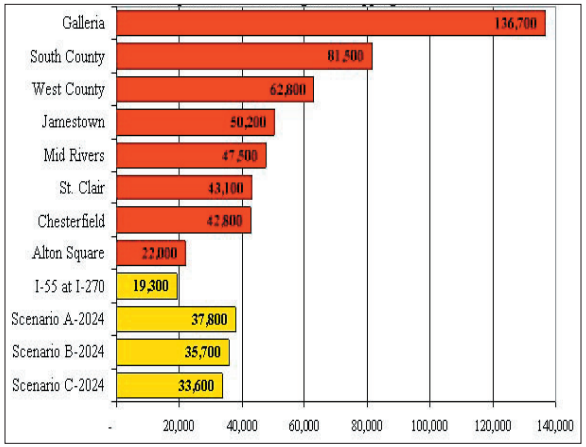
For scenario C, a moderate approach to household growth yields an overall acreage requirement of approximately 4,400 acres over 20 years. Doubling the required acreage for scenario C yields a need of about 8,800 acres. This translates to almost 14 square miles needed for future growth.

Land Demand in Five-Year Increments:
Disaggregating these projections into five-year increments (six years for the first segment—2004 through 2009) yields the acreage requirements illustrated in the following graph. Scenario A, for instance, would require about 2,500 acres from 2004 through 2009 up to 3,500 acres consumed in the 2020-2024 period.

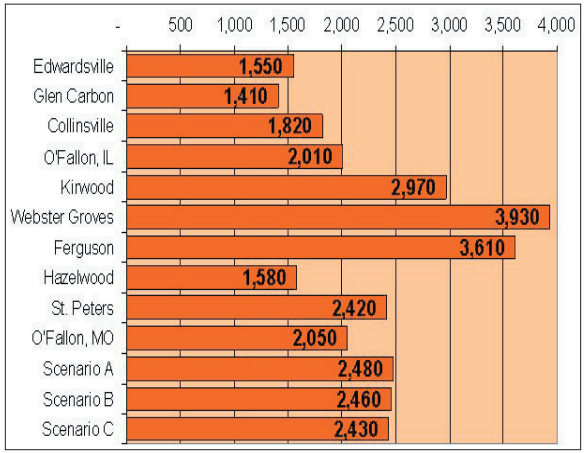
The first two segments for each scenario are the same because of the six-year period at the beginning. Generally speaking, the land demands increase each year as the growth projections anticipate a slightly increasing rate of growth over the study period.



Projected Acres of Development in 5-Year Increments



Households in 5-Mile Radius to Major Shopping Centers



Residential Density Comparison Within the St. Louis Region