



The planning process begins with an evaluation of a community's characteristics, such as population, housing, workforce, income, local market potential, development patterns, natural resources and other pertinent factors. This information is a basic ingredient in planning for the future. Historical and current population trends can be used in various ways to illustrate problem areas of development and provide an indication of probable future needs. Once a database of existing conditions is compiled, a community can evaluate then use the findings to help set goals for the future development of the community.

POPULATION AND HOUSING

Population

Lenox Township had a 74.7% increase in population between 1990 and 2000. As shown in Table 2-1 below this is a significant increase from the previous decade in which the Township experienced a 1.35% increase in population. It is also higher than Macomb County's 9.9% rate of growth between 1990 and 2000. All of the communities adjacent to Lenox experienced a steady rate of growth between 1990 and 2000, with the exception of Armada which had minimal growth of 1.6%. Nearby Macomb Township experienced the highest growth with a 122.2% increase in population in the last decade.

Table 2-1
Population, Lenox Township & Adjacent Communities

Community	1970	1980	70-80 %Change	1990	80-90 %Change	2000	90-00 %Change
Lenox Twp	2,869	3,028	5.54%	3,069	1.35%	5,362	74.7%
Armada	1,352	1,392	2.96%	1,548	11.21%	1,573	1.6%
Armada Twp	1,601	2,495	55.84%	2,943	17.96%	3,673	24.8%
Casco Twp	2,065	4,331	109.73%	4,552	5.10%	4,747	4.3%
Chesterfield Twp	9,378	18,276	94.88%	25,905	41.74%	37,405	44.4%
Columbus Twp	1,937	3,097	59.89%	3,241	4.65%	4,615	42.4%
Ira Twp	3,612	4,316	19.49%	5,581	29.31%	6,966	24.8%
Macomb Twp	6,140	14,230	131.76%	22,714	59.62%	50,478	122.2%
New Baltimore	3,237	5,439	68.03%	5,798	6.60%	7,405	27.7%
New Haven	1,855	1,871	0.86%	2,335	24.80%	3,071	31.5%
Ray Twp	2,683	3,121	16.33%	3,230	3.49%	3,740	15.8%
Richmond	3,234	3,536	9.34%	4,141	17.11%	4,897	18.3%
Richmond Twp	1,719	2,453	42.70%	2,528	3.06%	3,416	35.1%
Macomb County	625,309	694,600	11.08%	717,400	3.28%	788,149	9.9%

Source: U.S. Census

For the purpose of evaluating future population, it is useful to compare the Township's population trends with those of adjacent communities. Lenox and the adjacent communities in Macomb and St. Clair Counties were evaluated as a Subregion for this comparison. Table 2-2 below illustrates the Township's share of Macomb County's growth as well as the Township's share of the Subregion. In 2000, the Township comprised 0.68% of the County's population and Lenox Township's growth during the decade constituted 3.24% to the County's total growth. Lenox Township's share of the Subregion population has decreased since 1970, representing 3.86% of the Subregion population in 2000. The Township's share of the Subregion's Growth for 2000 was 4.11%.

Table 2-2
Growth as a Percent of Macomb County and Subregion, 1980-2000

Year	Lenox Township Population	Macomb County Population	Lenox Share of County Population	Lenox Share of County Growth	Subregion Population	Lenox Share of Subregion Population	Lenox Share of Subregion Growth
1970	2,869	625,309	0.46%	-	38,729	7.41%	-
1980	3,028	694,600	0.44%	0.23%	63,698	4.75%	0.64%
1990	3,069	717,400	0.43%	0.18%	83,094	3.69%	0.21%
2000	5,362	788,149	0.68%	3.24%	138,921	3.86%	4.11%

Source: U.S. Census

Households

As discussed above, Lenox Township's population increased by 74.7% between 1990 and 2000. The number of households in the community increased by 47.7% (see Table 2-3). The number of households in the Township increased at a rate roughly 28% lower than the population increase. This is contrary to the national trend, which reflects an increased number of households exceeding population increases due to decreasing household size. Despite this contradiction, the Township's average household size has decreased since 1980. In 1980 the Township had an average household size of 3.42 persons per household, it was 3.10 in 1990, and in 2000 it was 2.83 persons. Even with these decreases, average household size in Lenox Township was greater than that for Macomb County in all three periods (See Table 2-4).

Table 2-3
Total Households
Lenox Township and Adjacent Communities, 1990 and 2000

Community	1990	2000	90-00 %Change
LENOX	979	1,446	47.70%
Armada	503	540	7.36%
Armada Twp	879	1,175	33.67%
Casco Twp	1,455	1,634	12.30%
Chesterfield Twp	8,916	13,347	49.70%
Columbus Twp	1,029	1,533	48.98%
Ira Twp.	2,143	2,677	24.92%
Macomb Twp	7,355	16,946	130.40%
New Baltimore	2,261	2,942	30.12%
New Haven	772	1,064	37.82%
Ray Twp	1,052	1,305	24.05%
Richmond	1,540	1,977	28.38%
Richmond Twp	756	1,020	34.92%
Macomb County	264,991	309,203	16.68%

Source: U.S. Census

Table 2-4
Average Household Size, 1980-2000

	1980	1990	2000
Lenox Township	3.42	3.10	2.83
Macomb County	3.00	2.68	2.52

Source: U.S. Census

Housing Units

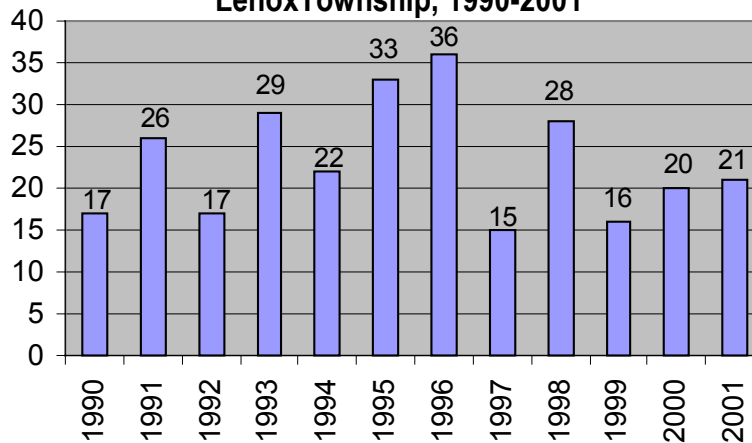
As portrayed in Table 2-5 below, the number of housing units in Lenox Township increased by nearly 48% during the last decade – consistent with the 47.7% increase in households reflected in Table 2-3. The increase in the number of housing units in the Township occurred at a rate approximately 32% higher than was experienced by Macomb County.

Table 2-5
Total Housing Units
Lenox Township and Adjacent Communities, 1990 and 2000

Community	1980 Housing Units	1990 Housing Units	% Change 1980-1990	2000 Housing Units	% Change 1990-2000
Lenox Twp	919	1,018	10.77%	1,508	48.13%
Armada	480	514	7.08%	558	8.56%
Armada Twp	729	899	23.32%	1,203	33.82%
Casco Twp	1,391	1,502	7.98%	1,717	14.31%
Chesterfield Twp	6,075	9,594	57.93%	13,967	45.58%
Columbus Twp	968	1,066	10.12%	1,595	49.62%
Ira Twp	1,762	2,396	35.98%	2,871	19.82%
Macomb Twp	4,951	7,562	52.74%	17,922	137.00%
New Baltimore	2,118	2,459	16.10%	3,218	30.87%
New Haven	613	824	34.42%	1,138	38.11%
Ray Twp	954	1,076	12.79%	1,349	25.37%
Richmond	1,282	1,662	29.64%	2,062	24.07%
Richmond Twp	676	783	15.83%	1,060	35.38%
Macomb County	236,602	274,843	16.16%	320,276	16.53%

Source: U.S. Census

Figure 2-1
Residential Building Permits Issued
Lenox Township, 1990-2001

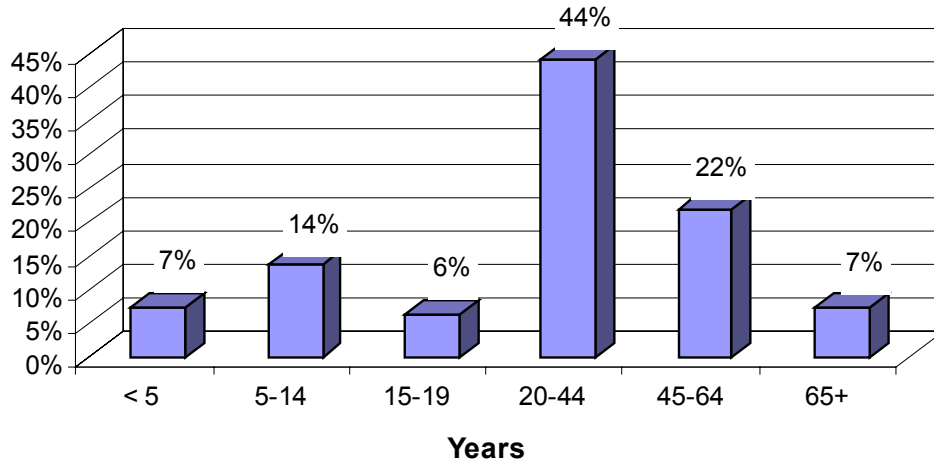


Source: SEMCOG .

Age

In addition to total population, housing units and household size, it is also important to examine the overall age groupings of a population. The overall age grouping provides figures for the number of school-age children, the size of the workforce (i.e. 20-64 year groups), and size of the elderly population. This data can be used for school enrollment projections, planning for recreation facilities, special services for the elderly, and other governmental services. Figure 2-2 illustrates the age distribution, and Figure 2-3 provides a comparison of the age distribution of the Township's residents from 1990-2000.

Figure 2-2
Lenox Township, Age Distribution, 2000



Source: U.S. Census

Figure 2-3
Major Age Comparisons, 1990 and 2000, Lenox Township

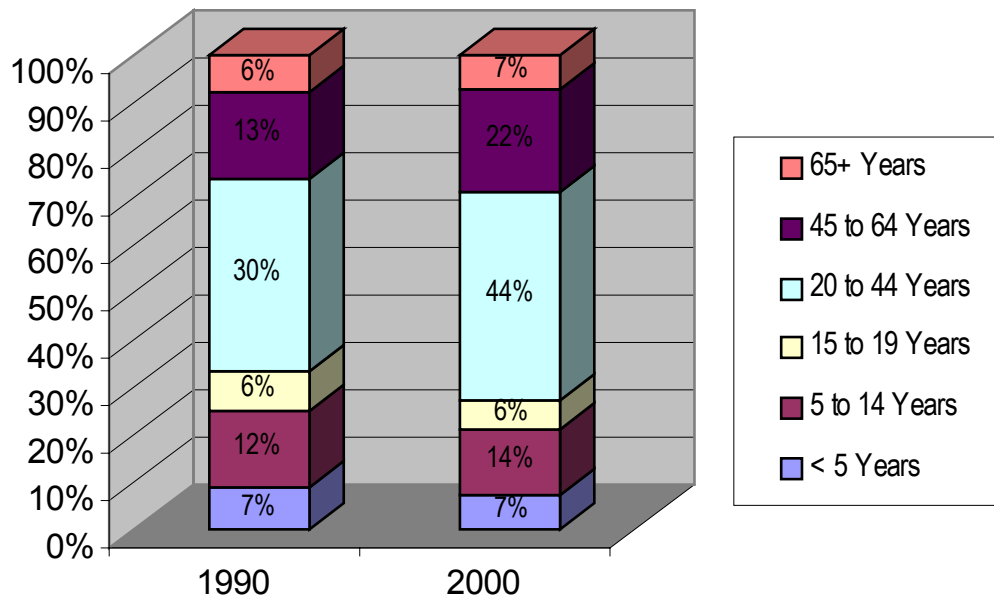


Figure 2-3 compares the overall age distribution of the Township's residents from 1990-2000. The Major Age Group Comparison indicates that the age distribution in the Township had a subtle shift during the 1990s. The most significant increase was from 30% to 40% for residents aged 20-44. Residents 45 years and older increased from 19% to 29% of the population- reflecting the impact of baby boomers on the age distribution. There was a slight increase in percentage from 18%-20% for school age children 5- 19 years of age. The number of pre-school age children remained steady, representing 7% of the entire population. These demographics indicate it is critical for the community to plan for the needs of people of all ages, with a particular emphasis needed on programs and facilities for older adults.

Population Projections

It is important to have a good estimate of the future population so that planning for infrastructure, municipal services, and administrative capabilities can be well managed and directed for the growth and development that occurs. Planning for a population that is less than expected renders the community unprepared. To properly plan for Lenox Township's future, an accurate estimate of its population for the next twenty years is essential.

SEMCOG has prepared population forecasts for southeast Michigan communities to 2010. The population projections for Lenox Township, and adjacent communities are provided in Table 2-6 below.

Table 2-6
Population Projections
Lenox Township & Adjacent Communities

Community	2000 Projection	2010 Projection	2020 Projection	% Change 2010-2020
LENOX TWP	5,362	6,463	7,552	16.8%
Armada	1,573	1,527	1,617	5.9%
Armada Twp	3,673	4,329	5,292	22.2%
Casco Twp	4,747	4,781	5,027	5.1%
Chesterfield Twp	37,405	46,273	53,085	14.7%
Columbus Twp	4,615	5,323	6,339	19.1%
Ira Twp	6,996	7,598	8,604	13.2%
Macomb Twp	50,478	74,251	94,312	27.0%
New Baltimore	7,405	11,212	13,011	16.0%
New Haven	3,071	3,296	3,559	8.0%
Ray Twp	3,740	4,330	5,293	22.2%
Richmond	4,897	5,743	6,780	18.1%
Richmond Twp	3,416	4,081	4,966	21.7%
Macomb County	788,149	836,020	882,410	5.5%

Source: SEMCOG

There are a variety of methods to project the Township's future population. The constant proportion, growth rate, and increasing proportion methods are relatively easy to administer and can lend alternative projections based on historical trends and growth rates.

The constant proportion method assumes that the Township will maintain the percentage of the County's projected 2010 and 2020 population as it experienced in 2000. Lenox Township contained 0.68% of the County's 2000 population. Projections for the Township using SEMCOG projections are as follows:

	<u>Macomb County</u>	<u>Lenox Township</u>
2000 Population	788,149	5,362
2010 Population	830,143	5,645
2020 Projection	876,371	5,959

The growth rate method assumes that the 2000-2010 growth rate will be the same as between 1990-2000 and the 2000-2020 growth rate will be the same as between 1980-

2000. Because of the Township's very low growth rate of 1.35% from 1980 –1990, this method reproduces a similar, unrealistic result for the year 2020. This method of projection results in the following:

2000 Population	5,362
1990-2000 % Change	74.7%
1980-2000 % Change	77.1%
2010 Projection	9,367
2020 Projection	9,495

The increasing proportion method assumes that the rural areas and small Townships on the fringe of growth centers will expand over the next two decades as the growth centers approach their build-out. This method requires that the forecaster apply a growth rate to the community. The data below assumes that Lenox Township will comprise 1% percent of the County population in 2010 and 1.5% percent in 2020. The results are as follows:

	<u>2000</u>	<u>2010</u>	<u>2020</u>
Macomb County	788,149	830,143	876,371
Increasing %	0.68%	1.0%	1.5%
Lenox Township	5,362	8,301	13,146

Table 2-7
Population Projection Summary

Method / Source	2000 Census	2010 Projection	2020 Projection
SEMCOG	5,362	6,463	7,552
Constant Proportion	5,362	5,645	5,959
Growth Rate	5,362	9,367	9,495
Increasing Proportion	5,362	8,301	13,146

All of the above methods of projection rely upon estimates for larger jurisdictions that may or may not occur. It is important for a community planning its future not to underestimate its potential for growth. (Lenox Township experienced a 75% increase in population during a decade in which sanitary sewer service was not yet available). Underestimation can only result in being unprepared. For that reason, the Master Plan will use the following assumptions of future Township population as the basis for the community's long range plans:

	<u>2000</u>	<u>2010</u>	<u>2020</u>
Lenox Township	5,362	8,000-10,000	12,000-15,000

Employment

As shown in Table 2-8 below, Production, Transportation and Material Movers and Sales and Office positions represented the job categories of the majority of residents in the Township with 26% and 26.1% respectively. Manufacturing was the top industry for workers in the Township with 27.9% of the total workforce. The employment industry distribution in Lenox Township is fairly consistent with the distribution of employment in Macomb County. The County exceeds the Township in terms of Managerial and Professional occupations, while the Township has a higher proportion of residents in Construction and Production occupations.

Table 2-8
Employment by Occupation & Industry
Lenox Township & Macomb County, 2000

Occupation	Township	% of Total	County	% of Total
Managerial and Professional	647	18.3%	120,704	30.9%
Sales Office Occupations	921	26.0%	110,480	28.3%
Service Occupations	424	12.0%	51,220	13.1%
Farming, Forestry, and Fishing	5	0.1%	430	0.1%
Construction, Extraction and Maintenance	623	17.6%	38,664	9.9%
Production, Transportation and Material Moving	925	26.1%	69,293	17.7%
TOTAL	3,545	100.0%	390,791	100.0%
Industry				
Ag. Forestry Fisheries & Mining	18	0.5%	762	0.2%
Construction	392	11.1%	26,072	6.7%
Manufacturing	989	27.9%	102,034	26.1%
Wholesale Trade	121	3.4%	14,639	3.7%
Retail Trade	426	12.0%	49,112	12.6%
Transportation, Warehousing & Utilities	117	3.3%	12,403	3.2%
Information	66	1.9%	8,006	2.0%
FIRE	109	3.1%	21,477	5.5%
Professional, Scientific, Mgt., Administrative & Waste Mgt. Services	263	7.4%	38,571	9.9%
Educational, Health & Social Services	487	13.7%	60,974	15.6%
Arts, Entertainment, Recreation, Accomodation & Food Services	211	6.0%	27,827	7.1%
Other Services	200	5.6%	17,014	4.4%
Public Administration	146	4.1%	11,900	3.0%
Total	3,545	100.0%	390,791	100.0%

Source: U.S. Census 2000

According to the 2000 U.S. Census, the mean travel time to work for Lenox Residents was 30.5 minutes as compared with a mean travel time of 26.2 minutes for Macomb County. The same source reveals that Lenox Township residents were a little more likely to carpool (12.8%) than the County as a whole (7.5%). Despite the evidence of

some carpooling among Township residents, the majority of residents (83.7%) drive alone to their place of work. This figure is slightly lower than the 89% percent of individual commuters reported for Macomb County.

Education

Table 2-9 below shows the education attainment levels for Lenox Township and Macomb County. As shown, the educational attainment of residents in Lenox Township is fairly consistent with that of the County. The number of Township residents with education levels beyond an Associate Degree is slightly lower than the County as a whole.

Table 2-9
Educational Attainment, Lenox Township & Macomb County, 2000

	Lenox Township*	%Lenox Township	Macomb County*	% Macomb County
Not A High School Graduate	1,102	19.6%	91,371	17.1%
Graduated High School	2,260	40.2%	175,565	32.8%
Some College- No Degree	1,395	24.8%	132,819	24.8%
Associate Degree	402	7.2%	41,936	7.8%
Bachelor's Degree	369	6.6%	63,603	11.9%
Graduate or Professional Degree	90	1.6%	30,542	5.7%
Total	5,618	100.0%	535,836	100.0%

Source: 2000 U.S. Census

* Census figures on educational attainment are based on population 25 years and over.

Income

Table 2-10 shows the per capita and median household incomes of Lenox Township and adjacent communities. Lenox Township's per capita income, \$18,800 is low in comparison to adjacent communities with the exception of the Village of New Haven. The median household income for the Township (\$50,659) is just below that of Macomb County overall (\$52,102).

Table 2-10
Income, Lenox Township and Adjacent Communities, 2000

Community	2000 Median Household Income	2000 Per Capita Income
LENOX	\$50,659	\$18,800
Armada	\$61,700	\$22,447
Armada Twp	\$68,421	\$24,766
Casco Twp	\$52,961	\$22,299
Chesterfield Twp	\$61,630	\$24,410
Columbus Twp	\$61,062	\$21,767
Ira Twp.	\$45,525	\$22,115
Macomb Twp	\$72,319	\$25,907
New Baltimore	\$60,699	\$26,921
New Haven	\$40,699	\$16,739
Ray Twp	\$70,081	\$26,604
Richmond	\$43,378	\$21,384
Richmond Twp	\$69,449	\$24,937
Macomb County	\$52,102	\$24,446

Source: 2000 U.S. Census

Unemployment and Low Income

According to the 2000 Census of Population and Housing, 2,247 of Lenox Township residents 16 years and over were in the labor force. The unemployment level for the Township was 2.8%, consistent with the 2.7% for the County as a whole. The same source reported that 6.2% of Lenox Township families were living below the poverty line. This is slightly higher than the percentage of families, 4.0%, in Macomb County that were living below the poverty line in 2000.

NONRESIDENTIAL LAND USE MARKET POTENTIAL

An important part of the existing conditions analysis is an examination of demand or market potential for non-residential land uses. A balanced supply of industrial, office and retail development is critical to a community for a number of reasons. If there are fewer acres available than the market can support, a community could lose potential tax base, employment opportunities and decrease the quality of life for residents who need the goods and services that such uses provide. If there is an over abundance of commercial, office and industrial land, marginal businesses may develop and/or building vacancy rates may increase creating the potential for blight.

Commercial Development

In order to determine how much commercial land Lenox Township can support, an analysis of income levels in Lenox is necessary. As noted above the year 2000 per capita income for Lenox Township was \$18,800. The per capita income of Macomb County from the same source was \$24,446. The 2000 Census figure represents an increase of approximately 23% over the past 10 years. Based on this income level, the table on the next page estimates Lenox's 2000 ("current") retail expenditures and projected retail expenditures.

Retail Spending

Once the amount of retail spending within a community is estimated, the amount of needed retail space (in square feet) can be estimated. This can be determined by looking at two factors: retail spending and supporting population. There are three shopping center classifications used for analysis: neighborhood convenience, community comparison, and regional comparison.

Table 2-11

Current Neighborhood, Community, and Regional Expenditures, Lenox 2000

Total Year 2000 Income	Current ('00) Retail Expenditures	Current ('00) Neighborhood Expenditures	Current ('00) Community Expenditures	Current ('00) Regional Expenditures
\$100,805,600 ¹	\$55,443,080 ²	\$13,722,162 ³	\$15,662,670 ^{4,5}	\$11,088,616 ⁶

1. 18,800 x 5,362 people (2000 Census population)
2. Assumes 55% of total income is spent on retail purchases (PAS Report #358, *Analyzing Neighborhood Retail Opportunities*, Published by American Planning Association)
3. Assumes 75% of Convenience goods spending will be made within Neighborhood Shopping Center categories.
4. Assumes 40% spent in comparison goods stores (PAS Report #358, Published by American Planning Association)
5. Birchler Arroyo Associates, Inc. estimates that 25% of Convenience goods and 50% of Comparison goods spending will be made within Community Shopping Center categories.
6. Birchler Arroyo Associates, Inc. estimates that 50% of comparison item purchases made by Township residents could take place within the Township and 50% of Comparison goods spending will be made within Regional Shopping Center categories.

Table 2-12
Forecast Retail & Neighborhood Expenditures, Lenox 2010 & 2020

Forecast 2010 Income	Forecast 2010 Retail Expenditures	Forecast 2010 Neighborhood Expenditures	Forecast 2020 Income	Forecast 2020 Retail Expenditures	Forecast 2020 Neighborhood Expenditures
\$265,192,567 ¹	\$145,855,911 ²	\$36,099,338 ^{3,5}	\$561,11,027 ⁴	\$308,613,265 ²	\$76,381,783 ^{3,5}

1. \$26,519 x 10,000 people (2010 population estimate with income adjusted for 3.5% inflation)
2. Assumes 55% of total income is spent on retail purchases (PAS Report #358, *Analyzing Neighborhood Retail Opportunities*, Published by American Planning Association)
3. Assumes 33% of total retail expenditures is spent in convenience goods stores, 40% spent in comparison goods stores (PAS Report #358, Published by American Planning Association)
4. \$37,407 X 15,000 people (2020 population estimate with income adjusted for 3.5% inflation)
5. Assumes 75% of Convenience goods spending will be made within Neighborhood Shopping Center categories.

Table 2-13
Forecast Community and Regional Expenditures, Lenox, 2010 & 2020

Forecast 2010 Retail Expenditures	Forecast 2010 Community Expenditures	Forecast 2010 Regional Expenditures	Forecast 2020 Retail Expenditures	Forecast 2020 Community Expenditures	Forecast 2020 Regional Expenditures
\$145,855,911 ¹	\$41,204,295 ^{2,3}	\$29,171,182 ⁵	\$308,613,265 ⁴	\$87,183,247 ^{2,3}	\$61,722,653

1. \$26,519 x 10,000 people (2010 population estimate with income adjusted for 3.5% inflation)
2. Assumes 40% spent in comparison goods stores (PAS Report #358, Published by American Planning Association)
3. Birchler Arroyo Associates, Inc. estimates that 25% of Convenience goods and 50% of Comparison goods spending will be made within Community Shopping Center categories.
4. \$37,407 x 15,000 people (2020 population estimate with income adjusted for 3.5% inflation)
5. Birchler Arroyo Associates, Inc. estimates that 50% of comparison item purchases made by Township residents could take place within the Township and 50% of Comparison goods spending will be made within Regional Shopping Center categories.

According to the latest retail data published in the Dollars & Cents of Shopping Centers: 2002 (Urban Land Institute) the average annual sales per square foot of gross leasable area for neighborhood shopping centers is \$271.53 per square foot. Community centers had an average annual sales per square foot of \$229.84 and regional centers had an average of \$218.77. Based on the previous retail spending analysis, Lenox Township could support the following square footages in commercial centers.

Table 2-14
Shopping Center Classifications
Commercial GLA based on 2020 Population

Type	Forecasted 2020 Sales per Square Foot	Forecasted 2020 Township Resident Expenditures	Expenditures made within Township ²	GLA Based on Lenox Township 2020 Retail Spending
Neighborhood (Convenience)	\$505 ¹	\$76,381,783	\$38,190,891	75,626
Community (Minor Comparison)	\$427 ¹	\$87,183,247	\$43,591,623	102,088
Regional (Major Comparison)	\$405 ¹	\$61,722,653	\$15,430,663	38,100

1. ULI- 2002 data with 3.5% annual inflation for 2020 forecast.
2. Birchler Arroyo Associates, Inc. estimates that 50% of neighborhood community item purchases 25% of regional item purchases made by Township residents could take place within the Township.

As reflected in Table 2-14 above, with \$38,190,891 estimated (50% of forecasted 2020 convenience expenditures assumed to be spent within the community) available for convenience spending within the Township in 2020, Lenox Township could support 75,626 square feet of neighborhood retail. Based on the population projections and forecast expenditures available, 102,088 square feet of community comparison and 38,100 square feet of regional comparison shopping could be supported by the Township.

Supporting Population

A general comparison with the results of the retail spending analysis can be made using an analysis of the supporting population in the Township. As the table below illustrates, neighborhood retail centers are the smallest and serve the daily needs of nearby residents by providing basic goods and services, such as groceries, hardware, dry cleaning, banking, etc. A population of 5,000 - 10,000 people living within a five to ten minute drive is generally required to support such a development.

Table 2-15
Shopping Center Classifications
GLA Based on Supporting Population

Type	Leading Tenant	General Range (Typical GLA)	Minimum Site	Supporting Population	GLA Based on Lenox 2020 Population
Neighborhood (Convenience)	Supermarket	30,000 - 100,000 sq. ft. (50,000 sq. ft.)	3 - 10 ac.	5,000 - 10,000	30,000-100,000 sq. ft.
Community (Minor Comparison)	Junior Dept. or Discount Store	100,000 - 300,000 sq. ft. (150,000 sq. ft.)	10 - 30 ac.	20,000 - 60,000	0
Regional (Major Comparison)	1 or more Full Line Dept. Store	300,000 - 900,000 sq. ft. (400,000 sq. ft.)	30 - 60 ac.	60,000 - 100,000	0

Source: Shopping Center Development Handbook, 2nd edition, Urban Land Institute

Based on the previous analysis, Lenox Township’s projected 2020 population of 15,000 could support between 30,000 sq. ft. and 100,000-sq. ft. of neighborhood commercial development. Population projections do not reflect an adequate supporting population for Community Commercial or Regional Commercial development within the Township.

Table 2-16
Summary of Commercial Development Forecast Methods

SUMMARY	GLA Based on Retail Spending Analysis	GLA Based on Lenox Township Support Population Analysis
Neighborhood (Convenience)	75,626	30,000 – 100,000 sq. ft.
Community (Minor Comparison)	102,088	0
Regional (Major Comparison)	38,100	0

According to *Urban Planning and Design Criteria*, neighborhood commercial developments typically need approximately one acre per 12,500 square feet of space, community commercial developments typically need approximately one acre per 15,000 square feet, and regional centers need approximately one acre per 13,300 square feet. Based on the summary table above, in order to provide for neighborhood convenience shopping within Lenox, 2 to 8 acres of land would be needed, 0 to 2.2 acres is needed for community commercial development, and 0 to 1.9 acres for regional shopping. The total amount of land area planned for retail may need to be larger than these numbers because of three key factors: 1) business generated by the Gratiot Corridor pass-by, non-resident traffic; 2) limitations on total buildable area due to wetlands, steep slopes, woodland preservation, and the like, and 3) the per capita income for the Township is likely higher than that reported by the Census due to the inclusion of New Haven Village statistics in the total, therefore it is likely that the Township’s per capita income is closer to that of the County (\$24,446).

Industrial Development

The demand for industrial development is related to many factors including materials, labor, transportation, energy, and public policy. Industrial developers examine the availability of utilities, affordable housing for the work force, suitable characteristics of the land, and good transportation access.

There are two common methods of forecasting future industrial needs for an area: 1) based on total population, and 2) based on total land area. According to *Urban Planning and Design Criteria*, a typical planning standard for industry is 12 acres per 1,000 population. Based on an estimated 2010 population of 10,000 for Lenox Township, approximately 120 acres of industrial land can be supported within the community. The total land area method forecasts that within a rural community

industrial land typically consumes 2-5 percent of total land area. Two percent of the estimated 22,480 acres of land area within the community equals roughly 450 acres.

Given the rural character of Lenox and the impact of existing intensive land uses within the community, a range between the total population and the total land area methodologies may be a more appropriate estimate for forecasting the Township's need for industrial land.

Office Development

There are two types of office buildings: single-tenant and multi-tenant. Single tenant buildings can be located in almost any location satisfactory to the tenant, who may often be the building owner. Multi-tenant office buildings, which are often built on the speculation that tenants will be found, are much more tied to market factors. Multi-tenant office developers look at access, proximity to professional and clerical labor, parking, transit opportunities, proximity to professional and personal services and the overall "image" of the community.

Close to half (44%) of the employed residents of Lenox (1,568) work in professions that typically occur within an office setting (i.e. managerial, technical, sales, etc.). In addition, the census reported that the median travel time for employed residents was 30 minutes to their workplace. Assuming that this commuting pattern occurs evenly among all office professions, 878 office professionals work within relative proximity to Lenox Township.

The Urban Land Institute estimates that approximately 202 square feet of office space is needed per employee. Based on this projection and the estimate of office employees within close proximity to Lenox Township, approximately 177,356 square feet of office space could be supported within the Township. However, it is not reasonable to expect that multi-tenant office buildings would be marketable at present, nor that a significant portion of Lenox residents would suddenly find their office jobs relocated to the Township. Small professional office, medical office, and combination office/industrial buildings are likely to be more viable within the community over the next 15-20 years.