

**Lee County MPO Rail Feasibility Study
Contract 2012-001**



Technical Report

**Estimates and Projections of
Existing and Future Land Uses in Lee County**

August 15, 2013

**Prepared by:
Spikowski Planning Associates**

1. Report Summary

This report identifies sources for estimates and projections of existing and future land use in Lee County from available plans and studies.

Six potential sources for this type of data have been identified:

- Lee County Metropolitan Planning Organization
- Florida DOT / InfoGroup
- Lee County Property Appraiser
- Lee County Planning Division
- United States Census Bureau
- Bureau of Economic and Business Research at the University of Florida

Each source is discussed separately in this report.

2. Introduction

Local government comprehensive plans are based on various analyses of existing land use data and on forecasts of the future population. For present purposes, these plans are not the best data sources, for several reasons:

- Plans for towns and cities focus on the incorporated areas they serve, rather than Lee County as a whole.
- Plans for counties focus on the unincorporated area where the Board of County Commissioners has municipal jurisdiction.
- Comprehensive plans are updated on irregular schedules, thus their data on existing land uses may be recent, old, or completely obsolete. Their population forecasts often are based on the target year for MPO plans, which can be a unifying factor among plans. However, because of irregular update schedules, this target year can easily vary by five, ten, or even more years.

3. Lee County Metropolitan Planning Organization

The Lee County Metropolitan Planning Organization covers all of Lee County, both incorporated and unincorporated land. State and federal agencies require long-range transportation plans to be completely updated every five years. For these two reasons, MPO plans are a prime source of data for existing land uses and forecasts of future land uses.

The Lee County MPO's most recent long-range transportation plan was adopted in December 2010. Extensive data is included about the magnitude and location of existing land uses (defined as the year 2007) and projected land uses for the year 2035.

All of this data is organized by Traffic Analysis Zone (TAZ). There are about 1,260 TAZs in Lee County. All data is available for both Lee and Collier Counties because the most recent travel simulation model used by the MPO included both counties.

There are several factors, however, that caution against excessive reliance on this data.

The first factor is that the base year of 2007 was so many years after the previous U.S. Census, which was conducted in 2000. That seven-year period saw the largest increment of growth in Lee County's history. Although the Lee County Planning Division monitors growth on an annual basis, including growth in large portions of incorporated areas, that database was not used in compiling the 2007 base year data. Instead, much of the presumed 2007 data was an interpolation between 2000 census data and prior growth projections for 2030,¹ irrespective of actual growth patterns during the boom years leading up to 2007.

Land use projections for 2035 were compiled in the same format as the 2007 data and organized by the same TAZ boundaries.

The obvious difficulty in forecasting future growth in the aggregate is eased by relying on the latest official population projections from the Bureau of Economic and Business Research (BEBR) at the University of Florida. BEBR prepares three sets of projections for each five-year increment: a low, medium, and high projection. The medium projection is typically relied on as a reasonable forecast of population growth.

Given this benchmark, corresponding forecasts of growth in employment are then prepared. Shares of these forecasts are then assigned to individual TAZs. This process is conducted by professionals retained either by MPOs or by state DOTs, sometimes with direct involvement or oversight by local planners but generally with no oversight by citizens or public officials.

To visualize the spatial distribution of land uses from the most recent MPO plan, two maps of Lee County have been prepared for this report and are provided on the following pages.

The first map shows in red the approximate distribution by TAZ of dwelling units in 2007. Additional dwelling units expected by 2035 are shown in green. Each dot represents 20 dwelling units. The dots are displayed randomly within each TAZ.

The second map shows corresponding data for employment in 2007 (red) and 2035 (green). Each dot represents 20 employees. Again, the dots are displayed randomly within each TAZ.

The Seminole Gulf rail corridor is shown on each map so that its physical relationship with land use concentrations is easily apparent.

¹ 2007 Lee/Collier County Travel Demand Model Validation Report, Florida Department of Transportation, August 2010, pages 12 and 19.





4. Florida DOT / InfoGroup

Florida DOT acquired an important database of businesses in the year 2010 to aid Florida MPOs in understanding local employment patterns. The database was compiled by InfoGroup, a private vendor formerly known as InfoUSA and American Business Information.

The database has been refined by Florida DOT to organize data on number of employees and the type of business into three categories, sortable by the physical location of each business: industrial employees, commercial employees, and service employees. This locational data can be grouped into Traffic Analysis Zones (TAZ) to provide base-year data for the MPO's next travel simulation model.

To visualize the spatial distribution of employment from the InfoGroup database, a map of Lee County and northern Collier County has been prepared for this report and is provided on the following page. The InfoGroup database provides the presumed location of employees for each business, allowing this map to be more precise than the maps on the previous pages which displayed data with a random pattern of dots within TAZs. The number of employees on this map is represented by dots whose sizes are proportional to the number of employees at each location. In a map of this scale, the proportional dots in areas of dense employment overlap considerably, reducing the apparent density of employment. Maps of this type can overcome that limitation by showing smaller areas, but this map intentionally shows the entire Seminole Gulf rail corridor to visualize at a glance the corridor's physical relationship to employment in Lee and northern Collier County. (Several database errors in the location of large employers have been corrected on this map; additional refinement will be needed before using this data in the next MPO travel simulation model.)

5. Lee County Property Appraiser

County property appraisers maintain data about the use of all parcels of land in their counties.

The Florida Department of Revenue requires classification of every parcel using its own two-digit land use codes (for instance, 00 means vacant residential; 01 means single family, 02 means mobile homes; 03 means multifamily of 10 units or more; 04 means condominium). The Lee County Property Appraiser also maintains a second classification of every parcel using with an expanded version of the state's coding system. For instance, "01" single-family codes are expanded to indicate whether the home is on a golf course, island, canal, or creek, or whether it is on a rural parcel.

Certain shortcomings of both data sources should be noted. Certain critical information not needed for appraisal purposes is often missing or provided inconsistently, for instance the number of dwelling units in apartment buildings. The records for commercial and industrial uses are designed for appraisal purposes and have been applied by different officials over time with inconsistent results. In some cases, insufficient detail is available for creating estimates of employment. Public buildings are not subject to real estate taxes and often have little data provided, even though they may be major sources of employment.

Despite these limitations, this information is provided on an annual basis for every parcel of land, making it extremely valuable for planning purposes that need parcel-level detail.



6. Lee County Planning Division

The Lee County Planning Division supplements the property appraiser's parcel-level data with additional information.

This inventory is not updated annually and is less detailed in municipalities. Despite these limitations, this inventory is the most reliable source of data on the current number of dwelling units, the acreage and current uses of farmland, and details of recently completed construction.

This data is compiled in Access databases and can be linked to GIS mapping.

7. U.S. Census Bureau

A highly reliable source of spatial data is available from the United States Census Bureau. Census data only describes existing conditions; future-year projections or forecasts are not provided.

Every ten years, the population of the United States is assessed as to its basic characteristics such as place of residence and age, race, and gender. Results are provided to the public at various geographic scales, the smallest of which is a census block, which can correspond to areas as small as a city block. Data that would violate personal privacy is not provided at that scale. More data is available at larger geographies such as block groups or census tracts.

Until 2010, the decennial census also surveyed a portion of the population with many additional questions, known as the census "long form." Beginning in 2010, these additional questions were no longer included, having been replaced by a continuous sampling technique known as the American Community Survey (ACS). The ACS provides more timely demographic, housing, social, and economic statistics, many of which are critical for transportation planning.

A special tabulation of data for transportation planning is known as Census Transportation Planning Products (CTTP). The CTTP had been based on the census long form, but now has begun to rely on newer ACS data.

CTTP data provides several unique views that are highly valuable for transportation planning:

- Residence-based tabulations summarizing worker and household characteristics.
- Workplace-based tabulations summarizing worker characteristics.
- Worker flows between home and work, including travel mode.

The next CTTP will be based entirely on the latest 5 years of ACS data (2006-2010) and will be released in August 2013. Data will be provided in small geographic units including census tracts and Transportation Analysis Zones (TAZs).

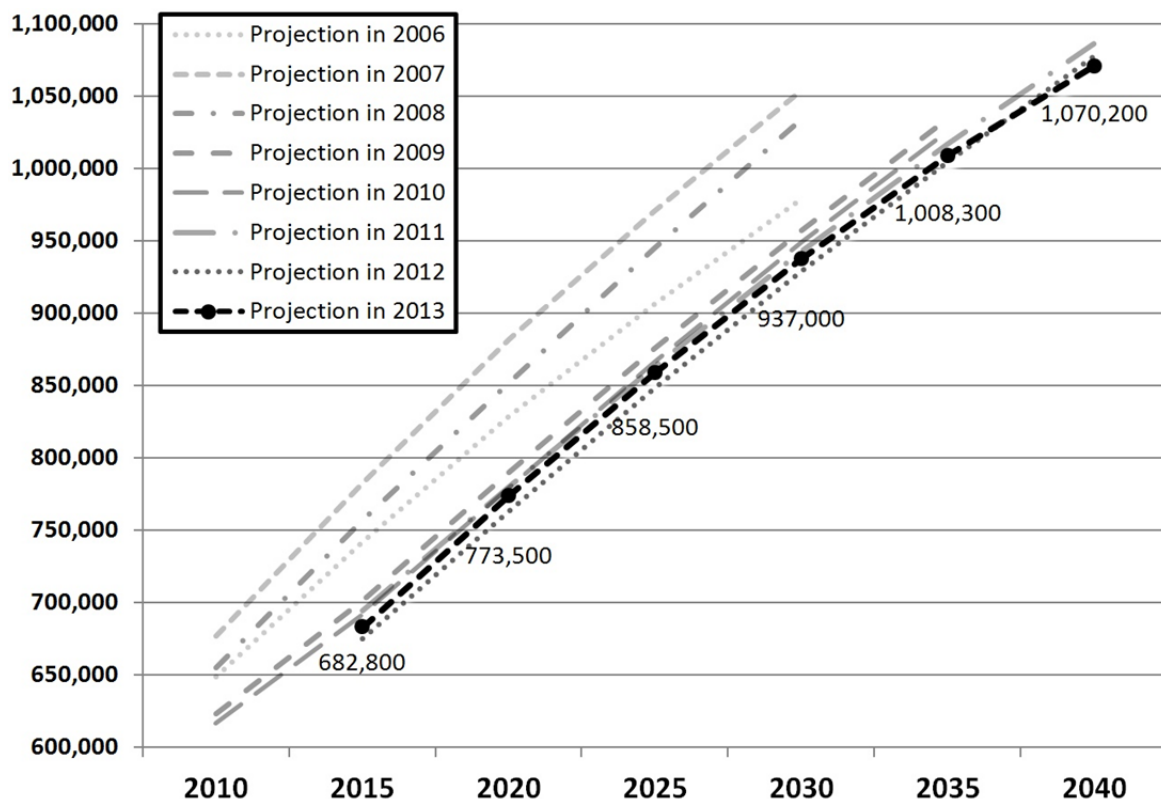
8. Bureau of Economic and Business Research at University of Florida

The Bureau of Economic and Business Research (BEBR) at the University of Florida is a primary source for population data. One important publication provides annual population estimates for Florida cities and counties. Many revenue-sharing decisions are based on these annual estimates, so they are carefully prepared and frequently scrutinized by local governments across the state.

Another important product contains future population projections for Florida counties. These are provided in five-year increments and include low, medium, and high projections. The medium projection is typically relied on as a reasonable forecast of population growth. Until 2012, Chapter 163 of the Florida Statutes endorsed the use of BEBR medium projections in county comprehensive plans.

BEBR tries not to overreact to current economic conditions when preparing these projections. During a 30-year projection period, multiple booms and busts are inevitable, but their timing and severity cannot be predicted. BEBR projections are focused on long-term outcomes more than accuracy at any particular point during the projection period.

Nonetheless, the severity of the Great Recession has dramatically altered the BEBR projections in recent years. The chart below shows the eight most recent annual medium projections for Lee County. The projections were still rising in 2007, but by 2008 the severity of the recession caused continuous drops in the projections through 2012. The 2013 projections show slight increases through 2035.

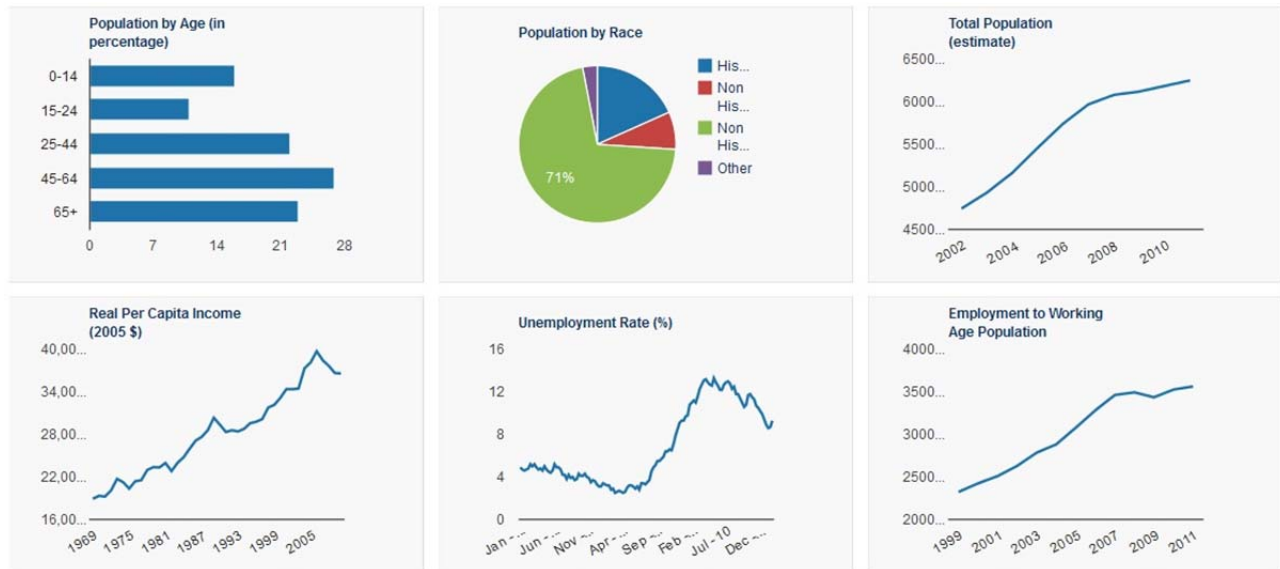


The medium projections for each county are also broken down by age, sex, race, and Hispanic origin. The detailed 2013 breakdown for Lee County is provided below.

Population Projections by Age, Sex, Race, and Hispanic Origin for Florida and Its Counties, 2015–2040, With Estimates for 2012

County and State	Age/ Sex	Census 2010	Estimates 2012	Projections						
				2015	2020	2025	2030	2035	2040	
LEE										
All Races	Total	618,754	638,029	682,822	773,539	858,524	936,972	1,008,350	1,070,250	
	0-4	32,866	33,610	35,737	39,406	44,576	48,044	51,808	53,869	
	5-17	88,003	89,364	93,997	104,172	112,164	121,702	132,283	141,431	
	18-24	47,476	49,303	53,430	56,326	64,324	65,521	70,277	73,082	
	25-54	218,111	222,206	234,183	255,582	283,113	307,826	340,332	357,648	
	55-64	87,192	91,964	101,113	115,321	122,035	116,689	121,604	130,327	
	65-79	108,041	112,995	122,726	161,337	177,041	215,335	212,343	228,147	
	80+	37,065	38,587	41,636	41,395	55,271	61,855	79,703	85,746	
	Female	315,154	325,312	348,577	395,403	439,013	479,161	515,070	546,040	
	0-4	16,076	16,452	17,511	19,309	21,842	23,541	25,386	26,396	
	5-17	42,926	43,584	45,832	50,819	54,847	59,547	64,734	69,198	
	18-24	23,447	24,362	26,412	27,705	31,621	32,121	34,793	35,920	
	25-54	109,603	111,474	117,180	127,603	141,764	154,261	171,025	180,317	
	55-64	46,864	49,249	53,888	60,246	62,522	59,426	61,743	66,072	
	65-79	55,292	58,585	64,727	86,552	95,800	114,651	111,611	118,251	
	80+	20,946	21,606	23,027	23,169	30,617	35,614	45,778	49,886	
	Non-Hispanic White	Total	444,472	453,159	474,559	517,317	557,570	594,678	628,386	658,330
		0-4	16,098	16,202	16,657	17,263	18,731	19,276	19,959	20,206
		5-17	47,995	47,263	47,039	49,149	49,897	53,370	56,284	59,749
		18-24	27,967	28,299	29,324	28,038	30,481	29,029	31,719	31,922
25-54		144,464	144,784	147,934	150,186	162,088	171,451	190,193	195,840	
55-64		74,704	77,976	84,323	91,801	92,216	82,544	83,799	91,269	
65-79		98,424	102,566	110,673	143,463	154,317	183,748	175,938	184,100	
80+		34,820	36,069	38,609	37,417	49,840	55,260	70,494	75,244	
Female		228,364	233,106	244,525	267,168	287,883	306,889	323,218	337,529	
0-4		7,864	7,925	8,162	8,459	9,178	9,445	9,780	9,901	
5-17		23,322	22,938	22,786	23,839	24,370	26,054	27,513	29,162	
18-24		14,184	14,259	14,638	13,870	14,869	14,392	15,725	15,864	
25-54		73,203	73,200	74,546	75,324	81,412	85,872	95,495	98,225	
55-64		40,152	41,825	45,105	48,290	47,280	41,835	42,220	46,195	
65-79		50,053	52,871	58,076	76,585	83,378	97,701	92,247	94,585	
80+		19,586	20,088	21,212	20,801	27,396	31,590	40,238	43,597	
Non-Hispanic Black		Total	50,074	52,405	57,573	68,226	78,241	87,555	95,953	103,075
		0-4	4,700	4,870	5,275	5,941	6,604	7,068	7,612	7,877
		5-17	12,182	12,359	13,012	14,888	15,963	17,501	18,789	20,233
		18-24	5,503	5,874	6,606	6,850	8,141	7,978	8,916	9,111
	25-54	19,534	20,338	22,197	26,532	30,381	34,455	37,643	40,545	
	55-64	4,149	4,583	5,391	6,928	8,015	8,909	9,706	10,390	
	65-79	3,184	3,462	3,998	5,669	7,255	9,351	10,207	11,384	
	80+	822	919	1,094	1,418	1,882	2,293	3,080	3,535	
	Female	26,060	27,281	29,989	35,549	40,806	45,674	50,010	53,660	
	0-4	2,382	2,432	2,583	2,904	3,222	3,442	3,707	3,836	
	5-17	6,101	6,211	6,559	7,398	7,876	8,536	9,194	9,870	
	18-24	2,868	3,028	3,369	3,507	4,138	4,047	4,426	4,514	
	25-54	10,195	10,657	11,697	14,062	16,152	18,304	19,914	21,291	
	55-64	2,254	2,471	2,881	3,580	4,192	4,780	5,267	5,660	
	65-79	1,743	1,912	2,233	3,241	4,096	5,141	5,597	6,289	
	80+	517	570	667	857	1,130	1,424	1,905	2,200	
	Hispanic	Total	113,308	121,033	138,112	173,012	205,601	235,720	263,166	286,449
		0-4	11,396	11,807	12,959	15,141	17,937	20,166	22,586	24,078
		5-17	25,940	27,754	31,736	37,379	43,101	47,038	53,138	57,062
		18-24	13,190	14,221	16,413	20,193	24,082	26,783	27,706	30,074
25-54		49,106	51,958	58,593	72,603	83,757	94,434	104,316	112,449	
55-64		7,070	8,048	9,880	14,794	19,896	23,299	25,987	26,407	
65-79		5,387	5,871	6,861	10,672	13,703	20,200	23,976	30,185	
80+		1,219	1,374	1,670	2,230	3,125	3,800	5,457	6,194	
Female		54,690	58,603	67,130	84,490	101,033	116,354	130,625	142,815	
0-4		5,492	5,731	6,350	7,419	8,789	9,881	11,067	11,798	
5-17		12,528	13,410	15,342	18,172	20,969	23,042	25,965	27,952	
18-24		5,975	6,602	7,842	9,678	11,768	12,775	13,648	14,530	
25-54		23,328	24,677	27,818	34,674	40,354	45,981	51,152	56,024	
55-64		3,705	4,157	5,023	7,383	10,002	11,739	13,075	12,947	
65-79		2,937	3,208	3,759	5,847	7,315	10,656	12,510	15,968	
80+		725	818	996	1,317	1,836	2,280	3,208	3,596	

BEBR also provides a regularly updated data sheet for each county that describes key demographic and economic data and recent trends. The latest version is shown below.



	Nov - 11	Dec - 11	Jan - 12	Feb - 12	Mar - 12	Apr - 12	May - 12			
Employment	253,762	253,831	253,704	255,127	257,034	254,458	256,286			
Gross Sales	1,275,625,285	1,378,303,702	1,817,989,137	1,573,403,759	1,603,951,483	1,857,995,375	1,501,497,123			
Labor Force	283,519	282,561	281,507	281,597	282,278	278,374	281,212			
Multi-Family Building Permits	258	15	4	14	NA	NA				
Single-Family Building Permits	97	61	93	124	180	126				
Tax Collected	45,005,549	51,312,206	58,401,950	55,149,258	59,696,164	66,516,016	52,767,714			
Taxable Sales	722,658,058	820,145,122	984,251,348	902,820,646	958,734,567	1,096,631,384	886,847,264			
	Aug - 11	Sep - 11	Oct - 11	Nov - 11	Dec - 11	Jan - 12	Feb - 12	Mar - 12	Apr - 12	May - 12
Unemployment Rate	11.50	11.30	10.70	10.50	10.20	9.90	9.40	8.90	8.60	8.70
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Employment to Working Age Pop	55	55	54	50	50	51	50	52	47	50
Per Capita Income	31,648	32,449	36,079	38,167	41,089	40,937	41,766	40,483	41,094	
Real Per Capita Income (2005 \$)	34,395	34,481	37,363	38,167	39,749	38,479	37,693	36,682	36,620	
Working Age Population	262,935	278,534	288,324	307,939	328,314	346,475	349,567	343,800	352,779	356,502
BEBR Estimate	474,380	493,147	516,435	545,931	574,310	597,156	608,210	612,169	618,754	625,310