

Chapter 5 | Current Demographics, Land Use, and Travel Patterns

Chapter 5 provides a broad overview of the Capital Region, beginning with a look at basic demographics, such as population, employment, and economic data. The chapter identifies land use development and commute patterns across the region, and explores their interrelatedness. Particular attention is placed upon how transportation can support or undermine the region’s economic vitality. Finally, Chapter 5 looks at the relationship between transportation and housing affordability, through the lens of the Housing and Transportation Affordability (H + T) Index.

5.1 | Current Population Trends in the Capital Region

Table 5-1 shows the current 2015 population by Parish. East Baton Rouge Parish is the largest Parish with a population of close to 450,000. The five-parish region grew by about 100,000 population between 2000 and 2010. During this time, the region grew 10 times the state average at an annual growth rate of 1.52%. The region’s highest growth rate has occurred in the suburbs, particularly in Ascension and Livingston Parishes. Table 5-2 shows the population growth rates between 2000 and 2010, and between 2010 and 2015. Even though the population growth seems to have slowed down after 2010, Capital Region is still growing faster than the state average. Regional growth continued to occur more in the suburban parishes than the urban core.

Table 5-1: Population, 2015

Ascension Parish	East Baton Rouge Parish	Iberville Parish	Livingston Parish	West Baton Rouge Parish	Louisiana
119,455	446,753	33,095	137,788	25,490	4,670,724

Source: U.S. Census Quick Facts, 2015; Wikipedia.

Table 5-2: Growth 2000-2010; 2010-2015

	Ascension Parish	East Baton Rouge Parish	Iberville Parish	Livingston Parish	West Baton Rouge Parish	Louisiana
Annual Growth Rate 2010-2015	2.15%	0.27%	-0.16%	1.41%	1.29%	0.55%
Annual Growth Rate 2000-2010	3.95%	0.67%	0.01%	3.91%	1.11%	0.16%

Source: US Census Community Facts 2010 and 2000.

5.2 | Special Populations and Mobility Needs

Transit-Dependent Populations

Elderly and disabled populations in all locations often cannot drive, may not be able to drive significant distances and/or do not own or have access to personal vehicles. Both groups thus face major transportation challenges. This is especially true in communities that lie outside of city centers. Transportation services for elderly populations are provided by parish Councils on Aging (COAs). Some COA’s provide rural transit for the general public across the entire parish. Other parishes in the planning area provide limited transportation services for the elderly and disabled only.

The U.S. Census only provides age group figures, such as population over 65 group and median age of that group, for the more urbanized parishes of East Baton Rouge, Livingston and Ascension.

Table 5-3: Population Over 65

Parish	Total Population	Population 65 and over	Percent of Population	Median Age 65 and over
Ascension	112,308	10,669	9.50%	71.9
East Baton Rouge	443,598	51,901	11.70%	73.2
Iberville	33,375	4,272	12.80%	-
Livingston	132,160	14,273	10.80%	72.2
West Baton Rouge	24,347	2,824	11.60%	-

Source: US Census American Community Survey; American Fact Finder. 2014 5-Year Estimates.

Table 5-4: Disabled Population

Parish	Total Population	Physical Disability	Est. % of Total Pop
Ascension	111,467	13,151	11.80%
East Baton Rouge	440,358	55,274	12.55%
Iberville	29,619	5,047	17.04%
Livingston	131,253	19,409	14.79%
West Baton Rouge	23,715	3,368	14.20%

Source: US Census American Community Survey; 2014 5-Year Estimates

Universe: Civilian noninstitutionalized population

As we move into the future, consideration of mobility needs must include these groups to ensure that we provide opportunities for employment, access to needed services, and to maintain and improve community cohesion.

School Age Population

Schools are significant traffic generators. School buses stop and start with resulting morning and afternoon travel delays and traffic congestion. Many younger students who do not ride the bus are dropped off before school and picked up after school in personal vehicles. This can cause significant traffic congestion and potential for traffic incidents and conflicts with waiting vehicles parked along the sides of streets and roads.

Around high schools, young and inexperienced drivers in their own vehicles can increase the incidence of traffic conflicts and crashes.

As shown on the table below, the CRPC MPO has 199 public and 61 private K12 schools. The area also has 2 public colleges, 4 public technical colleges and two public community colleges. Enrollment in pre-school, elementary, middle, and high schools together has an enrollment of over 130,000 students. Table 5-5 shows the enrollment in technical, community and public colleges in the CRPC MPO region. Total school and college enrollment in the Capital Region is close to 190K.

Table 5-5: Capital Region MPO School Enrollment 2015

Parish	Enrollment	#Public Schools	#Private Schools
Ascension	21,055	27	4
East Baton Rouge	76,256	113	51
Iberville	4,836	8	1
Livingston	24,710	41	2
West Baton Rouge	4,357	10	3
Total	131,214	199	61

Source: CRPC-MPO Travel Demand Model, 2017

Table 5-6: Capital Region College Enrollment 2015

Parish	College Enrollment
Ascension	2,916
East Baton Rouge	53,820
Iberville	0
Livingston	0
West Baton Rouge	0
Total	56,736

Source: CRPC-MPO Travel Demand Model, 2017

Limited English Proficiency (LEP) Populations

This term refers to individuals with limited English proficiency (LEP), defined as not speaking English as their primary language and having limited ability to read, write, speak or understand English. In the CRPC MPO study area, such individuals are primarily Spanish speakers, with a limited number of older Vietnamese speakers.

Depending on their size and locations, linguistically isolated populations can trigger the requirement to provide translation services to reduce language barriers that could exclude them from participating in or benefitting from any program or activity that receives Federal financial assistance. As a recipient of federal assistance, the MPO is required to take reasonable steps to ensure meaningful access and input by LEP persons.

The table below shows percentages of households in CRPC MPO parishes that use a language other than English at home and self-report as speaking English “Not Well” or “Not at All”.

Table 5-7: Percent LEP Households

Parish	Language Other than English	Speak English “Not Well” or Not at All”
Ascension	7.1%	1.01%
East Baton Rouge	7.9%	1.26%
Iberville	3.7%	0.61%
Livingston	4.4%	0.51%
West Baton Rouge	4.2%	0.80%

Source: U.S. Census. American Community Survey. 2014 5-Year Estimates

Universe: Population over 5 years of age

The CRPC MPO maintains a Title VI plan which adheres to the federal requirements for accommodation of Limited English Proficiency (LEP) individuals. The Title VI plan is updated annually. CRPC MPO has followed U.S. Department of Justice guidance using a “four-factor analysis” process to determine the number and proportion of LEP individuals in the region and how to cost effectively provide information services to these individuals. The guidance also offers a safe harbor of 5% of the effected population or 1,000 people in the effected neighborhood, with only document translation required.

Ethnicity

The MPO Study area is home to a large minority population. Iberville Parish and the City of Baton Rouge are both have large Black-African American populations, while Ascension Parish has significant percentage of Mexican, Cuban, and other Hispanic nationalities.

Table 5-8: Ethnicity

Parish	Total Pop	White	Black-African American	American Indian	Asian	Hispanic
East Baton Rouge	443,598	48.8%	45.5%	0.2%	3.1%	3.8%
West Baton Rouge	24,347	59.8%	37.3%	0.3%	0.5%	2.6%
Livingston	132,160	91.4%	5.9%	0.4%	0.4%	3.2%
Ascension	112,308	74.4%	22.4%	0.2%	1.1%	4.9%
Iberville	33,375	49.2%	48.7%	0.1%	0.1%	2.3%

Source: US Census American Community Survey; American Fact Finder. 2014.

Income and Poverty

The following table illustrates median income for parishes within the study area. Poverty is a significant concern, particularly in the City of Baton Rouge, where some areas report over 40% of residents living in poverty. Poverty typically limits transportation options, which can limit access to jobs, medical services, and shopping for food and other basic needs.

Baton Rouge also has the highest concentration of carless households in the region, making many residents dependent on public transit. Transit services are discussed in more detail in Chapter 8. (Note: concentrations of low income residents in Baton Rouge near universities are often transitional/temporary students, rather than full-time residents.)

Table 5-9: Median Income and Poverty

Parish	Median Household Income	Percent Below Poverty
Ascension	\$48,535	12.8%
East Baton Rouge	\$49,202	19.3%
Iberville	\$57,478	19.6%
Livingston	\$70,207	13.7%
West Baton Rouge	\$45,692	18.9%
Louisiana	\$44,991	19.6%

Source: U.S. Census. American Community Survey. 2014 5-Yr Estimates

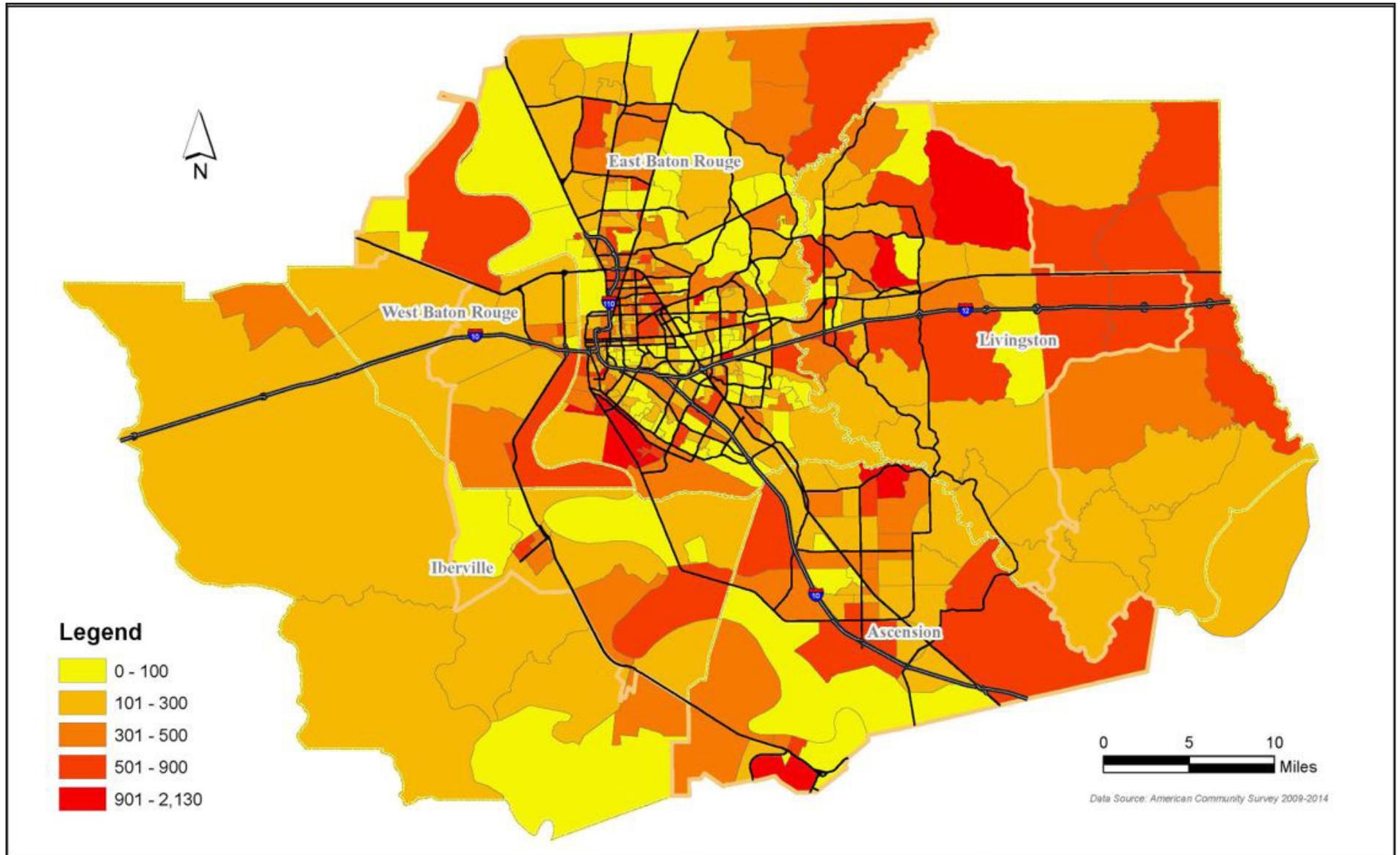


Figure 5-1: Population below Poverty Level

5.3 | Economy and Employment

The CRPC-MPO has a strong and varied economic base. Although the region houses only 14% of the state’s population, it employs approximately 19% of its workforce. Louisiana State University (LSU), located in the heart of Baton Rouge, is the state’s flagship university and the region’s largest employer. Other major private sector employers include Exxon Mobile, CB&I, and Our Lady of the Lake Regional Medical Center.

As the state capital city, Baton Rouge workforce also includes many state workers and civil servants. Some of the largest public sector employers include the Louisiana Departments of Revenue, Education, and Transportation and Development, and the State Police.

Table 5-10: Employment Classifications

Parish	Total Employment	Retail Employment	Agriculture, Mining, and Construction Employment	Manufacturing, Transportation/ Communications/ Utilities, & Wholesale Trade	Government, Office, and Services	Other Employment
Ascension	50,048	10,868	4,005	12,910	22,180	84
East Baton Rouge	291,766	57,246	18,126	30,928	184,392	1,073
Iberville	13,270	1,913	588	4,612	6,102	55
Livingston	26,447	8,155	1,858	2,302	14,051	81
West Baton Rouge	14,389	2,801	2,068	4,582	4,834	105
Grand Total	395,920	80,983	26,645	55,335	231,558	1,398

Source: CRPC MPO Travel Demand Model 2017

A complete list of major, regional employers can be found in the Existing Conditions documents with the appendices on CRPC website at (<http://crpcla.org/move2042/>).

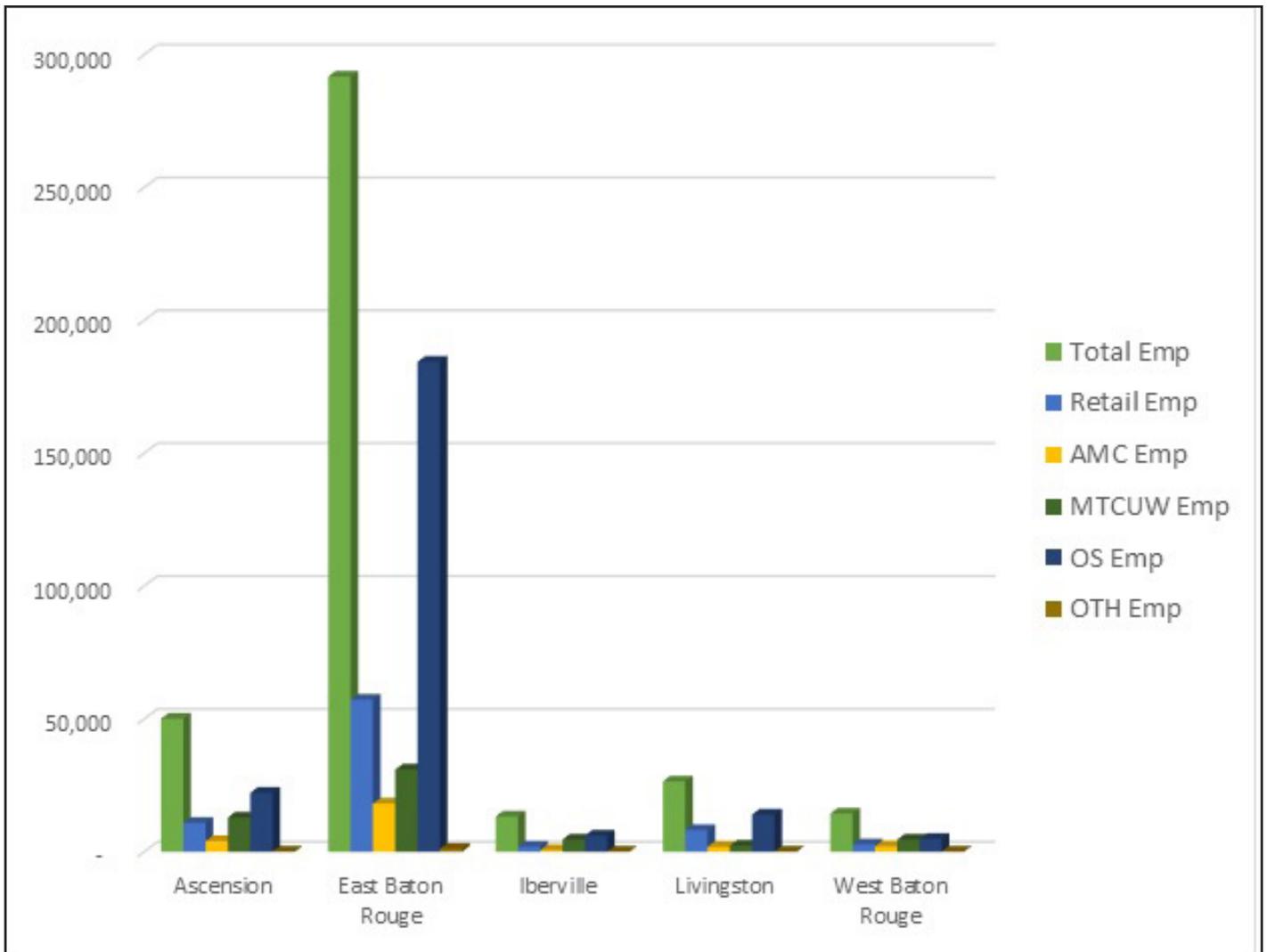


Figure 5-2: Employment by Parish

5.4 | Employment Density

Clustering of employment centers significantly impact commute patterns, which in turn affect regional traffic volumes, peak- hour travel times, and overall congestion. As shown below, employment in the CRPC-MPO area concentrates in East Baton Rouge Parish, and, to a lesser but growing extent in Livingston and Ascension Parishes. Employment tends to concentrate along the Mississippi River and major road and highway corridors.

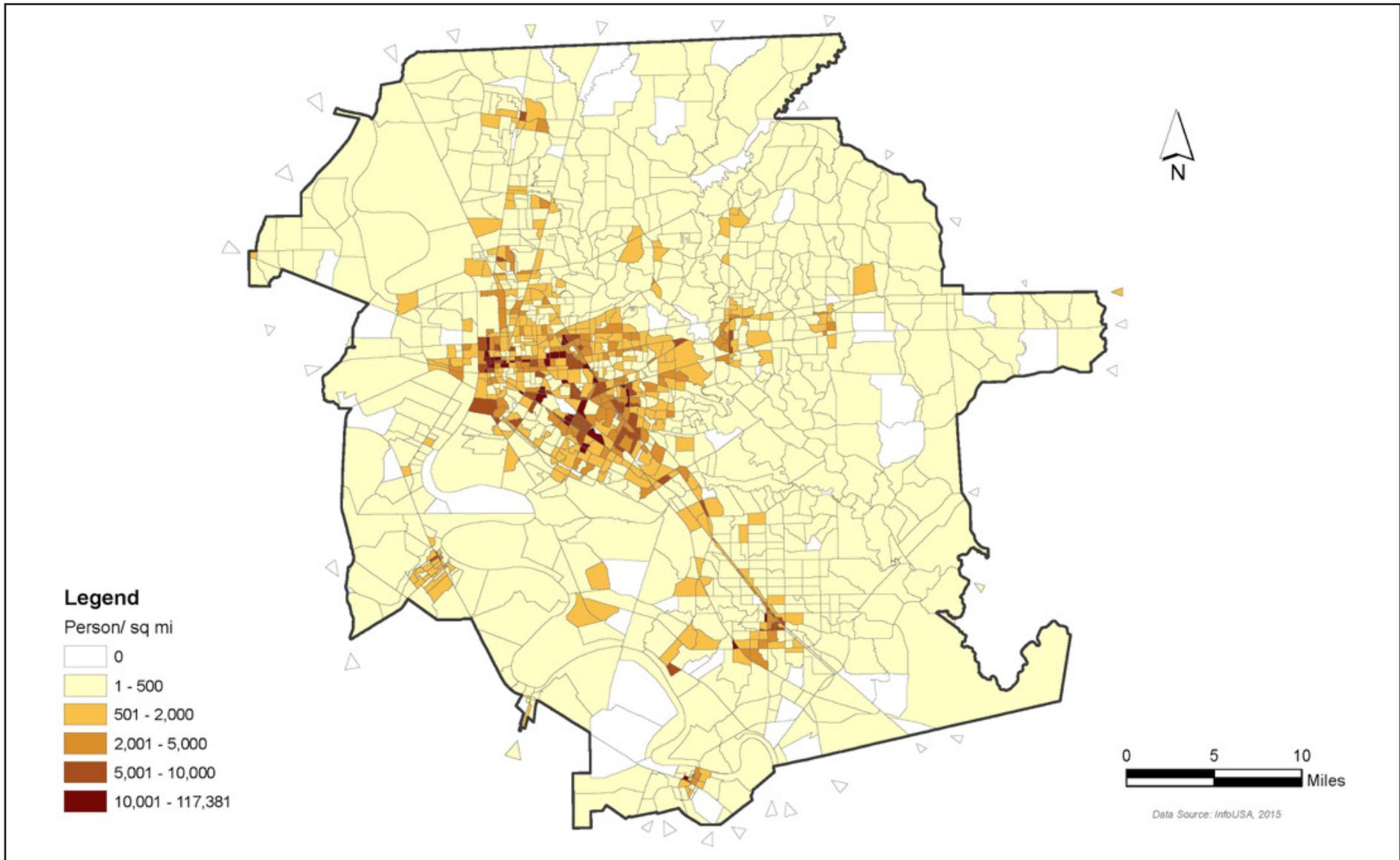


Figure 5-3: Regional Employment Density

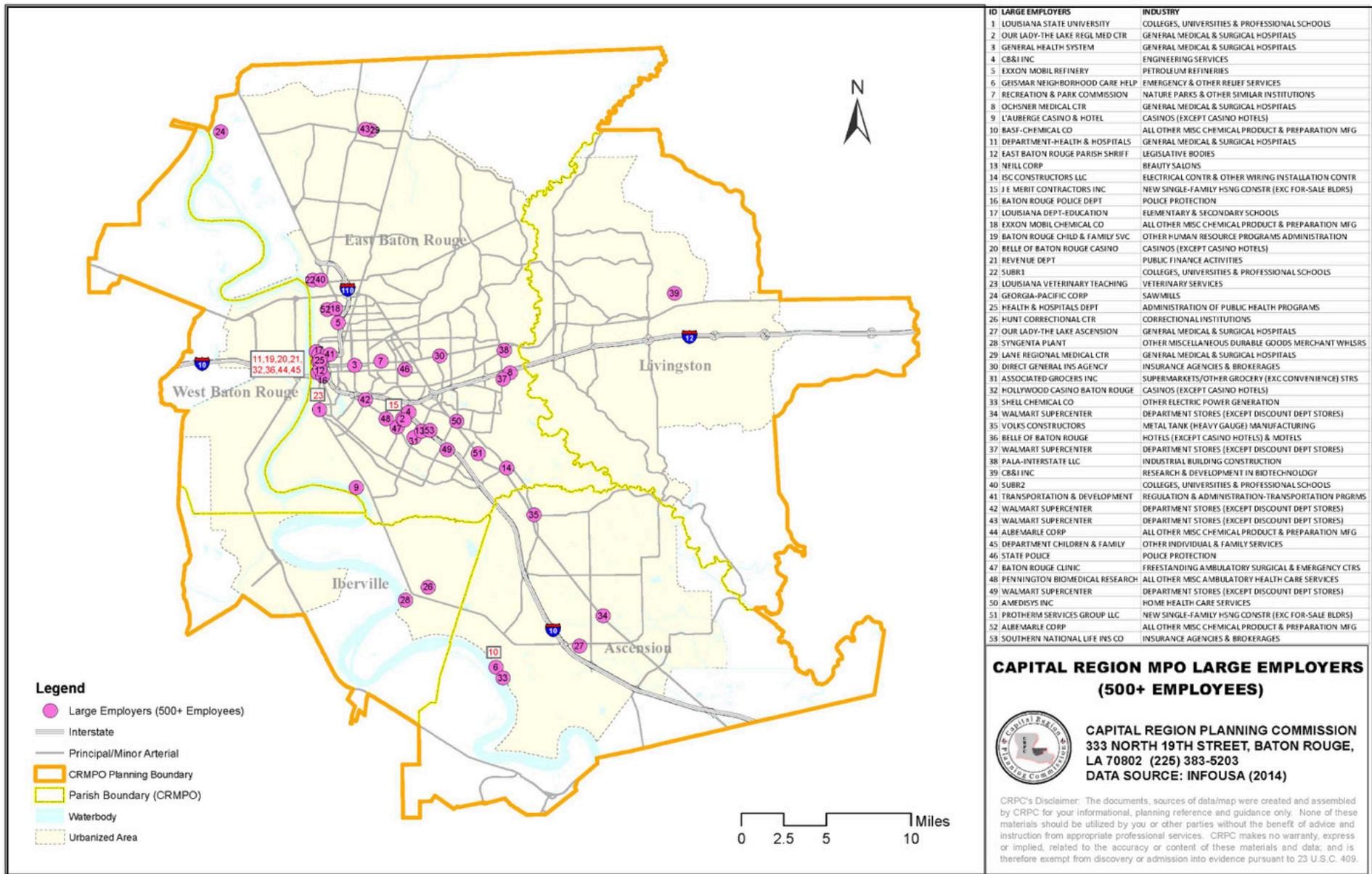


Figure 5-4: Regional Large Employers

5.5 | Mobility, Economic Competitiveness, and the CRISIS Coalition

As the Capital Region grows, the ability of the transportation system to adequately handle the resulting increased traffic volumes has become of significant concern regarding quality of life and economic vitality. In 2015, the Baton Rouge Chamber of Commerce found that 76% of local business leaders considered transportation and traffic issues to be the region’s top obstacle to staying economically competitive.

Business and industry have responded to these concerns by joining in the Capital Region Industry for Sustainable Infrastructure Solutions (CRISIS) coalition. The group’s Capital Region Mobility Strategy, developed in tandem with CRPC’s Long-Range Transportation Plan update, aims to align short- and long-term transportation strategies with broader goals for regional mobility, safety, and economic vitality. The initiative is funded by the Louisiana Office of Community Development and the U.S. Department of Housing and Urban Development, and coordinated by Kimley-Horn, a national leader in transportation planning.

Capital Region Mobility Strategy

CRISIS’s initial State of the Region briefing, issued in October 2016, recognized five key factors that affect transportation in the Capital Region.

On October 7, 2016, the CRISIS team conducted a forum to gather input for the plan from regional elected officials, practitioners, and private industry. Participating stakeholders uniformly ranked regional infrastructure performance and travel options as poor, while they had mixed opinions on land use, regional competitiveness, resiliency and preparedness.

State of the Region Key Factors:

- ✓ Infrastructure Performance
- ✓ Land Use and Urban Form
- ✓ Regional Competitiveness
- ✓ Resiliency and Preparedness
- ✓ Travel Options

The CRISIS briefing emphasized the relationship between land use and transportation, and identified the Capital Region’s dispersed land use and growth patterns as a major stressor on the transportation network. In 2014, 21% of area workers commuted 50 miles or more each day. The CRISIS group issued its final regional mobility strategy report in September 2017. The report recognized many key transportation issues in the CRPC-MPO study area, such as:

- Stagnant transportation funding levels
- Shifting demographics, with significant regional population growth and dispersed settlement patterns that extend commuting distances
- Growing economy
- Rising expectations
- Natural uncertainty, with aging infrastructure and weather events that affect regional resiliency

Recommendations from the CRISIS report included: (1) improve capacity and efficiency, with enhanced river crossings, improvements to regional arterials and use of new transportation technology; (2) expand travel choice and management, offering active transportation alternatives, travel demand management, ride share, and transit services; (3) develop strong ‘complete and safe streets’ policies, implement smart growth initiatives, and develop strong regional leadership on transportation issues.

For more information on CRISIS and their work, visit (<http://trafficcrisis.com/crms/>).

5.6 | Land Use

Although East Baton Rouge Parish has the highest concentrations of jobs and population, increased growth rates continue to move to the east and south and, to a slightly lesser extent, to the north. This growth trend has resulted in increasing numbers of people who must commute longer distances for work. Furthermore, since these outer suburbs are not served by transit, commuters must drive longer distances, often in single occupant vehicles. While efforts are underway in Baton Rouge to encourage infill development, particularly in north Baton Rouge, such development will take time. Meanwhile, population growth continues to move away from the city center.

Land use has a direct impact on traffic volumes and congestion, especially within the CRPC MPO area. As growth extends outward from Baton Rouge in a lower density sprawl pattern, the cost to local governments' for delivering municipal services increases. Volumes and intensity of commuter traffic will increase as well, especially at peak morning and evening times. Ascension and Livingston Parish have seen extensive construction of new, single family subdivisions since 2010. The CRISIS Mobility Strategy Report (2017) identified several strategies that should be implemented across the region that focus on the importance of local land use policies and codes. These strategies focus on smart growth initiatives and tools to help local jurisdictions re-think their land use patterns. The report also highlights regional initiatives such as access management and multimodal corridor planning which would help move the regional dialogue toward a discussion that better links land use decisions and transportation impacts.



A low-density, American suburb. Single-family subdivisions across the Capital Region such as these generate significant vehicular traffic, especially at one-way entry and exit points and utilize municipal infrastructure inefficiently.



Regional malls with ample free parking, such as the Tanger Outlet Mall in Gonzales, generate an enormous amount of automobile trips.

5.7 | Commuting in the Capital Region

By far, the most common mode of travel to work in the CRPC-MPO area is the single occupancy vehicle. In 2011, over 85% of regional commuters drove alone to work each day.

Although transit, cycling and walking are options for some commuters, low density development and inadequate infrastructure make these modes unsafe, inconvenient, and/or overly time consuming for most workers. The Texas A&M University Transportation Institute (TTI) named Baton Rouge the nation’s third most congested medium-sized city, based on hours of yearly delay, wasted fuel, and total cost to consumers. They calculated a peak-period planning time index for Baton Rouge of 2.8, reflects unpredictable traffic conditions. It takes approximately 28 minutes to complete a trip that should normally take 10 minutes. Wages well above the state average and competition for available jobs contribute to lengthening of commutes and resulting congestion, with many workers willing to drive farther in exchange for community assets in more dispersed locations.

As shown by this graphic a significant majority of workers in Baton Rouge drive to work alone when compared to New Orleans, the state and nation. With the exception of carpooling the percentage of commuters in Baton Rouge that choose a mode other than a single occupant vehicle (SOV) are below the national averages. Similarly, as shown in Table 5.6 fewer than 10% of commuters in the region carpool (except East Baton Rouge). This is factor contributes to regional congestion, especially at peak travel times.

Inter-Regional Commuting

The New Orleans Data Center tracks work commute patterns across the Southeast Louisiana Super Region, which links the metropolitan areas of New Orleans, Baton Rouge and Houma-Thibodaux. The three locales are closely linked, with the oil & gas industry served by Houma-Thibodaux’s Port Fourchon, the Louisiana Offshore Oil Port (LOOP), and numerous pipelines providing the raw materials for petrochemical manufacturing sectors in Baton Rouge and New Orleans.

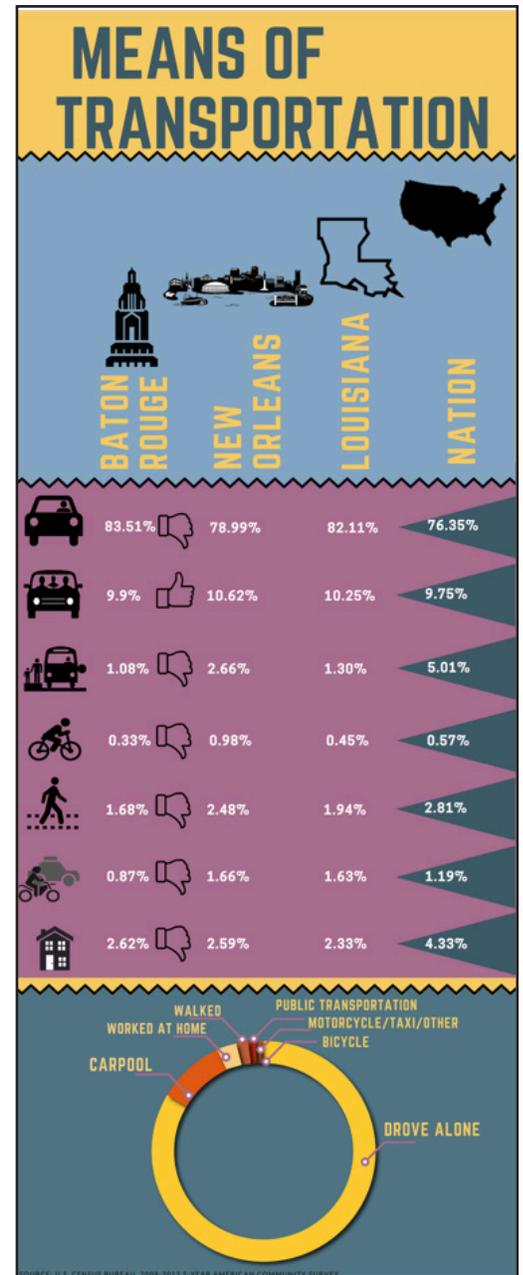


Figure 5-5: Means of Transportation

Table 5-11: Commute by Mode

Parish	Drove Alone	Carpooled	Public Transport	Walked	Other Means	Mean Travel Time to Work (minutes)
East Baton Rouge	82.0%	10.4%	1.7%	2.1%	1.2%	23.1
West Baton Rouge	85.9%	9.4%	0.3%	0.8%	2.6%	24.5
Livingston	86.1%	9.1%	0.2%	0.8%	1.0%	34.3
Ascension	86.7%	8.4%	0.1%	0.9%	0.9%	29.1
Iberville	85.2%	9.4%	0.5%	2.0%	1.6%	24.2

Source: U.S. Census. American Community Survey. American Fact Finder. 2014.

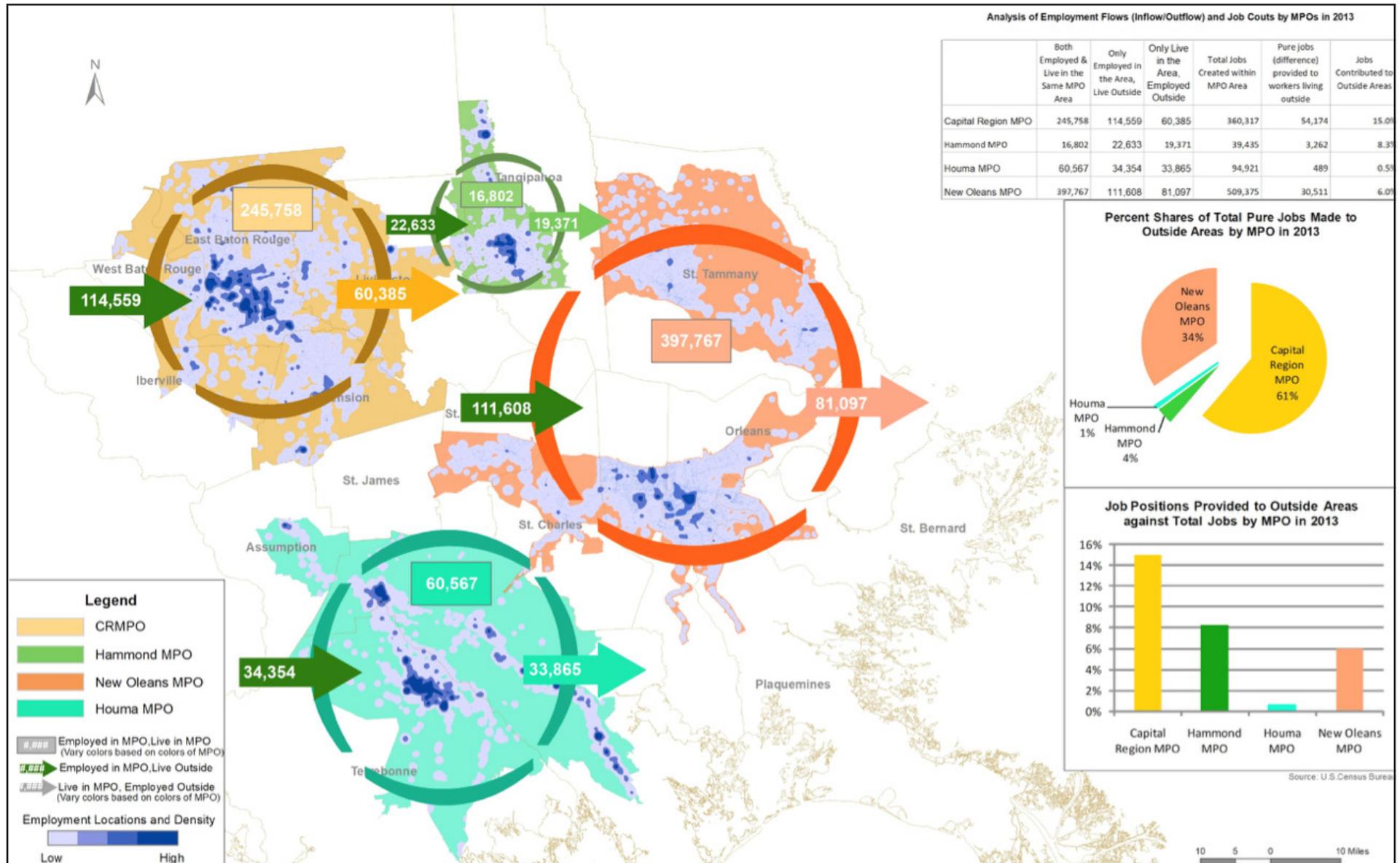


Figure 5-6: Job Flows and Counts Analysis by MPOs in South East Louisiana

A key indicator of regional economic integration is the commute patterns across the Super Region. These reflect the number of commuters who live in one region, but work in another. The data shows a 26% overall increase in cross-metro commuters between 2004 and 2014. With current lower oil prices and resulting reduced activity in the energy industry, current data does not indicate significant commuting between Baton Rouge and Houma-Thibodaux. However, as shown in the map of commute patterns, some limited traffic between the two areas does continue.

Leaders in the three metro regions have joined in the Southeast Super Region Committee to work on regional development plans, with emphasis on productivity, innovation, new business formation, and enhancing global competitiveness. Recommendations recognize the importance of transportation, and especially improved public transit services, to more efficiently move workers and students around the Super Region to support integrated development plans based on strengthening private/public education, and increasing workforce skills.

Commuting Between Baton Rouge and New Orleans

The Data Center of New Orleans found a 24.4% of growth in commuting from Baton Rouge to New Orleans from 2004 to 2010 and an additional 1.7% growth from 2010 to 2014. That puts nearly 30,000 vehicles on MPO region roads every day. While commuting from New Orleans to Baton Rouge dropped 10.1% from 2004 to 2010, it increased by 13.9% by 2014. Commute distances in general have been increasing. Twenty-one percent of workers drove 50 miles or more to work each day, in 2014.

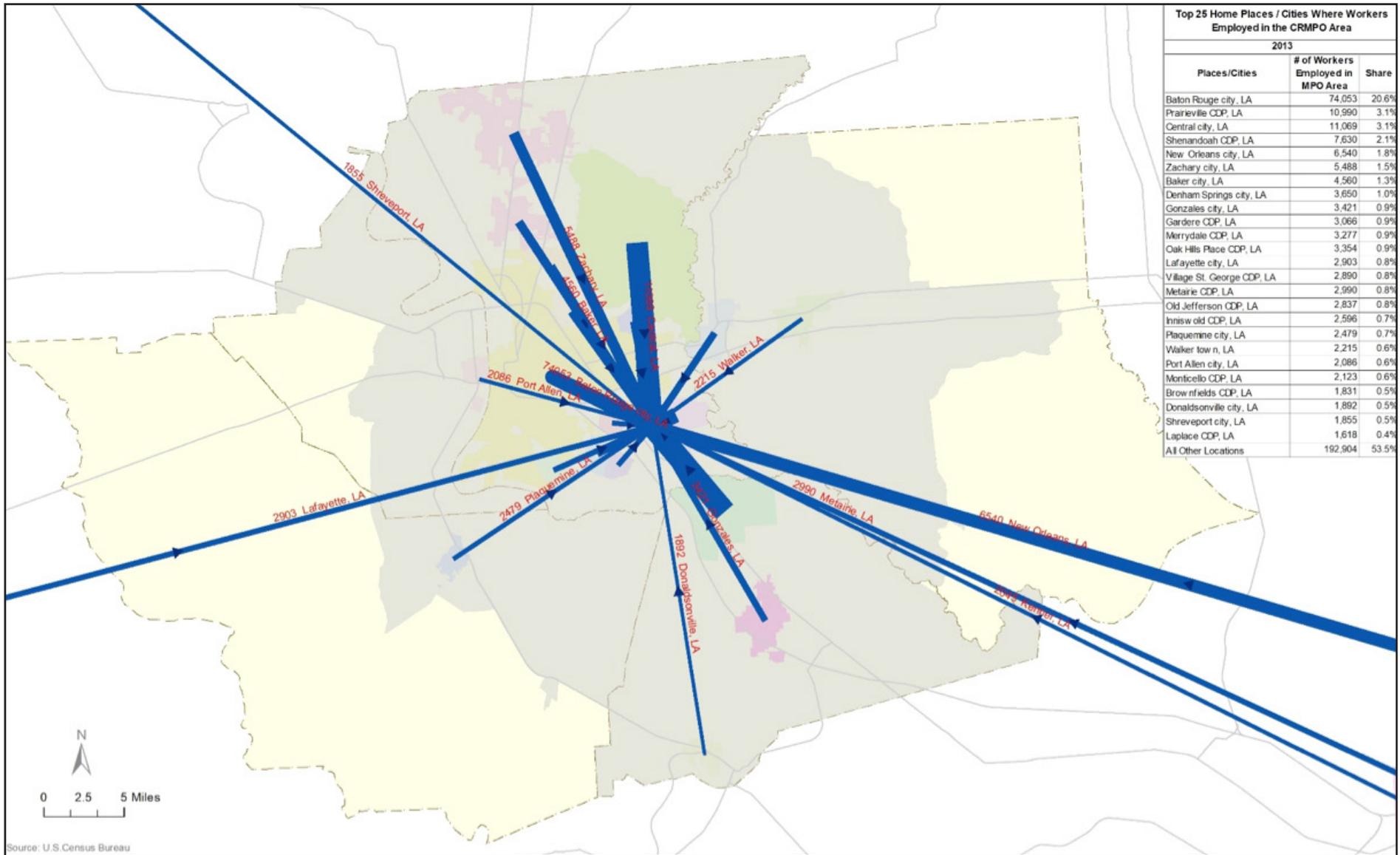


Figure 5-7: Top 20 Home Locations Commuters Drive from to Work in Baton Rouge

5.8 | Housing and Transportation Affordability Index

The relationship between transportation and land use extends far beyond traffic congestion. As the cost of living in a city center rises, lower income individuals are often forced into lower density, less expensive suburbs, where the need to purchase and maintain an automobile adds significantly to a household’s expenditures. Traditional affordability measures use a benchmark of no more than 30% of median household income expended for housing costs. With that formula, slightly more than half (55%) of U.S. neighborhoods can be considered affordable.

In the early 2000s, growing recognition that the traditional formula omits travel costs led the Center for Neighborhood Technology and the Brookings Institution to partner in developing the Housing + Transportation Affordability Index (H + T). Based on experience with a community-level pilot program in Minneapolis, the partners set a combined H + T affordability benchmark of 45% of median household income. Under this metric, only 26% of neighborhoods in the U.S. can be considered affordable.

The H + T reflects the close interaction of jobs, transportation, affordable housing, land use, and other regional social factors. Lack of affordable housing impacts the supply of low-cost labor, while also increasing demand on the transportation system. When affordable options are limited, many people try to find less expensive housing in outlying communities. The resulting longer commutes create higher transportation costs that wipe out any savings on housing, as workers travel longer distances between jobs and housing they can afford. In addition to work trips, dispersed development requires traveling longer distances to shop for groceries, to take children to and pick them up from school, and for other activities like medical appointments. This is especially challenging for households in rural areas that have no access to vehicles or whose vehicles are not consistently dependable.

Table 5-12: Regional H+T Data

	East Baton Rouge	West Baton Rouge	Livingston	Ascension	Iberville
Housing	27%	26%	26%	29%	22%
Transportation	24%	27%	27%	27%	28%
Average	51%	53%	54%	56%	50%
Range	32%-118%	41%-65%	43%-65%	40%-75%	38%-60%
Transport Costs	\$12,491	\$13,819	\$14,100	\$13,818	\$14,446
Av. Household VMT	22,731	26,924	26,974	26,060	27,349
Autos/Household	1.77	1.88	1.95	1.93	2.01
Compact Neighborhoods	2.8	1.7	2.1	2.3	1.3
Loc. Efficient Neighborhoods	0%	0%	0%	0%	0%
Job Access	6.7 [High]	7.4 [High]	2.9 [Low]	4.8 [Moderate]	4.6 [Moderate]

Source: www.hatindex.cnt.org/

The H + T community affordability ratio is calculated based on neighborhood and household characteristics. At the neighborhood level these characteristics include:

- **Gross Population Density;** **Regional Household Intensity ;** **Fraction of Single-Family Detached Households;**
- **Block Density;** **Employment Mix;** **Transit Connections;**
- **Transit Access;** **Transit Access to Jobs;** **Average Available Transit Trips per Week.**

What is an affordable neighborhood? Such areas are described as compact, indicating higher-density development, with a mix of land uses located so that residents and workers are within walking distance of many destinations. With relative ease of access to jobs, services, transit and amenities, such areas tend to have lower transportation costs, which are calculated based on costs of auto ownership, auto usage and public transit usage. The dispersed development patterns that predominate in the CRPC MPO area tend to produce neighborhoods that are less compact and walkable and require automobiles for most trips to jobs, services, and amenities. This results in higher transportation costs.

The following chapters will build upon the established land use and employment patterns with the development of various growth scenarios. These scenarios were presented to the public and stakeholders throughout the process. And, ultimately were used in the development of the transportation model.