

# Southern Connector Toll Rate Study



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November 20, 2015

## Sign-off Sheet

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## **SOUTHERN CONNECTOR TOLL RATE STUDY**

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### **1.0 INTRODUCTION**

Stantec Consulting Services Inc. ("Stantec") was retained by the Board of Directors of the Connector 2000 Association, Inc. (the "Association") to complete a traffic and revenue report with a detailed toll rate study for the Southern Connector. The Connector 2000 Association, its advisors and the South Carolina Department of Transportation (SCDOT) intend to use this study to plan the future toll increases needed to cover its bond obligations and its obligations to SCDOT.

This report summarizes the analysis of the traffic and revenue potential of the toll road. To determine the near-term forecast, recent trends in traffic and revenue on the Southern Connector were evaluated. Field data, including traffic count data at the non-tolled ramps and origin-destination data, were collected and levels of congestion on competing roads were identified. In addition, Stantec retained the services of CBRE, local real estate experts, to evaluate the potential for future land use development projects in the area. These data are discussed herein and the CBRE report is included in the Appendix. In addition, overall traffic growth as predicted by the travel demand model developed by Greenville Pickens Area Transportation Study (GPATS), the Metropolitan Planning Organization for the Greenville region, was used to predict long term traffic growth in the area.

#### **1.1 DESCRIPTION**

The 16-mile Southern Connector is located in Greenville County, South Carolina, south of the downtown area of the City of Greenville. It was built to interstate standards and is designated as I-185. As shown in Figure 1, the Southern Connector, together with the toll-free section of I-185 north of I-85 and I-385, forms a circumferential interstate route leading into the City of Greenville. Within the City, I-185 connects to Church Street (US 29) on the west side and I-385 connects to North Street (SC 183) on the east side.

The Southern Connector extends south from toll-free I-185 at its interchange with I-85 and east to its terminus at I-385 near the cities of Mauldin and Simpsonville. North from the western terminus of the Connector, toll-free I-185 provides access to the Greenville Health System (GHS) campus and downtown Greenville. I-85 provides access to Atlanta to the southwest and to Charlotte to the northeast. I-385 provides access to the City of Greenville in the north and to the fast growing suburbs of Simpsonville and Fountain Inn to the south. Further south, I-385 provides access to I-26 and Columbia and Charleston.



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The Southern Connector has four intermediate interchange locations. From the west, at the interchange of I-185 and I-85, the Connector proceeds southeast to an interchange with SC 153, continues east to interchanges with SC 20, with US 25 south of the South Carolina Technology and Aviation Center (formerly known as the Donaldson Center) and Matrix Industrial Parks, and with Fork Shoals Road before turning northeast and terminating at an interchange with I-385 at its intersection with US 276 and Standing Springs Road, between the cities of Mauldin and Simpsonville. Posted speeds on the Connector are 65 mph, except for the section between the two mainline toll plazas, where posted speeds are 70 mph. Speeds through the electronic toll collection lanes are limited at 45 mph.

**Figure 1: Southern Connector Location Map**



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### **1.2 FINANCIAL HISTORY**

In 1998, bonds were issued to finance substantially all of the costs of the Southern Connector. The Connector 2000 Association operates the Southern Connector as a toll facility pursuant to a License Agreement with the South Carolina Department of Transportation (SCDOT). It opened to toll paying traffic on March 14, 2001.

Land use in the area surrounding the Southern Connector was slow to develop and consequently, toll revenues were lower than originally forecasted. Revenues were not able to cover the 1998 Bond obligations when due nor the obligations to SCDOT and, as a result, the Association filed for bankruptcy protection on June 24, 2010. In 2012, the Association completed the actions necessary to implement its Debt Adjustment Plan, including the exchange of certain 2011 Pro-rata Term Bonds for By-Lot Term Bonds and payment of the remaining outstanding cost of issuance of the 2011 Bonds. As such, the Bankruptcy Court issued a Final Decree closing the Association's Chapter 9 Bankruptcy case on August 27, 2012.<sup>1</sup>

As part of the governing First Amended and Restated Master Indenture of Trust (dated April 1, 2011), the Association is required to deliver a written Toll Rate Study to the Trustee from time to time, but at a frequency of no less than every five years. It would study the past and projected future traffic, growth, employment and other relevant factors to determine the optimum toll rates for the Southern Connector that would maximize revenue over a projected period of not less than five years. This report is the first of these toll rate studies.

### **1.3 TOLL COLLECTION AND TOLL RATES**

As shown on the map, tolls are collected at two across-the-road mainline plazas and two ramp locations. The West Toll Plaza is located between SC 153 and SC 20 and the East Toll Plaza is located between Fork Shoals Road and I-385. Tolls are also collected on the ramps to and from the east at SC 20 and to and from the west at Fork Shoals Road.

Customers of the Southern Connector may pay by cash or by Palmetto Pass (PalPass). This electronic toll collection (ETC) prepaid toll account allows users to travel through dedicated lanes without stopping and have their tolls automatically deducted from a prepaid account.

Each mainline plaza consists of four toll collection lanes. The two left lanes are unattended; the left-most lane is an express PalPass lane and the second-from-left lane is for exact change payment (coin only) for 2-axle vehicles only. The two right lanes are attended and for cash payment, change and receipts. PalPass is accepted for payment in each lane. Also, as of January 2011, tolls at the mainline plazas may also be paid by credit card in the attended cash payment lanes. The speed limit through the express lane at the mainline plazas is 45 mph. The ramp plazas each consist of one unattended lane requiring either exact change or PalPass payment.

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<sup>1</sup> Connector 2000 Association, Inc., Annual Report. June 30, 2014.

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Originally, the toll rates for the entire 50-year term of the License Agreement, which permits the Association to operate the Southern Connector, were set by the SCDOT pursuant to Section 57-5-1340 of the South Carolina Code of Laws, 1976, as amended under Section 6.4 of the License Agreement. The initial rates established by SCDOT were adjusted and implemented by the Association on January 3, 2005 and then again on November 1, 2009 pursuant to a Toll Rate Study that was required by the Association. As part of the bankruptcy filing, the toll rates were adjusted again and were put into effect on January 2, 2012. The toll rates implemented in 2012 are still in effect as of the writing of this report. The toll rates effective in 2001, 2005, 2009 and 2012 are shown in Table 1 for 2-axle vehicles and in Table 2 for multi-axle vehicles. Note that the ramp charge is the same regardless of vehicle class or payment type.

**Table 1: Historical Toll Rates, 2-Axle Vehicles**

Effective Date	Mainline		Ramp <sup>(1)</sup>	
	Cash	PP	Cash	PP
3/14/2001	\$0.75	\$0.60	\$0.50	\$0.50
1/3/2005	\$1.00	\$0.75	\$0.50	\$0.50
11/1/2009	\$1.25	\$1.00	\$0.65	\$0.65
1/2/2012	\$1.50	\$1.35	\$0.75	\$0.75

1) Cash and PalPass tolls are equal at the ramp plazas.

**Table 2: Historical Toll Rates, Multi-Axle Vehicles**

Mainline	3/14/2001		1/3/2005		11/1/2009		1/2/2012	
Class	Cash	PP	Cash	PP	Cash	PP	Cash	PP
3 axle	\$1.50	\$1.20	\$1.80	\$1.35	\$2.55	\$2.10	\$3.00	\$2.55
4 axle	\$2.00	\$1.60	\$2.40	\$1.80	\$3.40	\$2.80	\$4.00	\$3.40
5 axle	\$2.50	\$2.00	\$3.00	\$2.25	\$4.25	\$3.50	\$5.00	\$4.25
6 axle	\$3.00	\$2.40	\$3.60	\$2.70	\$5.10	\$4.20	\$6.00	\$5.10

### 1.3.1 PalPass Discounts

The Association is permitted to implement discounts to encourage utilization of the Southern Connector. As was shown in Table 1 and Table 2, PalPass payment at the mainline plazas is discounted from the cash rates. Since opening, the 2-axle PalPass discount on the Southern Connector has ranged between 10 and 25 percent for 2-axle vehicles and between 15 and 25 percent for multi-axle vehicles.

As shown in the tables, 2-axle PalPass users currently receive a 10 percent discount and multi-axle vehicles receive a 15 percent PalPass discount at the mainline plazas; no discount is



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received at ramp toll collection locations. The effect of the 2012 toll adjustment was a 20 percent increase for 2-axle/cash tolls and about an 18 percent increase for multi-axle/cash tolls. The resulting toll cost over 16 miles is approximately 18.8 cents per mile for 2-axle vehicles paying cash and 16.9 cents per mile for 2-axle vehicles using PalPass.

The PalPass discount program has been continued in order to encourage the use of PalPass. Paying by PalPass is a convenience for the repeat user as it allows for quicker toll payment; vehicles do not have to stop at the plaza. Also, as cash rates increase, cash users have had the ability to reduce the magnitude of the toll increases by switching to PalPass. PalPass payments are also beneficial to the Association as it costs less to collect an electronic payment than a cash payment.

### 1.3.2 Multi-Axle Discounts

The Southern Connector has two discount programs available to multi-axle vehicles. These programs are described below. It should be noted that the Southern Connector has the right to discontinue or to change the level of discount provided by the programs at any time but must give the participants a one month notice.

#### 1.3.2.1 Fleet Volume Discounts

A fleet volume discount program for multi-axle vehicles was initiated on the Southern Connector in January 2009. A fleet is defined as an account with three or more vehicles. Companies may opt in to the program which provides additional discounts to trucks using the facility using a PalPass transponder. If the enrolled company's toll expenditures in a calendar month total more than \$500, a credit is refunded to the prepaid account on the last day of that month. The current level of discount is listed in Table 3. As shown, the discount is capped at 25 percent.

**Table 3: Fleet Volume Discount Program**

Monthly Charges Before Discount	Discount
\$500.00 to \$999	12.5%
\$999 to \$1799	15.0%
\$1800 to \$1999	20.0%
> \$2000	25.0%

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### **1.3.2.2 Pay-by-Plate Discounts**

A pay-by-plate discount program was initiated on the Southern Connector in January 2012. Companies may opt in to the program which allows trucks to use the facility via the PalPass lanes without a transponder. A company may open a pay-by-plate discount account with a minimum deposit of \$100 and needs to provide the Association with license plate numbers and/or company ID numbers for their trailers and trucks. These trailers and trucks are directed to use the PalPass express lanes and do not need to stop and pay a toll. The trucks are identified via the plate numbers or company ID numbers as they pass through the PalPass lanes and are currently charged the PalPass toll. Currently there are over 30 national carriers that participate in the program and there is a list of over 330,000 individual license plates in the program database.

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### 2.0 TRAFFIC AND REVENUE GROWTH

Table 4 shows the annual transactions and annual revenue for all years the Southern Connector has been open. Figure 2 and Figure 3 graphically depict the annual transactions and revenue, respectively.

**Table 4: Southern Connector Transaction and Revenue Growth**

Year	Annual Transactions	Annual Average Daily Transactions	% Change	Annual Revenue	% Change
2001 <sup>(1,2)</sup>	2,658,741	9,105		\$ 2,004,659	
2002	3,966,717	10,868	19.4%	\$ 2,957,000	47.5%
2003	4,566,095	12,510	15.1%	\$ 3,336,977	12.9%
2004	5,129,949	14,016	12.0%	\$ 3,770,170	13.0%
2005 <sup>(3)</sup>	4,948,535	13,558	-3.3%	\$ 4,664,081	23.7%
2006	5,434,691	14,890	9.8%	\$ 5,085,659	9.0%
2007 <sup>(4)</sup>	5,839,205	15,998	7.4%	\$ 5,448,214	7.1%
2008	5,653,527	15,447	-3.4%	\$ 5,239,309	-3.8%
2009 <sup>(5,6)</sup>	5,455,974	14,948	-3.2%	\$ 5,252,741	0.3%
2010 <sup>(7)</sup>	4,538,473	12,434	-16.8%	\$ 5,327,110	1.4%
2011	4,884,705	13,383	7.6%	\$ 5,749,348	7.9%
2012 <sup>(8)</sup>	4,617,246	12,615	-5.7%	\$ 6,754,149	17.5%
2013	4,688,005	12,844	1.8%	\$ 6,963,035	3.1%
2014	5,162,469	14,144	10.1%	\$ 7,565,888	8.7%
<b>First 9 months of Calendar Year</b>					
2014	3,790,547	13,885		\$ 5,570,136	
2015	4,272,607	15,651	12.7%	\$ 6,292,788	13.0%

<sup>(1)</sup> Southern Connector opened to toll-paying traffic March 14, 2001.

<sup>(2)</sup> Recession from March 2001 through November 2001.

<sup>(3)</sup> Toll increase January 2005.

<sup>(4)</sup> Recession starts December 2007.

<sup>(5)</sup> Recession ends June 2009.

<sup>(6)</sup> Toll increase November 2009.

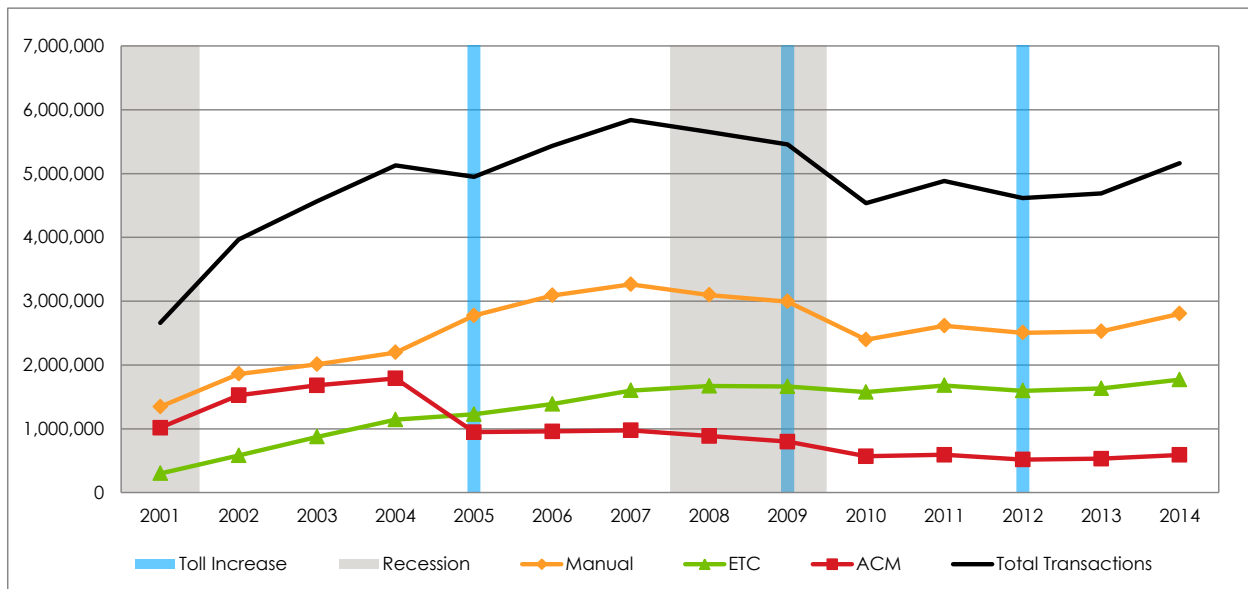
<sup>(7)</sup> Northbound I-385 closed near Columbia from January 2010 through August 2010.

<sup>(8)</sup> Toll increase January 2012.

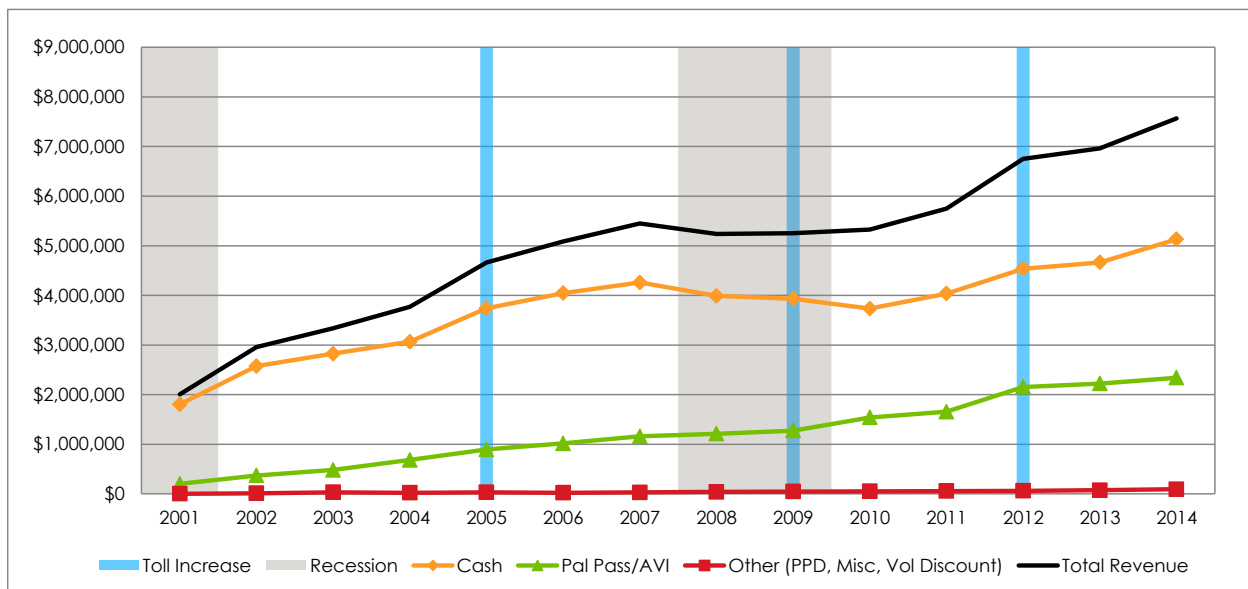
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**Figure 2: Annual Transactions**



**Figure 3: Annual Revenue**



During the first four years the Southern Connector was open, transactions grew at an average annual growth rate of 15.5 percent. This period of high growth when a facility is first opened is referred to as the “ramp-up” period when potential users become aware of the facility and its advantages and begin to choose to use the toll road. In 2005, the annual transactions decreased by 3.3 percent due to the toll increase in January of that year. From 2005 to 2007 transactions increased, but at a slightly lower average annual growth rate of 8.6 percent. Transactions decreased in 2008 and 2009 because of the economic effects of the Great





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Recession and because of the toll increase that took effect in November 2009. 2010 transactions were also affected by the November 2009 toll increase and were further dampened as long distance through trips on the Southern Connector were diverted as part of the 8-month closure of the southern-most portion of I-385 from mile marker 1 to 15. SCDOT closed the northbound direction of this section of I-385 between January and August of 2010 to construct roadway improvements. Northbound traffic destined for the Greenville area was diverted to I-26 and I-85, bypassing the Southern Connector area. The impact on Southern Connector transactions was about a 7 percent loss (on top of the loss in transactions due to the toll increase). In January 2009, the Association had implemented a volume discount for multi-axle vehicles (discussed in Section 1.3.2.1) that likely helped to dampen the effect of the toll increase for that vehicle type. Transactions grew by a healthy 7.6 percent in 2011 and then decreased again in 2012 as a result of the January 2012 toll increase. Since 2012, annual transactions have been increasing and 2014 showed an increase of 10.7 percent over the 2013. Transactions in the first 9 months of 2015 grew over 12 percent over the same 9 months of 2014.

As shown in Table 4 and Figure 3, there has only been one year of negative revenue growth on the Southern Connector. In 2008, the economic effects of the Great Recession that started in November 2007 caused transactions to decrease by 3.2 percent and revenues to decrease by 3.8 percent. After each toll increase, revenues increased. The toll increase that took place in January 2005 decreased the total 2005 transactions by 3.5 percent, however the 2005 gross revenues increased 23.7 percent. Revenue growth was also low in 2009 at 0.3 percent, as the effects of the recession continued but the effect was dampened by the toll increase in November 2009. Revenue also saw a bump of 17.5 percent in 2012 as a result of the January 2012 increase.

Table 5 and Table 6 show the monthly comparisons for 2012-2015 for transactions and revenue, respectively. Monthly growth has increased every month since July 2013 for both transactions and revenue. Growth in 2015 has been strong.

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**Table 5: Monthly Transaction Comparison**

Month	2012 <sup>(1)</sup>	2013	'12 to '13 % change	2014	'13 to '14 % change	2015	'14 to '15 % change
January	339,441	336,290	-0.9%	359,244	6.8%	405,342	12.8%
February	352,769	328,699	-6.8%	332,604	1.2%	380,330	14.3%
March	395,737	387,799	-2.0%	420,387	8.4%	474,293	12.8%
April <sup>(2)</sup>	388,036	341,271	-12.1%	428,663	25.6%	473,219	10.4%
May	410,376	411,050	0.2%	456,694	11.1%	514,271	12.6%
June	397,452	392,865	-1.2%	443,865	13.0%	502,412	13.2%
July	390,436	397,840	1.9%	452,711	13.8%	513,270	13.4%
August	400,543	425,789	6.3%	452,473	6.3%	499,543	10.4%
September	382,863	413,515	8.0%	443,906	7.3%	509,927	14.9%
October	409,578	446,107	8.9%	495,227	11.0%	n/a	n/a
November	402,635	411,994	2.3%	451,437	9.6%	n/a	n/a
December	347,380	394,786	13.6%	425,258	7.7%	n/a	n/a

(1) 2012 was a leap year. February has an extra day.

(2) Southern Connector was closed to traffic from 4/21/13 to 4/24/13 for a movie shoot.

**Table 6: Monthly Revenue Comparison**

Month	2012 <sup>(1)</sup>	2013	'12 to '13 % change	2014	'13 to '14 % change	2015	'14 to '15 % change
January	\$479,907	\$491,408	2.4%	\$516,803	5.2%	\$586,410	13.5%
February	\$507,345	\$479,941	-5.4%	\$486,080	1.3%	\$557,073	14.6%
March	\$568,792	\$573,278	0.8%	\$618,118	7.8%	\$710,189	14.9%
April <sup>(2)</sup>	\$566,066	\$553,837	-2.2%	\$632,048	14.1%	\$700,326	10.8%
May	\$598,034	\$617,831	3.3%	\$670,569	8.5%	\$759,056	13.2%
June	\$582,669	\$586,578	0.7%	\$652,468	11.2%	\$741,348	13.6%
July	\$571,623	\$593,369	3.8%	\$673,534	13.5%	\$765,499	13.7%
August	\$595,267	\$627,781	5.5%	\$673,388	7.3%	\$746,689	10.9%
September	\$573,260	\$607,599	6.0%	\$647,128	6.5%	\$726,197	12.2%
October	\$602,129	\$654,582	8.7%	\$721,363	10.2%	n/a	n/a
November	\$595,193	\$608,695	2.3%	\$651,019	7.0%	n/a	n/a
December	\$513,862	\$568,136	10.6%	\$623,370	9.7%	n/a	n/a

(1) 2012 was a leap year. February has an extra day.

(2) Southern Connector was closed to traffic from 4/21/13 to 4/24/13 for a movie shoot. A flat rate fee was paid to cover revenue lost that month.

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### 2.1 MONTHLY TRAFFIC VARIATIONS

Table 7 and Figure 4 show the average volume transactions by month and each month indexed to the average monthly transactions. Monthly traffic is generally higher in the autumn months because of high travel for home Clemson University football games. January and February are the lowest travelled months with factors less than 0.9. March and April are average months with factors of 1.0. October is the highest travelled month with an annual factor of 1.09 which indicates that month's traffic is about 9 percent over the average.

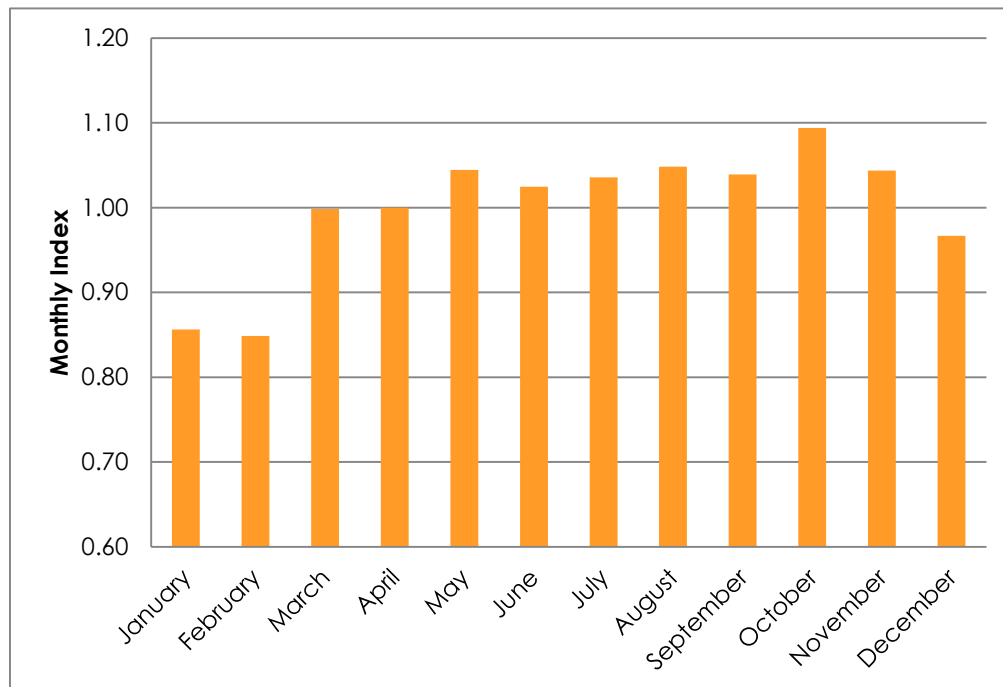
**Table 7: 2014 Monthly Traffic**

Month	Average Transactions	Index
January	356,398	0.86
February	353,189	0.85
March	415,474	1.00
April	416,122	1.00
May	434,606	1.04
June	426,474	1.02
July	431,087	1.04
August	436,281	1.05
September	432,380	1.04
October	455,209	1.09
November	434,353	1.04
December	402,319	0.97
AADT	416,158	1.00

## SOUTHERN CONNECTOR TOLL RATE STUDY

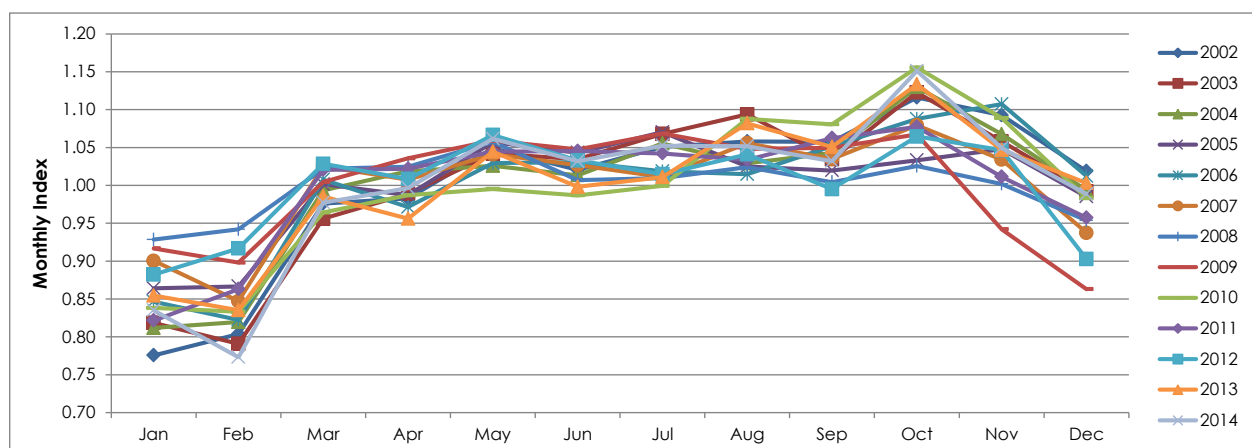
Traffic and Revenue Growth  
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**Figure 4: Monthly ADT Variations**



Since the first full year the Southern Connector was open, 2002, the seasonal traffic pattern has remained fairly consistent, as shown in Figure 5.

**Figure 5: Indexed Monthly Transactions 2002 – 2014**



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### 2.2 DAILY TRAFFIC VARIATIONS

Table 8 and Figure 6 show the transaction proportion each day of the week represents of a total week. For this analysis all weeks the Southern Connector was open were considered, however holiday weeks and substantially irregular weeks (snow or other weather events) were taken out of the analysis. Sunday shows the least amount of traffic, averaging only 88 percent of the AADT. Monday through Thursday transactions are consistently about 14 to 15 percent of the weekly total, while Friday traffic is higher representing about 18 percent of the total weekly traffic. On a Friday, traffic averages more than 24 percent greater than the AADT. The Southern Connector serves as a regional bypass for weekend travel; therefore Friday carries the highest percentage of weekday traffic all year round. The daily variations of the Southern Connector traffic have been fairly consistent since the toll road opened in 2001.

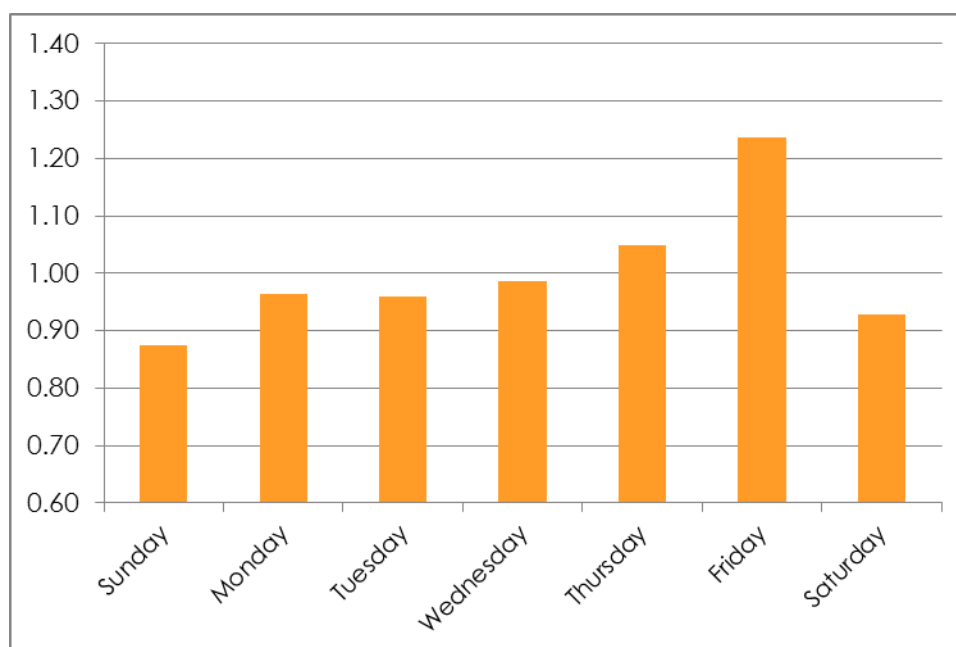
**Table 8: Transactions by Day of the Week**

Day	Percent of Weekly Total	Daily Factor
Sunday	12.5%	0.88
Monday	13.8%	0.96
Tuesday	13.7%	0.96
Wednesday	14.1%	0.99
Thursday	15.0%	1.05
Friday	17.7%	1.24
Saturday	13.3%	0.93

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**Figure 6: Daily Factors by Day of the Week**



## 2.3 TRAFFIC AND TOLL REVENUE BY LOCATION

Table 9 shows the 2014 traffic and revenue by toll plaza location. The mainline plazas account for 93.1 percent of the transactions and 96.5 percent of the total toll revenue. Since the toll rate on the ramps is only 75 cents, it only accounts for 3.5 percent of the toll revenue even though almost 7 percent of the transactions take place on the ramps. The ramp plazas have showed only slight growth over the years; in 2005 the ramps accounted for 6.4 percent of the total transactions compared to the 7.0 percent in 2007. The portion of the ramps has remained stable at this level since then, indicating similar overall growth at the ramps as compared to the mainline plazas.

**Table 9: 2014 Traffic and Revenue by Location**

Toll Location	Transactions	Percent	Avg. Toll	Toll Revenue	Percent
West ML Plaza	2,298,456	44.5%			
East ML Plaza	2,510,033	48.6%			
<b>Mainline Plaza Subtotal</b>	<b>4,808,489</b>	<b>93.1%</b>	<b>\$1.52</b>	<b>\$7,300,403</b>	<b>96.5%</b>
SC-20 Ramps	224,156	4.3%			
Fork Shoals Rd Ramps	129,824	2.5%			
<b>Ramps Subtotal</b>	<b>353,980</b>	<b>6.9%</b>	<b>\$0.75</b>	<b>\$265,485</b>	<b>3.5%</b>
<b>Total</b>	<b>5,162,469</b>	<b>100.0%</b>	<b>\$1.47</b>	<b>\$7,565,888</b>	<b>100.0%</b>

## SOUTHERN CONNECTOR TOLL RATE STUDY

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### 2.4 TRAFFIC AND TOLL REVENUE BY VEHICLE CLASS AND PAYMENT TYPE

There are two categories into which vehicles can be grouped: vehicle class and payment type (Palmetto Pass vs. cash). A Palmetto Pass (PalPass) is an electronic toll device (transponder) that allows customers to pre-pay tolls with cash, check, or credit card charge and drive through a dedicated toll lane without stopping for a manual transaction. Transponders can be obtained by submitting an application that can be obtained at any of the manned toll lanes, calling the customer service number, or applying online at the Southern Connector's website. Table 10 shows the 2015 traffic and revenue by class. With regard to vehicle class, 2-axle passenger cars accounted for 95.4 percent of the traffic and 88.0 percent of the total toll revenue for the first 9 months of 2015.

**Table 10: 2015 Traffic and Revenue by Class**

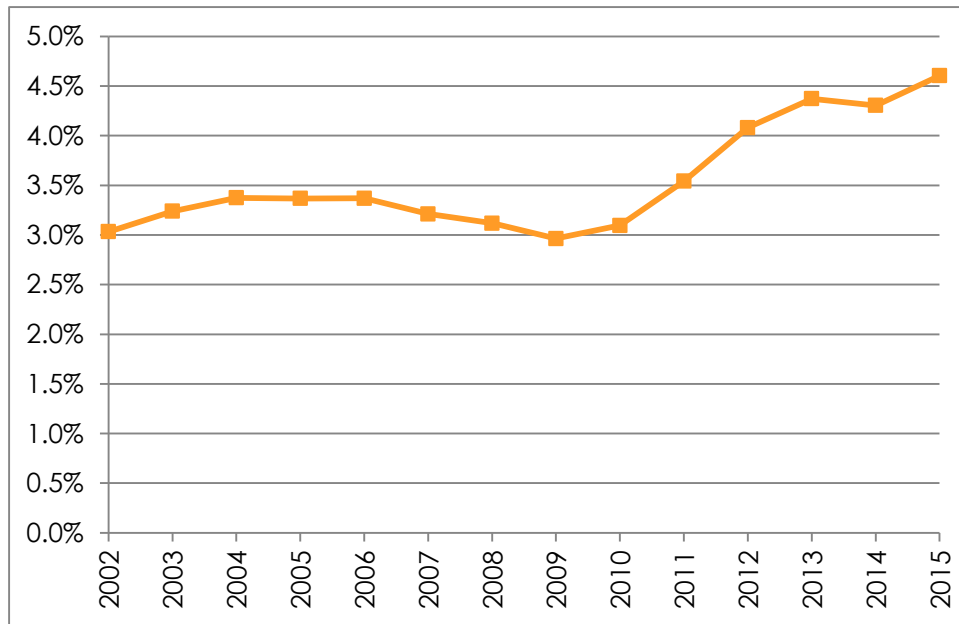
Month in 2015	Transactions				
	Total	2-axle	Multi-axle	% 2-axle	% Multi-axle
January	405,342	387,435	17,907	95.6%	4.4%
February	380,330	361,514	18,816	95.1%	4.9%
March	474,293	453,174	21,119	95.5%	4.5%
April	473,219	451,594	21,625	95.4%	4.6%
May	514,271	489,264	25,007	95.1%	4.9%
June	502,412	479,086	23,326	95.4%	4.6%
July	513,270	489,971	23,299	95.5%	4.5%
August	499,543	477,057	22,486	95.5%	4.5%
September	509,927	486,805	23,122	95.5%	4.5%
Jan - Sep Total	4,272,607	4,075,900	196,707	95.4%	4.6%
Month in 2015	Revenue				
	Total	2-axle	Multi-axle	% 2-axle	% Multi-axle
January	\$586,410	\$514,292	\$72,118	87.7%	12.3%
February	\$557,073	\$481,648	\$75,425	86.5%	13.5%
March	\$710,189	\$629,554	\$80,635	88.6%	11.4%
April	\$700,326	\$617,605	\$82,721	88.2%	11.8%
May	\$759,056	\$663,849	\$95,207	87.5%	12.5%
June	\$741,348	\$651,098	\$90,250	87.8%	12.2%
July	\$765,499	\$676,676	\$88,824	88.4%	11.6%
August	\$746,689	\$661,177	\$85,512	88.5%	11.5%
September	\$726,197	\$638,887	\$87,310	88.0%	12.0%
Jan - Sep Total	\$6,292,788	\$5,534,786	\$758,003	88.0%	12.0%

## SOUTHERN CONNECTOR TOLL RATE STUDY

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As shown in Figure 7, the percentage of multi-axle vehicle transactions has continued to increase over the past few years.

**Figure 7: Percent Multi-axle Transactions 2002-2015**



Note: Percent shown for 2015 is based on data for January through September only.



## SOUTHERN CONNECTOR TOLL RATE STUDY

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Table 11 shows the traffic and toll revenue by payment type for the first 9 months of 2015. PalPass is the electronic toll collection (ETC) method used by the Southern Connector. As shown, PalPass revenue made up 34.1 percent of the transactions and 29.9 percent of the revenue for those 9 months. The portion PalPass comprises of the revenue is less than the transactions because of the discounts given to all PalPass users and also the volume discounts given to multi-axle vehicles. PalPass makes payments easier and more convenient for the customer and also is cost-effective for the Association. On a per transaction basis, it is less costly to collect an electronic payment than a cash payment.

**Table 11: Traffic and Revenue by Payment Type**

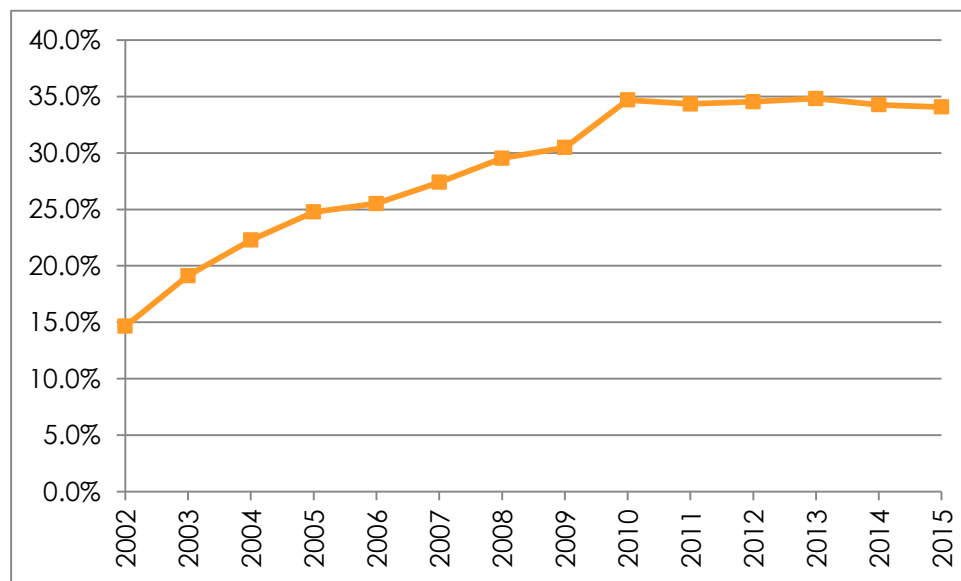
Month in 2015	Transactions				
	Total	Cash	PalPass	% Cash	% PalPass
January	405,342	253,270	152,072	62.5%	37.5%
February	380,330	240,531	139,799	63.2%	36.8%
March	474,293	308,207	166,086	65.0%	35.0%
April	473,219	308,533	164,686	65.2%	34.8%
May	514,271	345,480	168,791	67.2%	32.8%
June	502,412	339,654	162,758	67.6%	32.4%
July	513,270	350,998	162,272	68.4%	31.6%
August	499,543	333,239	166,304	66.7%	33.3%
September	509,927	337,037	172,890	66.1%	33.9%
Jan - Sep Total	4,272,607	2,816,949	1,455,658	65.9%	34.1%
Month in 2015	Revenue				
	Total	Cash	PalPass	% Cash	% PalPass
January	\$586,410	\$389,392	\$197,017	66.4%	33.6%
February	\$557,073	\$375,502	\$181,571	67.4%	32.6%
March	\$710,189	\$490,112	\$220,078	69.0%	31.0%
April	\$700,326	\$482,183	\$218,143	68.9%	31.1%
May	\$759,056	\$540,362	\$218,694	71.2%	28.8%
June	\$741,348	\$526,729	\$214,620	71.1%	28.9%
July	\$765,499	\$549,663	\$215,837	71.8%	28.2%
August	\$746,689	\$528,614	\$218,074	70.8%	29.2%
September	\$726,197	\$528,943	\$197,254	72.8%	27.2%
Jan - Sep Total	\$6,292,788	\$4,411,501	\$1,881,287	70.1%	29.9%

## SOUTHERN CONNECTOR TOLL RATE STUDY

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Figure 8 displays the percent of total transactions that were PalPass transactions from the first full year the Southern Connector was open to September 2015. PalPass transactions accounted for about 15 percent of the total transactions in the first full year of operation (2002) and have increased to account for 34.1 percent of the total trips for the first 9 months of 2015.

**Figure 8: PalPass Usage 2002 to 2015**



Note: Percent shown for 2015 is based on data for January through September only.

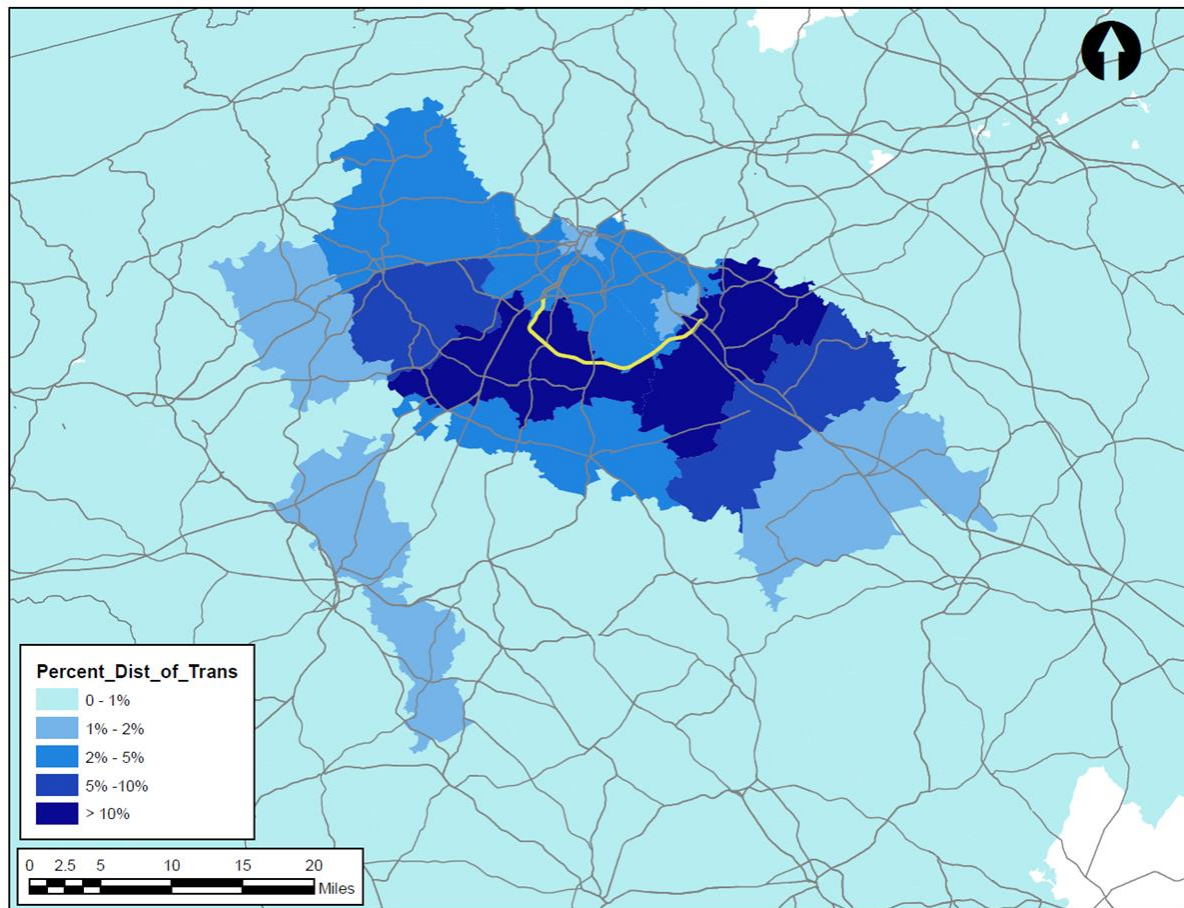
Electronic Toll Collection usage at the Southern Connector is relatively low when compared to other US toll roads due to the low percentage of commuters using the toll road. A road side interview survey conducted by URS Consultants in 2005 indicated that approximately 40 percent of the Southern Connector traffic is commuters. The percent of PalPass users is predicted to continue to grow in the future as the number of commuters and other regular users increases.

## SOUTHERN CONNECTOR TOLL RATE STUDY

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Figure 9 shows the geographical distribution of the account locations for 2015 transactions (partial year). As expected, the majority of accounts are based in the vicinity of the Southern Connector. In particular, most of the transactions are based from the residential communities to the south and east of the Southern Connector.

**Figure 9: Account Locations for PalPass Transactions (2015 Partial Year)**



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### 2.5 TRAFFIC TRENDS SINCE JANUARY 2014

The following Table 12 displays the traffic transactions since January 2014. Toll transactions have been increasing. During this period, the economy was doing well and gas prices have been comparatively low. Travel across the US has been growing as evidenced in by the increase in vehicle miles traveled nationwide.

**Table 12: 2014 and 2015 ADT by Month**

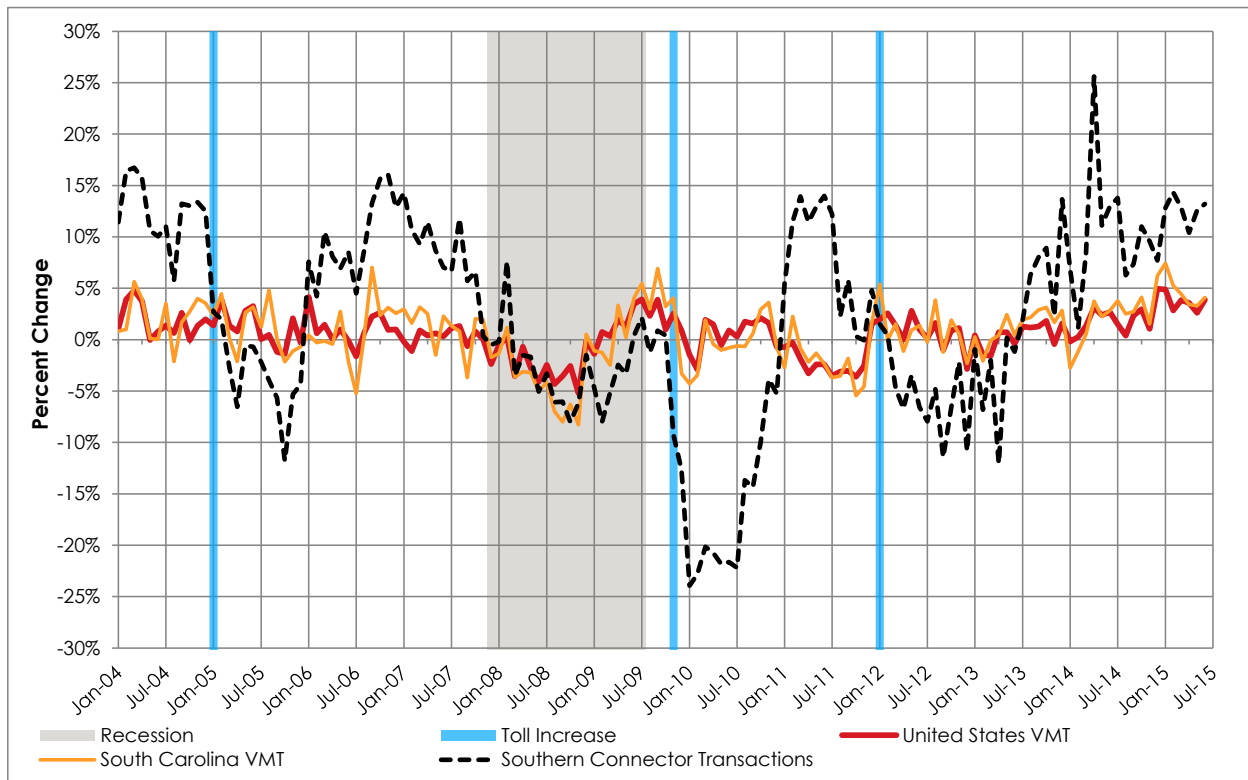
Month	2014 ADT	2015 ADT	Percent Change
January	11,589	13,076	12.8%
February	11,879	13,583	14.3%
March	13,561	15,300	12.8%
April	14,289	15,774	10.4%
May	14,732	16,589	12.6%
June	14,796	16,747	13.2%
July	14,604	16,557	13.4%
August	14,596	16,114	10.4%
September	14,797	16,998	14.9%
October	15,975	N/A	N/A
November	15,048	N/A	N/A
December	13,718	N/A	N/A
Jan - Sep Average	13,885	15,651	12.7%

## SOUTHERN CONNECTOR TOLL RATE STUDY

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Figure 10 compares the monthly growth of the Federal Highway Administration (FHWA) vehicles miles traveled in the United States and South Carolina with transactions on the Southern Connector since 2004. As shown, VMT in South Carolina and the national VMT show very similar growth patterns, and except for the 12 months following a toll increase, transactions on the Southern Connector generally follow the same growth patterns as VMT. Since January 2013, VMT has shown a generally increasing growth trend as have the transactions on the Southern Connector.

**Figure 10: Southern Connector Transactions vs VMT**

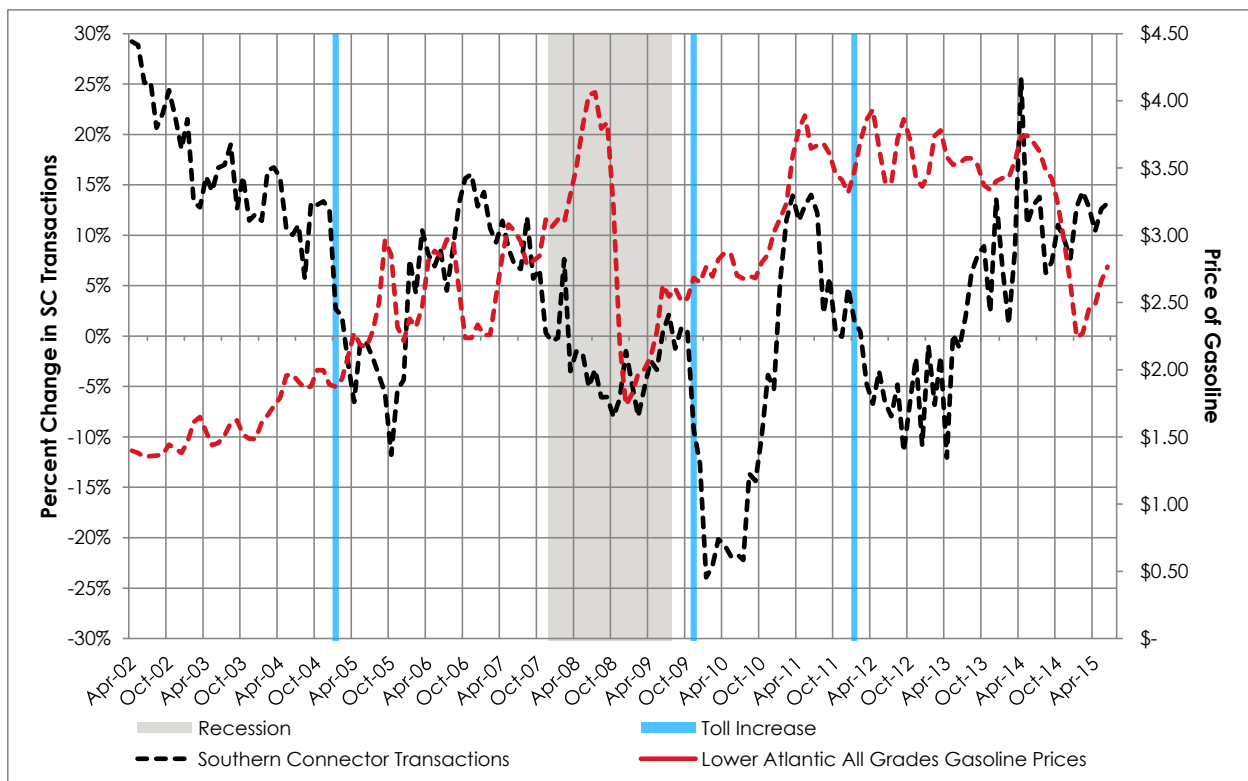


## SOUTHERN CONNECTOR TOLL RATE STUDY

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It is likely that motorists will adjust their travel patterns in the future if there are higher gasoline prices. Higher gas prices lead to less discretionary income that could be spent elsewhere, including on tolls. Figure 11 compares the Southern Connector's transaction percent change with the gas prices in the South Carolina area. As shown, transactions on the Southern Connector correlate to the price of gas. For the period between April 2002 and December 2008, the highest price of gasoline occurred on July 7, 2008 and has continually decreased through the end of the year. Prior to 2005, the high increase in Southern Connector transactions indicate "ramp-up", which is the time it takes motorists to gain knowledge and become comfortable with a new roadway. In 2005, the percent decrease in traffic is a result of the toll increase that took place in January 2005. The Southern Connector transactions then reverted to similar previous growth rates until higher prices in gasoline occurred in 2008. Following the November 2009 toll increase, transaction growth dropped and then was affected by the higher gas prices until early 2013. In early 2013, gas prices again began to decrease and Southern Connector transactions began to increase.

**Figure 11: Comparison of Growth Rates of SC Transactions and Price of Gasoline**

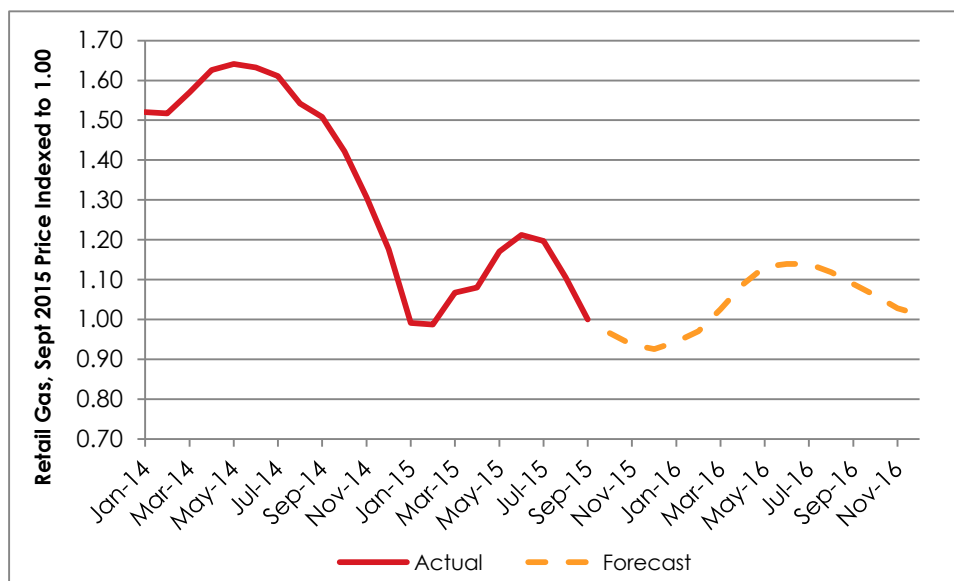


## SOUTHERN CONNECTOR TOLL RATE STUDY

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Figure 12 displays the US Energy Information Administration's gasoline price forecasts for the US east region. Over the next year, gas prices across the country will follow standard seasonal patterns, but are projected to be fairly low and stable.

**Figure 12: US East Coast Retail Gasoline Prices and Short-Term Forecasts (September 2014 Indexed to 1.00)**



Source: US Energy Information Administration

## 2.6 TRAFFIC STUDIES

### 2.6.1 Volumes on Competing Routes

Table 13 summarizes count data available from permanent South Carolina Department of Transportation (SCDOT) stations from 2008 through to 2014. As shown, 2014 showed increases at all locations where data were available. In 2014, I-85 carried about 16 times the traffic than the Southern Connector.

Also of note is the 7.2 percent decrease on I-385, south of Simpsonville, in 2010. SCDOT completely closed the northbound direction of the southernmost portion of I-385 (from mile marker 1 to 15) to accelerate a reconstruction project's schedule. While this closure helped SCDOT to finish the project in a more efficient manner, the closure had a substantial effect on through traffic on both I-385 and the Southern Connector as this through traffic was detoured to I-26 and I-85. As shown, the Southern Connector had a 16.5 percent decrease in traffic in 2010. About 7 percent was due to the I-385 closure, and the rest was due to the toll increase at the end of 2009.

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**Table 13: SCDOT Counts in the Study Area**

Year	I-85		I-385		I-385		I-185 <sup>(5)</sup>	
	West of US 276		Between Southern Connector and I-85		South of Simpsonville		At East Toll Plaza	
	Avg M-F	Average Annual Growth	Avg M-F	Average Annual Growth	Avg M-F	Average Annual Growth	Avg M-F	Average Annual Growth
2008	104,833		65,481		42,250		7,932	
2009 <sup>(1)</sup>	102,987	-1.8%	66,669	1.8%	42,333	0.2%	7,634	-3.7%
2010 <sup>(2)</sup>	107,177	4.1%	64,915	-2.6%	39,288	-7.2%	6,378	-16.5%
2011 <sup>(3)</sup>	106,539	-0.6%	n/a	n/a	43,055	9.6%	6,916	8.4%
2011 <sup>(4)</sup>	n/a	n/a	n/a	n/a	43,797	1.7%	6,438	-6.9%
2013	n/a	n/a	n/a	n/a	45,909	4.8%	6,493	0.9%
2014	118,748	3.7%	n/a	n/a	48,450	5.5%	7,199	10.9%

(1) Toll Increase on the Southern Connector.

(2) Northbound I-385 closed between mile markers 1 and 15. Traffic diverted to I-26 and I-85.

(3) n/a was noted where locations had only partial counts available.

(4) Toll Increase on the Southern Connector.

(5) Counts are via SCDOT permanent count equipment, not toll plaza receipts.

### 2.6.2 Southern Connector Volumes

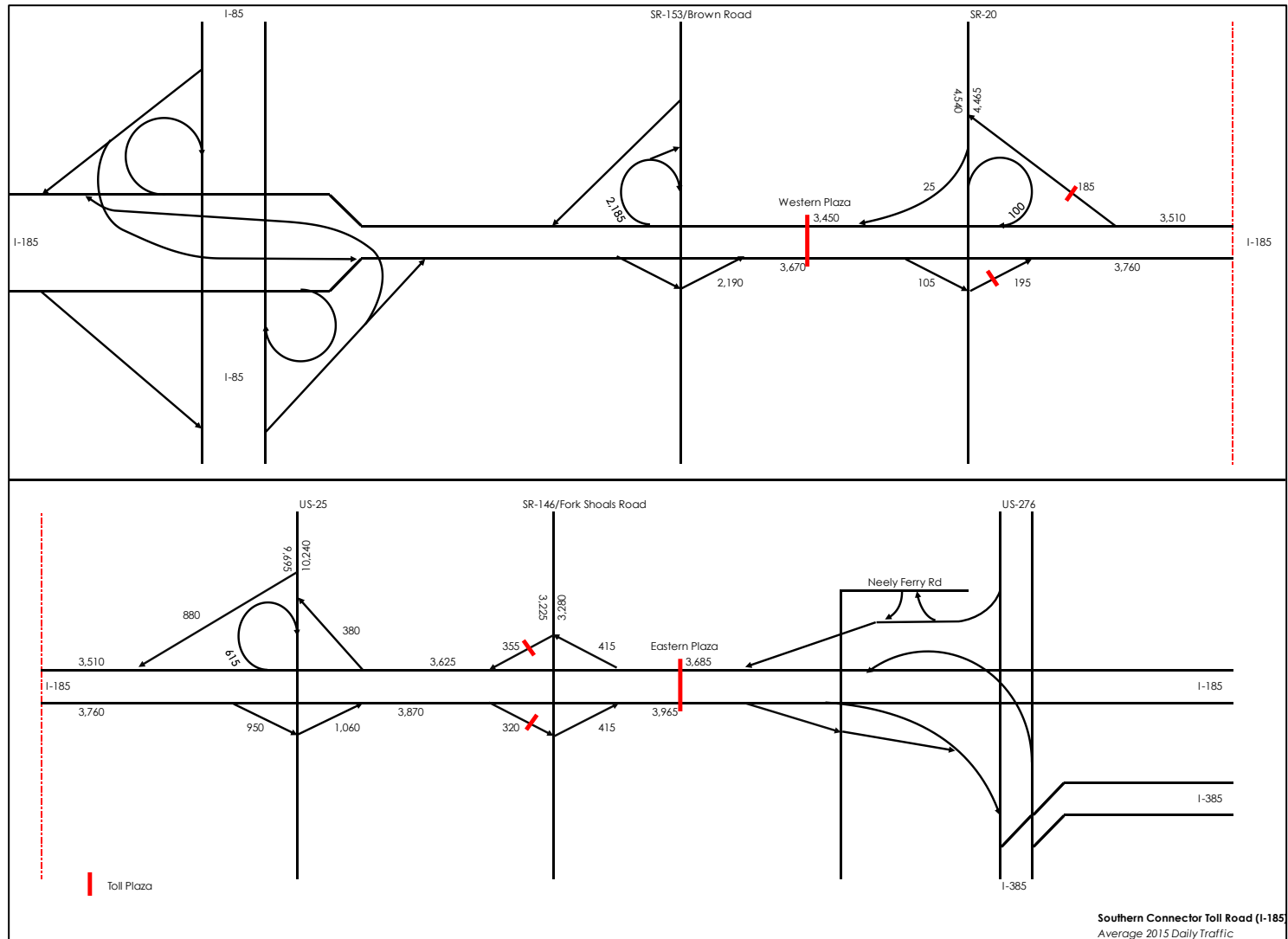
As part of this study, traffic counts were collected at the non-tolled ramps between the two mainline plazas and on the ramps to and from the east at SC 153. The counts were taken in July 2015 and are summarized in AADT format in Figure 13. As shown the ramps between the toll plazas all carry low volumes. The highest ramp volumes between the two toll plazas are located at the ramps to and from the south at US 25 and are in the order of magnitude of 1000 vehicles per day. Additionally, the ramps to and from the east at SC153 carry high volumes (over 2000 vehicles per day). When travelling northbound on I-85, traffic is directed to use SC 153 to access the Southern Connector even though there is an interchange with I-185 further north on I-85. This movement is a "short-cut" to the Southern Connector and although it is not signed in the reverse direction, knowledgeable travelers likely take the shortcut in both directions.



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**Figure 13: 2015 Volumes in the Study Area**



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### 2.6.3 Origin-Destination Patterns on the Southern Connector

Also as part of this study, a limited origin-destination study was undertaken. Data were obtained from StreetlightData, which uses "big data" in the form of anonymous location data from tens of millions of GPS-enabled devices. The device sources include smart phone navigation applications, in-dashboard car navigation systems, smart phone handsets, and commercial vehicle management systems. Travel patterns were traced in the westbound direction for vehicles that pass through the east toll plaza and originate from either I-385 northbound, south of I-185 or I-385 southbound, north of I-185. These two origins represent over 95 percent of all the trips that pass through the east toll plaza. Data were collected for four representative months: February 2015, September 2014, June 2014 and April 2014. Data were summarized separately for passenger cars and commercial vehicles.

The top 10 origin-destination pairs in the westbound direction for personal trips are summarized in Table 14. As shown, the most popular personal trip passes through both toll plazas and is between I-385 NB and SC 153 WB; this trip pair represents 49.5 percent of all personal trips passing through the east toll plaza. The top five most popular personal trip pairs represent 78.9 percent of the trips passing through the east toll plaza, the top 10 most popular personal trip pairs represent 90.7 percent of all personal trips passing through the east toll plaza. As shown, most of these trips (71.5 percent) are through trips and pass through both toll plazas.

**Table 14: Top 10 Origin-Destination pairs for Personal Trips (Average Day)**

Rank	Origin	Destination	Trip Type	% of Total
1	I-385 NB	State Hwy 153 WB	2 Mainline Plazas	49.5%
2	I-385 NB	I-85 WB	2 Mainline Plazas	12.6%
3	I-385 SB	US-25/Augusta Rd SB	1 Mainline Plaza	6.4%
4	I-385 NB	I-185 NB	2 Mainline Plazas	6.1%
5	I-385 NB	State Hwy 146/Fork Shoals Rd NB	1 Mainline Plaza	4.3%
6	I-385 NB	US-25/Augusta Rd NB	1 Mainline Plaza	4.2%
7	I-385 SB	State Hwy 146/Fork Shoals Rd SB	1 Mainline Plaza	3.9%
8	I-385 SB	State Hwy 153 WB	2 Mainline Plazas	3.3%
9	I-385 SB	State Hwy 146/Fork Shoals Rd NB	1 Mainline Plaza	2.7%
10	I-385 NB	US-25/Augusta Rd SB	1 Mainline Plaza	1.9%

The top 10 origin-destination pairs in the westbound direction for commercial trips are summarized in Table 14. As shown, the most popular commercial trip pair passes through both toll plazas and is between I-385 NB and SC 153 WB and represents 39.4 percent of all commercial trips passing through the east toll plaza. The top five most popular commercial trip pairs represent 76.5 percent of the trips passing through the east toll plaza, the top 10 most popular commercial trip pairs represent 91.8 percent of all commercial trips passing through the east toll plaza. As shown, most of these trips (65.9 percent) are through trips and pass through both toll plazas.

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**Table 15: Top 10 Origin-Destination pairs for Commercial Trips (Average Day)**

Rank	Origin	Destination	Trip Type	% of Total
1	I-385 NB	State Hwy 153 WB	2 Mainline Plazas	39.4%
2	I-385 NB	I-85 WB	2 Mainline Plazas	20.3%
3	I-385 NB	US-25/Augusta Rd NB	1 Mainline Plaza & 1 Ramp	8.8%
4	I-385 SB	State Hwy 153 WB	2 Mainline Plazas	4.1%
5	I-385 SB	US-25/Augusta Rd SB	1 Mainline Plaza	3.9%
6	I-385 NB	State Hwy 146/Fork Shoals Rd NB	1 Mainline Plaza	3.8%
7	I-385 SB	State Hwy 146/Fork Shoals Rd NB	1 Mainline Plaza	3.6%
8	I-385 SB	State Hwy 146/Fork Shoals Rd SB	1 Mainline Plaza	3.0%
9	I-385 NB	US-25/Augusta Rd SB	1 Mainline Plaza	2.8%
10	I-385 SB	I-85 WB	2 Mainline Plazas	2.1%

## 2.7 SPEED STUDIES

I-185 does not parallel I-385, so for many trip origins and destinations I-185 is not a useful alternative. However, for some longer trips, particularly those destined for the western side of Greenville, the use of I-185 for part of the trip may provide an alternative routing to the portions of I-385 and I-85. In general, trips from the south-east to the north-west might divert from I-385 at the intersection of the two expressways. These southeast to northwest trips are a small share of the trips on I-385 relative to the trips headed towards the Greenville core on I-385.

Table 16 summarizes speed data observed as collected from a big data source, SIGALERT. SIGALERT collects cellphone data to determine speeds on major traffic corridors throughout the US. SIGALERT data were summarized for the period from July 2, 2015 to July 31, 2015. As shown, average speeds on the Southern Connector are about the same or faster than on I-85, I-385 and the toll free section of I-185, indicating there is currently no time advantage for trips to use the Southern Connector. When comparing the distances traveling via I-85 directly from the Atlanta area traveling northeast, the Southern Connector route is actually slightly longer. Since the speeds on I-85 and the Southern Connector are generally similar, a trip via I-85 results in a shorter trip. These data display the lack of competitive ability that the Southern Connector currently has with I-85 and supports the resulting low share of traffic the Southern Connector carries in the corridor. As congestion on I-85 and I-385 increases, the Southern Connector will become a more attractive alternative for these bypass trips in the future.

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**Table 16: Observed Speeds on Interstate Routes**

Interstate	Direction	Speed		
		AM	PM	Off-Peak
Southern Connector (I-185)	Eastbound	65	65	65
	Westbound	62	62	63
I-85	Eastbound	65	56	67
	Westbound	68	61	68
I-385	Northbound	61	63	63
	Southbound	65	64	65

## 2.8 IMPACT OF PAST TOLL INCREASES

Since its opening, tolls on the Southern Connector have been raised three times: on January 3, 2005, on November 1, 2009 and on January 1, 2012. As a result of these toll increases, transactions on the facility decreased and toll revenues increased. The ratio of the percent decrease in traffic to the percent increase in tolls is termed the toll elasticity and measures the sensitivity or reaction to a toll increase. Elasticity is a negative factor, the greater the absolute value of the elasticity factor, the greater the loss of traffic due to a toll increase. An elasticity value close to -1.0 indicates that the facility is very elastic or very sensitive to toll increases. An elasticity value close to 0.0 indicates that the facility is relatively inelastic, or not sensitive to toll increases. Moderate elasticity ranges from -0.20 to -0.40.

The major impact of a toll increase on traffic volumes is generally due to the shift of traffic to other routes resulting from the attractiveness and potential cost benefits of these competing alternative routes. Motorists may also curtail trips by carpooling, consolidating trips and foregoing trips. As previously discussed, I-85/I-385 is a very competitive route to the Southern Connector as it is free, shorter in distance and also provides a comparable trip in terms of travel time for through trips. Factors that also affect toll elasticity, but that also cannot be easily measured, include current economic conditions (including but not limited to the price of gas), the frequency of toll increases and how long the facility has been in operation. Other more "human" factors that cannot be measured are the impacts of a multiple coin increase.

It should be noted that elasticity is a measure of the impact of "real" toll increases and is not adjusted to reflect inflation. In general, if toll increases in line with inflation are implemented periodically, there should be little impact on traffic volumes. A decrease in toll rates could result in increased traffic; however, there is no evidence based on the results of the prior toll increases to indicate that the traffic increases are sufficient to yield higher toll revenues on the Southern Connector.

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To estimate the elasticity resulting from a toll increase, it is necessary to remove the effects of normal growth on facility performance by calculating pro forma traffic as though the toll increase had not occurred and then comparing the pro forma values to actual performance after the toll increase. The following Table 17 presents the pro forma traffic for each of the toll increases and calculates the resulting elasticity values. As shown, the elasticities have been decreasing, with the 2005 elasticity being a -0.45 and the 2012 elasticity being a -0.38. All these calculated elasticities indicate that the Southern Connector would be categorized at the high end of a moderately elastic facility. This is would be expected as the Southern Connector does not provide a time or distance advantage for most trips in the study area.

**Table 17: Elasticity Calculations for Toll Increases**

	Toll Increase Year <sup>(1)</sup>		
	2005	2009	2012
Pro Forma Traffic <sup>(2,3)</sup>	5,671,928	5,512,104	5,080,093
Actual Traffic <sup>(2)</sup>	4,948,535	4,909,443	4,617,246
Average Toll before Increase <sup>(4)</sup>	\$ 0.73	\$ 0.93	\$ 1.18
Average Toll after Increase <sup>(5)</sup>	\$ 0.94	\$ 1.17	\$ 1.46
Elasticity <sup>(6)</sup>	-0.45	-0.41	-0.38

(1) 2005 and 2012 toll increases in January. 2009 toll increase in November.

(2) Estimated total traffic without a toll increase for 12 mos after the toll increase.

(3) Actual total traffic for the 12 mos after the toll increase date.

(4) Actual toll for the 12 months before the toll increase.

(5) Actual average toll for the 12 months after the toll increase.

(6) Elasticity= change in traffic/change in toll

Elasticity factors can be applied to future traffic to estimate the effect of a future toll increase. Based on the analysis of the historical elasticity factors, an elasticity factor of -0.40 is reasonable to use to estimate the effects of future toll increases on the Southern Connector as it is approximately the average of the elasticities of the prior two increases. An elasticity of -0.40 would forecast a decrease in traffic of 40 percent for each 100 percent increase in toll rates.

The following Table 18 and Figure 14 show the theoretical revenue change that can be expected at various levels of toll increase, given an elasticity factor of -0.40. For example, revenues would increase by approximately 20 percent with a toll increase of 50 percent. Maximum revenues can be expected at a toll level that is about 75 percent higher than existing rates, however traffic would decrease by 30 percent. It should be noted that all three past toll increases were based on passenger car toll increases of 25 cents. The calculated elasticity may not be valid for a toll increase substantially more than 25 cents and could potentially be higher.

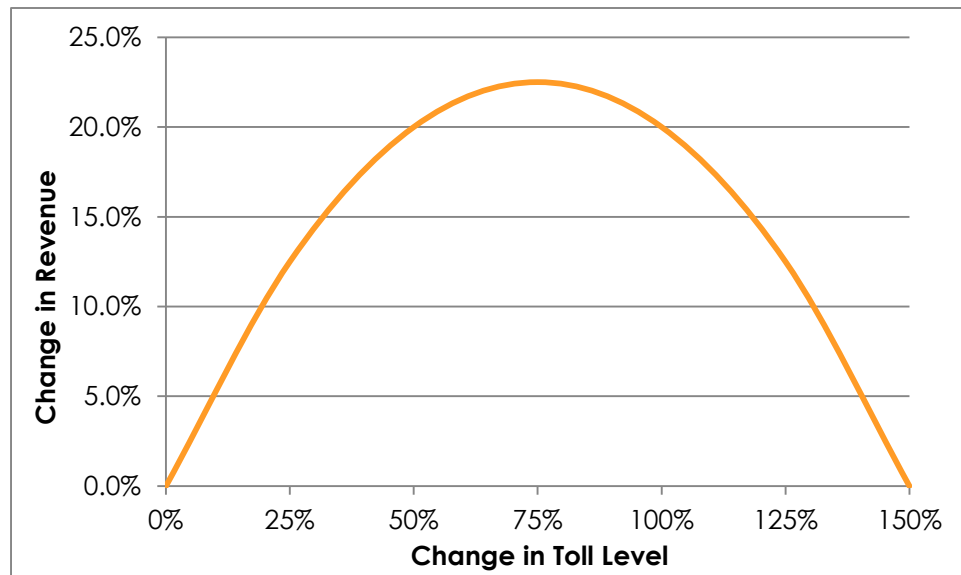
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**Table 18: Theoretical Impact of Revenue on Toll Increases Elasticity = -0.40**

Toll Increase	Traffic Impact	Revenue Change
0%	0.0%	0.0%
25%	-10.0%	12.5%
50%	-20.0%	20.0%
75%	-30.0%	22.5%
100%	-40.0%	20.0%
125%	-50.0%	12.5%
150%	-60.0%	0.0%

**Figure 14: Theoretical Elasticity Curve, Elasticity = -0.40**



## 3.0 SOCIOECONOMIC AND DEMOGRAPHIC FACTORS

The major factors affecting traffic generation for potential users of the Southern Connector are population, employment, and land use in the areas served by the toll road. To support the reasonableness of the forecasts, historical and projected data from the GPATS model and other sources were compared to information from the US Bureau of Census and a private socioeconomic forecasting firm, Woods & Poole Economics. Information was also obtained from the Real Estate Study for the Southern Connector Toll Road prepared by CBRE specifically for this study as an update to the 2009 Study prepared by Grubb & Ellis | Furman Co. (Furman).

### 3.1 POPULATION

As shown in Table 19, the population in Greenville County, as reported by the US Bureau of the Census, has been growing at a faster rate than population in both the entire United States and the state of South Carolina. Between 1990 and 2000, the population of Greenville County increased from 320,127 to 379,616, an average annual rate of increase of 1.7 percent, compared to a growth rate of 1.4 percent for the State and 1.2 percent for the entire US. Between 2000 and 2010, the population of Greenville County continued to grow at the same annual rate, 1.7 percent, to a total 2010 population of 451,225. The population of South Carolina also continued at a steady 1.4 percent per year between 2000 and 2010, while the population growth for the entire US slowed to 0.9 percent per year. In 2010, Greenville County represented about 10 percent of South Carolina's population.

**Table 19: Historical Population Comparison 1990 – 2010**

Year	US		South Carolina		Greenville County	
	Pop	Average Annual Growth	Pop	Average Annual Growth	Pop	Average Annual Growth
1990	248,710,000		3,486,310		320,127	
2000	281,422,000	1.2%	4,012,012	1.4%	379,616	1.7%
2010	308,748,000	0.9%	4,625,364	1.4%	451,225	1.7%

Source: US Census

Long term population estimates for Greenville County indicate that growth is anticipated to slow down. Table 20 presents projections through 2030 from two sources: Woods & Poole Economics, Inc., a nationally-recognized demographics forecasting firm; and GPATS, the Metropolitan Planning Organization for the Greenville area. The Woods & Poole data are shown for both 2007 and 2014, the most recent year of publication. The GPATS data is from the 2008 Long Range Transportation Plan (LRTP) development process and corresponds to a similar publishing timeline as the 2007 Woods & Poole data. Generally, population estimates are published as a reaction to the current economic climate, so that during a down cycle, as was the case for the 2007

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estimates, growth projections tend to be lower. As shown, the 2014 Woods & Poole estimates show higher future population growth rates than the 2007 Woods & Poole estimates as they were published during an upward trend in the economic cycle. Estimated growth rates for the County from the three sources are in the same range through to 2030. However, it should be noted that the GPATS estimates fall between the more pessimistic 2007 Woods & Poole data and the more optimistic 2014 Woods & Poole projections. In fact, the 2030 GPATS estimates are just about two percent higher than the 2007 Woods & Poole estimates and about 10 percent lower than the 2014 Woods & Poole estimates. Because the 2008 GPATS model socioeconomic estimates were reasonable and slightly more conservative than the Woods and Poole 2014 update, the 2008 estimates were used in our forecasts of the long term future growth trend, as discussed later in this report.

**Table 20: Greenville County Estimated Population 2000 – 2035**

Year	Woods & Poole				GPATS 2008	
	2007 Release	Annual Growth	2014 Release	Annual Growth	2008 Release	Annual Growth
1990	<b>321,857</b>		<b>321,857</b>		<i>n/a</i>	
2000	<b>381,135</b>	<b>1.70%</b>	<b>380,949</b>	<b>1.70%</b>	<b>379,616</b>	<i>n/a</i>
2010	<i>433,323</i>	<i>1.29%</i>	<b>453,263</b>	<b>1.75%</b>	<i>426,570</i>	<i>1.17%</i>
2020	<i>474,214</i>	<i>0.91%</i>	<i>515,028</i>	<i>1.29%</i>	<i>474,430</i>	<i>1.07%</i>
2030	<i>520,042</i>	<i>0.93%</i>	<i>577,067</i>	<i>1.14%</i>	<i>521,990</i>	<i>0.96%</i>
2035	<i>544,986</i>	<i>0.94%</i>	<i>607,980</i>	<i>1.05%</i>	<i>n/a</i>	<i>n/a</i>

Note: Actual is shown in **Bold**. Estimates are in *Italics*.

The geographic base for the GPATS regional transportation model includes parts of Greenville, Pickens, Anderson, Laurens, and Spartanburg Counties. The following Table 21 shows the population for the year 2000 and the projections for 2010, 2020, and 2030 for the portion of each County included in the study area. Greenville County is the most significant portion of the model, accounting for approximately 75 percent of the population in 2010 through 2030.



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**Table 21: 2008 GPATS Model Area Estimated Population 2000 - 2030**

County	Total Population			
	2000	2010	2020	2030
Greenville	360,631	413,585	466,252	518,932
Pickens	63,860	73,991	84,134	94,268
Anderson	18,618	25,871	33,126	40,379
Laurens	5,002	6,302	8,011	9,722
Spartanburg	16,941	21,541	26,146	30,746
Total	465,052	541,290	617,669	694,047
Average Annual Rate of Growth				
	'00-'10	'10 - '20	'20 - '30	
Greenville	1.4%	1.2%	1.1%	
Pickens	1.5%	1.3%	1.1%	
Anderson	3.3%	2.5%	2.0%	
Laurens	2.3%	2.4%	2.0%	
Spartanburg	2.4%	2.0%	1.6%	
Total	1.5%	1.3%	1.2%	

Source: Greenville Pickens Area Transportation Study

Growth rates for the sections of Greenville County included in the model area are slightly higher than the rates for the full county. The highest growth rates are for Laurens and Anderson counties, however, these counties have small populations so the incremental increase is small.

### 3.2 EMPLOYMENT

Between 2000 and 2010, employment in Greenville County, as reported by the US Bureau of Census, has been growing at slightly lower rates than the population. Between 1990 and 2000, the employment of Greenville County, in terms of employment by place of residence of the worker, grew at an average annual rate of 1.5 percent. Between 2000 and 2010, the period that included the Great Recession and the long protracted recovery, employment in the County grew at 0.9 percent, slightly higher than the State. As shown in Table 22, the average annual growth rates of total employment for Greenville County and South Carolina are similar and have been trending upwards. Greenville County employment has been growing at a higher rate than both the State and the US since 1990. In 2013, Greenville County jobs accounted for 10.5 percent of the total jobs in South Carolina.

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**Table 22: Greenville County Employment 1990 – 2013**

Year	US		South Carolina		Greenville County	
	Employment	Annual Growth	Employment	Annual Growth	Employment	Annual Growth
1990	115,681,202		1,603,425		161,895	
2000	129,721,512	1.2%	1,824,700	1.3%	188,489	1.5%
2010	138,984,766	0.7%	1,955,264	0.7%	205,186	0.9%
2013	145,234,043	1.5%	2,081,766	2.1%	219,285	2.2%

Source: US Bureau of the Census

As shown in Table 23, employment in the GPATS model area is estimated to increase from 269,007 jobs in 2000 to 395,914 jobs in 2030. This is an average annual rate of increase of 1.3 percent and represents more than 125,000 new jobs. This rate of growth is slightly higher than that forecasted by Woods & Poole for Greenville County in 2007: 290,386 jobs in 2000 and 406,263 in 2030, an average annual rate of growth of 1.2 percent. This rate of growth is also slightly lower than that forecasted by Woods & Poole for Greenville County in 2014: 288,305 jobs in 2000 and 412,936 in 2030, an average annual rate of growth of 1.5 percent. The US Bureau of Census and Woods & Poole include data for the entire counties shown while the GPATS data include only the areas within their model boundaries. The Woods & Poole and GPATS model data represent employment by place of work and not place of residence of the worker. Although this differs fundamentally in concept from the US Bureau of Census, the objective here is to compare the anticipated growth from these forecasts. Once again, the 2008 GPATS estimates are reasonable.

**Table 23: Greenville Area Estimated Employment 2000 – 2030**

Year	Woods & Poole				GPATS 2008	
	2007 Release	Annual Growth	2014 Release	Annual Growth	2008 Release	Annual Growth
1990	<b>229,949</b>		<b>228,058</b>		n/a	
2000	<b>290,386</b>	<b>2.4%</b>	<b>288,305</b>	<b>2.4%</b>	<b>269,007</b>	n/a
2010	314,300	0.8%	<b>303,409</b>	<b>0.5%</b>	n/a	n/a
2020	360,300	1.4%	355,269	1.6%	n/a	n/a
2030	406,263	1.2%	412,936	1.5%	395,914	1.3%
2035	n/a	n/a	445,128	1.5%	n/a	n/a

Note: Actual is shown in **Bold**. Estimates are in *Italics*.

Source: Woods & Poole Economics, Inc.

The forecast of total employment in the GPATS model area was based on the assumption that area-wide employment would grow in proportion to population. The new jobs were first distributed based on known developments since 2000 and proposed and planned near-term



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land use improvement projects. The remainder of the forecasted new jobs was then distributed throughout the region. Estimated GPATS model area employment for 2000 and 2030 is shown in the following Table 24 by county.

**Table 24: GPATS Model Area Estimated Employment 2000 - 2030**

County	Total Employment		Change	
	2000	2030	AAGR	Number of Jobs
Greenville	233,559	330,322	1.2%	96,763
Pickens	22,079	37,123	1.7%	15,044
Anderson	2,311	6,334	3.4%	4,023
Laurens	2,037	3,874	2.2%	1,837
Spartanburg	9,021	18,261	2.4%	9,240
Total	269,007	395,914	1.3%	126,907

Source: Greenville Pickens Area Transportation Study

The GPATS employment estimate for Greenville County is projected to increase at a slower rate than in the surrounding counties. Residential development, also from GPATS sources, indicates that areas outside of Greenville will attract new retail and commercial development. As a result, the share of jobs in Greenville will decrease as commercial development increases in the other counties as shown in Table 25 but most jobs will still be located in Greenville County.

**Table 25: Employment Distribution 2000 – 2030**

County	Percent of Total Employment	
	2000	2030
Greenville	86.8%	83.4%
Pickens	8.2%	9.4%
Anderson	0.9%	1.6%
Laurens	0.8%	1.0%
Spartanburg	3.4%	4.6%
Total	100.0%	100.0%

Source: Greenville Pickens Area Transportation Study

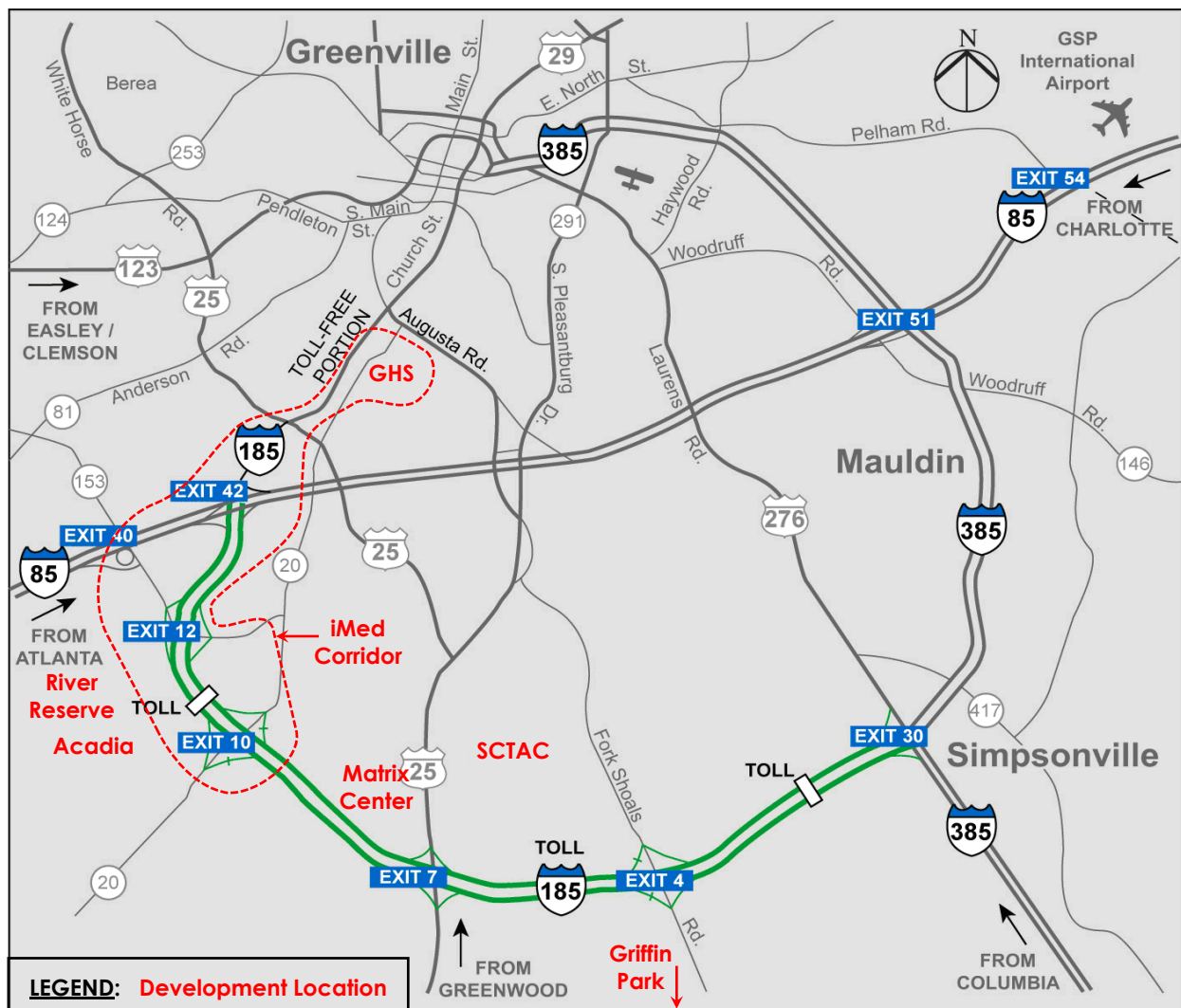
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### 3.3 REAL ESTATE STUDY

In order to estimate the near-term future development growth, both residential and commercial, in the area surrounding the Southern Connector, a local real estate firm, CBRE, prepared a study of recent and projected development patterns in the area along the road and in the broader surrounding area served by the route. The study included an assessment of demographic trends, available buildings and vacant tracts of land, zoning and entitlements, utility/infrastructure availability and economic development initiatives, as well as residential, retail, office and industrial sectors of the overall real estate market. The full report is attached in Appendix A. Key points made in the study are discussed in the following sections. The locations of key developments mentioned are shown in Figure 15.

**Figure 15: Major Developments in the Southern Connector Area**



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### 3.3.1 Residential Development

In general, the area immediately surrounding the Southern Connector has not seen much residential development. Recent population growth in the immediate area surrounding the Southern Connector has been minimal, however, population growth in Mauldin and the areas surrounding I-385 including Simpsonville and Fountain Inn were more notable. Developments currently active include:

- Acadia, which is located immediately adjacent to the Southern Connector (to the south) at the interchange with SC 153. Acadia covers a land area of 290 acres and has 88 homes built with 40 additional homes under construction in the summer of 2015. Full buildout is expected to occur between 2020 and 2030 and is to include 700 residences and 50,000 sq. ft. of commercial development. Current homes range in price from \$350,000 to \$600,000.
- River Reserve, a 250-acre residential development, is located adjacent to Acadia. Homes are currently being constructed in the \$450,000 to \$1,000,000 range.
- Griffin Park is located further south from the Southern Connector in the southwestern quadrant of the intersection of Fork Shoals Road and West Georgia Road. It is a 295-acre development that had some financial trouble until about 2013/2014. It is planned as a Traditional Neighborhood Development (mixed-use) consisting of 1,062 single family homes, townhouses, and shops. Currently homes selling in the \$150,000 to \$275,000 range are being built. Buildout is expected to take about 15-20 years.

### 3.3.2 Non-residential Regional Development

Non-residential development in the area immediately surrounding the Southern Connector is primarily industrial, with some pockets of neighborhood commercial to support both the industrial and residential uses. CBRE's study highlights that the Greenville-Spartanburg market has a high ratio of manufacturing to warehouse space and is foremost an industrial market with approximately 160 million sq. ft. of manufacturing, warehouse and flex space. This is larger than the industrial markets of Columbia and Charleston combined. For five consecutive years, vacancy in the Greenville area has declined and absorption was consistently positive. Vacancy currently sits at 8.0 percent and is not declining mostly due to a lack of product. Annual net absorption, which topped 4.3 million sq. ft. in 2012 and 2013, dropped down to 2.5 million sq. ft. in 2014. Developers are aggressively responding to this lack of available commercial/industrial space by constructing over 3 million sq. ft. of space which is expected to be added in 2015. Over 1.3 million sq. ft. of that space is considered speculative, meaning construction started before occupancy was achieved.

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Growth in the Greenville-Spartanburg market is being driven by two factors: the presence of manufacturing and the attractiveness of the location as a potential distribution hub. The market is located on I-85 between Charlotte, NC and Atlanta, GA with interstate access via I-385 and I-26 to the Port of Charleston. The Greenville-Spartanburg market has access to over 12.5 million people within a three-hour drive.

More recently, the Inland Port of South Carolina was opened in the market in Greer, SC near Spartanburg. Even if a local business is not actively using the South Carolina Inland Port, the fact that they have options helps to mitigate the operational risk of relying too heavily on one mode of transportation. The facility is designed to help increase already strong efficiencies for importers and exporters of goods through the Port of Charleston, which will cause increased distribution traffic traveling to and from Georgia and Charleston, SC. The Inland Port has outperformed expectations through its first full fiscal year. Large regional manufacturers Michelin, GE and automaker BMW, located in nearby Spartanburg, have constituted the majority of the port's activity.

### 3.3.3 Non-residential Development in Southern Connector Corridor

Generally, the outlook for non-residential development in the study area is positive with existing development and available commercial space and land for development. The Southern Connector provides a direct, reliable route. There are two obstacles to development noted in the study.

Discussions with the Greenville Area Development Corporation and several local commercial real estate brokers indicated that there are several industrial land tracts available for sale. However, it was noted that there are only a few tracts that range in size from 80- to 200-acres given the topography issues that begin to occur closer to the Connector. These discussions indicated that flood plains and rolling topography can deter large industrial site users that then, as a result, end up looking elsewhere. However, the Southern Connector corridor has been successful with industrial users that needed sites in the 5- to 20-acre range. These users tend to represent distribution uses; which bodes well for the Connector.

The relative lack of sewer service is one of the main constraints to development in this area. Renewable Water Resources (ReWa) provides wastewater treatment services to the Southern Connector area. ReWa owns and maintains the sewer trunk lines and treatment facilities, while sewer sub-districts (Metropolitan, Mauldin, and Simpsonville) maintain the smaller collector lines that feed into the trunk lines. The sewer authority and its sub-districts are often unwilling to share in the costs of extending service. Several recent projects in the study area such as Griffin Park and Acadia have spent an enormous amount of money to bring sewers to their property in order to make their project viable. These projects are on a large enough scale to be able to justify this expense; smaller projects would not be able to afford these capital improvements. Consequently, commercial and residential development in the Southern Connector service area will continue to follow locations with existing sewer availability for some time into the future.

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Some of the key non-residential developments mentioned in the Real Estate Study are discussed below.

- The South Carolina Technology and Aviation Center, SCTAC, was formerly known as the Donaldson Center Business Park and is located in the northeast quadrant of the intersection of Route 25 and the Southern Connector. SCTAC, a 2,300-acre business and industrial park, was converted from an Air Force base to a “multi-modal” industrial park and has modern airport facilities and railway access. With more than 85 successful and diverse companies, SCTAC has an annual economic impact of \$1.9 billion, while supporting more than 6,800 jobs. The aviation companies located at SCTAC, including global giant Lockheed Martin, provide aircraft maintenance and repair, fuel and supplies, flight charters, hangar rentals, and other aviation services. Michelin North America maintains a major manufacturing facility within the SCTAC.

The South Carolina Army Air National Guard has a visionary plan to develop an Aviation Center of Excellence at SCTAC with an investment of \$60 million and creating 150 jobs. The Aviation Support Facility was completed in April with plans to construct a new field maintenance shop and readiness center early next year. The campus will house Greenville Tech's Aircraft Maintenance School, a workforce training program meeting the needs of the aerospace industry. The initial phase includes an \$18 million Greenville Readiness Center and the \$12 million Field Maintenance Shop. Both will be located across from the existing Greenville Armory on property leased from the SCTAC Center, and are expected to be complete by the end of 2016.

SCTAC recently converted a closed runway into an automotive test track. The International Transportation Innovation Center (ITIC) boasts 350 acres of testing infrastructure, including two miles of newly-resurfaced asphalt and concrete straightaways and an urban track landscape. ITIC provides multiple industries - automotive, information, and communication-with a comprehensive approach that promotes and facilitates innovation workshops, prototype development and validation, technology demonstration events, technology conferences, and exhibition management. Currently, ITIC has six industrial buildings available from 13,500 sq. ft. to 23,500 sq. ft.

- The Matrix Business & Technology Park is located in the northwest quadrant of the intersection of Route 25 and the Southern Connector. The Matrix Park is a 1,100-acre, master-planned park with a special I-2 zoning classification and restrictive covenants that make it ideally suited for industry, warehouse/distribution operations, research & development and headquarters campus facilities. Companies currently operating within the Matrix Business & Technology Park include GE Aviation, JTEKT, KI Logistics, Roy Metal Finishing, The Blood Connection, and Sun City Produce. The park currently has approximately 780 acres for sale at approximately \$25,000 per acre. Additionally, the park currently has approximately 113,000 square feet of industrial space available at \$7.50 per sq. ft.





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- The Greenville Health System (GHS) is the largest employer within the Greenville metropolitan area with almost 10,925 jobs in 2014. The main campus, housing Greenville Memorial Hospital, located at the northern terminus of I-185 north of I-85, is South Carolina's largest acute care hospital. The University of South Carolina School of Medicine Greenville, which opened in 2012, is located on this campus. In March 2015, GHS broke ground on a new facility that will house GHS Senior Care. The facility which will serve up to 200 people will be located near the main campus.
- The Greenville Health System has proposed a plan to develop several innovation campuses along the I-185 and I-85 corridor known as iMED. "iMED" stands for "Innovations in Medical Economic Development", and is the overarching brand for a chain of life sciences/biomedical/innovation campuses. The vision is for iMED to be a major catalyst for the dynamic expansion and growth of the life sciences/biomedical industry cluster in the Greenville area and to become a powerful economic development engine for the region and the State, focused on creating, attracting, and retaining knowledge-based, high-paying jobs.

The iMED corridor is expected to be over 1,000 acres in the coming years, and will initially be anchored by two campuses – iMED 1 and iMED 2. iMED1 is envisioned to be a densely populated, mixed-use, R&D/education, entrepreneurial campus in immediate proximity to the GHS Memorial Campus and the University of South Carolina School of Medicine-Greenville. iMED2 will be prominently situated at the intersection of I-85 and I-185, and will target device makers, pharma companies, and other advanced production and manufacturing facilities – ranging from high-impact/late stage innovation companies, to mid-size/established companies, to branch facilities or potential divisional headquarters of major national/international companies.

The Greenville Chamber of Commerce has named iMED as one of its transformative projects in the Accelerate program, noting that it wants to help spur the establishment or expansion of 10 new life sciences businesses over the next five years. The Chamber intends to help launch initial infrastructure and facilities by the end of 2019. Discussions with the Greenville Area Development Corporation indicated this development is most likely to occur within a 10 to 15 year span, with the initial construction commencing once financing is achieved. It was noted that this initial construction may not occur for another five years. It is likely that the initial development associated with iMed will be located in the proximity of the existing medical campus at the northern end of I-185.



### 4.0 FUTURE ROADWAY NETWORK IMPROVEMENTS

According to the GPATS 2014-2019 Transportation Improvement Program (TIP), there are currently no local area roadway improvements planned or to be constructed that would have a significant impact on Southern Connector traffic. The SCDOT Statewide Transportation Improvement Plan and Long Range Transportation Plan (LRTP) do list some projects in the area on competing or feeder routes to the Southern Connector. These projects include:

- The design-build project at the I-85/I-385 Interchange. This project includes the 6-laning of I-385 from south of Woodruff Road to north of I-85, the construction of auxiliary lanes and widening of ramps on I-85 between Pelham Road and I-385, the addition of collector-distributor roads along I-385 and the replacement of loop ramps with directional ramps. Construction is expected to begin in late 2015, with substantial completion in late 2018. According to SCDOT, minimal traffic disruptions are expected to occur as part of this project. Minimal traffic diversions from the Southern Connector are expected when the project is finished.
- The I-85 widening from White Horse Road to Woodruff Road. This is considered a partial widening project with most of the widenings between on and off-ramps. The project includes improvements to the I-85/Laurens Road interchange, the widening of northbound I-85 to 4 lanes between Mauldin and Laurens Roads, the widening of southbound I-85 between Woodruff and Mauldin Roads, and between Augusta and White Horse Roads, and the replacement of two of the loop ramps at the I-85/Laurens Road interchange with signalized diamond legs. It also includes the replacement of the Ridge Road bridge over I-85, the widening of the I-85 bridges over Laurens Road and the abandoned railroad (future Swamp Rabbit Trail) and replacement of the Salters Road bridge over I-85. Preliminary engineering is to begin in FY 2015 with construction scheduled to begin FY 2019. For the purposes of this study, a 10-year construction schedule was assumed. It is likely that this project will have a positive impact on Southern Connector traffic during construction since some level of construction delays is inevitable. Since the project is only a partial widening project focused on adding additional lanes between on and off ramps, it is expected to have a minimal effect on Southern Connector traffic in the long term.

### **5.0 PROJECTED TRAFFIC AND REVENUE**

Because the Southern Connector has been open to traffic for 14 years, it has a history of toll increases which could be analyzed and because there are no major network changes in the study area that would impact travel patterns in the area, the near-term traffic and revenue forecasts herein are primarily based on historic and future trend analyses, revealed behavior and the evaluation of the future land use development presented in the Real Estate Study.

These analyses and the future traffic growth as forecasted by the 2008 GPATS Regional Transportation Demand Model traffic forecasts were used to develop the long-term 50-year estimates of traffic and revenue for the toll road. The traffic and revenue estimates herein are Stantec's estimates of the maximum revenues that could reasonably be expected to be achieved on the Southern Connector.

#### **5.1 ESTIMATED 2015 TRAFFIC AND REVENUE**

The first step in preparing the traffic and revenue forecasts for the toll road was to review performance for 2015. Through September 2015, toll transactions totaled 4,272,607, a 12.7 percent increase over the same period in 2014, and revenues totaled \$6,292,788, a 13.0 percent increase over the same period in 2014. Because of the recent stock market turmoil, currency devaluations in some foreign markets, and because the general consensus is that the US will increase interest rates the last quarter of the year, the toll road may see slightly lower growth rates than the previous nine months. As such, 2015 transactions were estimated to increase by a total of 12.3 percent to 5,797,500. Using the same average tolls as in 2014, the estimated 2015 annual revenue is \$8,527,800, which translates to a 12.7 percent increase over 2014 annual revenue.

#### **5.2 OVERALL TRAFFIC GROWTH FORECASTING PROCEDURE**

As part of the previous toll study completed in 2009, Stantec used the Greenville Pickens Area Transportation Study (GPATS) model to determine overall projected growth for the corridor. The GPATS Travel Demand Model was developed to assist in the analysis of the transportation system in the Greenville-Pickens area. GPATS is the Metropolitan Planning Organization (MPO) for the Greenville-Pickens region of South Carolina. As part of the 2009 Stantec Toll Study, the socioeconomic inputs to the model were adjusted to reflect the findings of the 2009 real estate consultant, Grubb & Ellis | The Furman Co. (Furman). When the 2009 study was completed, socioeconomic conditions in the county, state and national level were in an economic recession and as previously discussed, socioeconomic forecasts made in that part of an economic cycle tend to be more pessimistic.

As part of this current study, we compared the 2009 socioeconomic forecasts to the most recent growth forecasts. As expected, because the 2014 forecasts are being made in the upswing of



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an economic cycle, the socioeconomic forecasts are more optimistic. That said, the current real estate study did not find any major new developments constructed or planned for construction in the near-term and, as such, the 2008 GPATS long term growth projections were still reasonable and were used in this study.

In addition, according to the National Bureau of Economic Research, since 1945, the average length of an economic cycle from the trough to the peak is 58.4 months, or almost 5 years; the last trough was in June 2009, more than 6 years ago. The recovery period from the Great Recession (December 2007 through June 2009) has been long and protracted. While there does not seem to be indications that a recession is eminent, history suggests caution and this also supports the use of the 2008 GPATS results to forecast long term growth on the Southern Connector.

A spreadsheet model was developed that used the long term growth rates from the GPATS model with adjustments to the near term growth to account for current and expected study area developments and current economic conditions. A toll elasticity of -0.40, based on the revealed behavior of the last two toll increases on the Southern Connector, was applied to all future toll increases. In addition, some diversion from cash payment to PalPass was assumed as drivers would realize some cost savings and electronic payment will be easier and more convenient.

### **5.3 ESTIMATED TRAFFIC AND REVENUE, PROPOSED TOLLS**

The proposed toll rates that would result in the maximum revenues for the Southern Connector are shown in Table 26. As shown, toll increases are recommended to occur every four years beginning on January 1, 2016. The next toll increase would be on January 1, 2020, and every four years thereafter until 2051.

## SOUTHERN CONNECTOR TOLL RATE STUDY

Projected Traffic and Revenue  
November 20, 2015

**Table 26: Proposed Toll Schedule through 2028**

Vehicle Class	Payment Type	Effective Date			
		1-Jan-16	1-Jan-20	1-Jan-24	1-Jan-28
Mainline Toll Plazas					
2-Axle	Cash	\$ 1.75	\$ 2.00	\$ 2.25	\$ 2.50
	PalPass	\$ 1.60	\$ 1.85	\$ 2.10	\$ 2.35
3-Axle	Cash	\$ 3.60	\$ 4.20	\$ 4.80	\$ 5.40
	PalPass	\$ 3.00	\$ 3.60	\$ 4.20	\$ 4.80
4-Axle	Cash	\$ 4.80	\$ 5.60	\$ 6.40	\$ 7.20
	PalPass	\$ 4.00	\$ 4.80	\$ 5.60	\$ 6.40
5-Axle	Cash	\$ 6.00	\$ 7.00	\$ 8.00	\$ 9.00
	PalPass	\$ 5.00	\$ 6.00	\$ 7.00	\$ 8.00
6-Axle	Cash	\$ 7.20	\$ 8.40	\$ 9.60	\$ 10.80
	PalPass	\$ 6.00	\$ 7.20	\$ 8.40	\$ 9.60
Ramp Toll Plazas					
All	Cash	\$ 1.00	\$ 1.00	\$ 1.25	\$ 1.25
	PalPass	\$ 1.00	\$ 1.00	\$ 1.25	\$ 1.25

As shown, under this toll schedule, 2-axle cash and PalPass tolls would increase by \$0.25 every four years. Three-axle, 4-axle, 5-axle and 6-axle vehicles would see increases every 4 years of \$0.60, \$0.80, \$1.00 and \$1.20, respectively. PalPass tolls would be discounted by \$0.15, \$0.60, \$0.80, \$1.00, and \$1.20 from the cash tolls for 2-axle, 3-axle, 4-axle, 5-axle, and 6-axle vehicles, respectively. The tolls at the two ramp locations are increased periodically to maintain the same approximate relationship (after rounding) to the cash passenger car toll rates at the mainline barriers.

It is recommended to keep the PalPass discount in place as it is an effective marketing tool to both attract and retain customers on the facility. As discussed previously, most trips on the Southern Connector are through trips. These trips compete directly with the free alternative route on I-85/I-385. Since the Southern Connector trip does not currently provide a time advantage, most trips are discretionary and based on the perceived quality of the trip (comfort, safety, ease of payment, reliability). Electronic payments also cost the Association less on a per transaction basis, thereby potentially saving the Association operational costs.

In addition, it is recommended that the multi-axle fleet volume discount program be reduced in scale. The forecasted revenues assume that only accounts that spend more than \$500 are given a 10 percent monthly discount. This discount is capped at \$500 per month. The revenue forecasts assume that this discount will be given through the entire forecast period. The impact to revenue would be minimal and it is an effective marketing strategy to keep the multi-axle vehicles that are frequent users as customers.



## SOUTHERN CONNECTOR TOLL RATE STUDY

Projected Traffic and Revenue  
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In addition, preserving a PalPass and multi-axle fleet volume discounts throughout the forecast period allows for the potential for increased revenue should it be needed at a future time. These discounts could be reduced or eliminated at any time (with a month's notice) to increase revenues without implementing an across-the-board toll increase.

The traffic and revenue forecast is presented in Table 27. It is to be noted that the forecasts developed represent a longer term trendline representing projected average performance over the years. Individual years will vary from this trendline, possibly significantly, in both positive and negative directions.

Transactions are forecasted to grow initially by higher growth rates, then slowing to 3 to 4 percent a year by 2030, then slowing further for the remainder of the forecast horizon. Every four years, per our toll increase assumption, we are expecting a slight decrease in transactions to account for the elastic reaction to the toll increase assumed.

Revenue, as devised, will continue to grow throughout the forecast period with revenue jumps in years that tolls are assumed to be increased. Average tolls will increase from the current level of \$1.47 to \$3.78 at the end of the forecast.

## SOUTHERN CONNECTOR TOLL RATE STUDY

Projected Traffic and Revenue  
November 20, 2015

**Table 27: Annual Traffic and Revenue Forecast**

Year	Annual Transactions	Percent Change	Annual Revenue	Percent Change	Average Toll
2013	4,688,000		\$ 6,963,000		\$ 1.49
2014	5,162,500	10.1%	\$ 7,565,900	8.7%	\$ 1.47
2015	5,797,500	12.3%	\$ 8,527,800	12.7%	\$ 1.47
2016	5,852,800	1.0%	\$ 10,164,400	19.2%	\$ 1.74
2017	6,233,200	6.5%	\$ 10,825,100	6.5%	\$ 1.74
2018	6,576,000	5.5%	\$ 11,420,400	5.5%	\$ 1.74
2019	6,904,900	5.0%	\$ 11,991,500	5.0%	\$ 1.74
2020	6,818,300	-1.3%	\$ 13,537,700	12.9%	\$ 1.99
2021	7,125,100	4.5%	\$ 14,146,900	4.5%	\$ 1.99
2022	7,445,700	4.5%	\$ 14,783,600	4.5%	\$ 1.99
2023	7,743,500	4.0%	\$ 15,374,900	4.0%	\$ 1.99
2024	7,635,800	-1.4%	\$ 17,184,400	11.8%	\$ 2.25
2025	7,941,300	4.0%	\$ 17,871,700	4.0%	\$ 2.25
2026	8,258,900	4.0%	\$ 18,586,600	4.0%	\$ 2.25
2027	8,589,300	4.0%	\$ 19,330,100	4.0%	\$ 2.25
2028	8,441,000	-1.7%	\$ 21,094,200	9.1%	\$ 2.50
2029	8,694,200	3.0%	\$ 21,727,000	3.0%	\$ 2.50
2030	8,955,000	3.0%	\$ 22,378,800	3.0%	\$ 2.50
2031	9,134,100	2.0%	\$ 22,826,400	2.0%	\$ 2.50
2032	9,046,700	-1.0%	\$ 24,979,300	9.4%	\$ 2.76
2033	9,227,700	2.0%	\$ 25,478,900	2.0%	\$ 2.76
2034	9,412,200	2.0%	\$ 25,988,500	2.0%	\$ 2.76
2035	9,600,500	2.0%	\$ 26,508,300	2.0%	\$ 2.76
2036	9,606,100	0.1%	\$ 28,884,000	9.0%	\$ 3.01
2037	9,798,300	2.0%	\$ 29,461,600	2.0%	\$ 3.01
2038	9,994,200	2.0%	\$ 30,050,900	2.0%	\$ 3.01
2039	10,194,100	2.0%	\$ 30,651,900	2.0%	\$ 3.01
2040	10,220,400	0.3%	\$ 33,425,600	9.0%	\$ 3.27
2041	10,322,600	1.0%	\$ 33,759,900	1.0%	\$ 3.27
2042	10,425,900	1.0%	\$ 34,097,500	1.0%	\$ 3.27
2043	10,530,100	1.0%	\$ 34,438,500	1.0%	\$ 3.27
2044	10,468,000	-0.6%	\$ 36,814,900	6.9%	\$ 3.52
2045	10,572,700	1.0%	\$ 37,183,100	1.0%	\$ 3.52
2046	10,678,400	1.0%	\$ 37,554,900	1.0%	\$ 3.52
2047	10,785,200	1.0%	\$ 37,930,400	1.0%	\$ 3.52
2048	10,734,000	-0.5%	\$ 40,568,200	7.0%	\$ 3.78
2049	10,841,400	1.0%	\$ 40,973,900	1.0%	\$ 3.78
2050	10,949,800	1.0%	\$ 41,383,600	1.0%	\$ 3.78
2051	11,059,300	1.0%	\$ 41,797,500	1.0%	\$ 3.78

## SOUTHERN CONNECTOR TOLL RATE STUDY

Projected Traffic and Revenue  
November 20, 2015

### 5.4 ASSUMPTIONS

For this report, the forecasts of traffic and revenue have been based on certain assumptions regarding conditions in the area served by the Southern Connector and factors affecting performance of the toll road. Major assumptions include;

- The toll road will continue to be operated efficiently and maintained in a safe and attractive manner, and will provide adequate capacity to handle traffic demand;
- Toll levels for the forecasts will occur on the same timeline as proposed herein and toll increases will be as described herein.
- Transportation improvements in the Greenville area will be the same as those included in the 2014-2019 Transportation Improvement Program (TIP) and 2013 Long Range Transportation Plan (LRTP) and there will be no additional improvements to existing competing routes to the Southern Connector or construction of any additional competing routes;
- Population and employment trends will be similar to those described herein;
- Utility infrastructure in the area served by the Southern Connector will be developed so that it is adequate to serve the projected increases in population and land use development;
- Motor fuel will be in adequate supply and the price of gasoline and diesel fuel will not be significantly higher than the range of prices experienced in 2015 (after adjustments for inflation); and
- Economic conditions in the Greenville Area, South Carolina and the United States will follow a generally normal trend and there will be no major depression, national emergency condition or extended fuel shortage.

\* \* \* \* \*

It is Stantec's opinion that the revenue projections are reasonable and that they have been prepared in accordance with accepted practice. However, given the uncertainties within the current international and economic climate, Stantec considers it necessary to state that the traffic and revenue projections are based on the following caveats:

1. This report presents the results of Stantec's consideration of the information available to us as of the date hereof and the applications of Stantec experience and professional judgment to that information. It is not a guarantee of any future events or trends.
2. The traffic and revenue forecasts will be subject to future economic and social conditions and demographic developments that cannot be predicted with certainty.



## SOUTHERN CONNECTOR TOLL RATE STUDY

Projected Traffic and Revenue  
November 20, 2015

3. The projections contained in this report, while presented with numerical specificity, are based on a number of estimates and assumptions which, though considered reasonable to us, are inherently subject to significant economic and competitive uncertainties and contingencies, many of which will be beyond Stantec's control and that of the Association. In many instances, a broad range of alternative assumptions could be considered reasonable. Changes in the assumptions used could result in material differences in projected outcomes.
4. If, for any reason, any of these conditions should change due to changes in the economy or competitive environment, or other factors, the consultant's opinions or estimates may require amendment or further adjustments.



# APPENDIX A

Real Estate Study by CBRE, Inc.

# REAL ESTATE STUDY

## SOUTHERN CONNECTOR TOLL ROAD

Southern Connector Toll Road  
Greenville, Greenville County, South Carolina 29673  
CBRE, Inc. File No. 15-341AT-2250

*Fleur Hartmann*  
Sr. Transportation Engineer  
STANTEC CONSULTING SERVICES INC.  
50 West 23rd Street  
New York, New York 10010

[www.cbre.com/valuation](http://www.cbre.com/valuation)

**CBRE**

November 20, 2015

Fleur Hartmann  
Sr. Transportation Engineer  
STANTEC CONSULTING SERVICES INC.  
50 West 23rd Street  
New York, New York 10010

RE: Real Estate Study for Southern Connector Toll Road  
Southern Connector Toll Road  
Greenville, Greenville County, South Carolina 29673  
CBRE, Inc. File No. 15-341AT-2250

Dear Ms. Hartmann:

At your request and authorization, CBRE, Inc. has prepared a real estate study for the Southern Connector Toll Road area in Greenville, SC. This study will be used as a part of the basis for the overall Traffic and Revenue Study. Our analysis is presented in the following Appraisal Report.

The subject area is known as the Southern Connector and represents an approximate tolled 14-mile portion of Interstate 185. Overall, I-185 is a 16-mile highway that serves as a spur route of Interstate 85 into the city of Greenville as well as a shortcut route for drivers accessing Interstate 385 from northbound I-85. The subject (Southern Connector) was constructed as a public-private partnership between the South Carolina Department of Transportation and Interwest Carolina Group, LLC, a development team that included a not-for-profit corporation called Connector 2000 Association.

This report is the result of a comprehensive study of historical and projected development patterns in the area along the Southern Connector and the broader surrounding area served by the Connector. It includes an assessment of demographic trends, available buildings and vacant tracts of land, zoning and entitlements, utility/infrastructure availability, planned transportation improvements, and economic development initiatives, as well as the residential, retail, office and industrial sectors of the overall real estate market. CBRE has relied on several market analytic resources, market participant interviews and transportation studies within this report. As requested, this report estimates projected development for the short (5 year), intermediate (15 year), and long (50 year) term time periods.

It has been a pleasure to assist you in this assignment. If you have any questions concerning the analysis, or if CBRE can be of further service, please contact us.

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Respectfully submitted,

CBRE - VALUATION & ADVISORY SERVICES



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### ADDENDA

- A Précis METRO Report - Economy.com, Inc.
- B Greenville County – Comprehensive 10-Year Plan - 2009
- C Greenville County – Comprehensive Plan – 5-Year Review 2013
- D GPATS Long Range Transportation Study (2013)
- E Client Contract Information
- F Qualifications

## Introduction

The subject area is known as the Southern Connector and represents a tolled 14-mile portion of Interstate 185. Overall, I-185 is a 16-mile highway that serves as a spur route of Interstate 85 into the city of Greenville as well as a shortcut route for drivers accessing Interstate 385 from northbound I-85.

### Southern Connector Toll Road – Map



The Southern Connector was constructed as a public-private partnership between the South Carolina Department of Transportation and Interwest Carolina Group, LLC, a development team that included a not-for-profit corporation called Connector 2000 Association. Under this agreement, C2A operates the toll road under a fifty year license. They were responsible for financing, designing, constructing, operating and maintaining the road during this period and the toll revenue would be used to pay them for these efforts.

There are two toll plazas located along the Southern Connector, known as the east and west plazas. Toll booths are located on entrance/exit ramps on Fork Shoals Road (exit 4) and Piedmont Highway (exit 10). The toll plazas has both electronic toll collection (ETC) and cash lanes; toll booths located on ramps accept only ETC or exact change only. Those that do not have exact change or do not pay the toll can fill out a "Pledge Payment Form;" violators have 30 days to remit payment before administrative fees are added to the toll due.

<sup>1</sup> Southern Connector Toll Road Map : <http://www.southernconnector.com/Zmap.htm>



## Executive Summary

Overall, the Southern Connector Area has experienced strong growth over the past five years. While a majority of this growth has been industrial-oriented development, residential development is beginning to increase as Greenville's overall population continues to expand down Highway 276 (Laurens Road) and I-385 towards Mauldin and Simpsonville.

### Industrial Development Trends & Projections

The major developments of influence in the immediate area include the SC Technology and Aviation Center (SCTAC), the Michelin Tire facility, and the Southern Railroad spur. These projects have all fostered industrial growth in the region including Beechtree Business Park and the Matrix Business Park among others. These development's existing and available space is discussed in their relative sections.

#### Michelin North America

Michelin North America is a \$10.76 billion dollar a year company operating 19 plants in 16 locations and employs 22,000 people. Michelin employs 4,000 people in Greenville where it has its North American headquarters as well as a major manufacturing facility and R&D center. While the headquarters office space is not located within the Southern Connector Area, the manufacturing facilities are all located within the Southern Connector Area.

#### SC Technology and Aviation Center (SCTAC)

SC Technology and Aviation Center (SCTAC), is designed to meet the unique needs of technologically-advanced businesses in a global economy. The center features an attractive combination of advanced manufacturing, distribution, and aviation facilities with 450 acres of available property. With more than 85 successful and diverse companies, SCTAC has an annual economic impact of \$1.9 billion, while supporting more than 6,800 jobs. SCTAC serves as landlord to 37 tenant companies and the property management team maintains hundreds of acres of common area including 1,400 acres at the Donaldson Field within the SCTAC.

#### South Carolina Army Air National Guard

The South Carolina Army Air National Guard has a visionary plan to develop an Aviation Center of Excellence at SCTAC with an investment of \$60 million and creating 150 jobs. The Aviation Support Facility was completed in April with plans to construct a new field maintenance shop and readiness center early next year. The campus will house Greenville Tech's Aircraft Maintenance School, a workforce training program meeting the needs of the aerospace industry in the Upstate. Currently, this plan is under construction for the initial phase of development. The initial phase includes an \$18 million Greenville Readiness Center and the \$12 million Field Maintenance Shop. Both will be located across from the existing Greenville Armory on property leased from the S.C. Technology and Aviation Center, and are expected to be complete by the end of 2016.

### International Transportation Innovation Center (ITIC)

SCTAC recently converted a closed runway into an automotive test track, breathing new economic life into an aviation asset that had stood idle for nearly 50 years. ITIC provides multiple industries - automotive, information, and communication-with a comprehensive approach that promotes and facilitates innovation workshops, prototype development and validation, technology demonstration events, technology conferences, and exhibition management. ITIC is located within the *South Carolina Technology & Aviation Center (SCTAC)*. SCTAC, Clemson University's ICAR, Oak Ridge National Lab, Toyota, Duke Energy and other industry partners are performing wireless charging testing in support of a \$12 million grant award from the United States Department of Energy. Currently, ITIC has six industrial buildings available from 13,500 square feet to 23,500 square feet.

### The Matrix Park

The Matrix Park is situated at the corner of US-25 (Augusta Road) and the Southern Connector, and is also within 4 miles of I-85. Companies currently operating within the Matrix Business & Technology Park include Gordon Food Service, GE Aviation, JTEKT, KI Logistics, Roy metal Finishing and The Blood Connection. The park currently has approximately 780 acres for sale at approximately \$25,000 per acre. Additionally, the park currently has approximately 113,000 square feet of industrial space available at \$7.50 per square foot, NNN.

### Residential Trends & Projections

Overall, it was indicated that the residential development within the Southern Connector area has been positive and developers are actively prospecting land near the I-85 / I-185 corridor, Highway 25/ I-185 corridor and along West Georgia Road near I-385 and Simpsonville. As shown in this report, Greenville County's Comprehensive Plan and the Long Range Transportation Plan produced by GPATS indicates strong growth in the southeast Greenville area along the eastern boundary of the Southern Connector area over the next 10 to 15 years. Our research and discussions with market participants confirmed these projections.

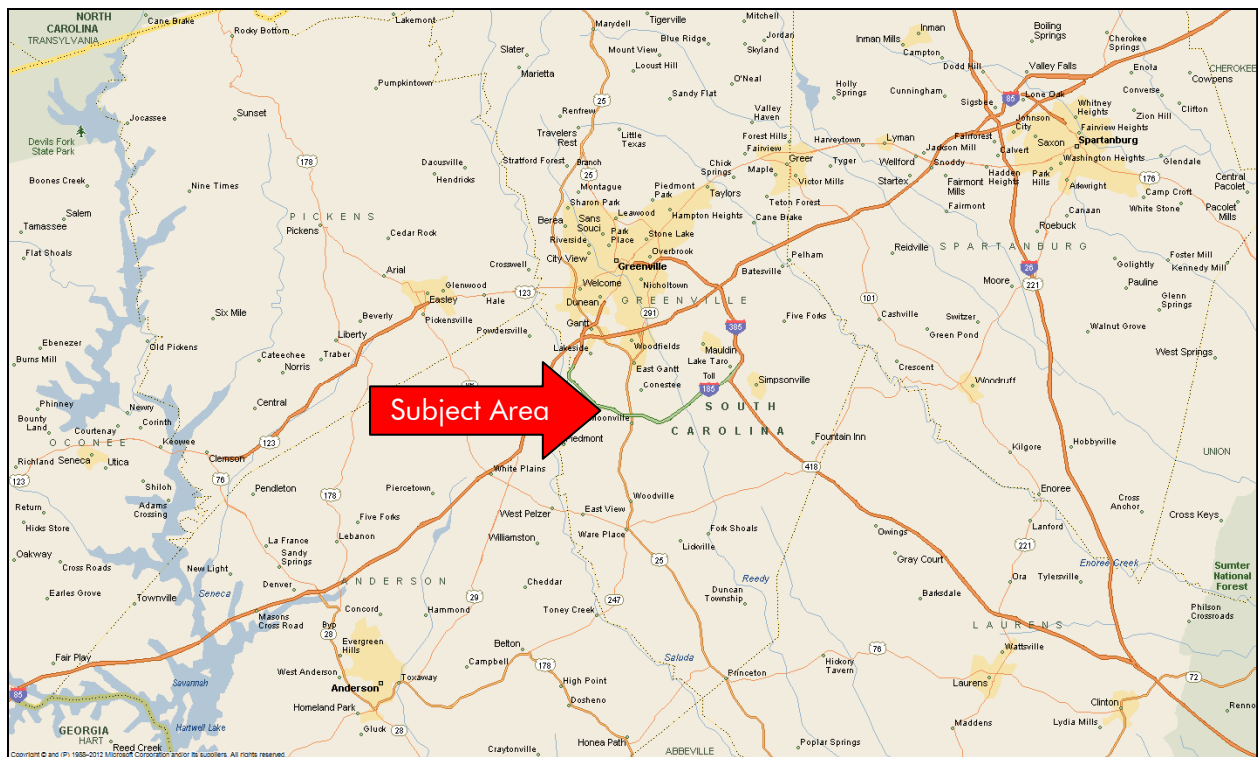
### Conclusion

The Southern Connector Area has seen increased activity on several fronts within recent years. While most of the significant projects in the Southern Connector Area are industrial oriented, residential developments are beginning to expand into the east and west boundaries of the Southern Connector Area. Further, it was noted that the Southern Connector area is becoming more attractive compared to other locations throughout Greenville due to available land, ease of access and other major economic drivers such as Michelin Tire. However, until water and sewer is expanded into low growth areas, development will remain moderate. Overall, the Southern Connector Area can expect to continue to see moderate growth with industrial oriented development in the near-term centered around the SC Technology & Aviation Center and Highway 25. Residential development is expected to be primarily single-family in nature and to



represent a slow- to moderate-growth trend in the near-term with continued expansion of new developments as utilities are extended and population growth continues within the area.

## Greenville Area Analysis



Economy.com provides the following Greenville area economic summary as of March 2015. The Greenville Area MSA, as defined by Economy.com, comprises Greenville, Anderson, Pickens, and Laurens Counties and the principal cities of Greenville, Mauldin and Anderson. The full Economy.com report is presented in the addenda.

2009	2010	2011	2012	2013	2014	INDICATORS	2015	2016	2017	2018	2019	2020
29.7	30.6	31.7	31.7	32.4	33.6	Gross metro product (C09\$ bil)	35.0	36.4	37.5	38.5	39.3	40.0
-4.3	3.2	3.5	-0.0	2.2	3.4	% change	4.2	4.0	3.0	2.7	2.1	1.9
353.6	354.5	362.4	368.5	379.4	388.5	Total employment (th)	399.9	410.6	417.7	422.3	425.3	427.6
-6.7	0.2	2.2	1.7	2.9	2.4	% change	2.9	2.7	1.7	1.1	0.7	0.5
10.6	9.9	8.8	7.7	6.2	5.4	Unemployment rate (%)	5.8	5.6	5.2	5.1	5.0	5.1
-2.6	2.6	5.2	4.5	2.8	5.2	Personal income growth (%)	6.8	7.5	6.9	5.9	4.7	4.1
42.6	42.0	42.4	43.2	44.9	46.5	Median household income (\$ th)	48.0	49.8	51.9	53.9	55.5	56.9
819.3	825.8	833.4	842.0	850.4	862.5	Population (th)	874.8	886.9	898.7	910.6	922.7	934.7
1.3	0.8	0.9	1.0	1.0	1.4	% change	1.4	1.4	1.3	1.3	1.3	1.3
7.2	3.2	4.8	5.9	5.3	9.3	Net migration (th)	9.9	9.8	9.6	9.8	10.1	10.2
1,729	1,756	1,907	2,650	3,254	3,634	Single-family permits (#)	4,142	4,738	4,771	4,698	4,548	4,295
92	206	122	168	641	1,943	Multifamily permits (#)	1,710	1,300	1,062	796	757	716
133.4	135.9	134.7	141.4	148.5	154.0	Existing-home price (\$ th)	160.2	163.8	165.5	167.0	170.7	176.8

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### Recent Performance

Greenville-Anderson-Mauldin's recovery has transitioned into an expansion as payrolls increase and industrial production rises at an above-average pace. Hiring in professional/business services and manufacturing has cooled, but hiring in health services and leisure and hospitality

<sup>2</sup> Economic Indicators: Economy.com Greenville-Anderson-Mauldin Economic Summary – March 2015

has picked up the slack. State exports are benefiting manufacturing payrolls and lower energy costs are boosting manufacturers' profits. As of March 2015, the 6% unemployment rate is among the lowest in the state. Foreclosures continue to decline steadily, but they remain well above their prerecession peak.

### Manufacturing

Nationally, manufacturing is one of the sectors that was instrumental in driving the United States economy out of recession. The strengthening U.S. dollar and weak international demand will cause growth in Greenville's export-centric manufacturing industry to stall in 2015, but as headwinds dissipate, payrolls will pick up in 2016. Industrial production will exceed the national average behind growth in high-value subsectors such as machinery and transportation equipment. Michelin will provide a stable source of jobs and will gain from rising U.S. auto sales and deteriorating U.S. roadways. Increased global energy demand remains an upside risk, as General Electric Co.'s Greenville plant is at the forefront of manufacturing the company's newest gas turbine. The first turbine is scheduled for delivery in the summer, and GE anticipates the sale of as many as 500 by 2030. GE Power & Water, the division to which the Greenville site belongs, will become GE's largest division by revenues after the company spins off GE Capital. U.S. defense spending cuts could weigh on Greenville manufacturing; Michelin has several large military contracts that would be put at risk by a lower defense spending budget.

With the Greenville-Spartanburg market having a high ratio of manufacturing to warehouse space, the region's industrial market has been ahead of the national market in terms of growth. Greenville-Spartanburg is first and foremost an industrial market with approximately 160 million square feet of manufacturing, warehouse and flex space. This is larger than the industrial markets of Columbia and Charleston combined. For five consecutive years, vacancy has declined and absorption has been consistently positive. Vacancy currently sits at a record 8.0%, unable to move further mostly due to a lack of product. Annual net absorption, which topped 4.3 million square feet in 2012 and 2013, dropped down to 2.5 million square feet in 2014. Space that does not exist cannot be absorbed.

Developers are aggressively responding to this lack of product with the over 3 million square feet of space expected to be built in 2015. Over 1.3 million square feet of that space is considered speculative, meaning construction started before occupancy was achieved.

Both numbers represent the highest amounts of construction since we began tracking the Greenville-Spartanburg industrial market in 2001. Absorption in 2015 should be the strongest since the recession. It is possible for vacancy gains to be held in check as new product is delivered to the market.

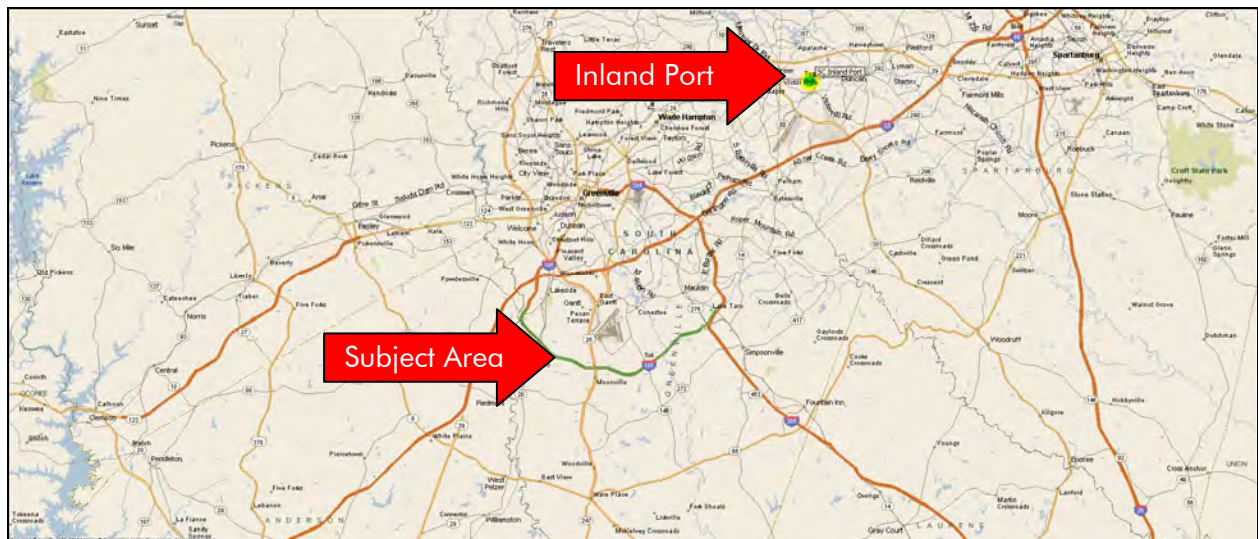
Growth in the Greenville-Spartanburg market is being driven by two factors: the presence of manufacturing and the attractiveness of the location as a potential distribution hub. Manufacturing is being accelerated by a strengthening United States economy and an increasing

demand for goods by consumers in emerging markets. In 2013, China emerged as the biggest importer of goods manufactured in South Carolina. The rapid growth of the middle class in China is only going to increase the significance of South Carolina's most important international trade partner.

The area is being perceived as an attractive location of distribution due to its ideal location on the I-85 corridor, nestled between the Atlanta and Charlotte MSAs. A distribution hub in the Greenville-Spartanburg market has access to over 12.5 million people within a three-hour drive. The development of the South Carolina Inland Port has only added to the attractiveness of the area as a distribution location. Even if a tenant is not actively using the South Carolina Inland Port, the fact that they have options helps to mitigate the operational risk of relying too heavily on one mode of transportation.

### Inland Port

One of the long-term primary drivers of our economy going forward will be the South Carolina Inland Port. While this facility is not located within the Southern Connector's immediate neighborhood, the facility is designed to help increase already strong efficiencies for importers and exporters of goods through the Port of Charleston, which will cause increased distribution traffic traveling to and from Georgia and Charleston, SC. The Inland Port at has outperformed expectations through its first full fiscal year. Large regional manufacturers Michelin, GE and automaker BMW, located in nearby Spartanburg, have constituted the majority of the port's activity. Located between Charlotte and Atlanta, the port is situated in one of the fastest-growing corridors in the South, and provides inland manufacturers direct access to the Port of Charleston.



The South Carolina Inland Port opened in October 2013, extending the Port of Charleston's reach 212 miles inland to Greer, SC, and providing shippers with access to more than 95 million consumers within a one-day drive. The inland port boosts efficiency for international freight movements between the Port of Charleston and companies located across the Southeast, and the

project is expected to create additional economic investment in the South Carolina Upstate, where BMW, Michelin and other international manufacturers already operate.

### Inland Port – Birds Eye View



Exporters and importers of goods are likely to use the facility as a staging area for operations up and down the east coast. As such, we envision strong growth for the distribution market as a result of activity at the SCIP over the next decade, with the pace of that change quickly accelerating after Post-Panamax ships arrive at the Port of Charleston with regularity. The widening of the Panama Canal is expected to be complete in 2016 and the Port of Charleston is racing to increase the depth of their port to 50 feet to accommodate the larger ships.

### Housing

The housing market will continue its recovery, but much work still needs to be done. Accelerating wages and above-average population growth will boost housing demand, igniting housing starts over the near term. Population growth will not return to prerecession levels in the near-term, but will support construction payrolls, which have struggled to recover from the recession and remain weaker than average. Expanding labor markets, affordable housing, and a moderate climate make Greenville a desirable working and retirement destination. Declining foreclosures will give a bump to house prices in the short term, but growth will trail the national average over the long run because house prices already rose significantly in 2012, 2013 and 2014.

### Conclusion

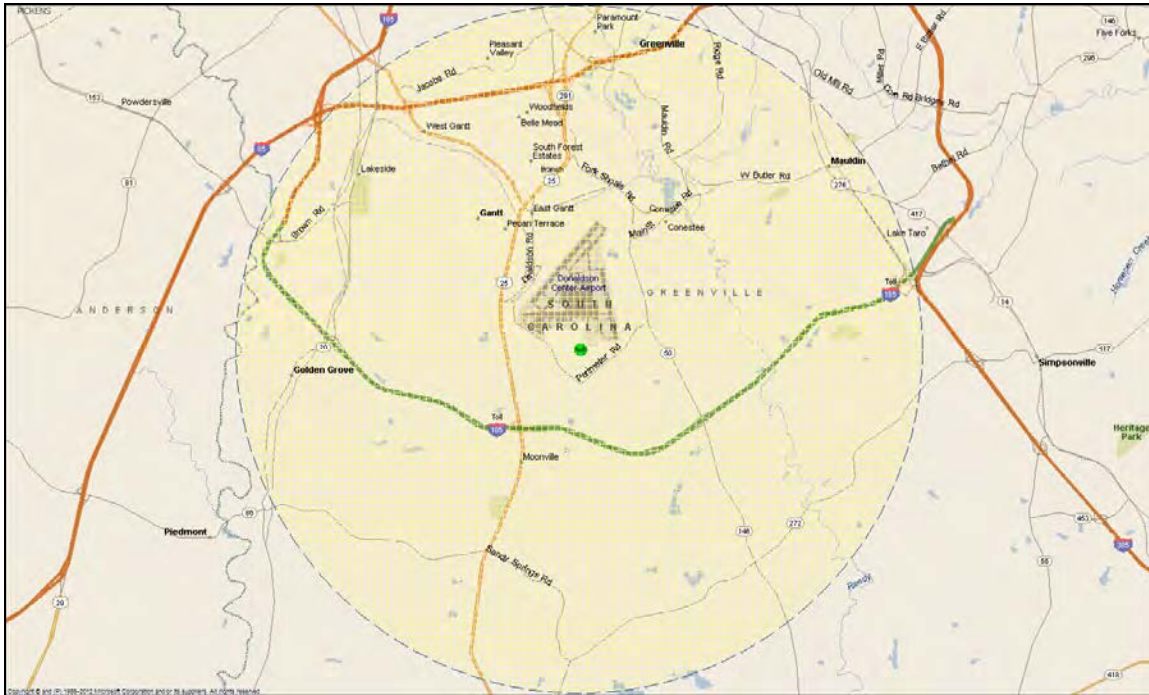
Greenville-Anderson-Mauldin's recovery has transitioned into an expansion. Despite slowing payroll growth, manufacturing output will exceed the national average over the medium term. However, a weakening global economy could erode manufacturing exports. Longer term, population increases, improving educational attainment, and an expanding logistics industry will underpin above-average job growth over the forecast horizon.

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<sup>3</sup> Inland Port – Birds Eye View Photo



## Neighborhood Analysis



NOTE: The Southern Connector Toll Road is the green highlight portion of I-185 with the neighborhood representing the yellow highlighted area.

### Location

The subject area is in the city of Greenville and is considered a suburban location. The city of Greenville is situated in southwest Greenville County with the Southern Connector area situated in the south to southeast portion of the city of Greenville. The Greenville Central Business District ranges in distance from the Southern Connector neighborhood; depending on the relative location within the neighborhood; however the southern boundary of the neighborhood is considered to be Sandy Springs Road which is approximately 12 miles from the Greenville CBD.

### Boundaries

The neighborhood boundaries are not differentiated or exact, but generally conform to a five-mile radius from the southern boundary of the SCTAC.

### Land Use – Overall Greenville County Area<sup>4</sup>

The following information regarding the overall Greenville County area is extracted from the Greenville County Comprehensive 10-Year Plan and the Greenville County Comprehensive Plan: 5-Year Review. Greenville County's predominant land use pattern is best characterized by low-density, dispersed development, with separated and disconnected uses. This pattern, while consistent with the land use plan from Designing Our Destiny, does little to advocate current

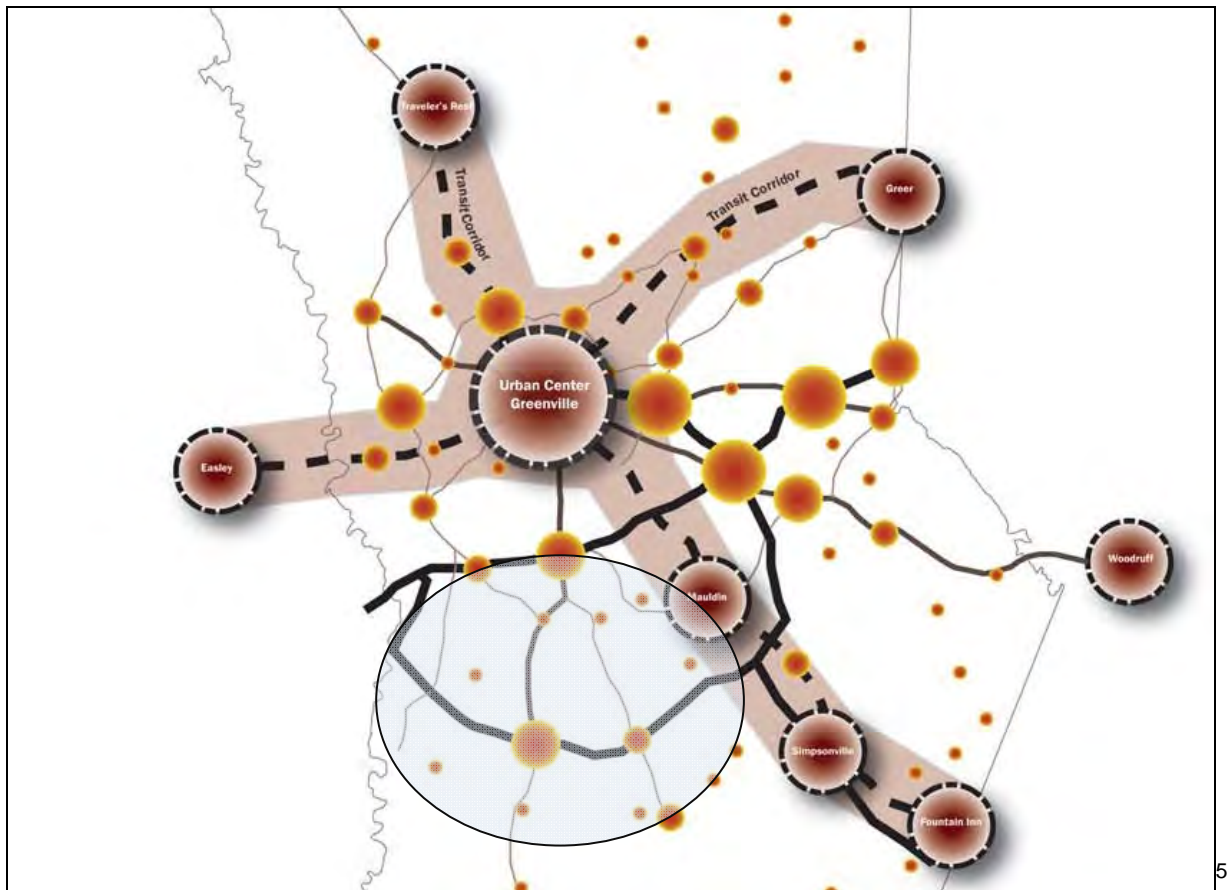
<sup>4</sup> Greenville County Comprehensive 10-Year Plan (2009) & 5-Year Review (2013)

goals that emphasize the need to create economically viable, mixed-use, people-oriented communities supportive of plans for multi-modal transportation alternatives. Despite the current dispersed development pattern, Greenville County has an underlying development structure that can be described as Communities, Centers, and Corridors.

After studying the existing land use and transportation patterns, the determination was made that three basic components —Communities, Centers, and Corridors— form a skeletal structure of the existing growth pattern and form the basis for the future land use strategy. The basic premise of the Communities, Centers, and Corridors is to encourage growth in areas that can best support new development. This strategy seeks to build on Greenville’s existing development framework by clearly defining the role of each of these three components to better accommodate future growth and ensure continued economic development.

A key goal of the Communities, Centers, and Corridors growth strategy is to better integrate land use and transportation planning so that land uses are supportive of our transportation objectives and vice versa. As a new growth strategy is implemented, land uses can be organized so that citizens will have improved access to future transportation choices resulting in higher use. This growth strategy encourages a future growth pattern that focuses mixed-use development in centers and along major roadways so that pedestrian, bike, and transit options are more feasible. By utilizing existing facilities and infrastructure more effectively, this strategy seeks to reduce the demand for extensive new facilities and infrastructure. Utilizing this approach, Greenville County can continue to accommodate growth and economic development while reducing long-term costs associated with road widening projects and costly infrastructure improvements. The following maps summarize Greenville County’s projected concentrations of growth most recently adopted Land Use Map:

## Greenville County – Projected Concentrations of Growth Map



As shown in the above map, the highlighted area represents the Southern Connector Area. There are several projected growth areas within the Southern Connector Area with the primary anticipated growth at the Highway 25 and I-185 corridor with residential, industrial and retail development over the next 5 to 10 years. This is located along the Southern Connector and represents the highest potential growth section for the Southern Connector area.

<sup>5</sup> Projected Concentrations of Growth Map – Greenville County Comprehensive 10-Year Plan (2009)



# *Future Land Use Map*

## **Legend**

- Highway
- Interstate

## **Center Type**

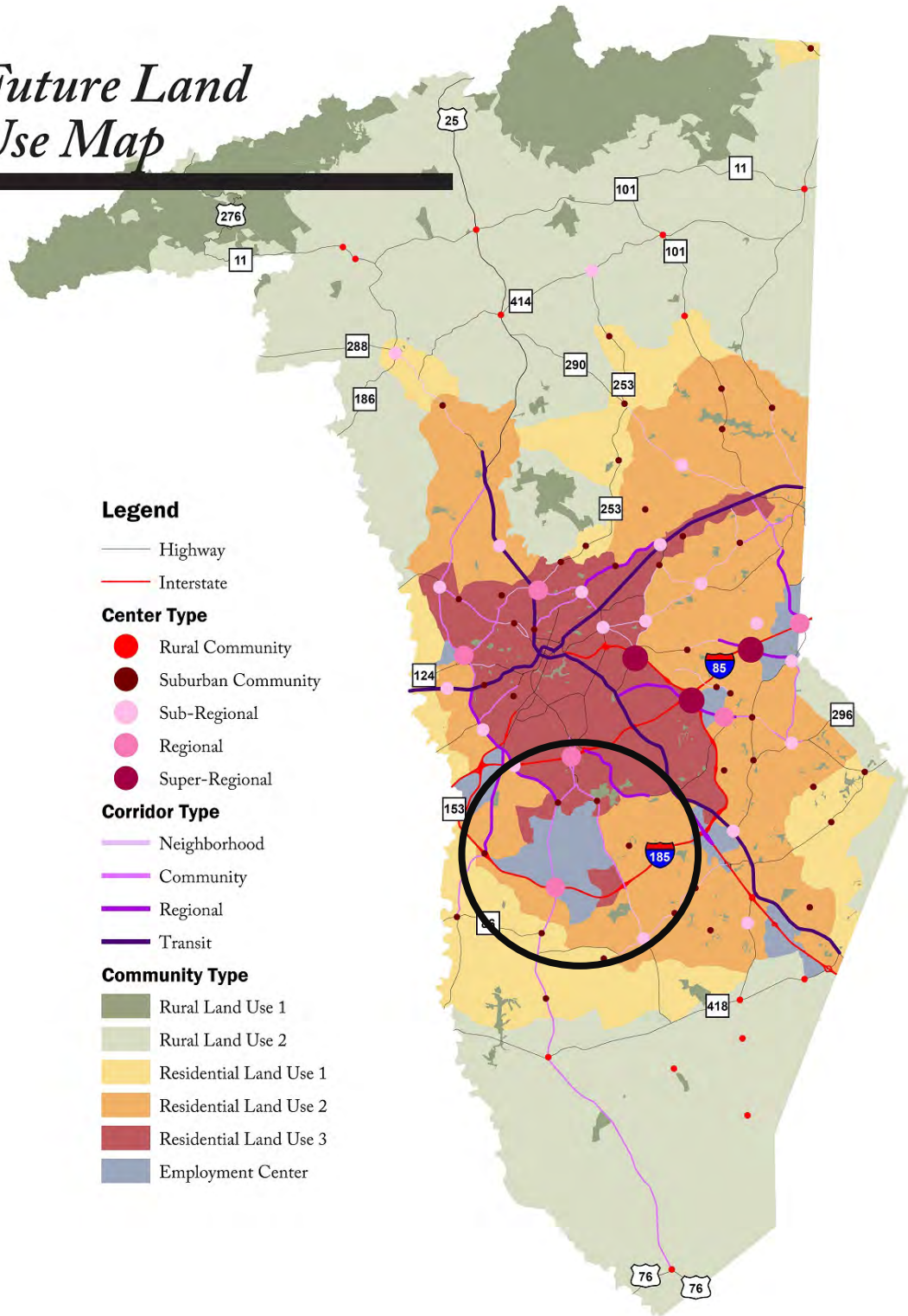
- Rural Community
- Suburban Community
- Sub-Regional
- Regional
- Super-Regional

## **Corridor Type**

- Neighborhood
- Community
- Regional
- Transit

## **Community Type**

- Rural Land Use 1
- Rural Land Use 2
- Residential Land Use 1
- Residential Land Use 2
- Residential Land Use 3
- Employment Center



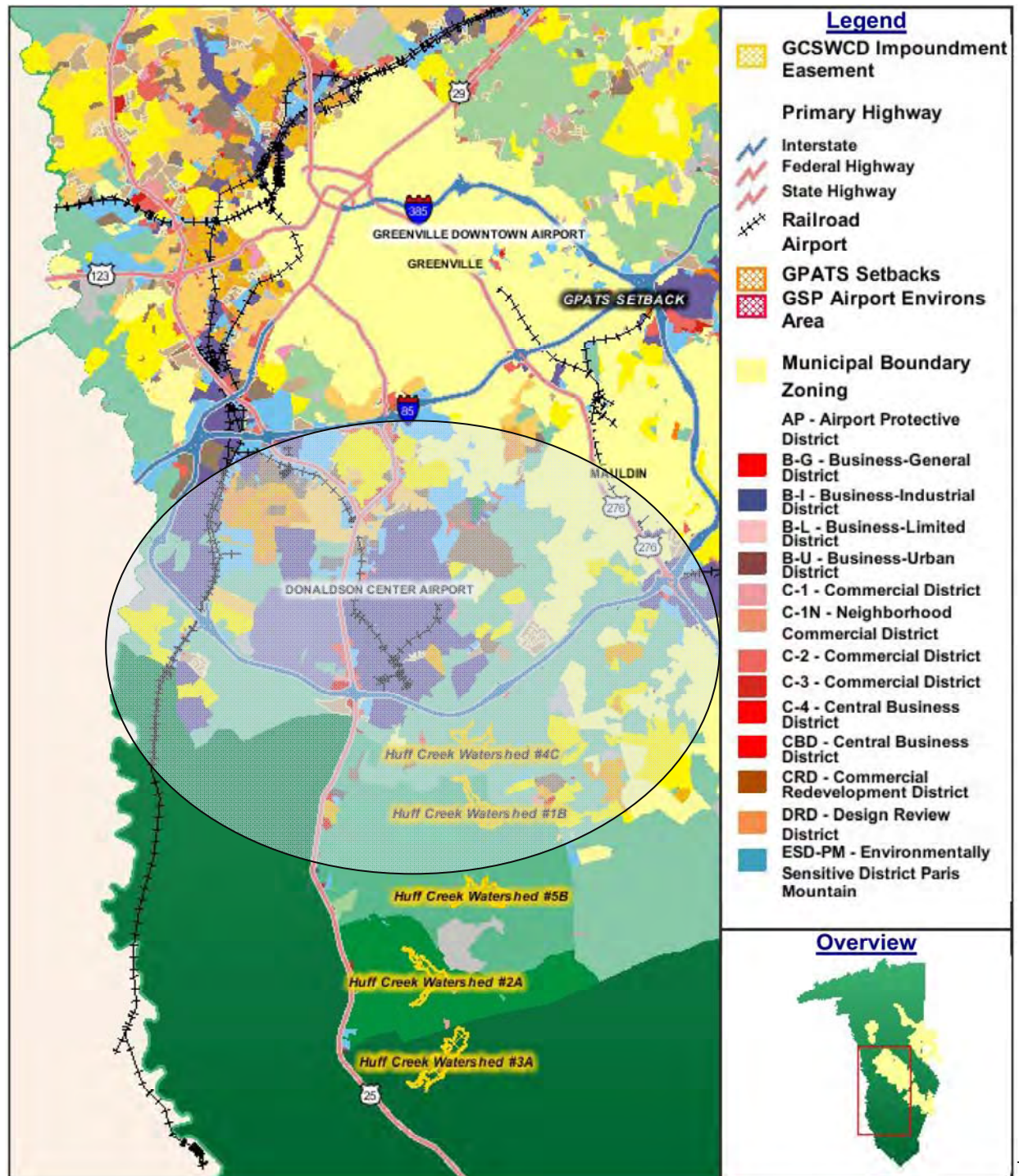
6

NOTE: The oval area represents the Southern Connector market area.

<sup>6</sup> Future Land Use Map – Greenville County Comprehensive Plan: 5-Year Review (2013)

## Zoning Map

The following map summarizes the Southern Connector's current neighborhood Zoning Districts:



NOTE: The highlighted oval area represents the Southern Connector market area.

<sup>7</sup> Greenville County Current Zoning Map – Greenville County GIS Services (2015)

As shown above, the Southern Connector area is primarily focused on industrial development with a significant amount of environmentally sensitive areas to the south of I-185. A majority of the current residential zoning districts are located towards the north and northeast of the Southern Connector neighborhood; closer to the Greenville CBD, the Interstate 85 and Highway 276 corridors. However, as shown with the Future Land Use Map on page 12, a majority of the area south of I-185 will represent residential zoning districts in the near future.

### Land Use- Southern Connector Neighborhood

Land uses within the immediate vicinity are predominately industrial development with pockets of single family residential and commercial development. Major developments of influence in the immediate area include the SCTAC, the Michelin Tire facility, and the Southern Railroad spur. These projects have all fostered industrial growth in the region including Beechtree Business Park and the Matrix Business Park among others. Development in this region has been slow, but relatively consistent and helped by improved infrastructure including the widening of Highway 25 and the completion of Interstate 185, identified as the Southern Connector. Commercial development prior to the recession was growing slightly, relegated to the primary north-south corridors including US Highway 276 and S. Pleasantburg Drive, but is now largely come to a halt. The majority of commercial development is business service and retail, designed to serve the areas immediate population. Residential development in the area is relatively static, although 47% of the residential development within a 3-mile radius has been built since 1990. As of 2015, the median value of all homes within a 3-mile radius is approximately \$127,134.

### Growth Patterns

The neighborhood is considered to be in the mature stage of the development cycle and just outside of what are considered the primary growth areas of the MSA. A majority of growth is concentrated further north along White Horse Road and the I-85 / I-185 intersections. There is very little retail development in the neighborhood with most of the improvements being scattered industrial buildings. The neighborhood is best characterized as an industrial area, with most residents living just outside the neighborhood. Population and household growth over the past decade has been moderate with no significant changes projected through 2015.

### Access

Primary access to the subject neighborhood is provided by Interstate-85, Interstate-185 and Interstate-385 with secondary access provide by US Highway 276, US Highway 25, US Highway 50/146 and US Highway 20 as identified in the preceding map. Secondary roads such as Fork Shoals Road, White Horse Road, Perimeter Road, Ridge Road, Verdae Boulevard and South Pleasantburg Drive provide additional access throughout the area. Ingress/egress to the neighborhood and the major transportation routes of the region (I-85 and I-185) are considered good, fostering industrial development of the area within the near-term and several proposed commercial developments in the long-term.



## Greenville Health System

Greenville Health System is a nonprofit, patient-centered, teaching and research institution. As of 2014, the system has 1,358 licensed beds, 1,366 affiliated and employed medical staff, and 12,770 employees dispersed throughout six medical campuses and a variety of outpatient and specialty facilities. The Greenville Health System has proposed a plan to develop several innovation campuses along the I-185 and I-85 corridor known as iMED. Discussions with several market participants indicated this project is most likely a 10 to 15 year plan with the initial construction commencing once financing is achieved. It was noted that this initial construction may not be for another five years. The following map outlines the proposed innovation corridor.

### iMed Innovation Corridor Map



“iMED” stands for “Innovations in Medical Economic Development”, and is the overarching brand for a chain of life sciences/biomedical/healthcare innovation campuses to be developed along the I-185 and I-85 corridors in Greenville, South Carolina. IMED will be a major catalyst for the dynamic expansion and growth of the life sciences/biomedical industry cluster in the Upstate of South Carolina. It will become a powerful economic development engine for the region and the State, focused on creating, attracting, and retaining knowledge-based, high-paying jobs. IMED will be characterized by ready access to the vast clinical resources of GHS, which is the largest healthcare system in South Carolina (8 campuses; 14,000+ employees), one of the largest providers in the Southeast, and one of the newest formally designated Academic Health Centers in the nation. The GHS Clinical University is comprised of divisions of Education, Research, and Innovation (including the Greenville Health Research Development Corporation)

<sup>8</sup> iMed Map – Proposed Development Area Map (2015)

which are capable of supporting a wide variety of strategic industry alliances and partnerships, in tandem with primary university and affiliate partners.

The IMED corridor is expected to be over 1,000 acres in the coming years, and will initially be anchored by two campuses – IMED 1 and IMED 2. IMED1 is envisioned to be a densely populated, mixed-use, R&D/education, entrepreneurial campus in immediate proximity to the GHS Memorial Campus and the University of South Carolina School of Medicine-Greenville. IMED2 will be prominently situated at the intersection of I-85 and I-185, and will target device makers, pharma companies, and other advanced production/manufacturing facilities – ranging from high-impact/late stage innovation companies, to mid-size/established companies, to branch facilities or potential divisional headquarters of major national/international companies.

Successful, sustainable development of the IMED corridor will require an unprecedented level of community collaboration, involving numerous stakeholders, and creatively leveraging public/private partnerships and associated economic development and funding strategies.

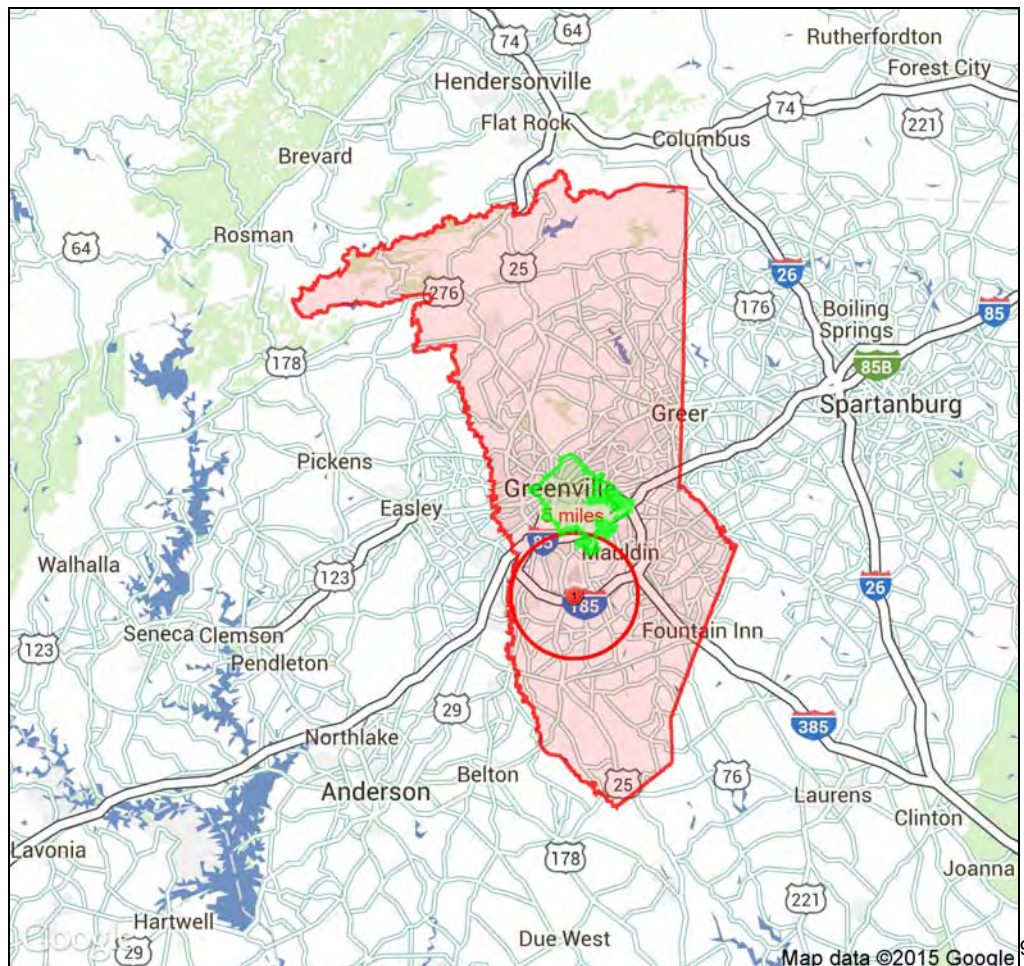
To get the concept moving, IMED needs public-private partnerships and an “unprecedented level of community collaboration,” says Sam Konduros, director of the Greenville Health System’s Research Development Corporation. Health providers, private partners, developers, city, county and the state need to come together. “We want to have a nationally prominent, unique, value proposition for why companies would want to be here,” he said.

The vision is gaining traction. The Greenville Chamber of Commerce has named iMED as one of its transformative projects in the Accelerate program, noting that it wants to help spur the establishment or expansion of 10 new life sciences businesses over the next five years. The chamber intends to help launch initial infrastructure and facilities by the end of 2019. Discussions with the Greenville Area Development Corporation indicated this development is most likely a 10 to 15 year plan.

## Conclusion

Overall, the Southern Connector area has seen several new industrial projects surrounding the SCTAC. The Matrix Business and Technology Park and the South Carolina Technology and Aviation Center. Additionally, discussions with several residential real estate agents indicated strong residential development and selling activity within the Southern Connector area. It was noted that activity has risen year over year since 2011-2012. Based upon our research, further industrial and residential growth can be expected in the neighborhood; however, retail/office development will continue to lag behind for the near-term until enough residential is built to support larger retail/office developments.

## Demographic Analysis



As shown above, for our demographic analysis, we have utilized three market areas of comparison including Greenville County, the City of Greenville and a 5-mile radius known as the Southern Connector Area.

### Demographic Analysis

Demand for retail properties is a direct function of demographic characteristics analyzed on the following pages.

### Housing, Population and Household Formation - 2015

The following table illustrates the population and household changes for the subject neighborhood with primary focus on the 1, 3 and 5 radius.

<sup>9</sup> Demographic Map – CBRE VAS - 2015

POPULATION AND HOUSEHOLD PROJECTION			
	Greenville County	Greenville	Southern Connector
<b>Place of Work</b>			
Total Businesses	25,385	9,504	1,538
Daytime Employment (Total Employees)	270,775	108,476	20,970
<b>Population</b>			
2015 Population	485,310	61,241	55,053
2020 Population	518,537	64,225	59,353
2010 Population	451,225	58,375	50,575
2000 Population	379,613	56,852	40,271
Percent Pop Change: 2010 to 2015	7.55%	4.91%	8.85%
Percent Pop Change: 2015 to 2020	6.85%	4.87%	7.81%
<b>Households</b>			
2015 Households	189,661	27,437	20,549
2020 Households	202,569	29,125	22,084
2010 Households	176,531	25,622	18,989
2000 Households	149,554	25,056	15,279
Percent HH Change: 2010 to 2015	7.44%	7.08%	8.21%
Percent HH Change: 2015 to 2020	6.81%	6.15%	7.47%
Annual HH Change: 2010 to 2015	1.49%	1.42%	1.64%
Annual HH Change: 2015 to 2020	1.36%	1.23%	1.49%
Average Household Size	2.50	2.07	2.67
Source: Nielsen/Claritas			

As shown, the subject's neighborhood is experiencing moderate positive increases in both population and households.

### Income Distributions - 2015

Household income available for expenditure on consumer items is a primary factor in determining the retail supply and demand levels in a given market area. In the case of this study, a projection of household income identifies (in gross terms) the market from which the subject submarket draws. The following table illustrates estimated household income distribution for the subject neighborhood.

HOUSEHOLD INCOME DISTRIBUTION			
Housholds by Income Distribution - 2015	Greenville County	Greenville	Southern Connector
Income < \$15,000	14.51%	19.58%	15.23%
Income \$15,000 - \$24,999	12.66%	13.81%	13.89%
Income \$25,000 - \$34,999	10.73%	11.83%	10.30%
Income \$35,000 - \$49,999	13.80%	12.57%	14.57%
Income \$50,000 - \$74,999	17.29%	15.17%	17.77%
Income \$75,000 - \$99,999	10.89%	8.31%	11.02%
Income \$100,000 - \$124,999	6.99%	5.19%	6.65%
Income \$125,000 - \$149,999	4.66%	3.70%	4.05%
Income \$150,000 - \$199,999	4.54%	4.14%	3.72%
Income \$200,000 - \$249,999	1.58%	1.83%	1.32%
Income \$250,000 - \$499,999	1.83%	2.78%	1.15%
Income \$500,000+	0.53%	1.09%	0.34%
Source: Nielsen/Claritas			

The following table illustrates the median and average household income levels for the subject neighborhood.

HOUSEHOLD INCOME DISTRIBUTION			
Income	Greenville County	Greenville	Southern Connector
2000 Median Household Income	\$41,364	\$33,464	\$41,817
2015 Median Household Income	\$47,983	\$40,085	\$45,649
2020 Median Household Income	\$50,848	\$42,481	\$49,588
2015 Per Capita Income	\$26,403	\$29,976	\$23,139
Source: Nielsen/Claritas			



An analysis of the income data indicates that the submarket is generally comprised of middle-income economic cohort groups, which include the target groups to which the subject is oriented.

### Retail Sales Volumes – Southern Connector Area - 2015

The following table illustrates retail sales for only the Southern Connector Area at given radii intervals of 1, 3 and 5 miles.

RETAIL EXPENDITURES (\$000's)									
SUBJECT'S SUBMARKET									
Product Sample	1 Mile Radius			3 Mile Radius			5 Mile Radius		
	2015	2020	%/Yr	2015	2020	%/Yr	2015	2020	%/Yr
All Retail Stores	5,188	5,552	1.4%	181,822	202,496	2.2%	719,858	799,511	2.1%
Grocery Stores	912	968	1.2%	32,025	35,339	2.0%	124,367	136,957	1.9%
Eating Places	369	394	1.3%	13,490	14,885	2.0%	54,044	59,561	2.0%
Drinking Places	10	11	1.3%	361	400	2.1%	1,486	1,639	2.0%
Health and Personal Care Stores	433	465	1.4%	14,278	16,124	2.5%	56,951	63,815	2.3%
Building Material & Garden Equipment & Supplies	128	144	2.3%	4,506	5,285	3.2%	18,065	21,083	3.1%
Hardware Stores	16	18	2.3%	569	667	3.2%	2,266	2,643	3.1%
Lawn & Garden Equipment & Supplies Dealers	22	24	2.6%	749	885	3.4%	2,977	3,504	3.3%
Furniture Stores	76	83	1.9%	2,717	3,126	2.8%	10,907	12,502	2.8%
Other Home Furnishing Stores	56	63	2.2%	2,045	2,382	3.1%	8,224	9,544	3.0%
Household Appliance Stores	19	23	4.1%	666	847	4.9%	2,634	3,335	4.8%
Radio/TV/Other Electronics Stores	73	100	6.4%	2,633	3,756	7.4%	10,444	14,847	7.3%
Department Stores (Excluding Leased)	426	473	2.1%	15,304	17,858	3.1%	60,085	69,858	3.1%
Clothing and Clothing Accessory Stores	332	361	1.7%	12,353	14,179	2.8%	48,264	55,201	2.7%
Shoe Stores	52	55	1.1%	1,961	2,184	2.2%	7,454	8,272	2.1%
General Merchandise Stores	853	941	2.0%	30,326	35,044	2.9%	118,897	136,984	2.9%
Warehouse Clubs and Superstores	434	477	1.9%	15,273	17,527	2.8%	59,814	68,484	2.7%
Full Service Restaurants	116	125	1.4%	4,232	4,672	2.0%	17,346	19,136	2.0%
Fast Food Restaurants	120	126	1.0%	4,452	4,841	1.7%	17,400	18,900	1.7%
Jewelry Stores	67	76	2.8%	2,366	2,872	4.0%	9,794	11,816	3.8%
Book Stores	35	40	2.3%	1,366	1,622	3.5%	5,916	7,014	3.5%
Gift, Novelty, and Souvenir Shops	16	18	2.4%	577	676	3.2%	2,322	2,716	3.2%
Florists	45	52	2.9%	1,605	1,942	3.9%	6,468	7,787	3.8%
Hobby, Toy, and Game Shops	31	35	2.5%	1,142	1,344	3.3%	4,520	5,307	3.3%
Sporting Goods Stores	40	49	3.8%	1,571	1,988	4.8%	6,195	7,822	4.8%
Camera/Photographic Supply Stores	6	9	5.8%	232	321	6.7%	927	1,277	6.6%
Luggage and Leather Goods Stores	6	7	5.0%	208	280	6.1%	856	1,144	6.0%
Sew/Needlework/Piece Goods Stores	7	7	1.8%	258	294	2.6%	1,032	1,172	2.6%
Convenience Stores	49	53	1.7%	1,684	1,881	2.2%	6,548	7,313	2.2%
Home Centers	60	67	2.3%	2,114	2,477	3.2%	8,453	9,857	3.1%
Nursery and Garden Centers	19	22	2.5%	670	788	3.3%	2,662	3,120	3.2%
Computer and Software Stores	29	39	5.9%	1,051	1,469	6.9%	4,231	5,887	6.8%
Clothing Accessory Stores	5	6	1.9%	190	220	2.9%	754	868	2.9%
Auto Dealers	1,009	1,004	-0.1%	34,974	35,561	0.3%	140,980	143,340	0.3%
Automotive Part, Accessories & Tire Stores	54	51	-1.2%	1,774	1,736	-0.4%	7,025	6,862	-0.5%
Gasoline Stations with Convenience Stores	450	464	0.6%	15,348	16,265	1.2%	60,095	63,613	1.1%
Gasoline Stations without Convenience Stores	128	128	0.0%	4,385	4,524	0.6%	17,291	17,806	0.6%
Electronic Shopping and Mail Order	218	252	2.9%	7,659	9,297	4.0%	30,781	37,200	3.9%
Total Accommodation and Food Services	534	570	1.3%	19,560	21,680	2.1%	79,027	87,388	2.0%

Source: Nielsen/Claritas

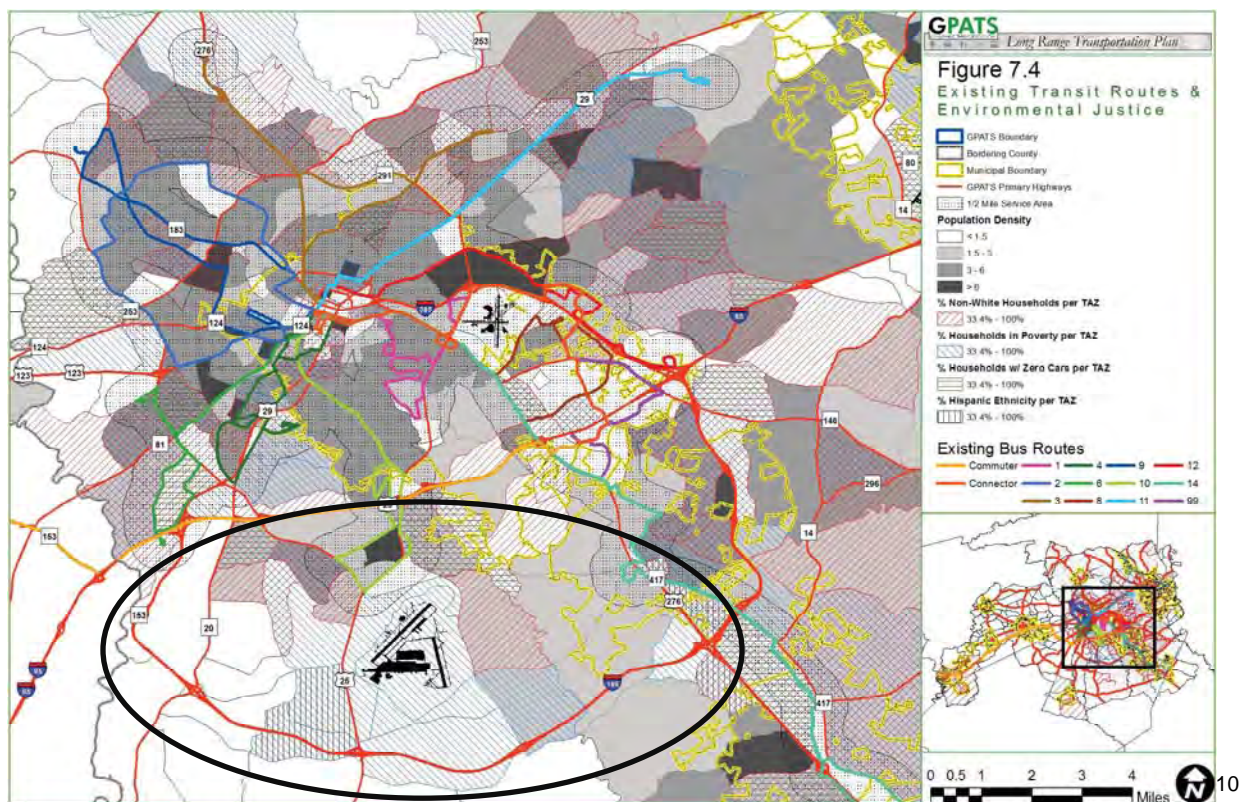
The annual rate of change for All Retail Stores is indicated as 1.4%, 2.2% and 2.1% on a 1-, 3-, and 5-mile radii, respectively. When excluding the Auto Dealers category, the rate of change for all retail is 1.7%, 2.6% and 2.5%, respectively. As noted, demand for most retail products is expected to increase over the next five years.

## Greenville/ Pickens Area Transportation - Long Range Transportation Plan (LRTP)

The Long Range Transportation Plan (LRTP) is a federally mandated document that must be updated by all metropolitan planning organizations (MPOs) once every five years. Every 10 years, an entirely new plan is developed. This addendum serves as an update to the 2030 Long Range Transportation Plan, which was completed in 2007. It includes updated demographic, environmental, and program information, and incorporates projects from areas that were brought into GPATS in early 2013. After approval of the 2035 Long Range Transportation Plan update, projects can begin to be moved into the five-year Transportation Improvement Program as funding allows. The Transportation Improvement Program provides timelines and project estimates based on the phases of each project (preliminary engineering, right-of-way acquisition, and construction).

Through linear regression, the 2035 population in households for the region is expected to reach 840,861. This figure is a planning-level estimate, and is dependent on many variables, so frequent updates of the future population are done whenever new data becomes available.

### Existing Transit Routes & Density - 2013

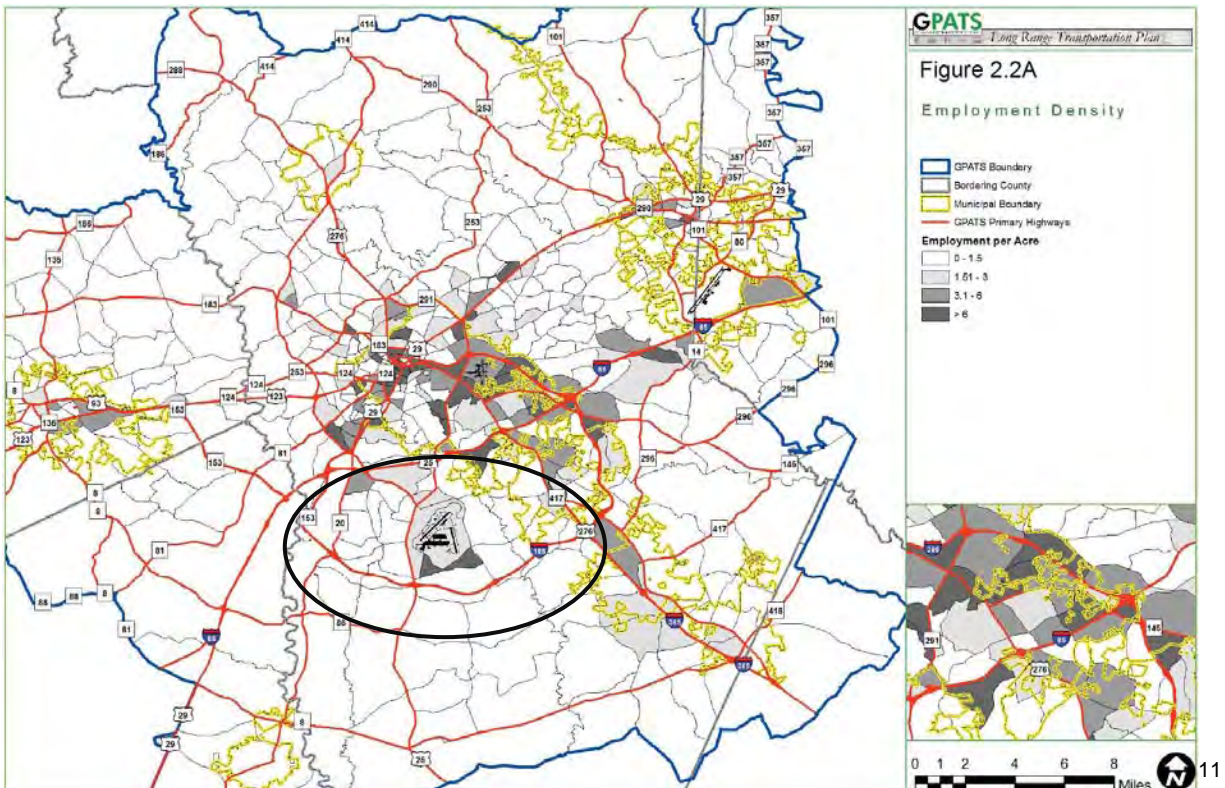


NOTE: The oval area represents the Southern Connector market area.

<sup>10</sup> Existing Transit Routes & Density Map – GPATS Long Range Transportation Study (2013)

As shown above, most of the Greenville area density is located towards the north and east of the subject neighborhood. The growth of the GPATS region continued since the 2007 LRTP was adopted, both in density and in size. With the expansion of the GPATS boundary, the 2010 population of GPATS expanded to 621,834 persons in households, per the 2010 US Census.

### Employment Density - 2013



NOTE: The oval area represents the Southern Connector market area.

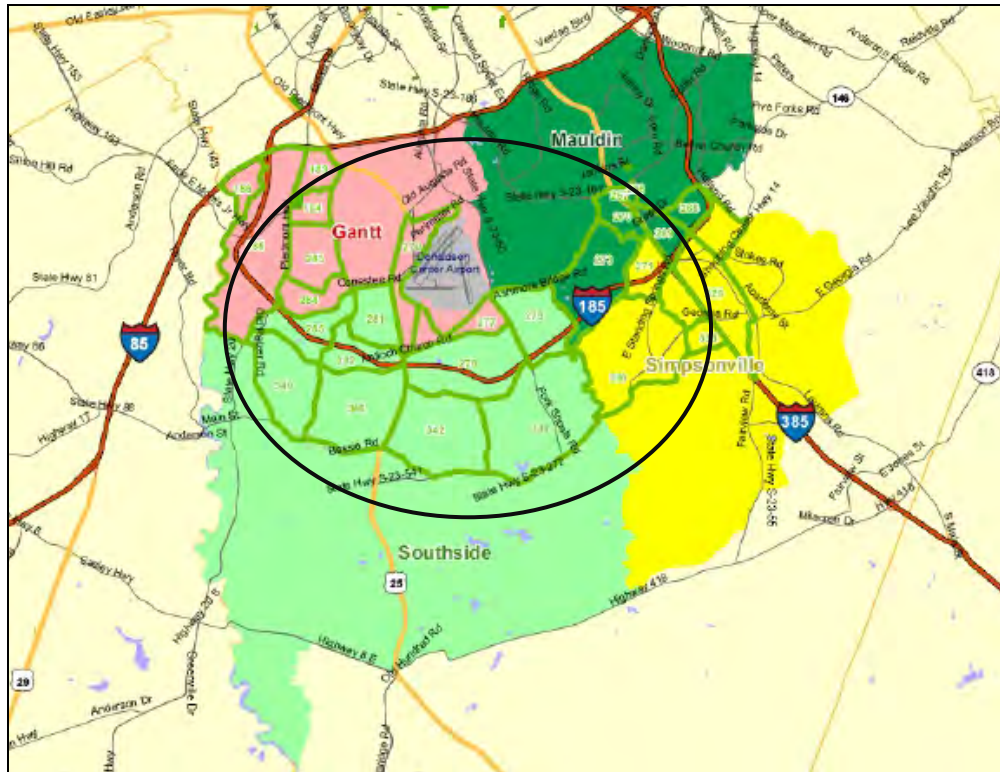
Overall, the Southern Connector area currently has a low employment density with a majority of the employment density surrounding the SCTAC. This density is primarily industrial oriented companies; however, several of these companies are expanding operations and several more are proposing to locate their operations here as discussed in the Industrial Market Analysis later in this report.

### Greenville County Comprehensive Plan – Population Changes

The areas along the Southern Connector were analyzed by Transportation Analysis Zones (TAZ) and the broader surrounding area served by the Connector was analyzed by Planning Areas. A total of twenty-nine TAZ's and four Planning Areas are covered in this study.

<sup>11</sup> Employment Density Map – GPATS Long Range Transportation Study (2013)





12

NOTE: The oval area represents the Southern Connector market area.

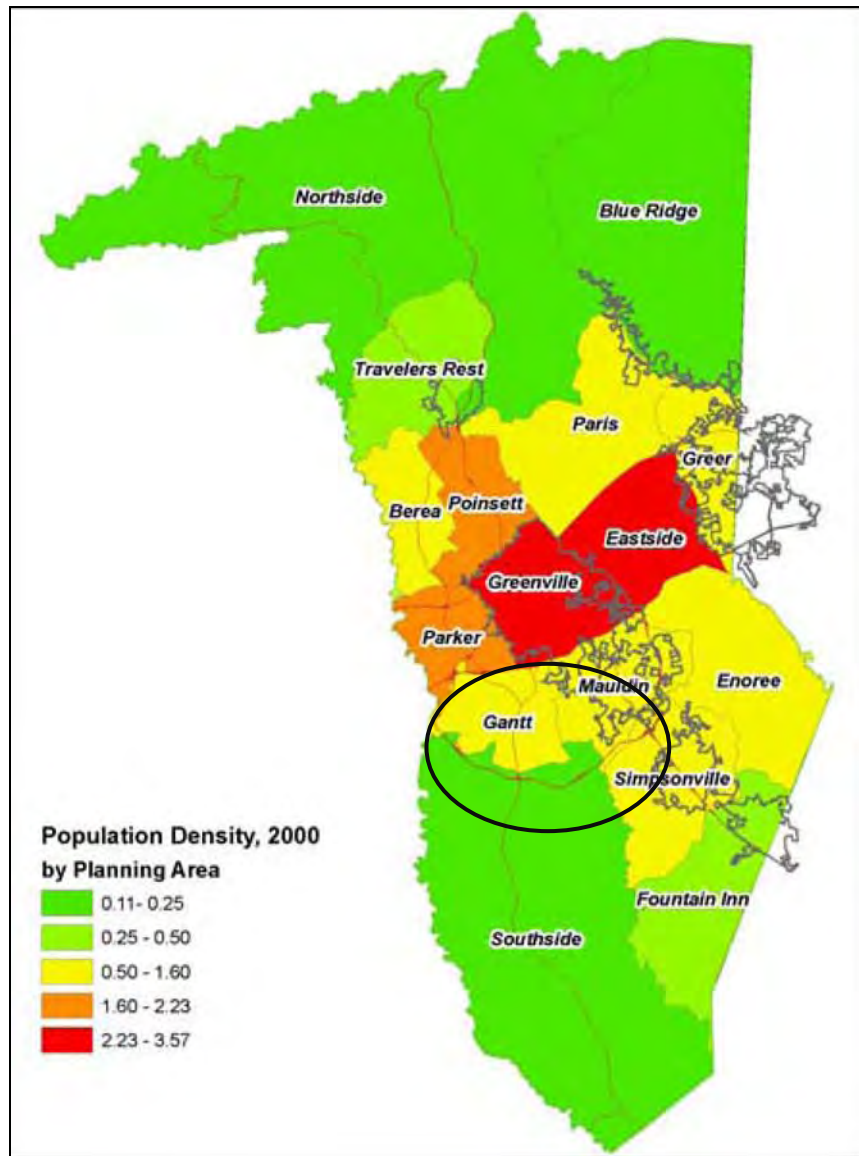
### Area Transportation Study (GPATS) Boundary

Planning Areas are subdivided into Traffic Analysis Zones (TAZs), and the Planning Area population forecasts are then allocated among these zones. This allocation was performed by the Greenville County Planning Commission and is accomplished by developing a Growth Index for the TAZs in each Planning Area. The Growth Index evaluates each TAZ relative to the other TAZs within the same Planning Area, based on the following: (1) the percent of the total undeveloped area within the TAZ; (2) the share of vacant or developable land in the Planning Area contained within each TAZ; (3) the percent change in dwelling units that has occurred in the TAZ since 2000; (4) the percent of total residential development in the Planning Area since 2000. Based on a scoring system for these Growth Index criteria, each TAZ is designated as Low, Moderate, or High growth. The total growth forecast for the Planning Area is then distributed accordingly to each TAZ. The enclosed maps show population densities and changes by Planning Area and TAZ in for the period from 2000 to 2030.

To calculate the number of projected housing units in each TAZ, the forecasted populations were adjusted by the historical vacancy rate and average household size in its particular Planning Area. It should be noted that these two figures were assumed to remain constant over the 50 year study period.

<sup>12</sup> TAZ's and Planning Areas Map – GPATS Study (2013)

## Population Density – 2000



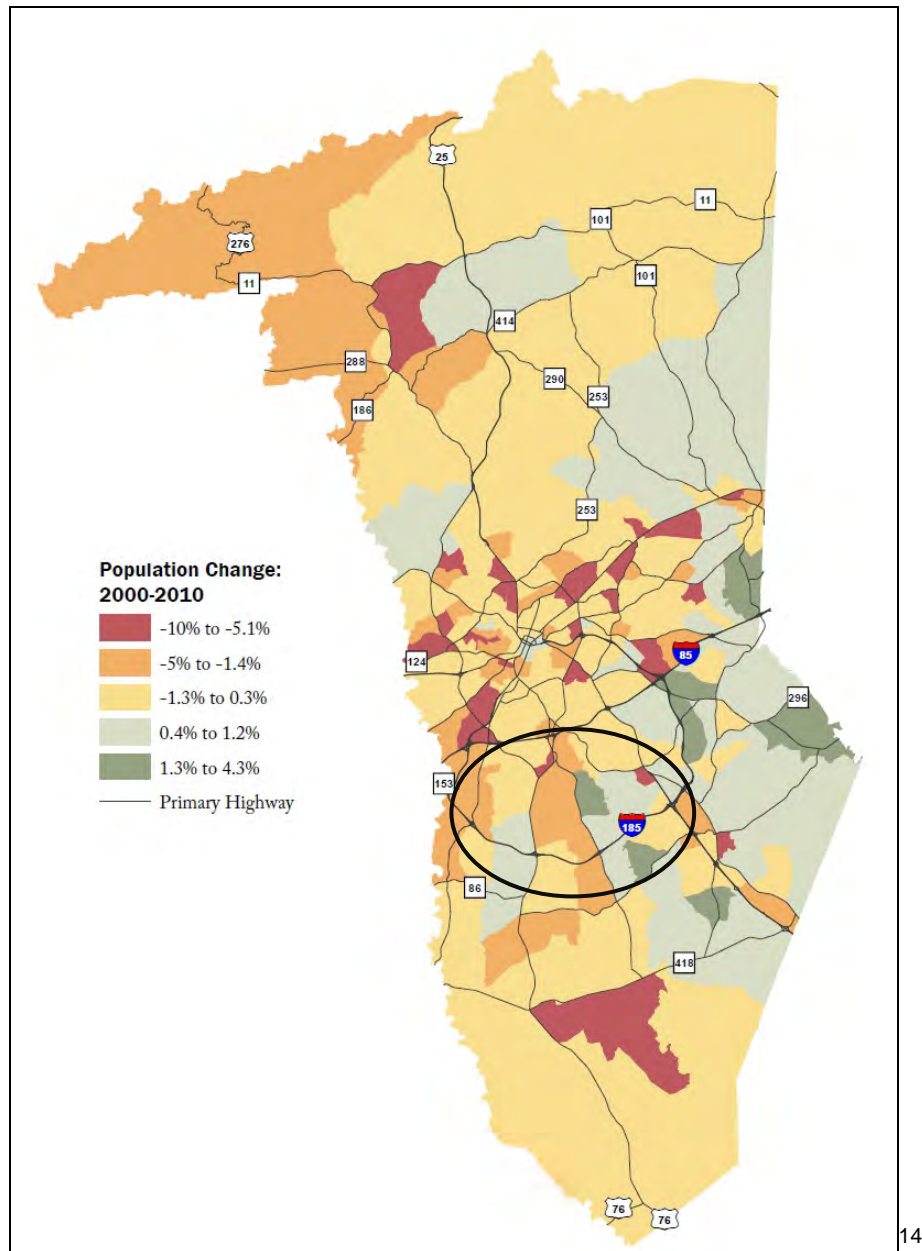
13

NOTE: The oval area represents the Southern Connector market area.

As shown above, the population density in the year 2000 was considered low within Southern Connector Area with mostly industrial and rural uses. A majority of the population has historically been located within the Greenville CBD and Northeast Greenville along the Interstate 85 corridor.

<sup>13</sup> Population Density Map, 2000 – Greenville County 10-Year Comprehensive Plan – (2008)

## Population Density Change – 2000 - 2010



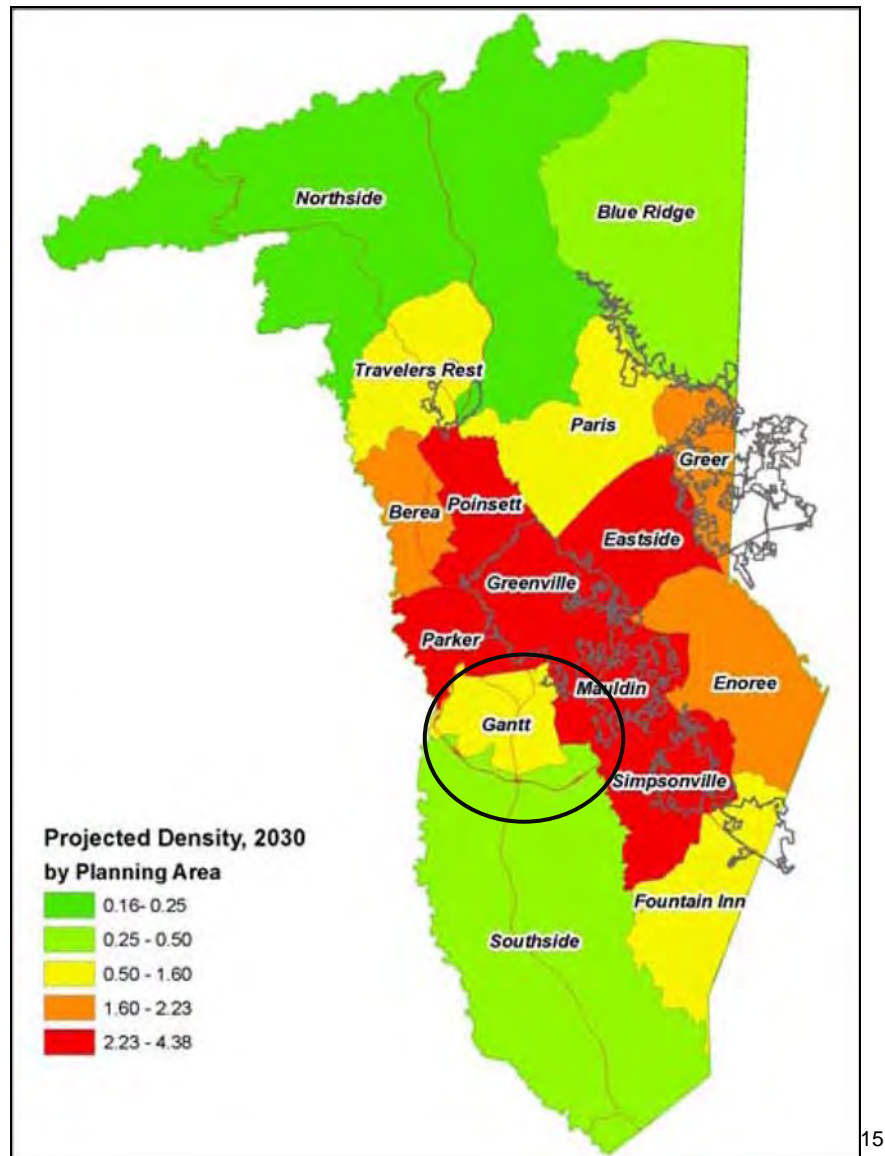
14

NOTE: The oval area represents the Southern Connector market area.

As shown above, the population change from the year 2000 to 2010 represented little growth within Southern Connector Area. Areas surrounding the SCTAC indicated negative population changes (-5% to -1.4%). A majority of the positive growth took place closer to the I-385 and I-185 corridor; closer to Simpsonville and Mauldin (0.4% to 1.2%). Further, there was some minor growth at the I-185 and Highway 25 corridor (0.4% to 1.2%).

<sup>14</sup> Population Change Map, 2000 to 2010 – Greenville County Comprehensive Plan – 5-Year Review (2013)

## Population Density – 2030



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NOTE: The oval area represents the Southern Connector market area.

As shown above, the population density in the year 2030 is projected to grow significantly; however, a majority of the population growth is located north of the Southern Connector Area closer to the Greenville CBD. Additionally, the Mauldin and Simpsonville areas, located at the eastern boundary of the Southern Connector area, are projected to experience significant growth over the next 15-years. Based upon our research and discussions with market representatives, this appears accurate as it was noted that significant growth is expected in the southeast Greenville area along the I-385 corridor within the Mauldin and Simpsonville areas.

<sup>15</sup> Population Density Map, 2030 – Greenville County 10-Year Comprehensive Plan – (2008)



## Conclusion

Generally speaking, the existing road system in the Southern Connector service area is not an obstacle to future commercial and residential development within the foreseeable future. On a small scale year over year basis, any necessary road improvements (widening, realignment, signalization, etc.) are typically made during construction of the development that justified the improvements, and usually at the expense of the private developer. Larger scale road projects initiated by the SCDOT are usually reactionary, acting to alleviate traffic congestion and improve safety. The Southern Connector Toll Road has seen continued increase in use and revenue on a year over year basis with continued industrial and research investment proposed for the immediate neighborhood.

It appears that a majority of the development within the Southern Connector Area will industrially oriented with significant activity in recent years and several developments proposed for the near-term. However, based on the above reports, the overall Greenville County area is projecting a majority of population growth to continue its positive growth trend along Highway 276 and Interstate 385 within Mauldin and Simpsonville. With regards to the Southern Connector Area, population growth is expected to be moderate over the next 15 years with a majority of population growth occurring along the eastern boundary of the Southern Connector Area in the above mentioned Mauldin and Simpsonville areas. As discussed later in the report, there appears to be several single-family developments along Highway 272 (W Georgia Road) just southeast of the Southern Connector area which is further support for projected population growth along the I-385 corridor near Simpsonville.

## Market Analysis - Industrial

As shown in the Demographic Analysis, population growth is expected to be relatively moderate within the immediate Southern Connector Area. However, industrial growth appears to be growing significantly within the Southern Connector Area.

The market analysis forms a basis for assessing market area boundaries, supply and demand factors, and indications of financial feasibility. Primary data sources utilized for this analysis include *The CoStar Industrial Report: The Greenville / Spartanburg Market, 2<sup>nd</sup> Quarter 2015*, published by CoStar Advisory Services Group, Inc. This market area includes Greenville, Anderson, Spartanburg, Cherokee, Laurens and Pickens Counties.

The Southern Connector Area is located in the I-85 South/Donaldson Industrial Submarket within the overall Greenville/Spartanburg MSA as described by CoStar.

### Market Overview

The following discussion illustrates some general observations in the overall Greenville/Spartanburg industrial market.

### Market Summary – Overall Greenville/Spartanburg Market Area

The Greenville/Spartanburg Industrial market ended the second quarter 2015 with a vacancy rate of 8.0%. The vacancy rate was slightly down over the previous quarter, with net absorption totaling positive 581,727 square feet in the second quarter. Vacant sublease space remained unchanged in the quarter, remaining zero square feet. Rental rates ended the second quarter at \$3.56, a slight decrease over the previous quarter. Six buildings delivered to the market in the quarter totaling 484,000 square feet, with 2,960,282 square feet still under construction at the end of the quarter. (The under construction numbers for this report do not include all industrial projects currently under construction in Upstate South Carolina. For example, approximately two million square feet of industrial projects under construction in the Upstate are included in the Charlotte Industrial market report.)

### Absorption

Net absorption for the overall Greenville/Spartanburg Industrial market was positive 581,727 square feet in the second quarter 2015. That compares to negative (489,353) square feet in first quarter, positive 1,201,948 square feet in fourth quarter 2014, and positive 642,254 square feet in third quarter 2014.

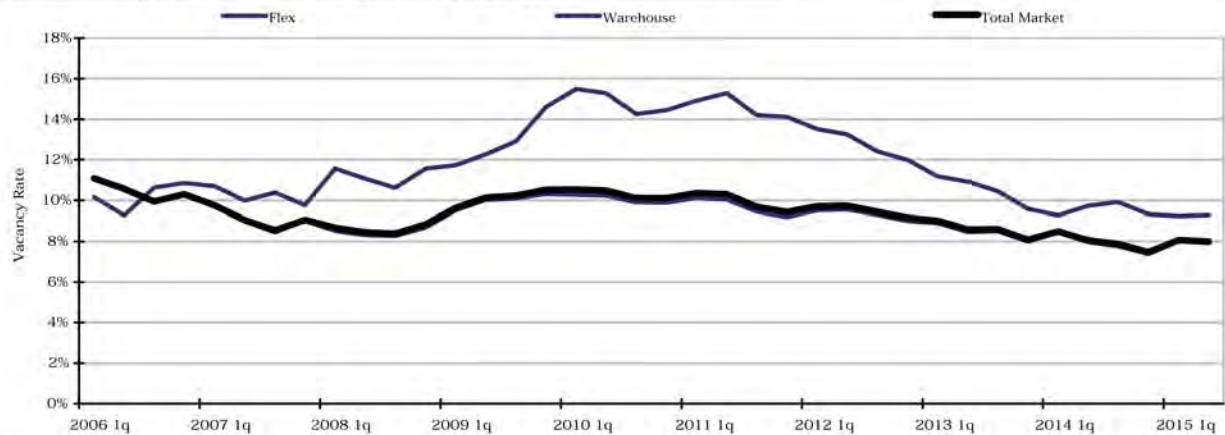
Tenants moving into large blocks of space within the Southern Connector area include: WW Grainger moving into 168,087 square feet at 111 Southchase Boulevard just southeast of the Southern Connector along I-385 and Fusion Surplus Solutions moving into 60,000 square feet and Yokohama Industries Americas South Carolina moving into 40,000 square feet at 132 White Horse Court.

## Vacancy

The Industrial vacancy rate in the Greenville/Spartanburg market area slightly decreased to 8.0% at the end of the second quarter 2015. The vacancy rate was 8.1% at the end of first quarter 2015, 7.5% at the end of fourth quarter 2014, and 7.9% at the end of third quarter 2014.

### Vacancy Rates by Building Type

2006-2015



Source: CoStar Property®

## Deliveries and Construction

During the second quarter 2015, six buildings totaling 484,000 square feet were completed in the Greenville/Spartanburg market area. This compares to four buildings totaling 726,000 square feet that were completed in the first quarter 2015, four buildings totaling 487,967 square feet completed in the fourth quarter 2014, and 314,000 square feet in three buildings completed in the third quarter 2014.

There were 2,960,282 square feet of Industrial space under construction at the end of the second quarter 2015 for the Greenville/ Spartanburg Industrial market. The under construction numbers for this report do not include all industrial projects currently under construction in Upstate South Carolina. For example, approximately two million square feet of industrial projects under construction in the Upstate are included in the Charlotte Industrial market report. However, it is worth noting the large amount of industrial development currently under construction in update South Carolina.

While few of the current projects under construction are located within the Southern Connector neighborhood, a notable 2015 delivery includes the White Horse Road Industrial Center, a 306,000-square-foot facility located at 2721 White Horse Road just north of Interstate 185 which could create demand on the Southern Connector for quicker access to Columbia and Charleston via I-385.

Additionally, Pantex Americas, Inc. announced in June 2015 that they are establishing their first U.S. operations in Simpsonville, SC. This property will include a 140,000 square foot facility

located at 844 S.E. Main Street in Simpsonville, SC. This is expected to be a \$10.4 million investment and create 45 new jobs.

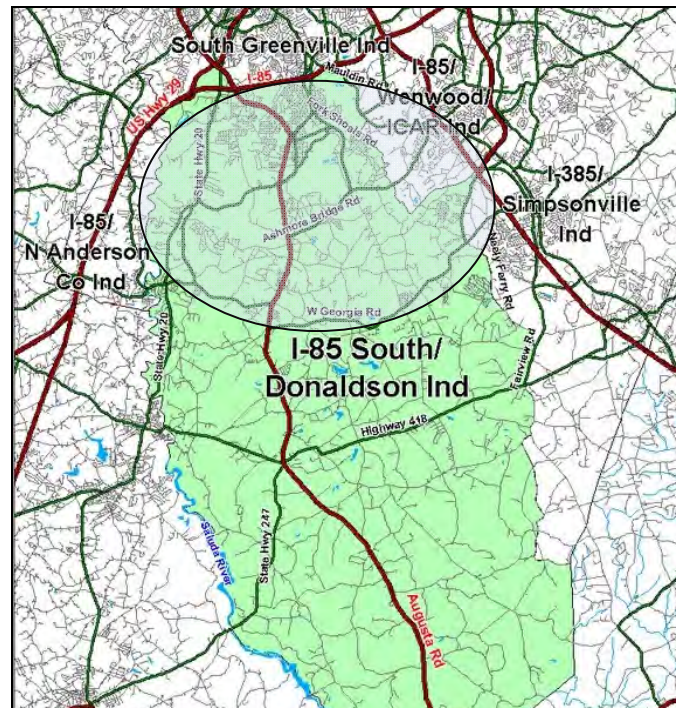
### Greenville/Spartanburg Industrial Trends

Period	Existing Inventory		Vacancy		Net Absorption	Delivered Inventory		UC Inventory		Quoted Rates
	# Bldgs	Total RBA	Vacant SF	Vacancy %		# Bldgs	Total RBA	# Bldgs	Total RBA	
2015 2q	2,404	79,388,060	6,221,589	7.8%	720,713	3	173,000	4	500,250	\$3.74
2015 1q	2,402	79,227,060	6,781,302	8.6%	(414,152)	2	316,000	7	673,250	\$3.71
2014 4q	2,401	78,924,060	6,064,150	7.7%	36,119	0	0	9	989,250	\$3.55
2014 3q	2,403	78,934,223	6,110,432	7.7%	34,756	2	214,000	8	981,000	\$3.40
2014 2q	2,401	78,720,223	5,931,188	7.5%	10,501	0	0	6	606,000	\$3.33
2014 1q	2,402	78,940,223	6,161,689	7.8%	(29,996)	1	2,400	4	414,000	\$3.33
2013 4q	2,401	78,937,823	6,129,293	7.8%	869,477	0	0	2	208,400	\$3.26
2013 3q	2,401	78,937,823	6,998,770	8.9%	300,646	0	0	1	2,400	\$3.22
2013 2q	2,401	78,937,823	7,299,416	9.2%	(10,995)	0	0	0	0	\$3.20
2013 1q	2,401	78,937,823	7,288,421	9.2%	118,931	0	0	0	0	\$3.17
2012 4q	2,401	78,937,823	7,407,352	9.4%	429,795	0	0	0	0	\$3.14
2012 3q	2,401	78,937,823	7,837,147	9.9%	83,527	3	34,000	0	0	\$3.14
2012 2q	2,399	78,943,095	7,925,946	10.0%	302,711	0	0	3	34,000	\$3.19
2012 1q	2,399	78,943,095	8,228,657	10.4%	(117,103)	0	0	3	34,000	\$3.25
2011 4q	2,399	78,943,095	8,111,554	10.3%	242,448	0	0	1	14,000	\$3.23
2011 3q	2,400	78,993,095	8,404,002	10.6%	780,642	1	90,000	0	0	\$3.26

Source: CoStar Property®

We note the negative absorption in 2015 is due to a significant amount of delivered construction in 2014 that has since been absorbed.

### Interstate-85 South/ Donaldson Industrial Submarket



NOTE: The highlighted oval area represents the Southern Connector market area within the I-85 South/ Donaldson Industrial Submarket defined by CoStar; however, CoStar's map does not

<sup>16</sup> I-85 South / Donaldson Industrial Submarket - CoStar

reflect the I-185 toll road, but is merely a guide to reflect the industrial submarket boundaries in relation to the Southern Connector Area.

The table below presents the quarterly trends in rental rates and occupancy for the I-85 South/ Donaldson submarket over recent years:

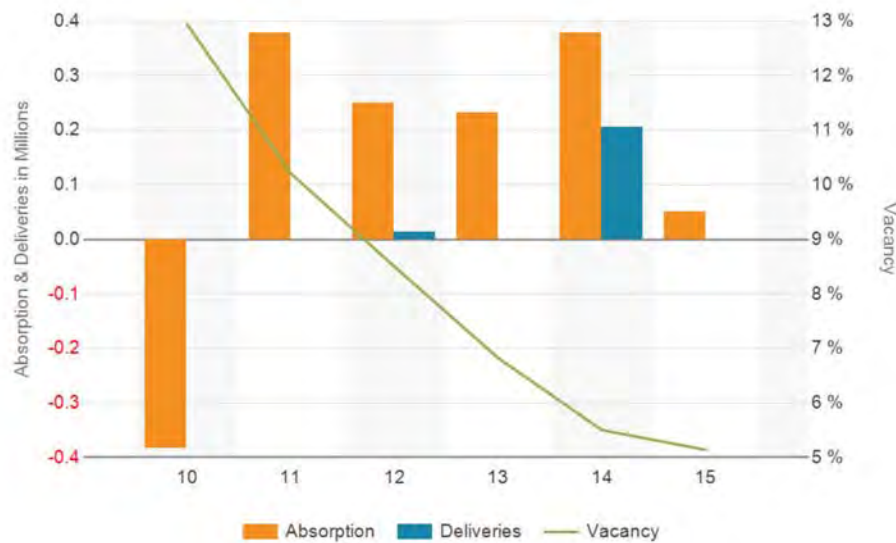
MARKET TRENDS - I-85 SOUTH / DONALDSON INDUSTRIAL SUBMARKET												
Period	# Bldgs	Total RBA	Vacant SF	Vacancy %	Net Absorption	# Delivered	RBA Delivered	# Under Const	RBA Under Const	Direct Average Rate	Sublet Average Rate	Total Average Rate
QTD	361	14,044,454	722,130	5.1%	3,080	0	0	0	0	\$3.85/nnn	-	\$3.85/nnn
2015 2Q	361	14,044,454	725,210	5.2%	265,605	0	0	0	0	\$3.79/nnn	-	\$3.79/nnn
2015 1Q	361	14,044,454	990,815	7.1%	(217,695)	0	0	0	0	\$3.69/nnn	-	\$3.69/nnn
2014 4Q	361	14,044,454	773,120	5.5%	71,348	0	0	0	0	\$3.72/nnn	-	\$3.72/nnn
2014 3Q	361	14,044,454	844,468	6.0%	274,452	1	206,000	0	0	\$3.65/nnn	-	\$3.65/nnn
2014 2Q	360	13,838,454	912,920	6.6%	(58,850)	0	0	1	206,000	\$3.54/nnn	\$2.85/nnn	\$3.47/nnn
2014 1Q	360	13,838,454	854,070	6.2%	90,630	0	0	1	206,000	\$3.56/nnn	\$2.85/nnn	\$3.48/nnn
2013 4Q	360	13,838,454	944,700	6.8%	210,070	0	0	1	206,000	\$3.55/nnn	-	\$3.55/nnn
2013 3Q	360	13,838,454	1,154,770	8.3%	38,780	0	0	0	0	\$3.25/nnn	-	\$3.25/nnn
2013 2Q	360	13,838,454	1,193,550	8.6%	(35,375)	0	0	0	0	\$3.22/nnn	-	\$3.22/nnn
2013 1Q	360	13,838,454	1,158,175	8.4%	18,350	0	0	0	0	\$3.13/nnn	-	\$3.13/nnn
2012 4Q	360	13,838,454	1,176,525	8.5%	2,575	0	0	0	0	\$3.22/nnn	-	\$3.22/nnn
2012 3Q	360	13,838,454	1,179,100	8.5%	114,420	1	14,000	0	0	\$3.17/nnn	-	\$3.17/nnn
2012 2Q	359	13,824,454	1,279,520	9.3%	132,248	0	0	1	14,000	\$3.21/nnn	-	\$3.21/nnn
2012 1Q	359	13,824,454	1,411,768	10.2%	(200)	0	0	1	14,000	\$3.25/nnn	-	\$3.25/nnn
2011 4Q	359	13,824,454	1,411,568	10.2%	71,200	0	0	1	14,000	\$3.18/nnn	-	\$3.18/nnn
2011 3Q	359	13,824,454	1,482,768	10.7%	311,500	0	0	0	0	\$3.21/nnn	-	\$3.21/nnn
2011 2Q	359	13,824,454	1,794,268	13.0%	(4,873)	0	0	0	0	\$3.25/nnn	-	\$3.25/nnn
2011 1Q	359	13,824,454	1,789,395	12.9%	480	0	0	0	0	\$3.28/nnn	-	\$3.28/nnn
2010 4Q	359	13,824,454	1,789,875	12.9%	(138,750)	0	0	0	0	\$3.23/nnn	-	\$3.23/nnn
2010 3Q	359	13,824,454	1,651,125	11.9%	(84,725)	0	0	0	0	\$3.25/nnn	-	\$3.25/nnn
2010 2Q	359	13,824,454	1,566,400	11.3%	(273,580)	0	0	0	0	\$3.24/nnn	-	\$3.24/nnn
2010 1Q	359	13,824,454	1,292,820	9.4%	113,304	0	0	0	0	\$3.24/nnn	-	\$3.24/nnn
2009 4Q	359	13,824,454	1,406,124	10.2%	(37,195)	0	0	0	0	\$3.30/nnn	-	\$3.30/nnn
2009 3Q	359	13,824,454	1,368,929	9.9%	13,248	0	0	0	0	\$3.44/nnn	-	\$3.44/nnn
2009 2Q	359	13,824,454	1,382,177	10.0%	238,635	0	0	0	0	\$3.42/nnn	-	\$3.42/nnn
2009 1Q	359	13,824,454	1,620,812	11.7%	(175,072)	0	0	0	0	\$3.24/nnn	-	\$3.24/nnn
2008 4Q	359	13,824,454	1,445,740	10.5%	(17,804)	0	0	0	0	\$3.24/nnn	-	\$3.24/nnn
2008 3Q	359	13,824,454	1,427,936	10.3%	(159,700)	0	0	0	0	\$3.29/nnn	-	\$3.29/nnn
2008 2Q	359	13,824,454	1,268,236	9.2%	500,550	0	0	0	0	\$3.26/nnn	-	\$3.26/nnn
2008 1Q	359	13,824,454	1,768,786	12.8%	154,652	0	0	0	0	\$3.36/nnn	-	\$3.36/nnn

Source: Costar

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## Absorption & Deliveries – Submarket



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As shown above, the vacancy rate has drop significantly over the past five years with absorption indicating positive trends year over year. Additionally, the chart summarizes the significant amount of delivered space in 2014 to the I-85 South and Donaldson Industrial submarket.

### Available Land Tracts

Discussions with the Greenville Area Development Corporation and several local commercial real estate brokers indicated that there are several industrial land tracts available for sale. However, it was noted that there are only a few tracts that range from 80- to 200-acres given the topography issues that begin to occur closer to the connector. It was indicated that flood plains and rolling topography can deter large industrial site users to look elsewhere. However, they have been successful with industrial users in the 5- to 20-acre range in recent years. These users tend to represent distribution uses; which bodes well for the connector.

### Major Industrial Developments

The major developments of influence in the immediate area include the SCTAC, the Michelin Tire facility, and the Southern Railroad spur. These projects have all fostered industrial growth in the region including Beechtree Business Park and the Matrix Business Park among others.

### Michelin Tire Facility

Michelin North America is a \$10.76 billion dollar a year company operating 19 plants in 16 locations and employs 22,000 people. It manufactures and sells tires for airplanes, automobiles, farm equipment, heavy duty trucks, motorcycles, and bicycles. Michelin employs 4,000 people in Greenville where it has its North American headquarters as well as a major manufacturing facility and R&D center. With over 8,520 people within South Carolina, the company manufactures and

<sup>18</sup> Industrial Absorption & Deliveries - I-85 South / Donaldson Industrial Submarket – CoStar 2015

sells tires for every type of vehicle including those used by NASA. A vital extension of Michelin's research and development community is the Michelin test facility in Laurens, S.C. This 3,500-acre site maintains 12 special tracks of varying lengths and surfaces for testing tires and suspension systems and for driver training. Engineers test tires for noise, adherence to wet surfaces, gravel endurance, off-road inclines, traction in mud, and vehicle dynamics, such as high-speed lane change and drift. Used primarily by Michelin, the facility also offers other groups test opportunities, such as vibration analysis and chassis loading tests in a confidential environment. The facility is also used to train law enforcement officers from North and South Carolina to enhance their skills in handling emergency situations.

### **SOUTH CAROLINA TECHNOLOGY & AVIATION CENTER**

SC Technology and Aviation Center is designed to meet the unique needs of technologically-advanced businesses in a global economy. This is the primary generator of economic development and future growth in traffic demand among the subject neighborhood. The center features an attractive combination of advanced manufacturing, distribution, and aviation facilities with 450 acres of available property. With more than 85 successful and diverse companies, SCTAC has an annual economic impact of \$1.9 billion, while supporting more than 6,800 jobs. The park, centered around Donaldson Field's 8,000' primary runway, is also recognized as a major aircraft maintenance and modification center capable of completing major structural repairs, inspections, and other service needs. The aviation companies located at SCTAC, including global giant Lockheed Martin, provide aircraft maintenance and repair, fuel and supplies, flight charters, hangar rentals, and other aviation services.

SCTAC serves as landlord to 37 tenant companies and the property management team maintains hundreds of acres of common area and Donaldson Field within the SCTAC's. These operations are essential to the SCTAC organization, as they are 100 percent dependent upon lease revenues to fund their operations.

Over the last five years, SCTAC has embarked upon a comprehensive strategy to compete for jobs and capital investment in today's global economy. The most obvious element of this strategy was the 2008 rebranding from Donaldson Center Industrial Air Park to the SC Technology and Aviation Center, which accurately describes the high-tech businesses that operate within the center, embraces our unique position within South Carolina and leverages the state's strong international reputation as "just right" for business.

### **South Carolina Army Air National Guard**

The South Carolina Army Air National Guard has a visionary plan to develop an Aviation Center of Excellence at SCTAC with an investment of \$60 million and creating 150 jobs. The Aviation Support Facility was completed in April with plans to construct a new field maintenance shop and readiness center early next year. The campus will house Greenville Tech's Aircraft Maintenance School, a workforce training program meeting the needs of the aerospace industry in the



Upstate. Currently, this plan is under construction for the initial phase of development. The initial phase includes an \$18 million Greenville Readiness Center and the \$12 million Field Maintenance Shop. Both will be located across from the existing Greenville Armory on property leased from the S.C. Technology and Aviation Center, and are expected to be complete by the end of 2016. The Readiness Center and Field Maintenance Shop will provide the a complement to the Army Aviation Support Facility, in operation since 2014. The combination of these three state-of-the-art facilities will create a 'campus' at SCTAC that will serve as a major economic development catalyst for SCTAC, the City of Greenville and Greenville County. The Greenville Readiness Center and Field Maintenance Shop are the latest installments for an economic engine of growth that has risen from the closed Air Force base that Greenville city and county purchased in 1963.

The 95,225 square foot Greenville Readiness Center "is the modern-day version of an armory," said John Powell, of LTC Associates, architect for both facilities. Located on 14 acres, two units will be based here with separate drill halls and a shared kitchen. There will also be space for aviation-related support services, such as communications.

The 45,500-square-foot Field Maintenance Shop will be located on an adjacent 12 acres and be used to maintain service for up to 896 wheeled vehicles and trailers, along with 30 tracked vehicles. It will include eight work bays and an administration area.

Hendrick Construction completed the 110,000-square-foot Army Aviation Support Facility at Donaldson Field at SCTAC in February 2014 for the S.C. National Guard. The administration and maintenance facility houses 10 helicopters and is operated by 75 full-time military technicians and serves as the base for 200 Guardsmen. The facility is located on 34 acres adjacent to Donaldson Field at SCTAC.

### International Transportation Innovation Center (ITIC)

SCTAC recently converted a closed runway into an automotive test track, breathing new economic life into an aviation asset that had stood idle for nearly 50 years. The International Transportation Innovation Center (ITIC) boasts 350 acres of testing infrastructure, including two miles of newly-resurfaced asphalt and concrete straightaways and an urban track landscape. ITIC provides multiple industries - automotive, information, and communication-with a comprehensive approach that promotes and facilitates innovation workshops, prototype development and validation, technology demonstration events, technology conferences, and exhibition management. ITIC is located within the *South Carolina Technology & Aviation Center* (SCTAC).

Much more than just a test-track infrastructure, ITIC is a world-class innovation and research platform in the domain of sustainable mobility and networked connectivity that brings experts together to collaborate on transportation topics of the future. The ITIC facilities include an extensive range of offices, hangars, and meeting space for the following: research &

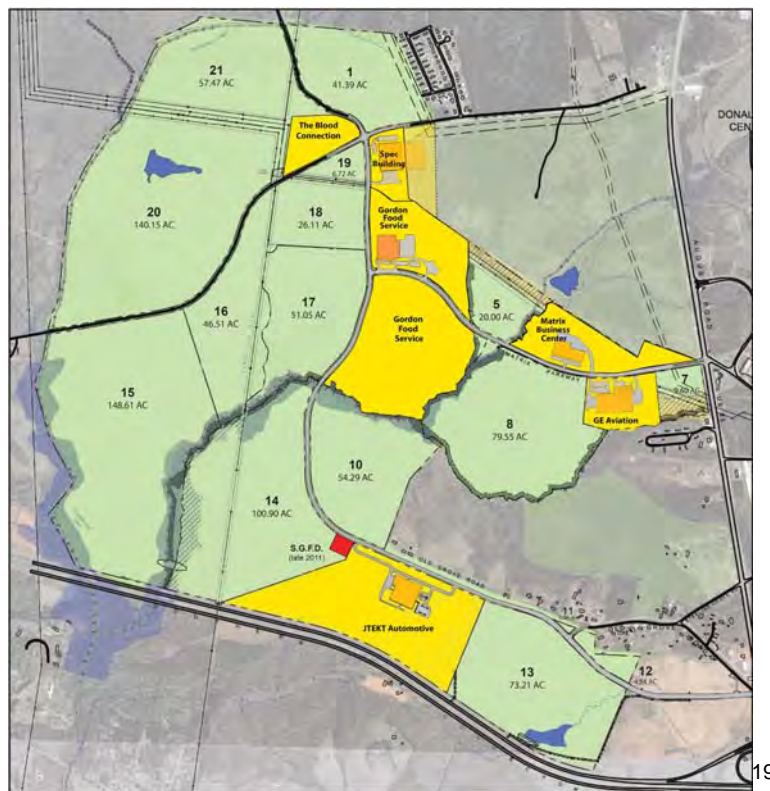
development, strategic events, product unveilings, industry conferences & exhibitions, educational programs & training, entertainment, and more.

SCTAC, Clemson University's ICAR, Oak Ridge National Lab, Toyota, Duke Energy and other industry partners are performing wireless charging testing in support of a \$12 million grant award from the United States Department of Energy. The development of ITIC promises unlimited opportunity for connected vehicle research and clean transportation technologies.

Currently, ITIC has six industrial buildings available from 13,500 square feet to 23,500 square feet.

### THE MATRIX BUSINESS & TECHNOLOGY PARK

The Matrix is the most recent addition to an area of Greenville County long known as a hub of industry. Approximately one mile from SC-TAC, some of the park's industrial neighbors include Michelin, Lockheed Corp., 3M, and Cytec Carbon Fibers. Located in southern Greenville County, SC, the Matrix Park is a 1,100-acre, master-planned park with a special I-2 zoning classification and restrictive covenants that make it ideally suited for industry, warehouse/distribution operations, research & development and headquarters campus facilities.



The Matrix Park is situated at the corner of US-25 (Augusta Road) and the Southern Connector, and is also within 4 miles of I-85.

<sup>19</sup> Available Land Tracts Map within the Matrix Park - 2015

Ideal access is featured within the park as well. The Matrix Park's internal road system is designed for industrial use. Major park thoroughfares are paved for three-lane traffic, and graded for five lanes. In addition, the system forms two loops, creating an easy and efficient design for truck and commuter traffic.

Companies currently operating within the Matrix Business & Technology Park include Gordon Food Service, GE Aviation, JTEKT, KI Logistics, Roy metal Finishing and The Blood Connection.

The park currently has approximately 780 acres for sale at approximately \$25,000 per acre. Additionally, the park currently has approximately 113,000 square feet of industrial space available at \$7.50 per square foot, NNN.

### **GE Aviation**

In 2010, GE Aviation built a 150,000 square foot facility within the Matrix Industrial Park. GE Aviation is a world-class leader in the aviation industry and a renowned manufacturer of engines for commercial and military aircraft. GE has a long history in South Carolina with investments in Florence, Charleston and Greenville. The Greenville facility produces high pressure turbine (HPT) blades that are used in commercial aircraft engines produced by GE Aviation.

### **JTEKT**

In 2013, JTEKT expanded its current footprint and invested \$102 million at their facility within the Matrix Business Park. JTEKT manufactures auto parts used in driveline components. The company constructed a new building near its existing facility at 1866 Old Grove Road.

### **KI Logistics**

In 2014, KI Logistics completed a new \$11.5 million, 206,000-square-foot North American headquarters at The Matrix Business and Technology Park at U.S. Highway 25 (Augusta Road) and Interstate 185 in southern Greenville County.

The logistics company is a subsidiary of Kimura Inc., a manufacturer of steel containers and racks for the automotive market, which already operates a 70,000-square-foot facility in Laurens.

Given the increased demand from customers, KI Logistics has since expanded their headquarters to 272,000 square feet. Kimura Unity is best known for its expertise in logistics and distribution, and serves such customers as Drive Automotive, JTEKT and Toyota.

### **Roy Metal Finishing (RMF)**

In 2013, Roy Metal Finishing expanded its current operations. RMF previously operated two facilities in Greenville County; however, they built a new 85,000 square foot building to combine all operations. This facility has expanding potential for up to 200,000 square feet.

## **Market Participant Interviews**

Discussions with several market participants indicated the I-185 area will be the corridor of industrial development for the future. While the corridor has been slow to develop since its

development in 2001, it is anticipated more growth will develop within the Greenville area and ultimately within southern Greenville due to the development of the toll road.

### Conclusion

Over the next 24 months, the Greenville-Spartanburg industrial market is expected to remain highly active with over four million square feet of market absorption and vacancy rates declining modestly. The manufacturing and warehouse sectors are both poised for growth as a result of activity related to the development of the South Carolina Inland Port.

## Market Analysis – Residential

To assess the historical and project residential market trends, we gathered data from both primary and secondary sources. The primary data collected relates to the specific market in which the subject area is located. Primary data may include: specific property sales information, buyer preference surveys, project absorption statistics and competition inventory surveys. Secondary data may include: census data, building permit information, housing and vacancy rates from the Department of Housing and Urban Development (HUD), multi-listing service information, surveys by private companies and surveys and forecasts performed by local planning boards, economic development commissions, and universities. Overall, we have included market information as it relates to the single-family and multi-family development throughout the Greenville area and the Southern Connector neighborhood.

### SINGLE FAMILY DEVELOPMENT

#### Market Overview – June 2015

The following market overview includes information extracted from the multiple listing service for the greater Greenville area which includes Greenville, Laurens, Pickens, Spartanburg, Anderson Counties and portions of Greenwood and York Counties.

Markets across the country continue to improve and further perform at peaks not seen in years. For the 12-month period spanning July 2014 through June 2015, Closed Sales in the Greater Greenville region were up 15.9 percent overall. The price range with the largest gain in sales was the \$200,001 to \$300,000 range, where they increased 27.6 percent.

The overall Median Sales Price was up 5.1 percent to \$165,000. The property type with the largest price gain was the Single-Family Homes segment, where prices increased 5.2 percent to \$171,500. The price range that tended to sell the quickest was the \$100,001 to \$150,000 range at 64 days; the price range that tended to sell the slowest was the \$300,001 and Above range at 95 days.

Market-wide, inventory levels were down 1.6 percent. The property type that gained the most inventory was the Condos segment, where it increased 3.1 percent. That amounts to 6.2 months supply for Single-Family homes and 5.3 months supply for Condos.

## Residential Market Summary – Overall Greenville Area

Key Metrics	Historical Sparkbars			06-2014	06-2015	Percent Change	YTD 2014	YTD 2015	Percent Change
	06-2013	06-2014	06-2015						
New Listings				1,482	1,472	- 0.7%	8,683	8,685	+ 0.0%
Pending Sales				970	519	- 46.5%	5,359	5,559	+ 3.7%
Closed Sales				1,036	1,242	+ 19.9%	4,718	5,634	+ 19.4%
Days on Market				78	69	- 11.5%	88	80	- 9.1%
Median Sales Price				\$168,000	\$179,900	+ 7.1%	\$156,400	\$168,000	+ 7.4%
Average Sales Price				\$201,040	\$215,325	+ 7.1%	\$189,253	\$199,571	+ 5.5%
Pct. of List Price Received				96.5%	97.3%	+ 0.8%	96.2%	97.0%	+ 0.8%
Housing Affordability Index				143	137	- 4.2%	154	146	- 5.2%
Inventory of Homes for Sale				5,531	5,444	- 1.6%	--	--	--
Months Supply of Inventory				6.9	6.2	- 10.1%	--	--	--

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## Communities Under Construction

The following represent several communities under construction within the Southern Connector Area:

## Acadia

Acadia is a 290 acre Traditional Neighborhood Development (mixed-use) located along the Southern Connector between Highway 153 and Highway 20. Acadia has a main entrance on Highway 153 and will have a future secondary entrance on Highway 20. The neighborhood is planned for up to 700 residential units and 50,000 square feet of commercial space. Construction began in 2006 with complete build-out anticipated to take approximately 15 to 20 years. Currently, the community has 88 homes built with 10 homes under construction. Additionally, they are planning to start construction on 10 more homes within the next 30- to 40-days. Discussions with the property representative indicate strong activity since 2010 with home prices ranging from \$350,000 to \$600,000.

## River Reserve

River Reserve is located near the Acadia development along the Southern Connector between Highway 153 and Highway 20. This community has approximately 250 acres and was developed in the early 2000's. A market representative indicate they had a slow start due to access and

<sup>20</sup> Market Summary – Greenville Area – Greater Greenville Associations of Realtors (ggar) – June 2014

economic conditions; however they are competing well with Acadia and have seen increased construction and sales since 2011-2012. The properties range from \$450,000 to \$1,000,000+.

### Griffin Park

Griffin Park is located in the southeastern quadrant of the intersection of Fork Shoals Road and West Georgia Road. It is planned as a Traditional Neighborhood Development (mixed-use) project consisting of 1,062 single family homes, townhouses, tons of shops, and will be 295 acres in size when complete. Complete build-out is anticipated to take approximately 15 to 20 years. The property had been in financial trouble until 2013-2014. Eastwood Homes is now actively building new homes in the community ranging from \$150,000 to \$275,000. A representative at Eastwood Homes indicated that a majority of their competition is located along West Georgia Road heading northeast towards I-385 and Simpsonville.

### Conestee

Efforts to create a plan and encourage revitalization of the Conestee Mill Community, began in January 2012 by working with local residents, business owners, and local stakeholders to identify key issues and areas of interest within the community. The Conestee Community Master Plan documents the physical, social, and historical composition of the community and builds upon previous community planning efforts to establish a shared vision for Conestee. It proposes solutions to current issues and suggests recommendations to stimulate community revitalization and guide future development in a manner that highlights community assets and preserves community values.

The Conestee master plan includes a study area located between Mauldin Road and Fork Shoals Road just south of the City of Greenville. It consists of approximately 877 acres (1.37 square miles) and includes the historic Conestee Mill Village. It sits about two miles south of Interstate 85 and immediately adjacent to the South Carolina Technology and Aviation Center (SCTAC), Conestee Park (formerly Municipal Stadium) and Lake Conestee Nature Park.

The Conestee Community Master Plan is to be used as a guide in consideration of future land use, zoning, area capital improvements, and policy decisions. This plan serves to encourage private investment in the community and open more funding opportunities for redevelopment and revitalization efforts. The plan is comprised of a collection of seven sub-areas; The Village, Village Center, North Village, South Village, Lakeshore Gateway, West Gateway, and The Service Sector. Each of these sub-areas are defined by their distinctive characteristics including land use, geographic location, physical design, and development potential. The master plan's implementation timeline includes a near-term (1-3 year), mid (3-6 year), and long-term (6+ years) actions that are necessary to accomplish the goals of the Conestee Neighborhood Plan.

### Conclusion – Single Family Residential

Sustained job growth, lower mortgage rates and a slow rise in the number of homes for sale appear to have unleashed at least some pent-up demand. Since housing demand relies heavily



on an economy churning out good jobs, it's encouraging to see second quarter GDP growth revised upwards to a 4.2 percent annualized rate and stronger-than-expected job growth in recent months. Further improvements are still needed by way of wage growth and consumer confidence but recovery continues. Overall, it was indicated that the residential development within the Southern Connector area has been positive and developers are actively prospecting land near the I-85 / I-185 corridor, Highway 25/ I-185 corridor and along West Georgia Road near I-385 and Simpsonville.

## MULTI-FAMILY DEVELOPMENT

### Market Overview – Overall Greenville Area

The Greenville-Spartanburg-Anderson area's vacancy rate has improved from 6.8% in May 2014 to 5.8% in May 2015. The vacancy rate has been steadily improving over the past eighteen months. Absorption was positive with the gain of 365 renters over the past six months.

There are currently 2,771 units under-construction in the Greenville area, which is the highest level ever recorded. There are 3,130 units proposed in the overall area. Down-town Greenville accounted for nearly all of the new units delivered in the past six months.

The area's occupancy rate will likely rise over the next twelve months. Supply will exceed demand throughout 2016 as a large number of new units are completed. Rent growth will be positive, but slow to 1% to 2% over the next twelve months.

Greenville-Spartanburg-Anderson Trends												Annualized	
	May '10	Nov. '10	May '11	Nov. '11	May '12	Nov. '12	May '13	Nov. '13	May '14	Nov. '14	May '15	1-Yr Avg.	5-Yr Avg.
Vacancy	One Bedroom %	7.5%	8.1%	7.3%	7.0%	6.1%	6.2%	6.9%	7.4%	6.6%	5.6%	6.1%	6.8%
	Two Bedroom %	8.9%	8.8%	7.0%	8.4%	6.6%	7.0%	7.2%	7.8%	6.6%	5.9%	6.0%	7.2%
	Three Bedroom %	10.0%	9.2%	7.7%	10.1%	7.3%	7.0%	9.0%	9.0%	8.2%	7.2%	7.2%	8.3%
	Totals	8.7%	8.6%	7.2%	8.2%	6.6%	6.8%	7.3%	7.8%	6.8%	6.0%	6.2%	7.3%
Rents	One Bedroom \$/mo.	\$553	\$573	\$587	\$588	\$613	\$621	\$650	\$653	\$670	\$705	\$735	\$632
	Two Bedroom \$/mo.	\$664	\$684	\$698	\$696	\$716	\$733	\$765	\$770	\$783	\$820	\$857	\$744
	Three Bedroom \$/mo.	\$784	\$814	\$820	\$816	\$838	\$858	\$881	\$901	\$921	\$945	\$975	\$868
	Totals	\$647	\$673	\$684	\$684	\$707	\$721	\$749	\$753	\$774	\$806	\$839	\$731
Supply Demand	Same-Unit Growth	4.6%	2.4%	2.1%	0.4%	2.6%	1.5%	3.2%	0.0%	2.5%	2.2%	3.0%	4.5%
	Absorption	1,253	254	508	-197	659	-152	405	718	426	623	365	884
	Change in Supply	303	309	16	120	64	0	532	949	141	340	359	570
	Differential	950	-55	492	-317	595	-152	-127	-231	285	283	6	314
	Starts	0	136	64	0	694	746	461	321	1,995	1,073	971	2,044
	Units U/C	309	136	184	64	694	1,440	1,362	734	2,589	2,175	2,771	1,133
	Units Proposed	1,199	1,170	1,266	1,091	1,293	1,426	2,080	2,940	3,813	3,187	3,130	2,054

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### Submarket – Greenville South

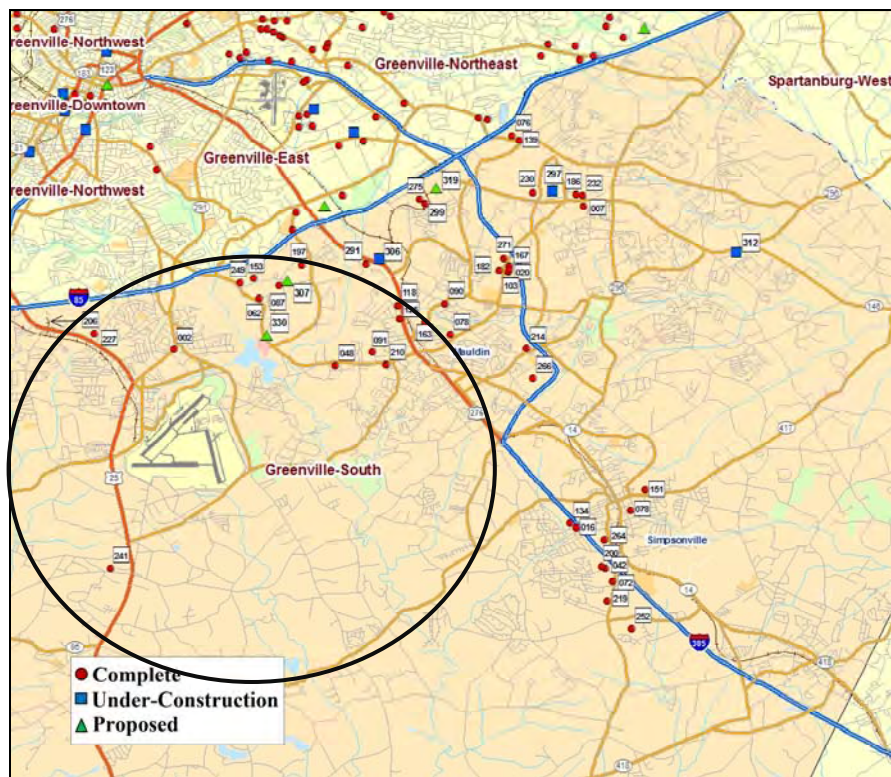
The Greenville-South submarket includes the cities of Mauldin and Simpsonville, where most of the apartment communities in this submarket are located. This submarket is bordered to the north by I-85. The Southern Connector Area is located within the western area of this multi-family submarket and is shown in the map on the following page.

<sup>21</sup> Greenville – Spartanburg – Anderson - Multi-Family Summary, Real Data Apartment Market Research, June 2015

Greenville-South Submarket Trends													Annualized	
		May '10	Nov. '10	May '11	Nov. '11	May '12	Nov. '12	May '13	Nov. '13	May '14	Nov. '14	May '15	1-Yr Avg.	5-Yr Avg.
Vacancy	One Bedroom %	7.7%	8.7%	5.8%	5.4%	4.3%	4.8%	6.5%	9.4%	6.4%	4.2%	3.0%	4.5%	6.0%
	Two Bedroom %	9.6%	9.9%	6.3%	8.2%	5.3%	4.4%	6.0%	8.0%	5.7%	4.1%	3.7%	4.5%	6.5%
	Three Bedroom %	7.7%	4.9%	5.8%	11.7%	4.4%	3.9%	4.8%	5.4%	5.3%	4.6%	3.3%	4.4%	5.6%
	Totals	8.8%	8.7%	6.1%	7.9%	4.8%	4.4%	6.0%	8.1%	5.9%	4.2%	3.4%	4.5%	6.2%
Rents	One Bedroom \$/mo.	\$579	\$600	\$602	\$608	\$650	\$637	\$678	\$690	\$714	\$719	\$755	\$729	\$658
	Two Bedroom \$/mo.	\$711	\$719	\$737	\$736	\$761	\$777	\$816	\$827	\$831	\$838	\$880	\$850	\$785
	Three Bedroom \$/mo.	\$834	\$849	\$856	\$874	\$889	\$892	\$911	\$950	\$970	\$988	\$1,017	\$992	\$912
	Totals	\$687	\$701	\$713	\$717	\$749	\$749	\$784	\$800	\$813	\$821	\$859	\$831	\$763
Same-Unit Growth		5.4%	1.9%	2.1%	-0.2%	2.3%	2.1%	2.0%	-0.6%	2.7%	1.7%	4.1%	5.9%	4.3%
Supply Demand	Absorption	292	196	184	-134	185	62	127	422	187	137	66	203	313
	Change in Supply	131	215	0	0	0	0	215	635	0	0	0	0	217
	Differential	161	-19	184	-134	185	62	-88	-213	187	137	66	203	96
	Starts	0	0	0	0	346	504	0	0	480	0	44	44	250
	Units U/C	215	0	0	0	346	850	635	0	480	480	524	495	321
Units Proposed		346	346	346	346	504	0	0	660	330	619	880	610	398

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### Under Construction & Proposed



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NOTE: The oval area represents the Southern Connector market area.

We note that most of the communities under construction and proposed are located towards the northern boundaries of the Greenville South Submarket and closer to Interstate 85 and Interstate 385.

<sup>22</sup> Greenville –Spartanburg–Anderson – Submarket Trends, Real Data Apartment Market Research, June 2015

<sup>23</sup> Greenville –Spartanburg–Anderson – Under Construction & Proposed, Real Data Apartment Market Research, June 2015

## Under Construction

Communities located within the Greenville South Submarket and under construction include:

- Woodfield Investments continues to build 336 units at Innovation at Millennium located on Innovation Road within the Millennium Campus.
- Millennium Campus in the Greenville-South submarket. First units are anticipated to be complete this fall.
- STM Acquisition & Development continues construction on 144 units at Larkspur Pointe located on Woodruff Road near Scuffletown Road in the Greenville-South submarket. Completion is expected this fall.
- Continental Properties started construction on a second phase of 44 units at Springs at Greenville located on Oak Springs Drive in the Greenville-South submarket. Construction is anticipated to be complete this August.

## Proposed Communities

Proposed communities within the Greenville South Submarket include:

- Certus Partners proposes 305 units at Ardmore at Conestee Park located on Mauldin Road at Fairforest Way in the Greenville-South submarket. Construction is expected to start this July.
- Edward Rose Associates proposes 330 units at Laurel Woods II located at Fairforest Way and Wenwood Drive located in the Greenville-South submarket. Construction is slated to begin this summer.
- Brand Properties proposes 245 units at a site on Market Point Drive off Woodruff Road in the Greenville-South submarket.

## Conclusion

Overall, residential development within the Southern Connector area includes single family development and multi-development focused towards middle- to lower-income demographics with limited new development. However, we noted that several new residential communities are currently under construction or proposed along Highway 272 (W Georgia Road) just southeast of the Southern Connector Area and located along the I-375 corridor. It is anticipated that this trend will continue for the near-term for the area. However, over the long-term, it is anticipated the area will experience more retail, office growth following the continued industrial and residential growth seen in the Southern Connector area and once the proposed Greenville Health System iMED plan begins construction.

## Utilities & Infrastructure

The neighborhood is primarily provided utilities by Duke Energy, Piedmont Natural Gas, the Greenville Water System, Renewable Water Resources (ReWa) and AT&T. Aside from overall real estate market conditions, the availability of utilities and infrastructure has had the biggest impact on where and when development activity will occur in the area served by the Southern Connector. The relative lack of sewer service is one of the main constraints to development in this area.

### Sewer

Renewable Water Resources (ReWa) provides wastewater treatment services to the Southern Connector area. ReWa owns and maintains the sewer trunk lines and treatment facilities, while sewer sub-districts (Metropolitan, Mauldin, and Simpsonville) maintain the smaller collector lines that feed into the trunk lines.

Sewer service is a concern in this area, as the sewer authority and its sub-districts are often unwilling to share in the costs of extending service. Several recent projects in the study area such as Griffin Park and Acadia have spent an enormous amount of money to bring sewer to their property in order to make their project viable. These projects are on a large enough scale to be able to justify this expense, but smaller projects would not be able to afford these capital improvements. Commercial and residential development in the Southern Connector service area will continue to follow sewer availability for some time into the future.

ReWa has several trunk lines in place serving this area. Generally speaking, they cross the Southern Connector in four places: along the Reedy River and Standing Springs Road; between Fork Shoals Road and Reedy Fork Road; between Hwy 25 and Hwy 20; and at I-85 and Hwy 153. Please see the enclosed sewer map showing the location of these lines. As you can see, there is a lack of adequate service to the south of the Southern Connector between Fork Shoals Road and Hwy 25 (Augusta Road). Renewable Water Resources (REWA), our regional wastewater treatment provider is also gearing up to update the Upstate Roundtable. The Upstate Roundtable is the 20 year strategic plan to align regional wastewater infrastructure with projected growth, while promoting environmental sustainability. This process will be a strategic effort in guiding REWA over the next twenty years as well as identifying where projected wastewater treatment capacity will be available.

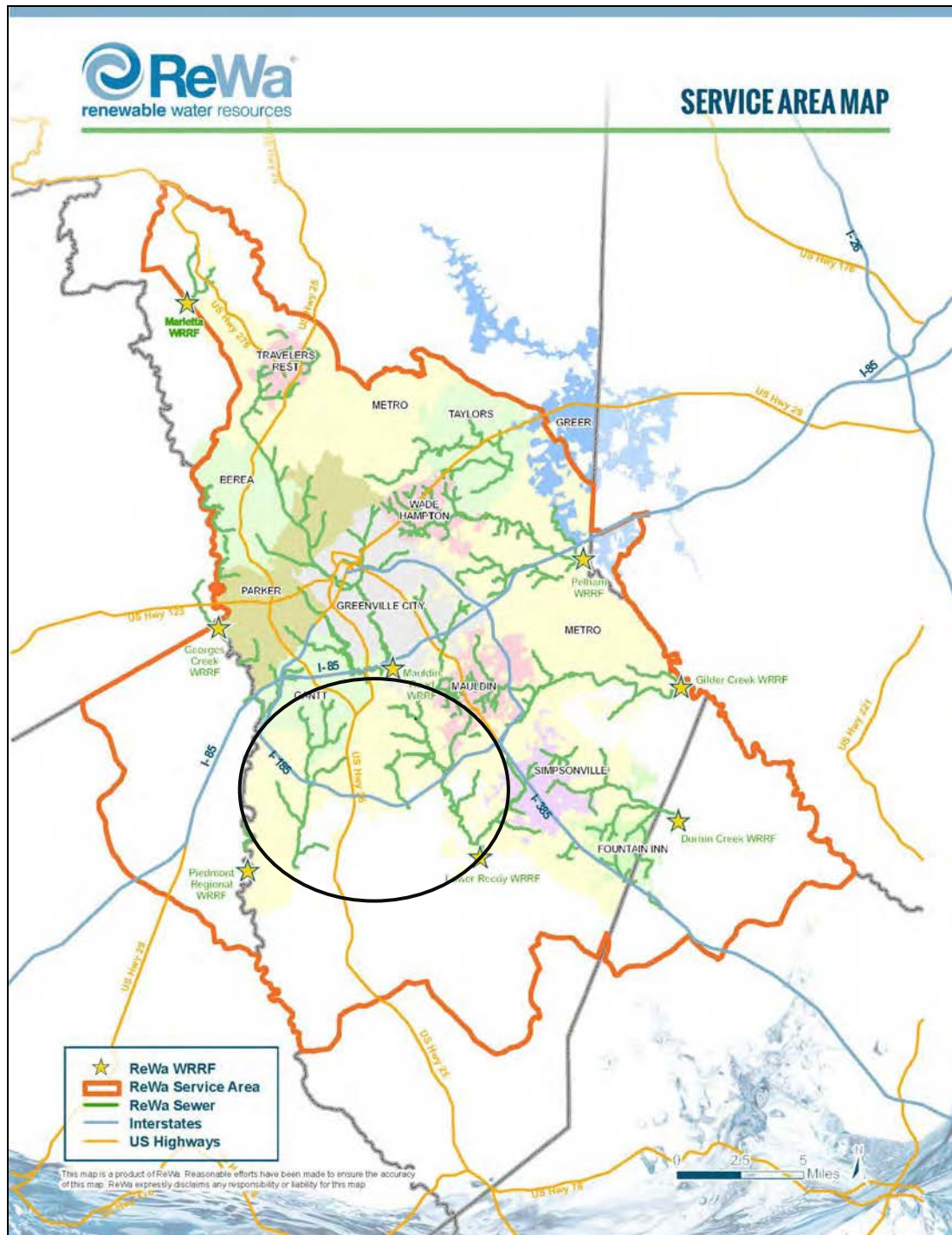
Since the Comprehensive Plan was adopted in 2009, REWA completed construction in 2012 of the Piedmont Regional water resource recovery facility to serve communities in both Greenville and Anderson Counties along the I-85 corridor. The completion of this facility allows REWA to provide a higher level of wastewater treatment by utilizing membrane bioreactor technology.

Since the adoption of the Comprehensive Plan in 2009, developer constructed facilities have continued to expand Metropolitan's service area. Metropolitan continues to focus its efforts on its proactive rehabilitation program. One of the main projects in the subject area includes the



construction of a trunk sewer on the south side of SCTAC along a Huff Creek tributary just north of the Southern Connector located between Michelin Road and South Harris Road.

The following map reflects ReWa's in-place lines:



NOTE: The oval area represents the Southern Connector market area

<sup>24</sup> ReWa's Service Area Map - 2015

As shown above, ReWa has several sewer lines throughout the Southern Connector Area; however, there appears to be a lack of service in the southeast quadrant area of Interstate 185 and US Highway 25. Discussions with Angie Davis at ReWa Development Services indicated that Greenville County and ReWa is currently in a planning phase to put together a long-term plan for servicing the needed areas; including areas around the Southern Connector.

### **Water**

The Greenville Water System has been very active replacing and upgrading water lines and pump stations to make their distribution system as efficient and effective as possible. There have been no major upgrades in the last five years. However the Greenville Water System is soon to begin two very important planning processes. They will begin both their Water System Facilities Master Plan Update, as well as a Water Resources Master Plan.

### **Electricity**

The availability and capacity of electrical service is not an issue in this area. Duke Energy has lines along almost all thoroughfares serving the Southern Connector. Generally speaking, it is not difficult to get electricity extended to a particular site that may not have service due to the fact that it is a relatively inexpensive process, and Duke's financial return on new infrastructure is usually achieved by revenues derived from the project's electrical consumption.

### **Natural Gas**

Piedmont Natural Gas provides service to the Southern Connector area, and generally speaking, follows the path of sewer service. They serve several of the major residential subdivisions in the area as well as the major commercial nodes. Piedmont has no plans at this time to extend service to any particular areas or projects, but would be willing to investigate this possibility on a case-by-case basis. Historically speaking, Piedmont Natural Gas has provided service to the majority of commercial and residential projects.

### **South Carolina Priority Investment Act (PIA)**

The SC Priority Investment Act (PIA) amended the South Carolina Local Government Comprehensive Planning Enabling Act by requiring a Priority Investment Element be added to all local comprehensive plans in South Carolina. The purpose of the Priority Investment Element is to improve governmental efficiency by requiring a higher level of coordination among local governments and other local or regional public service providers. Improved coordination among these organizations will result in future development that is more cost effective and more efficient in the consumption of land.

The Priority Investment Area Committee developed a planning process where they were able to identify areas of greatest potential to serve as Priority Investment Areas. This process included the development of goals, an analysis of geographic areas with the existing capacity to support new growth and redevelopment, a review of the draft Future Land Use Map, and the identification of current and future infrastructure and facility needs. From the first PIAC meeting in February 2009,



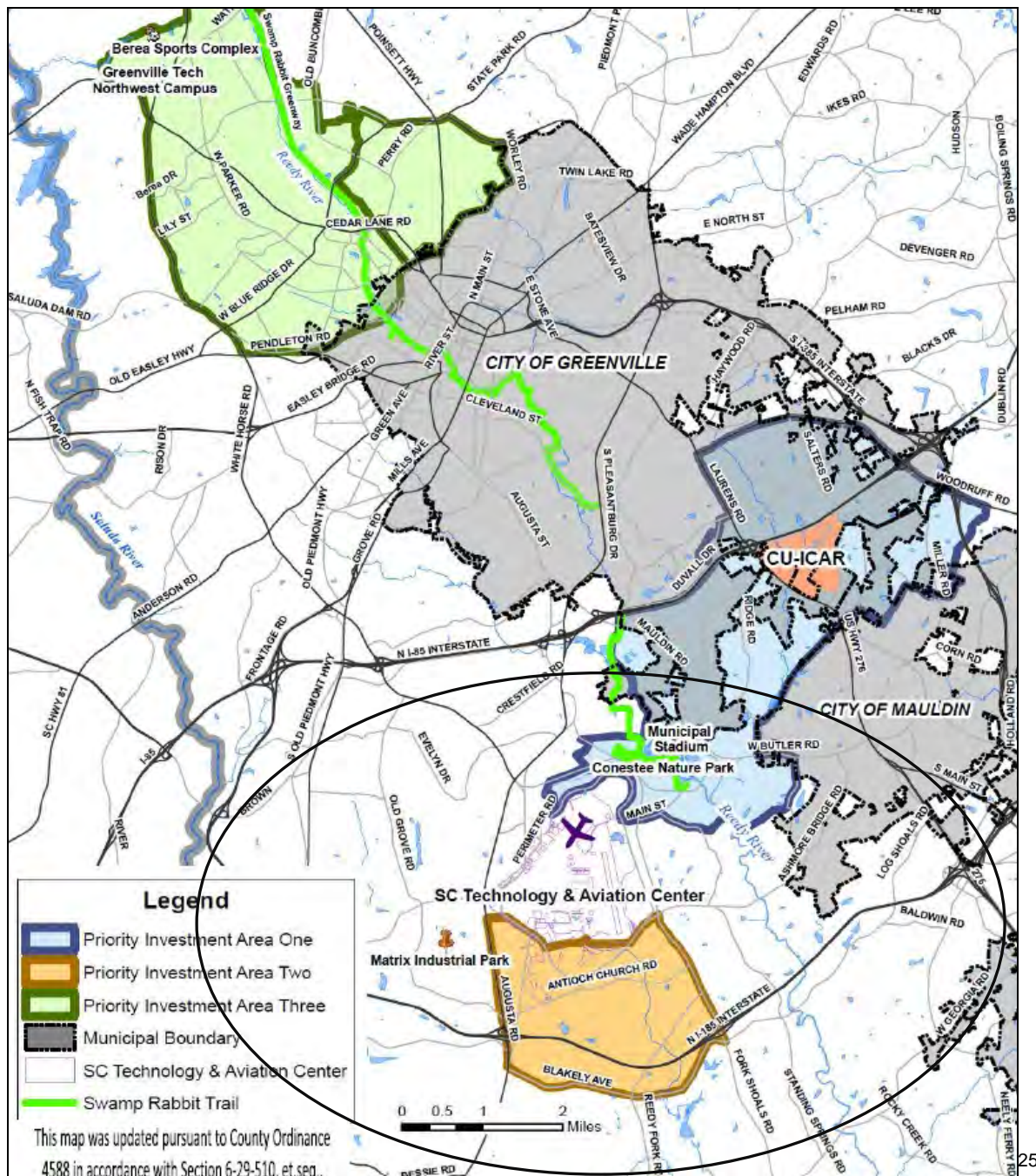
all participants agreed on the importance of sharing existing information – data, plans, and mapping- in order to determine if areas where all public services have some capacity to support additional development existed. This discussion led to a common goal: to communicate and share information on a regular basis. The committee agreed to provide computer mapping information to Renewable Water Resource's (ReWa) computer mapping system, as ReWa was undertaking a long-range planning process and had already created a base map to analyze future growth areas.

In addition to providing a forum for ongoing communication and the sharing of information, two tangible products were produced as a result of the PIAC's regular meetings: 1) a list of public infrastructure and facilities needed over the next ten years, and 2) a series of maps identifying each recommended Priority Investment Area.

Consistent with the requirements of the Priority Investment Act, this project list of public infrastructure needed over the next ten years was developed from the direct input from county department heads and/or special purpose districts responsible for providing the prescribed infrastructure, service, or utility. The proposed project list is a carefully considered list of anticipated infrastructure, service, and utility needs necessary to support future growth and improve or maintain existing levels of service. This project list is not an all-inclusive list, nor does it attempt to prioritize individual projects; it is simply a "wish list" identifying candidate projects for inclusion in the County's Capital Improvement Plan (CIP) or projects that the County can anticipate will occur during the ten-year planning horizon.

The Priority Investment Area map will serve as a supplement to the Future Land Use Map and identify those areas where the County can most cost effectively accommodate future growth, and/or where growth is needed to support overall future land use objectives. The Priority Investment Areas are where the County can and should encourage more concentrated growth and economic development. As a response to the utility issues mentioned above, the Southern Connector area has been identified as one of these Priority Investment areas. These three areas are shown on the following map:

## Priority Investment Areas



NOTE: The oval area represents the Southern Connector market area. As shown, the Southern Connector Area includes Priority Investment Area Two and a portion of Priority Investment Area One.

<sup>25</sup> Greenville County – Comprehensive Plan 5-Year Update (2013)

## References & Sources

### Claritas

Existing population and employment numbers for each geographic area, as well as growth rates of the last 15-20 years

### CoStar

Commercial real estate database for each geographic area, including existing inventory, recently constructed inventory and inventory to be constructed in the next five years

### Courthouse Retrieval System (CRS)

Public records for identifying the quantity of land that remains undeveloped

### Greenville County Planning Commission

- Southern Connector Future Land Use Map
- Greenville County Zoning Map
- 2009 Greenville County Comprehensive Plan: Population Element
- 2015 Demographics Report: Population Counts and Projections

### Greenville County GIS

Zoning and land use information

### CBRE

2015 Market Outlook

### Greenville-Pickens Area Transportation Study (GPATS)

- Long Range Transportation Study (Nov. 2007 / 2013)
- Demographic information (population data) allocated by Transportation Analysis Zones (as provided by Stantec)

### Market Participants

- Kevin Landmesser – Sr. VP – Greenville Area Development Corporation
  - o Mr. Landmesser currently serves as the Senior Vice President with the Greenville Area Development Corporation. Our discussions with Mr. Landmesser were primarily focused around recent development trends, current development trends and proposed development trends for the Southern Connector Area. Overall, he indicated several new developments within recent years around the Southern Connector and more specifically, the SCTAC. It was noted that most all of the significant projects in the Southern Connector Area are industrial oriented and have been great strides for Greenville. Further, it was noted that the Southern Connector area is becoming more attractive compared to other locations throughout Greenville due to available land, ease of access and other major

economic drives such as Michelin Tire. Additionally, discussions regarding the iMed development indicated that to his understanding, this project is in the very early stages. Currently, the Greenville Health System is working to find funding for the initial developments of this project; however, given this project is a 10 to 15 year development, it will most likely be several years before the first buildings are constructed in conjunction with the iMed plan.

- George Zimmerman – Coldwell Banker Caine – Commercial
  - o George Zimmerman is a senior commercial land broker with vast knowledge of the Southern Connector Area. He has represented several transactions within the Southern Connector Area and noted that this area is receiving more attention with regards to commercial and residential development. Mr. Zimmerman has several large acreage land listings within the Southern Connector Area and noted that water and sewer access is becoming more accessible to the growth areas of the Southern Connector which has allowed for further growth.
- Justin Hirsch – CBRE Broker – Land & Industrial
  - o Justin Hirsch is a commercial broker who specializes in Land & Industrial property with CBRE in the Greenville market. Justin's information was very much in-line with Mr. Zimmerman's perspective of the current and proposed market conditions for the Southern Connector Area. However, Mr. Hirsch indicated that development will mostly remain moderate until water and sewer lines are extended in projected growth areas within Southern Connector Area. Additionally, we asked Mr. Hirsch about the iMed project and it was indicated that it would most likely be 5-years before any construction begins on the iMed project as it is merely a plan right now.
- Griffin Park – Real Estate Sales Contact
  - o Discussions with the agent on duty at Griffin Park indicated the Griffin Park subdivision and the Greenville market in general has experienced continued year over year growth and increased in residential activity since 2011. It was noted that many of the subdivisions within the Southern Connector area had become stagnant following the "Great Recession"; however, each of these communities are actively building and selling homes.
- Lindsay Saunders – Keller Williams Realty
  - o Lindsay Saunders is a residential real estate agent with Keller Williams Realty. Lindsay had a listing within the River Preserve neighborhood near I-85, within the Southern Connector Area. She also indicated a strong increase in activity in sales and development throughout all of Greenville and the western and eastern boundaries of the Southern Connector Area. It was noted that most residential

activity is occurring near the I-185 and I-85 corridor and the I-185 and I-385 corridor with little residential development in between.

- Amanda Hamet - Coldwell Banker Caine - Broker-in-Charge
  - o Amanda Hamet is the Broker-In-Charge at Coldwell Banker Caine. Ms. Our discussions with Ms. Hamet were conducted to get a sense of the overall Greenville Residential Market and more specifically the Southern Connector Area. Her comments were in-line with the comments from Lindsay Saunders regarding continued increase in residential sales and development activity within the Greenville Market. However, with regards to the Southern Connector area, she referred we discuss with George Zimmerman; mentioned above.
- Angie Davis – ReWa Development Services
  - o Angie Davis is a represented with the ReWa Development Services division. Discussions with Ms. Davis indicated some new sewer line development within the Southern Connector area closer to Highway 272 / I-385 and Highway 25/ I-185 corridors. However, it was noted that the Southern Connector continues to be one of the primary underserved areas and ReWa, in conjunction with Greenville County and other water/sewer providers, are currently in planning discussions to determine an updated long-term plan for growth and the immediate development expansion needs.

**ADDENDA**



**ADDENDUM A**

**Précis METRO Report - Economy.com, Inc.**

## GREENVILLE-ANDERSON-MAULDIN SC

Data Buffet® MSA code: IUSA\_MGRV

## ECONOMIC DRIVERS



## EMPLOYMENT GROWTH RANK

**2014-2016**  
**92**  
 2nd quintile

**2014-2019**  
**105**  
 2nd quintile

Best=1, Worst=408

## RELATIVE COSTS

**LIVING**  
**97%**
**BUSINESS**  
**85%**

U.S.=100%

## VITALITY

**RELATIVE**  
**109%**
**RANK**  
**87**

U.S.=100%

Best=1, Worst=401

## BUSINESS CYCLE STATUS



## STRENGTHS &amp; WEAKNESSES

## STRENGTHS

- » Low unionization rate and low business costs encourage investment, especially FDI.
- » Clemson University helps stabilize employment and draws investors.
- » Rising population and improving educational levels create good workforce potential.

## WEAKNESSES

- » High concentration of old-line manufacturing.
- » Growing share of low-paying service jobs.
- » High employment volatility.

## FORECAST RISKS

SHORT TERM



LONG TERM


**RISK EXPOSURE**  
**2015-2020**
**203**
3rd quintile  
Highest=1  
Lowest=401

## UPSIDE

- » The upstate region develops as a logistics hub, boosting transportation employment.

## DOWNSIDE

- » Higher input costs force manufacturing layoffs.
- » Defense spending cuts hurt area's large number of defense contractors.
- » Housing construction fails to take off this year.

## MOODY'S RATING

**Aaa**
**COUNTY**  
**AS OF FEB 11, 2014**

## ANALYSIS

**Recent Performance.** Greenville-Anderson-Mauldin's recovery has transitioned into an expansion as payrolls increase and industrial production rises at an above-average pace. Hiring in professional/business services and manufacturing has cooled, but hiring in health services and leisure and hospitality has picked up the slack. State exports are benefiting manufacturing payrolls and lower energy costs are boosting manufacturers' profits. At 6%, the unemployment rate is among the lowest in the state. Foreclosures continue to decline steadily, but they remain well above their prerecession peak.

**Manufacturing.** The strengthening U.S. dollar and weak international demand will cause growth in GRV's export-centric manufacturing industry to stall in 2015, but as headwinds dissipate, payrolls will pick up in 2016. Industrial production will exceed the national average behind growth in high-value subsectors such as machinery and transportation equipment. Michelin will provide a stable source of jobs and will gain from rising U.S. auto sales and deteriorating U.S. roadways. Increased global energy demand remains an upside risk, as General Electric Co.'s GRV plant is at the forefront of manufacturing the company's newest gas turbine. The first turbine is scheduled for delivery in the summer, and GE anticipates the sale of as many as 500 by 2030. GE Power & Water, the division to which the GRV site belongs, will become GE's largest division by revenues after the company spins off GE Capital. U.S. defense spending cuts could weigh on GRV manufacturing; Michelin has several large military contracts that would be put at risk by a lower defense spending budget.

**Housing.** The housing market will continue its recovery, but much work still needs to be done. Accelerating wages and above-average population growth will boost housing demand,

igniting housing starts over the near term. Population growth will not return to prerecession levels, but will support construction payrolls, which have struggled to recover from the recession and remain weaker than average. Expanding labor markets, affordable housing, and a moderate climate make GRV a desirable working and retirement destination. Declining foreclosures will give a bump to house prices in the short term, but growth will trail the national average over the long run because house prices already rose significantly in 2012, 2013 and 2014.

**Inland port.** GRV's economy will benefit in the medium term from an expanding global economy. GRV is the largest exporting market in South Carolina and among the largest in the U.S. Since opening a year ago, the Inland Port at Greer has outperformed expectations through its first full fiscal year. Large regional manufacturers Michelin, GE and automaker BMW, located in nearby Spartanburg, have constituted the majority of the port's activity. Located between Charlotte NC and Atlanta, the port is situated in one of the fastest-growing corridors in the South, and provides inland manufacturers direct access to the Port of Charleston. Concerns in Europe and Asia paired with a strengthening U.S. dollar represent potential threats to the export growth forecast.

**Greenville-Anderson-Mauldin's recovery has transitioned into an expansion. Despite slowing payroll growth, manufacturing output will exceed the national average over the medium term. However, a weakening global economy could erode manufacturing exports. Longer term, population increases, improving educational attainment, and an expanding logistics industry will underpin above-average job growth over the forecast horizon.**

 Michael Ferlez  
 March 2015

 1-866-275-3266  
 help@economy.com

2009	2010	2011	2012	2013	2014	INDICATORS	2015	2016	2017	2018	2019	2020
29.7	30.6	31.7	31.7	32.4	33.6	Gross metro product (C09\$ bil)	35.0	36.4	37.5	38.5	39.3	40.0
-4.3	3.2	3.5	-0.0	2.2	3.4	% change	4.2	4.0	3.0	2.7	2.1	1.9
353.6	354.5	362.4	368.5	379.4	388.5	Total employment (ths)	399.9	410.6	417.7	422.3	425.3	427.6
-6.7	0.2	2.2	1.7	2.9	2.4	% change	2.9	2.7	1.7	1.1	0.7	0.5
10.6	9.9	8.8	7.7	6.2	5.4	Unemployment rate (%)	5.8	5.6	5.2	5.1	5.0	5.1
-2.6	2.6	5.2	4.5	2.8	5.2	Personal income growth (%)	6.8	7.5	6.9	5.9	4.7	4.1
42.6	42.0	42.4	43.2	44.9	46.5	Median household income (\$ ths)	48.0	49.8	51.9	53.9	55.5	56.9
819.3	825.8	833.4	842.0	850.4	862.5	Population (ths)	874.8	886.9	898.7	910.6	922.7	934.7
1.3	0.8	0.9	1.0	1.0	1.4	% change	1.4	1.4	1.3	1.3	1.3	1.3
7.2	3.2	4.8	5.9	5.3	9.3	Net migration (ths)	9.9	9.8	9.6	9.8	10.1	10.2
1,729	1,756	1,907	2,650	3,254	3,634	Single-family permits (#)	4,142	4,738	4,771	4,698	4,548	4,295
92	206	122	168	641	1,943	Multifamily permits (#)	1,710	1,300	1,062	796	757	716
133.4	135.9	134.7	141.4	148.5	154.0	Existing-home price (\$ ths)	160.2	163.8	165.5	167.0	170.7	176.8

## ECONOMIC HEALTH CHECK

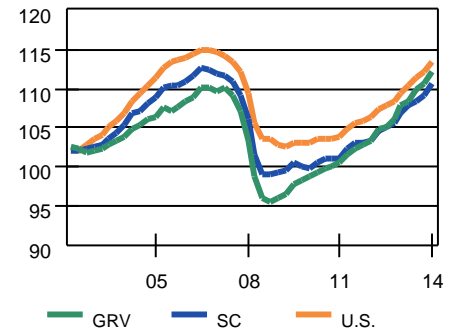
3-MO MA

	Sep 14	Oct 14	Nov 14	Dec 14	Jan 15	Feb 15
Employment, change, ths	0.3	0.8	1.0	1.4	1.3	1.4
Unemployment rate, %	5.5	5.6	5.7	5.7	5.8	5.9
Labor force participation rate, %	58.9	59.1	59.1	59.2	59.4	59.7
Employment-to-population ratio, %	55.5	55.6	55.6	55.7	55.9	56.2
Average weekly hours, #	35.9	35.8	35.8	35.8	35.9	35.7
Industrial production, 2007=100	102.0	101.8	102.6	103.0	103.4	103.1
Residential permits, single-family, #	3,775	3,672	3,669	3,582	3,666	3,702
Residential permits, multifamily, #	1,083	1,120	1,124	2,564	2,506	3,193
<div> <div>Better than prior 3-mo MA</div> <div>Unchanged from prior 3-mo MA</div> <div>Worse than prior 3-mo MA</div> </div>						

Sources: BLS, Census Bureau, Moody's Analytics

## BUSINESS CYCLE INDEX

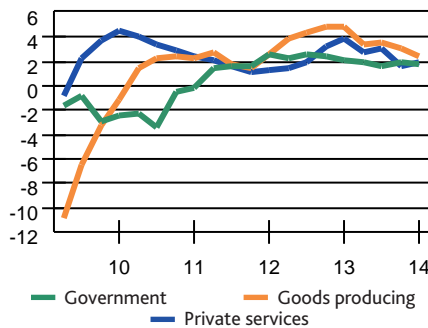
JAN 2002=100



Source: Moody's Analytics

## CURRENT EMPLOYMENT TRENDS

% CHANGE YR AGO



Sources: BLS, Moody's Analytics

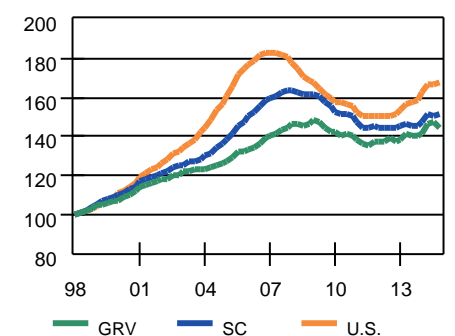
% CHANGE YR AGO, 3-MO MA

	Jun 14	Oct 14	Feb 15
Total	2.9	1.9	2.8
Construction	5.3	2.9	4.1
Manufacturing	3.0	2.6	2.2
Trade	2.7	0.9	2.4
Trans/Utilities	-3.3	1.2	1.6
Information	-5.0	-3.2	0.5
Financial Activities	0.8	3.5	4.2
Prof & Business Svcs.	5.4	2.9	4.0
Edu & Health Svcs.	3.5	2.8	3.8
Leisure & Hospitality	4.8	2.3	3.6
Other Services	-0.9	-5.6	-0.7
Government	1.7	1.9	1.9

Sources: BLS, Moody's Analytics

## HOUSE PRICE

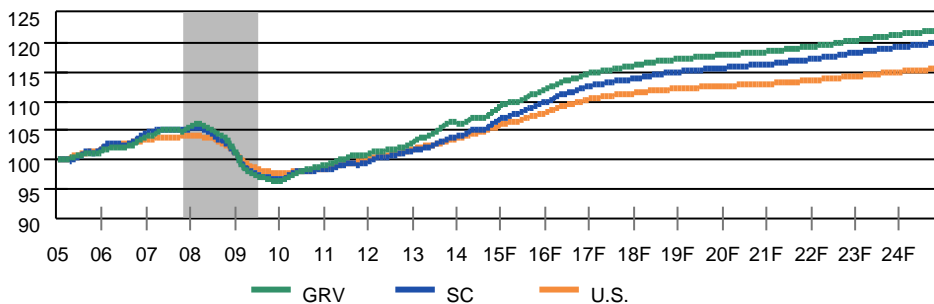
1998Q1=100, NSA



Sources: FHFA, Moody's Analytics

## RELATIVE EMPLOYMENT PERFORMANCE

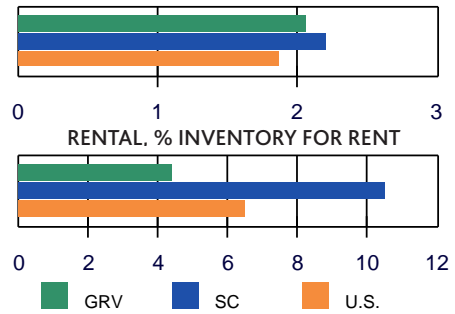
JAN 2005=100



Sources: BLS, Moody's Analytics

## VACANCY RATES

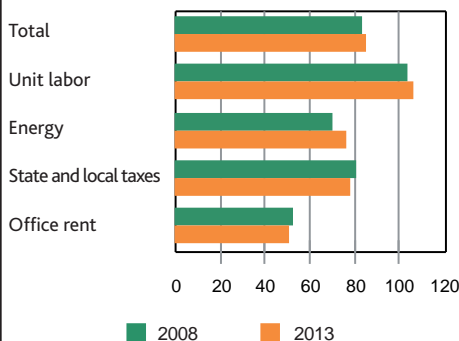
HOMEOWNER, % HOUSES FOR SALE



Sources: Census Bureau, ACS, Moody's Analytics, 2013

## BUSINESS COSTS

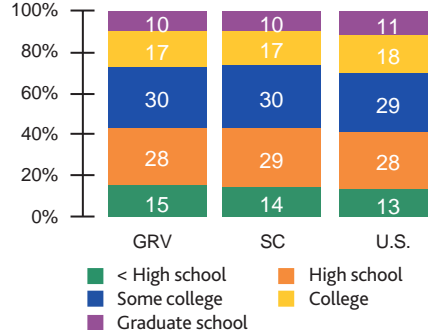
U.S.=100



Source: Moody's Analytics

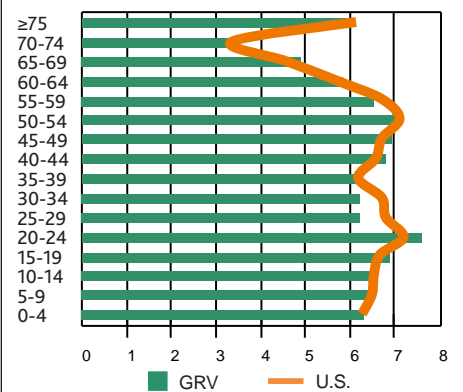
## EDUCATIONAL ATTAINMENT

% OF ADULTS 25 AND OLDER

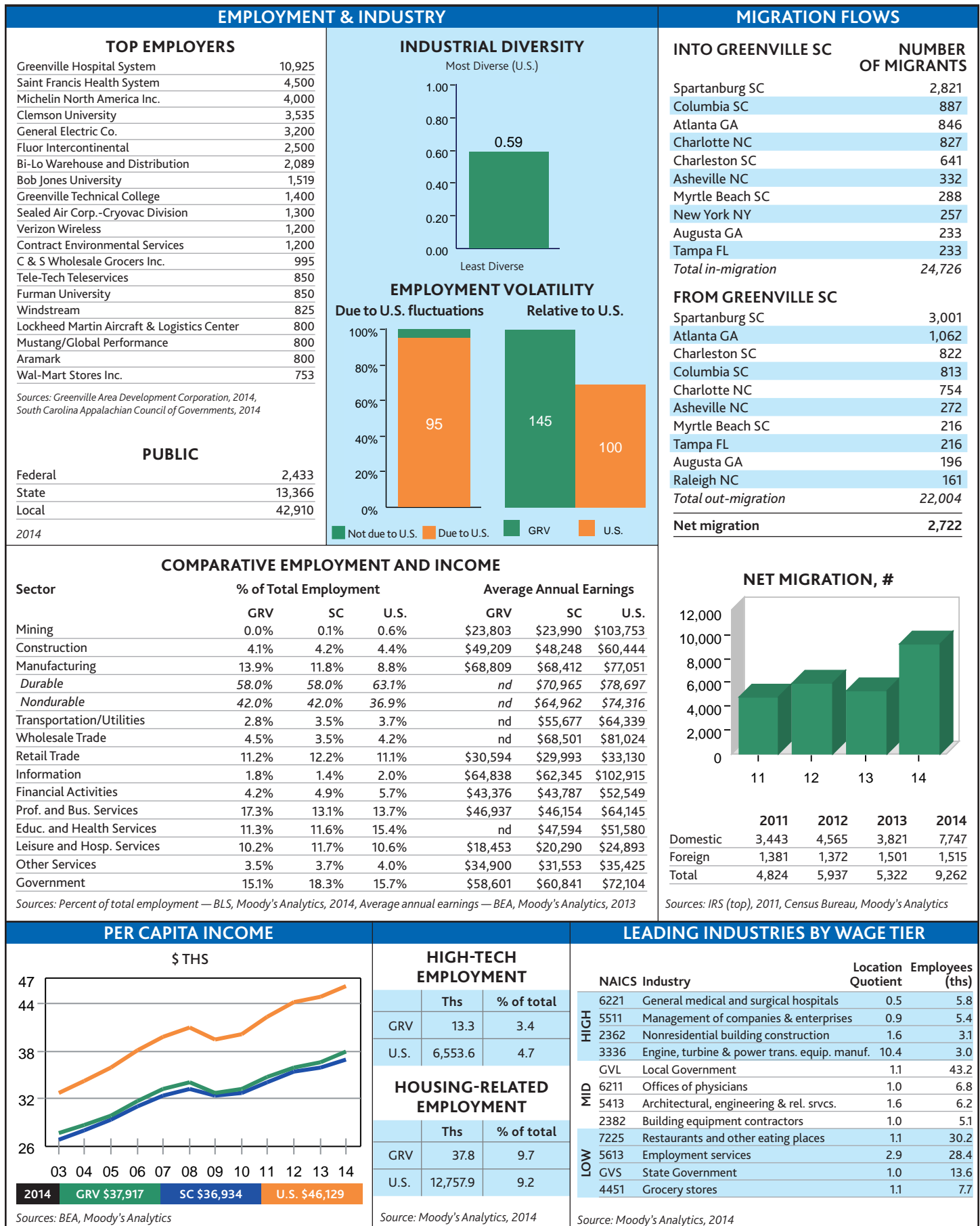


Sources: Census Bureau, Moody's Analytics, 2013

## POPULATION BY AGE, %



Sources: Census Bureau, Moody's Analytics, 2013



# About Moody's Analytics

## Economic & Consumer Credit Analytics

Moody's Analytics helps capital markets and credit risk management professionals worldwide respond to an evolving marketplace with confidence. Through its team of economists, Moody's Analytics is a leading independent provider of data, analysis, modeling and forecasts on national and regional economies, financial markets, and credit risk.

Moody's Analytics tracks and analyzes trends in consumer credit and spending, output and income, mortgage activity, population, central bank behavior, and prices. Our customized models, concise and timely reports, and one of the largest assembled financial, economic and demographic databases support firms and policymakers in strategic planning, product and sales forecasting, credit risk and sensitivity management, and investment research. Our customers include multinational corporations, governments at all levels, central banks and financial regulators, retailers, mutual funds, financial institutions, utilities, residential and commercial real estate firms, insurance companies, and professional investors.

Our web periodicals and special publications cover every U.S. state and metropolitan area; countries throughout Europe, Asia and the Americas; the world's major cities; and the U.S. housing market and other industries. From our offices in the U.S., the United Kingdom, the Czech Republic and Australia, we provide up-to-the-minute reporting and analysis on the world's major economies.

Moody's Analytics added Economy.com to its portfolio in 2005. Now called Economic & Consumer Credit Analytics, this arm is based in West Chester PA, a suburb of Philadelphia, with offices in London, Prague and Sydney. More information is available at [www.economy.com](http://www.economy.com).

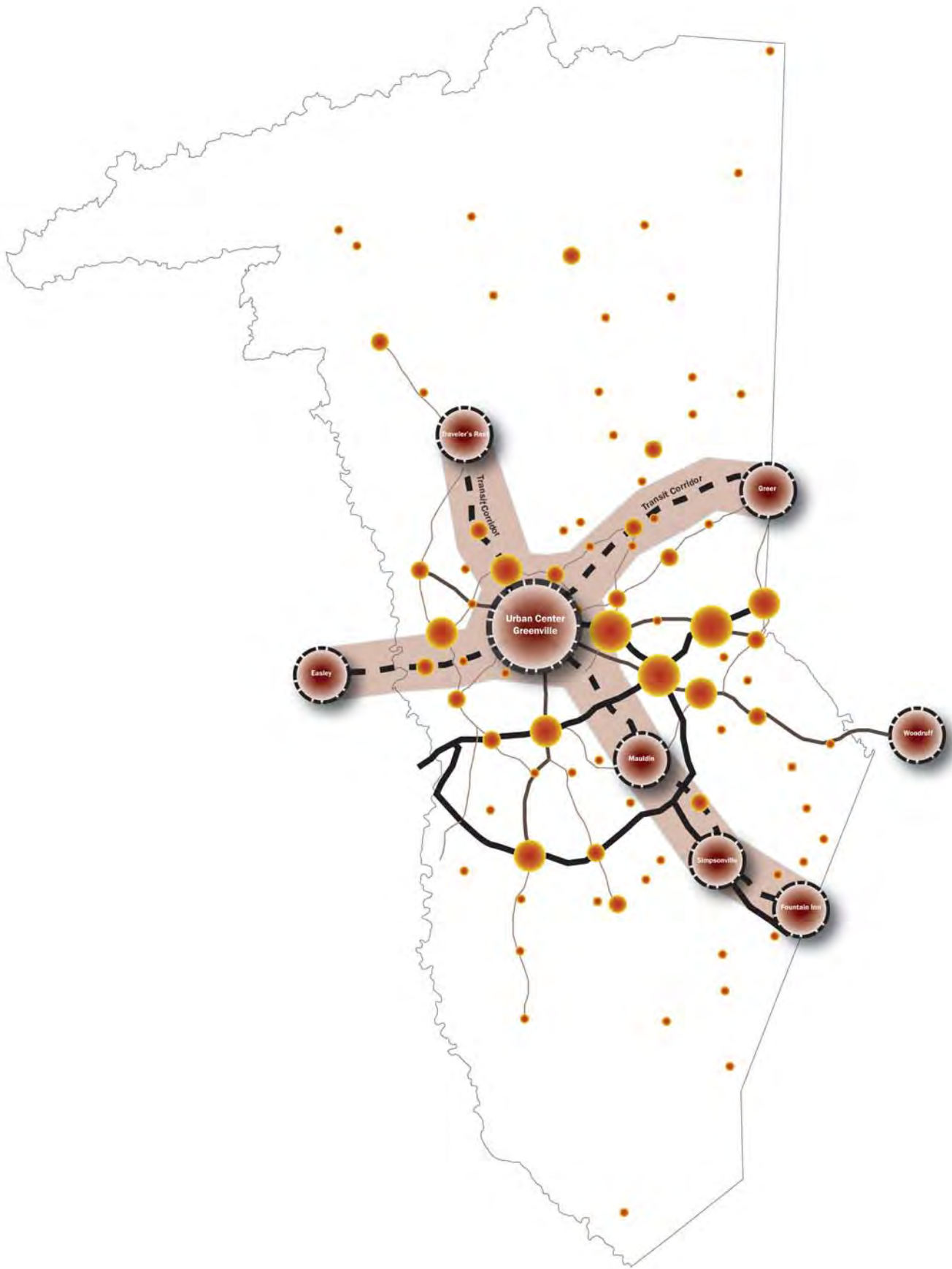
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**ADDENDUM B**

**Greenville County – Comprehensive 10-Year  
Plan - 2009**





# Future Land Use Map

Adopted December 1, 2009

**Legend**

**Centers**

- Rural Community Center
- Suburban Community Center
- Sub-Regional Center
- Regional Center
- Super-Regional Center

**Corridors**

- Neighborhood Corridor
- Community Corridor
- Regional Corridor
- Transit Corridor

**Communities**

- Rural Land Use 1
- Rural Land Use 2
- Residential Land Use 1
- Residential Land Use 2
- Residential Land Use 3
- Employment Center

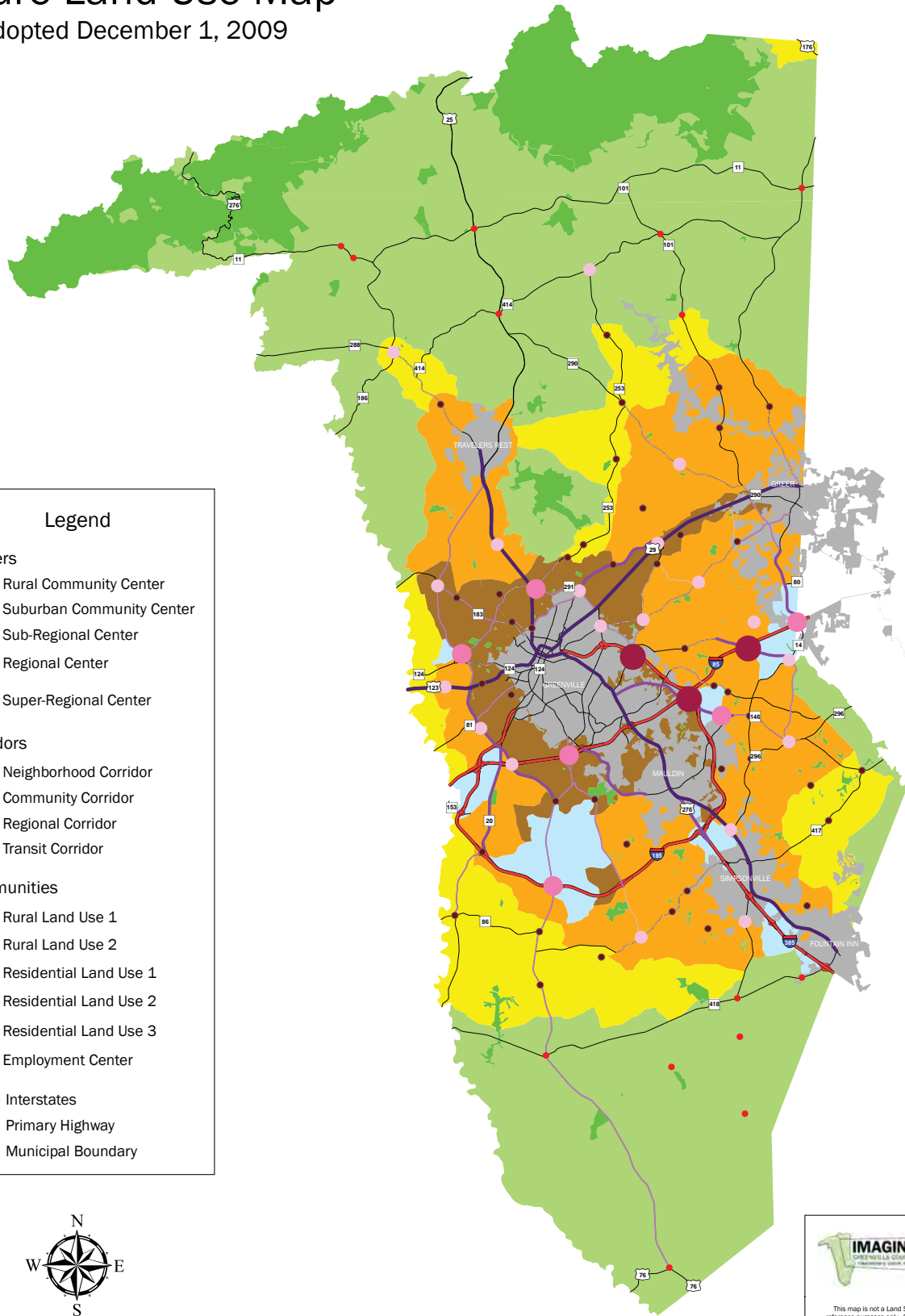
Interstates

Primary Highway

Municipal Boundary



0 1 2 4 6 8 Miles

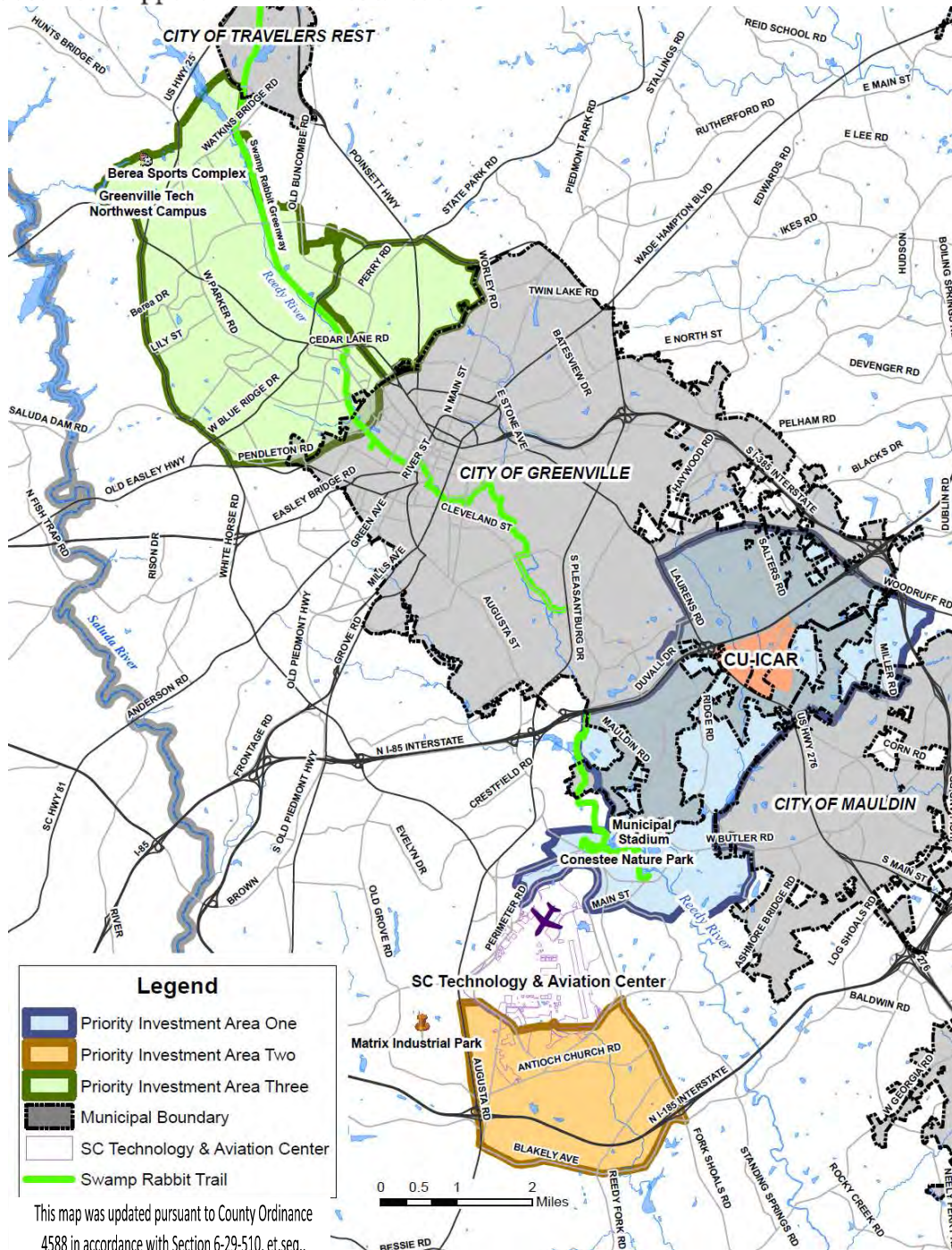


This map is not a Land Survey and is for general reference purposes only. Greenville County expressly disclaims responsibility for damages or liability that may arise from the use of this map.

The adoption of this map does not indicate the expansion of zoning regulations in those areas that are designated unincorporated.

Three Priority Investment Areas were identified by the PIAC group. The geographical boundaries of each of these three areas are shown on the Priority Investment Area Map included in this document. Appendix D identifies a list of

improvement projects for the Priority Investment Areas. This map will be used in concert with the Future Land Use Map when making future land use decisions.



**ADDENDUM C**

**Grenville County – Comprehensive Plan – 5-Year  
Review 2013**





GREENVILLE COUNTY  
COMPREHENSIVE PLAN

# 5 YEAR REVIEW



Greenville  
County



GREENVILLE COUNTY  
COMPREHENSIVE PLAN  
**5 YEAR  
REVIEW**

*Introduction* **01**  
*page 3*

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*Population* **02**  
*pages 4-6*

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*Economic Development* **03**  
*page 7*

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*Natural Resources* **04**  
*pages 8-9*

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*Cultural Resources* **05**  
*page 10*

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*Community Facilities* **06**  
*pages 11-14*

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*Housing* **07**  
*page 15*

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*Land Use* **08**  
*pages 16-24*

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*Transportation* **09**  
*pages 25-27*

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*Priority Investment Areas* **10**  
*page 28*

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# 01

## Introduction

Section 6-29-510, paragraph E of the Comprehensive Planning Act of 1994 states that local planning commissions who represent jurisdictions that have adopted comprehensive plans, must review that plan every five years and update it every ten years. The law does not identify any required specific actions that the planning commission must undertake to complete its review of the comprehensive plan. The planning commission has the flexibility to address how the update is to be completed based upon its judgment as to the best approach to take given the local situation.

The five year review of the Greenville County Comprehensive Plan, “Imagine Greenville County, Tomorrow’s Vision Today” adopted in 2009, focuses on updating any available demographic information from the 2010 Census, looks at each element of the plan and identifies significant changes. These changes can be physical improvements with regard to community facilities, adopted community plans since 2009, and any actions taken to implement the goals and objectives of each of the plan’s elements.

The five year review is organized by each of the comprehensive plan’s elements.

# What is the purpose of this document?



# 02

## Population

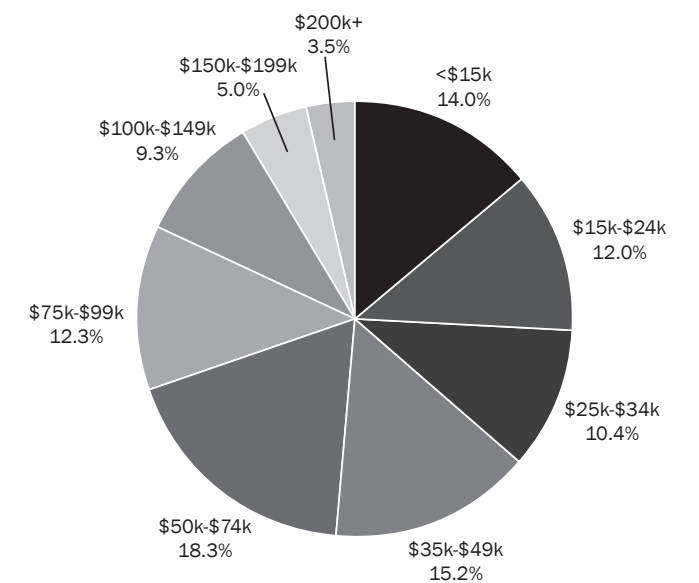
The Population Element considers historic trends and projections, household numbers and sizes, educational levels, and income characteristics. In 2010, the population of Greenville County was 451,225. The most recent U.S. Census Bureau data estimates that as of July 1, 2013, the population increased to 474,266, thus cementing Greenville’s status as the most populous county in South Carolina.

While both the U.S. population and that of South Carolina grew 2.4 percent between 2010 and 2013, Greenville’s population outpaced each with a 5.1 percent increase over the same period. This trend is expected to continue, however, at a lower overall rate.

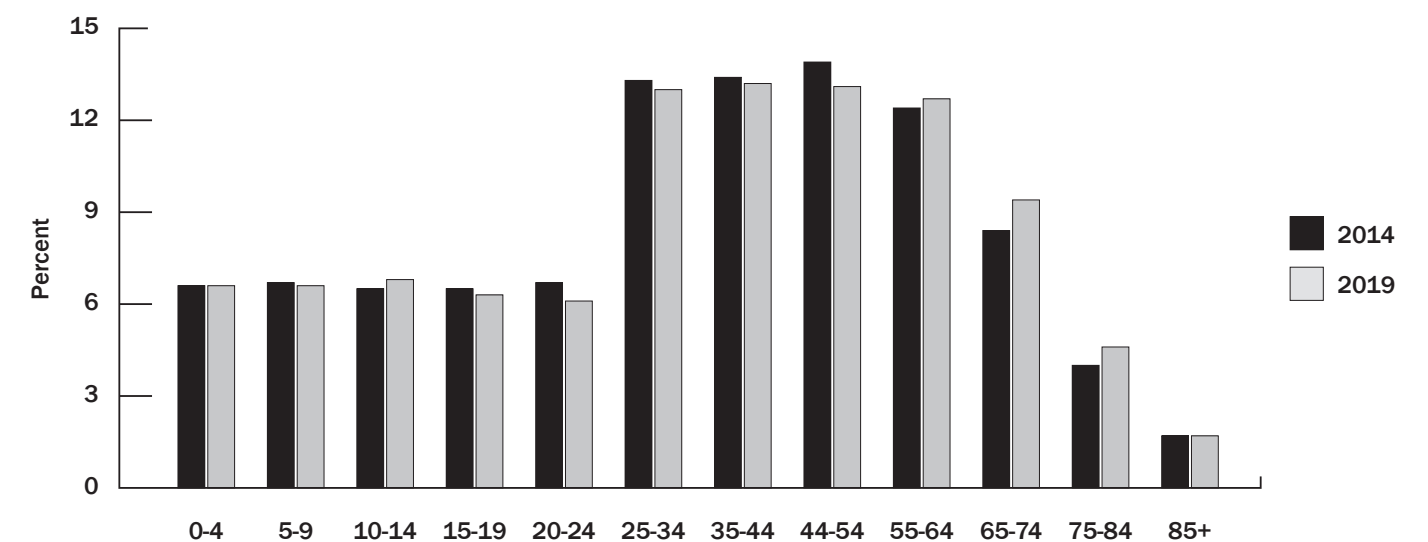
The median age in Greenville County continues to rise, reflecting national trends as baby boomers reach retirement age. The median age in Greenville County is expected to rise from 37.1 in 2010 to 38.5 in 2019. The 65-74 age group continues to be the fastest growing population cohort in the County with a 22 percent change between 2010 and 2014. Teenagers and the population of children under five years old represented the slowest growing population groups at 0.02 percent and 0.22 percent respectively over the same period.



Households by Income



Population by Age

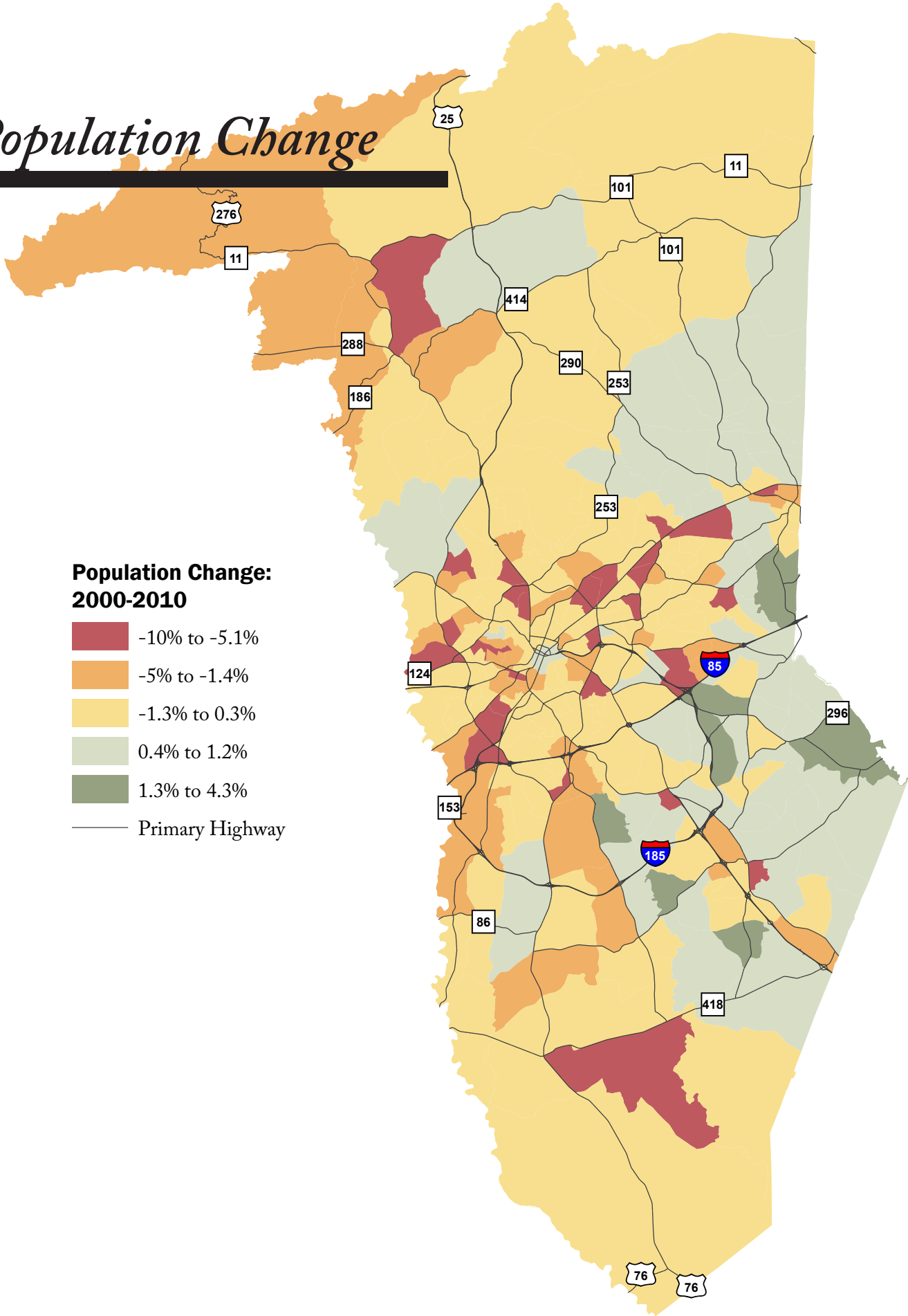


# Population Change

**Population Change:  
2000-2010**

- 10% to -5.1%
- 5% to -1.4%
- 1.3% to 0.3%
- 0.4% to 1.2%
- 1.3% to 4.3%

Primary Highway



Household incomes are diversified across the area, with an estimated Median Household income of \$47,887 in 2014. Poverty rates, however, continue to reflect national trends with 15.1 percent of Greenville County’s population living below the poverty level.

The following graphs illustrate the annual rate of anticipated growth from 2014 to 2019:

Population	Annual Rate
County	1.42%
State	1.01%
Nation	0.73%

Households	Annual Rate
County	1.42%
State	1.07%
Nation	0.75%

Families	Annual Rate
County	1.29%
State	0.93%
Nation	0.66%

Owner HHs	Annual Rate
County	1.41%
State	1.05%
Nation	0.69%

Median HH Income	Annual Rate
County	1.41%
State	1.05%
Nation	0.69%





# 03

## Economic Development

The economic downturn experienced by most of the United States following the adoption of the comprehensive plan was not as severe in Greenville County as indicated in the table below.

Announced Capital Investment and Job Creation  
Greenville County, SC 2010-2014

YEAR	NEW JOBS	NEW INVESTMENT
2010	2,083	\$251.9 Million
2011	3,092	\$290.5 Million
2012	1,454	\$273.1 Million
2013	1,001	\$238.9 Million
2014	1,310	\$451.9 Million

Source: Greenville Area Development Corporation

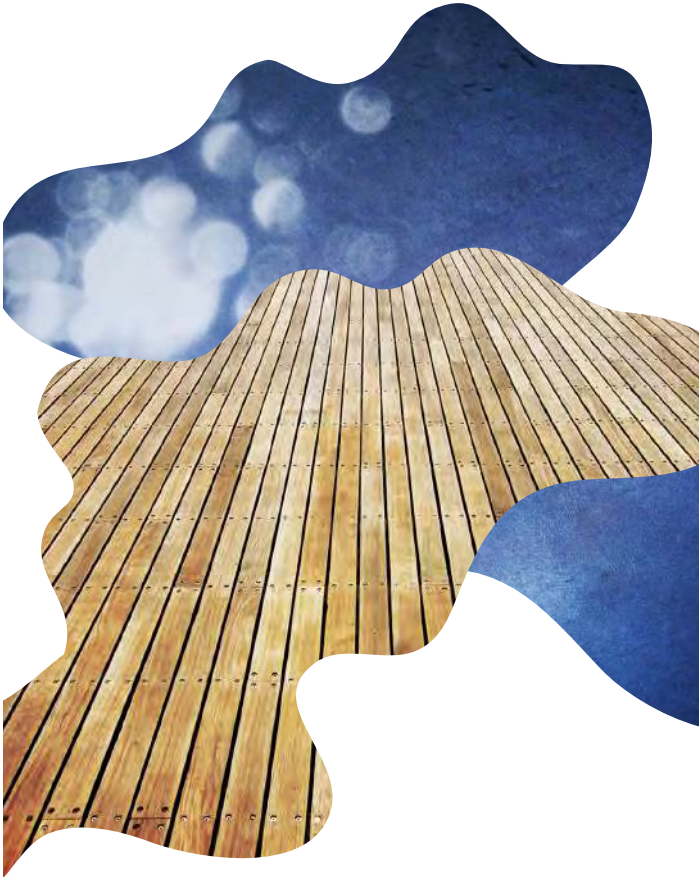
The Greenville Area Development Corporation has also identified some significant events that have occurred since the comprehensive plan was adopted in 2009 as well as some events that are planned in the next few years.

- South Carolina Inland Port in Greer
- Continued development in downtown Greenville including ONE, new hotels and offices and condos and retail and development along Church Street and Stone Avenue
- New ReWa Piedmont Wastewater Treatment Plan as well as upgrades to other plants
- Redevelopment of the Greenville News site
- Swamp Rabbit Trail and its impact on development and the economy
- I-385 widening and the future I-85 and I-385 interchange upgrade
- New Industrial “spec” buildings – White Horse Center (I-85 and White Horse Road), SouthChase, Logue Court at Pelham

- Planned Greenville Tech”Center for Manufacturing Innovation” at CU-ICAR
- New International Transportation Innovation Center (ITIC) at SC TAC
- New medical school opening on the Greenville Memorial Health Campus
- Greenville Spartanburg Airport upgrades and capital improvements

A lot of the Economic Development Element objectives identified in the comprehensive plan concerned better coordination and cooperation between Greenville County government and the local economic development organizations. The following is a list of actions that have been implemented to improve this coordination.

- The County Codes Department has instituted a “Fast Track-Design Build” Program
- Greenville County has developed a system to quickly resolve potential permitting issues
- The Greenville County Zoning Ordinance has been amended to allow for more flexibility with regard to a mixture of land uses and higher density residential.



# 04

## Natural Resources

Over the course of the past five years the Greenville County Planning Department along with several non-profit agencies have placed a new level of importance and value on community-based agricultural projects. Community scale gardens provide several benefits to an area besides being a source of local produce by also generating community pride and cooperation where successful. Just a few of the projects that have been developed over the last few years include:

- New Washington Heights Community Garden (with solar-powered, rain-harvesting irrigation system)
- Sans Souci Community Garden (which hosts a summer concert series)
- Dunear Community Garden
- Judson Community Garden
- Brandon Methodist Church Community Garden
- Berea Community Garden
- Odessa Street Community Garden
- Greengate Community Garden
- Drexel Terrace Community Garden
- Swamp Rabbit Teaching Garden
- Mill Village Farms
- Numerous youth gardens (hosted by a variety of local schools)
- Various non-profit and faith-based community gardens



The Greenville County Comprehensive Plan also addressed several goals for natural resources and their maintenance. Goal B of the Comprehensive Plan promotes becoming “a national innovator in promoting healthy, sustainable ecosystems and conservation of resources.” One of the most innovative gestures made by the County has been the development of a floodplain acquisition program. This program is based on a No Adverse Impact philosophy and amends the Flood Damage Prevention Ordinance of 2007. The Flood Damage Prevention ordinance removes structures from flood prone areas in perpetuity on properties across the Rocky Creek, Brushy Creek, Upper Reedy River, Gilder Creek, and Grove Creek Watersheds. To date, through this program, the County has acquired approximately 65 acres (129 properties) of flood prone land, conducted 73 bridge/culvert repairment or replacement projects, invested \$600,000 annually in neighborhood improvement projects, and planted over 533 trees.

Several departments throughout Greenville County have also made a concerted effort to provide public education programs that encourage proper stewardship of our county’s natural resources. Toward this end, Codes Enforcement has engaged communities, businesses, technical and academic organizations, while Land Development, Soil & Water, Solid Waste, Animal Care, and Public Works have provided a variety of educational programs through schools, communities, and public events. Additionally, in 2011, Greenville County Codes Enforcement Staff underwent certification in Energy Efficient Building Practices.



In an effort to invest in more renewable energy sources, Greenville County was awarded an Energy Stimulus Grant with which Greenville County Public Works and Property Management executed exhaustive retrofits on county-owned buildings, conducted energy training, and installed new sidewalks. The retrofitted county features, completed in 2011, resulted in a projected total savings of \$200,000 per year.

Greenville County has also built upon existing recycling initiatives by expanding locations of recycling containers, partnering between the Greenville County Recreation Department and Public Works to create and operate a new recycling center at the Mauldin Road stadium, and providing a new E-Waste Recycling Program by Solid Waste, complete with two drop off locations and educational programs.

An additional goal of the Natural Resources Element of the Comprehensive Plan includes the purpose of “maintain[ing] and improve[ing] all aspects of the county’s air quality.” Working to comply with EPA air quality standards, the Spare the Air Program (begun in 2006) continues to promote better air quality via various initiatives and educational plans. One of the key strategies of this program includes encouraging carpooling in the county and potentially partnering with the Recreation Department to provide greenway parking lots that provide park and ride sites from which citizens may bike to work using existing trails. Greenville County has also begun to “include use of alternative fuel vehicles in the County’s fleet; retrofitting Sheriff’s Office patrol vehicles with propane gas . . . ; diesel retrofit on the county’s heavy equipment and trucks; expanding the Breathe Better at School (B2) – anti-idling – program to the entire Upstate SC region; transit friendly projects (i.e., Swamp Rabbit Trail and other greenway initiatives of municipalities in the county); partnering with local organizations to implement the Electric Vehicle (EV) Ecosystem Pilot Program; and the school bus retrofit program that DHEC and the SC Department of Education implemented . . . .” In 2012, Greenville County partnered with Ten at the Top along with several other public and private agencies to develop the Clean Air Upstate campaign, led by Ten at the Top, in order to seek new strategies of meeting the EPA’s stricter 2013 revision for ground level ozone. Electric Vehicle Charging Stations were installed at County Square Offices.

Additionally, the Greenville County Land Development Division has initiated steps to encourage green building practices by promoting low impact developments complete with a storm water fee credit program and a regulation task force that is updating the land development regulations for low impact development regulations.

Another goal of the Comprehensive Plan includes the protection of natural water bodies and the provision of clean potable water. To this end, the Land Development Division maintains a steep slope criteria and identifies target buffer widths with a storm water fee discount for properly implemented buffers and open spaces. Furthermore, as part of an amendment to the Flood Damage Prevention Ordinance adopted in 2007, Codes Enforcement reviews and regulates all uses that occur in floodplains. In order to curb stormwater runoff in the county, Land Development follows the storm water ordinance which promotes low impact developments particularly in regards to water quality and has made adjustments to their water quality software to reflect these changes. A training day was also offered to educate local engineers on how the software may be used to fulfill ordinance standards.

**Upstate Forever**

“We hold conservation easements on 5,672 acres in Greenville County, 965 acres of that was protected between 2010-now. It is important to note that conservation easements are voluntary, legally-binding agreements, the landowners continue to own and live on the land, and the protection is permanent. Our role as the easement “holder” is to make sure that the easement terms are always adhered to, no matter who owns the land in the future.”



05  
*Cultural Resources*

The Cultural Resources Element includes the various destinations that comprise Greenville County’s unique cultural and historic heritage. The primary focus of this update is historic resources identification and preservation. The Cultural Resources Element considers historic buildings and structures, commercial districts, residential districts, unique, natural, or scenic resources, archaeological, and other cultural resources.

**Historic Resources**

There are 73 sites in the County listed on the National Register of Historic Places. Eleven sites were added in the last five years. One site, the Williams-Earle House, has been delisted and moved. In 2013 Brockington and Associates, Inc. conducted a historic resources survey of unincorporated Greenville County for the Greenville County Recreation District and the South Carolina Department of Archives and History (SCDAH). The survey identified 1,100 aboveground historic architectural resources that retain sufficient integrity to be included in the South Carolina Statewide Survey of Historic Places (SSHP). 40 of these are recommended as eligible to be listed on the Historic Register. These resources include buildings, structures, objects, districts, and landscapes that have architectural or historical significance. The Greenville County Historic Preservation Commission will review this inventory and determine if there may be the possibility of establishing historic districts within Greenville County.

Four resources within unincorporated Greenville County received Historic American Building Survey/ Historic American Engineering Record Documentation. Those buildings are:

- Joel Poinsett House, Greenville vicinity
- Paris Mountain State Park, bathhouse, Paris Mountain State Park, off SC Route 253, Greenville vicinity
- Road S-455 Bridge, Spanning Reedy River on Road

- S-455, Greenville vicinity
- Poinsett Bridge, SC Route 42, two miles Northwest of Route 11, 2.5 miles east of SC Route 25, Tigerville vicinity

**Cultural Resources**

The information listed below is a summary of some of the most popular cultural resources located in Greenville County. They are identified as either museums or performing arts venues.

***Museums***

- American Legion War Museum
- Children’s Museum of the Upstate
- Greenville County Museum of Art
- Greenville Cultural Exchange Service
- Museum and Gallery at Bob Jones University
- Museum and Gallery at Heritage Green
- Museum and Library of Confederate History
- Shoeless Joe Jackson Museum and Baseball Library
- Upcountry History Museum

***Performing Arts***

- Centre Stage
- Greenville Little Theatre
- Peace Center for the Performing Arts
- South Carolina Children’s Theatre
- Warehouse Theatre





# 06

## Community Facilities

The Community Facilities Element addresses the many essential services provided to citizens in the county in order to improve their quality of life. These services and facilities can include our education and recreation opportunities as well as our public health and safety considerations. This update focuses on significant improvement in facilities and services for these areas.

### Land Development

Since the adoption of the Greenville County Comprehensive Plan, several departments have worked together to promote more infill development within the county as a means to produce more efficient and cost-effective development, as reflected in the stated goals of the Community Facilities Element. The Greenville County Land Development Division coordinated with Upstate Forever (funded by the EPA's Targeted Watersheds Initiative Grant) to develop an incentive program for infill development, resulting in the Density Bonus Credit Program for Low Impact Development. The County's Planning Department also prepared a text amendment to the zoning ordinance that was subsequently adopted by County Council and that encourages mixed use and higher density infill development.

Following the Comprehensive Plan's objective of concentrating on Priority Investment Areas, the Greenville County Planning Department has provided support to several areas including Berea, Conestee, and New Washington Heights.

### Recreation

Since 2009, Greenville County Parks, Recreation & Tourism has begun or completed a number of additional projects across the county, including (but not limited to):

- Berea/Travelers Rest Sports Complex
- Camp Spearhead Retreat Center
- David Jackson Park

- Lake Conestee Nature Park
- Municipal Stadium
- MeSA Soccer Complex
- New and expanded waterparks
- Lakeside Park upgrades
- Pavilion Complex upgrades
- Piedmont Athletic Complex
- Sterling Center
- Swamp Rabbit Tram-Trail Line
- Slater Hall
- Blythe-Hagood House
- Pelham Falls Park
- GCRD Aquatics Facilities
- Conestee Park



An assessment conducted by the Clemson University Department of Parks, Recreation, and Tourism Management was conducted in 2010, and the results are as follows. The top five major findings from the 2010 assessment:

1. The public wants more trails.
2. The public wants more adult fitness facilities and outdoor adventure activities/facilities.
3. A need was expressed for more rectangular athletic fields, especially for soccer.
4. A need for future large parks in the rural areas in the northern and southern parts of the County to accommodate future growth.
5. The dissatisfaction with the condition of the older (35+ years) parks.

The top five trends impacting GCRT:

1. A growing, ethnically diverse, less healthy, aging population.
2. The 2008 – 2012 economic downturn and slow recovery impacted generated revenues and property tax revenue.
3. Growing deferred park maintenance and an aging/over used public park infrastructure.
4. The greatest public demand for park facilities continues to be trails.
5. Growing public environmental sensitivity – especially water.

The Capital Improvement Plan for GCRPT includes forty projects totaling \$73,189,500. The top five scheduled capital projects are:

- |  |                    |
|--|--------------------|
| 1. Deferred Maintenance at Existing Parks            | \$13,000,000       |
| 2. Trailblazer Park                                  | \$2,250,000        |
| 3. Poinsett Corridor/West Washington Park & Greenway | \$6,300,000        |
| 4. MeSA Soccer Complex Expansion                     | \$8,500,000        |
| 5. GHS Swamp Rabbit Trail Expansion                  | \$3,000,000        |
|  | <hr/>              |
|  | \$33,050,000 Total |

### Education

The Greenville County School District has continued to construct and make additions to existing facilities. The progress since 2009 is reflected in the following table:

School	Year of Addition/Construction 2009+	Square Footage Added 2009+
A.J. Whittenberg Elementary School	2010	89,490
Bell's Crossing Elementary School	2010	3,500
Brushy Creek Elementary School	2010	3,826
Chandler Creek Elementary School	2009	10,814
Dr. Phinnize J Fisher Middle School	2014	180,000
Hollis Elementary School	2010	1,553
Mauldin Elementary School	2010	3,500
Monarch Elementary School	2012	107,396
Paris Elementary School	2009	3,426
Pelham Road Elementary School	2010	8,469
Robert E. Cashion Elementary School	2009	3,734
Skyland Elementary School	2011	5,288
Woodland Elementary School	2010	3,500
Woodmont High School	2013	30,000

Another aspect of education is the opportunity to improve one's knowledge and skills through self-motivation. One opportunity to accomplish this is to take advantage of the resources of the County Library System.

The Greenville County Library System Board of Trustees adopted a Capital Improvement Plan in September 2012. The Library System addressed one of its highest priorities by purchasing land in August 2013 to establish a new library facility in the Five Forks area near the growing Woodruff Road residential development. The Library System also established a new bookmobile stop in the Blue Ridge area.



Utility Infrastructure

The Greenville Water System has been very active replacing and upgrading water lines and pump stations to make their distribution system as efficient and effective as possible. There have been no major upgrades in the last five years. However the Greenville Water System is soon to begin two very important planning processes. They will begin both their Water System Facilities Master Plan Update, as well as a Water Resources Master Plan.

Renewable Water Resources (REWA), our regional wastewater treatment provider is also gearing up to update the Upstate Roundtable. The Upstate Roundtable is the 20 year strategic plan to align regional wastewater infrastructure with projected growth, while promoting environmental sustainability. This process will be a strategic effort in guiding REWA over the next twenty years as well as identifying where projected wastewater treatment capacity will be available.

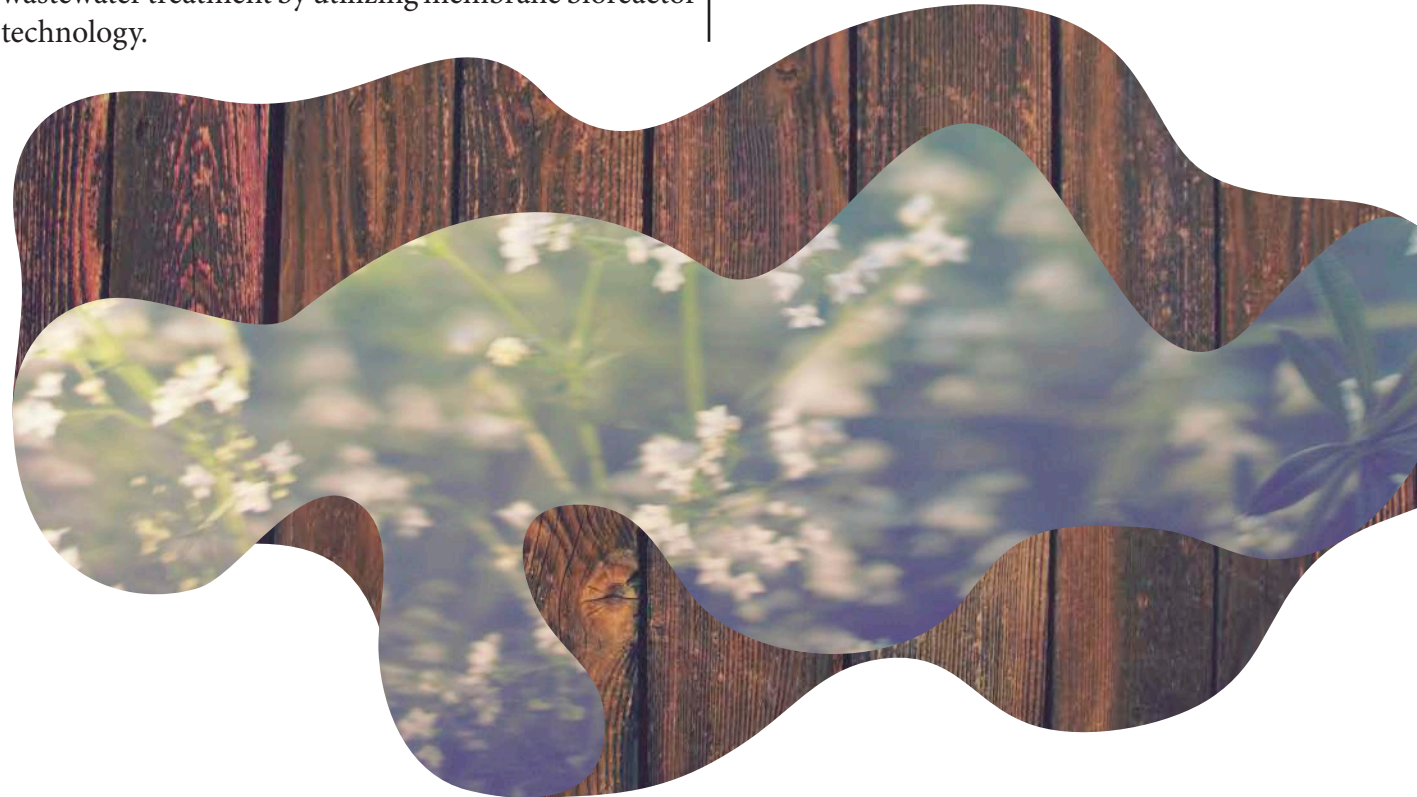
Since the Comprehensive Plan was adopted in 2009, REWA completed construction in 2012 of the Piedmont Regional water resource recovery facility to serve communities in both Greenville and Anderson Counties along the I-85 corridor. The completion of this facility allows REWA to provide a higher level of wastewater treatment by utilizing membrane bioreactor technology.

Since the adoption of the Comprehensive Plan in 2009, developer constructed facilities have continued to expand Metropolitan’s service area. Metropolitan continues to focus its efforts on its proactive rehabilitation program. On-going/future projects that will help promote growth in the County are as follows:

- Proposed upgrades of the existing sewer system in Sparrows Point subdivision will allow for continued development along Woodruff Road, east of the Five Forks area.
- Construction of a new sewer interceptor in the Travelers Rest area on the west side of US Highway 276 behind the Greenville Health System Hospital.
- Construction of a trunk sewer on the south side of SCTAC along a Huff Creek tributary just north of the Southern Connector located between Michelin Road and South Harris Road.

Greenville County Solid Waste Division

The Greenville County Solid Waste Division is continuing to build new collection units on the Twin Chimneys site as old units are filled; however, this expansion continues to occupy the existing footprint. As a result, there are no current plans to expand beyond the Twin Chimneys site. There are also no plans to date for expanding satellite sites.



Greenville County Recycling

The providers who responded to the survey.

- Starting July 1, 2011, as per state law, e-waste must be recycled. To assist citizens in complying with the law, in 2011, Greenville County aggressively expanded the existing electronic waste collection program in place to include additional locations for electronic recycling. (State of SC enacted a program for the recovery of used electronic beginning July 1, 2011.) Greenville County E-Waste Recycling Locations were expanded to include all Residential Waste & Recycling Centers and the Twin Chimneys Landfill.
- Increased the numbers of recycling containers at many locations due to increased volume
- Recycling Drop box tonnages have increased each year
- Commingle recycling tonnages have increased
- Paper and cardboard recycling tonnages have increased
- Continue to be awarded DHEC grants each year for Used motor oil, Used tire and Solid Waste grants
- Continue to offer Compost Bin and Rain Barrel sale event each year
- Maintained an average countywide recycling rate of 37%



Fire Protection Services

During the months of April and May in the year 2013, The Greenville County Fire Chiefs Association surveyed the various fire departments in Greenville County. The purpose of the survey was to define the fire protection services provided to the property owners of Greenville County. The survey resulted in the identification of the following types of information for each of the 28 fire providers who responded to the survey.

- Personnel
- Resources and Equipment
- Apparatus (vehicles)
- Facilities
- Financial information
- Operations and call responses
- Training offered and received
- Services and programs offered

The survey asked each fire provider to rate from 1 (most important) to 5 (least important) their needs in terms of apparatus, equipment, facilities, personnel, and training. Facilities and personnel were rated the highest in terms of existing and future needs. Respondents identified an estimated \$50.3 million of facility needs (expansions and new construction) over the next three to five years.



# 07

## Housing

In addition to updated Census information related to Housing data, there have been several activities that have occurred over the past five years dealing with the implementation of Housing Element goals identified in the 2009 Comprehensive Plan. These activities are listed below.

The Greenville County Land Development Regulations are currently being updated. As a part of this process there are a few items being discussed and considered which involve the goals and objectives outlined in the Housing Element. These items include requiring connectivity within residential subdivisions and also to adjoining properties which could be the location of future residential development. The ability to connect adjoining residential developments greatly improves transportation options on residential streets. Also increasing the ability to cluster subdivision development allows for higher density and more infill development as well.

There have also been several amendments to the Greenville County Zoning Ordinance affecting proposed goals and objectives of the Housing



Element. Residential development is now allowed in the commercial zoning classifications which mean the potential for more infill residential development and the conversion of vacant commercial structures for residential and mixed use development. In addition there are new higher density single family and multifamily zoning districts which could mean the possibility of higher density infill development as well.

Greenville County's storm water fees have been restructured to allow storm water credits for Low Impact Development Housing. Also housing developers now have a voluntary storm water banking program as an option for building more sustainable residential communities.

Another focus of the Housing Element dealt with the provision of housing for our special needs population. Currently there is an effort to identify potential housing options for individuals with disabilities and special needs to have safe and affordable housing after their caregiver has aged out. Hopefully some practical recommendations that will be adopted by the respectable housing stakeholders will result from this effort.

As mentioned in the Priority Investment Area Element Update, the expansion of Priority Investment Area Three will encourage the development of more workforce as well as low to moderate income housing options.

The following chart exhibits the total number of new homes, townhomes/condominiums, and apartments that have been permitted from 2010 to 2014:

Year	New Homes	New Townhomes/ Condos	New Apartments
2010	925	34	64
2011	1010	53	244
2012	1486	52	240
2013	1780	47	96
2014	1531	43	40

# 08

## Land Use

### Introduction

The Land Use element is a countywide, geographically significant, long-term look at the County's growth potential. Greenville County, like every jurisdiction in South Carolina that utilizes zoning, must have an updated Land Use element as regulated by State law (6-29-510 (E)). Incorporated into the comprehensive plan, this element focuses on determining the best locations and intensity of uses based on information from the needs and barriers identified in the other elements of the Comprehensive Plan. The most important part of the Land Use element is the Future Land Use map (see figure on page 17).

Future Land Use Maps of past plans have taken various forms to best communicate future growth patterns. The 1999 Comprehensive Plan displayed future land uses based on property lines and closely resembled a zoning map. However, in 2009, the map took on the more general, flexible plan that lends to our unique growth patterns. The centers, corridors, and communities approach addresses our automobile dominated system while weighing the demand for more pedestrian amenities. For example, access to where we live in suburban communities is auto-centric; however, concentrating businesses in regional centers

may benefit from alternative transportation including foot traffic. This idea has been reinforced at many community planning meetings, when participants mention wanting a nearby downtown atmosphere where residents and visitors have opportunity to walk among shops and restaurants.

### Land Use and Zoning

Like any effective effort, the best approach is to make a plan and create appropriate actions to reach your goal. This premise of plans and actions similarly serve this State-mandated comprehensive plan and zoning, respectively. The overall plan (the county comprehensive plan including land use element) guides potential actions (zoning) for a property.

Only county council has the final authority to enact amendments to the zoning ordinance. The Future Land Use Map only offers information to residents, the zoning applicant, county boards and staff of the zoning and rezoning process. These procedures are set up to maximize public involvement.

### 2009 Future Land Use (FLU) Map

A key goal of the Communities, Centers, and Corridors growth strategy is to better integrate land use and transportation planning so that land uses are supportive of our transportation objectives and vice versa. Within the context of this growth strategy each component serves a unique function:

- Communities are distinctive residential sub-areas of the County that share a common identity. They are often comprised of a collection of neighborhoods



# Future Land Use Map

## Legend

— Highway  
— Interstate

## Center Type

- Rural Community
- Suburban Community
- Sub-Regional
- Regional
- Super-Regional

## Corridor Type

- Neighborhood
- Community
- Regional
- Transit

## Community Type

- Rural Land Use 1
- Rural Land Use 2
- Residential Land Use 1
- Residential Land Use 2
- Residential Land Use 3
- Employment Center

- and often have a definable center.
- Centers serve as the major hubs of activity, providing goods and services to the surrounding neighborhoods and communities. They vary in size, from the smallest neighborhood center to large mixed-use areas that serve the larger region.
  - Corridors provide the connections that link the major urban centers to the smaller center types found within the outlying communities.

**FLU Categories** – based on the scale of capacity for residential, commercial, and industrial services while in the context of conveying people from place to place

- Communities
  - Rural Land Use #1
    - Predominately watershed properties, public lands (national, state, and county parks), private camps and conservation areas.
  - Rural Land Use #2
    - Ideal density of up to 1 unit per 3 acres.
  - Residential Land Use #1
    - Ideal density ranges from .3 units per acre to 3 units per acre
  - Residential Land Use #2
    - Ideal density ranges from 3 units per acre to 6 units per acre
  - Residential Land Use #3
    - Ideal density of 6 or more units per acre
- Centers
  - Rural Community Center
    - Small, low to medium density center that serves as a neighborhood center
    - Small-scale convenience-oriented retail, restaurants, and agriculture-related businesses.
    - Uses would include gas stations, locally-owned stores or cafes, and feed-n-seed stores serving a large, rural area
  - Suburban Community Center
    - Located within a neighborhood and designed to serve the surrounding residents
    - Small-scale, convenience-oriented retail and services such as locally-owned stores, restaurants, drug stores, barber shops, and day-care facilities
    - Servicing medium to high density residential
  - Sub-Regional Center
    - Service multiple surrounding neighborhoods

- and the larger community
  - Community-scale stores such as grocery stores, national casual dining restaurants, clothing stores, specialty boutiques and would ideally support higher density suburban and urban residential
- Regional Center
  - Large-scale retail such as grocery stores, some big-box stores, small hotels, movie theaters, and medium to large scale employment centers and parks
  - Higher density residential including both single-family attached and multifamily residences
- Super-Regional Center
  - Serves the overall county and the region for shopping, recreation, and employment
  - Contains the largest scale retail and service
  - Mixed use buildings with the highest density of residential
- Employment Center
  - Near high-capacity transportation networks
  - Characterized by large and small scale industrial and service uses as well as a mixture of convenience oriented retail and services
  - Medium to high density workforce housing may also be appropriate
- Corridors
  - Interstate
  - Transit
  - Regional
  - Community
  - Neighborhood

## Future Land Use Categories and Rezoning Activity

The Communities, Centers, and Corridors future land use strategy represents an opportunity to encourage the mixed use, higher residential density, infill development that the 2009 Comprehensive Plan advocates. One measure of the success of this land use strategy is to review rezoning requests that have occurred within the proposed communities, centers, and corridors since the comprehensive plan was adopted. There were 129 rezoning requests in the communities, centers, and corridors from the years 2010 to 2014.

Due to the land use flexibility provided by these land





## DEFINITION OF TERMS

**Corridors** provide the connections that link the major urban centers to the smaller center types found within the outlying communities.

**Communities** are distinctive residential sub-areas of the County that share a common identity. They are often comprised of a collection of neighborhoods and often have a definable center.

**Centers** serve as the major hubs of activity, providing goods and services to the surrounding neighborhoods and communities. They vary in size, from the smallest neighborhood center to large mixed-use areas that serve the larger region.

## REGIONAL CENTER

Located within a broader area, this center serves one or more contiguous regions in the County. Residents will typically travel longer distances to these centers on a weekly or biweekly basis. The Regional Centers are characterized by large-scale retail such as grocery stores, some big-box stores, small hotels, movie theatres, and medium to large scale employment centers and parks. The Regional Center ideally supports higher density residential including both single-family attached and multifamily residences.

## SUB-REGIONAL CENTER

Varying in size, but centrally located within a community, this center is designed to service multiple surrounding neighborhoods and the larger community for daily or weekly trips. It would be characterized by community-scale stores such as grocery stores, national casual dining restaurants, clothing stores, specialty boutiques and would ideally support higher density suburban and urban residential.

## SUBURBAN COMMUNITY CENTER

This center is centrally located within a neighborhood and designed to serve the surrounding residents for daily uses. This center is characterized by small-scale, convenience-oriented retail and services such as locally-owned stores, restaurants, drug stores, barber shops, and day care facilities, servicing medium to high density residential.

use categories, there was over a 90% consistency rate between the rezonings and the future land use map recommendations. This analysis served to reinforce the concept of “Centers” and the proposed location of them identified on the future land use map.

This analysis did indeed reinforce the concept of centers with respect to land use compatibility. One of the major characteristics of the center concept is the ability to reflect the context of the surrounding community. This reflection can be addressed through design, form, connectivity, and accessibility. These basic requirements are not being addressed within our existing land use regulations and policies.

## Mixing Uses and Creating Community Visions

Several amendments to the Greenville County Zoning Ordinance affect proposed goals and objectives of this element. Residential development is now allowed in the commercial zoning classifications which may translate to more infill residential development and the conversion of vacant commercial structures for residential and mixed use development. In addition, new, higher density single family and multifamily zoning districts which could mean the possibility of higher density infill development as well.

- Inclusion of residential components to other zoning types.
- Inclusion of raising limited farm animals within residential zoning

In addition, based upon the Greenville County Planning Commission’s recommendation, Greenville County Council amended the county’s comprehensive plan by adding the following area and community plans.

- Cherrydale Area Plan, as amended, 2010
- East Woodruff Road Area Plan, 2008
- Woodruff Road Corridor Study, 2007
- Scuffletown Road Area Plan, 2006
- Sterling Community Plan, 2011
- Conestee Community Plan, 2013
- Dunean Community Plan, 2014
- Judson Community Plan, 2012
- New Washington Heights Community Plan, 2014

Besides amending the comprehensive plan to include the area plans and community plans listed above, Greenville County Council approved two other comprehensive plan amendments. The first was the approval of the Coordination Element. This element was the result of an analysis of all the local government adopted comprehensive plans in Greenville County by all of the planning staffs. The Coordination Element identifies all of the similar goals and land use strategies in each of the comprehensive plans and advocates them as a guide for the types of development patterns that are being encouraged throughout Greenville County. This same Coordination Element has been amended to the comprehensive plans of several of the municipalities in Greenville County.

The other comprehensive plan amendment involved the expansion of one of our Priority Investment Areas to provide for the opportunity of more affordable housing in Greenville County.

**Community Planning Initiatives**

The planning staff in conjunction with community stakeholders and citizens have begun a visioning/problem identification and problem-solving planning process among several of the communities in the county. Thus far, these planning processes have been very effective in helping transform these communities and providing citizens with pride and ownership of their respective plans.

Additionally, Planning and Codes Enforcement staff engage with targeted communities by regularly attending neighborhood meetings. This allows staff to strengthen communication and proactively identify and address residents’ issues.

Community, Corridor, and Area plans are developed by the Long-Range Planning staff. Planners work with neighborhood groups, churches, community agencies, local businesses and other stakeholders to create “blueprints for development” in the form of plans for various geographic areas of the county.

These plans are detailed, and cover relevant physical development components, including land use, zoning, traffic planning, historic preservation, and design elements. Plans also recommend strategies to help

realize a community’s long-term vision for the future and provide a comprehensive framework to guide decisions. These plans are used by the County and the community alike and are adopted as amendments to the County’s Comprehensive Plan.

The narratives below are summaries of the community plans that have been adopted as an amendment to the comprehensive plan.

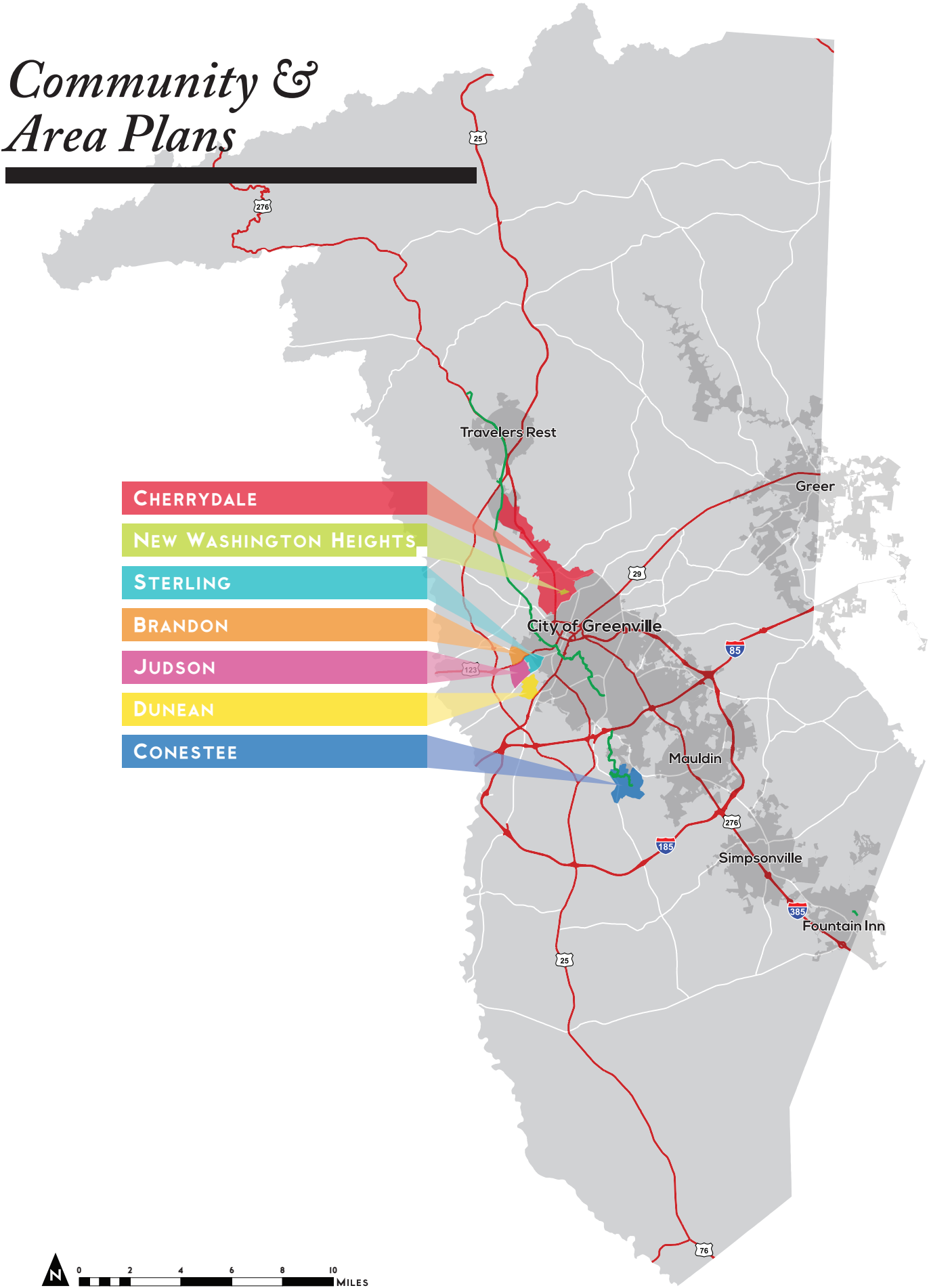
**Conestee** – Efforts to create a plan and encourage revitalization of the Conestee Mill Community, began in January 2012 by working with local residents, business owners, and local stakeholders to identify key issues and areas of interest within the community. The Conestee Community Master Plan documents the physical, social, and historical composition of the community and builds upon previous community planning efforts to establish a shared vision for Conestee. It proposes solutions to current issues and suggests recommendations to stimulate community revitalization and guide future development in a manner that highlights community assets and preserves community values.

The Conestee Community Master Plan is to be used as a guide in consideration of future land use, zoning, area capital improvements, and policy decisions. This plan serves to encourage private investment in the community and open more funding opportunities for redevelopment and revitalization efforts.

**Dunean** – Residents from the Dunean Community approached Planning staff in 2012 to develop a plan for this Historic Greenville Mill Village. The product of intensive community workshops and stakeholder meetings, the Dunean Community Plan represents the hopes and aspirations of Dunean residents as they seek to revitalize and grow their neighborhood.

Since the adoption of the Dunean Community Plan in 2013, residents have begun to tackle the recommendations and implementation strategies outlined in the Plan. From the development of a new Dunean Park, to fundraising for community signage, and improved community policing and codes enforcement, the residents of Dunean have taken ownership of their Plan and their community, improving the quality of life for all.

# Community & Area Plans





**Judson** – Our charge was to develop a plan that would not only preserve the progress that was made by the Greenville County Redevelopment Authority (GCRA) but also to expand and build upon those efforts to help in the revitalization of the Judson Community. Revitalization includes many different factors. These factors include, but are not limited to, health, public safety, transportation and beautification among others.

This community plan focuses on these aspects of revitalization and how they can be implemented. A



land use analysis did not play a significant role in this master plan due to the community already being an established residential neighborhood.

**New Washington Heights** - While there are several things that the residents can do themselves to continue to encourage a stronger community and promote renewal, nevertheless, there are steps the residents and staff from the Greenville County Community Planning & Development Department believe that Greenville County Council can take to make serious and progressive advancements that both protect and promote the interests of New Washington Heights, particularly as developers and investors become more interested in the neighborhood as the Poinsett District develops.

One of the strongest steps that Council can take to promote the interests of New Washington Heights residents is the implementation of a Design Overlay that guides all future development in accordance with the neighborhood’s master plan. This process would require a far more detailed description of guidelines, informing developers of what is expected from them, providing them with clear guidelines and a sense of protection that their investment will be shared by all additional developers that commit to New Washington Heights.

A clear obstacle to the potential commitment of new developers and individuals capable of investing in the area are the current conditions of Loop Street. Loop Street is part of the SCDOT’s road inventory; however, it is very low on their priority list for re-paving. For real transformation to occur throughout New Washington Heights, this primary neighborhood arterial needs renewed attention and a commitment of re-investment through re-paving.

**Trending Developments**

In addition to the future land use map and corresponding land use policies advocated in the comprehensive plan, there have been a few other land use activities occurring in the community since the comprehensive plan was adopted. These activities include:

**Healthy Eating and Activity Living** – Live Well Greenville in conjunction with local hospital systems,

community organizations, local media, and others have started a community education and awareness program advocating the benefits of a healthy and active lifestyle. The South Carolina Department of Health and Environmental Control in conjunction with Eat Smart Move More South Carolina have produced a Health and Planning Toolkit policy guide for local governments and other organizations to use. Information from this policy guide will be considered when the next major update to the county comprehensive plan takes place.

**Transit Oriented Development**–The City of Greenville working with consultants have been studying idea of making land use development more public transit friendly along some of its major corridors within the City of Greenville. The planning staff has been working with the City of Greenville staff, Greenlink staff, as well as other stakeholders to research the possibilities and required land use changes it would take to make some of these same corridors more transit friendly in the county within the more urban areas adjacent to the City of Greenville.





# 09

## Transportation

Over the last several years, Greenville County has undergone multiple changes when it comes to transportation. These changes include roadway and pedestrian projects, trail projects, new management for Greenlink, the start of a bike share program, and a tax referendum used to create a new funding source for transportation projects.

### Greenville-Pickens Area Transportation Study (GPATS)

After the expansion of Greenville-Pickens Area Transportation Study (GPATS) boundary, because of the 2010 Census, GPATS, as of November 2013, completed its five-year update to its Long Range Transportation Plan (LRTP). Since this addendum to the LRTP, multiple plans have been completed: the City of Greenville Bicycle Master Plan, the Greenlink Transit Vision and Master Plan and the Woodruff Road Corridor Study to name a few (Greenville-Pickens Area Transportation Study, 2013).

Along with many places around the country, Greenville County does not have a large funding source for transportation improvements and initiatives. Though many plans have been completed, they have not necessarily resulted in physical results, however, the plans that have been completed are being used as the guides for any and all work that occurs, including small patch work improvements.

### Tax Referendum

In the LRTP, it discussed a survey asking people their preferred sources of funding to fund transportation improvement projects:

*“...34 percent supported impact fees for developers, 18 percent supported transportation bonds, 6 percent supported increased gasoline tax, 5 percent supported increased sales tax, and 2 percent supported increased property tax.”*  
(Greenville-Pickens Area Transportation Study, 2013)

Greenville County decided upon a county-wide tax referendum. After the 2014 election, the people of Greenville County decided, by almost 66%, that raising taxes was not the way to solve the counties transportation funding problems. Though, it is worth noting that people that lived in the urbanized areas were more in favor of the tax than people who lived in the rural parts of the county. Urbanized areas don't have the legal authority to levy sales taxes like the county or state (Connor & Ward, 2014).

### Roadway & Pedestrian Projects

Though there are major projects under consideration, the funding resources are currently unavailable at this time. Because of the lack of money, over the years, roadway and pedestrian projects have focused on upgrading existing infrastructure.

### Trails

Back in the Spring of 2010, Greenville County published the Comprehensive Greenway Plan. This plan examined several benefits of trails to the Greenville County community: (1) creating value and generating economic activity, (2) bicycle & pedestrian transportation (reducing traffic congestion), (3) improving health through active living, (4) clear skies, clean rivers, and protected wildlife, (5) protecting people and property from flood damage and (6) enhancing cultural awareness and community identity (Greenways Incorporated Arbor Engineering, 2010). Since 2009, Greenville County has been constructing multi-use trails, called the Swamp Rabbit Trail, throughout the county. Though the entirety of the trail is not contiguous, to date, there are currently 20 miles of trail, with more to come (Greenville County Rec).

### Public Transit

Greenlink is now under the management of the City of Greenville. Since coming under Greenville's management, Greenlink has done much to improve the service for current riders along with initiatives to attract new riders. This includes starting shuttle services to Traveler's Rest, Furman, and eventually Fountain Inn. Greenlink has also expanded service to Clemson University, along with the campus connector service and Easley. Also, Greenlink has installed free wi-fi services in buses and shuttles. Buses are also equipped

with bike racks to help passengers travel those small distances between the bus stop and their origin and destination (City of Greenville).

### Bike Share

The City of Greenville, Greenville County, and Upstate Forever have started a bike share program called Greenville B-Cycle, centralized in downtown Greenville. Currently, there are six bike station and 28 bikes. Over the next four years, Greenville B-Cycle wants to expand the program to 10 bike stations and 50 bikes (Greenville B-Cycle).





### I-85/I-385 Interchange

The plans for the upgrade of the Interstate 85 at Interstate 385 Interchange have progressed through SCDOT, and construction will soon begin. In 2009, The South Carolina Department of Transportation (SCDOT) embarked on the planning process to upgrade the Interchange, which was operating with numerous congestion and safety deficiencies. In 2014, the preliminary plans were completed and Flatiron-Zachry consultants were hired to do the final “design-build” of the project. Utility companies are already relocating their lines, while groundbreaking is expected to occur in late 2015 with substantive construction beginning in early 2016. Construction is scheduled to be completed by the end of 2018. The Interchange will replace the tight cloverleaf ramps with flyover ramps, remove all weaving ingress and egress movements, and increase the design speed of the interchange from 35 mph to 45 mph. Numerous other improvements will be made at the same time as the Interchange, including upgrades to Roper Mountain Road, Woodruff Road, and the mainlines of I-85 and I-385.



### I-85/US-29 Update

With the MAP-21 Federal Highway Authorization, USDOT authorized state DOTs to allocate “Interstate” funding towards upgrading non-traditional aspects of the Interstate System, as well as improving identified “parallel corridors” that could absorb some of the Interstate congestion. For I-85 through Greenville and Spartanburg, US-29 was identified and funding was allocated to improve its opportunity to serve as a parallel corridor. In particular, SCDOT is focusing funding on Signal Timing Upgrades, Park and Rides, and Truck Parking, as well as some funding for safety and education. Discussions with SCDOT are on-going as to where the facilities will be located, and implementation will occur once the SCDOT Commission approves of the plan. Planners from SCDOT, GPATS (Greenville), and SPATS (Spartanburg) meet on a regular basis to work out the details. All funding for improvements to I-85 and US-29 are scheduled to be expended by FY 2019.

### LRTP Update

Greenville County Transportation Planning Staff, which also staffs the Greenville-Pickens Area Transportation Study (GPATS) are beginning their 10-year update to the Long-Range Transportation Plan (LRTP), a Federally-required document that details the priorities for GPATS for the next 25 years. Staff will be proceeding with Requests for Proposals this summer, with the intention of beginning data collection and travel demand model updating before the end of 2015. The process will include significant public involvement over the next 2.5 years, including several rounds of surveys, targeted public outreach, 2 rounds of 7+ public meetings, and media activity. The 2007 GPATS LRTP served as the base document for all transportation planning activity in the region for the last 8 years. It is responsible for over 30 local transportation planning efforts, making it one of the most influential documents in the Upstate’s recent history. Staff is intent on completing a successful follow-up with the help of the citizens of Greenville County and the entire South Carolina Upstate.

# 10 Priority Investment Areas

Since the Imagine Greenville County Comprehensive Plan was adopted in 2009, there has been some activity with regard to the Priority Investment Area Element. The County staff has been involved in two planning efforts in two of the three priority investment areas identified in the 2009 plan as well as the expansion of one of the priority investment areas.

In 2012, the County staff worked with residents, stakeholders, and public safety officials to identify issues that needed to be addressed in the Berea area of the county (located within Priority Investment Area Three). The three top issues identified were the development of a sense of place or identity for the Berea area, the need for some type of organizational structure in order to better communicate and work together for the betterment of the community, and the need to improve the physical appearance of the Berea area. In response, the Codes Enforcement Division and the County Sheriff’s Office conducted a series of community-wide community awareness campaign resulting in enforcement of code violations as well as any illegal/nuisance activities in the Berea area.

In addition, a citizen committee was created to look at identifying opportunities to creating more of a sense of place and identity for the Berea area. Some of the activities undertaken were the identification and potential beautification of entranceways into the Berea area, the study of opportunities to create a formal community structure, and the discussion with the Greenville County School District regarding the reuse of the former Berea Elementary School as a public Community meeting/recreation opportunity. The Berea Community with the help of County staff underwent a successful branding exercise.

In 2012, County staff once again working residents, and community stakeholders completed a Community Plan for the Conestee Area (located in Priority Investment Area One). The result of this planning process was an

adopted amendment to the Imagine Greenville County Comprehensive Plan. The Conestee Community Plan focused on the areas of Infrastructure and Housing, Public Safety, Economic Vitality, and Youth and Leadership Development. An implementation strategy was created to help address these focus areas across seven sub-areas across the community.

In 2013, County staff worked with the Greenville County Redevelopment Authority to investigate an opportunity to expand the eastern boundary of Priority Investment Area Three for the purposes of creating the opportunity for more workforce and low to moderate income housing in this area which is certainly a goal of the county comprehensive plan. In August 2013, County Council adopted an ordinance as an amendment to the comprehensive plan to expand the eastern boundary of Priority Investment Area Three.

Expansion of Priority Investment Area Three and the adopted Community Plan for New Washington Heights has resulted in securing funding for the purchase and demolition of substandard housing not only in New Washington Heights but the Poe Mill Community as well.





# Planning Staff

This review has been prepared by the Greenville County Planning & Code Compliance Division Staff.

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## Greenville County Community Planning, Development, and Public Works Department

Paula Gucker, *Assistant County Administrator*  
Judy Wortkotter, *Land Development*  
Hesha Gamble, *Engineering*  
Marcia Papin, *Solid Waste*  
Kirsten Robertson, *Soil & Water*

## Greenville County Council

Bob Taylor, *Chair*  
Butch Kirven, *Vice-Chair*  
Joseph Baldwin  
Lynn Ballard  
Jim Burns  
Sid Cates  
Joe Dill  
Lottie Gibson  
Willis Meadows  
Xanthene Norris  
Fred Payne  
Liz Seman

## Greenville County Planning Commission

Chad Tumblin, *Chair*  
James Barbare, *Vice-Chair*  
Chet Chea  
Michael Freeland  
Shawn Hammond  
Stephen Selby  
Milton Shockley, Jr.  
Christopher Sullivan  
Todd Ward





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**ADDENDUM D**

**GPATS Long Range Transportation Study (2013)**



Figure 2.1A

Population Density

- GPATS Boundary
- Bordering County
- Municipal Boundary
- GPATS Primary Highways

Population Density

- < 1.5
- 1.5 - 3
- 3 - 6
- > 6

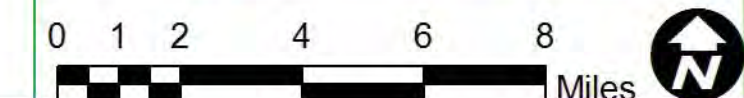
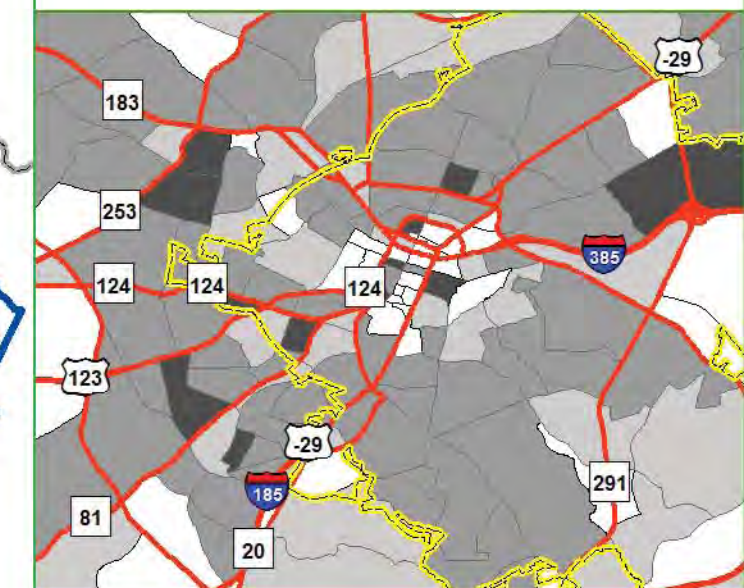
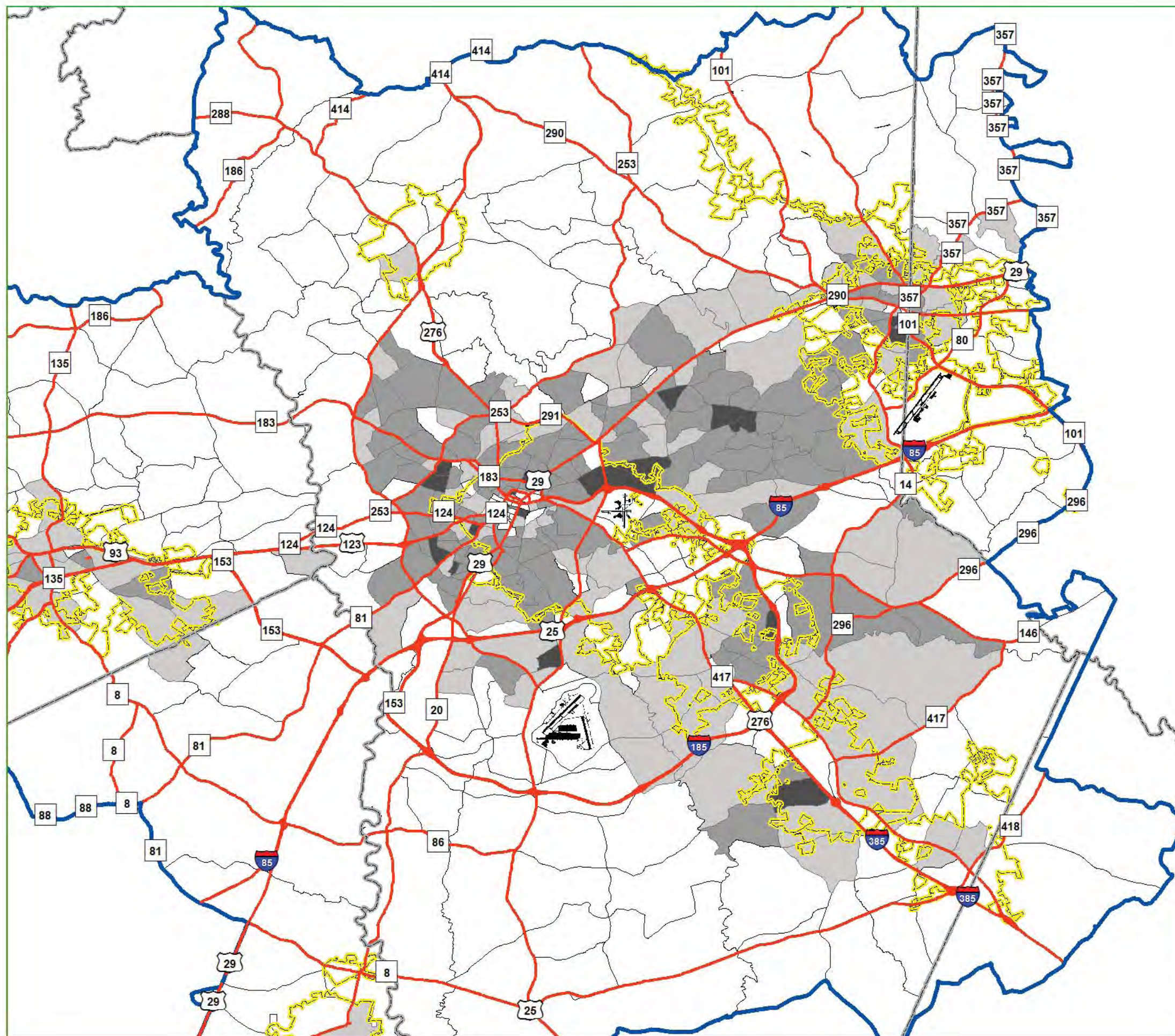




Figure 2.1B

Population Density

- GPATS Boundary
  - Bordering County
  - Municipal Boundary
  - GPATS Primary Highways
- Population Density**
- < 1.5
  - 1.5 - 3
  - 3 - 6
  - > 6

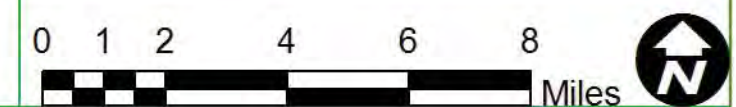
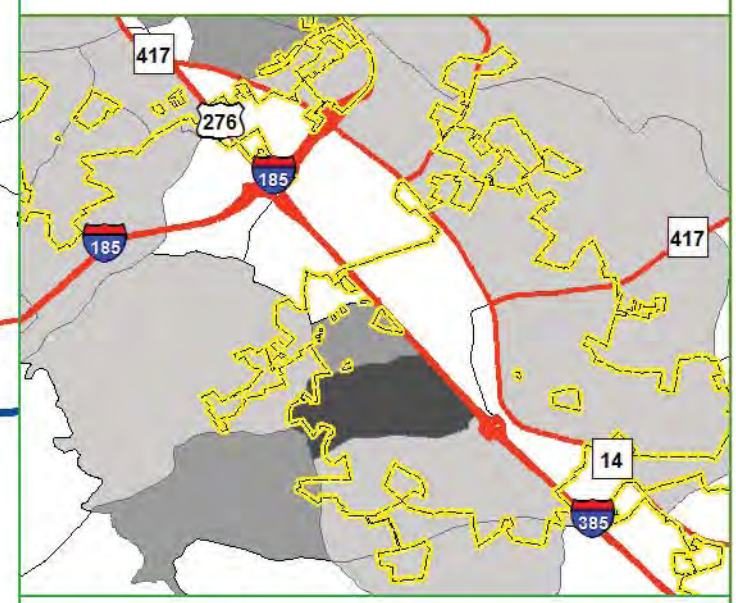
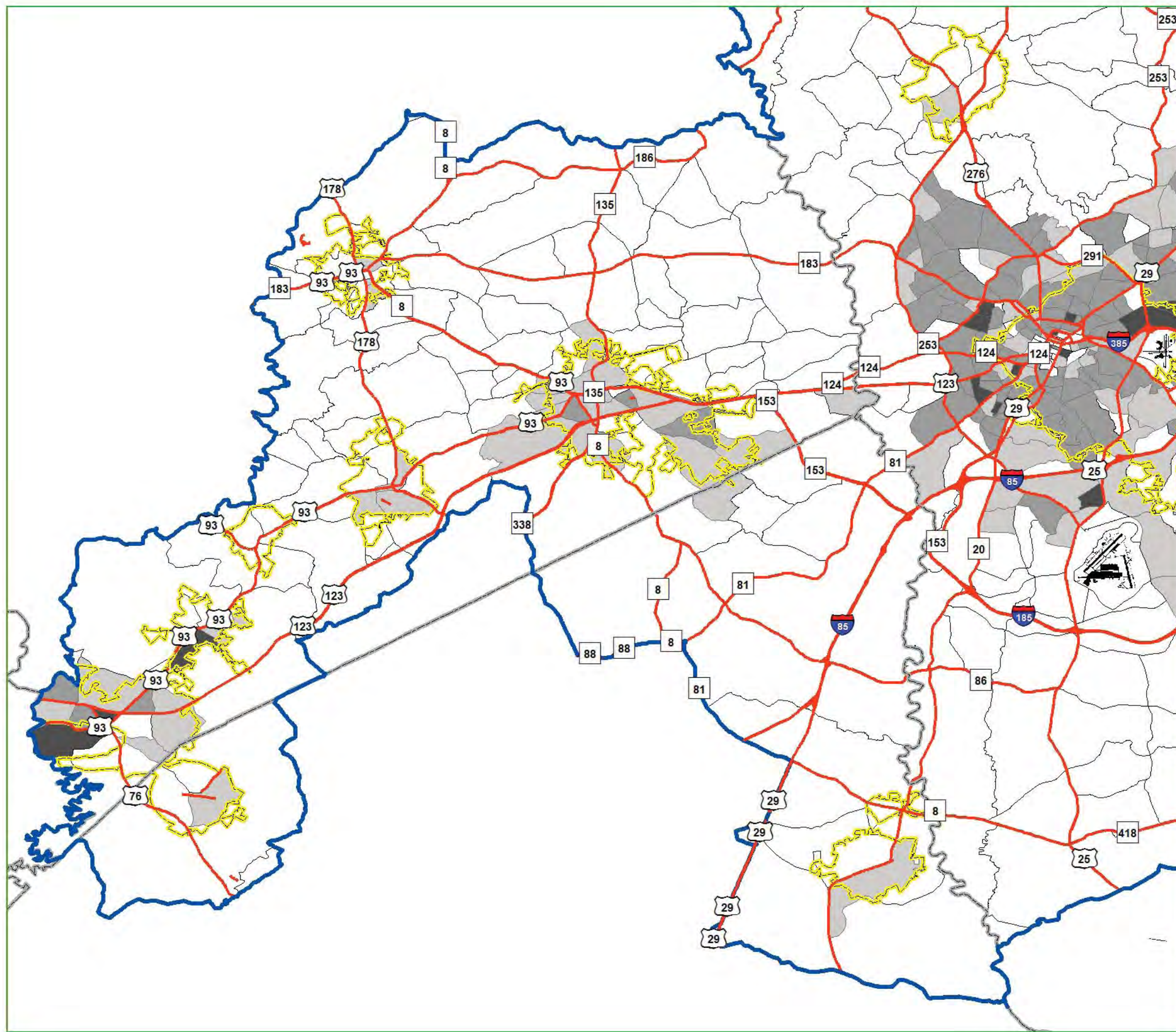




Figure 2.2A

Employment Density

- GPATS Boundary
  - Bordering County
  - Municipal Boundary
  - GPATS Primary Highways
- Employment per Acre**
- 0 - 1.5
  - 1.51 - 3
  - 3.1 - 6
  - > 6

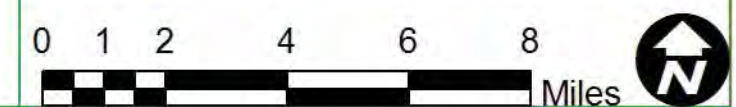
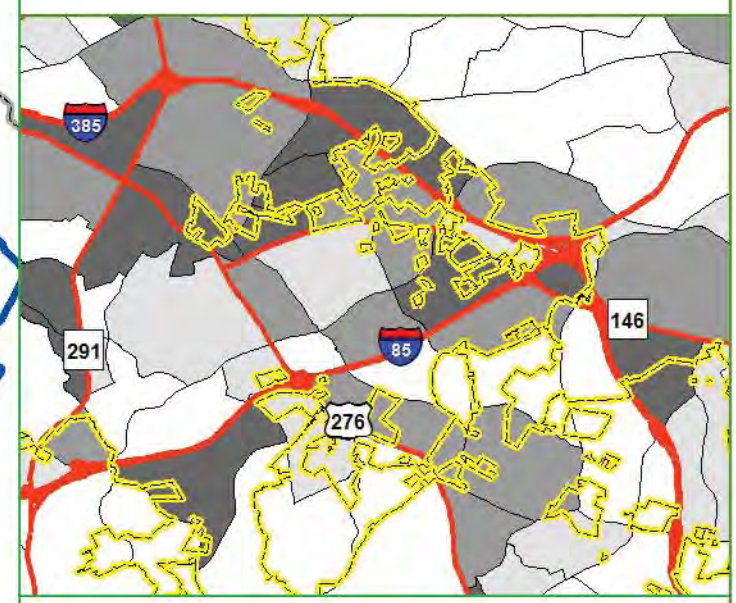
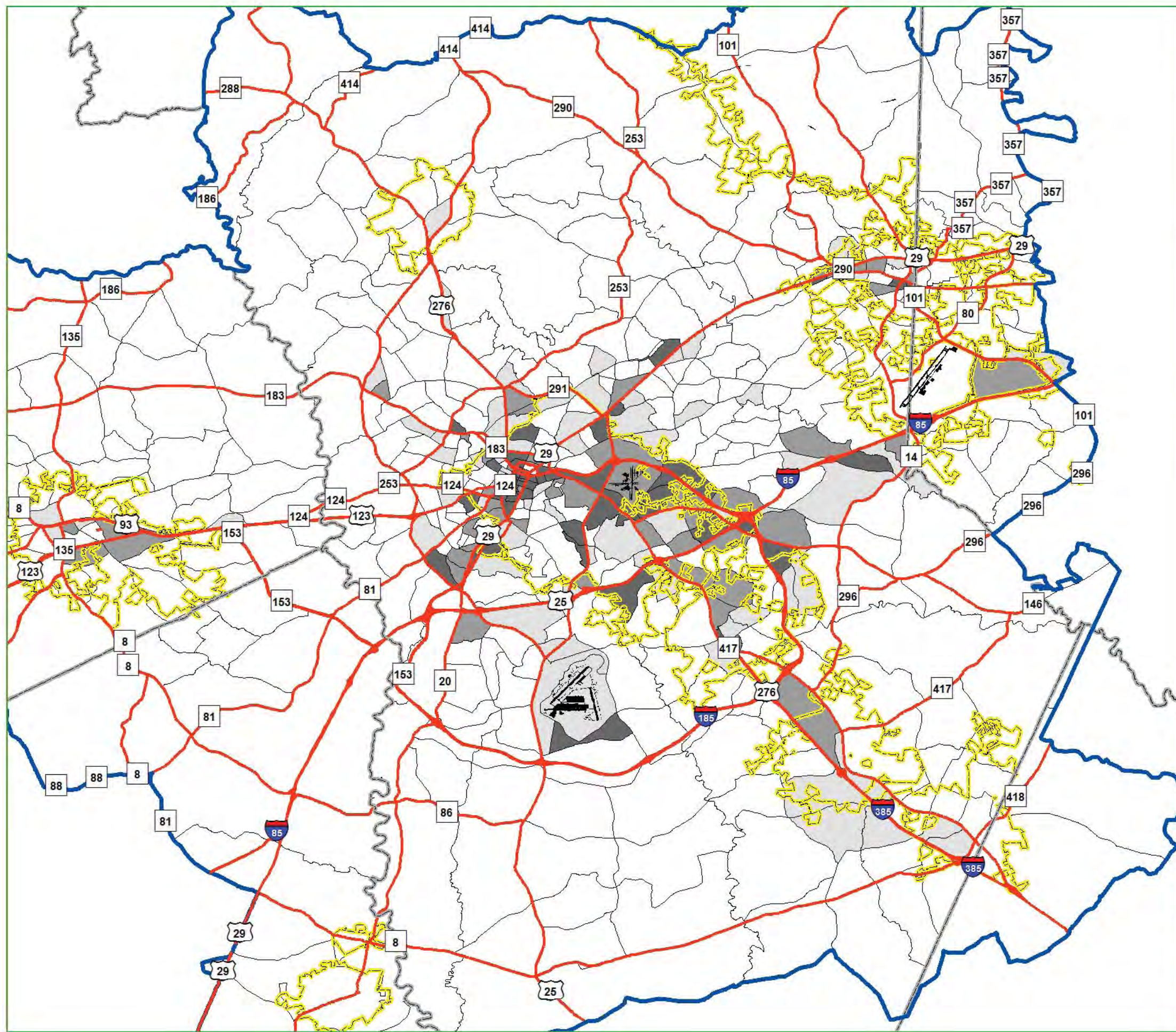




Figure 2.2B

Employment Density

- GPATS Boundary
- Bordering County
- Municipal Boundary
- GPATS Primary Highways

Employment per Acre

- 0 - 1.5
- 1.51 - 3
- 3.1 - 6
- > 6

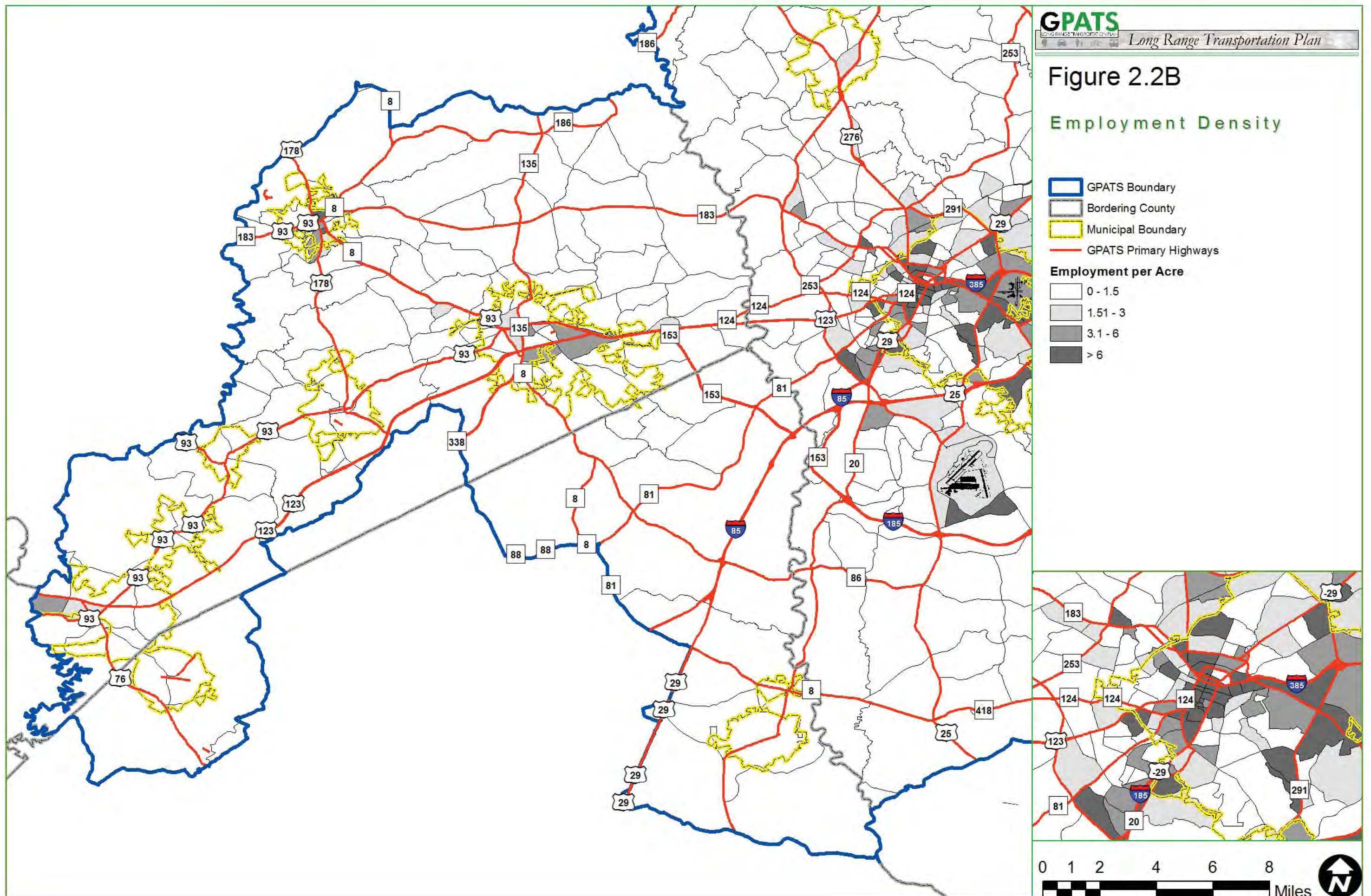
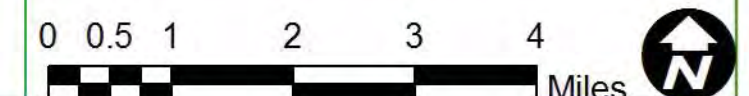
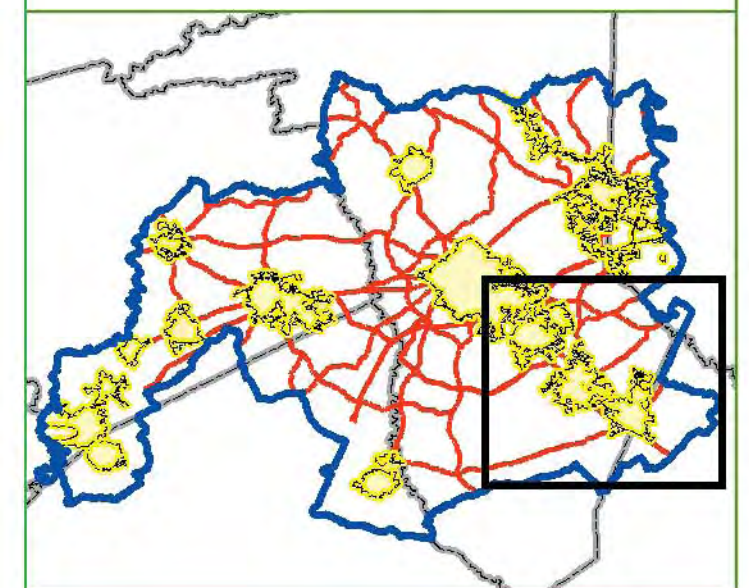
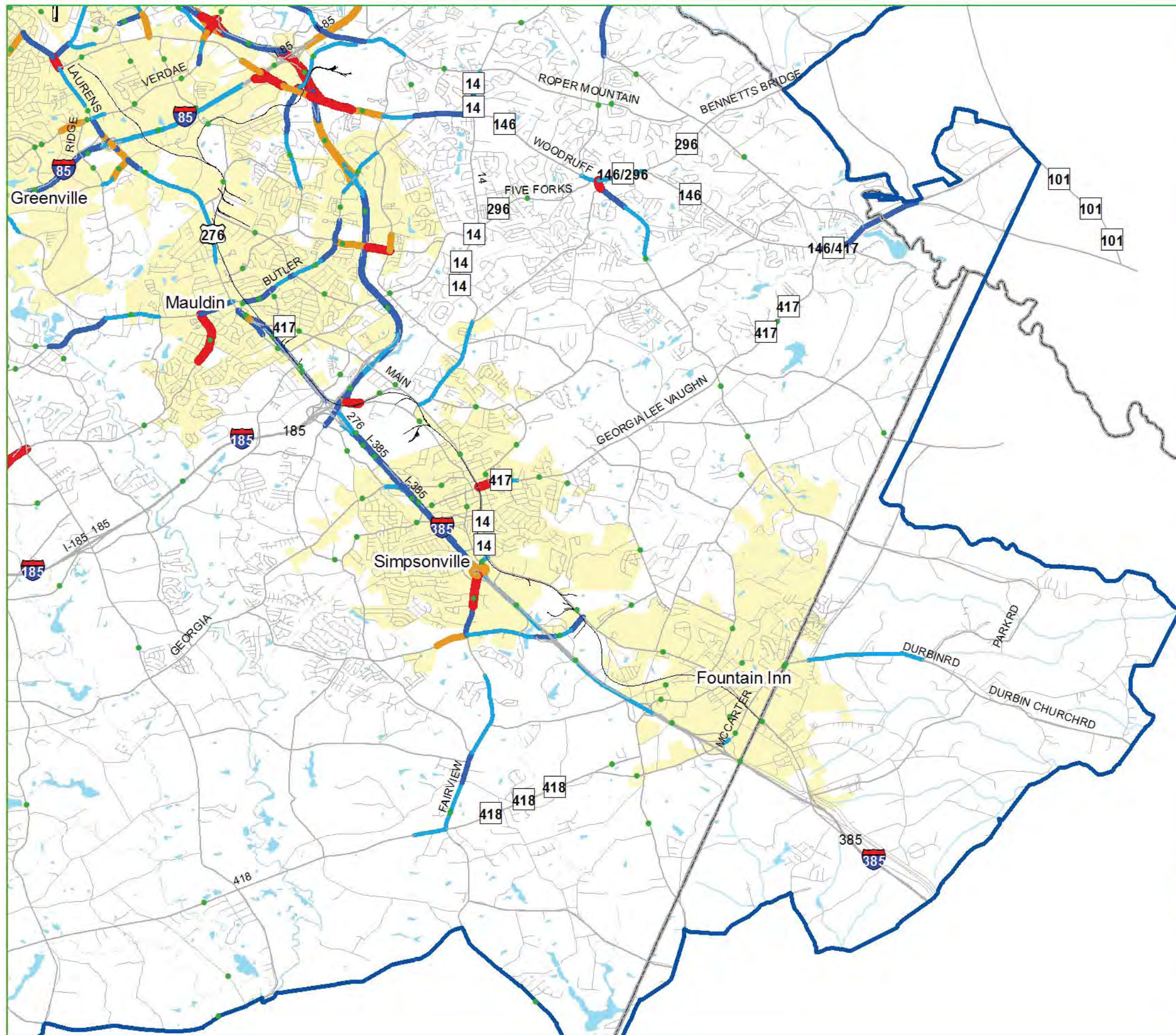
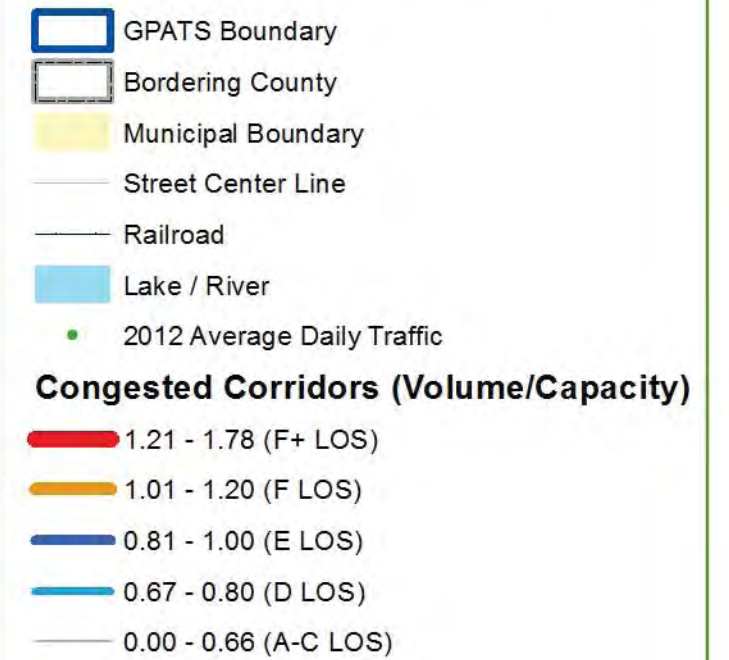


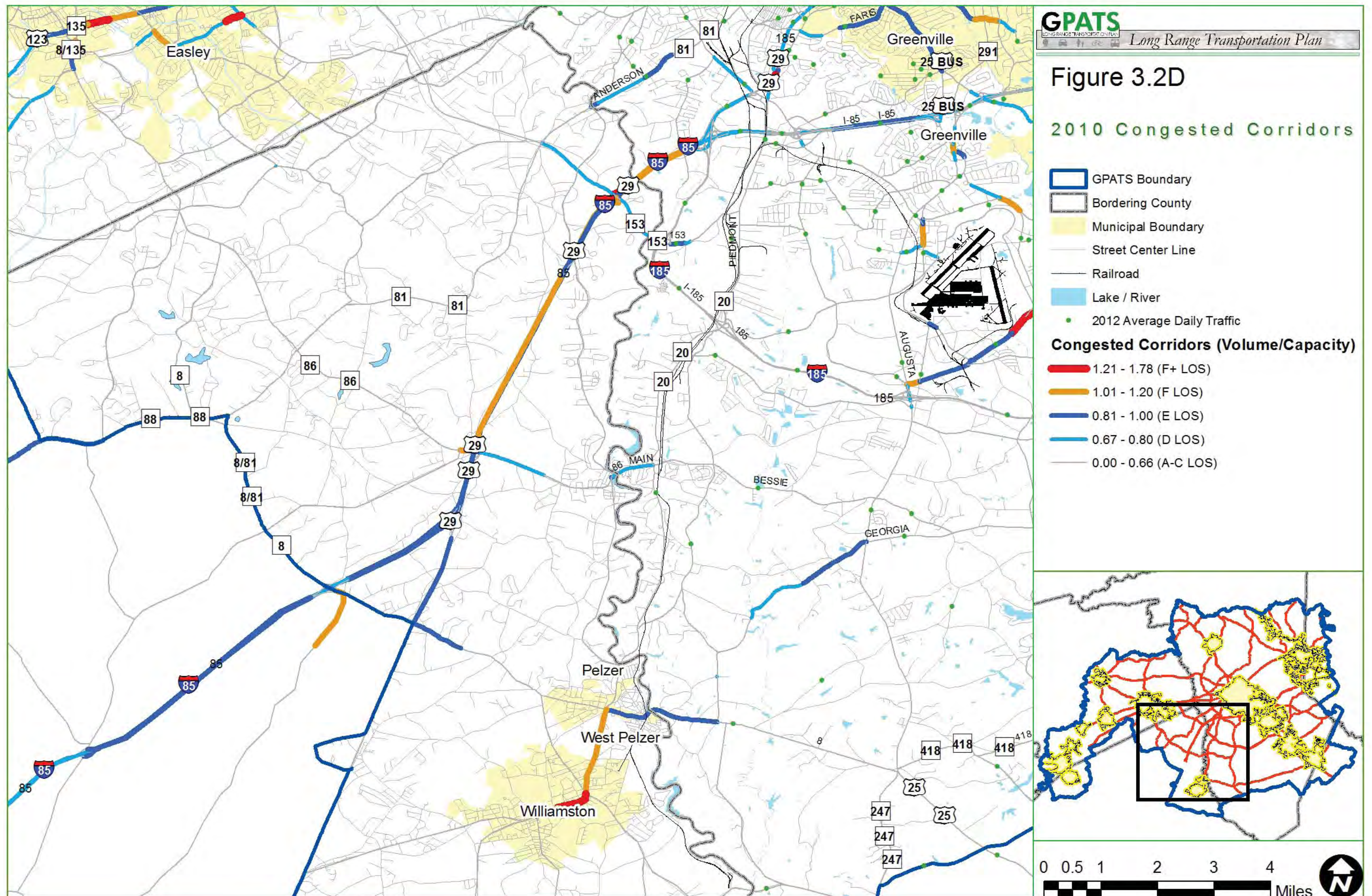


Figure 3.2A

2010 Congested Corridors



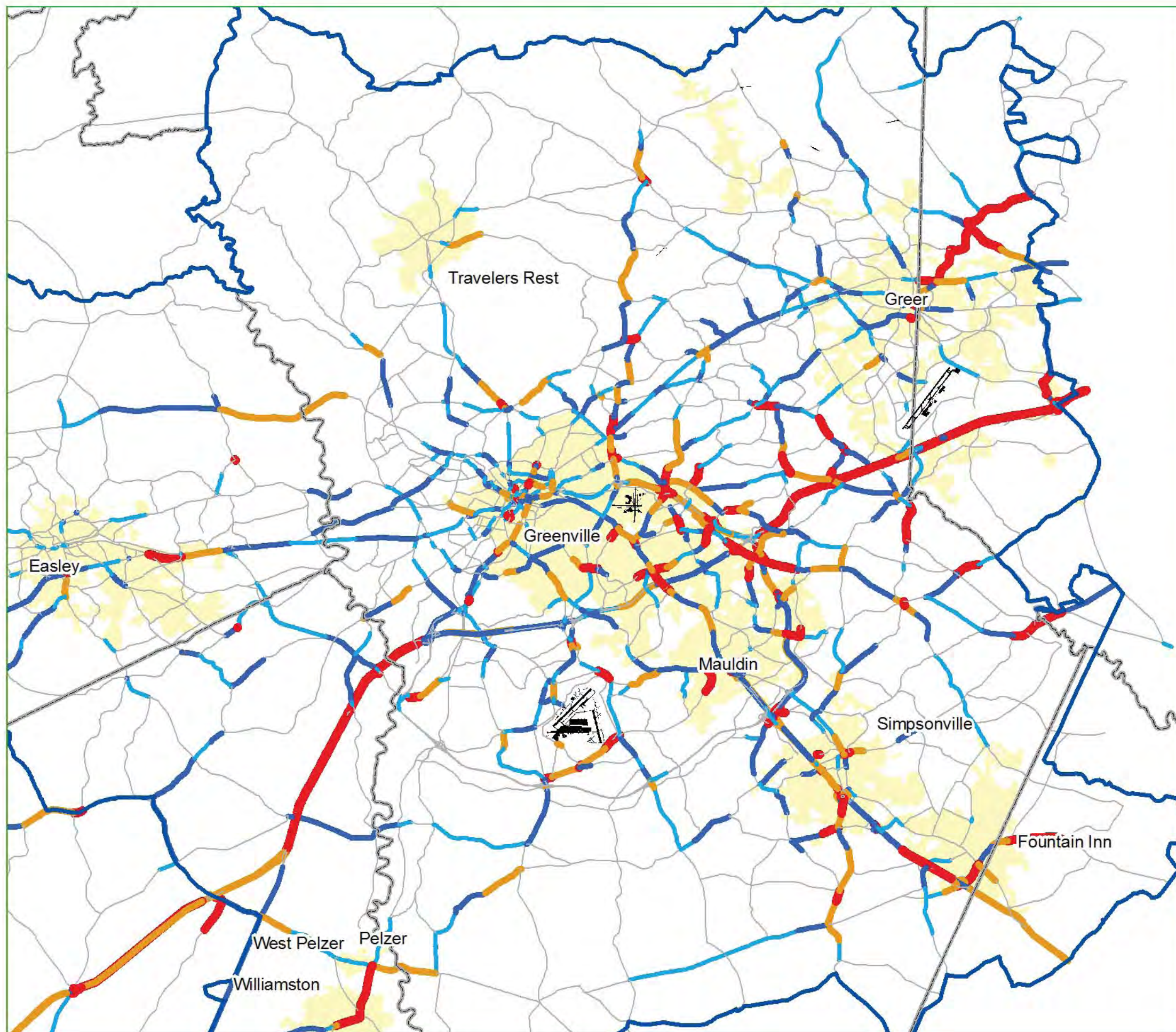




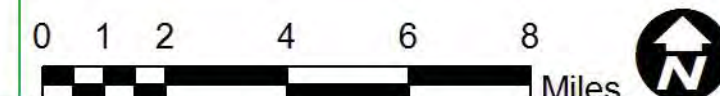
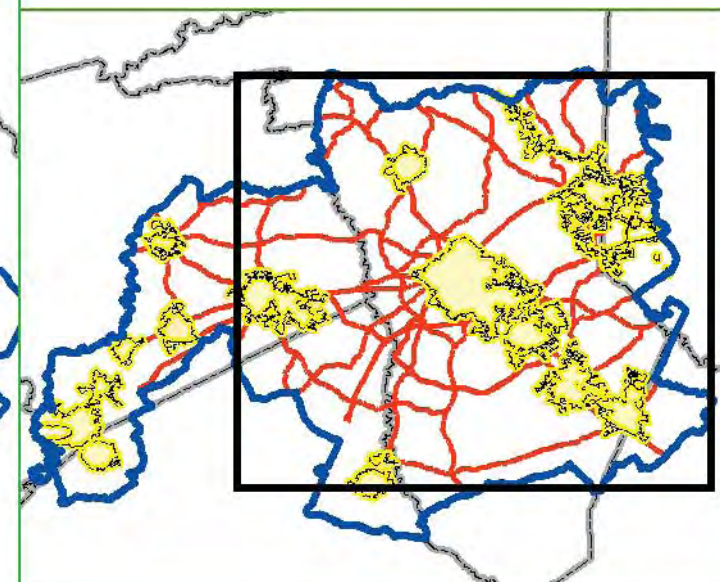


**Figure 4.2A**

Future Level of Service  
(No Changes)

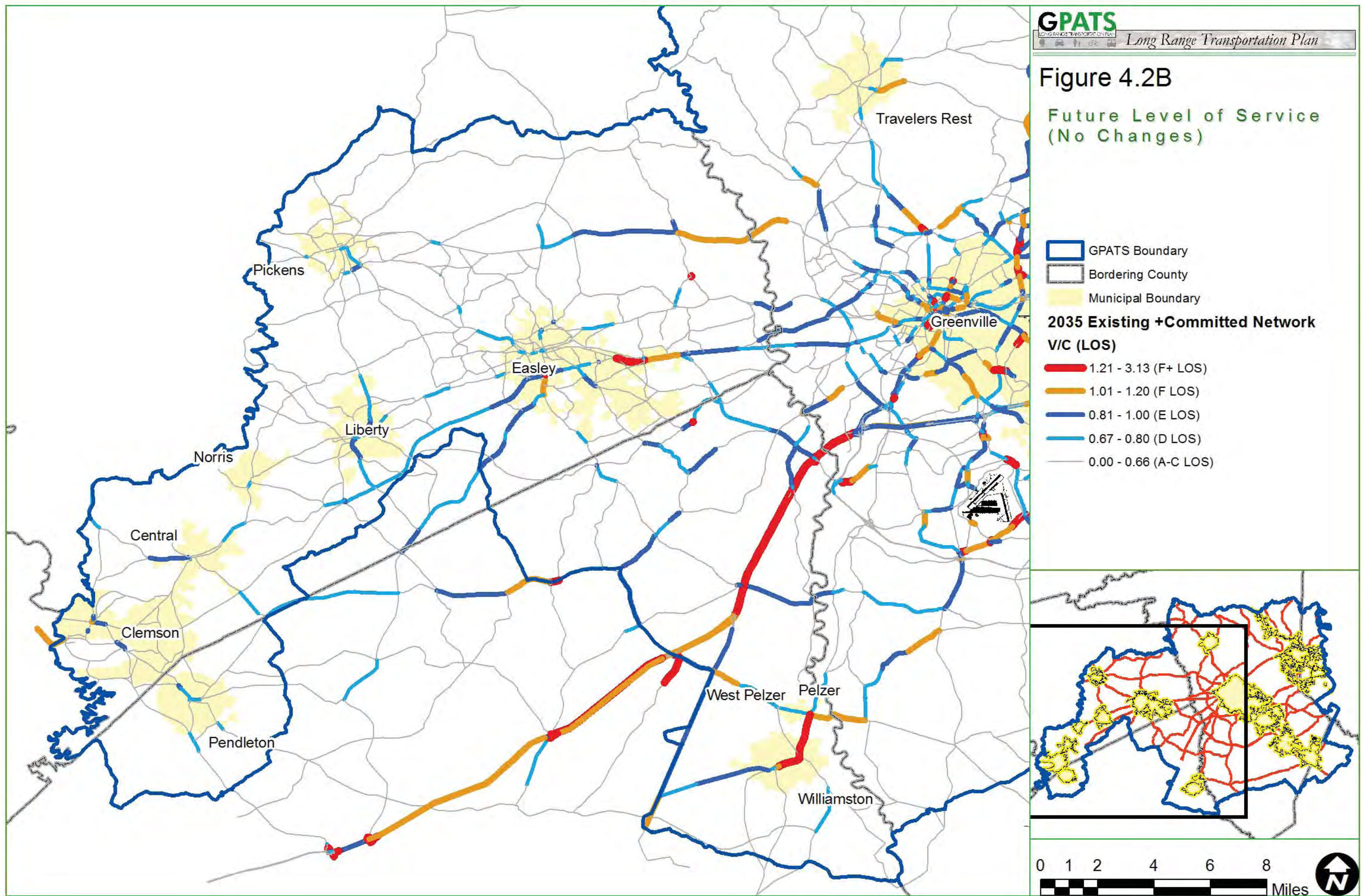


- GPATS Boundary
- Boring County
- Municipal Boundary
- 2035 Existing + Committed Network  
V/C (LOS)**
- 1.21 - 3.13 (F+ LOS)
- 1.01 - 1.20 (F LOS)
- 0.81 - 1.00 (E LOS)
- 0.67 - 0.80 (D LOS)
- 0.00 - 0.66 (A-C LOS)



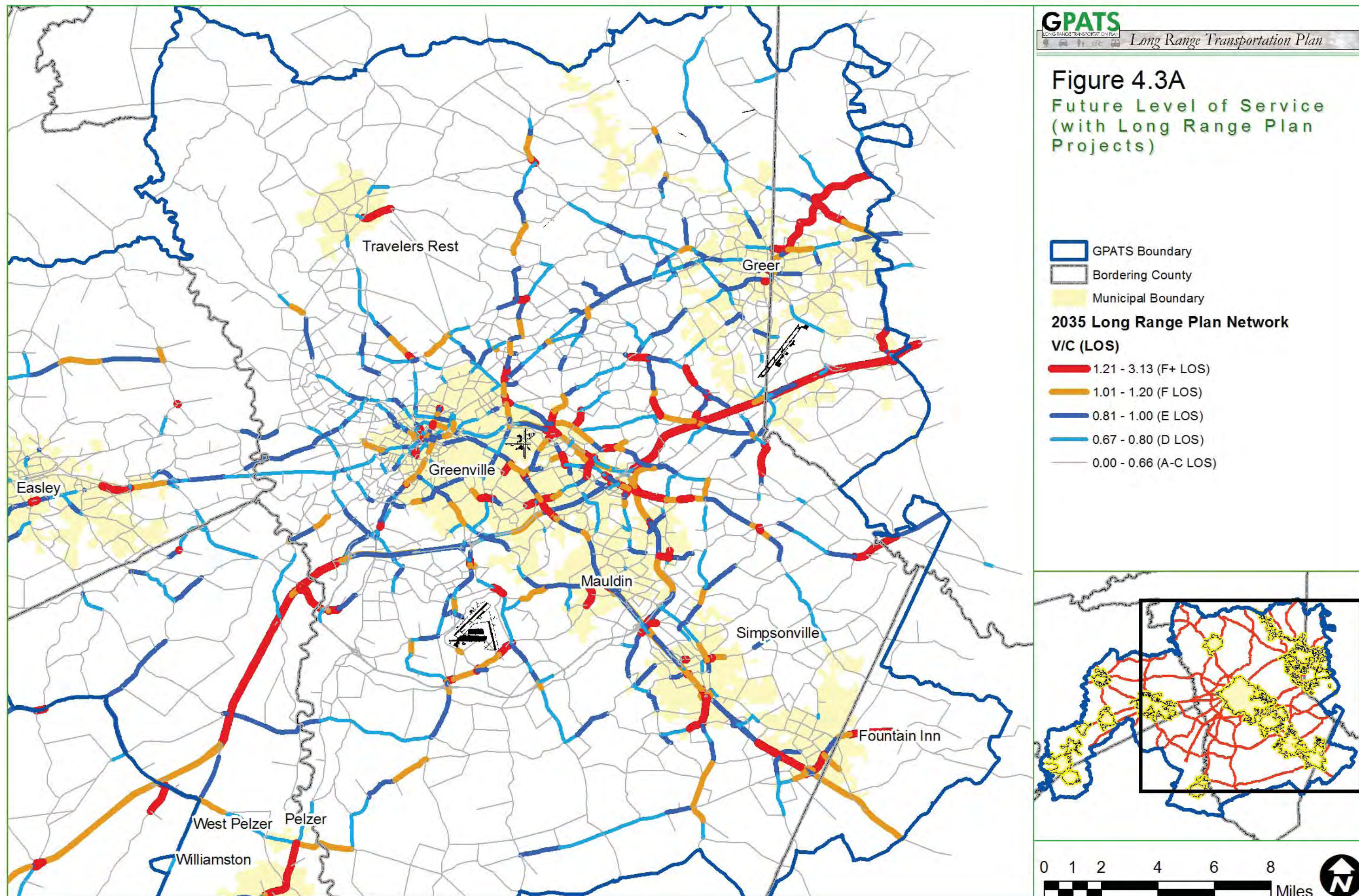


**Figure 4.2B**  
Future Level of Service  
(No Changes)





**Figure 4.3A**  
Future Level of Service  
(with Long Range Plan  
Projects)





**Figure 4.4A**  
**Future Level of Service**  
with Long Range Plan Projects  
and Vision Projects

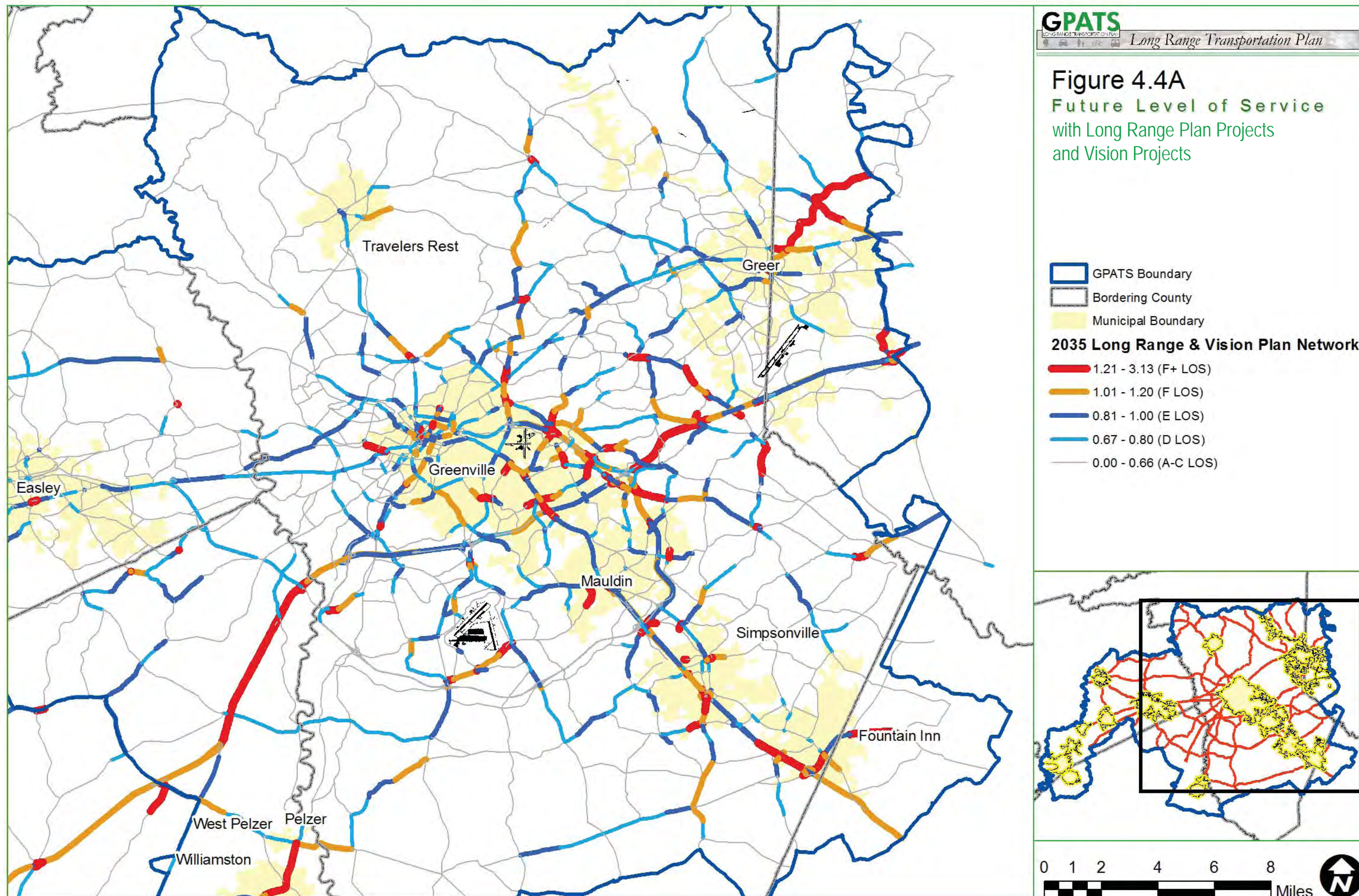
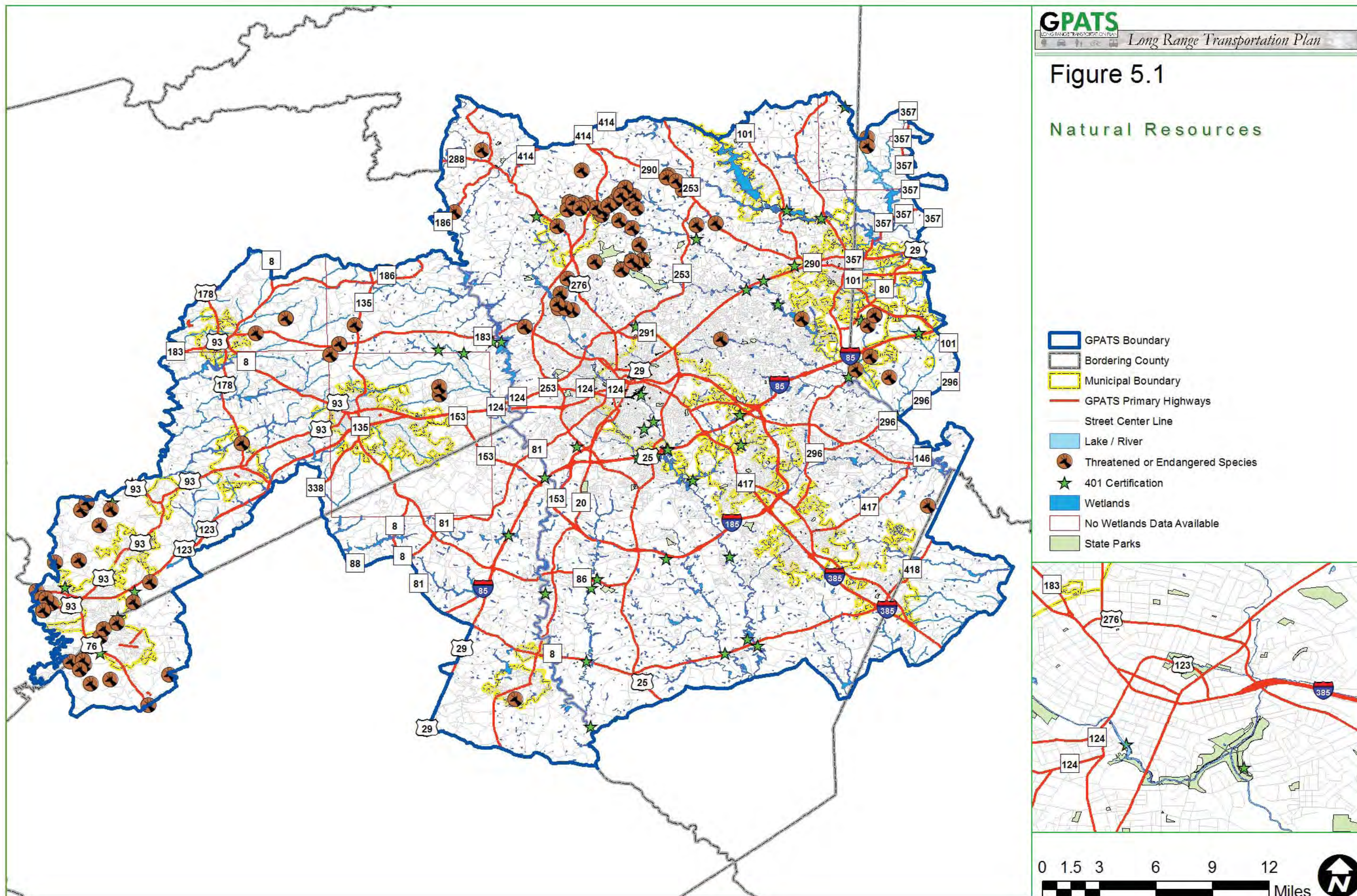




Figure 5.1

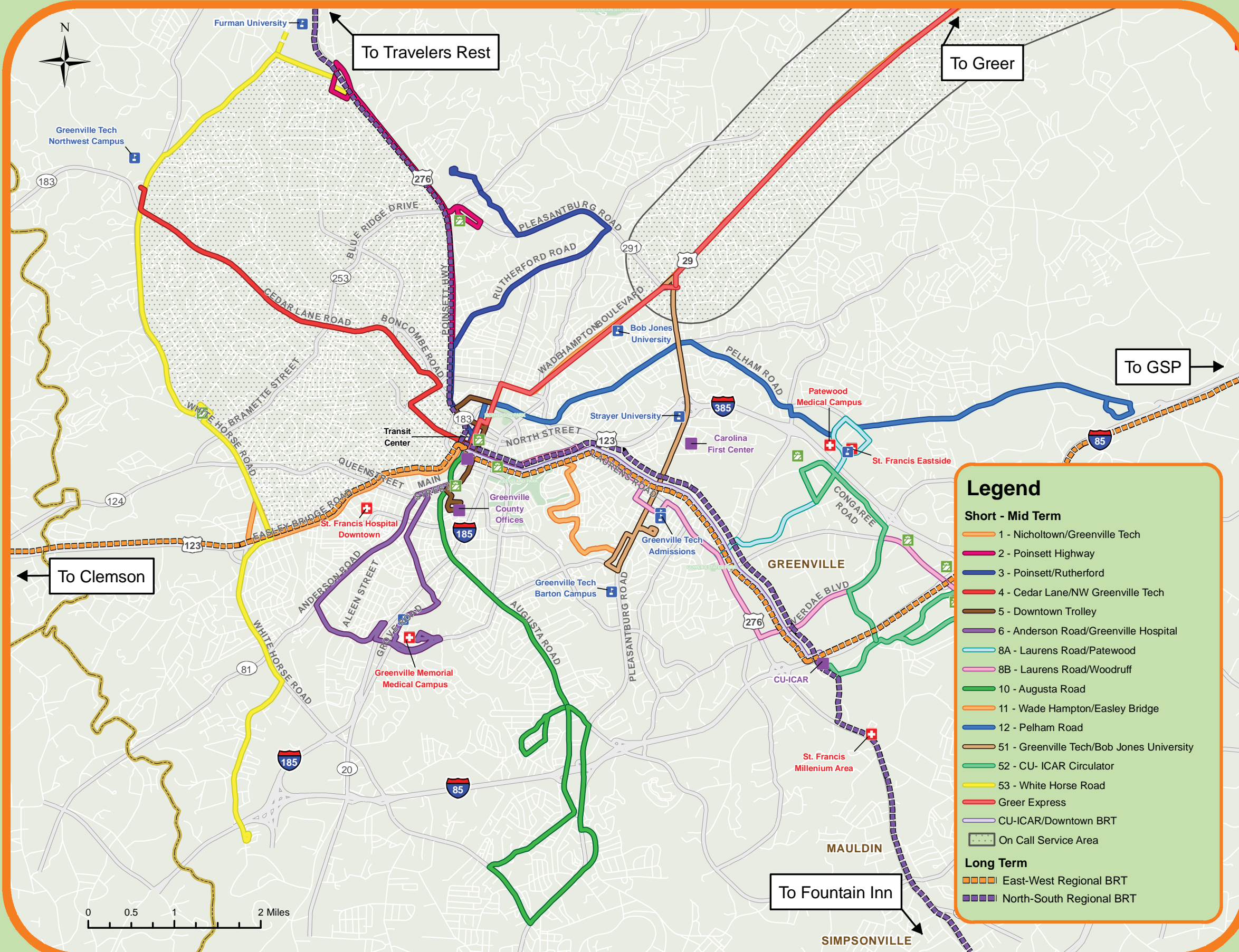
Natural Resources







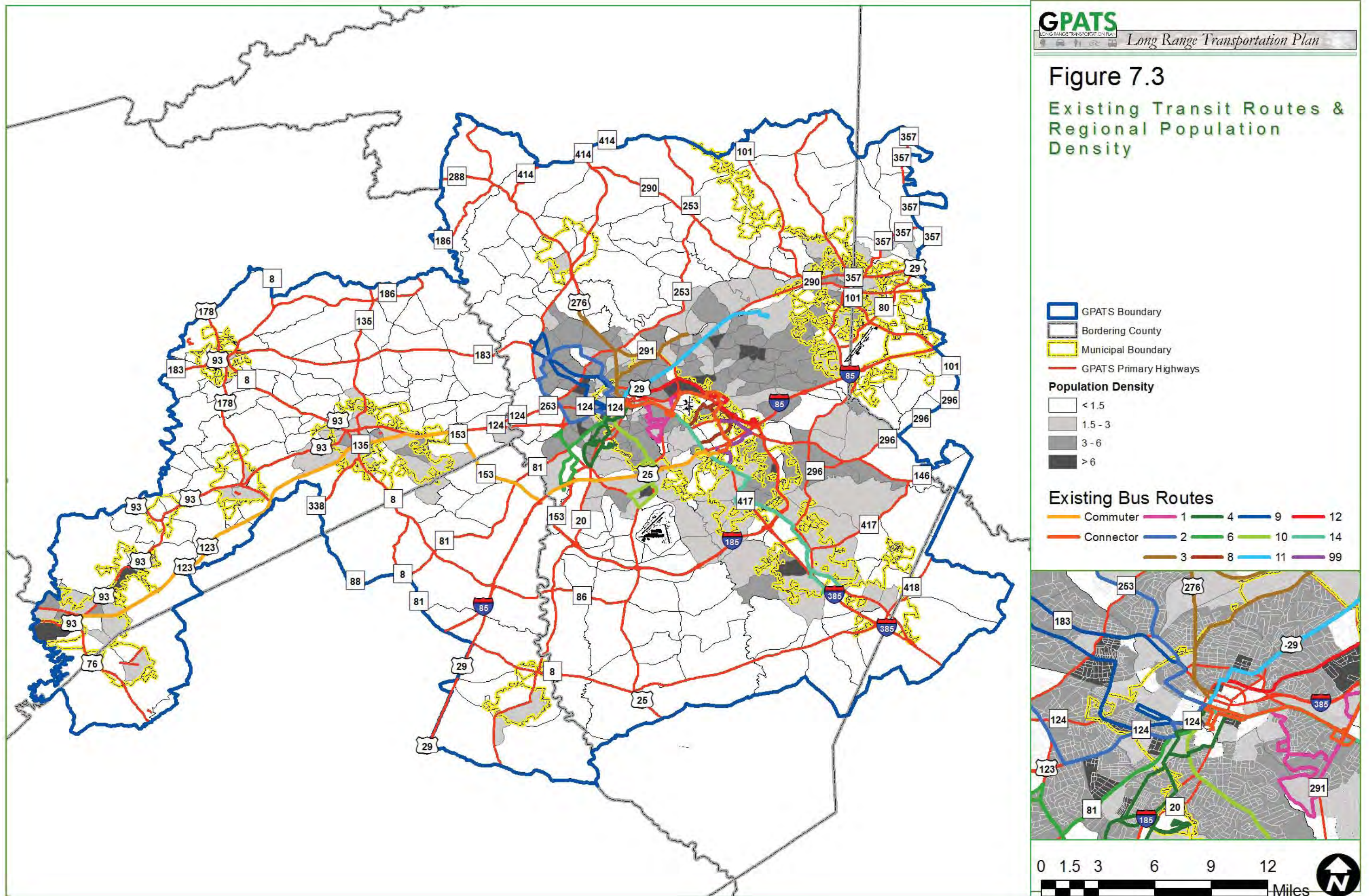






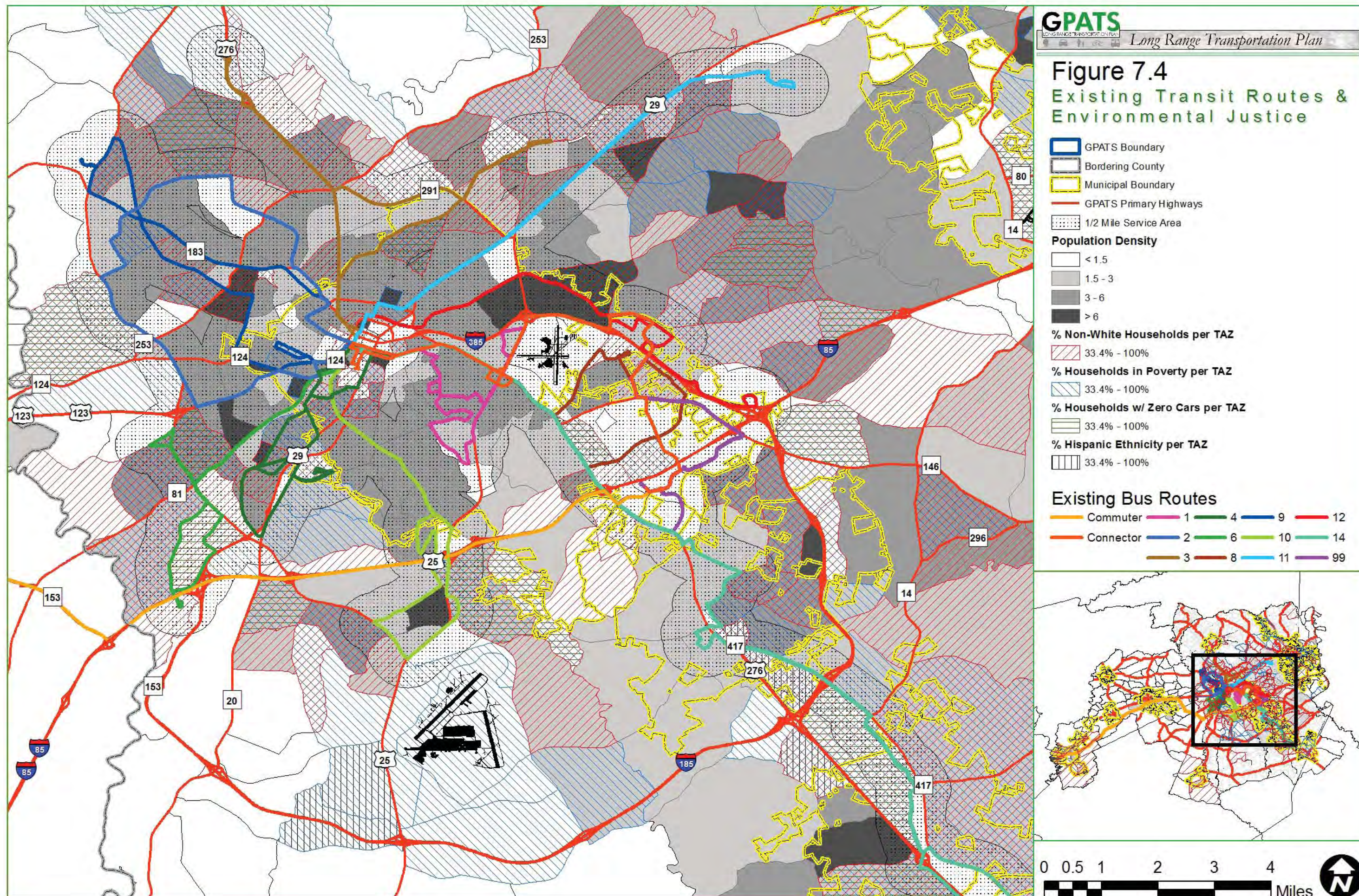
**Figure 7.3**

**Existing Transit Routes & Regional Population Density**





**Figure 7.4**  
Existing Transit Routes & Environmental Justice





**Figure 7.5**  
**Regional Environmental Justice & Population Density**

