

## **Introduction, Purpose, and Methods**

This report was prepared to analyze the information and trends developed as part of the City of Aiken's biennial level of service (LOS) analysis. The City of Aiken has adopted a Traffic Management Ordinance to provide better review and analysis of the potential impact of proposed developments. The Ordinance requires that there be prepared a map showing the LOS of the major streets in Aiken on a basis of at least once every two years. This process includes the acquisition of traffic counts using mechanical devices on the majority of the arterial streets and some of the collector streets in the City and the analysis of the data to establish the LOS for each of the street segments studied. The process has been used in 2004, 2006, 2008, 2010 and now in 2012.

In 2012, traffic counts were made at 99 count stations, some of which are also established count locations for the South Carolina Department of Transportation (SCDOT). Figure 1 shows the locations of the traffic count stations. Typically, the count machines are placed at each station for 3 to 5 days. Generally, the highest weekday total between Tuesday and Thursday is selected for use and the tallies are sent to the SCDOT for processing. SCDOT uses the raw count data which is supplied by the City and returns an estimated average annual daily traffic (AADT) for each location. This AADT represents effects of daily and seasonal variation and is developed using factors that the SCDOT will not divulge. Since they are averages, the AADTs returned from SCDOT will be exceeded on some days and of course will exceed actual daily volumes on certain days. However, this data provides a good basis for an "apples to apples" comparison of traffic counts both in terms of location and time.

The AADT data is then used to calculate a volume-to-capacity ratio (v/c ratio). This ratio is calculated by dividing the AADT by the daily capacity of the roadway. Methodology developed by the Florida Department of Transportation (FDOT) is used to estimate the daily carrying capacity of each segment of roadway in the study network. The FDOT methods are based on the Highway Capacity Manual and include many years of research in the state of Florida to confirm the values. The daily capacity values take into consideration the number of lanes, the presence of medians, the presence and density of traffic signals, speed limits, the amount of turning traffic and many other factors. The value of the v/c ratio is then used to assign an LOS to each segment of the study network. The following Table 1 shows the v/c ratios and LOS used by the City of Aiken as required by the Traffic Management Ordinance. These values are very close but differ slightly from criteria used by SCDOT. As seen in Table 1, streets are considered congested when the v/c ratio exceeds 0.70, which means the LOS is D or worse. In other words, when the daily capacity has been used to the extent of 70% of its availability, it is expected that there will be traffic congestion. During peak hours it is expect that traffic flow will be restricted with traffic operations in the range of LOS D and possibly worse. LOS at individual intersections is measured

in a different manner which takes into account the amount of stopped-time delay. It is possible to have LOS on a daily basis, as are used in the Aiken procedure, that differ from the LOS measured in the peak hours at intersections in the system. There may be times of the day when the LOS at intersections or within the segments is better or worse than the value calculated using the daily capacity and the AADT. However, this procedure does give a good indication of street segments that have capacity limitations and congestion issues. For example, in Table 1 it is seen that a segment of street with an LOS C would have acceptable traffic operations when looking at the overall segment and the overall day. There might be times such as the morning, midday and afternoon peak hours when the LOS in a segment might be better or worse than the overall LOS. Again, this procedure provides a snapshot of overall traffic operations. The Aiken Traffic Management Ordinance provides requirements for traffic studies depending upon the LOS derived in this process and the anticipated traffic generation and additions that will result from new development. The scope of the study depends upon the predicted trip generation and the current LOS of each segment of a street facility.

**Table 1**

**LOS Criteria for the City of Aiken Study Network**

LOS	V/C Ratio	Comments
A	$\leq 0.30$	Excellent traffic flow
B	$> 0.30$ and $\leq 0.50$	Good traffic flow
C	$> 0.50$ and $\leq 0.70$	Average traffic flow
D	$> 0.70$ and $\leq 0.90$	Acceptable traffic flow
E	$> 0.90$ and $\leq 1.0$	Congested traffic flow
F	$>1.0$	Severely congested traffic flow

**Figure 1 Traffic Count Stations for 2012 Level of Service Analysis**



## Analysis of Traffic Count Data

The following Table 2 shows the AADTs and LOS for the various segments of the study network. Street segments with LOS E or F are highlighted.

**Table 2 Year 2012 AADTs and LOS for Aiken Study Network**

Segment	Street	From	To	AADT	V/C Ratio	LOS
1	Centennial	Corporate	Churchill	7,600	0.47	B
2	Fabian	Pawnee	Silver Bluff Road	5,200	0.42	B
3	Pawnee	West Pine Log Road	Fabian	6,900	0.56	C
4	Pawnee	Fabian	Dougherty	1,100	0.09	A
5	Vaucluse Road	Robert Bell Pkwy.	Gregg Ave.	1,600	0.12	A
6	Vaucluse Road	Gregg Ave.	Trolley Line Road	1,600	0.12	A
7	Vaucluse Road	Trolley Line Road	Richland Ave. West	1,600	0.12	A
8	University Pkwy.	Robert Bell Pkwy.	Trolley Line Road	3,500	0.27	A
9	University Pkwy.	Trolley Line Road	Medical Park	7,500	0.46	B
10	University Pkwy.	Medical Park	Physicians	14,200	0.87	D
11	University Pkwy.	Physicians	Richland Ave. West	14,000	1.08	F

Segment	Street	From	To	AADT	V/C Ratio	LOS
12	Beaufort Street	Hampton/Camellia	Richland Ave. East	3,000	0.24	A
13	Gregg Ave.	Vaucluse Road	Trolley Line Road	2,200	0.17	A
14	Gregg Ave.	Trolley Line Road	Richland Ave. West	2,300	0.18	A
15	Hampton Ave.	York Street	Horry Street	4,500	0.35	B
16	Hampton Ave.	Vaucluse Road	York Street	9,700	0.75	D
17	Hampton Ave.	Laurens Street	Vaucluse Road	7,600	0.58	C
18	Wire Road	Horry Street	Rudy Mason Pkwy.	2,800	0.22	A
19	Hayne/Park Ave.	Richland Ave. West	Chesterfield	8,100	0.62	C
20	Park Ave.	Chesterfield	Orangeburg	3,000	0.18	A
21	Park Ave.	Orangeburg	Beaufort	2,400	0.15	A
22	Park Ave.	Beaufort	Richland Ave. East	2,500	0.19	A
23	Two Notch Road	South Boundary	Audubon	725	0.06	A
24	Two Notch Road	Audubon	East Pine Log Road	450	0.03	A
25	Dougherty Road	Silver Bluff Road	Neilson Street	11,900	0.92	E
26	Dougherty Road	Neilson Street	Whiskey Road	12,200	0.94	E

Segment	Street	From	To	AADT	V/C Ratio	LOS
27	Powderhouse Road	South Boundary	East Pine Log Road	3,600	0.28	A
28	Powderhouse Road	East Pine Log Road	Whiskey Road	3,200	0.25	A
29	Banks Mill Road	South Boundary	East Pine Log Road	3,700	0.28	A
30	Trolley Line Road	Robert Bell Pkwy.	University Pkwy.	5,200	0.40	B
31	Trolley Line Road	University Pkwy.	Gregg Ave.	5,500	0.42	B
32	Trolley Line Road	Gregg Ave.	Vaucluse Road	4,200	0.32	B
33	Silver Bluff Road	Whiskey Road	West Pine Log Road	10,900	0.84	D
34	Hitchcock Pkwy.	Richland Ave. West	Augusta Road	12,700	0.78	D
35	Hitchcock Pkwy.	Augusta Road	Dibble Road	17,700	0.86	D
36	Hitchcock Pkwy.	Dibble Road	Casaba Road	19,000	0.92	E
37	Hitchcock Pkwy.	Casaba Road	Silver Bluff Road	17,300	0.84	D
38	Rudy Mason Pkwy.	Charleston Hwy.	Wagener Road	17,300	0.84	D
39	Rudy Mason Pkwy.	Wagener Road	Willow Run Road	13,800	0.85	D
40	Rudy Mason Pkwy.	Willow Run Road	Wrights Mill Road	12,400	0.35	B
41	Rudy Mason Pkwy.	Wrights Mill Road	Wire Road	12,400	0.35	B

Segment	Street	From	To	AADT	V/C Ratio	LOS
42	Rudy Mason Pkwy.	Wire Road	York Street	12,600	0.35	B
43	Robert M. Bell Pkwy.	University Pkwy.	Trolley Line Road	7,000	0.43	B
44	Robert M. Bell Pkwy.	Trolley Line Road	Gregg Hwy.	8,200	0.50	C
45	Robert M. Bell Pkwy.	Gregg Hwy.	Richland Ave. West	7,500	0.46	B
46	Rutland Drive	York Street	Edgefield Hwy.	7,800	0.48	B
47	University Pkwy.	Edgefield Hwy.	Vaucluse Road	7,800	0.48	B
48	University Pkwy.	Vaucluse Road	Hudson Road	6,500	0.40	B
49	University Pkwy.	Hudson Road	University Pkwy.	7,800	0.48	B
50	Chesterfield	Park Ave.	South Boundary	7,500	0.60	C
51	Edgefield Hwy.	Croft Mill	Rutland Drive	11,200	0.90	E
52	Laurens Street	Hampton Ave.	Richland Ave. West	5,100	0.20	A
53	Laurens Street NW	Rutland Drive	Hampton Ave.	5,100	0.20	A
54	Whiskey Road	South Boundary	Grace	20800	1.39	F
55	Whiskey Road	Grace	Dupree	20,800	1.39	F
56	Whiskey Road	Dupree	Berrie	19200	1.28	F

Segment	Street	From	To	AADT	V/C Ratio	LOS
57	Whiskey Road	Berrie	Boardman	19,200	1.28	F
58	Whiskey Road	Boardman	Hitchcock	18,900	0.61	C
59	Whiskey Road	Hitchcock	Silver Bluff/ Price Ave.	22,300	0.68	C
60	Whiskey Road	Silver Bluff/ Price Ave.	Pine Log Road	16,000	0.49	B
61	Whiskey Road	Pine Log Road	Millbrook	23,900	0.73	D
62	Whiskey Road	Millbrook	Corporate	27,500	0.84	D
63	Whiskey Road	Corporate	Dougherty	23,300	0.71	D
64	Whiskey Road	Dougherty	East Gate	29,200	0.89	D
65	Whiskey Road	East Gate	Lower Mall/Lowes	24,700	0.75	D
66	Whiskey Road	Lower Mall/Lowes	Brookhaven	22,500	0.69	C
67	Whiskey Road	Brookhaven	Powderhouse Road	22,600	0.69	C
68	Whiskey Road	Powderhouse Road	Citadel	20,700	0.63	C
69	Whiskey Road	Citadel)	Chukker Creek Road	20,200	0.62	C
70	Whiskey Road	Chukker Creek Road	Talatha Church Road	17,600	0.54	C
71	East Pine Log Road	Whiskey Road	Two Notch Road	20,200	0.62	C



Segment	Street	From	To	AADT	V/C Ratio	LOS
72	East Pine Log Road	Two Notch Road	Powderhouse Road	20,200	0.62	C
73	East Pine Log Road	Powderhouse Road	Banks Mill Road	23,800	0.73	D
74	East Pine Log Road	Banks Mill Road	Old Airport Road	19,300	0.59	C
75	East Pine Log Road	Old Airport Road	Charleston Hwy.	17,000	0.52	C
76	Silver Bluff Road	Hitchcock Pkwy./West Pine Log	Dougherty	21,900	0.67	C
77	Silver Bluff Road	Dougherty	Pine Log Road	24,800	0.76	D
78	Silver Bluff Road	Pine Log Road	Town Creek Road	15,600	0.48	B
79	Silver Bluff Road	Town Creek Road	Hartwell	14,000	0.86	D
80	Silver Bluff Road	Hartwell	Woodside Plantation	11,800	0.72	D
81	Silver Bluff Road	Woodside Plantation	Pascallis	10,500	0.64	C
82	Silver Bluff Road	Pascallis	Richardsons Lake	9,000	0.55	C
83	West Pine Log Road	Silver Bluff Road	Pawnee	21,600	0.66	C
84	West Pine Log Road	Pawnee	Whiskey Road	19,400	0.59	C
85	York Street	Aldrich St.	Yates	10,400	0.32	B
86	York Street	Yates	Rudy Mason Pkwy.	15,300	0.47	B

Segment	Street	From	To	AADT	V/C Ratio	LOS
87	York Street	Rudy Mason Pkwy.	Hampton Ave.	14,200	0.44	B
88	York Street	Hampton Ave.	Richland Ave. East	8,200	0.25	A
89	Jefferson Davis Hwy.	West of City	SC 118	17,300	0.50	C
90	Richland Ave. West	SC 118	SC 421	13,600	0.39	B
91	Richland Ave. West	SC421	Gregg Hwy.(S-895)	21,600	0.63	C
92	Richland Ave. West	Gregg Hwy.	University Pkwy.	20,800	0.60	C
93	Richland Ave. West	University Pkwy.	Gregg Ave.	18,300	0.56	C
94	Richland Ave. West	Gregg Ave.	Valley	16,500	0.50	C
95	Richland Ave. West	Valley	Hayne	16,500	0.50	C
96	Richland Ave. West	Hayne	Vaucluse/Waterloo	13,700	0.42	B
97	Richland Ave. West	Vaucluse/Waterloo	Newberry	11,000	0.34	B
98	Richland Ave. West/East	Newberry	Beaufort	7,800	0.24	A
99	Richland Ave. East	Beaufort	Rudy Mason Pkwy.	8,800	0.27	A

Figure 2 shows the LOS for the study network on a base map prepared by the City's Department of Public Works/Engineering. As seen in Table 2 and on Figure 2, there are some street segments with poor levels of service of E and F and quite a few with LOS D.

**Figure 2 Aiken 2012 LOS for Study Network**

As noted in Table 2 and shown in Figure 2, the locations with LOS D, E or F are on segments of Hitchcock Parkway, Whiskey Road, Edgefield Highway, Dougherty Road and University Parkway.

The following Table 3 provides a summary of the LOS for the City of Aiken study network.

**Table 3**

**Summary of LOS for City of Aiken Study Network**

LOS Classification	Street Mileage	% of Total Mileage	Proportion
A	15.6	24.5%	About 4/5
B	23.5	37.0%	
C	12.0	18.9%	
D	6.8	10.7%	About 1/5
E	4.3	6.7%	
F	1.3	2.1%	
Total	63.5	100%	

As shown in Table 3, some 19.5% of the street mileage in the Aiken study network has LOS D, E or F, with 8.8% having E or F. Therefore, about one-fifth of the major street mileage in Aiken has traffic flow conditions considered below average. This is a slight improvement from 2010, when about one-fourth of the street mileage had LOS E or F, with the percentage change from about 25% down to about 20%.

## Trends Analysis

A review of traffic count data extending back to 2006 was made in order to see if there are any trends of note in the congestion and levels of service in the study network.

A calculation was made to determine the overall level of travel in the study network over the last six years. This calculation was made by multiplying the length of each segment by the AADT and the number of days to develop the total vehicle-miles of travel for each segment and the network as a whole. Table 4 shows the total travel in the Aiken study network for the years 2006, 2008, 2010 and 2012. As seen in Table 4, there was an increase in total vehicle-miles of travel between 2006 and 2008 of 13.8%. Between 2008 and 2010, there was a decrease in total travel of about 4.2%. Between 2010 and 2012, there was a decrease in total travel of about 6.9%. Despite the decline between 2010 and 2012, there has been a slight overall increase in total travel on the study network between 2006 and 2012 of about 1.7% total, or about 0.33% per year at a straight-line rate.

**Table 4 Total Aiken Study Network Travel in Years 2006, 2008 and 2010**

Year	Total Vehicle-Miles of Travel (million vehicle-miles)	Change from Previous Measurement	Comments
2006	229.80	NA	Baseline year
2008	261.46	+13.8%	Rudy Mason Pkwy. and new Wal-mart affect travel
2010	250.51	-4.2%	May reflect economic conditions
2012	233.74	-6.7%	Reflects economic conditions

The declines in total miles of travel on the Aiken street network since 2008 generally compare to national trends for travel, reflecting the shrinkage in the national economy. There were of course different rates of change in traffic volumes on the various segments of the study network with increases in some segments and decreases in others, generally related to economic activity and some road improvement projects, including Rudy Mason Parkway and the new connector from Whiskey Road to Silver Bluff Road via Fabian Drive. Table 5 shows the trends for the individual street segments in the study network. In some cases, segments were added to the study network or revised and those are noted with NA in the table.

**Table 5 Traffic Volume Changes 2006 – 2012**

Segment	Street	From	To	AADT 2006	AADT 2008	AADT 2012	Change from 2010 to 2012
1	Centennial Ave.	Corporate Pkwy.	Churchill	8,600	6,900	7,600	46.2%
2	Fabian	Pawnee	Silver Bluff Road	NA	NA	5,200	-22.4%
3	Pawnee	West Pine Log Road	Fabian	NA	NA	6,900	NA
4	Pawnee/Neilson	Fabian	Dougherty Road	NA	NA	1,100	NA
5	Vaucluse Road	Robert Bell Pkwy.	Gregg Ave.	2,900	1,400	1,600	0.0%
6	Vaucluse Road	Gregg Ave.	Trolley Line Road	2,900	3,200	1,600	0.0%
7	Vaucluse Road	Trolley Line Road	Richland Ave. West	2,900	3,200	1,600	0.0%
8	University Pkwy.	Robert Bell Pkwy.	Trolley Line Road	4,300	6,300	3,500	-49.3%
9	University Pkwy.	Trolley	Medical Park	4,300	6,300	7,500	8.7%

		Line Road					
10	University Pkwy.	Medical Park	Physicians	7,100	9,000	14,200	3.6%
11	University Pkwy.	Physicians	Richland Ave. West	7,100	9,000	14,000	0.0%
12	Beaufort Street	Hampton/Camellia	Richland Ave. East	NA	NA	3,000	-23.1%
13	Gregg Ave.	Vaucluse Road	Trolley Line Road	2,900	3,300	2,200	-29.0%
14	Gregg Ave.	Trolley Line Road	Richland Ave. West	3,000	3,250	2,300	-30.3%
15	Hampton Ave.	York Street	Horry Street	2,900	6,500	4,500	-18.2%
16	Hampton Ave.	Vaucluse Road	York Street	2,900	6,500	9,700	76.4%
Segment	Street	From	To	AADT 2006	AADT 2008	AADT 2012	Change from 2010 to 2012
17	Hampton Ave.	Laurens Street	Vaucluse Road	2,900	6,500	7,600	38.2%
18	Wire Road	Horry Street	Rudy Mason Pkwy.	2,900	3,100	2,800	-48.1%

19	Hayne/Park Ave.	Richland Ave. West	Chesterfield	NA	NA	8,100	NA
20	Park Ave.	Chesterfield	Orangeburg	2,500	3,000	3,000	-44.4%
21	Park Ave.	Orangeburg	Beaufort	2,500	3,000	2,400	-55.6%
22	Park Ave.	Beaufort	Richland Ave. East	2,500	3,000	2,500	-28.6%
23	Two Notch Road	South Boundary	Audubon	3,000	2,500	725	-71.0%
24	Two Notch Road	Audubon	East Pine Log Road	3,000	600	450	-10.0%
25	Dougherty Road	Silver Bluff Road	Neilson Street	12,500	12,050	11,900	-2.5%
26	Dougherty Road	Neilson Street	Whiskey Road	12,500	12,050	12,200	0.0%
27	Powderhouse Road	South Boundary	East Pine Log Road	3,200	3,200	3,600	2.9%
28	Powderhouse Road	East Pine Log Road	Whiskey Road	4,500	5,450	3,200	-40.7%
29	Banks Mill Road	South Boundary	East Pine Log Road	4,500	4,300	3,700	-7.5%



30	Trolley Line Road	Robert Bell Pkwy.	University Pkwy.	2,900	2,900	5,200	225.0%
31	Trolley Line Road	University Pkwy.	Gregg Ave.	2,900	2,900	5,500	48.6%
32	Trolley Line Road	Gregg Ave.	Vaucluse Road	2,900	2,900	4,200	13.5%
33	Silver Bluff Road	Whiskey Road	West Pine Log Road	11,400	12,350	10,900	-4.4%
34	Hitchcock Pkwy.	Richland Ave. West	Augusta Road	11,900	12,000	12,700	-26.2%
Segment	Street	From	To	AADT 2006	AADT 2008	AADT 2012	Change from 2010 to 2012
35	Hitchcock Pkwy.	Augusta Road	Dibble Road	18,200	16,800	17,700	-0.6%
36	Hitchcock Pkwy.	Dibble Road	Huntsman Drive	18,200	18,650	19,000	-1.0%
37	Hitchcock Pkwy.	Huntsman Drive	Silver Bluff Road	15,900	18,350	17,300	-10.8%
38	Rudy Mason Pkwy.	Charleston Hwy.	Wagener Road	13,800	15,100	17,300	-10.8%

39	Rudy Mason Pkwy.	Wage ner Road	Willow Run Road	9,700	11,30 0	13,800	13.1%
40	Rudy Mason Pkwy.	Willo w Run Road	Wrights Mill Road	10,70 0	11,90 0	12,400	-0.8%
41	Rudy Mason Pkwy.	Wrigh ts Mill Road	Wire Road	10,70 0	12,80 0	12,400	-0.8%
42	Rudy Mason Pkwy.	Wire Road	York Street	10,70 0	11,50 0	12,600	7.7%
43	Robert M. Bell Pkwy.	Univer sity Pkwy.	Trolley Line Road	5,400	8,750	7,000	-22.2%
44	Robert M. Bell Pkwy.	Trolley Line Road	Gregg Hwy.	5,400	8,750	8,200	-8.9%
45	Robert M. Bell Pkwy.	Gregg Hwy.	Richland Ave. West	5,400	9,050	7,500	-24.2%
46	Rutland Drive	York Street	Edgefield Hwy.	8,300	14,90 0	7,800	-39.5%
47	University Pkwy.	Edgefi eld Hwy.	Vaucluse Road	7,600	7,750	7,800	8.3%
48	University Pkwy.	Vauclu se Road	Hudson Road	6,600	9,950	6,500	-31.6%
49	University Pkwy.	Hudso n Road	University Pkwy.	9,900	10,80 0	7,800	-27.8%

Segment	Street	From	To	AADT 2006	AADT 2008	AADT 2012	Change from 2010 to 2012
50	Chesterfield	Park Ave.	South Boundary	7,000	8,100	7,500	1.4%
51	Edgefield Hwy.	Croft Mill	Rutland Drive	12,600	12,800	11,200	51.4%
52	Laurens Street NW	Hampton Ave.	Richland Ave. West	7,500	10,200	5,100	-39.3%
53	Laurens Street NW	Rutland Drive	Hampton Ave.	4,700	9,750	5,100	-39.3%
54	Whiskey Road	South Boundary	Grace	21,400	22,050	20,800	2.5%
55	Whiskey Road	Grace	Dupree	21,400	22,050	20,800	2.5%
56	Whiskey Road	Dupree	Berrie	22,100	24,400	19,200	-3.0%
57	Whiskey Road	Berrie	Boardman	22,000	24,400	19,200	-3.0%
58	Whiskey Road	Boardman	Hitchcock	22,000	24,400	18,900	-6.9%

Segment	Street	From	To	AADT 2006	AADT 2008	AADT 2012	Change from 2010 to 2012
59	Whiskey Road	Hitchcock	Silver Bluff/ Price Ave.	22,900	24,700	22,300	9.9%
60	Whiskey Road	Silver Bluff/ Price Ave.	Pine Log Road	17,300	19,000	16,000	6.0%
61	Whiskey Road	Pine Log Road	Millbrook	29,300	24,700	23,900	-7.4%
62	Whiskey Road	Millbrook	Corporate	NA	NA	27,500	7.0%
63	Whiskey Road	Corporate	Dougherty	30,900	26,800	23,300	-20.5%
64	Whiskey Road	Dougherty	East Gate	36,300	33,550	29,200	-11.5%
65	Whiskey Road	East Gate	Lower Mall/Lowes	30,800	21,050	24,700	16.0%
66	Whiskey Road	Lower Mall/Lowes	Brookhaven	24,800	21,900	22,500	6.1%
67	Whiskey Road	Brookhaven	Powderhouse Road	22,600	21,600	22,600	-6.6%
68	Whiskey Road	Powderhouse	Citadel	20,800	21,400	20,700	-14.5%

		se Road					
69	Whiskey Road	Citadel	Chukker Creek Road	20,050	19,050	20,200	-8.6%
70	Whiskey Road	Chukker Creek Road	Talatha Church Road	NA	16,450	17,600	-10.2%
71	East Pine Log Road	Whiskey Road	Two Notch Road	29,000	31,150	20,200	-17.2%
Segment	Street	From	To	AADT 2006	AADT 2008	AADT 2012	Change from 2010 to 2012
72	East Pine Log Road	Two Notch Road	Powderhouse Road	29,000	31,150	20,200	-17.2%
73	East Pine Log Road	Powderhouse Road	Banks Mill Road	22,000	22,500	23,800	7.7%
74	East Pine Log Road	Banks Mill Road	Old Airport Road	17,700	19,500	19,300	-6.3%
75	East Pine Log Road	Old Airport Road	Charleston Hwy.	17,700	20,900	17,000	-1.2%
76	Silver Bluff Road	Hitchcock	Dougherty	22,000	24,200	21,900	-8.4%

		Pkwy./ West Pine Log					
77	Silver Bluff Road	Dougherty	Pine Log Road	28,800	30,750	24,800	-14.5%
78	Silver Bluff Road	Pine Log Road	Town Creek Road	10,200	19,200	15,600	-2.5%
79	Silver Bluff Road	Town Creek Road	Hartwell	10,200	15,250	14,000	35.9%
80	Silver Bluff Road	Hartwell	Woodside Plantation	10,200	15,250	11,800	14.6%
81	Silver Bluff Road	Woodside Plantation	Pascallis	10,200	10,500	10,500	1.9%
82	Silver Bluff Road	Pascallis	Richardsons Lake	NA	NA	9,000	-12.6%
83	West Pine Log Road	Silver Bluff Road	Pawnee	25,900	29,100	21,600	7.5%
84	West Pine Log Road	Pawnee	Whiskey Road	25,900	29,100	19,400	-3.5%
85	York Street	Aldrich St.	Yates	NA	15,000	10,400	-3.7%
86	York Street	Yates	Rudy Mason Pkwy.	14,100	21,700	15,300	41.7%
87	York Street	Rudy Maso	Hampton Ave.	10,300	20,350	14,200	31.5%

Segment	Street	From	To	AADT 2006	AADT 2008	AADT 2012	Change from 2010 to 2012
88	York Street	n Hampton Ave.	Richland Ave. East	10,300	10,600	8,200	-24.1%
89	Jefferson Davis Hwy.	West of City	SC 118	NA	20,350	17,300	-14.4%
90	Richland Ave. West	SC 118	SC 421	NA	11,850	13,600	19.3%
91	Richland Ave. West	SC421	Gregg Hwy.	18,100	23,050	21,600	5.9%
92	Richland Ave. West	Gregg Hwy.	University Pkwy.	18,100	23,050	20,800	2.0%
93	Richland Ave. West	University Pkwy.	Gregg Ave.	18,100	23,050	18,300	-21.5%
94	Richland Ave. West	Gregg Ave.	Valley	18,100	23,050	16,500	-10.3%
95	Richland Ave. West	Valley	Hayne	18,000	18,950	16,500	22.2%
96	Richland Ave. West	Hayne	Vaucluse/Waterloo	13,400	13,550	13,700	1.5%
97	Richland Ave. West	Vaucluse/Waterloo	Newberry	12,100	15,150	11,000	-23.1%
98	Richland Ave. W/East	Newb	Beaufort	18,10	15,15	7,800	-35.0%

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99	Richland Ave. East	Beaufort	Rudy Mason Pkwy.	9,000	8,650	8,800	-26.7%



The following Table 6 shows the ten street segments with the highest overall total increases in traffic from 2010 to 2012.

**Table 6 Ten Street Segments with Largest Increases in Traffic Volume from 2010 to 2012**

Segment	Street	From	To	Additional AADT from 2010 to 2012
51	Edgefield Hwy.	Croft Mill	Rutland Drive	3,800
65	Whiskey Road	East Gate	Lower Mall/Lowes	3,400
1	Centennial Ave.	Corporate	Churchill	2,400
90	Richland Ave. West	SC 118	SC 421	2,200
59	Whiskey Road	Hitchcock	Silver Bluff/ Price Ave.	2,000
62	Whiskey Road	Millbrook	Corporate	1,800
73	East Pine Log Road	Powderhouse Road	Banks Mill Road	1,700
39	Rudy Mason Pkwy.	Wagener Road	Willow Run Road	1,600
83	West Pine Log Road	Silver Bluff Road	Pawnee	1,500
66	Whiskey Road	Lower Mall/Lowes	Brookhaven	1,300

As can be seen in Table 6, the street segments gaining the largest additional daily traffic volume from 2010 to 2012 are on Edgefield Highway, Whiskey Road, Richland Ave. West, Centennial, East Pine Log Road and Rudy Mason Pkwy. Generally, these increases are concentrated in commercial development areas.

## **Conclusions**

There are 9 street segments in Aiken totaling 5.6 miles in length with LOS E or F. There are another 16 segments totaling 6.8 miles with LOS D. The total mileage of the segments with LOS D, E or F is about 12.4 miles, or 9.3% of the total network. The total mileage with LOS D is about 10.7% of the total network. Therefore, in the Aiken major street network, over 9% of the mileage is congested or severely congested and another 11% is described as having acceptable congestion. So, about 20% (or about one-fifth) of the mileage on the City's major streets has significant congestion, with traffic flow rated worse than average.

It appears the economic downturn has affected travel in Aiken over the last few years, since the data shows there was a decrease in total vehicle-miles on the major street system of about 6.9% between 2010 and 2012. However, even with the decline between 2010 and 2012, there was still an overall increase in total travel on the study network between 2006 and 2012 of about 2% or about 0.33% per year. This would not be considered a substantial rate of growth.

The street segments showing the largest increases in daily traffic volume are on Richland Ave. West, Hitchcock Pkwy., University Pkwy., and Whiskey Road. These increases are indicative of the continued growth in commercial development in the vicinity of the new Wal-mart on Richland Ave., as well as the continued growth in the Whiskey Road corridor.

## **Recommendations**

It is of course possible and perhaps likely that the economy will rebound over the next two and that traffic volumes will grow during that time period. There has been modest new development in the southern portion of Whiskey Road and Aiken County plans to construct a new county government complex on University Parkway west of Edgefield Highway. This new facility will result in shifting of traffic to University Parkway and streets that connect to it. It is possible there might be a renovation or re-use of the existing county government facility that will affect traffic volumes on Richland Avenue.

It is recommended that the same method of assessing LOS be conducted again in 2014. There should also be a review with SCDOT to determine if the factors used to estimate AADT from daily raw counts can be provided for the City's review. In the past, the SCDOT has not been willing to provide this information. If provided, it would be advisable to review the factors and determine how well they may apply to data in Aiken.

If and when there is a rebound in the economy and/or traffic volumes begin to increase significantly, it would be advisable to consider adding travel-time runs to the analysis in order to better pinpoint street segments and intersections with congestion problems.