

Intercity Bus Service Study 2014

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University Transportation Center for Alabama

The University of Alabama, The University of Alabama at Birmingham,
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UTCA Theme: Management and Safety of Transportation Systems

University Transportation Center for Alabama

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<p>16. Abstract</p> <p>Rural transit programs are funded with 5311 funds, named for their description in Section 5311 of United States Code (49 USC S5311). In Alabama, 15% of 5311 funds are set aside to be spent on improving intercity bus service through the 5311(f) program at levels slightly under \$2M per year. With those funds, ALDOT is currently working with three intercity bus providers to improve the quality and quantity of service to Alabama citizens.</p> <p>This report was prepared to provide an overview of the existing 5311(f) program in Alabama and provide ALDOT with data to support decision making concerning overall program effectiveness, effectiveness of the current individual providers, and evaluation of the current subsidized routes and investigation of potential new routes. The report presents information in the following areas:</p> <ul style="list-style-type: none"> • Coverage of the state • Budget adequacy • Ridership and ridership trends • Providers' cost per trip • Current advertising expenditures • Bus stop amenities • Area for potential expansion • A comparison of two providers based on key ratios from quarterly reports <p>The researchers were not asked to examine existing fleets or evaluate federal funds matching programs.</p>					
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Contents

Contents.....	iii
Executive Summary.....	vi
1.0 Introduction.....	8
1.1 Purpose of the Study.....	8
1.2 Methodology.....	9
2.0 Historical Overview.....	10
2.1 Nationwide Intercity Bus Industry Trends.....	10
2.2 Recent Regulatory Changes	10
2.3 The Intercity Bus System in Alabama.....	11
3.0 Current Service.....	14
3.1 Existing Un-subsidized System.....	14
3.2 West Alabama Public Transportation.....	14
3.3 Capital/Colonial/Southern Trailways.....	17
3.4 Greyhound.....	19
3.5 Entire Coverage.....	19
4.0 Data Evaluation.....	22
4.1 Quarterly Reports.....	22
5.0 Facility Evaluation.....	29
5.1 Intercity Bus Stops.....	29
6.0 Evaluation of Services.....	35
6.1 Additional Coverage.....	35
6.2 Additional Route.....	37
6.3 Advertising.....	37
6.4 Budget.....	40
6.5 Program Comparisons.....	40
7.0 Conclusions.....	43
Appendices	
Appendix A – Quarterly Transportation Report Definitions.....	46
Appendix B – 49 CFR Part 374.309 Terminal Facilities	48
Appendix C – Bus Station Evaluation Form.....	49

Tables

Number		Page
4-1	Intercity Bus Service Quarterly Reports	23
4-2	Intercity Bus Quarterly Reports – Ratios	25
6-1	Intercity Bus Service Rural Coverage	37
6-2	Key Ratio Comparisons for Capital and Greyhound	41

Figures

Number		Page
2-1	Intercity Bus Routes, Cities Served in 2007	13
3-1	Un-subsidized Intercity Bus Routes and Cities in Alabama 2014	15
3-2	Intercity Bus Routes and Cities Served by WAPT 5311(f), (2015)	16
3-3	Intercity Bus Routes and Cities Served by Capital Trailways 5311(f), 2015	18
3-4	Intercity Bus Routes and Cities Served by Greyhound 5311(f), 2015	20
3-5	Intercity Bus Routes of Greyhound and 5311(f) Providers, (2015)	21
4-1	Comparison of Operational Performances of Service Providers	27
4-2	Comparison of Expenditure Ratios of Service Providers	28
5-1	Selma Bus Stop	30
5-2	Schedules, Accommodations and Phone Numbers in Selma, AL	31
5-3	Marion Capital Trailways Bus Stop Boarding Area	32
5-4	Dothan Greyhound Lines Bus Stop Covered Waiting Area	33
5-5	Interior Seating at Dothan Bus Stop	33
5-6	Anniston Greyhound Lines Bus Stop	34
5-7	Passengers Buying Tickets at Anniston Bus Stop	34
6-1	A 25 Mile Buffer Intercity Bus Service Coverage in Alabama	36
6-2	Performance Evaluation of Service Carriers	38
6-3	WAPT Advertisement for Bibb County, AL	39

Executive Summary

The 5311(f) program has made an impact on Alabama. Before the program, 32.2% of Alabama's rural population lived within 25 miles of an intercity bus stop. Today, 78.1% of Alabama's rural population lives within 25 miles of an intercity bus stop.

In years when no rolling stock is purchased, the program's cost to ALDOT is roughly \$1.6M - \$1.7M. Actual costs to the program for each of the three providers for the four, most-recent quarters available totals \$1,565,249 and is broken down by provider below:

- WAPT: \$171,242
- Greyhound: \$1,143,307
- Capital: \$250,700

This study examined the program and data from its three providers and made the following conclusions and observations:

- WAPT experienced low ridership on four of its five scheduled route and converted them to demand/response service. Though demand/response service is allowable in 5311(f) programs, the funding relationship with ALDOT for these routes will change.
- Capital's operating costs during its first two quarters of operation before federally-funded buses were delivered was as much as 7 times higher than its operating costs once those buses arrived. This situation occurred as Capital used its own buses on the route and charged full charter rates. Care should be used to ensure that such situations last a very brief time, as a single quarter using charter buses could increase the program's budget by \$0.25M or more.
- The 5311(f) program's budget situation is strong. Significant 5311(f) funds remain from the SAFETEA-LU program, and MAP-21 funds are expected to total roughly \$2.3M annually. The budget strength can allow the program to expand to un-served areas of the state.
- The general trend in ridership is increasing for all providers. Opportunities to attract riders vary, particularly with the length of the routes and the population around those routes. For the most recent four quarters available, total program ridership was 23,607 persons. Capital carried 1,373 riders; WAPT carried 8,232 riders; Greyhound carried 14,002 riders.
- A provider's cost per trip varies each quarter. Average cost per trip for the four most recent quarters available showed WAPT at \$24.22/trip, Greyhound at \$118.06/trip, and Capital at \$217.69/trip.
- None of the three providers have a significant local advertising budget. Though the research team did not perform an advertising cost:benefit study, it recommends increasing advertising as an opportunity to increase ridership and reduce cost per trip.

- A survey of 5311(f) bus stops indicated that some of them lack some basic amenities, particularly items listed in 49 CFR Part 374.309, Terminal Facilities. The research team recommends a program to ensure the stops have such items as easily-visible signs, posted schedules, information on local accommodations, and telephone numbers for local taxis and police.
- A comparison of the two providers that maintain scheduled routes was performed using the 6 “key ratios” cited in ALDOT’s *Policy and Procedure Manual*. In this comparison, Greyhound fares better in four categories, while Capital performs better in two categories.
- A comparison of Alabama’s 5311(f) program quarterly report data with that of other states was investigated but was deemed not feasible at this time.

Chapter 1

Introduction

The Alabama Department of Transportation (ALDOT) is charged by the Governor to oversee the use of Federal Transit Administration (FTA) funds in transit operations in Alabama. These federal funds flow through ALDOT to Alabama's rural and small urban transit programs.

Rural programs are funded with 5311 funds, named for their description in Section 5311 of United States Code (49 USC S5311). In Alabama, 15% of 5311 funds are set aside to be spent on improving intercity bus service through the 5311(f) program at levels slightly under \$2M per year. With those funds, ALDOT is currently working with three intercity bus providers to improve the quality and quantity of service to Alabama citizens. Since the 5311(f) program began in Alabama in FY2012, the number of bus stops in Alabama at which riders may access the intercity bus system has more than tripled from a low of 13 bus stops recorded in 2007.

1.1 Purpose of the Study

ALDOT is currently using SAFETEA-LU funds to support the 5311(f) program. These funds are expected to last through the FY2015 period and perhaps beyond. When those funds are consumed, MAP-21 funds are available to support the continuation of the program. As funding shifts, results from this study will provide ALDOT with support for decision-making in the following areas:

- Overall program effectiveness
- Effectiveness of the current individual providers
- Estimation of future funding levels
- Evaluation of the current subsidized routes and investigation of potential new routes

Overall, the research team was asked to evaluate the status of intercity bus service in Alabama as described in FTA's Circular No. 9040.1F, *Nonurbanized Area Formula Program Guidance and Grant Application Instructions*:

NATIONAL OBJECTIVES..... One objective of the funding for intercity bus service under Section 5311, therefore, is to support the connection between nonurbanized areas and the larger regional or national system of intercity bus service. Another objective is to support services to meet the intercity travel needs of residents in nonurbanized areas. A third objective is to support the infrastructure of the intercity bus network through planning and marketing assistance and capital investment in facilities. FTA encourages States to use the funding under 49 U.S.C. 5311(f) to support these national objectives, as well as priorities determined by the State.

1.2 Methodology

The study employed the following methodology:

- Kickoff Meeting between the research team and ALDOT staff to establish research priorities and to transfer useful data to the research team
- Literature search and interviews with staff from each of the three 5311(f) providers
- Assessment of current service through such avenues as Quarterly Report evaluation and visits to 5311(f) bus stops
- Evaluation of results and preparation of conclusions
- Final report preparation

The study team was not asked to assess the subjects of vehicles and federal funds matching. Recent expenditures of ARRA funds have the Alabama 5311(f) program bus inventory in good shape, and the three providers have well-developed matching strategies.

Chapter 2

Historical Overview

This section provides an overview of the national intercity bus industry and the bus industry within Alabama.

2.1 Nationwide Intercity Bus Industry Trends

The intercity bus industry experienced a steady decline starting around 1970. The following trends contributed to the decline of the industry (Sain Associates, 1995):

- Increase in personal auto ownership
 - Intercity travel by personal automobile increased dramatically in the last half of the twentieth century and has now become the primary means of intercity travel.
- Competition from airlines
 - The deregulation of the airline industry in 1978 increased consumer access to air travel. More persons can afford travel by airline, lessening their dependency on intercity bus service.
- Competition from Amtrak
 - With the creation of Amtrak in 1971 and the continued subsidization of that system, train travel has remained competitive.
- High operating costs
 - Operation of an intercity bus carrier is expensive, effectively limiting start-up entry into the market and prohibiting expansion of current systems.

2.2 Recent Regulatory Changes

Before 1978, Federal assistance to non-urban transit was virtually non-existent. In that year, Congress authorized transit assistance to “areas other than urbanized areas.” This assistance was included in Section 18 of the Federal Transit Act. These funds were distributed according to a statutory formula that is a function of each state’s population in rural areas and places of less than 50,000 residents. From 1978 until 1991, the Section 18 funding averaged \$72 million annually.

The 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) contained more significant provisions to support and enhance the intercity bus industry (Community Transportation Association of America, 2001). Section 18(i) of ISTEA specified that States must allocate a certain portion of their federal transit funds to support intercity bus service. The allocation of this funding was specified as follows: 5% of federal transit funds in FY 1992, 10% in FY 1993, and 15% in FY 1994 and the years thereafter. States whose executive officer (i.e., governor) certified that intercity bus needs were being met were not required to spend the Section 18 funds

on intercity bus projects. States that certified their intercity bus needs as met could allocate the Section 18 funding to other rural transit projects. This legislation was codified in Title 49 U.S.C. 5311(f) (Sain Associates, 1995).

Congress has passed several Transportation Bills since ISTEA, culminating in Map-21. MAP-21, the Moving Ahead for Progress in the 21st Century Act (P.L. 112-141), was signed into law by President Obama on July 6, 2012. It retains the 5311(f) requirements and funds surface transportation programs at over \$105 billion for fiscal years (FY) 2013 and 2014. Alabama was apportioned \$15,376,885 for Section 5311/5340 for FY2014. When 15% of that figure is dedicated to intercity bus service, 5311(f) funding is approximately \$2.3M per year.

The current text of 49 USC 5311(f) reads as follows:

(f) Intercity Bus Transportation.—

(1) In general.—*A State shall expend at least 15 percent of the amount made available in each fiscal year to carry out a program to develop and support intercity bus transportation. Eligible activities under the program include—*

- (A) planning and marketing for intercity bus transportation;*
- (B) capital grants for intercity bus facilities;*
- (C) joint-use facilities;*
- (D) operating grants through purchase-of-service agreements, user-side subsidies, and demonstration projects; and*
- (E) coordinating rural connections between small public transportation operations and intercity bus carriers.*

(2) Certification.—*A State does not have to comply with paragraph (1) of this subsection in a fiscal year in which the Governor of the State certifies to the Secretary, after consultation with affected intercity bus service providers, that the intercity bus service needs of the State are being met adequately.*

5311(f) funds may also be used for capital and administrative expenses, with a Federal share of 80 percent, and for operating expenses, with a Federal share of 50 percent.

2.3 The Intercity Bus System in Alabama

In 2001, there were 81 locations in Alabama with intercity bus service. By 2007, 68 of those locations lost access to intercity bus service. No locations gained access during that time period. The result was that there were only 13 locations in Alabama where riders could board an intercity bus. Figure 2-1 illustrates the towns served in 2007.

In 2009, the University Transportation for Alabama (UTCA) completed and published a study for ALDOT titled “Intercity Bus Service Study 2007.” One of the study’s findings was “Governor’s Certification that the intercity bus needs in Alabama are met should not be invoked,

and 15% of the 5311 funds should be made available for 5311(f) activities to support intercity bus service.” ALDOT adopted the recommendation of the study and implemented a plan to fund 5311(f) bus service. The service started in FY2012 and is the subject of the rest of this report.

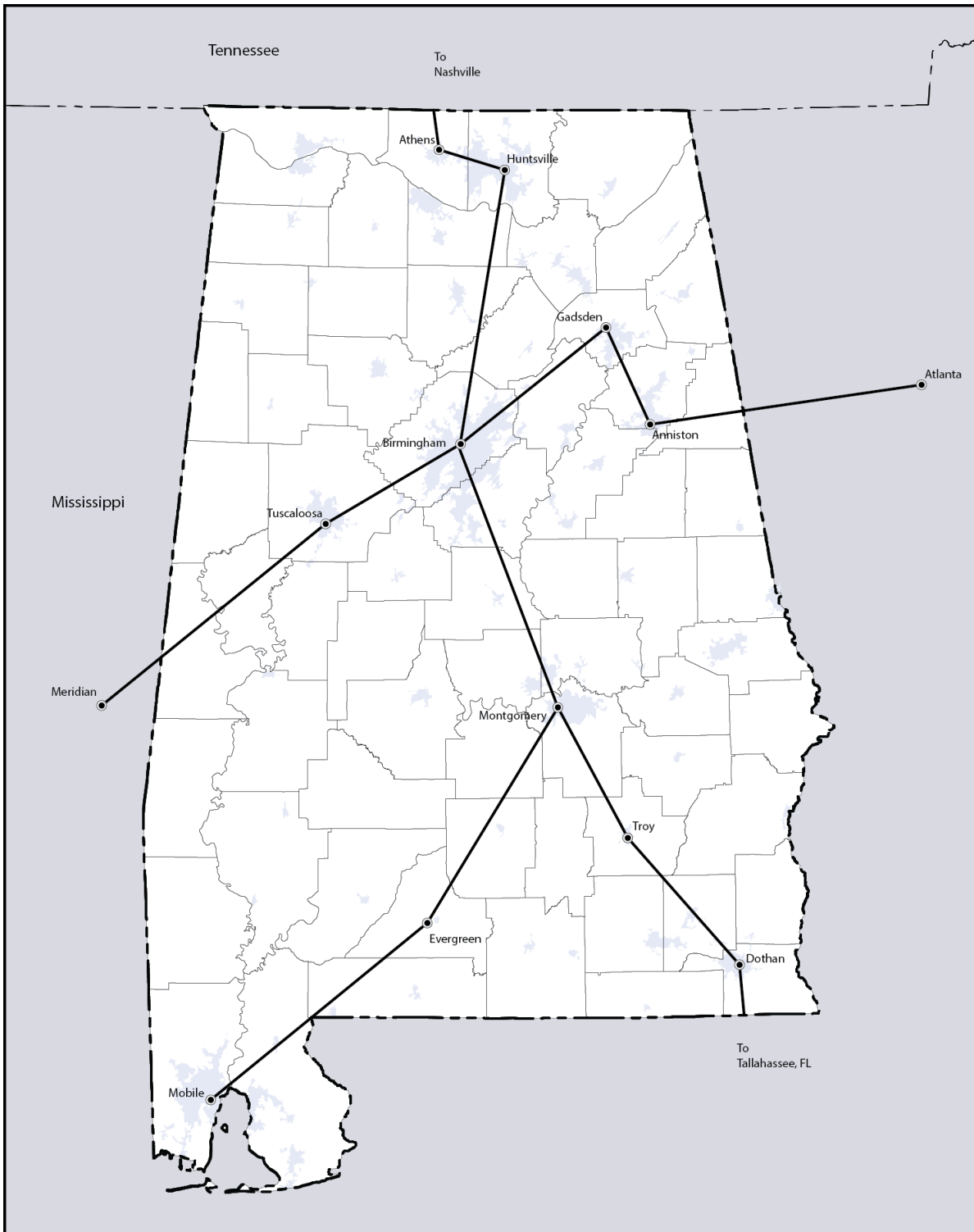


Figure 2-1: Intercity Bus Routes, Cities Served in 2007

Chapter 3

Current Service

This section starts with information about the un-subsidized Greyhound bus service that 5311(f) providers in the state tie their routes into. Then, it describes the services provided by the three 5311(f) entities in the state.

3.1 Existing Un-Subsidized System

The three 5311(f) systems must tie into an un-subsidized intercity bus service. The three providers tie into existing Greyhound service, and that existing, un-subsidized system is shown in Figure 3-1. Greyhound's un-subsidized routes serve 13 Alabama communities and Columbus, GA, just across the border from Phenix City, AL.

3.2 West Alabama Public Transportation

West Alabama Public Transportation (WAPT) began 5311(f) service in the second quarter of fiscal year 2012. WAPT serves four routes, as shown in Figure 3-2:

1. A route that begins in Livingston, AL, has two stops in Alabama, and connects with a Greyhound facility in Meridian, MS
2. A route that begin in Demopolis, AL and connects with a Greyhound facility in Tuscaloosa, AL
3. A route that begin in Greensboro, AL and connects with a Greyhound facility in Tuscaloosa, AL
4. A route that begins in Marion, AL and connects to Selma, AL, where it connects to Capital Trailways 5311(f) service that connects to Greyhound facilities in Tuscaloosa, AL and Mobile, AL
5. A route offering 3 round-trip services per day between Selma, AL and a Greyhound facility in Montgomery, AL.

Routes 1 through 4 (as numbered above) operate 5 days per week, one round-trip schedule per day. Route 5 operates one, round-trip schedule per day between Marion and Selma. Because of higher demand on the Selma-to-Montgomery route, that route offers three round-trip schedules per day, 365 days per year.

The net effect of the WAPT routes is to add intercity bus service to 10 Alabama communities that are not served through the un-subsidized routes shown in Figure 3-1. Figure 3-2 also shows 10-mile buffer zones around the towns served. If potential riders can travel the 10 miles to the 5311(f) bus stops, then the buffer zones provide an insight into the additional intercity bus service areas that the WAPT service provides to Alabama.

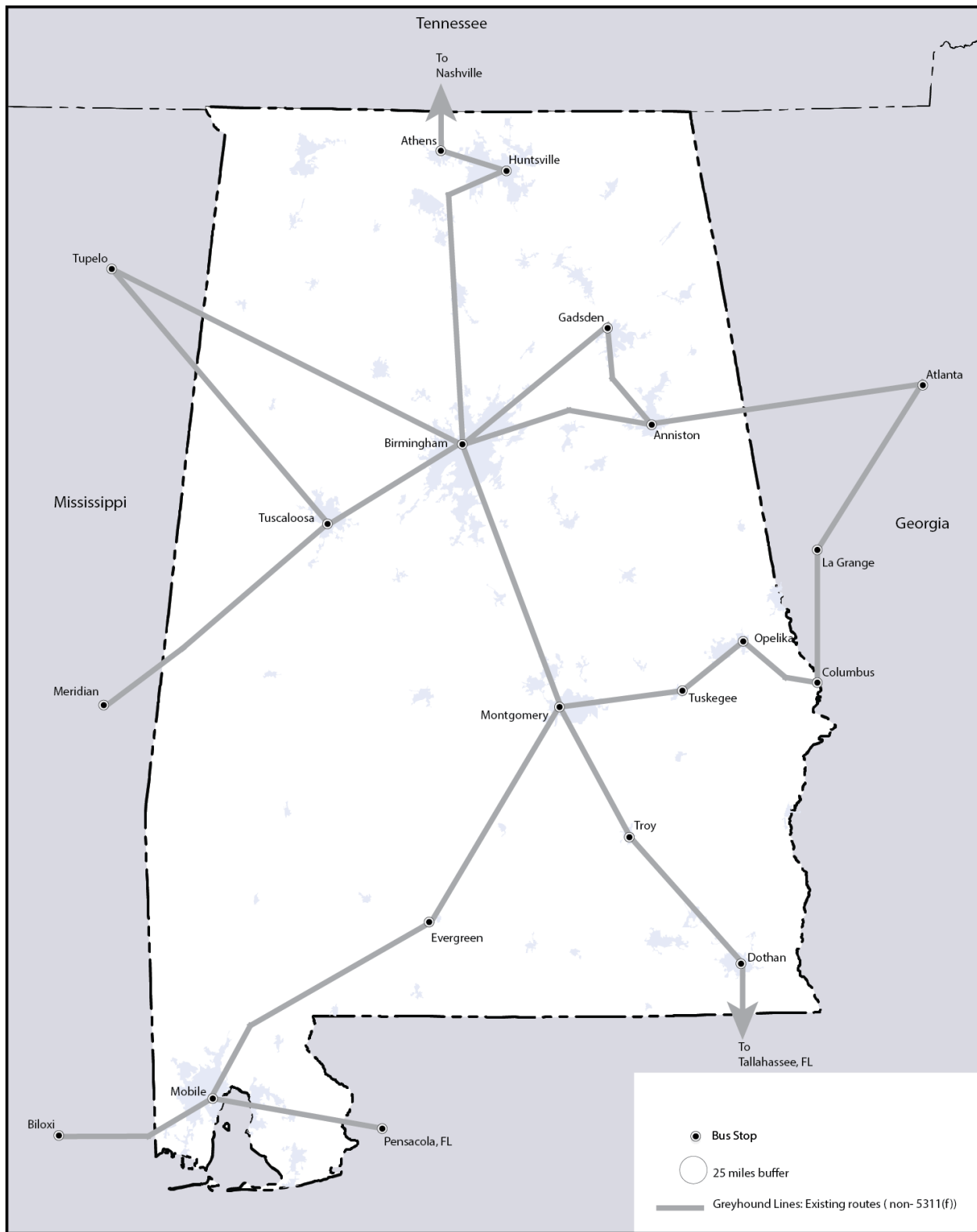


Figure 3-1: Un-subsidized Intercity Bus Routes and Cities in Alabama 2014

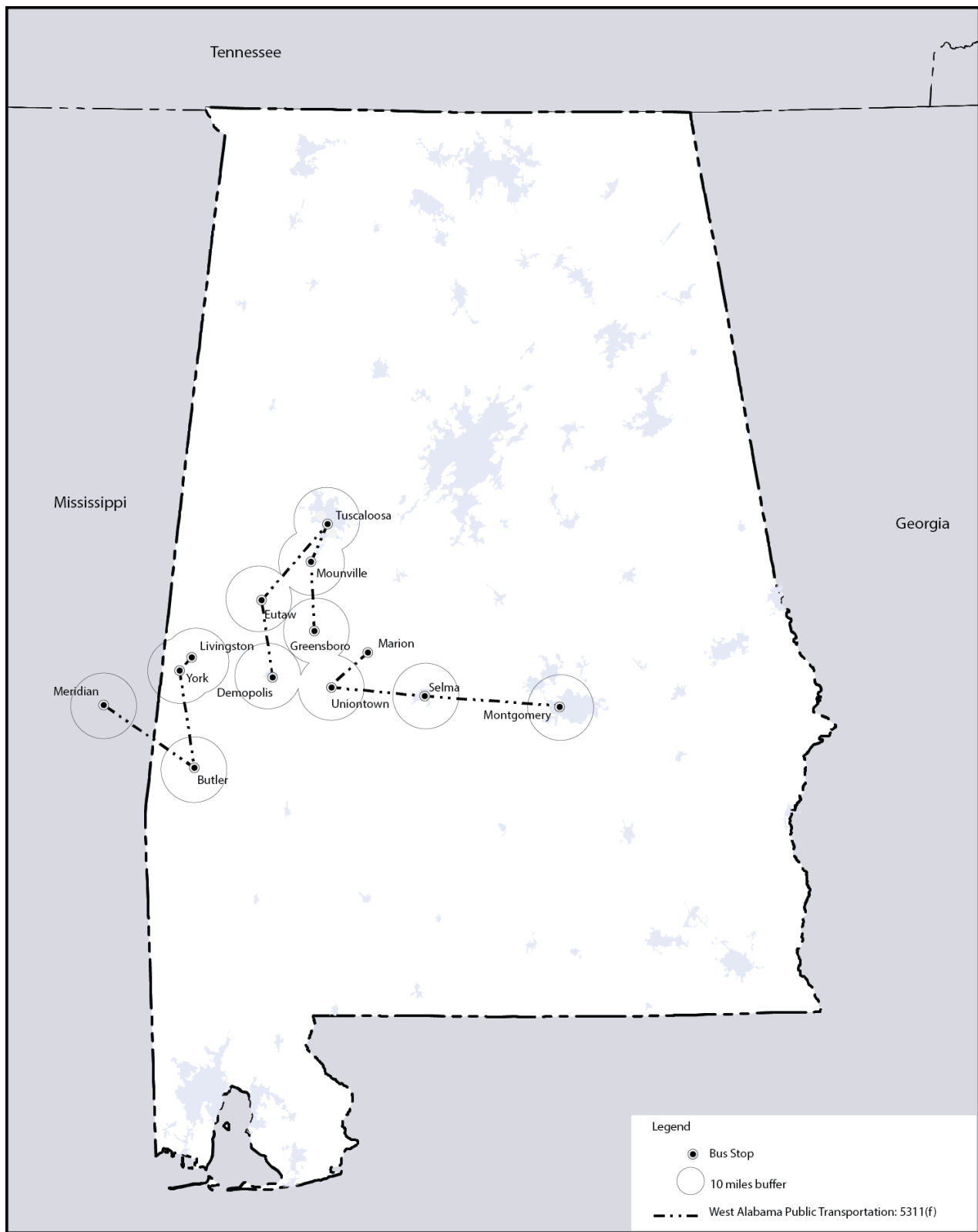


Figure 3-2: Intercity Bus Routes and Cities Served by WAPT 5311(f), (2015)

The WAPT 5311(f) stops are listed on Greyhound's ticketing website, but WAPT itself does not have a website listing its stops or selling tickets. WAPT sells no tickets. Most of their riders already have tickets printed from the Greyhound website, which have multiple "tears". The WAPT driver takes the WAPT "tear" and leaves the passenger the Greyhound tear. At the end of the month, WAPT submits the "tears" to Greyhound for compensation. If the passenger did not have a ticket upon boarding, when the WAPT vehicle reaches a Greyhound terminal, the WAPT driver escorts the passenger into the terminal, observes the passenger purchase a ticket, and takes the "tear" for the WAPT portion of the trip.

WAPT vehicles are almost always 15-passenger vans that can also be used for its rural transit operation. At certain times when ridership is high, such as the end of a school term at Livingston University (in Livingston, AL), a 30-person vehicle is available from the WAPT fleet. Most but not all the vehicles are chairlift-equipped. When Greyhound has sold a ticket to a passenger who requires assistance, Greyhound transmits that information to WAPT, and WAPT dispatches a suitable vehicle.

3.3 Capital/Colonial/Southern Trailways

Capital/Colonial/Southern Trailways (Capital) began 5311(f) service in the first quarter of fiscal year 2013. Capital operates one route, as shown in Figure 3-3. That route connects unsubsidized Greyhound stops in Mobile, AL and Tuscaloosa, AL. The net effect of the Capital route is to add intercity bus service to 10 communities that are not served through the unsubsidized routes shown in Figure 3-1 (although its Selma stop is also served by WAPT). The route offers one North-bound and one South-bound service per day, seven days per week.

Capital is interlined with Greyhound. None of the 5311(f) bus-stops on the Capital route sell tickets. Riders either buy tickets by cash or credit from the driver, or they buy them previously online.

Capital actually makes three stops in Tuscaloosa. After the bus stops at the Tuscaloosa Greyhound station, it also stops at the Amtrak railroad station and the Tuscaloosa Transit Center. The Capital 5311(f) service stops are listed in Amtrak; thus, a rider who visits the Amtrak website and wishes to travel from Thomasville, AL to Washington, DC on Amtrak will receive instructions to take the Capital bus from Thomasville to Tuscaloosa and to then get on the Amtrak train.

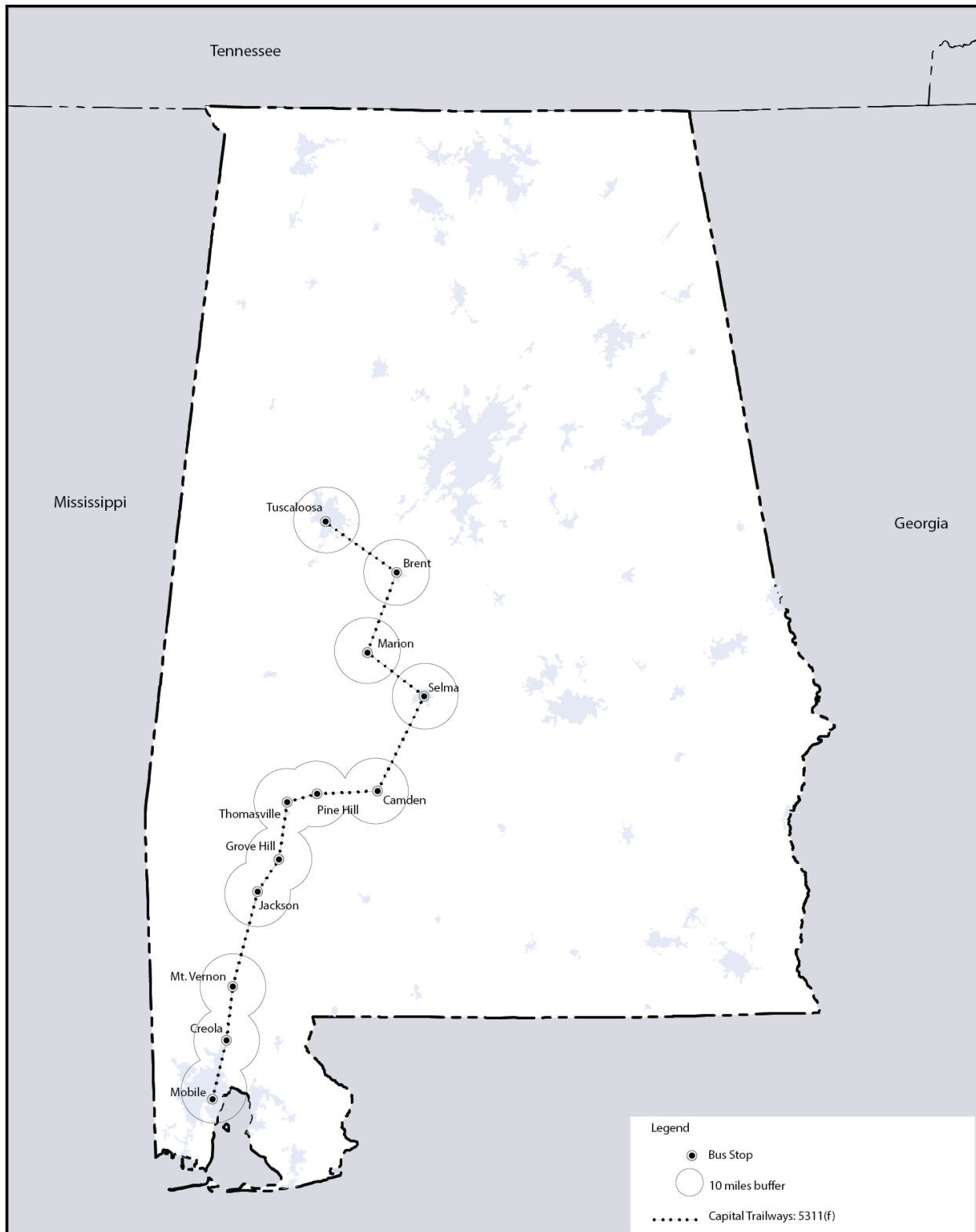


Figure 3-3: Intercity Bus Routes and Cities Served by Capital Trailways 5311(f), (2015)

3.4 Greyhound

Greyhound Lines, Inc. (Greyhound) began 5311(f) service in Alabama in the third quarter of fiscal year 2012. Greyhound operates two such routes, as shown in Figure 3-4:

- One route connecting to Greyhound un-subsidized routes in Chattanooga, TN and Birmingham, AL
- One route connecting to Greyhound un-subsidized routes in Birmingham, AL and Mobile, AL

These routes operate 7 days/week, and both offer one North-bound and one South-bound service per day. The net effect of the Greyhound routes is to add intercity bus service to 14 Alabama communities that are not served through the un-subsidized routes shown in Figure 3-1. Please note that Figure 3-4 actually includes 17 Alabama stops (including Mobile and Birmingham would result in 19), but Greyhound also serves the five following stops with both un-subsidized and 5311(f) service:

- Gadsden
- Anniston
- Opelika
- Dothan
- Evergreen

When the five stops served by both 5311(f) and un-subsidized routes is added, then Greyhound is providing new or additional service to 19 Alabama towns. (For counting purposes, the research team has counted the Columbus, GA stop as serving the Alabama town of Phenix City because the two cities adjoin so closely.)

Riders from towns served by the Greyhound 5311(f) program can purchase tickets from Greyhound. The ticketing arrangements between Greyhound and WAPT and Capital have been outlined in Sections 3.2 and 3.3 of this report.

3.5 Entire Coverage

Figure 3-5 shows the full coverage of the state of Alabama, including both the un-subsidized Greyhound routes as well as all three 5311(f) providers.

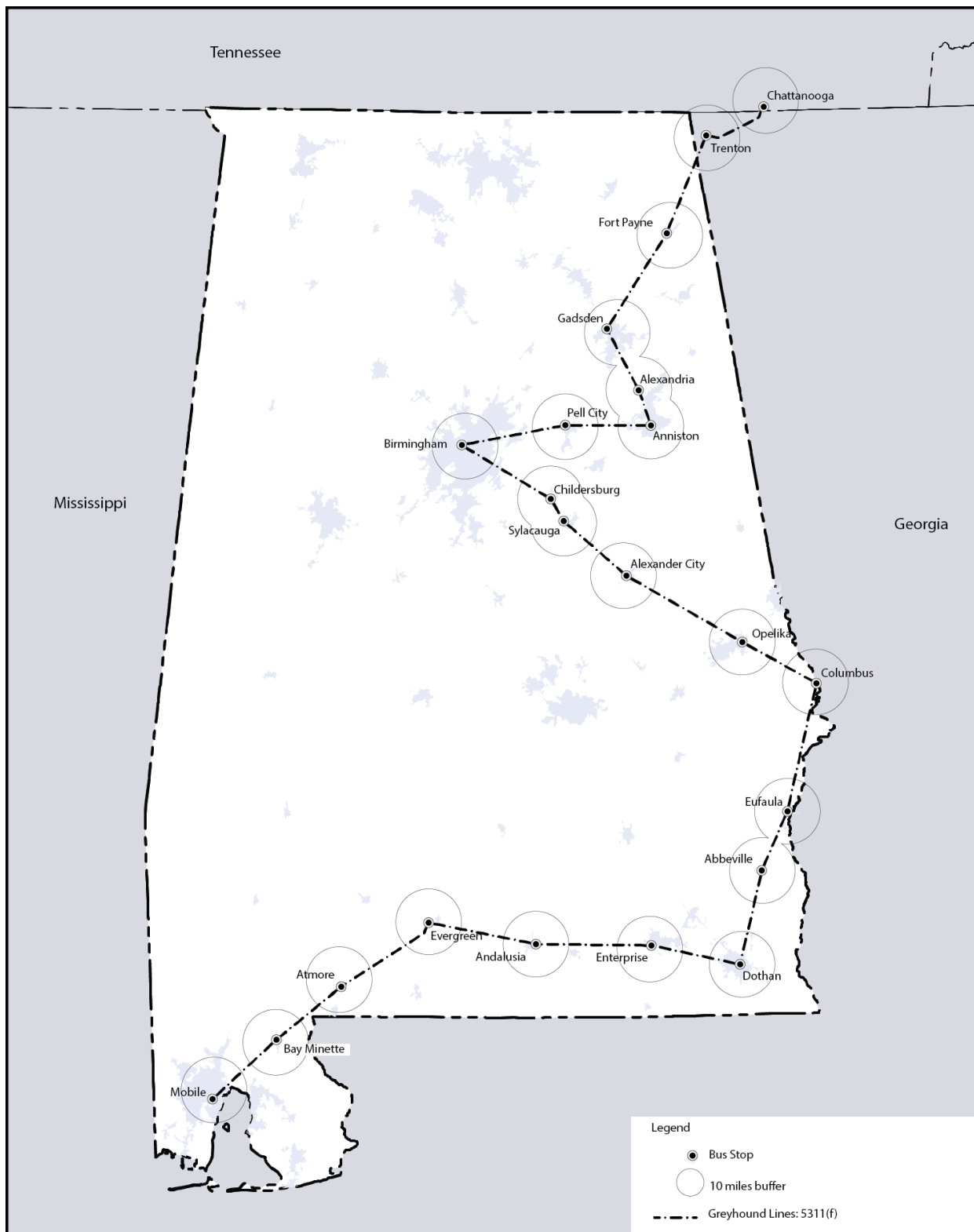


Figure 3-4: Intercity Bus Routes and Cities Served by Greyhound 5311(f), (2015)

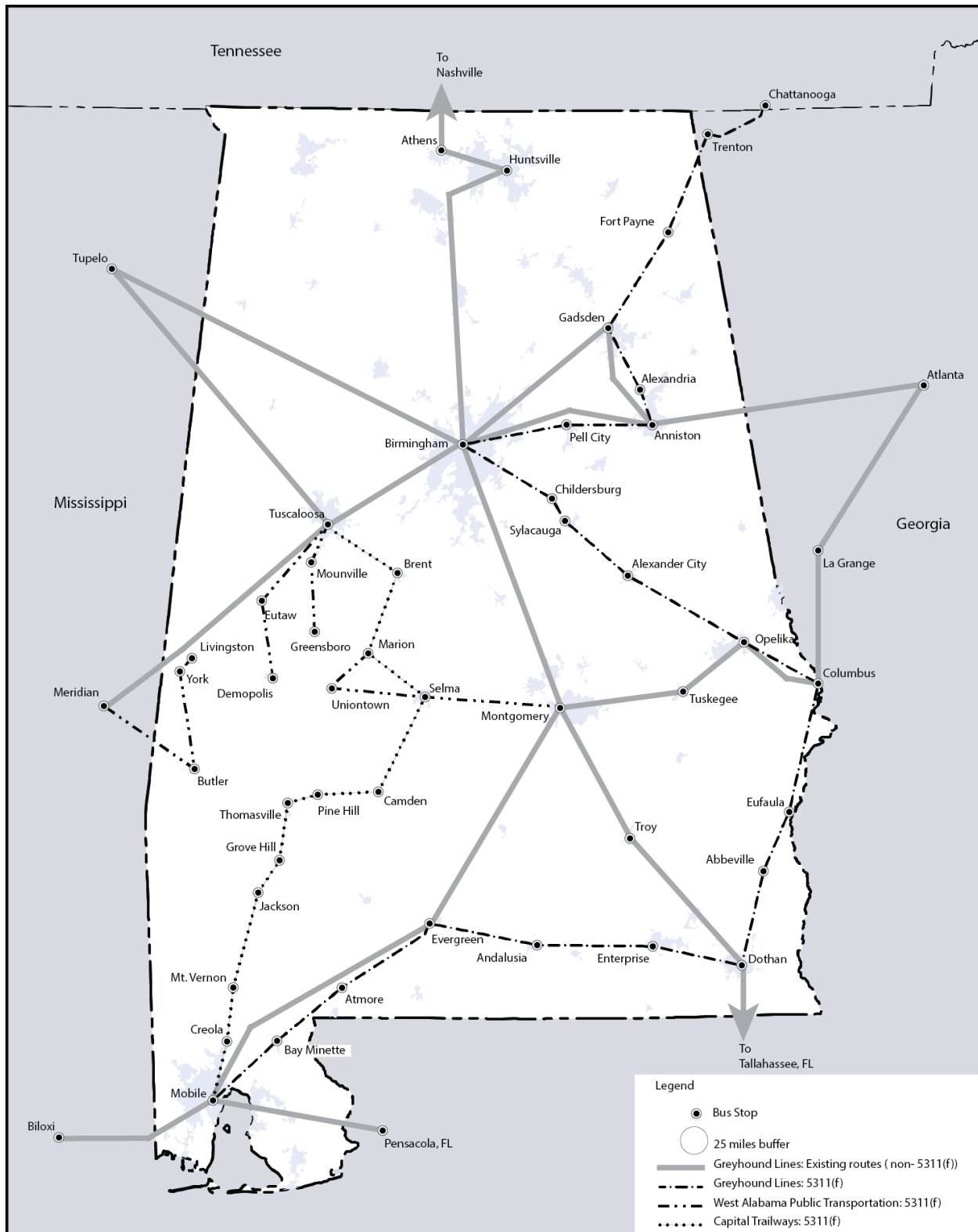


Figure 3-5: Intercity Bus Routes of Greyhound and 5311(f) Providers, (2015)

Chapter 4

Data Evaluation

The researchers used data from quarterly reports submitted to ALDOT by the three 5311(f) providers to help evaluate the performance of the subsidized routes and providers in Alabama.

4.1 Quarterly Reports

ALDOT supplied the researchers Quarterly Transportation Reports for three time periods:

- Portions of FY2012. Not all providers were operating in FY2012, so the quarterly reports from FY2012 were incomplete. In addition, the data that was available reflected start-up values which could be quite variable, so FY2012 data was not analyzed.
- FY2013. Data for all four quarters of FY2013 were available for all three providers, so this data was included in the analysis.
- FY2014. Data for the first three quarters of FY2014 was available for Capital and WAPT. Greyhound data was available for the first two quarters. All available FY2014 data was used in the analysis.

Tables 4-1 and 4-2 present the data. Table 4-1 shows raw data for such values as number of passenger trips and total cost for operating the system. Table 4-2 contains ratios calculated from the raw data. The descriptions that follow will include short definitions of the column headings of the two tables, but for a fuller description, please see Appendix A [ALDOT Bureau of Transportation Planning and Modal Programs Transit Section, Policy and Procedures Manual].

The tables contain shaded areas. In Table 4-1, shading means that the data was missing from the quarterly reports and was therefore estimated by the research team as described in the notes at the bottom of the table. In Table 4-2, ratios that were calculated using shaded data from Table 4-1 are also shaded; this was done to indicate that the ratios did not come directly from the Quarterly Reports.

An examination of Table 4-1 leads to the following observations:

- The general trend in ridership is increasing for all providers. For the most recent four quarters available, total program ridership was 23,607 persons. Capital carried 1,373 riders; WAPT carried 8,232 riders; Greyhound carried 14,002 riders.
- In general, both Greyhound and Capital had passenger service hours that exceeded vehicle hours and had passenger service miles exceeding vehicle miles. These values indicate that those two providers averaged more than one passenger onboard, while WAPT did not.

Table 4-1: Intercity Bus Service Quarterly Reports

Date	Fiscal year	Quarterly	Carrier	Passenger Trips	Passenger Service Hours	Vehicle Hours	Vehicle Miles	Passenger Service Miles	Operating Cost (\$)	Administrative Cost (\$)	Total Cost (\$)	Revenue (\$)
1/31/2013	2013	Q1	Capital Trailways	292	1,065	852	47,288	59,097	327,564	2,8376	355,940	9,122
4/10/2013	2013	Q2	Capital Trailways	283	1,017	852	48,258	57,612	170,311	4,105	174,417	10,000
7/31/2013	2013	Q3	Capital Trailways	340	1,245	852	48,097	70,273	51,227	4,105	55,332	10,486
10/30/2013	2013	Q4	Capital Trailways	348	1,265	852	48,642	72,215	55,067	4,105	59,172	10,954
4/5/2013	2013	Q1	Greyhound Lines	3,184	11,009	2,240	95,530	89,273	326,592	80,771	407,363	103,613
7/15/2013	2013	Q2	Greyhound Lines	3,358	11,317	2,192	93,268	87,672	312,282	75,991	388,274	108,179
9/17/2013	2013	Q3	Greyhound Lines	3,616	13,020	2,215	92,847	88,205	314,031	80,284	394,315	111,434
10/30/2013	2013	Q4	Greyhound Lines	3,881	13,601	2,264	94,931	93,269	313,269	65,955	379,223	123,861
1/30/2013	2013	Q1	West Alabama Public Transportation	987	1,420	1,420	30,110	30,110	53,953	0	53,953	8,674
4/5/2013	2013	Q2	West Alabama Public Transportation	873	1,024	1,280	43,650	34,920	48,292	0	48,292	7,556
7/19/2013	2013	Q3	West Alabama Public Transportation	1,538	1,200	1,500	38,450	34,550	42,187	0	42,187	14,097
10/28/2013	2013	Q4	West Alabama Public Transportation	1,652	1,400	1,600	36,510	33,240	45,926	0	45,926	8,991
2/4/2014	2014	Q1	Capital Trailways	321	1,138	852	48,592	64,929	60,921	17,128	78,050	10,420
4/30/2014	2014	Q2	Capital Trailways	310	1,172	852	44,880	61,740	73,953	8,738	82,692	10,079
9/23/2014	2014	Q3	Capital Trailways	394	1,438	852	48,064	81,104	66,589	8,602	75,191	12,952
4/10/2014	2014	Q1	Greyhound Lines	3,755	13,163	2,251	100,664	99,457	340,240	76,715	416,956	126,870
7/28/2014	2014	Q2	Greyhound Lines	2,750	9,449	2,294	97,021	93,471	354,771	69,982	424,753	109,775
1/13/2014	2014	Q1	West Alabama Public Transportation	1,656	1,340	1,589	28,510	25,420	39,583	0	39,583	5,432
4/14/2014	2014	Q2	West Alabama Public Transportation	2,412	1,450	1,742	30,400	27,500	54,915	0	54,915	5,500
7/14/2014	2014	Q3	West Alabama Public Transportation	2,512	1,484	1,789	31,300	28,520	56,341	0	56,341	5,600

Notes on Shaded Areas:

1. Vehicle hours were estimated from the posted bus travel time schedule for Capital Trailways for the fiscal years 2013 and 2014
2. Passenger service hours were estimated from the relation: Passenger service miles/(Vehicle miles/Vehicle hours) for Capital Trailways for the fiscal years 2013 and 2014 and West Alabama for FY 2013
3. The FY 2013, Q2 revenue entry for Capital Trailways was estimated from FY 2013, Q1 and FY 2013 Q3 revenue figures

- Greyhound had the highest total program cost. At the same time, its revenue was far higher than that of Capital and WAPT.
- Capital's operating costs were much higher in the first and second quarters of 2013 than in any other quarter. Capital's consultant explained that buses to be purchased with federal funds through ALDOT had not arrived in those quarters, so Capital was using its own buses and charging charter rates for them during those two quarters. The consultant mentioned that due to bus break-downs, that same situation exists today.

Thus, Table 4-1 presents a complicated picture. For example, Greyhound serves the most riders but at the highest cost.

Table 4-2 uses data from Table 4-1 to calculate ratios that are important metrics for service providers. Review of the table shows the following:

- Productivity (passenger trips per vehicle hour) – Greyhound has the highest productivity, followed by WAPT and then Capital.
- Hourly utilization (passenger service hours per vehicle hour) – Greyhound has the highest value, followed by Capital and WAPT.
- Miles/trip – The data for Capital in this column seems suspect. Miles per trip in each quarter is roughly 200 miles. However, 200 miles is also the distance between Mobile and Tuscaloosa, the two end points of the route. Assuming that each passenger did not travel the entire length of the route, it appears that Capital may have mistakenly inserted incorrect values in this column.
- For cost/hour and cost/trip – WAPT has the lowest values for cost per hour, followed by Capital and then Greyhound. Average cost per trip for the four most recent quarters available showed WAPT at \$24.22/trip, Greyhound at \$118.06/trip, and Capital at \$217.69/trip.
- Operational Cost Recovery Ratio (revenue divided by expenses) – Greyhound has the highest values in this category, followed by Capital and WAPT. This metric indicates how much of the total cost of operating the route is recaptured in fares.

Again, Table 4-2 presents a complicated picture. WAPT provides the most efficient service when cost per trip is evaluated. However, Greyhound carries the highest number of passengers per vehicle hour, and it recovers the greatest proportion of the revenue it expends to provide trips.

Table 4-2: Intercity Bus Quarterly Reports - Ratios

Date	Fiscal year	Quarterly	Carrier	Productivity	Hourly Utilization	Mileage Utilization	Miles Per Trip	Cost Per Trip	Cost Per Hour	Operational Cost Recovery Ratio
1/31/13	2013	Q1	Capital Trailways	0.34	1.25	1.25	202.39	1218.97	417.77	0.03
4/10/13	2013	Q2	Capital Trailways	0.33	1.19	1.19	203.58	616.31	204.71	0.06
7/31/13	2013	Q3	Capital Trailways	0.40	1.46	1.46	206.69	162.74	64.94	0.2
10/30/13	2013	Q4	Capital Trailways	0.41	1.48	1.48	207.51	170.04	69.45	0.2
4/5/13	2013	Q1	Greyhound Lines	1.42	4.91	0.93	28.04	127.94	181.86	0.32
7/15/13	2013	Q2	Greyhound Lines	1.53	5.16	0.94	26.11	115.63	177.13	0.35
9/17/13	2013	Q3	Greyhound Lines	1.63	5.88	0.95	24.39	109.05	178.02	0.35
10/30/13	2013	Q4	Greyhound Lines	1.71	6.01	0.98	24.03	97.71	167.5	0.4
1/30/13	2013	Q1	West Alabama Public Transportation	0.70	1.00	1	30.51	54.66	23.83	0.16
4/5/13	2013	Q2	West Alabama Public Transportation	0.68	0.80	0.8	40	55.32	34.01	0.16
7/19/13	2013	Q3	West Alabama Public Transportation	1.03	0.8	0.9	22.46	27.43	28.12	0.33
10/28/13	2013	Q4	West Alabama Public Transportation	1.03	0.88	0.91	20.12	27.8	28.7	0.2
2/4/14	2014	Q1	Capital Trailways	0.38	1.34	1.34	202.27	243.14	91.61	0.17
4/30/14	2014	Q2	Capital Trailways	0.36	1.38	1.38	199.16	266.75	97.06	0.14
9/23/14	2014	Q3	Capital Trailways	0.46	1.69	1.69	205.86	190.84	88.25	0.19
4/10/14	2014	Q1	Greyhound Lines	1.67	5.85	0.99	26.49	111.04	185.23	0.37
7/28/14	2014	Q2	Greyhound Lines	1.2	4.12	0.96	33.99	154.46	185.16	0.31
1/13/14	2014	Q1	West Alabama Public Transportation	1.04	0.84	0.89	15.35	23.9	24.91	0.14
4/14/14	2014	Q2	West Alabama Public Transportation	1.38	0.83	0.9	11.4	22.77	31.52	0.1
7/14/14	2014	Q3	West Alabama Public Transportation	1.4	0.83	0.91	11.35	22.43	31.49	0.1

Notes on Shaded Areas:

These entries were computed using shaded values on the preceding table

Figures 4-1 and 4-2 present the same information as did Table 4-2, but this time in visual form. Greyhound's productivity and hourly utilization stand out. Capital's miles per passenger trip also stand out, but this graph should probably be discounted for the reasons stated in the previous bulleted list. In figure 4-2, WAPT's low cost per hour and cost per trip are easily apparent, as is Greyhound's high Operational Cost Recovery Ratio.

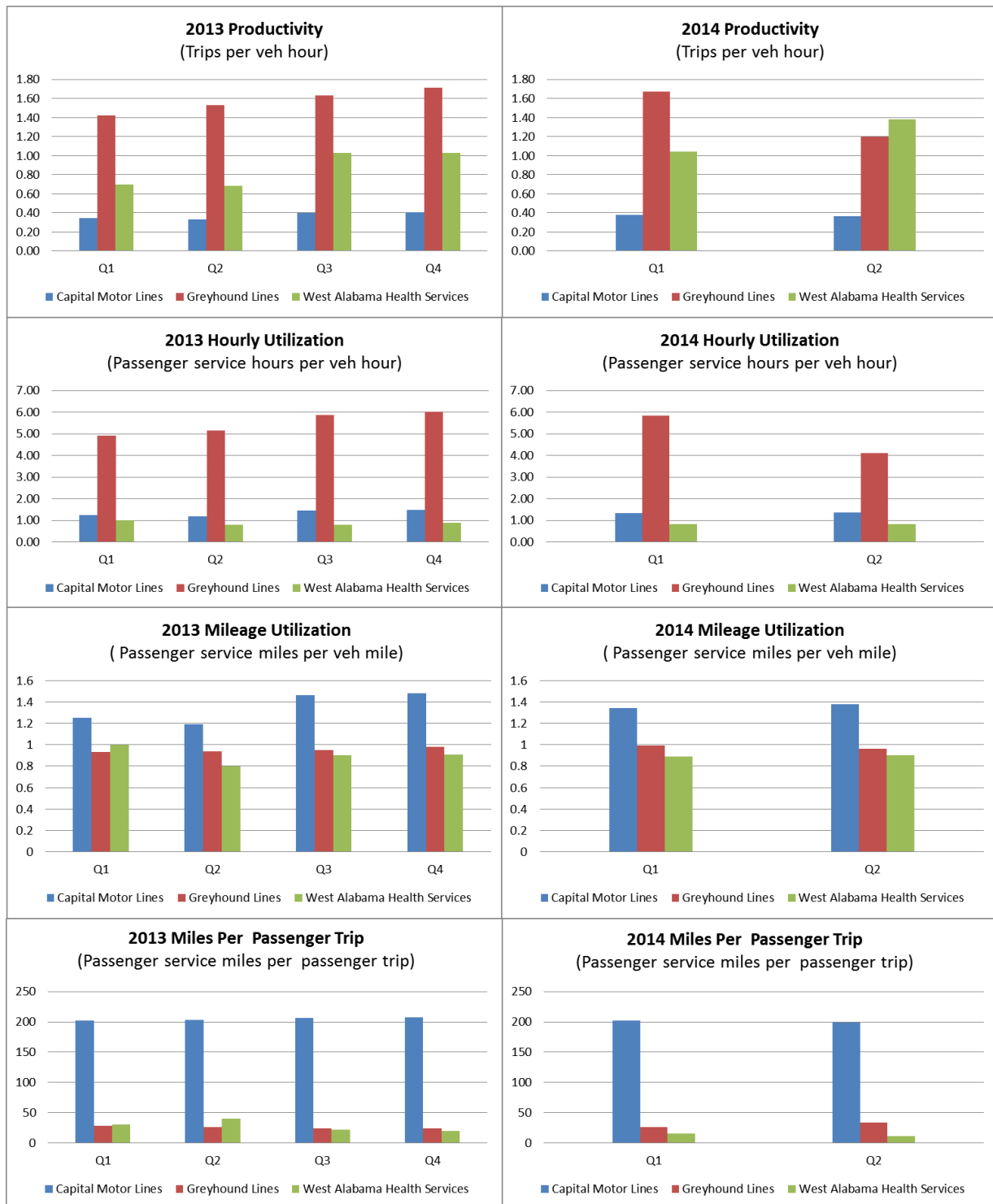


Figure 4-1: Comparison of Operational Performances of Service Providers



Figure 4-2: Comparison of Expenditure Ratios of Service Providers

Chapter 5

Facility Evaluation

This section describes a survey of a sample of 5311(f) intercity bus stops within Alabama. Among other items, the bus stops are compared against 49 CFR Part 374.309, Terminal Facilities (Appendix B).

5.1 Intercity Bus Stops

To gauge the quality of intercity bus facilities within Alabama, 12 locations (approximately 32% of the 37 5311(f) stops in Alabama) were selected and visited by the study team:

- Moundville
- Eutaw
- Brent
- Selma
- Marion
- Greensboro
- Anniston
- Pell City
- Childersburg
- Sylacauga
- Dothan
- Enterprise

The quality of services and facilities provided at these locations varied. The 12 stops were each evaluated using the Bus Station Evaluation Form put together by the research team and found in Appendix C. Particular attention was paid to several items listed in 49 CFR, Part 374.309, which states in part that “there shall be available, to the extent possible, a public phone, outside lighting, posted schedule information, overhead shelter, information on local accommodations, and telephone numbers for local taxi service and police.” The full text of Part 374.309 is found in Appendix B.

5.1.1 WAPT

Three WAPT bus stops were visited. The first stop was in Moundville, AL. The location was a city-owned Senior Activity Center. When the research team spoke with the staff, the staff had not heard of the 5311(f) route and said it never stopped there. The research team filled out a Bus Station Evaluation Form for the facility even though it was not used as a bus stop.

The second stop was in Eutaw, Alabama. Eutaw is on a different WAPT route than Moundville is on. The research team heard similar information from the staff at the Chevron gasoline

station, that the location was not used as a stop. Some local customers told the team, “You have to go to Tuscaloosa” to board a bus. The team did not fill out an Evaluation Form for Eutaw because it was not being used as a stop.

The last WAPT stop visited by the team was Selma, AL, a site that is used by both WAPT and Capital. WAPT uses the site as part of its route from Marion, AL to Selma, as well as on its non-stop route between Selma and Montgomery, AL. Capital owns the bus facility in Selma, and it is a stop on Capital’s 5311(f) route in Alabama. This facility will be described in more detail in section 5.1.2, but it largely satisfied the teams’ checklist for such items as a visible bus sign, a covered waiting area, information concerning local accommodations, and telephone numbers for taxi and police. The stop is not staffed, and the building is closed all day. The building only serves as a pick-up and drop-off point for riders.

Subsequent discussions with WAPT personnel indicated that early in the 5311(f) process, four of the 5 WAPT routes experienced very little ridership. The only route exhibiting strong ridership was the non-stop route between Selma and Montgomery. For that reason, the four under-performing routes were discontinued several years ago. Riders from areas around the discontinued routes are now only served on a demand-response basis, transported as part of WAPT’s regular 5311 rural transportation service to Tuscaloosa, Selma, or Meridian, MS to connect with un-subsidized bus routes in those towns.

The Selma bus stop is shown in Figures 5-1 and 5-2



Figure 5-1: Selma Bus Stop



Figure 5-2: Schedules, Accommodations, and Phone Numbers in Selma, AL

5.1.2 Capital

Three Capital bus stops were visited. Stops in Selma and Marion performed adequately on the Bus Station Evaluation Form and will be evaluated together below. A stop in Brent, AL did not meet expectations and will be also summarized below.

Selma and Marion exhibited the following characteristics:

- Visible bus stop signs: yes in 1 of 2 locations
- Outside lighting: yes in 2 of 2 locations
- Posted schedule information: yes in 2 of 2 locations
- Overhead shelter: yes in 2 of 2 locations
- Information on local accommodations: yes in 2 of 2 locations
- Telephone numbers for local taxi and police: yes in 1 of 2 locations.

The stop in Brent, AL did not meet expectation. Few of the Part 374.309 facilities were present. There was no bus sign. The manager at the location cited as the bus stop did not know anything about a bus facility at that location. The manager at an adjoining food mart said that sometimes the bus turns around in the rear parking lot and drives to the door and honks, but he “hasn’t seen them in a while.” The research team spoke about this facility to Capital’s consultant; he made the situation known to Capital, and Capital promised to investigate.

Figure 5-3 shows one of Capital's stops located at a motel in Marion, AL. Figures 5-1 and 5-2 also showed photos of a Capital bus stop in Selma, AL.



Figure 5-3: Marion Capital Trailways Bus Stop Boarding Area

5.1.3 Greyhound

The researchers visited six Greyhound bus stops. Three of the stops are also stops on Greyhound's un-subsidized routes in Alabama and will be evaluated separately. Three other stops are only 5311(f) stops and will also be evaluated separately.

Pell City, Anniston, and Dothan serve as stops both on un-subsidized routes and on 5311(f) routes. They are evaluated below:

- Visible bus stop signs: yes in 3 of 3 locations
- Outside lighting: yes in 3 of 3 locations
- Posted schedule information: yes in 2 of 3 locations
- Overhead shelter: yes in 3 of 3 locations
- Information on local accommodations: yes in 0 of 3 locations
- Telephone numbers for local taxi and police: yes in 2 of 3 locations.

Stops in Sylacauga, Childersburg, and Enterprise serve only 5311(f) functions and are evaluated below:

- Visible bus stop signs: yes in 2 of 3 locations
- Outside lighting: yes in 3 of 3 locations

- Posted schedule information: yes in 1 of 3 locations
- Overhead shelter: yes in 2 of 3 locations
- Information on local accommodations: yes in 0 of 3 locations
- Telephone numbers for local taxi and police: yes in 1 of 3 locations.

Figures 5-4 through 5-7 show aspects of Greyhound's facilities.

5.1.4 Summary

The differing character of the bus stops makes comparisons difficult. Because WAPT basically no longer has bus stops, its facilities cannot be compared to Capital and Greyhound. With the exception of Capital's Brent location, all of the Capital and Greyhound locations met expectations. However, in general, the stops that also experience un-subsidized bus traffic graded higher than the stops that serve only 5311(f) routes.

The research team particularly noted two items:

- Large and easily visible bus stop signs would be helpful in many locations
- Facilities suggested by *49 CFR Part 374.309, Terminal Facilities* could be easily improved with concentration on posting schedules, information on local accommodations, and telephone numbers for local taxi and police.



Figure 5-4: Dothan Greyhound Lines Bus Stop Covered Waiting Area

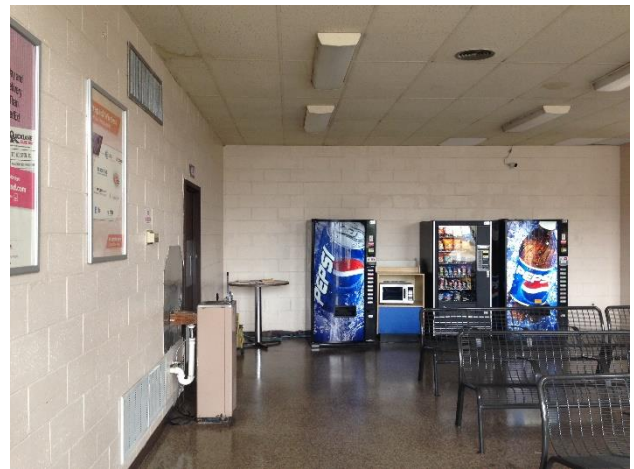


Figure 5-5: Interior Seating at Dothan Bus Stop



Figure 5-6 Anniston Greyhound Lines Bus Stop



Figure 5-7: Passengers Buying Tickets at Anniston Bus Stop

Chapter 6

Evaluation of Service

This chapter will investigate several aspects of the 5311(f) service in Alabama:

- How much more of the rural population has been served by the addition of 5311(f) service?
- Can additional routes increase the percentage of the rural population that is served?
- How are the providers performing?
- Are providers spending adequately on advertising?
- Is the 5311(F) budget adequate to maintain current service and to possibly increase service?

6.1 Additional Coverage

Figure 6-1 shows 25-mile-radius “buffer” circles around bus stops in Alabama. The buffer circles around stops for the bus routes in Alabama before the 5311(f) program began enclose 32.2% of Alabama’s rural population. When the bus stops for the three 5311(f) providers also have buffer circles placed around them, the percentage of the rural population that is within 25 miles of a bus stop increases to 78.1% . That is the difference that the 5311(f) program has made in Alabama: 45.9% more of the rural Alabama population is within 25 miles of a bus station.

Table 6-1 shows the coverage data broken down by provider. For example, Greyhound’s 5311(f) program produced 28.5% of that 45.9% gain; Capital produced 11.3% of it, and WAPT produced 6.1% of it.

Table 6-1 also shows how much of the rural population would be covered if the buffer circles around bus stops were only 10 miles. Before the 5311(f) program began, only 9.6% of the rural population was within 10 miles of a bus stop. The three providers combine to add an extra 21.3% additional coverage (in effect, more than tripling the coverage), and the percentage of the rural population within 10 miles of a bus stop has now increased to 30.9%. (The figure and table were made using U.S. Census Bureau 2010 block data, and the analysis was careful not to “double count” gains. For example, both WAPT and Capital use the bus stop in Selma. The gain for the addition of Selma was apportioned between the two providers; the gain was not counted twice.)

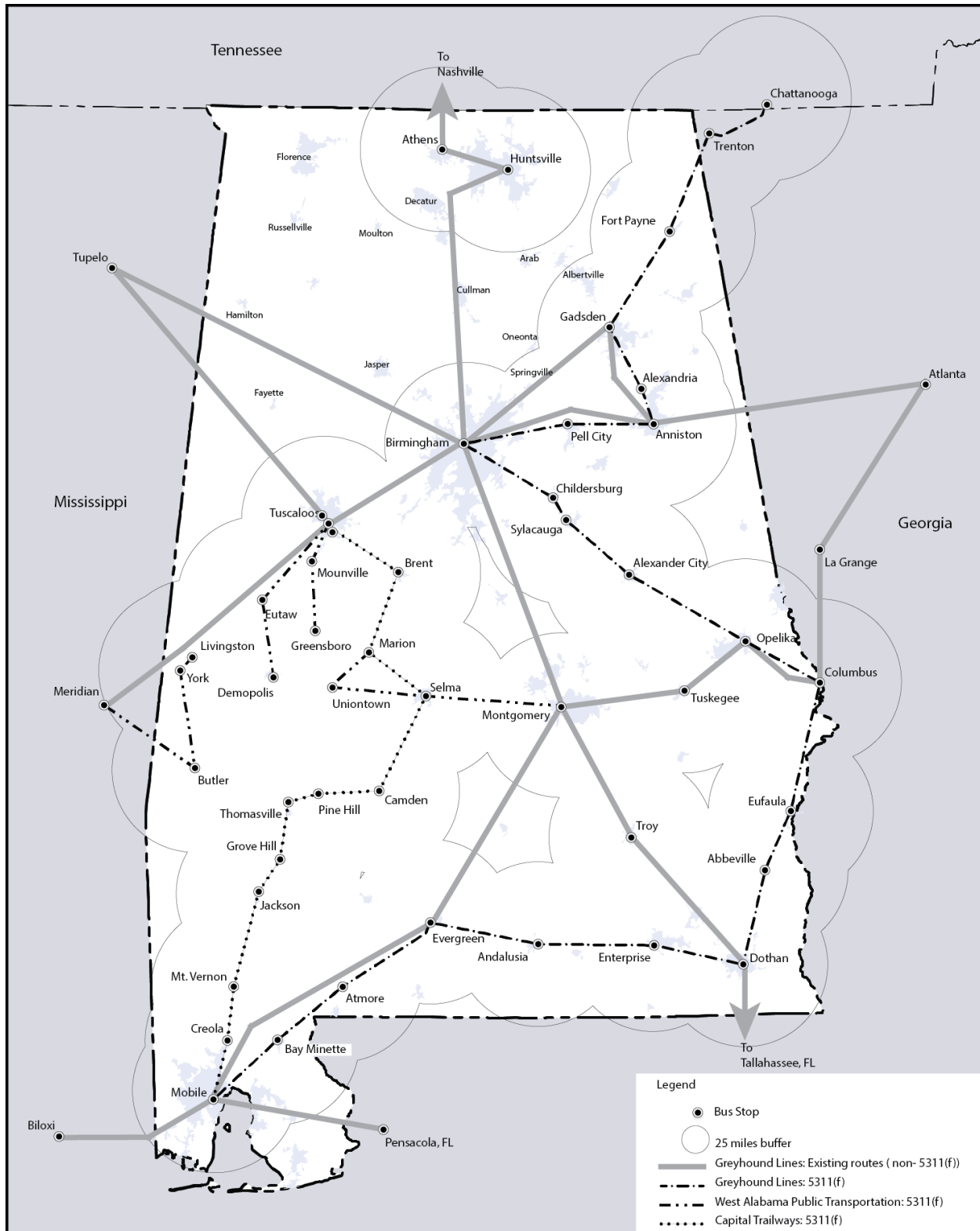


Figure 6-1: A 25 mile buffer Intercity Bus Service Coverage in Alabama

Table 6-1: Intercity Bus Service Rural Coverage

Carrier	Total Rural Pop(2010)	10 mile buffer @bus stops		25 mile buffer @bus stops	
		Potential Riders (2010)	Percentage of Rural Pop (2010)	Potential Riders(2010)	Percentage of Rural Pop (2010)
Greyhound Lines (un-subsidized)	2,695,685	259,148	9.6	866,863	32.2
Greyhound 5311(f)		389,414	14.4	767,866	28.5
Capital Trailways 5311(f)		107,011	4.0	305,247	11.3
WAPT 5311(f)		77,476	2.9	163,990	6.1
Potential New Line (5311(f))		73,449	2.7	203,077	7.5
Total	2,695,685	906,498	33.6	2,307,042	85.6

6.2 Additional Route

Could an additional 5311(f) route provide even more coverage? Figure 6-1 shows that the largest block of un-served Alabama area is in the Northwest portion of the state. Figure 6-2 shows the effect of putting a North-South route from Tuscaloosa to Nashville, passing through Fayette, Hamilton, Russellville, and Florence. This potential new line is also reflected in Table 6-1. If such a new route were implemented, a 10-mile buffer around the stops on the line would increase the percentage of Alabama's rural population that is within 10 miles of a bus stop by another 2.7%, for a total of 33.6% of the population. If the buffer were 25 miles, the percentage of rural population that is within 25 miles of a bus stop would increase 7.5% to a total of 85.6%.

The impact on the program budget of such a potential new line will be explored in Section 6.4 of this chapter.

6.3 Advertising

The research team asked each of the three providers to describe the amount of advertising they performed for their 5311(f) routes. WAPT responded that their advertisement is limited to distributing leaflets in their service area advertising the 5311(f) program. An example of such a leaflet distributed in Bibb County is found in Figure 6-3. WAPT estimates that they spend less than \$5,000 per year on such advertising, and though the leaflet does list Greyhound Intercity Bus, the leaflet does not provide much information about the 5311(f) service that is available.

Capital responded that their advertisement is largely limited to advertisements in university newspapers near the end of a semester to remind students of the intercity bus option for travel home.

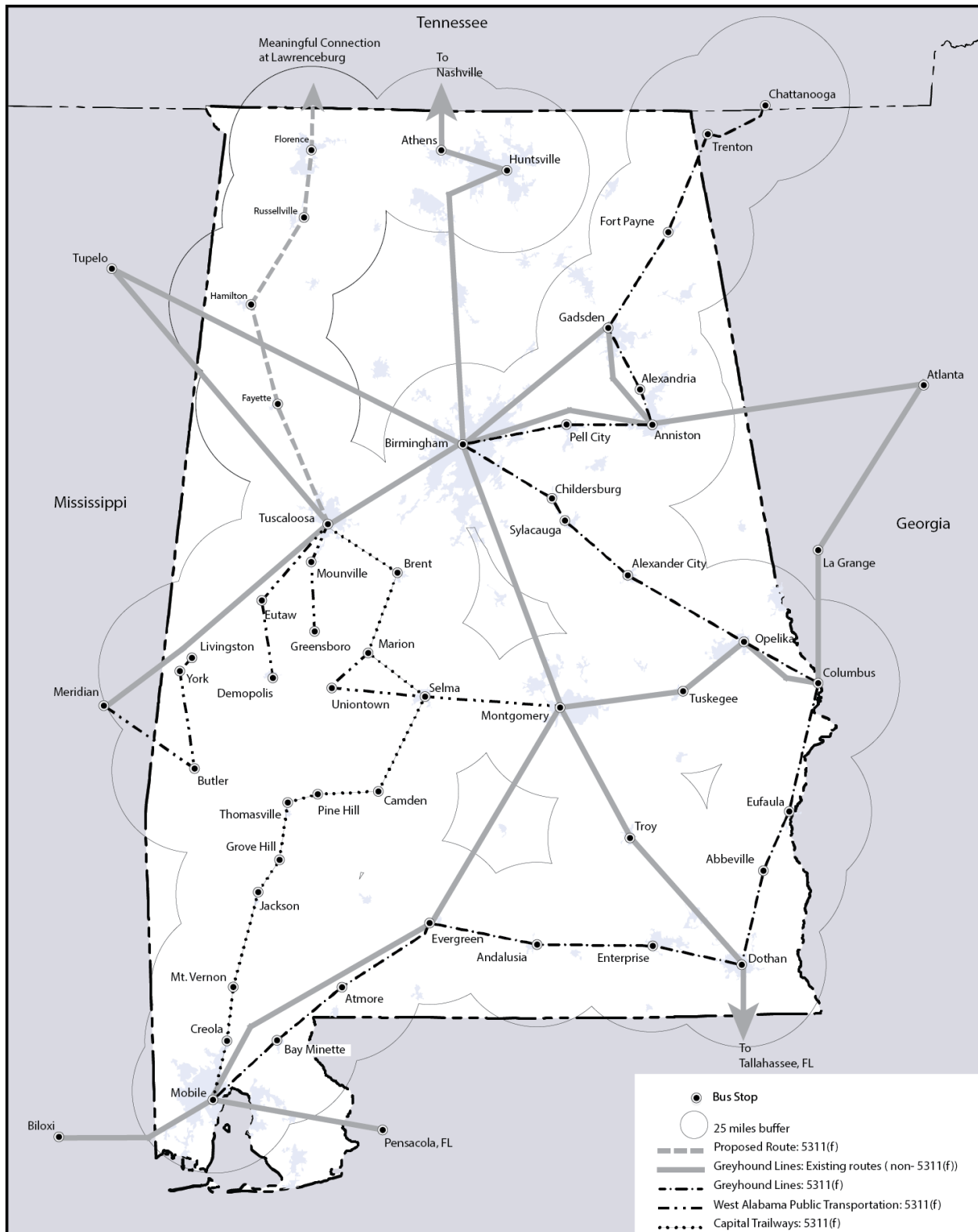
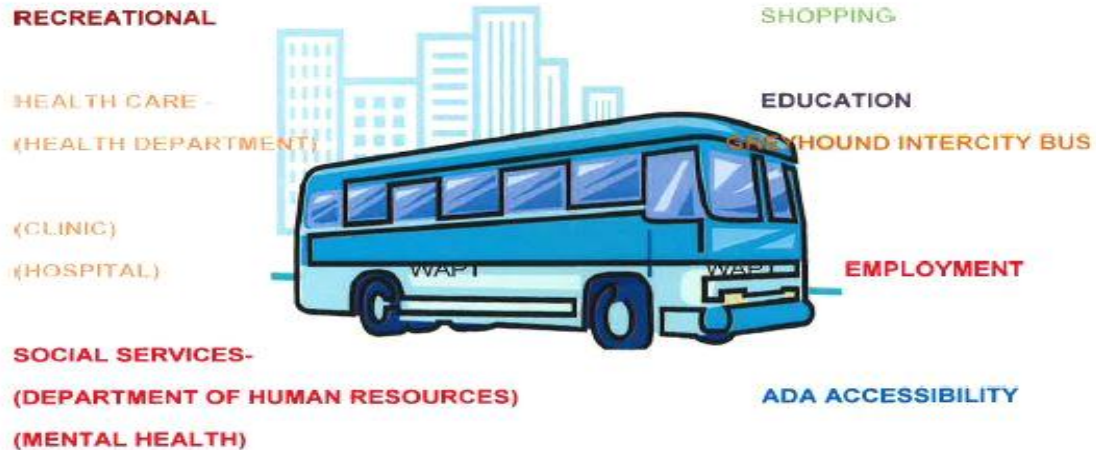


Figure 6-2: Performance Evaluation of Service Carriers

WEST ALABAMA PUBLIC TRANSPORTATION



BIBB COUNTY TRANSPORTATION

TRANSPORTATION!! TRANSPORTATION!!

NEED A RIDE!!

CALL (205) 225-0220 OR

1-877-799-5789

Figure 6-3: WAPT Advertisement for Bibb County, AL

Greyhound advertising is not focused locally, such as on 5311(f) programs. Greyhound rarely buys local advertisement such as local radio or TV spots. Instead, its advertising is focused on the Greyhound national brand. Riders may only learn about the Alabama 5311(f) bus stops when searching online for a bus ticket. A Greyhound consultant interviewed for this project suggested that the last advertisements specific to Alabama 5311(f) bus stops may have occurred when service was initiated several years ago.

An advertising needs study was not performed for this project. However, the responses from the three providers indicate that little advertising of the program has been performed in the past, and the research team will recommend that advertisement budgets be increased in future.

6.4 Budget

ALDOT had roughly \$5M of 5311(f) SAFETEA-LU funding remaining at the end of FY2014. For FY2015, ALDOT has budgeted roughly \$3M for the program. If the \$3M is expended during FY2015, ALDOT will still have approximately \$2M of 5311(f) SAFETEA-LU funding remaining.

MAP-21 funds for the 5311(f) program will also be available. The MAP-21 apportionment for FY2014 for Alabama for Section 5311/5340 was \$15,376,885. If 15% of that value is available for 5311(f), then ALDOT will also have roughly \$2.3M per year to devote to 5311(f) programs.

The actual program has historically cost less than \$2M per year, not counting purchases of rolling stock. Actual costs to the program for each of the three providers were taken from Table 4-1 by subtracting Revenue from Total Cost. This calculation was made for the four, most-recent quarters available on the table. The total is \$1,565,249 and is broken down by provider below:

- WAPT: \$171,242
- Greyhound: \$1,143,307
- Capital: \$250,700

The values came from quarters in FY2013 and FY2014. Allowing for 10% inflation increases the annual program total to roughly \$1.72M per year. Adding another route (such as the one shown in Figure 6-2) might add an additional \$0.25M per year to the budget. If the total program cost is also increased by 15% for an expanded advertising program, the program total is approximately \$2.3M. Even if requests by providers for replacement buses are added, the program seems in firm financial condition when the SAFETEA-LU funds are considered.

6.5 Program Comparisons

A direct comparison of the three providers is not possible because WAPT has become predominantly a demand/response operation, while Capital and Greyhound operate scheduled routes. However, at least one comparison can be made using data from Table 4-2. That table provides each provider's average cost per trip for the four most recent quarters available:

- WAPT: \$24.22/trip

- Capital: \$217.69/trip
- Greyhound: \$118.06/trip

WAPT's cost per trip is the lowest of the three, but it operates over a smaller geographic area and does not have the costs associated with a scheduled route. However, it does show that a demand-response system can be relatively efficient when operating in this way.

6.5.1 Capital and Greyhound

Finding further distinction between Capital and Greyhound service is difficult given the different areas of Alabama that they serve. However Table 6-2 compares the two providers in the 6 “key ratios” that are cited in ALDOT's *Policy and Procedure Manual for Federal Transit Administration Transportation Programs 5307, 5309, 5310, and 5311*. In this comparison, Greyhound fares better in four categories, while Capital performs better in two categories.

Table 6-2: Key Ratio Comparison for Capital and Greyhound

Criteria	Scoring values	West Alabama Public Transportation	Capital Trailways	Greyhound Lines
Productivity ▪ High passenger trips per vehicle hour	1: higher ranked 0: lower ranked	N/A	0	1
Hourly Utilization ▪ High passenger service hours per vehicle hour	1: higher ranked 0: lower ranked	N/A	0	1
Mileage Utilization ▪ High passenger service miles per vehicle miles	1: higher ranked 0: lower ranked	N/A	1	0
Cost Per Passenger Trip ▪ Low cost per passenger trip	1: higher ranked 0: lower ranked	N/A	0	1
Cost Per Hour ▪ Low cost per vehicle hour	1: higher ranked 0: lower ranked	N/A	1	0
Operational Cost Recovery Ratio ▪ High revenue over expenditure	1: higher ranked 0: lower ranked	N/A	0	1
Overall score		N/A	2	4

6.5.2 Comparisons with Other States

Research team personnel attended the Transportation Research Board “Rural Public and Intercity Bus Committee” AP055 committee meeting January 13, 2015 in Washington, DC to ask committee members for advice regarding comparing Alabama's 5311(f) program to programs in other states. The research team had wished to compare Quarterly Report data (including ‘key ratios’) to similar data from other states to help determine whether Alabama's program was as

effective as other states'. The committee members said that two reasons probably made such comparisons unlikely at this time:

- Agencies have not made this data available
- The accuracy of the data is suspect

Chapter 7

Conclusions

The 5311(f) program has made an impact on Alabama. Before the program, 32.2% of Alabama's rural population lived within 25 miles of an intercity bus stop. Today, 78.1% of Alabama's rural population lives within 25 miles of an intercity bus stop.

In years when no rolling stock is purchased, the program's cost to ALDOT is roughly \$1.6M - \$1.7M. Actual costs to the program for each of the three providers for the four, most-recent quarters available totals \$1,565,249 and is broken down by provider below:

- WAPT: \$171,242
- Greyhound: \$1,143,307
- Capital: \$250,700

This study examined the program and data from its three providers and made the following conclusions and observations:

- WAPT experienced low ridership on four of its five scheduled route and converted them to demand/response service. Though demand/response service is allowable in 5311(f) programs, the funding relationship with ALDOT for these routes will change.
- Capital's operating costs during its first two quarters of operation before federally-funded buses were delivered was as much as 7 times higher than its operating costs once those buses arrived. This situation occurred as Capital used its own buses on the route and charged full charter rates. Care should be used to ensure that such situations last a very brief time, as a single quarter using charter buses could increase the program's budget by \$0.25M or more.
- The 5311(f) program's budget situation is strong. Significant 5311(f) funds remain from the SAFETEA-LU program, and MAP-21 funds are expected to total roughly \$2.3M annually. The budget strength can allow the program to expand to un-served areas of the state.
- The general trend in ridership is increasing for all providers. Opportunities to attract riders vary, particularly with the length of the routes and the population around those routes. For the most recent four quarters available, total program ridership was 23,607 persons. Capital carried 1,373 riders; WAPT carried 8,232 riders; Greyhound carried 14,002 riders.
- A provider's cost per trip varies each quarter. Average cost per trip for the four most recent quarters available showed WAPT at \$24.22/trip, Greyhound at \$118.06/trip, and Capital at \$217.69/trip.

- None of the three providers have a significant local advertising budget. Though the research team did not perform an advertising cost:benefit study, it recommends increasing advertising as an opportunity to increase ridership and reduce cost per trip.
- A survey of 5311(f) bus stops indicated that some of them lack some basic amenities, particularly items listed in 49 CFR Part 374.309, Terminal Facilities. The research team recommends a program to ensure the stops have such items as easily-visible signs, posted schedules, information on local accommodations, and telephone numbers for local taxis and police.
- A comparison of the two providers that maintain scheduled routes was performed using the 6 “key ratios” cited in ALDOT’s *Policy and Procedure Manual*. In this comparison, Greyhound fares better in four categories, while Capital performs better in two categories.
- A comparison of Alabama’s 5311(f) program quarterly report data with that of other states was investigated but was deemed not feasible at this time.

References

Alabama Department of Transportation, *ALDOT Bureau of Transportation Planning and Modal Programs Transit Section, Policy and Procedures Manual for Federal Transit Administration Transportation Programs 5307, 5309, 5310, and 5311*, Montgomery, AL.

Community Transportation Association of America, *National Transit Resource Center*, ”
<http://www.ctaa.org/NTRC/RTAP>. Accessed September 2001. Washington, DC, 2001.

Federal Transit Administration, Circular No. 9040.1F, *Nonurbanized Area Formula Program: Guidance and Grant Application Instructions*, 2007.
http://www.fta.dot.gov/documents/FTA_C_9040.1F.pdf accessed 8/15/2014.

Sain Associates, “Alabama Intercity Bus Study,” Birmingham, AL, August 1995.

University Transportation Center for Alabama, *Intercity Bus Service Study 2007*, UTCA Report No. 07403, The University of Alabama, Tuscaloosa, AL, September 2008.

US Bureau of Transportation Statistics, Bus Profile
http://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/national_transportation_statistics/html/table_bus_profile.html accessed 1/17/2015

Appendix A: Quarterly Transportation Report Definitions

The Quarterly Transportation Report is due to ALDOT by the 30th of the month following each fiscal quarter (January 30th, April 30th, July 30th and October 30th each year). The report is designed to show the past quarter's information. The following instructions explain the categories of information requested. A screenshot of the ALDOT Transit Reporting System form is found on page 112.

DEMAND

1. **Passenger Trips** equal the number of total passenger trips made during the quarter. (Each time a person boards and then exits a vehicle, it is considered one passenger trip.)
2. **Passenger Service Hours** reflect the number of hours passengers were on the vehicle.

SUPPLY

1. **Vehicle Hours** equals the total hours **vehicles travel while in revenue service plus non revenue hours**.
2. **Vehicle Miles** equal the total number of miles driven during the quarter.
3. **Passenger Service Miles** equal the number of miles driven with passengers on board.

COSTS

1. **Operating** equals the total quarter's operating costs Expense Recap Sheets. (See Page 101)
2. **Administration** equals the total quarter's administration costs from the Expense Recap Sheets. (See page 101.)
3. **Total Cost** equals the sum of operating cost and administrative cost.

REVENUE

1. **Revenue** equals the total quarter's revenue from the Expense Recap Sheets. (See page 100)

EFFECTIVENESS/EFFICIENCY MEASURES

1. Vehicle miles/gallons of fuel - Divide the total miles driven in the quarter by the gallons of fuel consumed.
2. Number of Project Vehicles – Total number of fleet vehicles.
3. Total seating capacity – Total number of seats available on all vehicles.
4. Road Calls – Total number of road calls during the quarter. A large number here may suggest the need for new vehicles or better preventative maintenance.

DBE REQUIREMENTS

1. Total Contracting Opportunities – Total Federal dollars spent during the quarter on contracting opportunities.
2. DBE Contracts Awarded – Federal Dollar Value of DBE contract awards during quarter.
3. % DBE Awarded – Equal to Federal Dollar Value of DBE contracts awarded divided by the total value of contracting opportunities.

KEY RATIOS

1. Productivity – Divide the number of passenger trips by the number of vehicle hours. This indicates the number of passenger trips per hour being provided. The higher the number the more efficient the system utilizes vehicles.
2. Hourly Utilization - Divide the passenger service hours by the number of vehicle hours. Consistently low numbers in this category may indicate the need to restructure your routes to reduce “deadhead” time.
3. Mileage Utilization – Divide passenger service miles by the total vehicle miles. Low percentages in this category may indicate the need for route restructuring.
4. Cost Per Trip – Divide the total operating cost by the number of passenger trips. This figure indicates how much it costs you to provide service. The figure should be lower than cost per hour as you should be providing several passenger trips per hour. However, a consistently high number should lead you to examine your management practices.
5. Cost per Hour – Divide the total operating cost by the total number of vehicle hours.
6. Operational Cost Recovery Ratio – Divide Revenue by Operating Expenses.

Appendix B: 49 CFR Part 374.309, Terminal Facilities

§ 374.309 Terminal facilities.

(a) *Passenger security.* All terminals and stations must provide adequate security for passengers and their attendants and be regularly patrolled.

(b) *Outside facilities.* At terminals and stations that are closed when buses are scheduled to arrive or depart, there shall be available, to the extent possible, a public telephone, outside lighting, posted schedule information, overhead shelter, information on local accommodations, and telephone numbers for local taxi service and police.

(c) *Maintenance.* Terminals shall be clean.

Appendix C

ALABAMA TRANSIT INTERCITY BUS TRANSIT STUDY BUS STATION EVALUATION FORM

Station Location: _____

Hours/Days of Operation: _____

Bus Stop

Type: Bus only/ Other _____

Sheltered Ticket Area: Yes / No

Sheltered Waiting Area: Yes / No

Sheltered Boarding Area: Yes / No

Benches Available: Yes / No

Public Transit Available: Yes / No

Agent Available: Yes / No

Bus Stop is Centrally Located: Yes / No

Interior

Air Conditioning: Yes / No

Handicap Accessible: Yes / No

Rest Rooms: Yes / No

Public Phone: Yes / No

Eating Area: Yes / No

Interior Seating: Yes / No

Overall Condition: Excellent / Good / Fair / Poor

Food: Vending machines / Cold Foods / Hot Foods / None

Exterior

Parking: Yes / No, No of Spaces _____

Parking Separated from Terminal: Yes / No

Bus Stop Sign Clearly Displayed: Yes / No

Hours of Operation Posted: Yes / No

Schedule Posted Yes / No

Overall Condition: Excellent / Good / Fair / Poor

Taxi Service Available: Yes / No

Tickets

Separate Ticket Window: Yes / No

Avg. Tickets Sold: _____ Day / Month

Schedules Available: Yes / No

Number of Buses per Day: _____

Package Service

Package Service Available: yes / No

Packages Held for Pickup: Yes / No

Surrounding Area

Well lit: Yes / No

Clean: Yes / No

Safety: (Unsafe) 1 2 3 4 5 (Very Safe)

NOTE: Form prepared by UTCA research team.

University Transportation Center for Alabama

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