PULASKI AREA TRANSIT
TRANSIT DEVELOPMENT PLAN
FISCAL YEAR 2012-2017

Final Report

March 2011

Prepared by:

CTG Connetics Transportation Group

Under Sub-Contract to:

PBSJ

Under Contract to

DRPT
Virginia Department of Rail and Public Transportation

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CHAPTER 1: PAT SYSTEM OVERVIEW

Pulaski Area Transit (PAT) serves a small rural community off I-81 in the New River Valley in southwestern VA. PAT's mission is to provide safe, reliable and efficient transportation service to the residents of Pulaski Town and County. PAT's success lies in getting the buses to where the people are, building relationships with merchants and employers, and being flexible and customer-friendly.

1.1 HISTORY

PAT was established in 2003 when the community realized that a large proportion of the residents of the Town of Pulaski did not drive and relied heavily on taxicabs as their sole means of transportation. PAT began with a one-year demonstration grant from Virginia Department of Rail and Public Transportation (VA DRPT) of $173,000 with a local five percent match. Funds were generated by the Town of Pulaski by soliciting local businesses and holding a golf tournament. The golf tournament has become an annual event.

The first advisory council meeting was held in August 2004. It included representatives from the Town of Pulaski, Pulaski County, Agency on Aging, Pulaski County Department of Social Services, and Disability Services board. A fixed route with 24 stops along with demand response service was approved. Service was started on October 1, 2004, with two buses loaned from the New River Valley Agency on Aging/Senior Services until PAT's new buses arrived. Service was provided Monday through Friday, 8 am to 4 pm. The fare was 75 cents per one-way trip with children three years and under riding free. People in wheelchairs or requiring assistance paid $1.50. The demand response service needed a 24-hour notice and the fare was $2 per one-way trip.

Ridership increased steadily from 35 riders per day in the first month to 85 riders per day by December 2004, and went over the goal of 100 riders per day by the end of the first year. For the first year, PAT provided more than 14,000 passengers with trips to doctors, hospitals, shopping, work, and personal business. Transportation was also provided to events such as Count Pulaski Days, the Beatle Concert, baseball games, class reunions, special trips for area nursing homes, and daily shuttles to Randolph Park or Dublin. PAT also operated on several Saturdays, partly due to funding from Walmart of Pulaski. PAT was recognized as the fastest growing new system in the state.

On October 1, 2005, PAT received funds from the Federal Transit Administration (FTA) as a 5311 program and VA DRPT with local funding from the Town of Pulaski and Pulaski County. PAT's budget was $171,000 and provided 16 hours of service per day with two 12-passenger buses. In FY11, PAT will provide 40 hours of service per day using seven buses with a budget of $380,000. Fifty percent of the funding comes from the FTA 5311 program, 15 percent from VA DRPT, and the rest is from local sources including the Town of Pulaski, Pulaski County, local merchants and businesses, and income from special trips for area events.

PAT has won many awards in its short life. In 2006, PAT won the Small Business of the Year award from the Pulaski County Chamber of Commerce. In the same year, the Town of Pulaski won the Virginia Municipal League's Achievement Award for a population of 5,001-10,000 for creating PAT to fulfill a need for reliable public transportation. In 2008, PAT was one of two transit systems in the country to receive the Success in Enhancing Ridership Award from the FTA for areas with populations below 50,000 persons.

1.2 GOVERNANCE

PAT is governed by the New River Valley Senior Services Board of Directors and the PAT Advisory Council which represent stakeholders from the local area. The relationship between these organizations is described in the next section. The current board members are listed in Table 1-1 and advisory council members are presented in Table 1-2. Both the board and the council meet quarterly.

TABLE 1-1: SENIOR SERVICES BOARD OF DIRECTORS FY2010

Board Member	Alternate	Appointed By
Mr. Scott Weaver	Mr. Richard Ballengee	Town of Christiansburg
Mr. John Peek	Mr. Paul Baker	Giles County
Ms. Susan Anderson (Chair)	Ms. Cecile Newcomb	Town of Blacksburg
Ms. Lydia Hickam	Ms. Jill Sandidge	Town of Pulaski
Mr. Robert Gribben (Secretary/Treasurer)	Ms. Elizabeth Doyle	Montgomery County
Mr. R.L. Nicholson	Ms. Mary Ann Semones	City of Radford
Ms. Elaine Powell	Mr. Robert Hiss	Pulaski County
Mr. Lowell Boothe	Mr. Dan Campbell	Floyd County

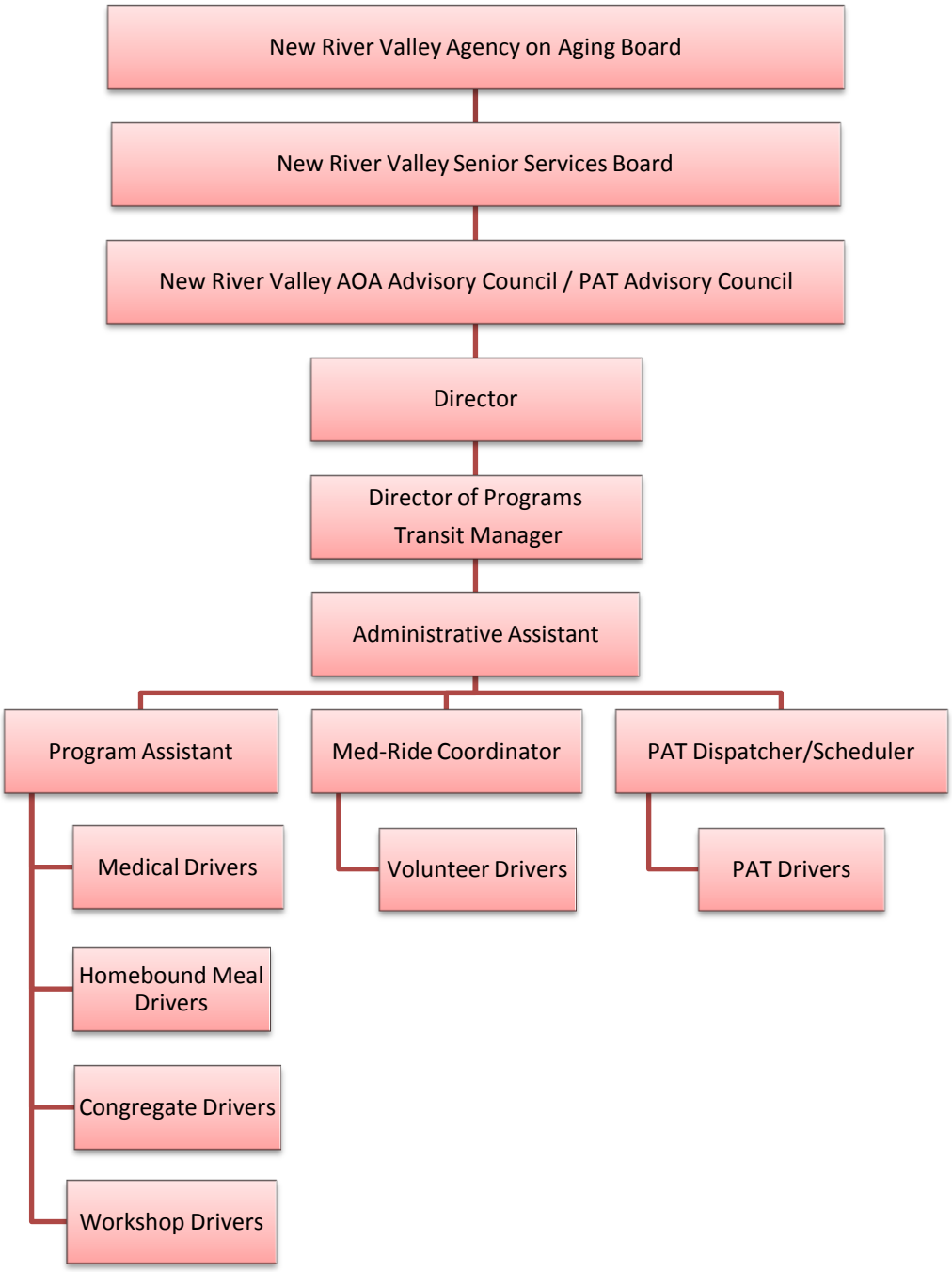
TABLE 1-2: PAT ADVISORY COUNCIL

Advisory Council Member	Representing
Ms. Elaine Powell	NVRSS Board Pulaski County
Ms. Barbie Tate	Town of Pulaski
Mr. Dave Hart	Town of Pulaski
Mr. Anthony Akers	Pulaski County
Ms. Sally Quesenberry	Pulaski County
Ms. Betty Hess	Consumer
Ms. Amy Heinline	Montgomery County
Delegate Ms. Anne Crockett-Stark	

1.3 Organizational Structure

The organization chart presented in Figure 1-1 shows the close relationship between PAT and its partner agencies, the New River Valley Agency on Aging and New River Valley Senior Services. PAT shares office space and staff with its partner agencies. PAT has two full-time and four part-time staff and 11 part-time drivers.

FIGURE 1-1: PAT ORGANIZATION CHART



1.4 Transit Services Provided and Areas Served

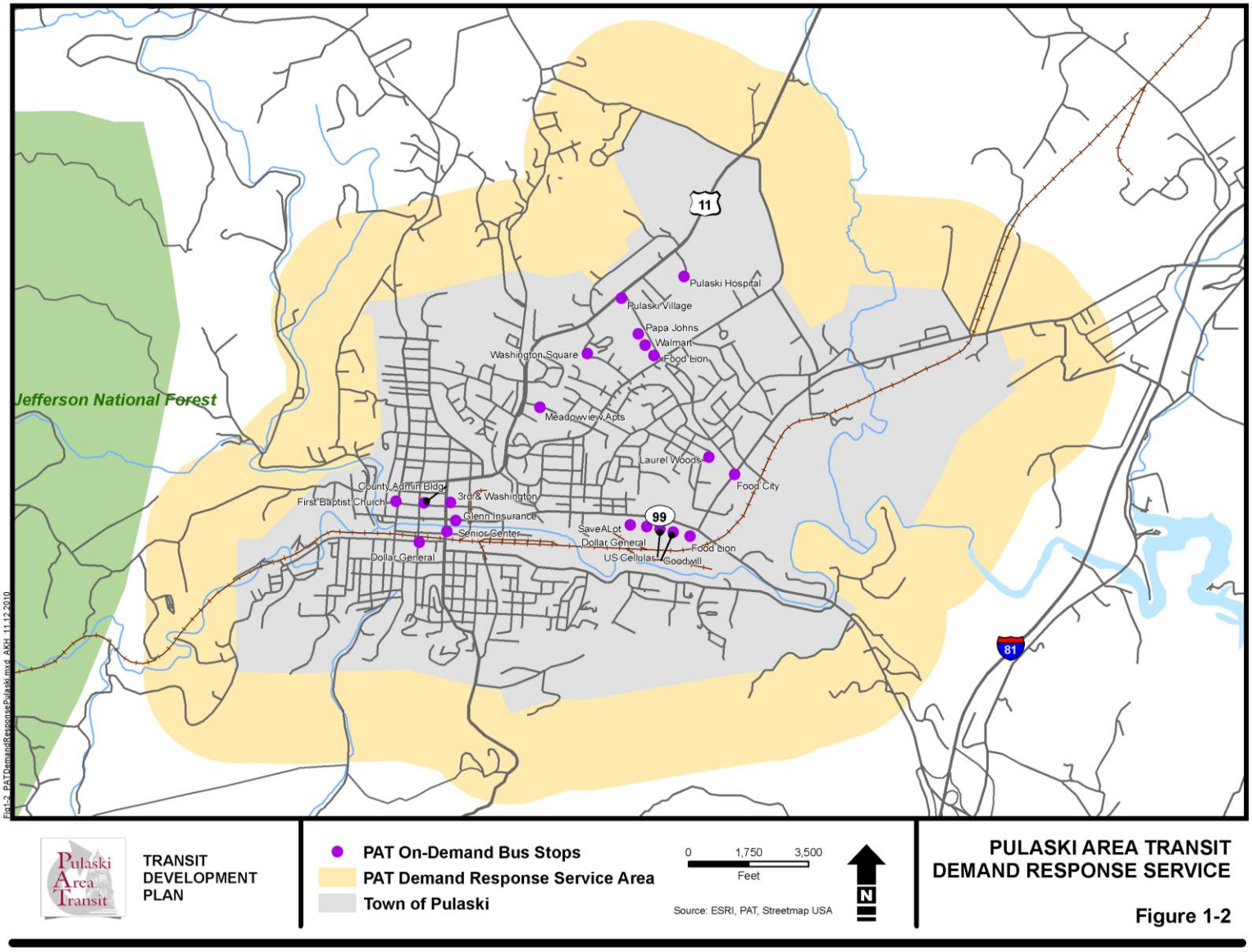
PAT's service area includes the Town of Pulaski and Pulaski County. Initially, PAT started with one fixed route with 24 stops, and a demand response service. But the success of the demand response service encouraged PAT to try to get the buses as close to the riders' locations as possible, rather than expect riders to come to the bus stops. PAT would like to build on this successful model for provision of service as they expand the service areas and grow ridership.

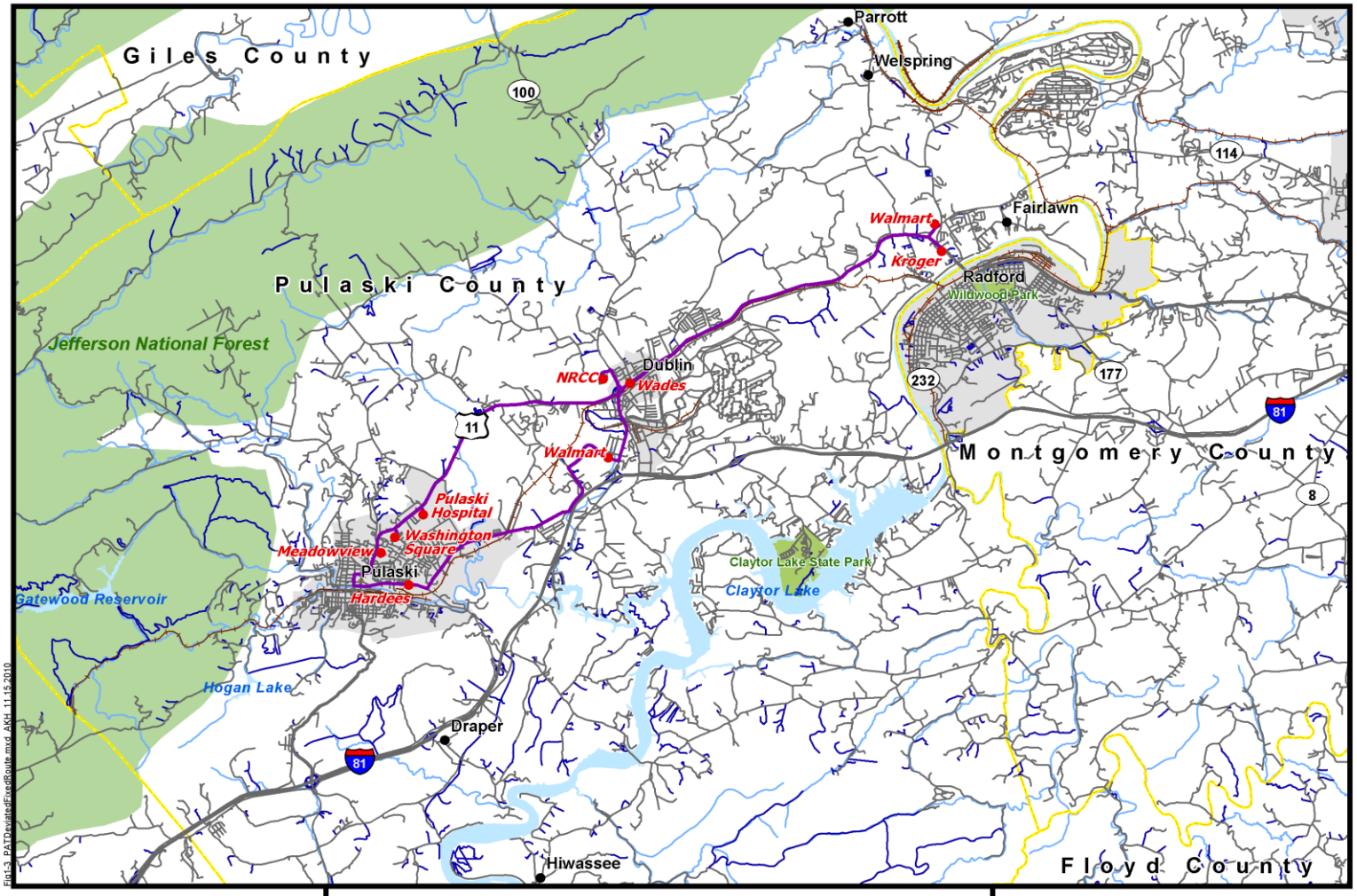
Demand Response Service: Currently, PAT provides demand response service in all areas within the Town of Pulaski and one mile outside the city limits. PAT's demand response route and bus stops in the Town of Pulaski are shown in Figure 1-2. Riders call PAT when they are ready to be picked up. Wait times are generally about 15 minutes, except in inclement weather.

Deviated Fixed Route Service: PAT also runs a deviated fixed route between the Town of Pulaski and Fairlawn in Pulaski County. Service in the Town of Dublin is limited to either drop-off or pick-up, connecting Dublin to other areas. Trips within Dublin are not permitted since the City of Dublin does not contribute to PAT's budget. A limited number of on-demand riders are accommodated on this service. The PAT route and fixed stops for this service are presented in Figure 1-3, and days/hours of service are listed in Table 1-3.

TABLE 1-*3:* SCHEDULE FOR PAT'S DEVIATED FIXED ROUTE SERVICE

Pulaski Hardee's	New River Community College	Dublin Walmart	Dublin Wades	Fairlawn Kroger	Fairlawn Walmart
7:20am	7:45am	7:55am	8:00am	8:20am	8:30am
	9:00am	9:10am	8:50am		
10:15am	10:30am	10:40am	10:45am	11:05am	11:15am
	11:40am	11:45am	11:30am		
12:30pm	12:45pm	12:55pm	1:00pm	1:20pm	1:30pm
	1:50pm	1:55pm	1:45pm		
3:45pm	4:00pm	4:15pm	4:10pm		


Jefferson National Forest
11
81
99
Pulaski Hospital
Pulaski Village
Papa Johns
Walmart
Food Lion
Washington Square
Meadowview Apts
Laurel Woods
Food City
County Admin Bldg
First Baptist Church
3rd & Washington
Glenn Insurance
Senior Center
Dollar General
SaveALot
Dollar General
US Cellular
Food Lion
Goodwill
Fig1-2_PATDemandResponsePulaski.mxd AKH 11.12.2010
TRANSIT DEVELOPMENT PLAN
PAT On-Demand Bus Stops
PAT Demand Response Service Area
Town of Pulaski
0 1,750 3,500
Feet
Source: ESRI, PAT, Streetmap USA
N
PULASKI AREA TRANSIT
DEMAND RESPONSE SERVICE
Figure 1-2


Giles County
Pulaski County
Montgomery County
Floyd County
Jefferson National Forest
Parrott
Welspring
Fairlawn
Radford
Wildwood Park
Dublin
Pulaski
Draper
Hiwassee
Claytor Lake State Park
Claytor Lake
Gatewood Reservoir
Hogan Lake
NRCC
Wades
Walmart
Kroger
Pulaski Hospital
Washington Square
Meadowview
Hardees
100
114
232
177
11
81
8
TRANSIT DEVELOPMENT PLAN
PAT Deviated Fixed Route Bus Stops
PAT Deviated Fixed Route
Municipality
County Line
0 6,500 13,000
Feet
Source: ESRI, PAT, Streetmap USA
N
PULASKI AREA TRANSIT
DEVIATED FIXED ROUTE
SERVICE
Figure 1-3

Other transportation providers that operate within the same geographical area as PAT include:

- **Blacksburg Transit (BT) -** provides public transportation to the Town of Blacksburg, Virginia Tech, Town of Christiansburg, and the partnering communities within the New River Valley. BT is projected to carry three million passengers in 2010.
- **The Smart Way Bus** - is the regional public transportation service operated by Valley Metro. It links the Roanoke Valley and Blacksburg and Christiansburg in the New River Valley.
- **Community Transit** - provides fixed route services as well as medical trips for individuals with disabilities and/or special needs in Floyd, Giles, Montgomery and Pulaski counties, and the City of Radford. Community Transit serves contracts with Medicaid, Virginia Premier, Optimal Translation & Transportation, Radford Department of Social Services, Radford City Public Schools and New River Community Action.
- **Tartan Transit** - operated by Radford University for students, faculty and staff.
- **Ride Solutions** - is the regional rideshare program for the Roanoke Valley – Alleghany Region. They provide carpool matching services, as well as transit and park and ride information, and an emergency cab service to participants. Membership and services are free.
- **The City of Radford and Radford University (RU) bus system** - proposed to begin service in 2011. Three large buses and seven 19-passenger buses will be purchased by the City of Radford with federal funds, and operation costs will be shared between the city and the university. RU students will be recognized as "free riders" with a student ID. The total cost of start-up and operation for the first year is $1,778,080 of which the university will pay $202,539 and the city will contribute $87,983.

In addition to the transportation services listed above, there are other nonprofit and public agencies providing human services transportation, university shuttles, and private, for-profit transportation companies in the area. Although there are multiple transportation systems in the area, seamless transfers are often a problem. The New River Valley Planning District Commission would like to integrate the local transportation systems to make the region more accessible and convenient.

1.5 Fare Structure

- $ 0.75 per one-way trip for trips within the Town of Pulaski
- $2.00 per one-way trip for on-demand service
- $2.00 per one-way trip to Pulaski County, Dublin or Fairlawn
- $1.00 for students going to New River Community College – new fare implemented in October 2010

Priority is given to those with disabilities. There are no discounts for seniors or the disabled. However, Social Services and Community Services provide bus passes to eligible riders. Children age three and under ride free. Children under age 12 must be accompanied by an adult.

1.6 Fleet

PAT's current fleet consists of 11 vehicles. Two (2) units are non-revenue supervisory vehicles. The remaining nine vehicles are Ford Supreme 12-passenger buses which are equipped with wheelchair lifts. The fleet has expanded at a regular pace of about two buses per year. All vehicles have two-way radios but are not equipped with GPS or other tracking technology. Currently, all vehicles run on gasoline. In the future, PAT would like to increase the diversity of their fleet to be able to dispatch the appropriate vehicle(s) for different types of trips. A larger 25-seater bus may be acquired to serve trips for special events or groups.

TABLE 1-4: PAT EXISTING VEHICLE INVENTORY BY YEAR OF ACQUISITION

No. of Vehicles	Vehicle Type	Seating Capacity	Revenue/ Non-Revenue	Projected Year/Mileage for Replacement
1	2004 Chevrolet	5	Non-Revenue	2008/100,000
3	2005 Ford Supreme Bus	12	Revenue	2009/100,000
1	2006 Ford Supreme Bus	12	Revenue	2010/100,000
2	2007 Ford Supreme Bus	12	Revenue	2011/100,000
1	2008 Ford Explorer Bus	5	Non-Revenue	2012/100,000
3	2010 Ford Supreme Bus	12	Revenue	2014/100,000
11	**TOTAL**			

In 2008, the Town of Pulaski acquired a trolley from VA Regional Transit, VA DRPT, and the City of Staunton. The trolley was donated by a resident of the Town of Pulaski. The trolley is used for special events.

1.7 Existing Facilities

PAT's administrative offices are co-located with its partner organizations, the New River Valley Agency on Aging and the New River Valley Senior Services, at 141 East Main Street, Suite 500, Pulaski, VA 24301. The office is located in a shopping center in the historic district of the Town on Pulaski. The offices include a driver break room and a large conference room which is used regularly for training.

There is an open area behind the building that is used to wash vehicles. Since this area is open to the elements, the winter temperatures and snow make it difficult to keep vehicles clean. There is no maintenance facility on the premises. For cost-efficiency, maintenance is contracted to the Town of Pulaski.

There is parking for two PAT vehicles at the office, and seven vehicles are parked in the lot adjacent to the Senior Center at 102 North Washington Avenue, Pulaski, VA 24301. In the future, PAT would like to secure funding to establish a separate office that houses all their needs including parking for all vehicles in one location, a fueling area, and a covered paved wash area.

PAT BUS STOP AT PULASKI HOSPITAL

Bus Stops and Shelters: PAT has signs posted for bus stops around the Town of Pulaski. There are no bus shelters. Most riders wait inside a store or building where possible. PAT has an *American Recovery and Reinvestment Act* (ARRA) grant of $54,000 which will fund 6 shelters in the near future. Proposed locations include Meadowview apartments, the ballpark, on Route 11 between Dublin and Pulaski, on Route 11 between Fairlawn and Dublin, and Washington Square.

1.8 Transit Security Program

PAT is dedicated to providing safe rides by ensuring drivers are adequately trained. PAT provides monthly training covering a range of issues and topics in short, efficient and informative sessions. These monthly training sessions also encourage communication between drivers and dispatchers and provide opportunities to share insights. Eight hours of training for defensive driving is provided annually.

Standard operating procedures are in place to conduct daily pre-trips and post-trip inspections on each vehicle. Procedures for fare accounting include a daily accounting practice. PAT uses Diamond fare box canisters that have a brass cylinder to store fares collected on-board. Drivers check an empty canister out from the office at the beginning of the shift and bring the filled canister back at the end of the shift. Fares are counted, logged and deposited the next day.

1.9 Public Outreach

The best advertisements for PAT are their clean, well-maintained buses being seen transporting people around the area. Bus schedules are posted in the buses, at PAT's headquarters, other town and county offices and local stores, and on the New River Community College campus. Schedules are also advertised in the local newspaper. There are regular news articles and paid advertisements to reach out to potential PAT riders in the local newspaper and on the radio. PAT would like to update their website (nrvseniorservices.org) to provide more transportation information to customers and potential riders.

PAT also participates in community events such as Count Pulaski Days and the Christmas and Fourth of July parades where the buses and staff are dressed up as cartoon characters. PAT also participates in the Agency of Aging Expo at the Community College, Pulaski Chamber of Commerce Expo, Halloween Treat Trail, and Pulaski Fest. Staff and volunteers wear PAT T-shirts.

PAT provides free rides to veterans on Veterans' Day and to voters on Election Day, and supports the local baseball team, the Pulaski Mariners. PAT's annual golf tournament is both a fund-raiser and a public outreach campaign. In 2008, the Town of Pulaski acquired a trolley named Lady Rebecca which is used for special events. The trolley helps to draw attention to the Town's public transportation options.

CHAPTER 2: GOALS, OBJECTIVES AND STANDARDS

This chapter presents the Pulaski Area Transit (PAT) vision and mission, identifies goals and objectives for the Transit Development Plan (TDP), and recommends a set of performance measures for the transit system.

2.0 VISION AND MISSION

PAT's vision is to become a regional public transportation system serving all areas of the New River Valley including four counties and one city.

PAT's mission is to provide safe, reliable and efficient transportation service to the residents of Pulaski Town and County.

2.1 TDP GOALS AND OBJECTIVES

Goal 1: Expand the current service area

Objective1.1: Increase ridership by 20% annually

Objective 1.2: Provide better service to remote parts of Pulaski County

Objective 1.3: Expand service to other areas in the New River Valley

Goal 2: Plan for adequate financial resources to support operational plans

Objective2.1: Establish a variety of funding sources including federal, state, local, contracts, donations from local businesses, fares, private, and advertising

Objective 2.2: Help with fund-raising activities in all localities and assist in collecting funds for the local match in order to receive federal and state funds

Objective 2.3: Apply for federal and state funding to meet Board-approved expenditures as outlined in the annual budget

Objective 2.4: Create partnerships with local businesses, governments and the community college

Objective 2.5: Establish a 5% contingency reserve over operational expenses

Goal 3: Recruit and retain a qualified workforce

Objective 3.1: Develop and implement a process to retain and expand management expertise and community investments

Objective 3.2: Create a staff development program to foster personal and professional growth

Objective 3.3: Develop, implement, monitor and improve training programs that will foster excellence in performance and comply with all the regulatory issues concerning public transit

Goal 4: Use all appropriate media to market PAT services

Objective 4.1: Establish and maintain a positive relationship with PAT stakeholders

Objective 4.2: Enhance PAT's public image so that it is recognized as a first rate public transit provider throughout the New River Valley

Objective 4.3: Maintain public awareness of transportation issues, changes and input through area media such as newspapers, radio and TV.

Objective 4.4: Develop or have access to a current web site utilizing computer technology to provide information to our customers and potential customers

Goal 5: Plan and manage assets to achieve proposed operational capacity

Objective 5.1: Establish, review, replace and manage the rolling stock to accommodate planned levels of ridership

Objective 5.2: Seek funding to replace and increase the number of vehicles to accommodate service area expansions

Objective 5.3: Ensure all vehicles meet ADA requirements while maintaining sufficient diversity to provide the most efficient vehicle to service the job

Objective 5.4: Establish a facility in Pulaski to house PAT administrative, training and maintenance needs

2.2 Service Performance Standards

This TDP work effort has also identified the following service standards that are to be monitored on an annual basis by PAT administrative staff. It is important to note that these standards may need to be updated periodically as service characteristics change over time. Significant changes in service hours and service miles can take up to three years to reach their full ridership potential.

2.2.1 Ridership Service Productivity Measures

The following system-wide service standards are proposed based on a review of ridership characteristics over the past five years and a peer review of comparable transit agencies.

Passengers per Revenue-Hour

Demand-responsive and deviated fixed route service should maintain a minimum of **7.0** passenger trips per revenue-hour. This is comparable to the last four years of service, which ranged from 6.9 to 7.4.

Passengers per Revenue-Mile

Demand-responsive and deviated fixed route service should maintain levels equivalent to **.55** passenger trips per revenue-mile. This is the average from FY2006 to FY2010, which ranged from .55 in FY2006 to .62 in FY2008 and .42 in FY2010.

Corrective measures should be investigated if ridership on PAT's fixed-route system and/or demand-responsive system fall below the levels identified above for twelve (12) months in a row and there has not been a significant change in revenue-miles or revenue-hours.

2.2.2 Cost Effectiveness Measures

The farebox recovery ratio calculates the farebox revenues as a percentage of operating expenses. This ratio is an indicator of cost effectiveness of the system.

Farebox Recovery Ratio

PAT's farebox recovery ratio for fixed-route services should remain at or above **11.8** percent. This is equivalent to FY2010.

Corrective measures should be investigated if the farebox recovery ratio falls below this standard for twelve (12) months in a row.

Cost per Revenue-Hour

In FY2010, PAT's operating cost per revenue-hour was $37.85. This is in line with the average over the past five years from FY2005 to FY2010. Thus, PAT's operating cost per revenue-hour for demand-responsive and deviated fixed route services should not exceed **$38.00** per revenue-hour.

Cost per Revenue-Mile

PAT's operating cost per revenue-mile for demand-responsive and deviated fixed route services should not exceed **$3.10** per revenue-mile. This is the average cost per revenue hour from FY2005 to FY2010, which ranged from $3.72 in FY2005 to $2.18 in FY2010.

Cost per Passenger Trip

PAT's operating cost per passenger trip for demand-responsive and deviated fixed route services should not exceed **$6.00** per passenger trip. This is the five-year average from FY2005 to FY2010 which ranged from $11.7 in FY2005 to $3.6 in FY2010.

Corrective measures should be investigated if the operating costs per revenue-hour, revenue-mile or passenger trips fall below theses standard for a period of twelve (12) months in a row and there has not been a significant change in service hours or miles. These measures should also be adjusted periodically to reflect current service.

CHAPTER 3: SERVICE AND SYSTEM EVALUATION

As discussed in Chapter 1, PAT currently offers a deviated fixed route service between the towns of Pulaski, Dublin and Fairlawn in Pulaski County, as well as a demand response service around the Town of Pulaski. The service has changed since PAT was established in FY2004 as lessons were learned about the needs of riders. This chapter provides an evaluation of the existing service, a historical performance evaluation over the past five years, a peer review, results from the latest onboard survey, and a land use summary of the current and potential service area.

3.1 EXISTING SERVICE EVALUATION

The following is an analysis of the existing ridership for the PAT system using FY2010 (Oct 2009 – Sept 2010) ridership data collected by PAT. In FY2010, a total of 62,781 passengers used the PAT system, 1,250 of which were demand response riders and 61,531 rode the deviated fixed route. Table 3-1 shows the ridership and revenue for FY2010.

TABLE 3-1: FY2010 RIDERSHIP AND REVENUE

Month	Days	Riders	Average Daily Riders	Vehicle Miles	Revenue	Passengers/ Vehicle Mile
Oct	22	5073	230.59	13,372	$ 3,810	0.38
Nov	19	4669	245.74	10,789	$ 3,392	0.43
Dec	20	4693	234.65	10,745	$ 3,692	0.44
Jan	20	4706	235.30	10,962	$ 4,036	0.43
Feb	18	4345	241.39	9,750	$ 3,299	0.45
Mar	23	5855	254.57	16,379	$ 4,366	0.36
Apr	22	5728	260.36	13,220	$ 4,243	0.43
May	20	4986	249.30	11,989	$ 5,809	0.42
Jun	22	5324	242.00	12,541	$ 3,980	0.42
Jul	21	5865	279.29	12,974	$ 4,624	0.45
Aug	22	5763	261.95	13,479	$ 4,502	0.43
Sep	22	5,774	262.45	13,076	$4,672	0.44
Total	***251***	***62,781***	***249.80***	***149,276***	***$ 50,425***	***0.42***

Figure 3-1 shows monthly PAT ridership for FY2010 and Figure 3-2 displays the FY2010 average daily ridership by month. Ridership was higher in the spring and summer, with July 2010 recording the highest monthly ridership of 5,865 passengers and highest average daily ridership of 279.29 passengers per day.

FIGURE 3-1: FY2010 MONTHLY RIDERSHIP

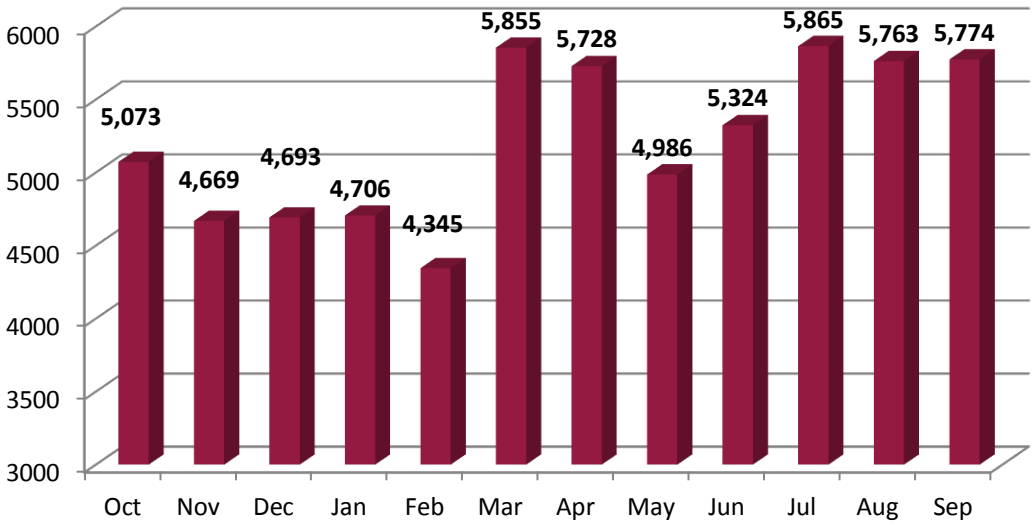
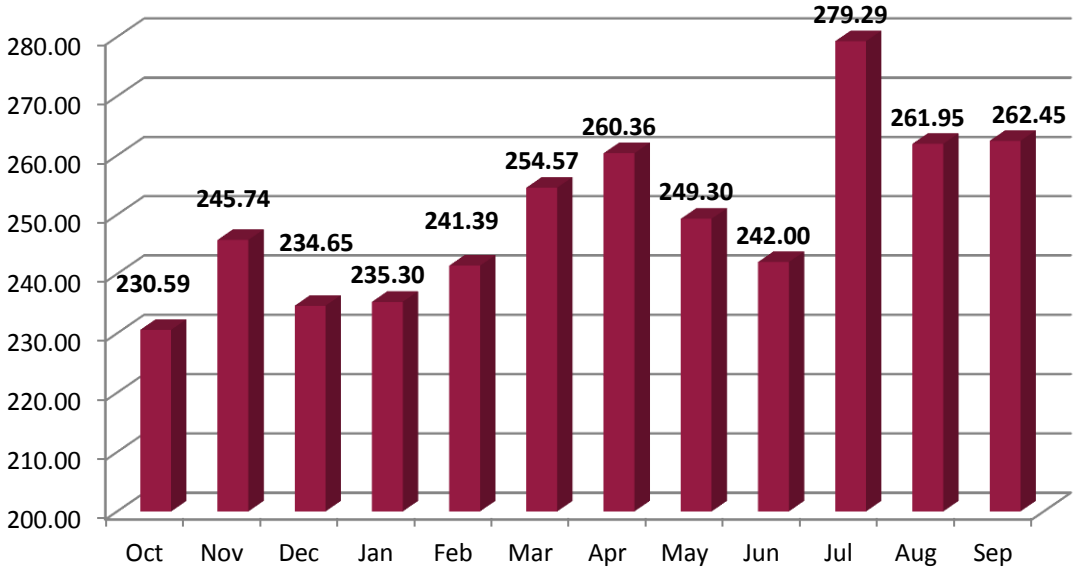
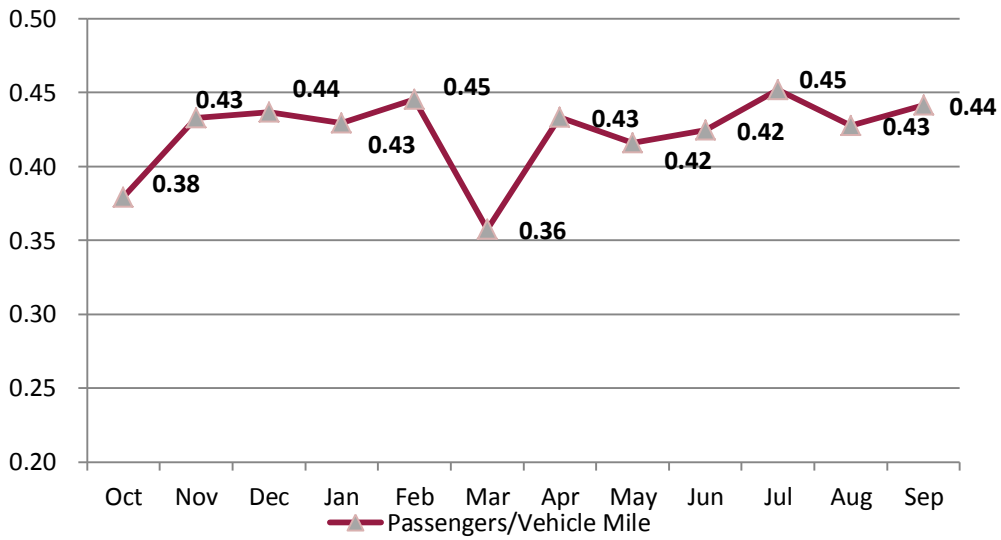


FIGURE 3-2: FY2010 AVERAGE DAILY RIDERSHIP BY MONTH



As seen in Figure 3-3, passengers per vehicle mile generally ranged between 0.42 to 0.45, with lower service efficiency in October 2009 and March 2010.

FIGURE 3-3: FY2010 PASSENGERS PER VEHICLE MILE BY MONTH



3.2 Fare Utilization

PAT fares include the Demand Response service at $2.00 each and the New River Express service at $1.00 per rider. Of the $49,980 fare revenues in FY2010 in FY2010, $2,500 of those came from 1,250 passenger trips on the Demand Response Service.

3.3 Historical Performance Evaluation (Six Year Analysis)

This section evaluates the historical performance of the PAT system based on data collected by PAT since inception (FY2005-2010). Table 3-2 lists PAT's annual data for the six-year period. Over this period, the overall number of passenger trips grew by 258.7 percent, while revenue-hours grew by 65.9, reflecting strong demand for the service. Total O&M costs increased by 60 percent over the same time period.

TABLE 3-2: PAT HISTORICAL ANNUAL STATISTICS

	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	% Change from FY2005 to FY2010
Passengers-Trips	17,500	38,684	53,072	55,384	56,778	62,781	258.7%
Revenue-Hours	5,200	6,370	7,532	8,060	7,638	8,627	65.9%
Revenue-Miles	54,786	70,000	89,579	89,175	96,653	149,276	172.55%
Total O&M Costs	$204,000	$234,389	$262,596	$290,539	$303,075	$326,459	60.0%

Three evaluation measures derived from these service statistics include service effectiveness, service efficiency, and cost effectiveness. Each of these is discussed in the sections below.

SERVICE EFFECTIVENESS

The number of passenger trips per revenue-hour and passenger trips per revenue-mile measure of how effectively the service is provided. Historically, service effectiveness has increased for the PAT system, as shown in Figures 3-4 and 3-5. Passenger trips per revenue-hour more than doubled between FY2005 and FY2010. Passenger trips per revenue-mile increased steadily through FY2008 and decreased slightly in FY2009 and FY2010. This decrease is likely due to a significant increase in revenue-miles in 2009 and 2010.

FIGURE 3-4: SERVICE EFFECTIVENESS – PASSENGER TRIPS PER REVENUE-HOUR

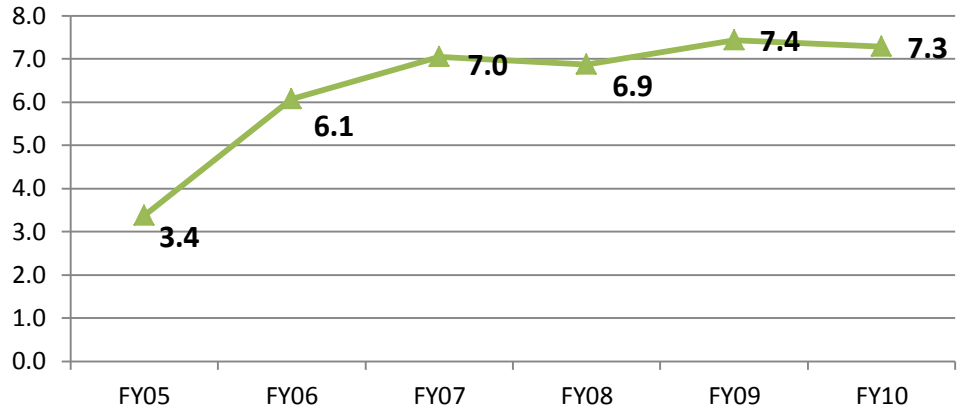
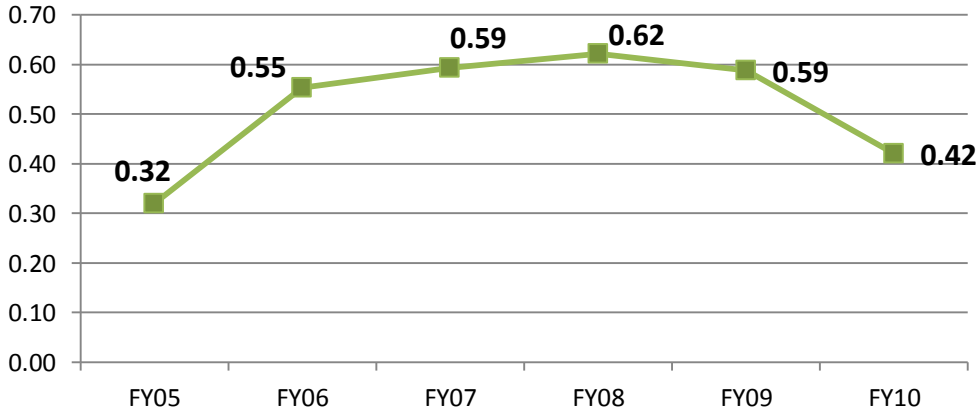


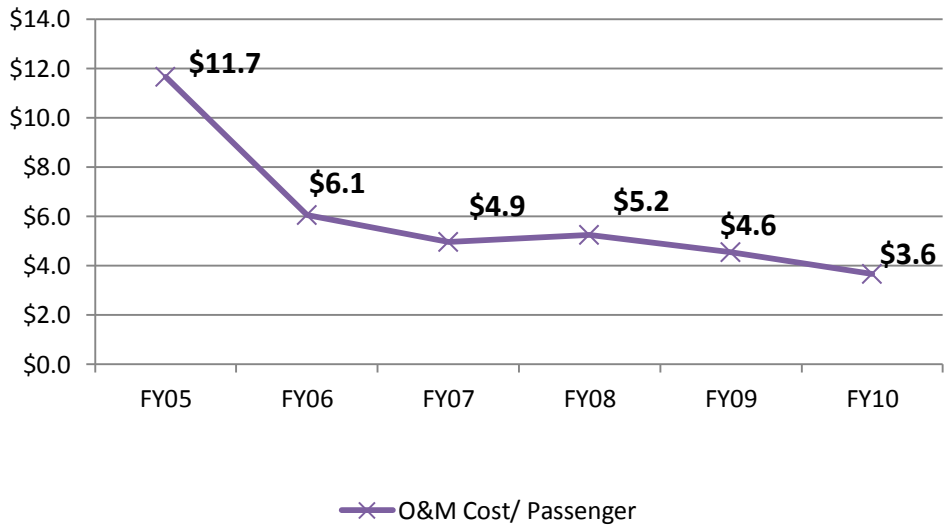
FIGURE 3-5: SERVICE EFFECTIVENESS – PASSENGER TRIPS PER REVENUE-MILE



COST EFFECTIVENESS

The ratio of operating and maintenance costs (O&M) per passenger trip reflects how cost effectively the agency is providing the service. These numbers do not account for inflation. Figure 3-6 shows that cost effectiveness improved by 65.9 percent for the PAT system between FY2005 and FY2010. Cost effectiveness improved significantly in the first two years of operation – FY2005 and FY2006. PAT has also managed expenses while increasing the hours and miles of service.

FIGURE 3-6: COST EFFECTIVENESS – O&M COST PER PASSENGER



SERVICE EFFICIENCY

The measure of O&M costs per revenue-hour provides an overview of how efficiently the service is operated. These numbers do not account for inflation. Figures 3-7 and 3-8 show that service efficiency has improved for the PAT system. Between FY2005 and FY2010, O&M costs per revenue-hour decreased by 3.5 percent and subsidy per passenger decreased by 58.5 percent.

FIGURE 3-7: SERVICE EFFICIENCY – O&M COST PER REVENUE HOUR

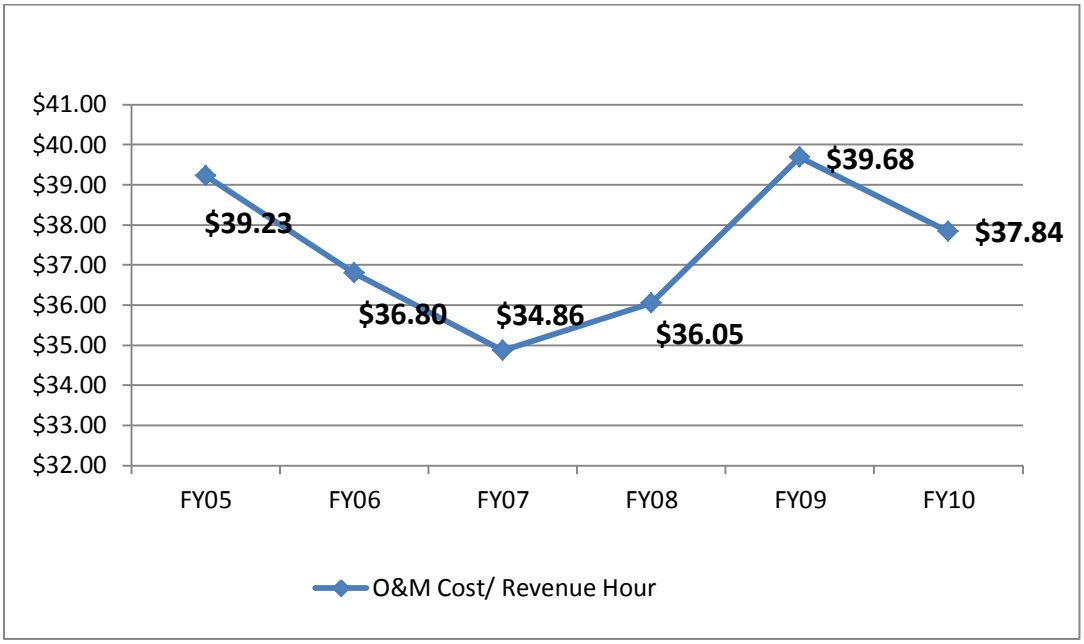
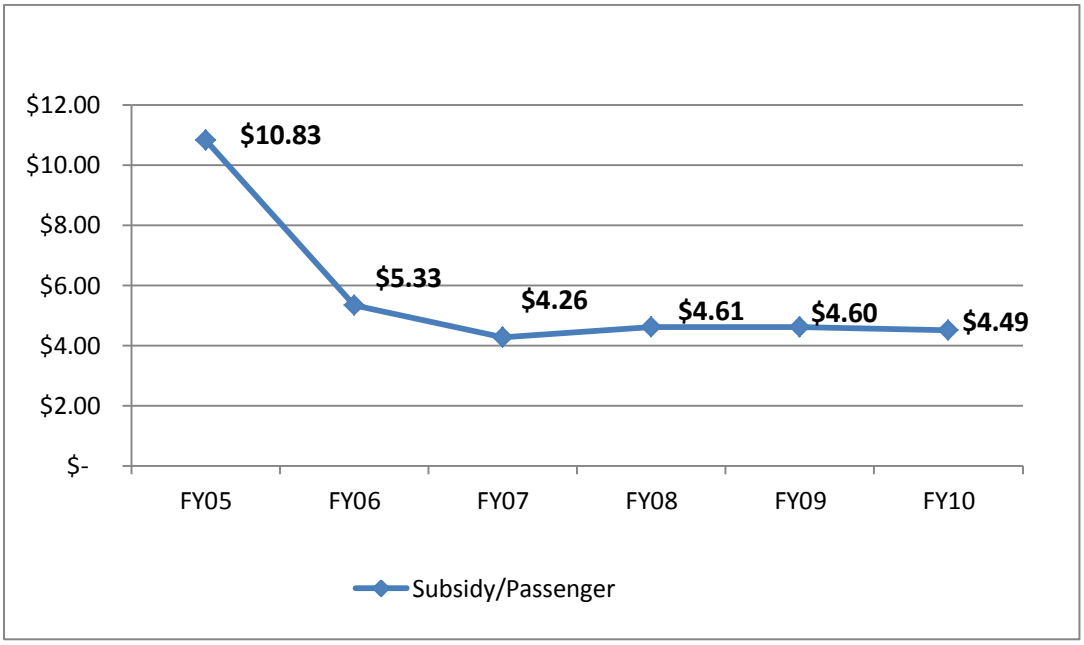


FIGURE 3-8: SERVICE EFFICIENCY – SUBSIDY PER PASSENGER



3.4 Peer System Analysis

A peer system review was prepared to compare PAT's system characteristics and performance measures with four other transit systems that have comparable population density and operational characteristics. Peer selection criteria included service area size, service area population, fleet size, and annual passenger trips.

There are several challenges when selecting peer systems, as transit conditions and needs can vary widely from jurisdiction to jurisdiction. In selecting peers for PAT, agency staff identified peers typically used for comparison in the past. Population density and operational characteristics were then compared to PAT to determine if peer would provide a good comparison. Because many of the rural service providers cover large service areas, traditional measures for population and service area are difficult to compare. Additionally, data availability is limited, as many of the peers, like PAT, are not required to report to the National Transit Database (NTD). The following four transit systems were identified as peers based on the application of the selection criteria:

- Lake Area Bus – South Hill, VA
- Graham Transit – Bluefield, VA
- Greene County Transit – Greene County, VA
- Blackstone Area Bus System (BABS) – Blackstone, VA

Two other transit systems, Farmville Area Bus (Farmville, VA) and Virginia Regional Transit (Staunton, VA), were considered for the peer review. However, these systems were ruled out after comparison of the data.

Complete data for 2009 and 2010 was unavailable for all of the final peers. The peer review for PAT is based on 2008 data from the VA Transit Performance Report by VA DRPT and the 2009 Blackstone Area Bus Transit Development Plan. Table 3-3 displays service and operating characteristics for the peer agencies and PAT, as well as the peer group averages.

TABLE 3-3: PULASKI AREA TRANSIT PEER AGENCY CHARACTERISTICS

Transit Agency	Location	Service Area (in sq. mi.)	Service Area Population	Population Density	Total Vehicles	Annual Revenue Miles	Annual Revenue Hours	Annual Passenger Trips
Lake Area Bus	South Hill, VA	12	9,891	824	2	30,201	1,961	6,281
Graham Transit	Bluefield, VA	8	6,000	750	4	132,000	7,240	40,754
Greene County Transit	Greene County, VA	160	17,500	109	15	246,307	10,988	52,676
Blackstone Area Bus	Blackstone, VA	2,914	106,691	37	13	364,025	13,744	30,764
Peer Average		774	35,021	430	9	193,133	8,483	32,619
Pulaski Area Transit	**Pulaski, VA**	**107**	**49,000**	**458**	**9**	**89,175**	**8,060**	**55,384**

Sources: 2008 data from VA Transit Performance Report by VA DRPT; 2009 Blackstone Area Bus Transit Development Plan;

The detailed peer analysis is included as a technical memorandum in Appendix A. Key findings of the peer analysis are as follows:

Service Supplied: In comparison to its peers, PAT operated considerably fewer revenue-hours and revenue-miles per capita and per square mile in 2008 than the peer averages. It must be noted that this measure is impacted by local policy and budget decisions. Additionally, population and area estimates may be measured differently for various transit agencies.

PAT provided 0.16 service hours per capita, which is 70 percent lower than the peer average (0.54). PAT's revenue-miles per capita (1.82) are 83 percent lower than the peer average (10.64). At 75 revenue-hours per square mile, PAT supplied 74 percent less than the peer average (285). PAT operated 833 revenue-miles of service per square mile, which is about 84 percent less than the peer average (5,170).

Ridership Productivity: While the passenger trips per capita for PAT were lower than the peer average, PAT's productivity in terms of passenger-trips per revenue-hour and revenue-mile was significantly higher than the peer average.

The passenger trips per capita for PAT (1.13) were about half the peer average of 2.68. PAT's productivity of 6.87 passengers per revenue-hour was 42 percent higher than the peer average of 3.97. PAT served 0.62 passengers per revenue-mile which was three times the peer average of 0.20.

Cost Efficiency: PAT was more cost efficient than the peer average on a passenger-trip basis but had a slightly higher cost per revenue-hour and revenue-mile. PAT's operating cost per passenger trip of $5.25 was 43 percent lower (or better) than the peer average. PAT's operating cost of $36.05 per revenue-hour is similar to the peer average. PAT spent $3.26 for each revenue-mile of service which is almost twice the peer average.

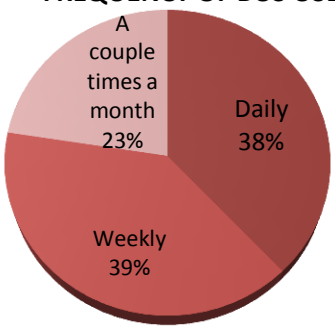
Farebox Revenues: PAT's farebox recovery rate was higher than the peer average. PAT's revenues from fares were 12 percent compared to an average of eight percent for peer systems.

O&M Funds: PAT's FY2008 operating budget of $290,539 is similar to the peer average ($278,670). PAT received 36 percent of total revenues from local funding, which is higher than the average for peer systems (29%).

3.5 On-Board Survey Analysis

PAT conducted an on-board rider survey during the month of September 2010 and received 142 responses. Passengers were asked about their opinions and experience with various aspects of the PAT system from fares and schedules to courteousness of staff. Some valuable insights were gained and PAT has been very responsive by making adjustments and planning improvements based on results. Demographic information for the passengers was also recorded. This section summarizes the results of the survey, the full response and comments can be found in Appendix B.

FIGURE 3-9:
FREQUENCY OF BUS USE

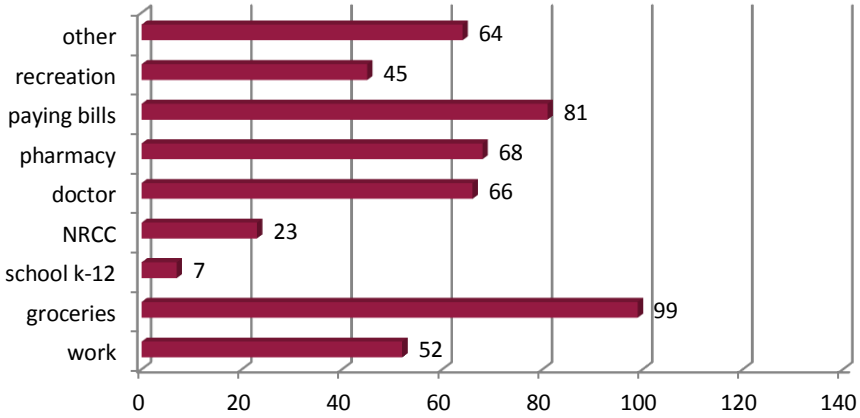


The feedback on PAT's service hours reveals that 94 respondents (66%) felt that current operating hours were convenient, but 48 respondents (34%) felt they were not convenient and needed to be adjusted. As a result, PAT extended service hours on October 1, 2010 from 8am-4pm to 7am-5pm. Results also showed a demand for Saturday service. Eighty four percent of the respondents felt that Saturday service would be helpful, 10 did not, and two did not respond. PAT responded by providing service on Saturdays to Dublin (Walmart) on a trial basis during the month of December 2010. PAT will track ridership to gauge the success of this service and the viability of providing this service in the long-term.

Almost all the passengers found fares to be reasonable, and said the buses were clean and comfortable. Almost all passengers also agreed that drivers were helpful and courteous, and 90 percent of respondents felt their dispatcher was courteous and polite.

Of the 142 respondents, 54 passengers (38%) used the bus daily, 56 passengers (39%) use it weekly, and 32 passengers (28%) use it a couple times a month (see Figure 3-9). As shown in Figure 3-10, passengers use the bus to make a wide variety of trips, the most common ones being to the grocery store and for paying bills.

FIGURE 3-10:
TYPES OF TRIPS MADE



Demographic information collected about PAT riders (see Figure 3-11) shows that a significant proportion of the customer base is elderly (28%) and disabled (32%). A majority of respondents were female (68%). It has been observed that women often have children in tow, and it is difficult for these passengers to use a fixed route system due to the need to travel to a bus stop at a fixed time. Over the years, PAT has learned that ridership increases with proximity of bus stops to the passengers' homes. The results of this survey also reinforced this learning. Only 74 respondents (52%) said they would ride the bus if it did not come to their house. When asked how riders would get to a bus stop, most passengers said they would walk (see Figure 3-12). A majority of PAT riders come from households with no vehicle, so they probably do not have the option to drive (see Figure 3-13). Others who have one or more vehicle available to them may be limited by their disability or comfort levels. Ninety-seven of the respondents (70%) do not have a valid driver's license, and thus, may have no other means to access transportation other than PAT. Only 64 percent of the respondents provided their household income. Among those responses, 56 percent are below the poverty level. Combined with the non-responses, PAT riders below the poverty level could be as high as 88.5 percent.

FIGURE 3-11: AGE GROUPS

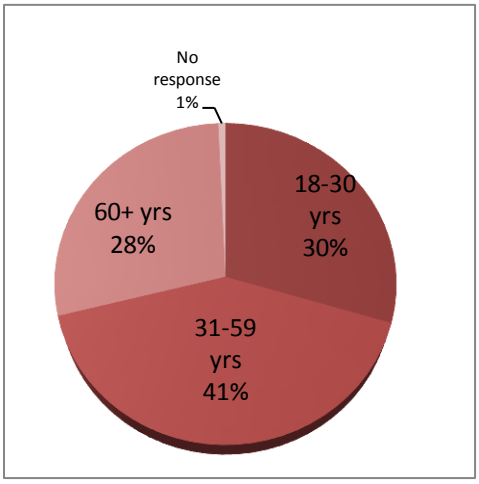


FIGURE 3-13: MODES FOR GETTING TO BUS STARTING POINT FROM HOME

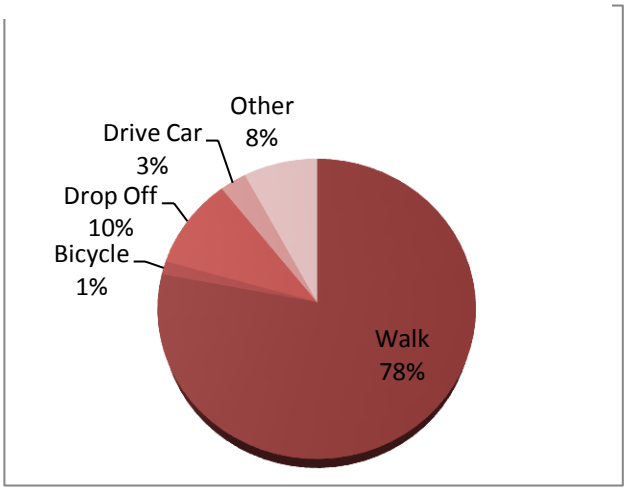
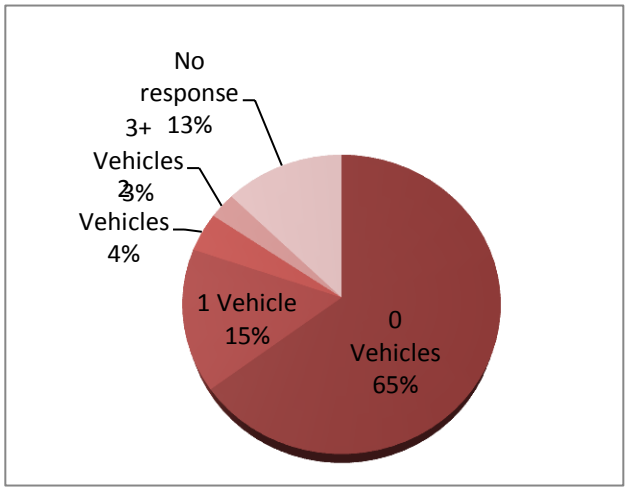


FIGURE 3-12: VEHICLES PER HOUSEHOLD



The 2010 PAT rider survey clearly showed the great need for the service provided and demand for extending that service. The positive opinions and comments in the survey were heartening for PAT staff to know that their special efforts to keep buses clean and go the extra mile for clients are appreciated. The survey also helps to guide PAT with planning for the future.

3.6 Public Outreach Efforts

Input was solicited from stakeholder jurisdictions within the PAT service area about the adequacy of existing service, and improvements and expansions in the future. The following stakeholders provided comments:

- Town of Pulaski / PAT Transit Advisory Committee
- Pulaski County
- Town of Dublin
- Floyd County
- New River Valley PDC

Stakeholder comments and suggestions are summarized below. For detailed notes from individual interviews, see Appendix C.

Existing Conditions

Outreach efforts revealed that growth in the region is relatively stable, with Fairlawn growing at a slightly faster pace. The Town of Pulaski may grow in size after a boundary adjustment, but the new area will be undeveloped land. The area is slowly recovering lost jobs, and some job growth is anticipated in the future. Major employers include Volvo and the Radford Army Ammunition Plant, with Phoenix Packaging projected to add jobs in the future.

PAT has a good relationship with the Town of Pulaski and Pulaski County. PAT's relationship with the Town of Dublin is limited since the Town does not contribute to PAT's budget but service is provided to destinations in the town. Floyd County does not currently have a relationship with PAT but is interested in establishing one. The lack of public transportation is a concern but long-term funding needs to be identified.

Pulaski County is the outdoor recreation hub for the New River Valley. Area residents go to Christiansburg and Fairlawn for shopping, and VA Tech is the sports hub. There are many destinations in the Blacksburg-Christiansburg area and in Radford for employment, education, shopping, and services, and the demand is likely to grow. Additionally, New River Valley Community College has two campuses, one in the Town of Dublin, and another in Christiansburg, with students traveling between the two campuses.

Future Needs Identified by PAT

Service needs identified by PAT include a Downtown Trolley route connecting downtown locations, with PAT buses bringing residents from outlying areas to the route. PAT would also like to start providing service one day a week from outlying communities like Hiwassee, Draper, and Snowville, etc. to the Town of Pulaski and from Belspring and Parrott to Fairlawn. PAT could provide regularly scheduled service for baseball nights with fixed pick up points from the town and auxiliary parking lots to reduce traffic impacts. Additionally, service with connections to Roanoke, Blacksburg and Radford were identified as a need.

Capital needs were also identified by stakeholders. PAT will pursue funding for a facility that houses all of its needs. The options may be to buy in town, or to acquire land through donations and build a new facility. PAT would like Automatic Fareboxes that count the fare as it is deposited. Scan cards for fare payments will also be considered. PAT also needs more child car seats. As part of an Information Technology Strategy (ITS) plan- PAT would like to identify funding to hire a consultant to study the system and make recommendations on appropriate IT solutions. PAT would also benefit from GPS as they expand service to outlying areas.

POTENTIAL FUTURE EXPANSION SUGGESTIONS

Better connections are needed between Pulaski and Christiansburg, as well as the NRCC main campus in Dublin and the campus at the New River Valley Mall. Interconnections are also needed to Blacksburg Transit and other local transit systems.

PAT could serve park and ride lots on I-81 (and other strategic locations) which could be pick-up points for long distance commuters and connection points for regional buses to access Roanoke and Washington, D.C. and to Amtrak at Lynchburg or Clifton Forge.

Stakeholders also recognized that PAT could serve more types of riders within the existing service area including workers, youth without drivers' licenses, and residents attending church on Sunday, as well as new destinations in or near the existing service area such as the NRV airport, the Boy Scout camp, and recreational bikers using the bike trail between Pulaski and Galax.

Floyd County residents need to access social services in or near the Town of Floyd, and to access regional services in Christiansburg, Blacksburg and Radford.

Event transportation to/from parking areas could be provided for baseball games, VA Tech games, FloydFest, local wineries, etc.

PAT'S STRENGTHS AND WEAKNESSES

PAT is lauded for its flexibility, helpfulness, and creativity to find transportation solutions. PAT's service has a good reputation and there has been no negative feedback from riders on timeliness or routes.

Stakeholders perceive that PAT struggles with general marketing to different types of riders. As with most transit systems, funding for capital projects and rolling stock is assumed to be a challenge. Stakeholders also recognize the rural nature of the region can be a challenge when planning service, and feel demand response is the best type of service for the area.

3.7 FACILITY AND EQUIPMENT CHARACTERISTICS

The following provides an overview of PAT's existing facilities and equipment.

EXISTING FACILITY

PAT's administrative offices are located in downtown Pulaski and are co-located with PAT's partner organizations, the New River Valley Agency on Aging and the New River Valley Senior Services, which

provides for efficiency in operations and costs. However, the facility does not have adequate provisions for washing vehicles, especially in the winter, since the wash area is open to the elements. It is also inconvenient to have two PAT vehicles parked at the office, and seven vehicles parked in the lot adjacent to the Senior Center. In the future, PAT would like to secure funding to establish an office facility that houses all of their needs including parking for all vehicles in one location, a fueling area, and a covered paved wash area.

Bus Stops and Shelters

Currently, PAT's bus stop signs posted in the Town of Pulaski are visible and adequate for riders to locate pick-up points and to provide publicity for the bus system. PAT does not have bus shelters but an *American Recovery and Reinvestment Act* (ARRA) grant of $54,000 will be used to fund six shelters in the near future.

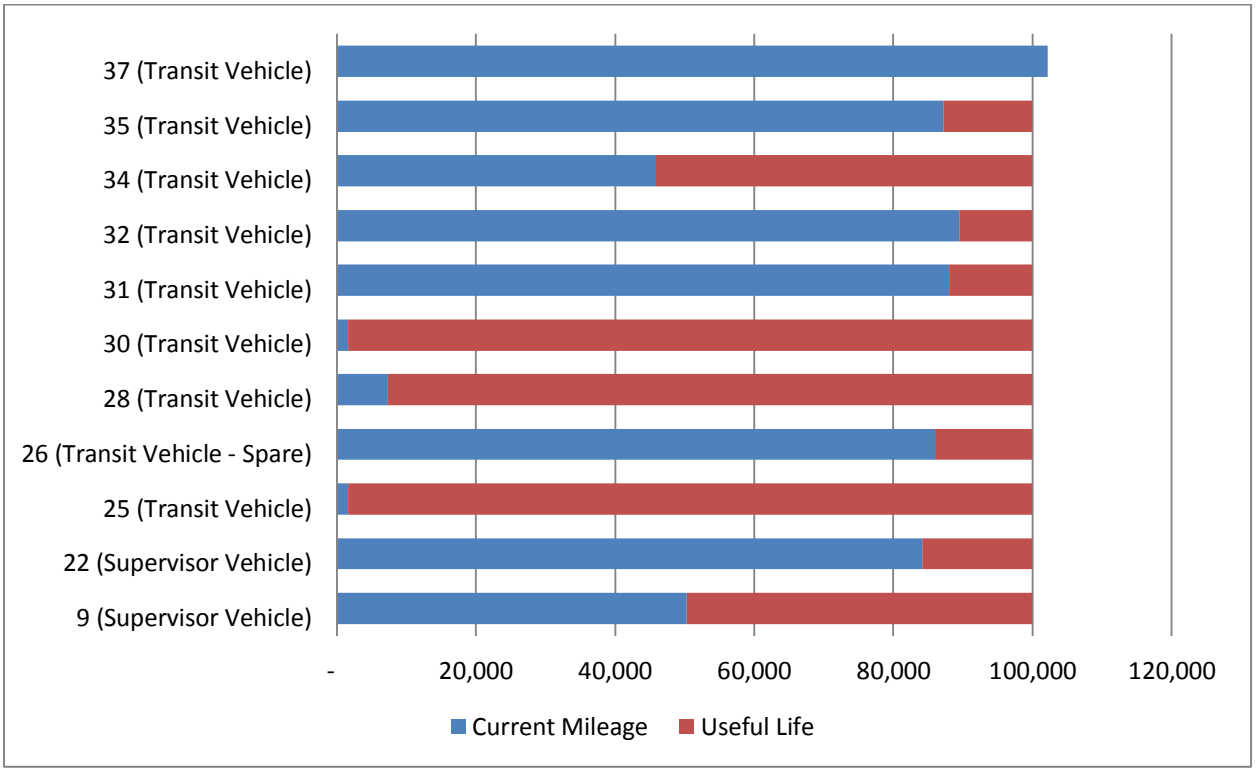
Existing Fleet

PAT's current fleet consists of 11 vehicles. Two (2) units are non-revenue supervisory vehicles, nine (9) are transit vehicles, and one (1) is a spare. Table 3-4 and Figure 3-14 show the useful life of the current fleet. Four (4) vehicles are due for replacement in the near future since they are either near the end or past their useful life.

TABLE 3-4: USEFUL LIFE OF PAT'S EXISTING VEHICLE INVENTORY

Vehicle	Years in Use	Years Remaining	Current Mileage	Useful Life
9 (Supervisor Vehicle)	2	2	50,331	49,669
22 (Supervisor Vehicle)	6	-2	84,156	15,844
25 (Transit Vehicle)	1	3	1,649	98,351
26 (Transit Vehicle-Spare)	5	-1	85,977	14,023
28 (Transit Vehicle)	1	3	7,378	92,622
30 (Transit Vehicle)	1	3	1,614	98,386
31 (Transit Vehicle)	5	-1	87,977	12,023
32 (Transit Vehicle)	5	-1	89,457	10,543
34 (Transit Vehicle)	3	1	45,870	54,130
35 (Transit Vehicle)	3	1	87,178	12,822
37 (Transit Vehicle)	4	0	102,183	(2,183)

FIGURE 3-14: USEFUL LIFE OF PAT'S EXISTING VEHICLE INVENTORY



All vehicles currently run on gasoline, and PAT will be considering other options for newer vehicles. PAT may choose to acquire a larger 25-seater bus to serve trips for special events or groups. In 2008, the Town of Pulaski acquired a trolley from VA Regional Transit, VA DRPT, and the City of Staunton. The trolley was donated by a resident of the Town of Pulaski and is used for special events.

3.6 ITS Programs

PAT does not have an ITS plan currently, but plans to undergo a study that will evaluate investing in appropriate IT options in the near future.

3.7 Title IV in Triennial Review

As a designated sub-recipient of FTA capital and operating assistance funding through the Virginia Department of Rail and Public Transportation (DRPT) whose services are provided in a rural portion of the Commonwealth, PAT is not required to prepare and submit its own separate Title VI report or the associated FTA Triennial Review. The statewide Title VI report and Triennial Review prepared by DRPT satisfies this FTA requirement. However, PAT is still required to follow the Title VI and Title VI-dependent guidelines for Federal Transit Administration recipients as described in FTA Circular C 4702.1A.

3.8 Service Coverage Characteristics

Access to Service

Household and employment data are available from the US Census Bureau using the "On the Map" website. According to the US Census, Pulaski County had an estimated 15,690 households and 12,733 jobs in 2008. Standards for fixed route service assume that passengers will walk up to ¼ mile to fixed route service, and ADA requirements include a ¾ mile demand response radius for fixed route service. PAT's deviated fixed route does not fall under these guidelines; however, these standards provide a measure to estimate the percentage of employment and households within a ¼ mile and ¾ mile buffer around the deviated fixed route service currently provided by PAT. As shown in Table 3-5, an estimated 24 percent of Pulaski County's households are within a ¼ mile walk radius of the deviated fixed route; and 54 percent are within the ¾ mile radius. This does not include the households with access to PAT's demand response service. PAT's deviated fixed route service is within ¼ miles of approximately 59 percent of the employment in Pulaski County and ¾ miles from 88 percent of the employment.

TABLE 3-5: HOUSEHOLDS AND EMPLOYMENT SERVED BY PAT DEVIATED FIXED ROUTE SERVICE

	2008 Total	0.25 Radius	% Total	0.75 Radius	% Total
Households	15,690	3,810	24%	8,397	54%
Employment	14,467	8,532	59%	12,733	88%

Propensity for Transit

For mass transit to be successful there needs to be "mass" or density. Fixed-route transit services are generally more successful in areas with high household and employment densities. Thus, one means of evaluating transit is to identify areas served that have attained at least the minimum densities, or thresholds, sufficient to support fixed route transit service. Using density thresholds, transit propensity is estimated for 2008 using household and employment data for each census block group.

The methodology for this approach is derived from the Transit Cooperative Research Program's (TCRP) Transit Capacity and Quality of Service Manual – 2nd edition (2003), which identifies a density of three households per acre and/or four jobs per acre as the thresholds to qualify as a transit-supportive environment.

Again, the US Census projections for 2008 are used to estimate the employment and household density by census block group, as shown in Figures 3-15 and 3-16. Much of the higher density employment is concentrated in downtown Pulaski and industrial areas between Dublin and Pulaski. Higher household densities are located in the towns of Pulaski, Dublin and Fairlawn.

Transit dependent populations are also identified using US Census Data. The following maps in Figures 3-17 through 3-28 identify transit dependent populations by census block group from the 2000 Census data. These maps are consistent with the household density maps, with transit dependent populations concentrated in the towns of Pulaski, Dublin and Fairlawn.

FIGURE 3-15: 2008 EMPLOYMENT DENSITY BY CENSUS BLOCK GROUP

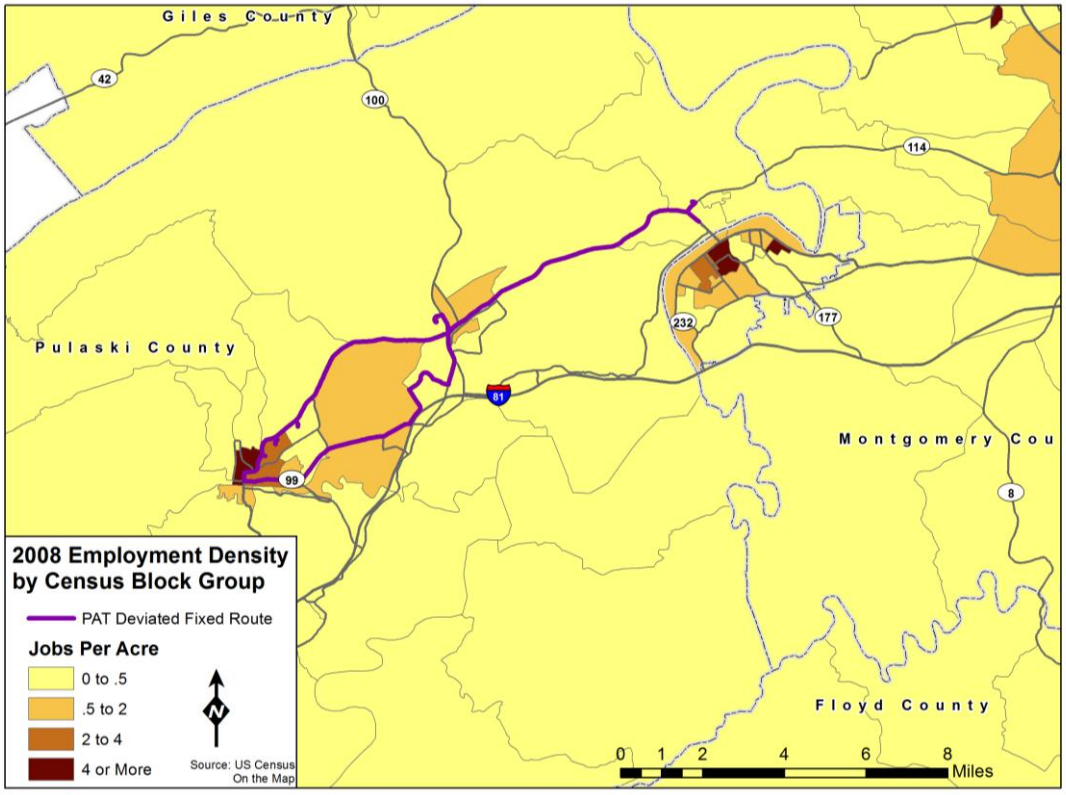


FIGURE 3-16: 2008 HOUSEHOLD DENSITY BY CENSUS BLOCK GROUP

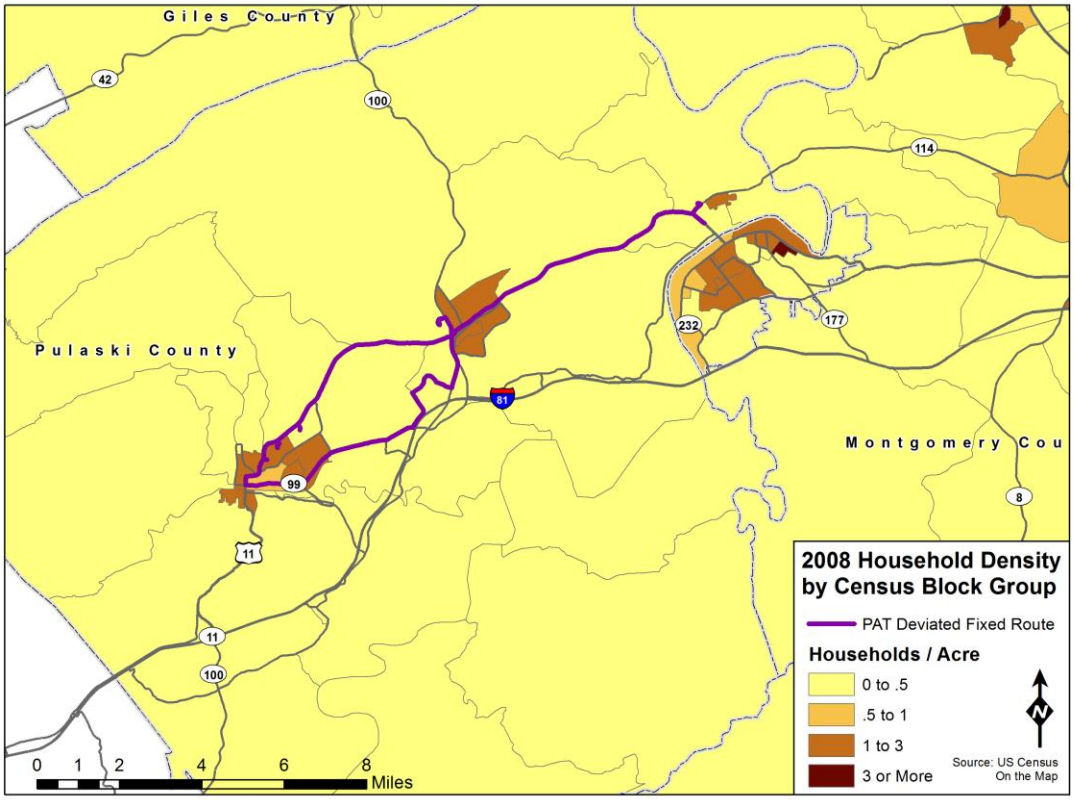


FIGURE 3-17: 2000 POPULATION DENSITY – PULASKI REGION

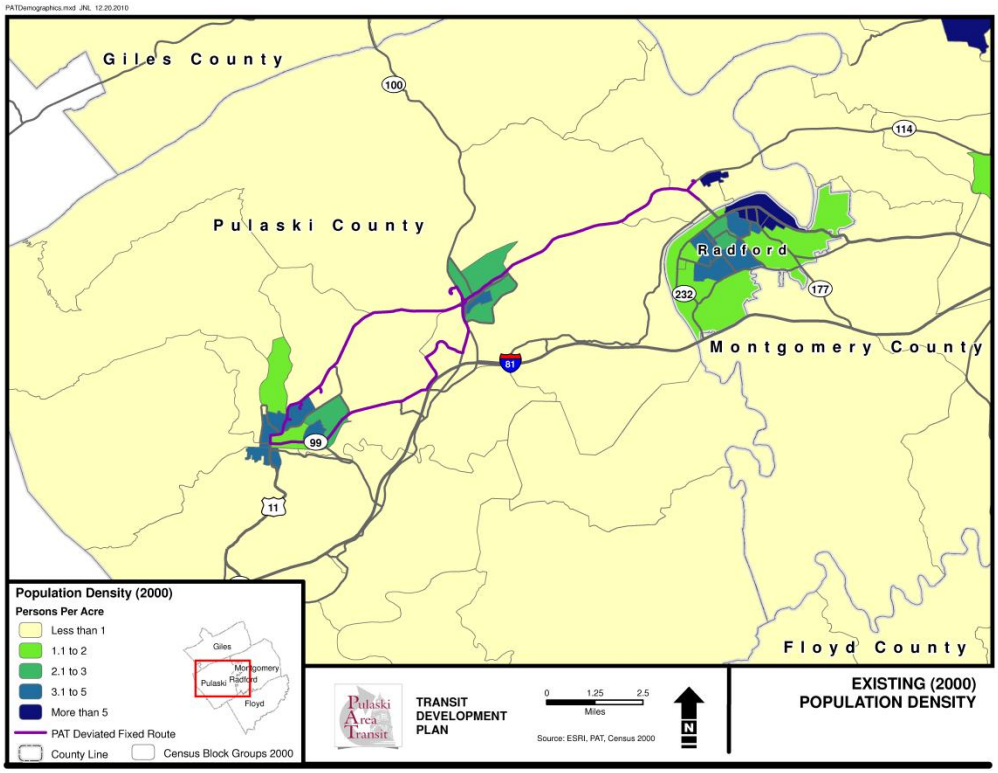


FIGURE 3-18: 2000 POPULATION DENSITY – TOWN OF PULASKI

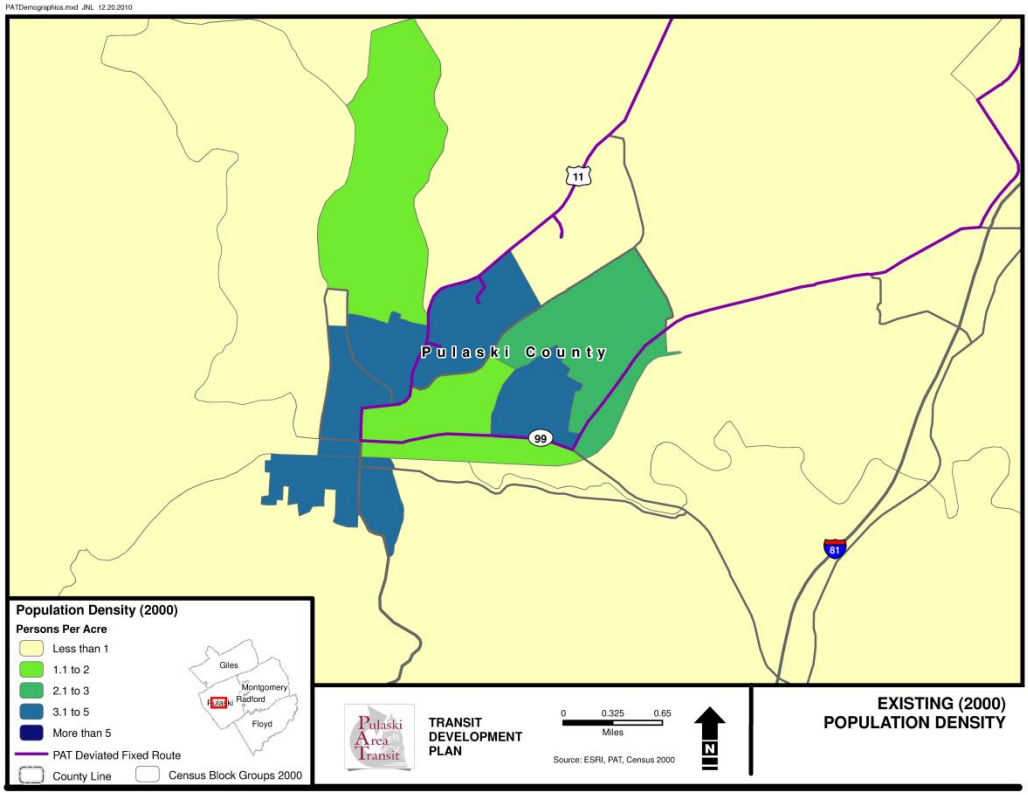


FIGURE 3-19: 2000 POPULATION AGE 60 AND OVER – PULASKI REGION

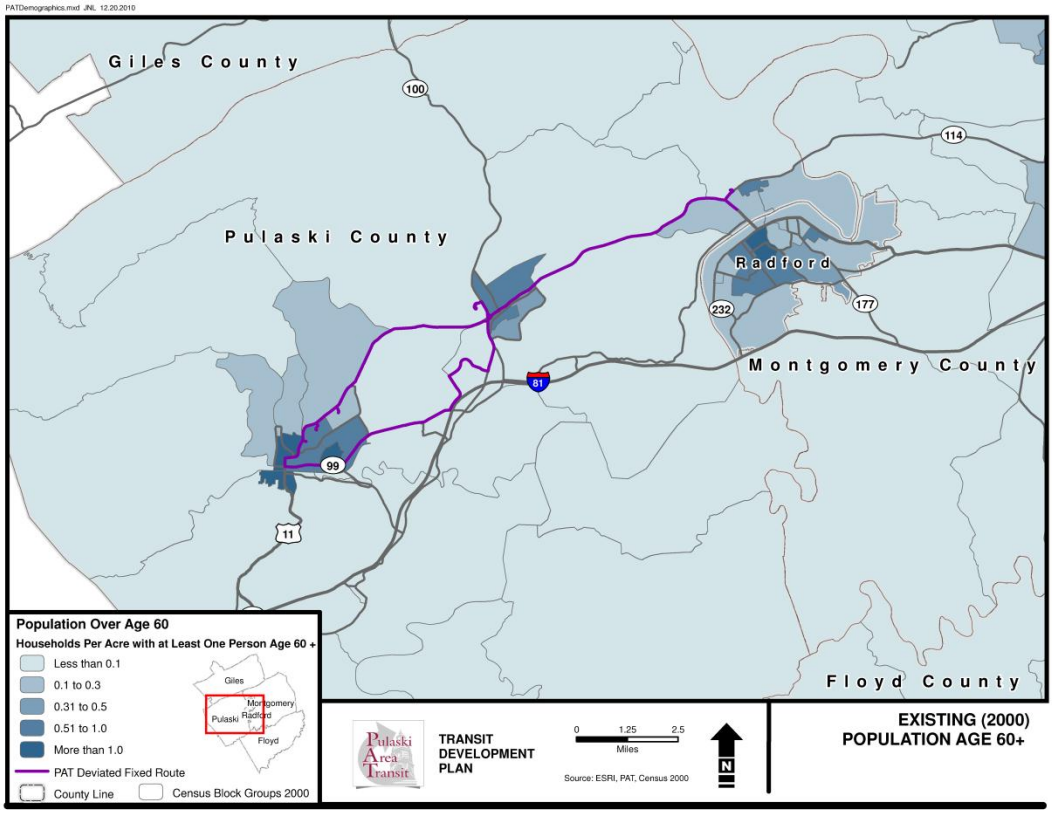


FIGURE 3-20: 2000 POPULATION AGE 60 AND OVER – TOWN OF PULASKI

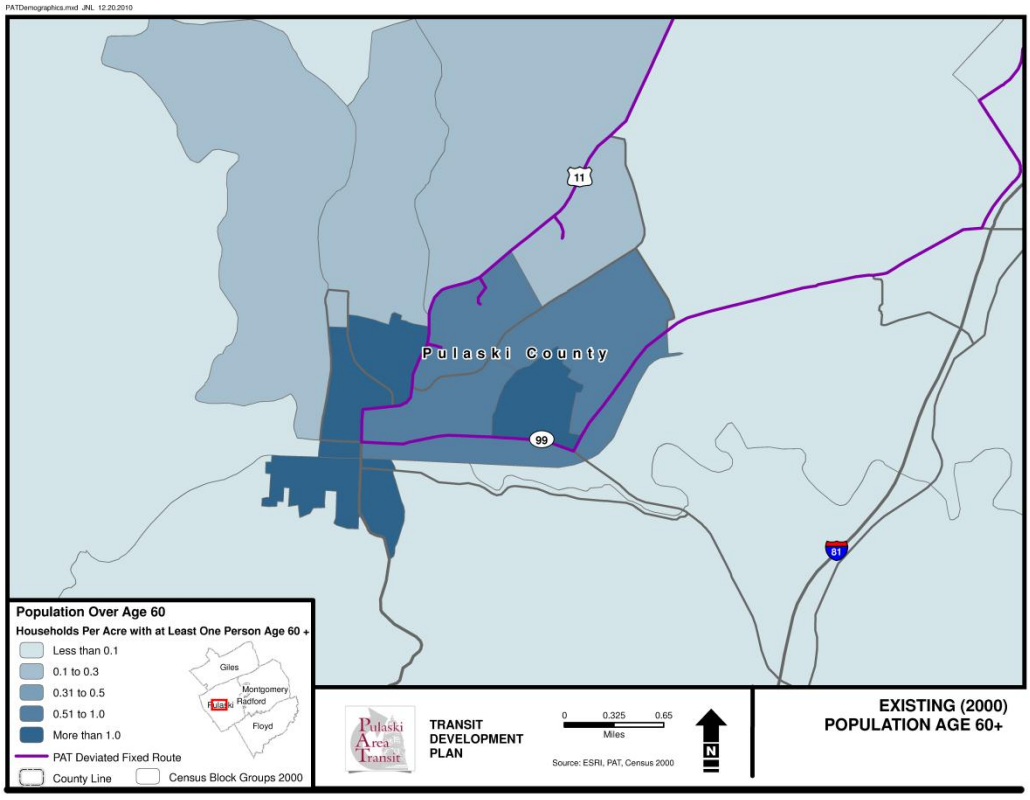


FIGURE 3-21: 2000 POPULATION WITH ONE OR MORE DISABILITY – PULASKI REGION

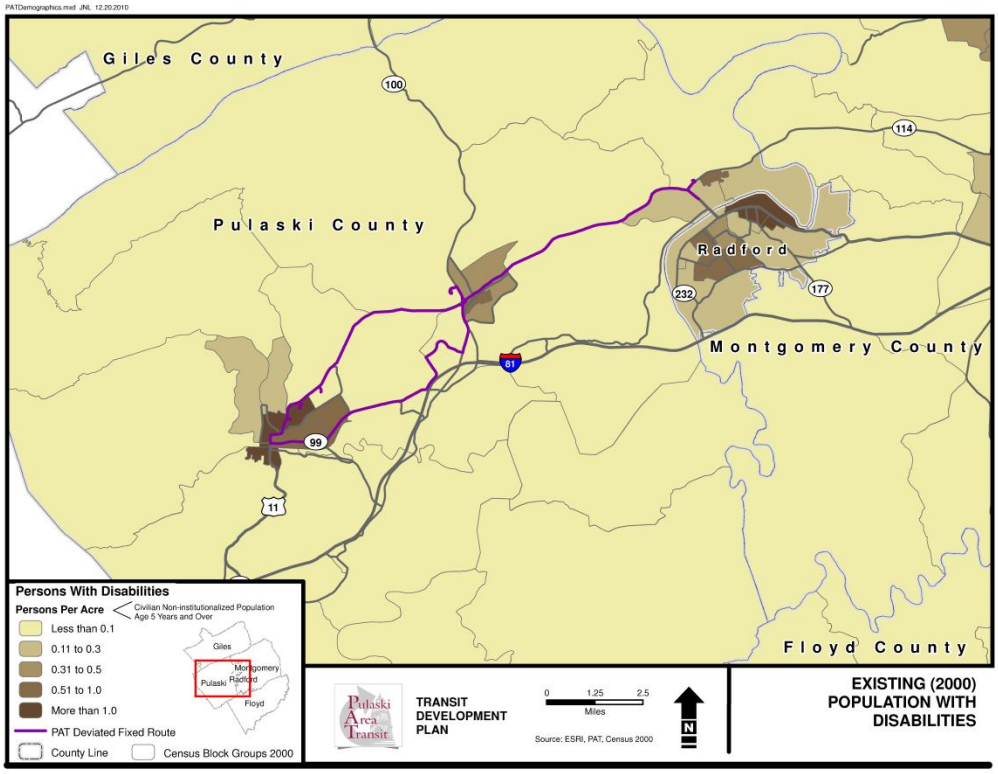


FIGURE 3-22: 2000 POPULATION WITH ONE OR MORE DISABILITIES – TOWN OF PULASKI

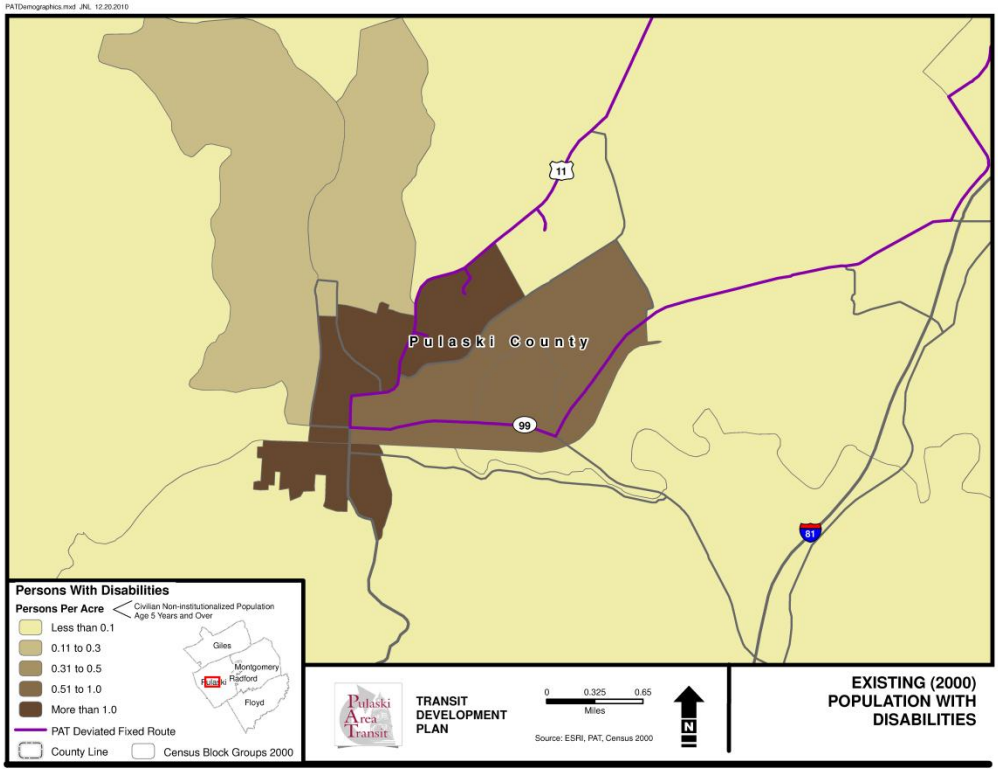


FIGURE 3-23: 2000 MINORITY POPULATIONS – PULASKI REGION

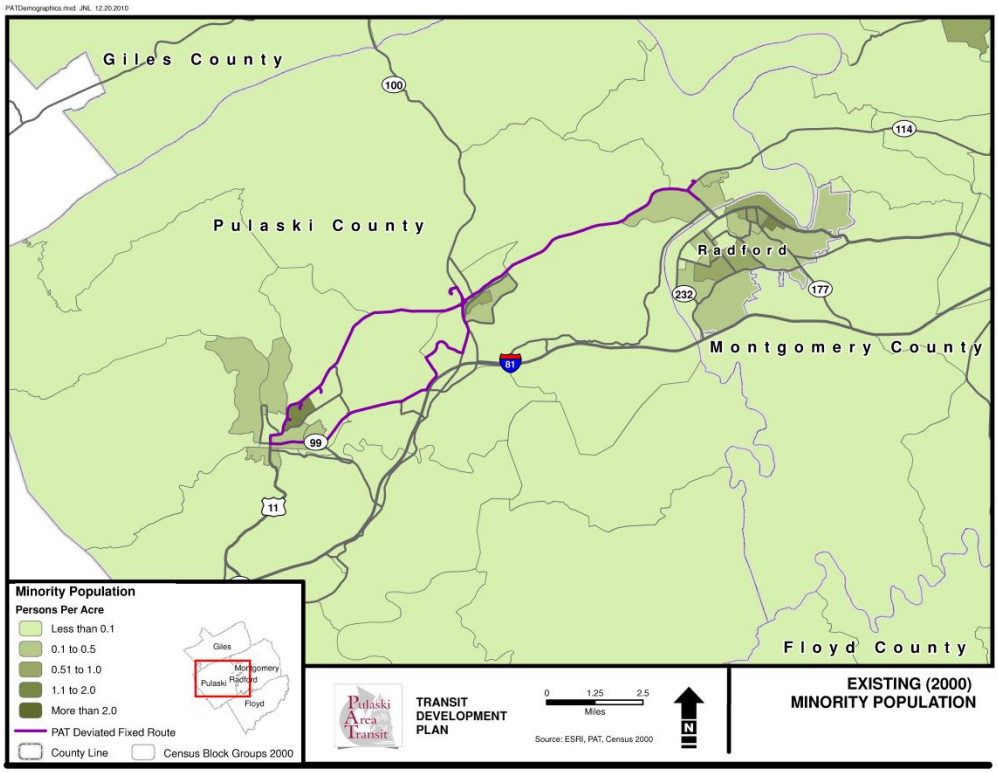


FIGURE 3-24: 2000 MINORITY POPULATION – TOWN OF PULASKI

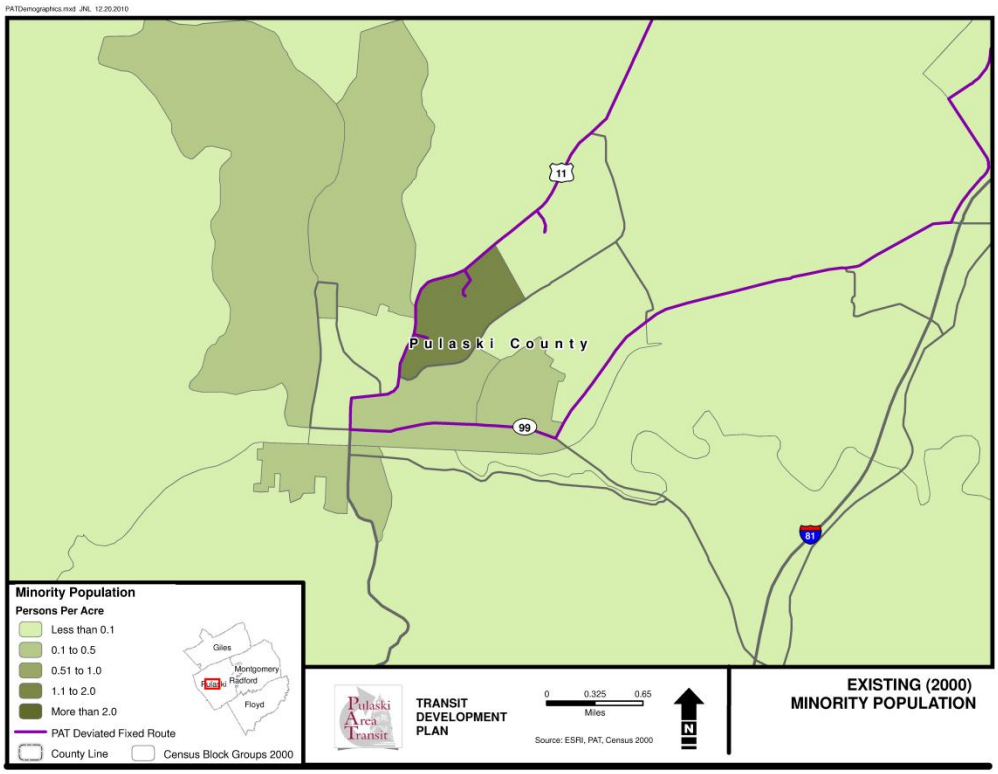


FIGURE 3-25: 2000 POPULATION BELOW POVERTY LINE – PULASKI REGION

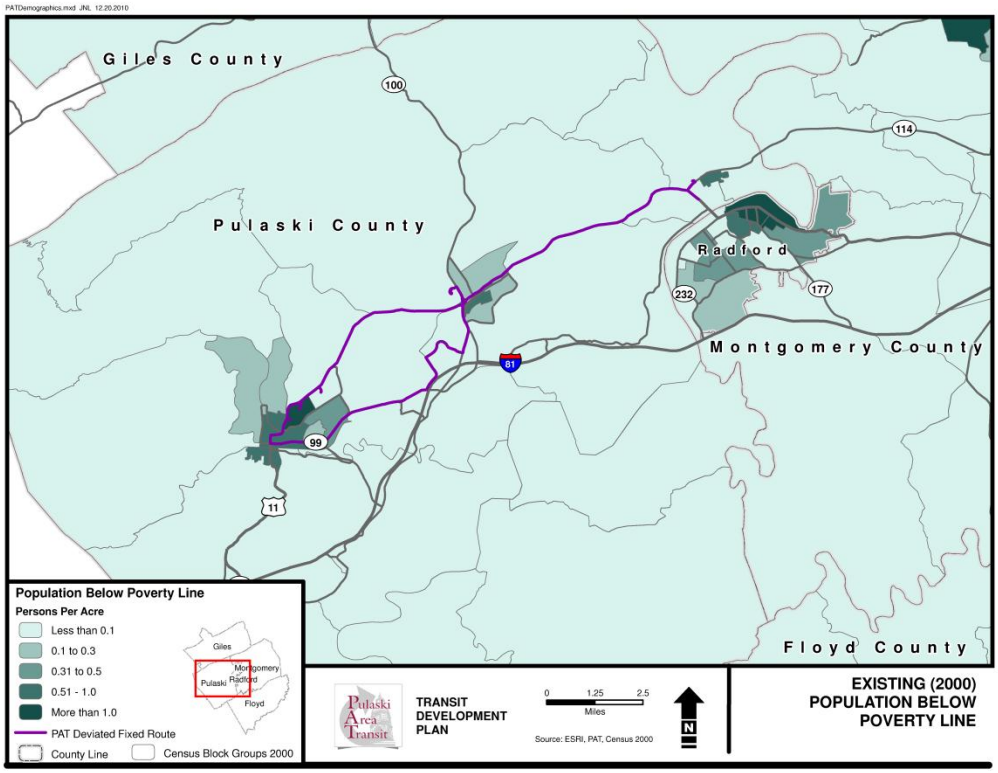


FIGURE 3-26: 2000 POPULATION BELOW POVERTY LINE – TOWN OF PULASKI

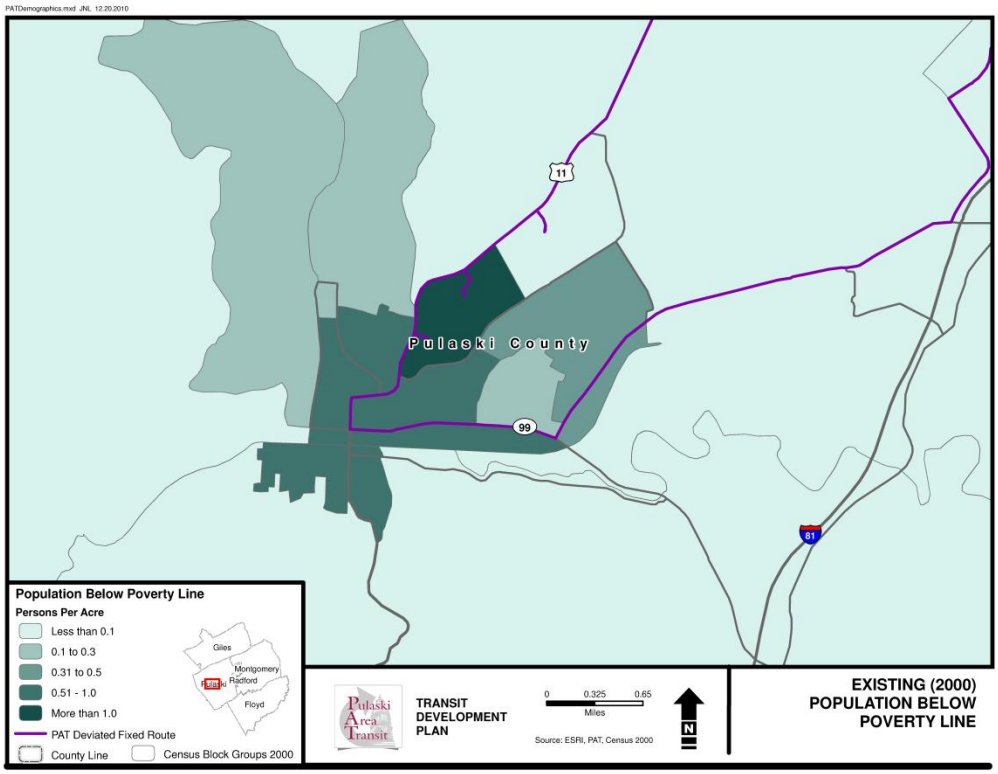


FIGURE 3-27: 2000 HOUSEHOLDS WITH NO VEHICLE – PULASKI REGION

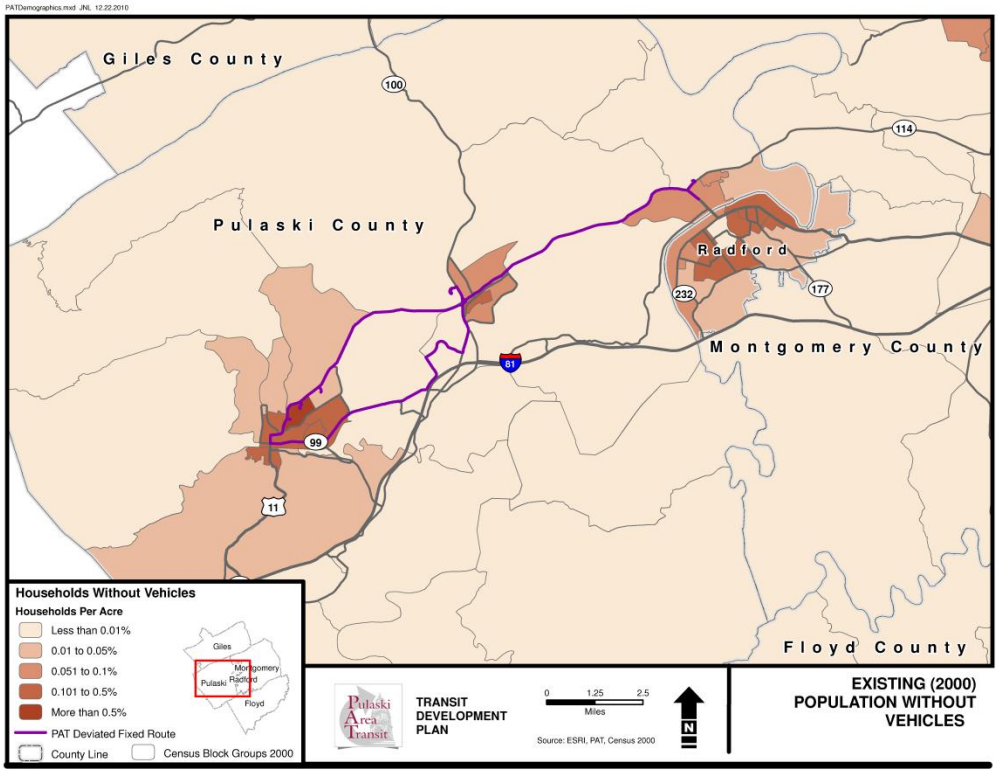
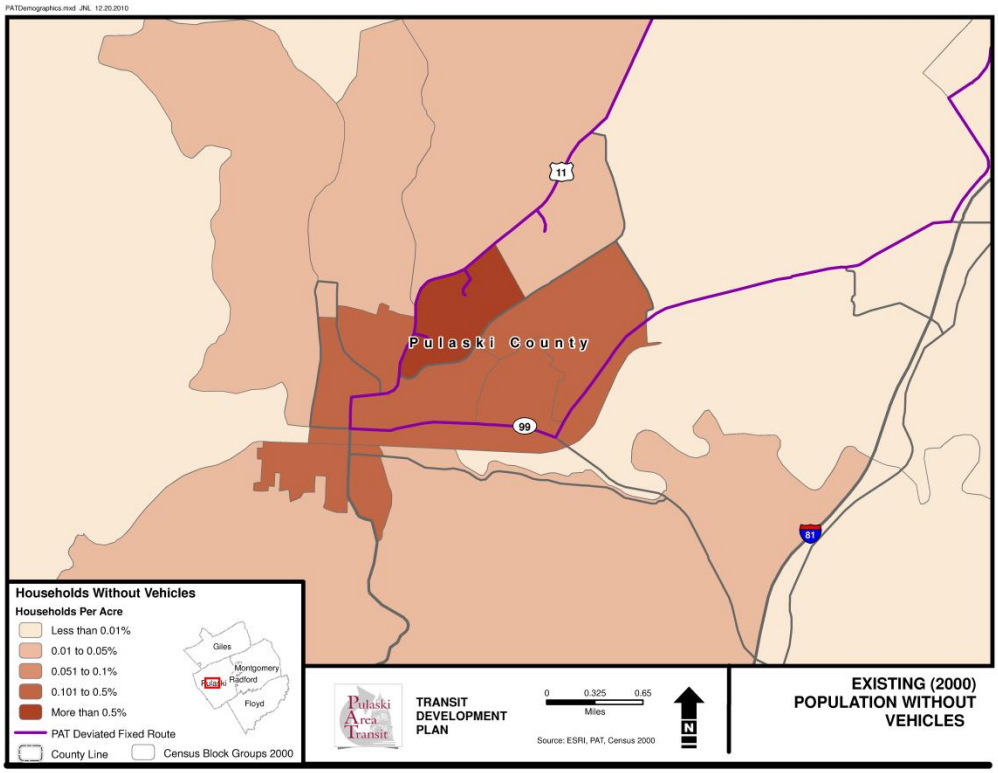


FIGURE 3-28: 2000 HOUSEHOLDS WITH NO VEHICLE – TOWN OF PULASKI



3.9 Existing and Future Land Use

In 2009, Pulaski County adopted the *2030 Pulaski County Comprehensive Plan* (*PCCP)* prepared by Pulaski County Planning Commission with assistance provided by the NRVPDC. The purpose of the Plan is to 'guide and accomplish a coordinated, adjusted and harmonious development in accordance with present and probable future needs and resources and to best promote the health, safety, morals, order, convenience, prosperity and general welfare of the inhabitants' in Pulaski County.' The PCCP includes the existing and future land use maps that provide insight in regards to both existing and future transit demand in the area currently served by Pulaski Area Transit (PAT).

Existing Land Uses and Transit Services in Pulaski County

In general, PAT's existing transit services are fairly adequate when the existing transit coverage is compared with existing land uses that are shown in Figure 3-29. Many of the transit supportive land uses in Pulaski County receive some level of transit service from PAT:

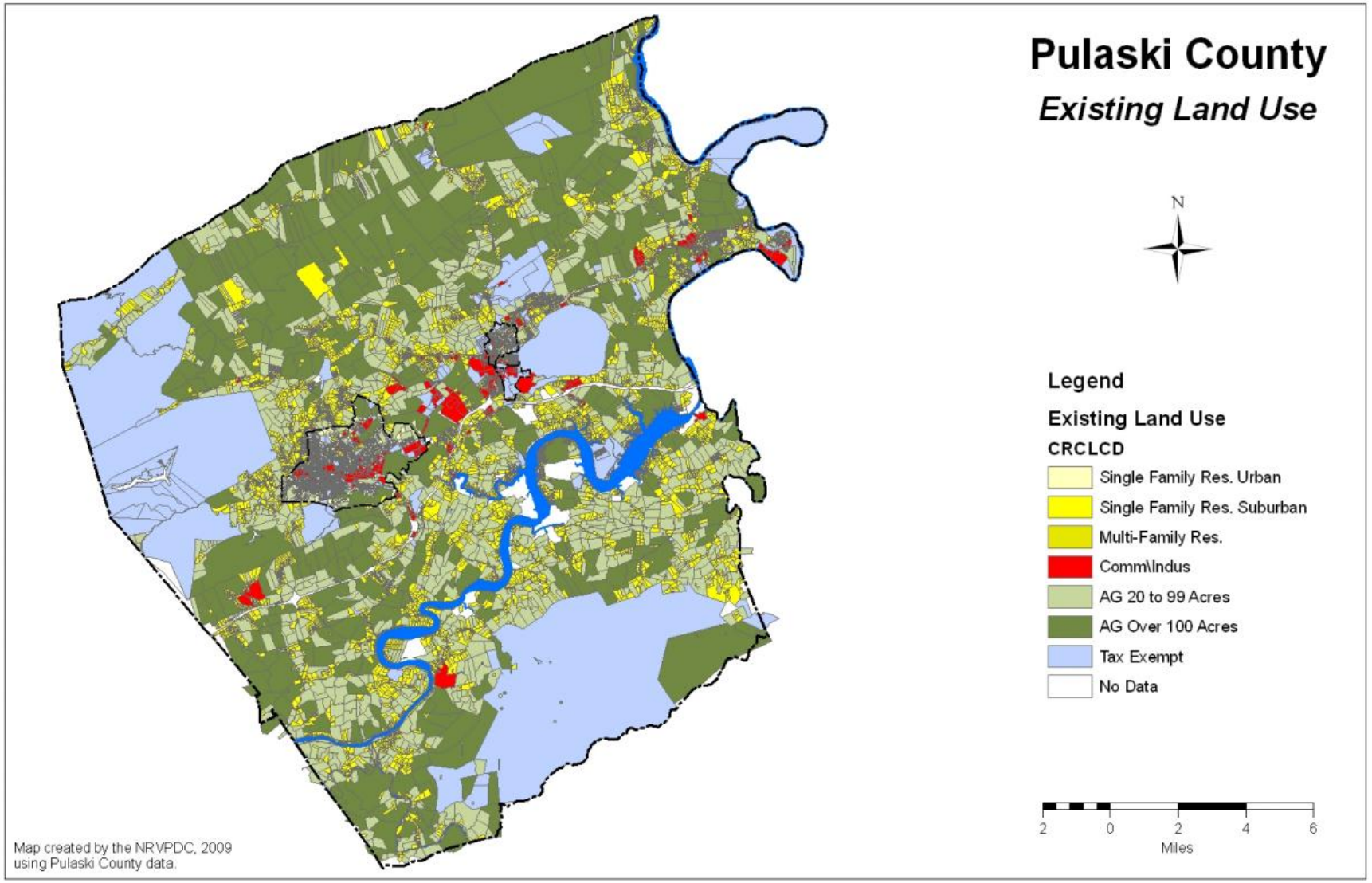
- In the Town of Pulaski, demand-responsive transit serves most major commercial nodes and corridors and shopping centers as well as downtown Pulaski. PAT service in Pulaski includes on-demand bus stops, which can serve as predecessors to permanent bus stops if fixed-route services (i.e. local circulator / shuttle service) are offered in the future.
- Countywide, the deviated fixed route extends transit services to county residents. The route mostly follows VA 611 and VA 100 from Pulaski eastbound towards Dublin, and then US 11 towards Radford Shopping Plaza in Fairlawn immediately north of Radford.

Future Land Uses and Transit Services in Pulaski County

Figure 3-30 shows the anticipated land use changes in Pulaski County based on the PCCP. Most of the residential growth is expected to occur in and around Pulaski, Dublin (particularly in areas around US 11, and in the northern/northeastern part of Pulaski County, including Fairlawn, Belspring, and Parrott. Nearly the entire area around Claytor Lake and New River is zoned for Planned Unit Development (PUD). Commercial growth is expected to intensify along major transportation corridors in Pulaski County, most notably US 11 between Pulaski and Dublin, VA 99 south of Pulaski, areas around I-81 from exit 89 to 92, and areas around the existing Radford Shopping Plaza Shopping Center.

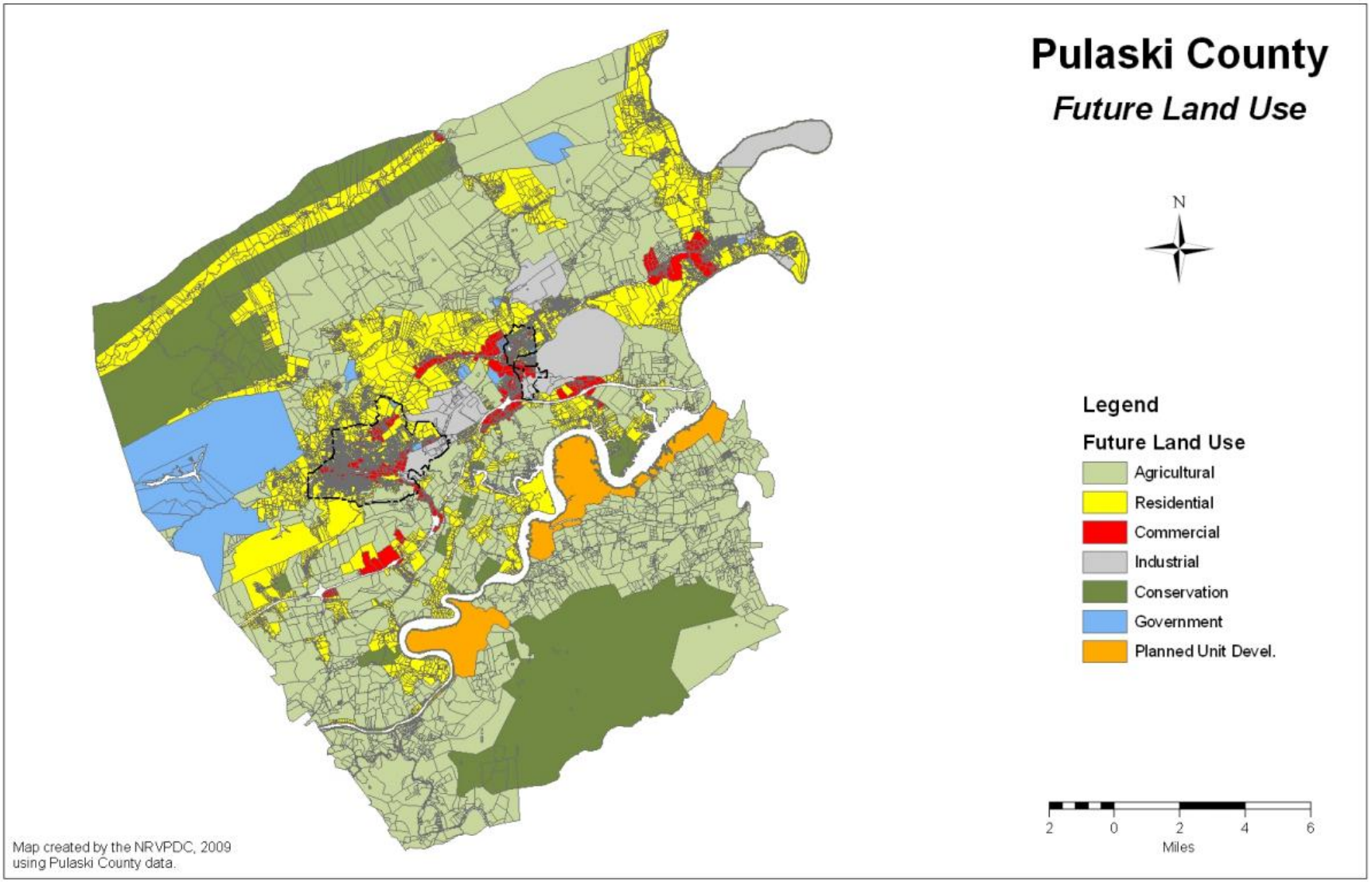
The anticipated land use changes present challenges and opportunities for PAT. Residential and commercial growth could result in increased transit demand, particularly if new residents could utilize transit to travel from their residences to employment centers and shopping and recreational opportunities. In the future, Fairlawn could essentially become a northern suburb / bedroom community of Radford in Montgomery County. Opportunities may also exist for PAT to connect to Radford to serve a transit market there, including a sizable population of college students. Yet, the dispersed nature of future residential development might prove transit service expansion to be difficult, at least outside of Pulaski and/or major commercial corridors. The PUD near Claytor Lake would be a welcome addition to the residential mix in Pulaski County and could be served well by transit if development was clustered enough to support transit services. However, bridge crossings across New River are limited and it is unclear whether the resulting development would support transit services.

FIGURE 3-29: EXISTING LAND USES IN PULASKI COUNTY



Source: Pulaski County Comprehensive Plan

Figure 3-30: Future Land Uses in Pulaski County



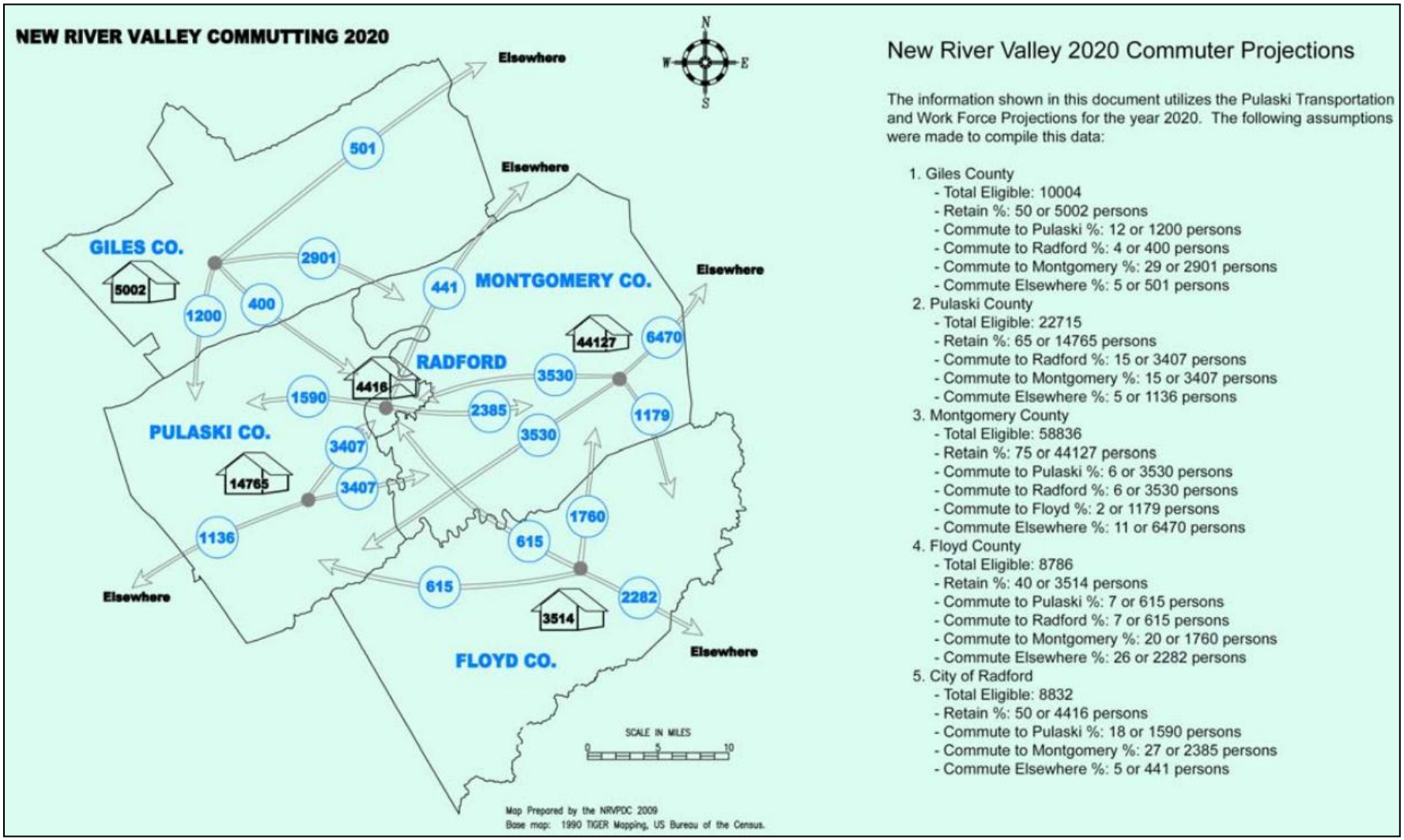
Source: Pulaski County Comprehensive Plan

Projected Future Commuter Flows in the New River Valley Area

The PCCP also includes a figure illustrating the estimated future commuter flows in the five-county New River Valley area by 2020. Figure 3-31 replicates the estimates made by the Pulaski Transportation and Work Force Projections. The in/outflow commuting patterns can be used to estimate potential future transit demand in the area (since each commuter is a potential transit rider if transit services are made available). It can also reveal any needs for coordination of transit services regionally and inter-county transit services. In general, about two in three residents of Pulaski County will live and work in the county in 2020. The major commuting outflow from Pulaski County will be to Radford – 15 percent of all eligible commuters in Pulaski County (including those who commute within Pulaski County) are projected to commute to work in Radford. The City of Radford's residents will also commute to Pulaski County– 18 percent of eligible commuters are estimated to do so in 2020. Some Pulaski County residents will also commute to Montgomery County, but there is also a projected inflow of Montgomery County's residents to Pulaski County. The residents of Floyd and Giles counties are projected to experience major outflow commuter patterns to Pulaski County as well.

Overall, the estimates suggest that Pulaski County (and Pulaski and Fairlawn in particular) will be a major magnet for commuting employees from within the county and from surrounding counties, especially Giles and Floyd counties and the City of Radford. In addition, Pulaski County's residents will commute outside the county for employment purposes, with particular future focus on the City of Radford and Montgomery County.

FIGURE 3-31: PROJECTED FUTURE COMMUTER FLOWS IN NEW RIVER VALLEY AREA



Source: Pulaski County Comprehensive Plan

EXISTING LAND USES AND TRANSIT SERVICES IN ADJACENT COUNTIES

Although Floyd and Giles counties are not in PAT's service area, their proximity and rural environment warrant some discussion of existing and future transit supportive land use. New River Valley Senior Services (NRVSS) has provided limited human transportation paratransit services in the five-county New River Valley area (including Floyd and Giles counties) for people with disabilities and for Medicaid recipients. Stakeholder outreach also revealed a need for some level of transit service for citizens in these counties.

In 2002, the Town of Floyd and Floyd County adopted its *Floyd/Floyd County Comprehensive* Plan (FFCCP). The purpose of the Plan is to 'reevaluate the Town and County development trends and provides a basis for describing future development patterns.' The FFCCP includes the existing and future land use statistics that provided insight in regards to both existing and future transit demand in the area currently not served by any formal transit agency.

Floyd County, located south of Pulaski County, is mostly rural in nature. While agriculture might have dominated the landscape in Floyd County, parcels designated "rural residential" (residential parcels less than 20 acres, most are less than two acres in size in Floyd County) were widely dispersed around the entire county and comprised nearly 62 percent of all parcels countywide in 2002. This suggests the need for providing Rural General Public (RGP) transit services for Floyd County's residents who might need them.

Figure 3-31 in the previous section also shows that many Floyd County's residents commute to Pulaski County – some of those commuters could potentially use PAT's services if the agency decided to provide out-of-county services. According to the Plan, informal carpooling is very popular in the Pulaski area. One of the official goals of the FFCCP is to "encourage formal park-and-ride lots to meet existing commuter need and encourage carpooling." The FFCCP includes guidelines regarding future land uses in Floyd County. It recommends that future growth be directed to established growth areas, particularly around the Town of Floyd, where high-density development and industrial uses should be concentrated. The Plan suggests that confined growth will allow more efficient and effective delivery of public services.

In 2005, Giles County adopted its revised *Giles County Comprehensive* Plan (GCCP). The purpose of the Plan is to 'determine the future needs of the locality in terms of social and physical infrastructure.' The GCCP identifies goals, objectives, and strategies that serve as guidelines for future land use. Giles County, north of Pulaski County, is mostly rural in nature, and very similar to the previously described Floyd County. The existing Giles County land use map highlights the dispersed nature of residential development in Giles County. One of the plan's goals focuses on supporting transit services in Giles County in the future by "supporting regional public transit options with respect to special populations within the County such as the elderly, handicapped, and unemployed." (page 64). Since there are no existing public transit agencies in Giles County, one of the agencies Giles County may choose to coordinate regional transit services with (if inter-county service is desired) would be PAT in Pulaski County.

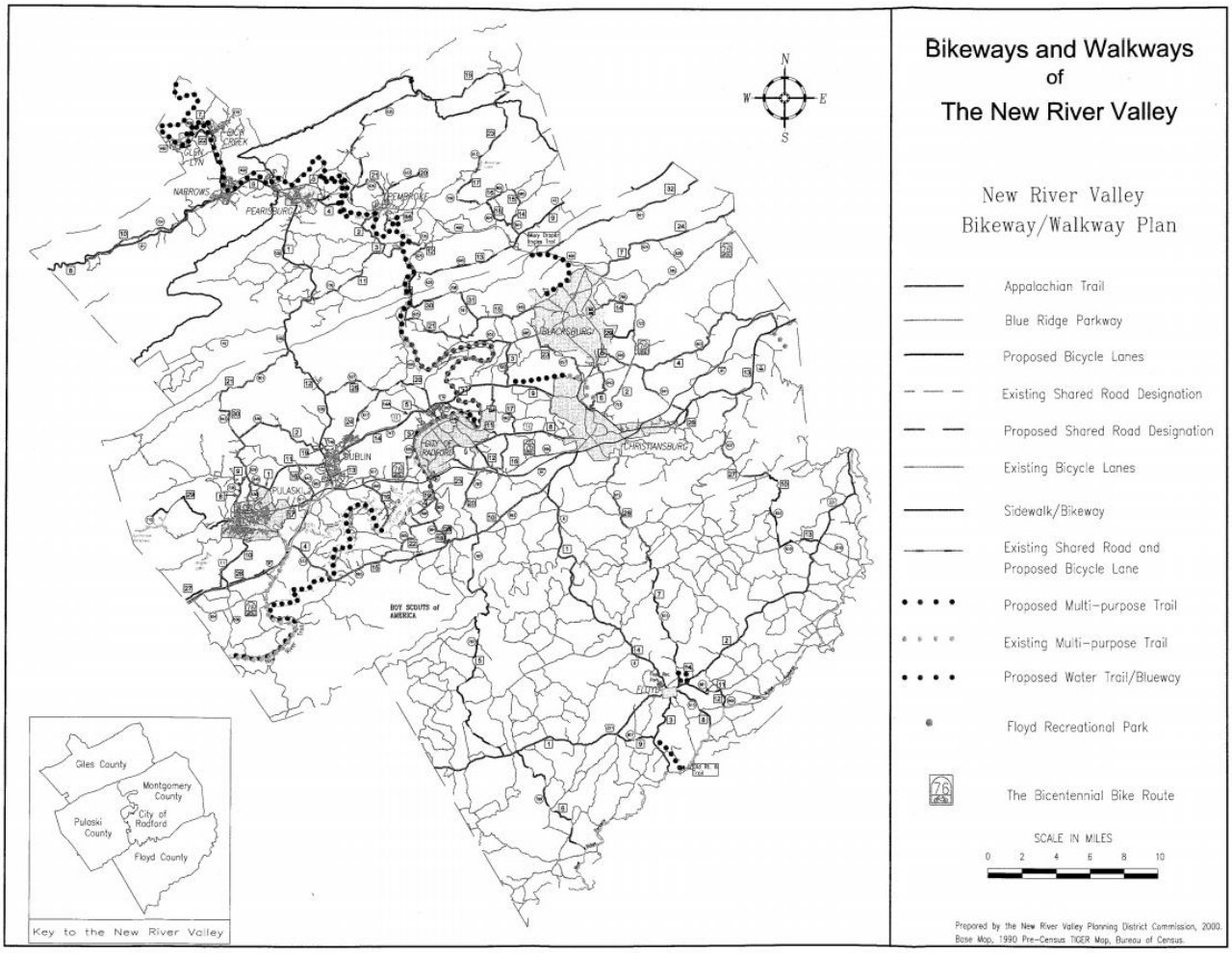
The future land use guide recommends channeling future residential growth to areas where residential development already exists today, focus commercial development along major transportation arteries in the county and industrial uses primarily along VA 460. Overall, these recommendations are positive indicators when it comes to possible introduction of transit services in Giles County.

3.10 Bike/Ped Plans

In 2000, the New River Valley Planning District Commission (NRVPDC) prepared the bicycle/pedestrian plan for the five-county New River Valley area, the *2000 Bikeway-Walkway-Blueway Plan* (BWBP). The Plan's goal is to provide information, guidelines and cohesion in the creation, expansion and coordination of bike/ped facilities in the New River Valley area. The BWBP includes an overview of the proposed bicycle and pedestrian facilities in each of the five counties. Figure 3-32, 3-33 and 3-34 present the bikeway/pedestrian plans for the entire New River Valley area, Pulaski, Floyd, and Giles counties, and the Town of Pulaski in Pulaski County, respectively.

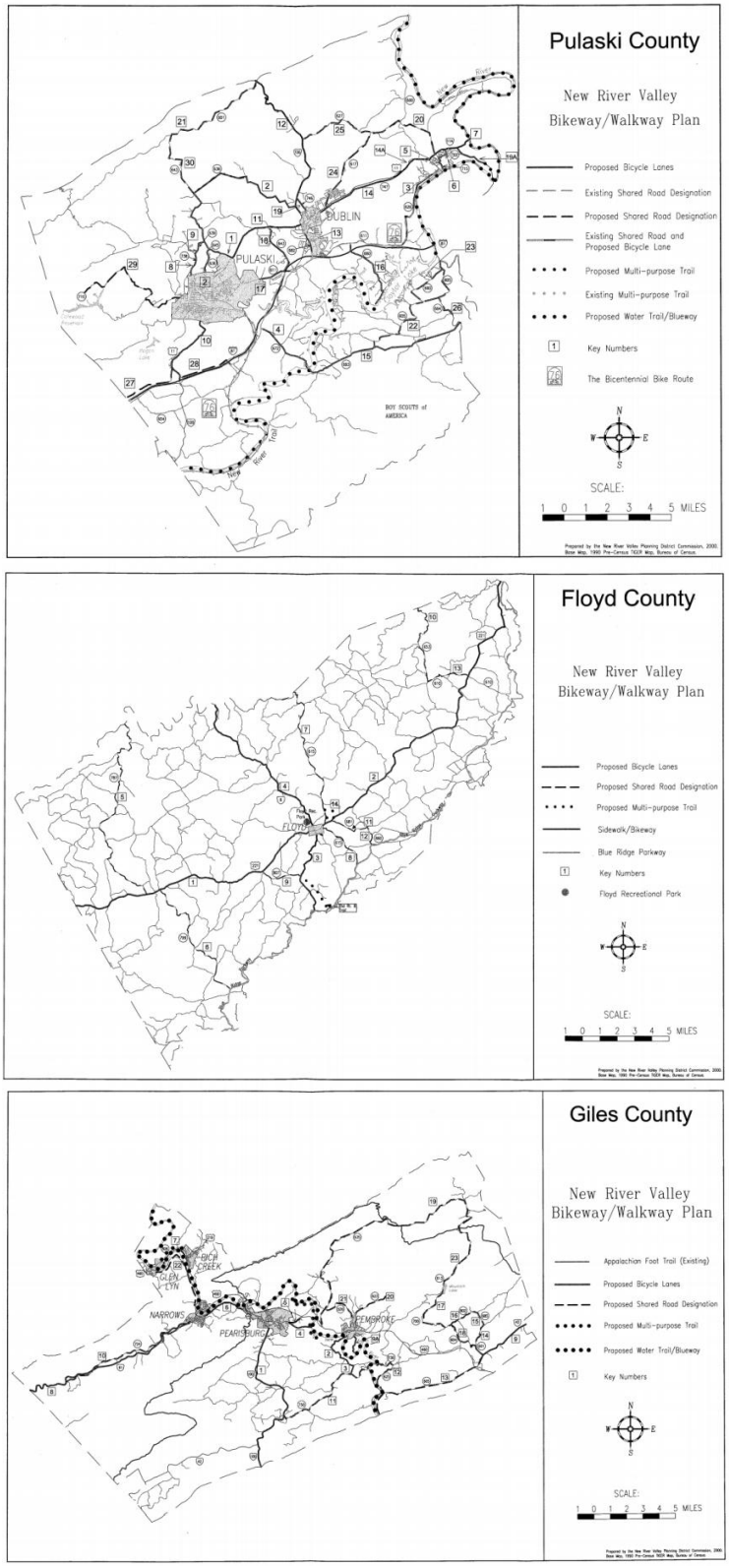
In general, the BWBP is very ambitious and if implemented would greatly enhance bicycle and pedestrian mobility and accessibility in the region. The Plan acknowledges that implementation efforts would be a multi-county endeavor and require substantial support from all constituencies.

FIGURE 3-32: NEW RIVER VALLEY AREA BIKEWAY/WALKWAY PLAN: FIVE-COUNTY OVERVIEW



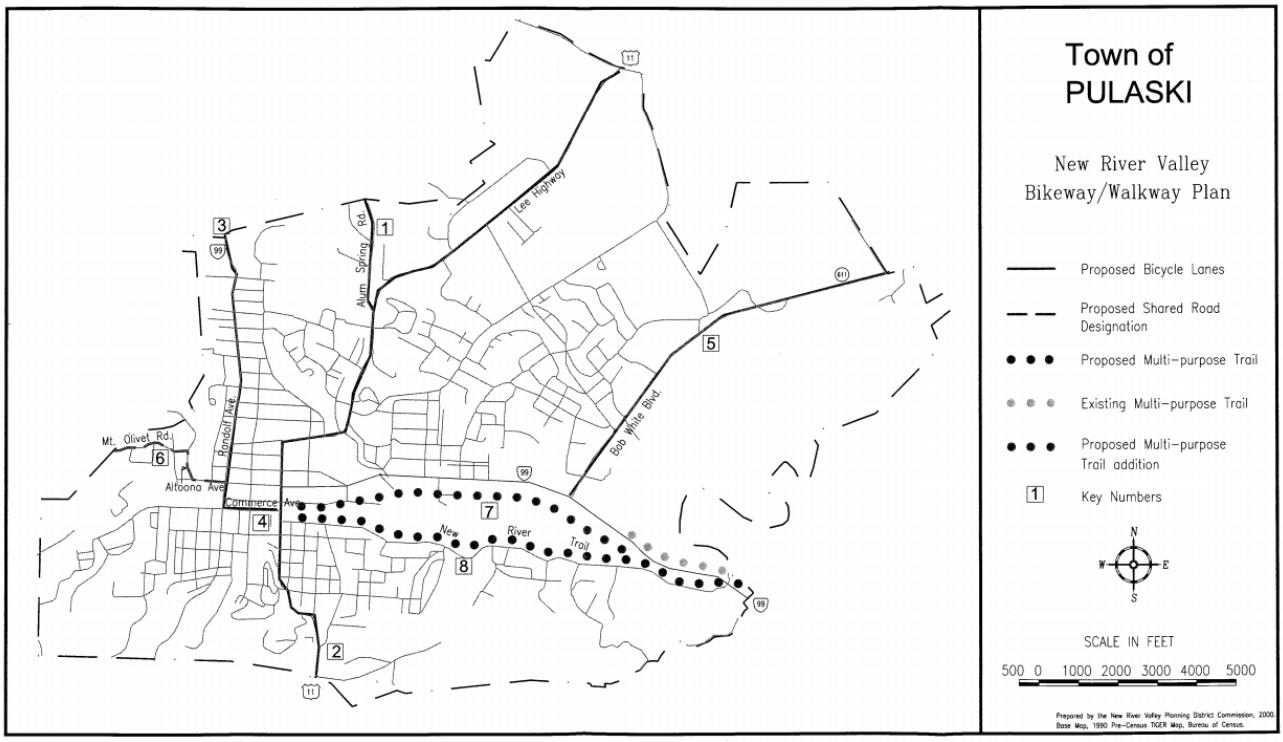
Source: 2000 Bikeway-Walkway-Blueway Plan

FIGURE 3-33: NEW RIVER VALLEY AREA BIKEWAY/WALKWAY PLANS: PULASKI, FLOYD, AND GILES AND COUNTIES



Source: 2000 Bikeway-Walkway-Blueway Plan

FIGURE 3-34: NEW RIVER VALLEY AREA BIKEWAY/WALKWAY PLANS: TOWN OF PULASKI



Source: 2000 Bikeway-Walkway-Blueway Plan

4.0 Transit Service and Facility Needs

This chapter identifies potential unconstrained service and facility needs for the PAT service area. Service and facility/equipment needs are identified based on the evaluation conducted in previous chapters of this TDP, stakeholder meetings, and demographic analysis. A meeting with PAT staff was also held to discuss potential service needs for inclusion in the TDP. Key findings that are taken into consideration in identifying transit service and facility unconstrained needs are as follows:

1. A review of service effectiveness, cost effectiveness and service efficiency indicates PAT does a good job with the resources available.
2. Existing and future transit supportive areas are served by transit within the Town of Pulaski and along the New River Express deviated fixed route; however, Pulaski residents do not have transit access to regional employment, educational, and shopping destinations in Radford, Christiansburg, Blacksburg and Roanoke.
3. Public outreach efforts revealed that expanding the existing service hours and adding regional connections are important to PAT riders. Providing weekend service for PAT residents to access shopping destinations was also identified by staff and stakeholders.
4. Pulaski County comprises a large area of roadways, with limited river crossings in the southern part of the county. This creates a challenge for PAT to provide service to all residents throughout the county, while continuing to provide effective and efficient service.
5. Bus stop amenities are limited. Recent federal funding will provide PAT with six new bus shelters; however, more benches, shelters and signs at major stop locations are needed to ensure the safety and comfort of passengers waiting for the service.
6. Most of PAT's staff are part-time, with responsibilities for both PAT and New River Valley Senior Services. As the service continues to expand, additional, dedicated staff and drivers will be needed.
7. As PAT's service grows and residents of the county become more familiar with the service provided, technological upgrades, such as GPS and other software are needed to ensure PAT continues to operate efficiently.
8. PAT shares space with New River Valley Senior Services. Vehicles are stored and maintained in different locations, and space is limited for PAT staff and drivers. PAT has a short term need to identify a new or expanded facility to house all PAT offices and vehicles.

Based on these findings, the following needs and service improvements have been identified for consideration for inclusion in this TDP. It is important to note that this list represents ***potential*** TDP improvements, unconstrained by budget and not prioritized. Recommended improvements for the TDP 6-year time period are identified in Chapter 5.

4.1 Unconstrained Service Needs

Existing Service

- **Longer Service Hours**: PAT currently operates demand response service from 7:00 a.m. until 5:00 p.m. on Monday through Friday and 9:00 a.m. until 3:00 p.m. on Saturday. This TDP recommends extending the demand response hours to 6:00 a.m. until 9:00 p.m. on Monday through Friday in an effort to accommodate more riders who work earlier or later shifts. In addition to extending the demand response service hours, this TDP recommends an additional round trip on the New River Express that departs the Pulaski Hardees at 5:30 p.m. and extending the 3:45 p.m. trip to include Fairlawn as shown in Table 4-1.

TABLE 4-1: PROPOSED NEW RIVER EXPRESS WEEKDAY SCHEDULE

Pulaski Hardees	NRCC	Dublin Wal-Mart	Dublin Wades	Fairlawn Kroger	Fairlawn Walmart	Dublin Wades	NRCC	Dublin Walmart
7:20 am	7:45 am	7:55 am	8:00 am	8:20 am	8:30 am	8:50 am	9:00 am	9:10 am
10:15 am	10:30 am	10:40 am	10:45 am	11:05 am	11:15 am	11:30 am	11:40 am	11:45 am
12:30 pm	12:45 pm	12:55 pm	1:00 pm	1:20 pm	1:30 pm	1:45 pm	1:50 pm	1:55 pm
3:45 pm	4:00 pm	4:10 pm	4:15 pm	**4:30 pm**	**4:40 pm**	**4:55 pm**	**5:00 pm**	**5:05 pm**
5:30 pm	**5:45 pm**	**5:55 pm**	**6:00 pm**	**6:20 pm**	**6:30 pm**	**6:45 pm**	**6:50 pm**	**6:55 pm**

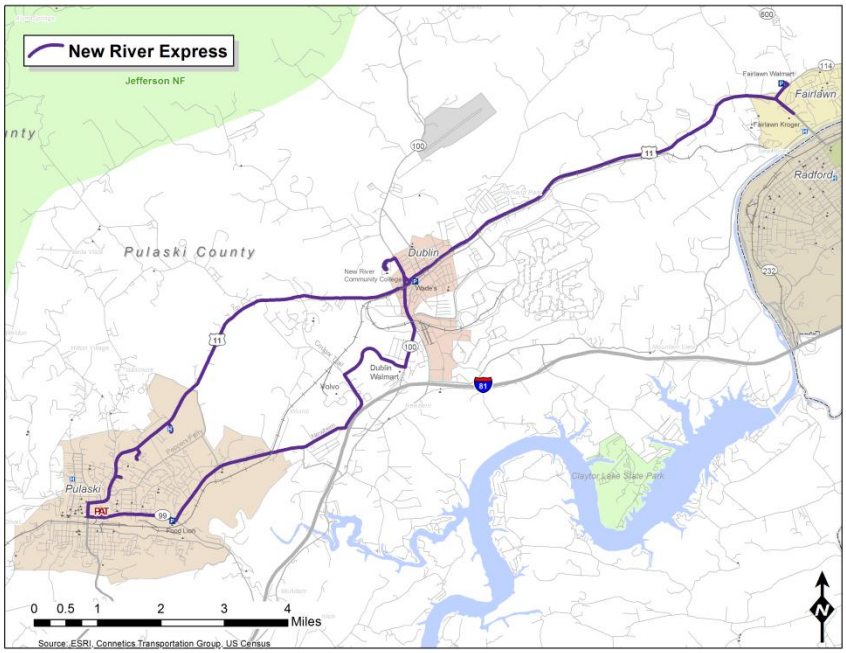
- **Deviated Fixed Route on Saturday:** In addition to the existing demand response service on Saturday, deviated fixed route service is proposed to include three trips from Pulaski to the Dublin Wal-Mart with the following schedule proposed in Table 4-2.

TABLE 4-2: PROPOSED NEW RIVER EXPRESS SATURDAY SCHEDULE

Pulaski Hardees	NRCC	Dublin Wades	Dublin Wal-Mart	Dublin Wades	Pulaski Hardees
10:00 am	10:15 am	10:20 am	10:25 am	10:30 am	10:45 am
12:00 p.m.	12:15 pm	12:20 pm	12:25 pm	12:30 pm	12:45 pm
2:00 p.m.	2:15 pm	2:20 pm	2:25 pm	2:30 pm	2:45 pm

- **Expanded Demand Response Service Area:** This TDP also identifies a need to expand PAT's Demand Response service area to cover the entire county. This could include one vehicle dedicated to the Fairlawn area, one vehicle in Northern Pulaski County, and one vehicle in Southern Pulaski County. This service could be provided from 6:00 a.m. until 8:00 p.m.

FIGURE 4-1: NEW RIVER EXPRESS IMPROVED FREQUENCIES



Commuter/Regional Service

Fairlawn/Christiansburg/Radford Loop – PAT staff and stakeholder meetings identified a need for connections to neighboring towns of Christiansburg and Radford. Since this service would travel outside of the service area, it would require coordination with transit providers in Radford and Blacksburg. The Mobility Study conducted by the New River Valley PDC identified in Chapter 3 of this TDP provides several route concepts that develop this triangle, including a Blacksburg-Radford-Christiansburg Route which travels between City of Radford and Christiansburg via Highway 11 and between Fairlawn and Christiansburg via Highway 114 with a stop identified at the Fairlawn Walmart. The proposed route would also continue into Blacksburg. PAT would have an opportunity to connect with this route using the New River Express Route. The following lists specific regional needs identified by PAT staff and stakeholders for connections between Pulaski, Fairlawn, Radford, Christiansburg, and Roanoke.

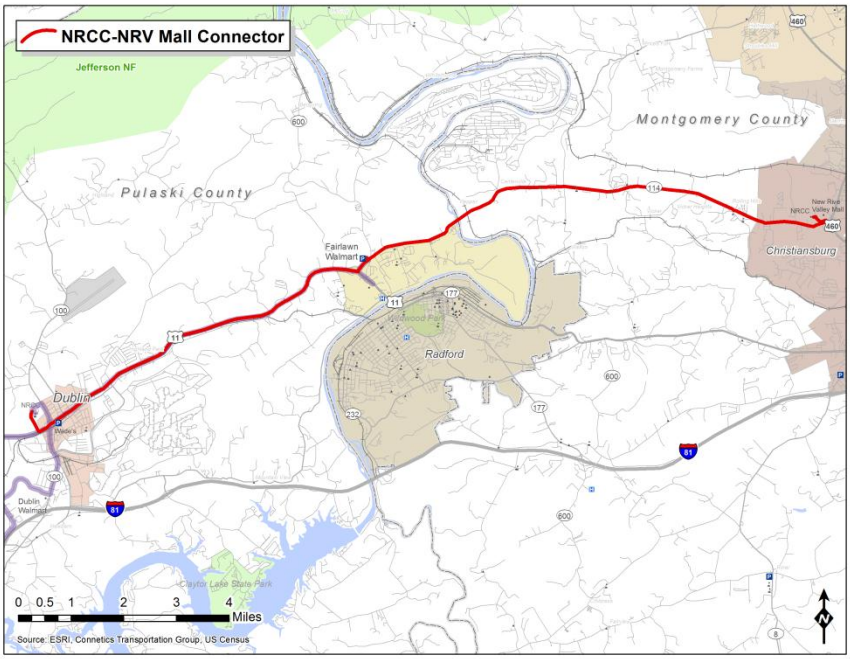
- **Dublin-Fairlawn-Christiansburg: New River Community College Connection**: The New River Community College has two campuses. One is located in Dublin, which is currently served by PAT. A second campus is located by New River Valley Mall in Christiansburg. Stakeholders identified the need to connect the two campuses with transit. This service would also provide PAT riders with access to New River Valley Mall as well as a connection to Blacksburg Transit and the Smartway bus to Roanoke. This route is recommended to travel nonstop from the Fairlawn Walmart to New River Valley Mall and NRCC-Christiansburg via Peppers Ferry Boulevard (Highway 114). This route could make four trips per day, and could be timed to coordinate with the New River Express, departing the Fairlawn Walmart at 8:30 a.m.; 11:15 a.m.; 1:30 p.m. and 4:40 p.m. Return trips would continue to the NRCC-Dublin Campus. This service could also be operated jointly with Blacksburg Transit as a

regional service between the Fairlawn Walmart and New River Valley Mall and the Smartway bus connection at the K-Mart in Christiansburg.

TABLE 4-3: PROPOSED NRCC-NEW RIVER MALL CONNECTOR SCHEDULE

Fairlawn Walmart	NRCC-New River Valley Mall	Fairlawn Walmart	NRCC – Dublin
8:30 a.m.	9:00 a.m.	9:30 a.m.	10:00 a.m.
11:15 a.m.	11:45 a.m.	12:15 p.m.	12:45 p.m.
1:30 p.m.	2:00 p.m.	2:30 p.m.	2:50 p.m.
4:45 p.m.	5:15 p.m.	5:45 p.m.	6:15 p.m.

FIGURE 4-2: NRCC-NRV MALL CONNECTOR

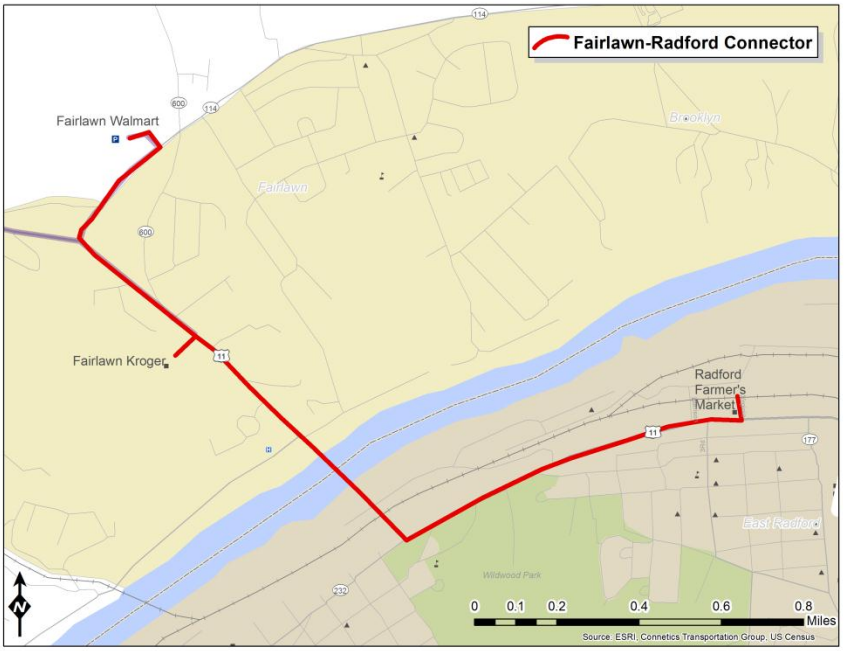


- **Radford Connection**: With the introduction of new transit service in Radford proposed for late 2011, opportunities for PAT to connect to the new transit service will exist, which would give Pulaski residents greater access to Radford University and medical facilities in Radford, as well as for Radford students to access the Walmart and Kroger in Fairlawn. Several proposed routes in the Transit Plan for City of Radford/Radford University connect to Fairlawn via the Fairlawn Kroger and Fairlawn Walmart. Opportunities exist for PAT residents to connect to this new service at these locations. In addition, a PAT route from the Fairlawn Walmart to downtown Radford would provide added opportunities for PAT Riders to travel directly to downtown Radford without making a transfer. From the Fairlawn Walmart, this route could travel southwest on Hwy. 114, southeast on Highway 11 to the Fairlawn Kroger, and would continue across the bridge and east on E. Main Street to the Farmers Market, where connections could be made to the proposed Radford Transit Service. This route would be timed to coordinate with the NRV Express service and the proposed NRCC Connector, with the following proposed schedule in Table 4-4. Additionally, this vehicle could be used to provide demand response service in the Fairlawn area during layovers.

TABLE 4-4: PROPOSED FAIRLAWN-RADFORD CONNECTOR SCHEDULE

Fairlawn Walmart	Fairlawn Kroger	Radford Farmers Market	Fairlawn Kroger	Fairlawn Wal-Mart
8:30 a.m.	8:40 a.m.	**9:00 a.m.**	9:20 a.m.	9:30 a.m.
11:15 a.m.	11:25 a.m.	**11:45 a.m.**	12:05 p.m.	12:15 p.m.
1:30 p.m.	1:40 p.m.	**2:00 p.m.**	2:20 p.m.	2:30 p.m.
4:45 p.m.	4:55 p.m.	**5:15 p.m.**	5:35 p.m.	5:45 p.m.

FIGURE 4-3: FAIRLAWN WALMART TO RADFORD FARMER'S MARKET

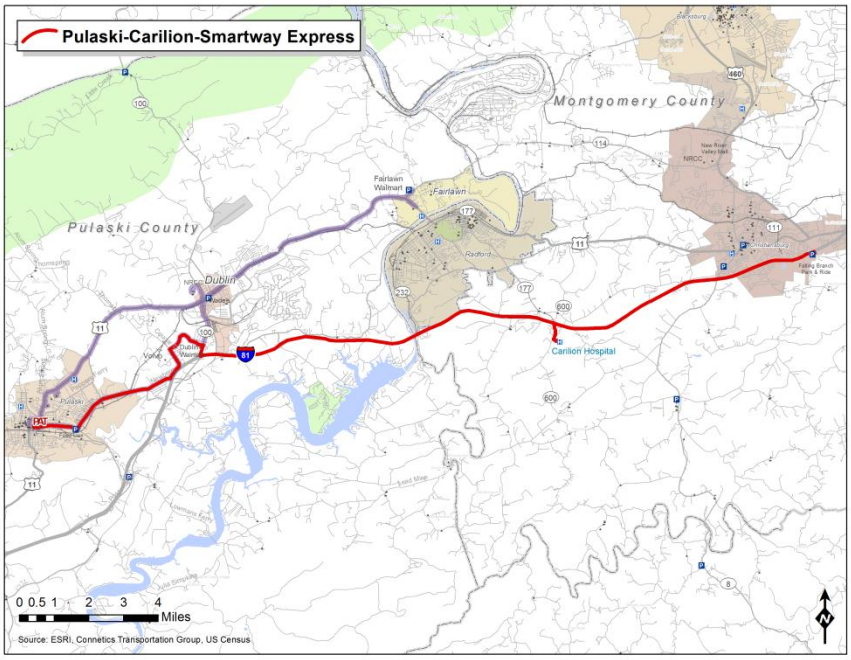


- **Connection to Smartway Commuter Bus to Roanoke**. Currently, the Smartway bus provides service between Christiansburg and Roanoke. Future service plans include extending the service to Carilion Hospital in Radford. Pulaski citizens would benefit from having access to this service. A proposed Radford to Christiansburg/Falling Branch Park and Ride Route identified in the NRVPDC Mobility Study could connect to both Carilion Hospital and the Smartway bus service to Roanoke. A PAT route to downtown Radford described above, would allow a connection to this service. Additionally, a PAT route to New River Valley Mall as described above, or via a connection to the proposed regional service between Fairlawn, Radford and Christiansburg would also create a connection to this service. Alternatively, PAT may choose to provide commuter service to the Carilion Hospital and the Smartway bus stop at the Falling Branch Park & Ride at Exit 118. This recommendation would include two a.m. peak, one midday, and two p.m. peak trips from downtown Pulaski, with limited stops at Volvo, the Dublin Walmart, Carilion Hospital and the Falling Branch Park and Ride. This route could be timed to coordinate with Smartway trips traveling to Roanoke during the AM peak and Smartway trips traveling from Roanoke during the PM Peak period, as provided in the proposed schedule in Table4- 5.

TABLE 4-5: PROPOSED PULUSKI-SMARTWAY SCHEDULE

Depart Downtown Pulaski	Arrive Falling Branch Park & Ride	Depart Falling Branch Park & Ride	Arrive Downtown Pulaski
5:30 a.m.	6:30 a.m.	6:45 a.m.	7:45 a.m.
7:00 a.m.	8:00 a.m.	8:15 am	9:15 am
12:00 pm	1:00 pm	1:15 pm	2:15 pm
4:30 pm	5:30 pm	5:45 pm	6:45 pm
6:45 pm	7:45 pm	8:00 pm	9:00 p.m.

FIGURE 4-4: PULASKI TO SMARTWAY BUS SERVICE TO ROANOKE

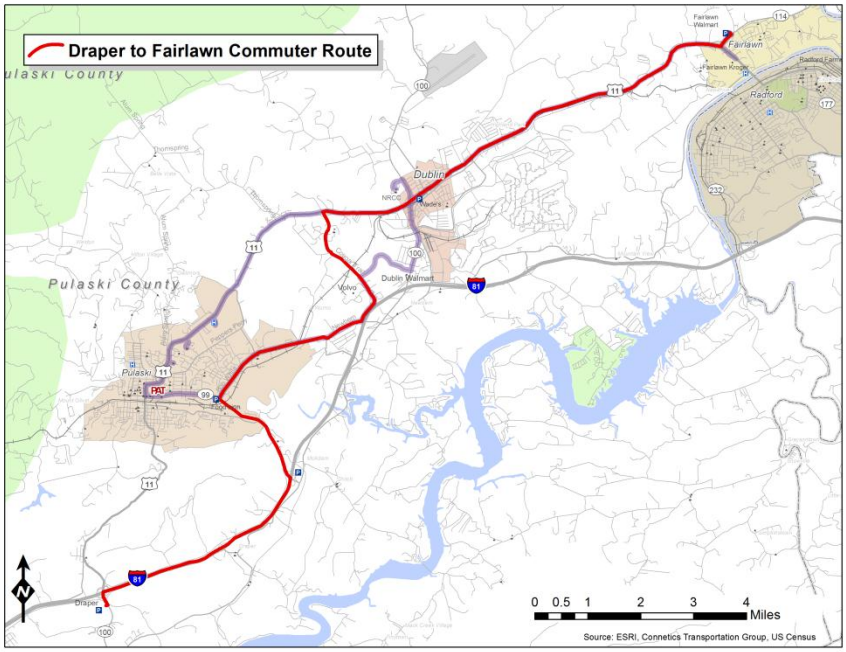


- **Draper to Fairlawn Commuter Route**: The New River Valley Mobility Study identifies the need for a regional employment route that travels from a Park & Ride at Kirby Road and Wysor Road in Draper to Pulaski via I-81 and HWY 99 to a Park and Ride at Exit 94 and the Town of Pulaski, to Volvo via Bob White Boulevard, to Dublin (Wade's Food Market) via Cleburne Boulevard, and to Fairlawn (Fairlawn Walmart) via Hwy 11. This route is proposed to operate during the peak a.m. and p.m. hours. Connections to Christiansburg, Radford and the Smartway bus to Roanoke could be made via the Fairlawn connector services proposed in this chapter. This route is estimated to take 55 minutes to travel 22 miles. A proposed schedule for this route is provided in Table 4-6.

TABLE 4-6: PROPOSED DRAPER TO FAIRLAWN COMMUTER ROUTE SCHEDULE

AM Peak: Draper to Fairlawn					
Draper PNR	**Exit 94 PNR**	**Town of Pulaski**	**Volvo**	**Dublin**	**Fairlawn**
6:00 a.m.	6:10 a.m.	6:20 a.m.	6:30 a.m.	6:40 a.m.	6:55 a.m.
7:00 a.m.	7:10 a.m.	7:20 a.m.	7:30 a.m.	7:40 a.m.	7:55 a.m.
8:00 a.m.	8:10 a.m.	8:20 a.m.	8:30 a.m.	8:40 a.m.	8:55 a.m.
6 a.m. return trip would stop at Volvo (7:30 a.m.). and Town of Pulaski (7:40 a.m.)					
PM Peak: Fairlawn to Draper					
Fairlawn	**Dublin**	**Volvo**	**Town of Pulaski**	**Exit 94 PNR**	**Draper PNR**
5:00 p.m.	5:20 p.m.	5:30 p.m.	5:40 p.m.	5:50 p.m.	6:00 p.m.
6:00 p.m.	6:20 p.m.	6:30 p.m.	6:40 p.m.	6:50 p.m.	7:00 p.m.
7:00 p.m.	7:20 p.m.	7:30 p.m.	7:40 p.m.	7:50 p.m.	8:00 p.m.
5 p.m. return trip would stop at Town of Pulaski (7:30 p.m.) and Volvo (7:40 p.m.)					

FIGURE 4-5: COMMUTER ROUTE TO DRAPER, PULASKI, DUBLIN AND FAIRLAWN

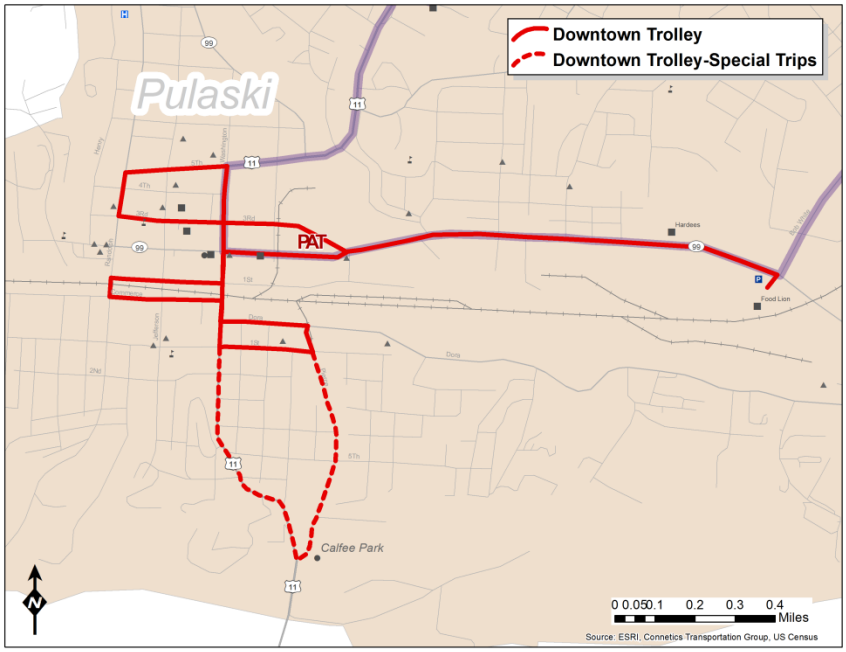


New Service

- **Downtown Trolley** – PAT staff identified the need to operate a downtown trolley to circulate the downtown businesses district, with PAT demand response service feeding into the route. The proposed route would travel west from the Food Lion on Hwy 99, northwest on 3rd Street NE to the Courthouse, north on Randolph Avenue, east on 5th Street NW, south on Washington Avenue, west on 1st Street NW, south on Randolph Ave, east on Commerce Street, south on E. Washington Street, east on Dora Highway, south on Pierce Avenue, west on 1st Street SE, north on Washington Street, and east on 2nd Street/E. Main Street to return to the Food Lion on Hwy 99. This route is proposed to operate hourly from 10:00 a.m. until 6:00 p.m., providing eight trips a day. In addition, this service

could be extended to Calfee Park during special events and game nights by continuing south on Pierce Avenue to Calfee Park and returning northbound via S. Washington Avenue.

FIGURE 4-6: DOWNTOWN TROLLEY SERVICE

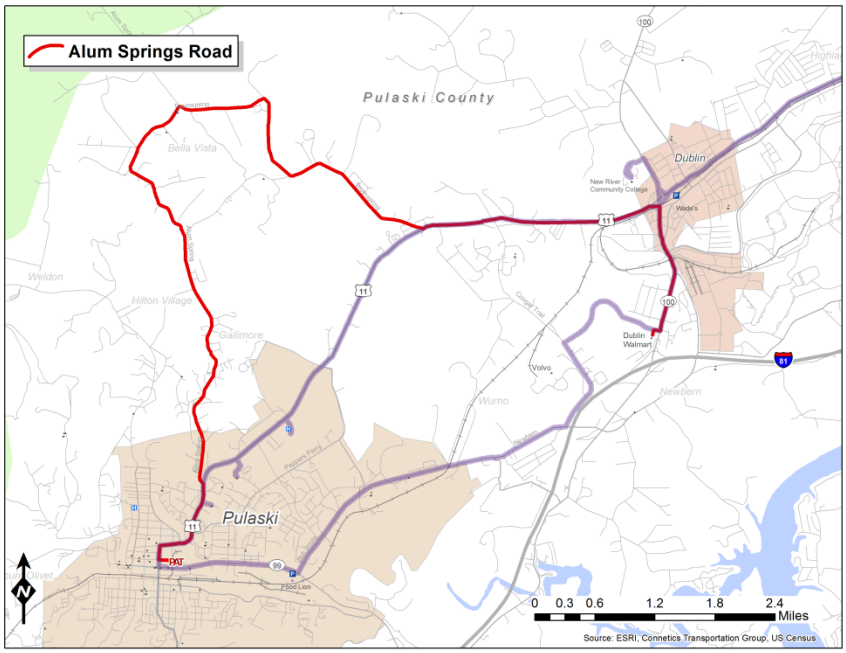


- **Alum Springs Road** (once a week): Once weekly deviated fixed route service is identified for Alum Springs Road. This route would travel from downtown Pulaski to the Dublin Walmart via a deviation on Alum Spring Road and SR 643. This route would make one trip at 8:15 a.m. from PAT to the Dublin Walmart, two round trips beginning at 11:00 a.m. and 1:00 p.m., and one 1-way trip from the Dublin Walmart to PAT at 4:15 p.m. This service would operate one day a week.

TABLE 4-7: PROPOSED ALUM SPRING ROAD SCHEDULE

PAT	Dublin Walmart	PAT
8:15 a.m.	**9:00 a.m.**	No Return
10:00 a.m.	**10:40 a.m.**	11:15 p.m.
1:00 p.m.	**12:55 p.m.**	1:45 p.m.
N/A	**4:15 p.m.**	5:00 P.M.

FIGURE 4-7: WEEKLY SERVICE ALONG ALUM SPRINGS ROAD

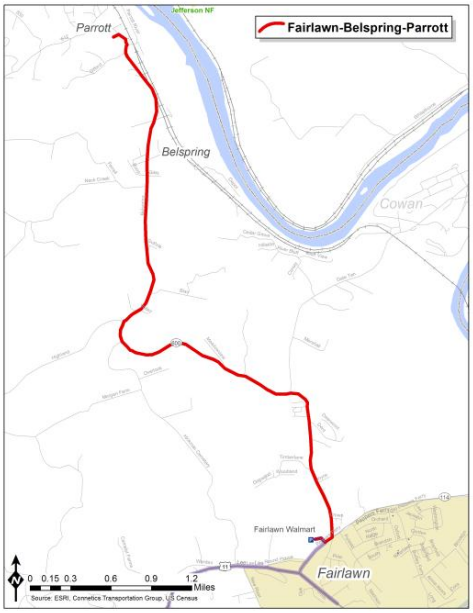


- **Belspring/Parrott (once a week):** Once weekly deviated fixed route service between Belspring, Parrot and the Fairlawn Walmart is also identified as a need in this TDP. From the Fairlawn Walmart, this route would travel north on Belspring Road (State Route 600), and would provide deviated fixed route service to the Parrott Post Office. This service would provide four round trips to Belspring and Parrott from the Fairlawn Walmart. The vehicle used for this route could also be used to provide demand response service in the Fairlawn area between the hours of 8:30 a.m. to 11:15 a.m. and 1:30 p.m. to 4:45 p.m.

TABLE 4-8: PROPOSED BELSPRING-PARROTT SCHEDULE

Fairlawn Walmart	Parrott Post Office	Fairlawn Walmart
7:30 a.m.	8:00 a.m.	8:30 a.m.
11:15 a.m.	11:45 a.m.	12:15 p.m.
12:30 p.m.	1:00 p.m.	1:30 p.m.
4:45 p.m.	5:15 p.m.	5:45 p.m.

FIGURE 4-8: WEEKLY SERVICE FROM FAIRLAWN TO BELSPRING AND PARROTT

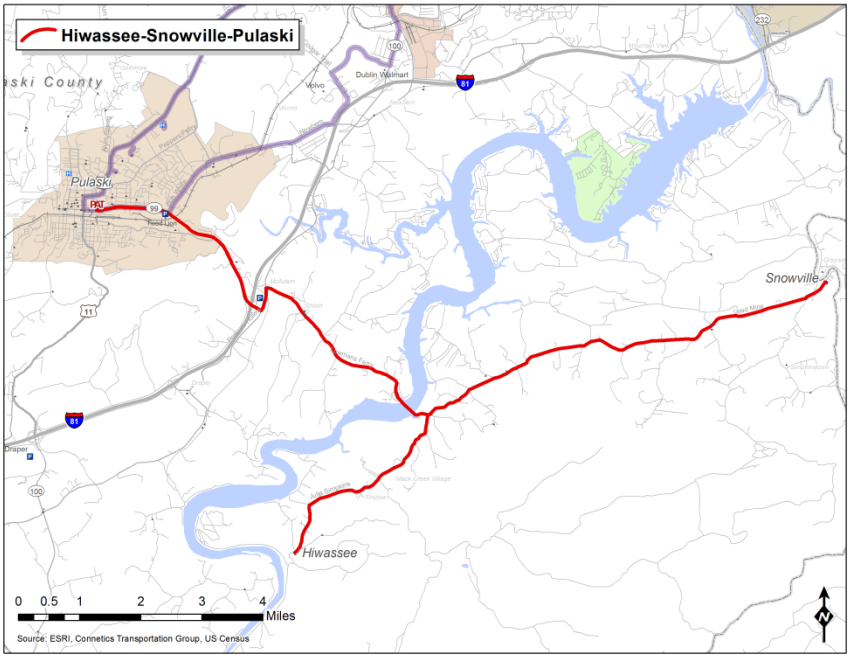


- **Hiwassee/Snowvillle (once a week):** In order to expand the reach of PAT service, a once weekly deviated fixed route service is proposed to connect the towns of Hiwasee and Snowville to Pulaski and the New River Express. This route would travel from PAT offices to Snowville via East Main Street (Hwy 99), north on Old Route 100, southeast on Lowman's Ferry Road (SR 672), northeast on Lead Mine Road to Snowville, southwest on Lead Mine Road to Hiwassee, and northeast on Lead Mine Road to return to State Route 672, Old Route 100 and HWY 99 to the Pulaski Hardees and PAT offices. This route could make three trips as shown in Table 4-9.

TABLE 4-9: PROPOSED HIWASEE - SNOWVILLE SCHEDULE

PAT	Snowville	Hiwassee	Pulaski Hardees	PAT
8:30 a.m.	9:00 a.m.	9:45 a.m.	10:15 a.m.	10:30 a.m.
10:45 a.m.	11:15 a.m.	12:00 p.m.	12:30 pm	12:45 a.m.
2:00 p.m.	2:30 p.m.	3:15 p.m.	3:45 pm	4:00 p.m.

FIGURE 4-9: WEEKLY SERVICE TO HIWASEE AND SNOWVILLE



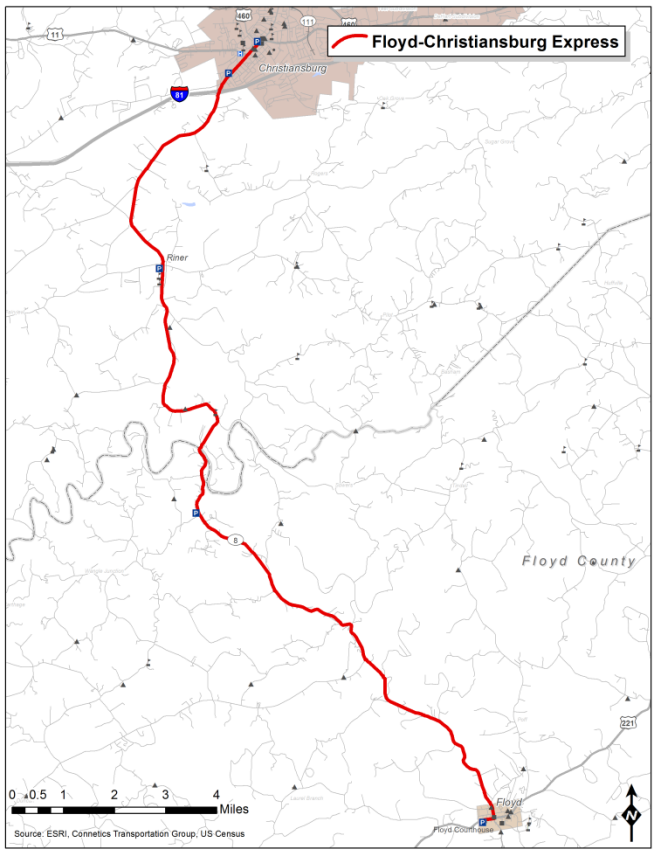
- **Summer Recreation Service:** Stakeholder outreach identified a need for service to Claytor Lake State Park, Boy Scout camps, the New River Trail and other recreational areas during the summer months. This service could be provided as a demand response service requiring advanced notice, or provided via a deviated fixed route on Saturdays only.
- **Floyd County**: Stakeholder outreach with representatives from Floyd County and staff members with PAT identified a potential demand for transit service in Floyd County. While Floyd County is outside of PAT's service area, they share similar geographic and demographic characteristics. These similarities would make PAT's model for demand response transit service effective in Floyd County. Due to the rural nature of the county, demand response transit could transport Floyd citizens to

needed social services, medical, shopping and employment centers. Additionally, the New River Valley PDC Mobility Study identified an employment route from downtown Floyd to downtown Christiansburg in Montgomery County. This service would require coordination across several jurisdictions. Proposed stops would include the Floyd Courthouse, Route 8/Alum Ridge Park & Ride Lot, Riner Food Center and I-81/Rt. 8 Park & Ride Lot. This TDP proposes two round trips in the AM peak and two round trips in the PM peak. Additionally, demand response service throughout Floyd County could be offered from 10:00 a.m. until 4:00 p.m. when the vehicle is not in commuter service.

TABLE 4-10: PROPOSED FLOYD-CHRISTIANBURG COMMUTER ROUTE SCHEDULE

AM Peak: Floyd to Christiansburg				
Floyd Courthouse	**Route 8/Alum Ridge Road**	**Riner Food Center**	**I-81/Route 8 PNR**	**N. Franklin & Main Street**
6:00 a.m.	6:15 a.m.	6:25 a.m.	6:35 a.m.	6:45 a.m.
8:00 a.m.	8:15 a.m.	8:25 a.m.	8:35 a.m.	8:45 a.m.
PM Peak: Christiansburg to Floyd				
N. Franklin & Main Street	**I-81/Route 8 PNR**	**Riner Food Center**	**Route 8/Alum Ridge Road**	**Floyd Courthouse**
4:30 p.m.	4:40 p.m.	4:50 p.m.	5:00 p.m.	5:15 p.m.
6:30 p.m.	6:40 p.m.	6:50 p.m.	7:00 p.m.	7:15 p.m.

FIGURE 4-10: LIMITED STOP COMMUTER SERVICE FROM FLOYD TO CHRISTIANBURG

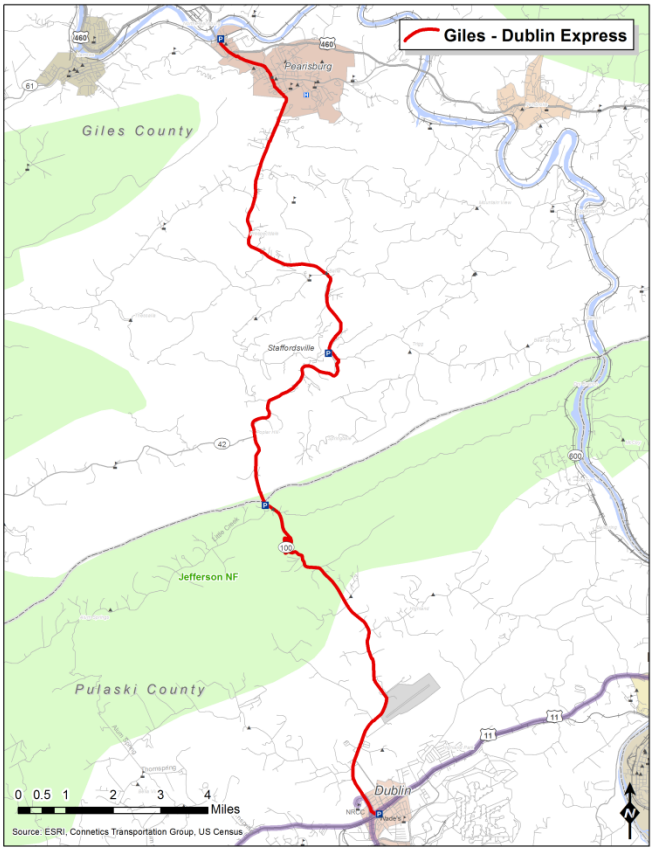


- **Giles County:** Giles County is also outside of PATs service area; however, shared boundaries and similarities in densities create opportunities for PAT to provide service in Giles. Additionally, the New River Valley PDC Mobility Study identifies an employment transportation route between Pearisburg and Dublin. This route would travel via Rt. 100 from Thomas Drive and Cord Drive in Pearisburg, with stops in Staffordsville, Little Creek and Wade's Food Market in Dublin. A proposed schedule is provided in Table 4-11. Demand Response service throughout Giles County could be provided from 9:30 a.m. until 4:30 p.m. while the vehicle is not in commuter service.

TABLE 4-11: PROPOSED PEARISBURG-DUBLIN COMMUTER ROUTE SCHEDULE

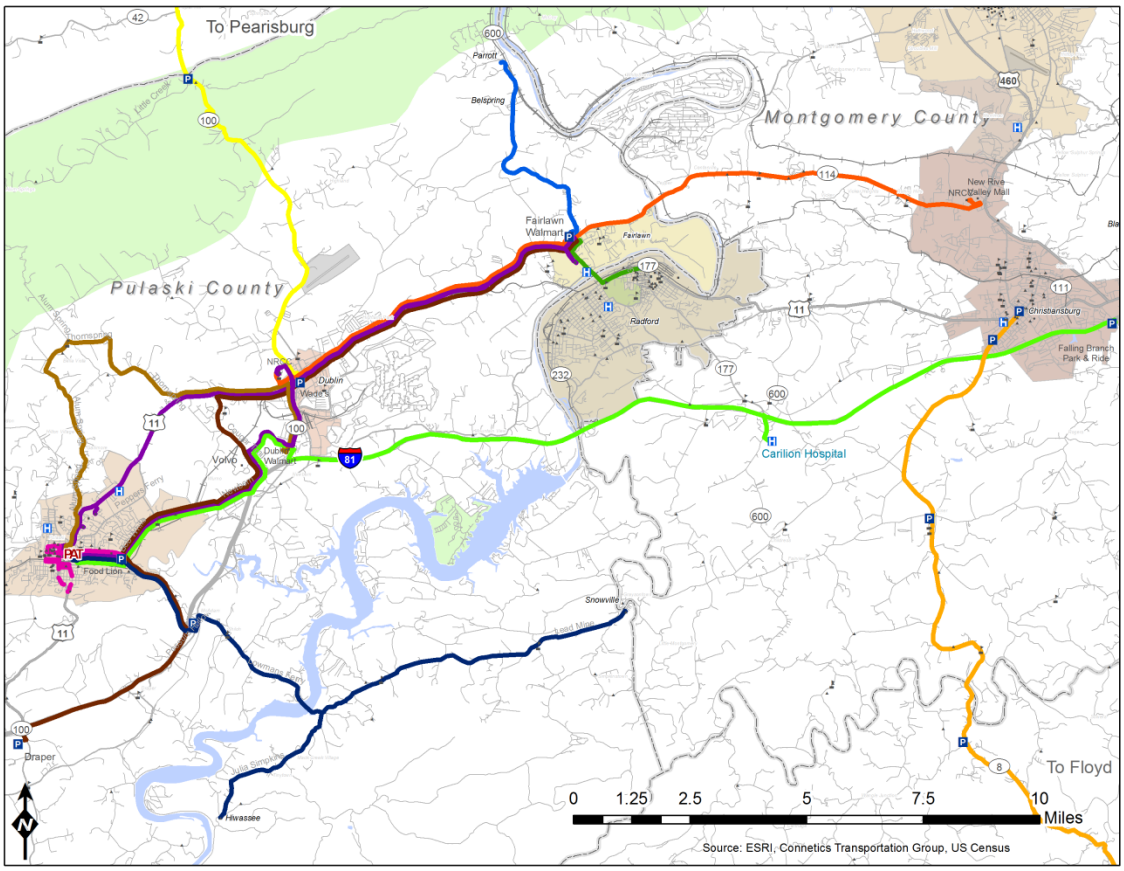
AM Peak: Pearisburg to Dublin			
Pearisburg Park & Ride	**Staffordsville Park & Ride**	**Little Creek Park & Ride**	**Wade's Dublin**
6:00 a.m.	6:15 a.m.	6:30 a.m.	6:40 a.m.
8:00 a.m.	8:15 a.m.	8:30 a.m.	8:40 a.m.
PM Peak: Dublin to Pearisburg			
Wade's Dublin	**Little Creek Park & Ride**	**Staffordsville Park & Ride**	**Pearisburg Park & Ride**
5:30 p.m.	5:40 p.m.	5:55 p.m.	6:10 p.m.
7:30 p.m.	7:40 p.m.	7:55 p.m.	8:10 p.m.

FIGURE 4-11: COMMUTER SERVICE FROM PEARISBURG TO DUBLIN



- **Connection to Amtrak Service in Lynchburg**: In 2010, the Virginia DRPT conducted a study of connector bus service from Roanoke to Amtrak service in Lynchburg. The study also examined extending the connector bus service to Blacksburg Virginia. The study concluded that service from Roanoke to Lynchburg could be feasible; whereas, service from Blacksburg would be too costly. Stakeholder outreach identified a need for service from the Pulaski area to the Amtrak rail service from Lynchburg to Washington. The DRPT plan identifies one trip leaving Roanoke on weekday mornings at 6:00 a.m. and arriving in Lynchburg at 7:10 a.m. A second trip in the evenings would travel from Lynchburg at 8:46 p.m. to Roanoke arriving at 9:56 p.m. Although not recommended in the 6-year TDP, Pulaski residents may benefit from a regional route that would connect to the proposed service.

FIGURE 4-12: SYSTEMWIDE UNCONSTRAINED NEEDS PLAN



4.2 Facility and Equipment Needs

1. **Vehicle Fleet**: PAT should continue to replace vehicles in its fleet as needed, and purchase new vehicles when new routes are added. This TDP assumes all vehicles will be 12-14 passenger body-on-chassis vehicles, with the exception of the downtown Trolley service. Additional equipment, such as bicycle racks and child safety seats should also continue to be replaced and purchased.
2. **Dedicated PAT Facility:** PAT's current facility includes shared office space with New River Valley Senior Services, and with maintenance and vehicle storage housed in a separate location. PAT has a need to conduct a study that examines the feasibility of purchasing or building a new facility that will provide office space for all of PAT's staff, a driver break room, vehicle storage, and a paved gas area and bus wash station.
3. **Bus Stop Amenities:** PAT should continue to identify and purchase bus stop shelters and benches for key transit stops including Meadowview Apartments, Washington Square Apartments, Calfee Park, and other locations along Route 11. Additionally, transit hubs will emerge at key transfer locations, such as the Town of Pulaski, Town of Dublin, Fairlawn Walmart and Fairlawn Kroger, where multiple routes and Park and Rides are identified. The Fairlawn Walmart will also emerge as a regional transit hub, should transit service in Radford and Blacksburg connect to Pulaski Area Transit routes at this location. These transit hubs will need shelters, benches and stop amenities to accommodate passengers waiting for transit.
4. **Technology**: PAT has several needs to ensure they continue to operate efficiently by introducing technology to the buses and operations. PAT would benefit from an ITS study that would provide options for PAT to consider along with costs, such as GPS/Automatic Vehicle Locator software, Automated Fareboxes and website enhancements.
5. **Staffing Positions**: Most of PAT's staff are employed part-time or share responsibilities with New River Valley Senior Services. As PAT continues to grow, dedicated and additional staff and drivers are needed.

4.3 Funding Requirements

Potential costs were estimated for the service and facility unconstrained needs identified above (in FY2011 dollars). Table 12 provides a summary of the unconstrained service needs described in this chapter, followed by estimated operating costs in Table 13. Capital cost estimates are identified in Tables 14 through 16. Potential funding requirements are based on the following assumptions:

- Operating cost of $37.85 per revenue hour in FY2011 dollars;
- Revenue vehicle costs are assumed at $49,500 in FY2011, $49,500 in FY2012, $50,000 in FY2013, $51,000 in FY2014, $51,500 in FY2015, and 54,000 in FY2016
- Service/pool vehicles are assumed at $25,000;
- Weekday service is assumed to be 251 days per year; Saturday service is 50 days per year; once weekly service is 52 days per year; and

- Vehicle requirements are exclusive by route, and do not consider interlining or sharing vehicles across several routes.

TABLE 4-12: SUMMARY OF PROPOSED SERVICE IMPROVEMENTS

Service Improvement	Jurisdiction	Span & Frequency
Existing Service Improvements		
Demand Response Service	Pulaski	Monday - Friday, 6:00 a.m. - 9:00 p.m.; Saturday, 9:00 a.m. - 3:00 p.m.; Expand service area to all of Pulaski County
New River Express	Pulaski	Extend Service Hours; Add Saturday Service; Monday - Friday, 7:20 a.m. - 6:56 p.m.; Saturday, 10:00 a.m. - 2:45 p.m.
New Commuter/Regional Service		
New River Community College Connection	Pulaski & Montgomery	4 trips; Monday - Friday, 8:30 a.m. - 6:15 p.m.
Radford Connection	Fairlawn & Radford	4 trips; Monday - Friday, 8:30 a.m. - 6:45 p.m.
Smartway Connection	Pulaski & Montgomery	5 trips; Monday - Friday, 5:30 a.m. - 9:00 p.m.
Draper to Fairlawn	Pulaski	6 peak period trips; Monday - Friday, 6:00 a.m. - 8:55 a.m.; 5:00 p.m. - 8:00 p.m.
New Deviated Fixed Route Service		
Downtown Trolley	Pulaski	Monday - Friday, 10:00 a.m. - 6:00 p.m.; 60-minute frequencies
Alum Springs Road	Pulaski	Once a Week; 4 trips; 8:15 a.m. - 5:00 p.m.
Belspring/Parrott	Pulaski	Once a Week; 4 trips; 7:30 a.m. - 5:45 p.m.
Hiawassee/Snowville	Pulaski	Once a Week; 3 trips; 8:30 a.m. - 4:00 p.m.
Outside Service Area		
Floyd to Christiansburg Commuter Service	Floyd	4 peak period trips; Monday - Friday, 6:00 a.m. - 8:45 a.m.; 4:30 p.m.; 7:15 p.m.
Floyd County Demand Response	Floyd	Monday - Friday, 9:30 a.m. - 3:30 p.m.
Pearisburg to Dublin Commuter Service	Giles	4 peak period trips; Monday - Friday, 6:00 a.m. - 8:40 a.m.; 5:30 p.m. - 8:10 p.m.
Giles County Demand Response	Giles	Monday - Friday, 9:30 a.m. - 4:30 p.m.

TABLE 4-13: UNCONSTRAINED SERVICE PLAN ESTIMATED OPERATING COSTS IN FY2011 DOLLARS

Weekday Deviated Fixed Route	Existing Rev. Hrs.	Existing Rev. Miles	Existing Daily Busses	Existing Annual Operating Costs	Expanded Rev. Hrs.	Expanded Rev. Miles	Expanded Daily Busses	Expanded Annual Operating Costs	Total Rev. Hrs.	Total Rev. Miles	Total Daily Busses	Total Annual Operating Costs
New River Express	2,134	32,796	1.00	$80,753	879	16,174	0.00	$33,251	3,012	48,970	1.00	$114,004
Christianburg/NRCC Connection	0	0	0	$0	2,510	29,809	1.00	$95,004	2,510	29,809	1.00	$95,004
Radford Connection	0	0	0	$0	2,259	7,590	1.00	$85,503	2,259	7,590	1.00	$85,503
Smartway Connector	0	0	0	$0	3,389	42,017	1.50	$128,255	3,389	42,017	1.50	$128,255
Draper to Fairlawn Commuter Route	0	0	0	$0	1,506	33,132	1.00	$57,002	1,506	33,132	1.00	$57,002
Downtown Trolley	0	0	0	$0	2,008	10,442	1.00	$76,003	2,008	10,442	1.00	$76,003
Alum Springs Road	0	0	0	$0	468	4,025	1.00	$17,714	468	4,025	1.00	$17,714
Belspring/Parrott	0	0	0	$0	520	2,251	1.00	$19,682	520	2,251	1.00	$19,682
Hiwassee/Snowville	0	0	0	$0	390	5,694	1.00	$14,762	390	5,694	1.00	$14,762
Floyd to Christianburg Commuter	0	0	0	$0	2,008	20,984	1.00	$76,003	2,008	20,984	1.00	$76,003
Pearisburg to Dublin Commuter	0	0	0	$0	2,008	30,722	1.00	$76,003	2,008	30,722	1.00	$76,003
Total	**2,134**	**32,796**	**1**	**$80,753**	**17,944**	**202,840**	**10.50**	**$679,180**	**20,078**	**235,635**	**11.50**	**$759,933**

Weekday Demand Response	Existing Rev. Hrs.	Existing Rev. Miles	Existing Daily Busses	Existing Annual Operating Costs	Expanded Rev. Hrs.	Expanded Rev. Miles	Expanded Daily Busses	Expanded Annual Operating Costs	Total Rev. Hrs.	Total Rev. Miles	Total Daily Busses	Total Annual Operating Costs
Pulaski Demand Response	7,530	116,464	3.00	$285,011	3,514	54,350	0.00	$133,005	11,044	170,814	3.00	$418,015
Fairlawn Demand Response	0	0	0.00	$0	3,514	54,350	1.00	$133,005	3,514	54,350	1.00	$133,005
Northern Pulaski Demand Response	0	0	0.00	$0	2,008	60,240	1.00	$76,003	2,008	60,240	1.00	$76,003
Southern Pulaski Demand Response	0	0	0.00	$0	2,008	60,240	1.00	$76,003	2,008	60,240	1.00	$76,003
Floyd Demand Response	0	0	0.00	$0	1,506	45,180	1.00	$57,002	1,506	45,180	1.00	$57,002
Giles Demand Response	0	0	0.00	$0	1,757	52,710	1.00	$66,502	1,757	52,710	1.00	$66,502
Total	**7,530**	**116,464**	**3.00**	**$285,011**	**14,307**	**327,070**	**5.00**	**$541,520**	**21,837**	**443,534**	**8.00**	**$826,530**
Total All Weekday	**9,664**	**149,260**	**4.00**	**$365,763**	**32,251**	**529,910**	**15.50**	**$1,220,700**	**41,915**	**679,169**	**19.50**	**$1,586,464**

Saturday Service	Existing Rev. Hrs.	Existing Rev. Miles	Existing Daily Busses	Existing Annual Operating Costs	Expanded Rev. Hrs.	Expanded Rev. Miles	Expanded Daily Busses	Expanded Annual Operating Costs	Total Rev. Hrs.	Total Rev. Miles	Total Daily Busses	Total Annual Operating Costs
New River Express	0	0	0.00	$0	300	2,595	1.00	$11,355	300	2,595	1.00	$11,355
Pulaski Demand Response	800	16,000	4.00	$30,280	0	0	0.00	$0	800	16,000	4.0	$30,280
TOTAL	**800**	**16,000**	**4.00**	**$30,280**	**300**	**2,595**	**1.00**	**$11,355**	**1,100**	**18,595**	**5.00**	**$41,635**
Total Unconstrained System	**10,464**	**165,260**	**8.00**	**$396,043**	**32,551**	**532,505**		**$1,232,055**	**43,015**	**697,764**	**19.50**	**$1,628,099**

TABLE 4-14: EXISTING REVENUE VEHICLE REPLACEMENT SCHEDULE

PAT Vehicle #	Date Delivered	Use	2011	2012	2013	2014	2015	2016	2017
Existing Vehicles			***Vehicle Age - Replacement Year (R)***						
37	2006	Transit Vehicle	**R**						
31	2005	Transit Vehicle	6	**R**					
32	2005	Transit Vehicle	6	**R**					
35	2007	Transit Vehicle	4	5	**R**				
34	2007	Transit Vehicle	4	5	6	**R**			
25	2010	Transit Vehicle	1	2	3	4	**R**		
28	2010	Transit Vehicle	1	2	3	4	**R**		
30	2010	Transit Vehicle	1	2	3	4	**R**		
26	2005	Transit Vehicle - Spare	6	7	8	9	10	**R**	
New Vehicles									
n/a	2011	Transit Vehicle	0	1	2	3	4	5	6
n/a	2012	Transit Vehicle		0	1	2	3	4	5
n/a	2012	Transit Vehicle		0	1	2	3	4	5
n/a	2013	Transit Vehicle			0	1	2	3	4
n/a	2014	Transit Vehicle				0	1	2	3
n/a	2015	Transit Vehicle					0	1	2
n/a	2015	Transit Vehicle					0	1	2
n/a	2015	Transit Vehicle					0	1	2
n/a	2016	Transit Vehicle - Spare						0	1
Total Vehicles			**9**	**9**	**9**	**9**	**9**	**9**	**9**
Average Vehicle Age			**3.2**	**2.7**	**3.0**	**3.2**	**2.6**	**2.3**	**3.3**
Vehicles Replaced			**1**	**2**	**1**	**1**	**3**	**1**	**0**
Total Vehicle Cost			**$49,500**	**$99,000**	**$50,000**	**$51,000**	**$154,500**	**$54,000**	**$0**

TABLE 4-15: ESTIMATED UNCONSTRAINED COSTS FOR REPLACEMENT/EXPANSION VEHICLES IN FY2011 DOLLARS

Service Vehicle Needs	Peak Vehicles	Fleet Vehicles	Vehicle Type	Unit Cost	Total Cost
Replacement Revenue Vehicle	8.00	9.00	Body on Chassis	$49,500	$445,500
Service Expansion Vehicles	11.50	14.00	Body on Chassis	$49,500	$693,000
Supervisor Replacement Vehicles		2.00	Supervisor Vehicle	$25,000	$50,000
Total	**19.50**	**23.00**	Spare Ratio	**18%**	**$1,188,500**

TABLE 4-16: OTHER UNCONSTRAINED CAPITAL NEEDS IN FY2011 DOLLARS

Other Capital Needs			Estimated Cost
Facility Needs	**Qty.**	**Cost**	**Total**
Facility Feasibility Study	1	$200,000	$200,000
Bus Stop Needs	**Qty.**	**Cost**	**Total**
Shelters	6	10,000	$60,000
Benches	10	1,000	$10,000
Signs	35	150	$5,250
Technology Needs	**Qty.**	**Cost**	**Total**
ITS Study	1	$57,000	$57,000
GPS/AVL	1	$250,000	$250,000
Website Enhancements	1	$50,000	$50,000

5.0 Service and Facility Recommendations

This chapter identifies service and facility needs that are recommended for inclusion in the six-year TDP time period (FY2012 through FY2017). Potential service and facility needs were previously identified in Chapter 4 of this TDP. Recommended service and facility improvements that are presented in this chapter are based on anticipated available funding during the TDP time period.

5.1 Service Recommendations

Chapter 4 of this TDP identified the following potential service improvements for consideration over the TDP's six-year time period.

1. Existing Service
    a. Longer Service Hours
    b. Deviated Fixed Route on Saturday
    c. Expanded Demand Response Service Area
2. Commuter/Regional Service between Fairlawn/Christiansburg/Radford
    a. Dublin-Fairlawn-Christiansburg (New River Community College Connector)
    b. Radford Connector
    c. Connection to Smartway Commuter Bus to Roanoke
    d. Draper to Fairlawn Commuter Route
3. New Deviated Fixed Route Service
    a. Downtown Trolley
    b. Alum Springs Road (once a week)
    c. Belspring/Parrott (once a week)
    d. Hiwassee/Snowvillle (once a week)
4. Outside Service Area
    a. Floyd County
    b. Giles County

In FY2011, PAT projected the following operating revenues:

<u>Operating Revenues</u>

- Farebox and Other Funds $45,000

<u>Federal</u>

- FTA Section 5311 Funds: $167,937
- New Freedom Grant: $37,500

State

- State Operating Assistance: $50,779
- State Paratransit Program Funds: 35,625

Local

- Local General Funds and Partner Contribution: $117,174
- New Freedom Grant Local Match: $1,875

Following are recommended service improvements for inclusion in the TDP's six-year time period.

FY2012

- **Expand Demand Response Hours**: to 6:00 a.m. until 9:00 p.m. on Monday through Friday to accommodate more riders who work earlier or later shifts. This service would cost an additional $133,005 per year, based on the FY2012 estimated operating cost per revenue hour of $37.85.
- **Extend New River Express Hours**: on weekdays by providing an additional round trip that departs from the Pulaski Hardees at 5:30 p.m. and extending the 3:45 p.m. trip to include Fairlawn, and on Saturdays by providing three additional trips from Pulaski to the Dublin Wal-Mart that depart from the Pulaski Hardees at 10:00 a.m., 12:00 p.m. and 2:00 p.m. This service would cost an additional $33,251 per year based on the FY2012 estimated operating cost per revenue hour of $37.85.

FY2013

- **NRCC/Smartway Connector -**This regional service would provide eight trips from the New River Community College (NRCC) in Dublin to the Fairlawn Walmart, and would continue to the New River Valley Mall, NRCC Christiansburg, and the Smartway Bus Connection at the Kmart-Christiansburg. This service would begin service at 6:00 a.m. with the last trip at 8:00 p.m. Proposed frequencies are 120 minutes. The following table shows a sample schedule for the proposed service. This service is described below via two segments, the NRCC-Dublin to Fairlawn Walmart, which is inside PAT's service area, and Fairlawn to NRCC/New River Valley Mall, which not only spans PATs service area but also travels through Montgomery County and Blacksburg Transit's service area. A map of this route is provided in Chapter 4, Figure 4-2.

TABLE 5-1: PROPOSED NRCC/SMARTWAY CONNECTOR SCHEDULE

Depart NRCC Dublin	Arrive Fairlawn Walmart	Depart Fairlawn Walmart	Arrive NRCC NRV Mall	Arrive Smartway (Kmart)	Depart Smartway (Kmart)	Arrive NRCC-NRV Mall	Arrive Fairlawn Walmart	Depart Fairlawn Walmart	Arrive NRCC Dublin
1st Hour					2nd Hour				
:00	:20	:30	:50	:55	:00	:05	:20	:30	:50

  - **NRCC-Dublin to Fairlawn**: This segment of the NRCC/Smartway connector is proposed to provide eight round trips per day between the NRCC campus in Dublin and the

Fairlawn Walmart. This service, in conjunction with the segment described below, connects the two NRCC campuses, and provides access for Pulaski residents to the New River Valley Mall, Blacksburg Transit and the Smartway bus to Roanoke. Based on the schedule described above, this segment of the service would cost an additional $77,971 per year at an operating cost per hour of $38.99.

- **NRCC/Smartway Connector (Fairlawn Walmart to NRCC/New River Mall/Smartway bus)**: The Fairlawn Walmart provides the potential for a regional transit hub for PAT, City of Radford and Montgomery County transit providers to connect their services. Thus, this segment of the NRCC/Smartway connector is proposed to operate from the Fairlawn Walmart with eight trips per day to New River Valley Mall and NRCC-Christiansburg, and the Smartway Bus at the K-Mart in Christiansburg via Peppers Ferry Boulevard (Highway 114). Based on an operating cost per hour of $38.99, this service would cost an additional $77,971 per year. This segment could include a cooperative arrangement with Blacksburg Transit, whereby Blacksburg Transit may operate all or some of the trips and coordinate with PAT's service for the NRCC Dublin to Fairlawn segment. Potential operating scenarios include 1) Pulaski Area Transit operates the segment from NRCC Dublin to Walmart, with passengers transferring to a Blacksburg Transit bus for the remainder of the trip from Fairlawn to Christiansburg; 2) Pulaski Area Transit operates the service from NRCC Dublin, to Fairlawn Walmart and continues to NRCC-New River Valley Mall-Smartway; 3) Pulaski Area Transit and Blacksburg Transit alternate trips between Fairlawn Walmart and NRCC-New River Valley Mall. This service would require regional coordination and partnerships, with potential funding sources coming from regional partners, like NRCC, and federal grants, such as Job Access Reverse Commute (JARC) funds.

- **Demand Response around Fairlawn**: from 6:00 a.m. until 8:00 p.m. by dedicating one vehicle to the Fairlawn area. Based on an operating cost per hour of $38.99, this service would cost an additional $136,995 per year for a total of 3,514 annual revenue hours.

FY2014

- **Once weekly service to Alum Spring Road**: through a deviated fixed route that operates three round trips a day as described in Chapter 4 between downtown Pulaski and the Dublin Walmart via a deviation on Alum Spring Road and SR 643. Table 4-7 and Figure 4-7 in Chapter 4 show a proposed schedule and map for this service. Based on an operating cost of $40.16 per hour, this service would cost an additional $18,793 per year for a total of 468 annual revenue hours.
- **Once weekly service to Belspring/Parrott**: through a deviated fixed route that operates four round trips a day between the Fairlawn Walmart and the Parrott Post Office via Belspring Road (State Route 600) as described in Chapter 4, Table 4-8 and Figure 4-8. Based on an operating cost of $40.16 per hour, this service would cost an additional $20,881 per year for a total of 520 annual revenue hours.

- **Once weekly service to Hiwassee/Snowville**: through a deviated fixed route that operates three round trips a day between Pulaski and Snowville via Hiwasee as described in Chapter 4, Table 4-9 and Figure 4-9. Based on an operating cost of $40.16 per hour, this service would cost an additional $15,660 per year for a total of 390 annual revenue hours.
- **Downtown Trolley**: that circulates in the downtown businesses district operating hourly from 10:00 a.m. until 6:00 p.m., providing eight trips a day, as described in Chapter 4. Figure 4-6 in Chapter 4 shows the proposed alignment for this service. This service could also be extended to Calfee Park during special events and game nights. Based on an operating cost of $40.16 per hour, this service would cost an additional $80,631 per year for a total of 2,008 annual revenue hours.

FY2015

- **Draper to Fairlawn Commuter Service**: during morning and evening peak hours that connects a Park & Ride in Draper, a Park & Ride at Exit 94, the Town of Pulaski, the Volvo plant, Dublin and Fairlawn as described in Chapter 4, Table 4-6 and Figure 4-5. Based on an operating cost of $41.36 per hour, this service would cost an additional $62,288 per year for a total of 1,506 annual revenue miles.
- **Demand Response around southern Pulaski County**: from 9:00 a.m. until 5:00 p.m. by dedicating one vehicle to southern Pulaski County, as described in Chapter 4. This service would cost an additional $83,050 per year based on an operating cost of $41.36 per hour, for a total of 2,008 annual revenue hours.
- **Demand Response around northern Pulaski County**: from 9:00 a.m. until 5:00 p.m. by dedicating one vehicle to northern Pulaski County, as described in Chapter 4. Based on an operating cost per revenue hour of $41.36 per hour, this service would cost an additional $83,050 per year for 2,008 annual revenue hours.

FY2016

- **Floyd County Commuter Service**: that provides two round trips in the AM peak and two round trips in the PM peak hours between downtown Floyd and downtown Christiansburg, with stops at the Floyd Courthouse, Route 8/Alum Ridge Park & Ride Lot, Riner Food Center and I-81/Rt. 8 Park & Ride Lot as described in Chapter 4, Table 4-10 and Figure 4-10. Based on an operating cost of $42.60 per hour, this service would cost an additional $85,542 per year for a total of 2,008 annual revenue hours.
- **Demand Response around Floyd County**: from 10:00 a.m. until 4:00 p.m. for Floyd citizens to access social services, medical, shopping and employment centers as described in Chapter 4. Based on an operating cost per hour of $42.60, this service would cost an additional $64,156 per year for 1,506 annual revenue hours.

FY2017

- **Giles County Commuter Route**: that provides two round trips in the AM peak and two round trips in the PM peak hours between Pearisburg and Dublin, with stops in Staffordsville, Little Creek, and Dublin as described in Chapter 4, Table 4-11 and Figure 4-11. Based on an operating cost per hour of $43.88, this service would cost an additional $88,108 per year for 2,008 annual revenue hours.
- **Demand Response around Giles County**: from 9:30 a.m. until 4:30 p.m. to access social services, medical, shopping and employment centers as described in Chapter 4. Based on an operating cost per hour of $43.88, this service would cost an additional $77,095 per year for a total of 1,757 annual revenue hours.

Estimates of service requirements for each year of the TDP are noted below in Table 5.2. Table 5.3 shows the service expansion projects implemented each year. Proposed improvements in this service plan reflect a 156 percent increase over PAT's existing annual service-hours. Weekday and Saturday service plan tables for each year of the TDP are provided in Appendix D.

TABLE 5-2: ANNUAL PAT SERVICE REQUIREMENTS

Service Statistic	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
Weekday Base Buses	10.0	11.0	13.0	15.0	16.0	17.0
Saturday Base Buses	8.0	9.0	9.0	9.0	9.0	9.0
Annual Rev. Bus Hours	15,157	22,671	26,057	31,579	35,093	38,858

Other service improvements that were identified in Chapter 4 of this TDP, but not recommended for inclusion in the six-year TDP are:

- Smartway Connector via interstate – this service was combined with the NRCC connector via Highway 114.
- Radford Connection – this service may be incorporated as a scheduled trip with the Fairlawn demand response service, should the demand arise once the City of Radford begins transit service.
- Summer Recreation Service – the expanded demand response service throughout Pulaski County would cover many of the recreational areas. Should demand for these destinations reveal the need for scheduled service, PAT may choose to move this project forward into the 6-year TDP during the annual update process described in Chapter 8.
- Connection to Amtrak Service in Lynchburg – Currently, the service from Blacksburg to Lynchburg is not considered feasible. Should a reasonable connection from the region become available, PAT may choose to provide access to this service during the annual update process.

Although these improvements were identified as potential service expansion needs, they were not deemed to be as critical with the greatest demand for this service anticipated to occur beyond the six year planning horizon. If funds are available, these improvements can be moved forward into the six-year TDP time period. Similarly, funding constraints could result in the need to shift some service improvements that have been identified for the six-year TDP to later years.

Table 5-3: Proposed Service Expansions by Year of Implementation

FY 2012	Jurisdiction	Route	Existing Rev. Hrs.	Expanded Rev. Hrs.	Add'tl Vehicles	Total Rev. Hrs.	Additional Cost
Expand Demand Response Hours	Pulaski	DR	8,330	3,514	1.0	11,844	$133,005
Extend New River Express Hours	Pulaski	FR	2,134	1,179	0.0	3,313	$44,625
Total			10464.0	4693.0	1.0	15,157	$177,630
FY 2013	**Jurisdiction**	Route	Existing Rev. Hrs.	Expanded Rev. Hrs.	**Add'tl Vehicles**	Total Rev. Hrs.	Additional Cost
NRCC/Smartway Connector (NRCC-Dublin to Fairlawn)	Pulaski	FR	0	2,000	0.5	2,000	$77,971
NRCC Connector/Smartway(Fairlawn to NRV Mall)	Regional	FR	0	2,000	0.5	2,000	$77,971
Demand Response Fairlawn	Pulaski	DR	0	3,514	1.0	3,514	$136,995
Total			0	7,514	2.0	22,671	$292,937
FY 2014	**Jurisdiction**	Route	Existing Rev. Hrs.	Expanded Rev. Hrs.	**Add'tl Vehicles**	Total Rev. Hrs.	Additional Cost
Alum Spring Road (Once Weekly)	Pulaski	FR		468	1.0	468	$18,793
Belspring/Parrott (Once Weekly)*	Pulaski	FR		520	0.0	520	$20,881
Hiawassee/Snowville(Once Weekly)*	Pulaski	FR		390	0.0	390	$15,660
Downtown Trolley	Pulaski	FR		2,008	1.0	2,008	$80,631
Total			0	3,386	2.0	26,057	$135,965
FY 2015	**Jurisdiction**	Route	Existing Rev. Hrs.	Expanded Rev. Hrs.	**Add'tl Vehicles**	Total Rev. Hrs.	Additional Cost
Draper to Fairlawn Commuter Route*	Pulaski	FR		1,506	0.0	1,506	$62,288
Demand Response Southern Pulaski	Pulaski	DR		2,008	1.0	2,008	$83,050
Demand Response Northern Pulaski	Pulaski	DR		2,008	1.0	2,008	$83,050
Total			0	5,522	2.0	31,579	$228,388
FY 2016	**Jurisdiction**	Route	Existing Rev. Hrs.	Expanded Rev. Hrs.	**Add'tl Vehicles**	Total Rev. Hrs.	Additional Cost
Floyd County Commuter Route	Floyd	FR		2,008	1	2,008	$85,542
Floyd County Demand Response	Floyd	DR		1,506	0	1,506	$64,156
Total			0	3,514	1.0	35,093	$149,698
FY 2017	**Jurisdiction**	Route	Existing Rev. Hrs.	Expanded Rev. Hrs.	**Add'tl Vehicles**	Total Rev. Hrs.	Additional Cost
Giles County Commuter Route	Giles	FR		2,008	1	2,008	$88,108
Giles County Demand Response	Giles	DR		1,757	0	1,757	$77,095
Total			0	3,765	1.0	38,858	$165,203

5.2 Vehicle and Facility Recommendations

This TDP has also identified the following vehicle and facility improvements for consideration over the six-year time period, in addition to needs for bus stop amenities, acquiring and operating new technology based on the proposed ITS study, and additional staff and drivers dedicated to PAT.

FY2012

- Two revenue vehicles are proposed to be replaced in FY2012;
- One expansion vehicle is proposed to accommodate the expanded hours for demand response service in FY2012 at a cost of $49,500; and
- An ITS study is proposed to identify appropriate technology for the system along with a plan to acquire and operate the new technology at an estimated cost of $57,000.

FY2013

- One revenue vehicle and one non-revenue vehicle are proposed to be replaced in FY2013;
- Two expansion vehicles are proposed to serve the NRCC-Smartway Connector service and provide demand response service in Fairlawn at an estimated cost of $50,000 per vehicle;
- Eight signs, two benches, and three bus shelters are proposed for FY2013; and
- A feasibility study is proposed to evaluate options for acquisition of a dedicated facility for PAT that meets all of the agency's needs.

FY2014

- One revenue vehicle is proposed to be replaced in FY2014;
- Two expansion vehicles are proposed for FY2014. One vehicle will serve new deviated fixed route service to outlying parts of Pulaski County, and the other will serve as the downtown trolley; with an estimated cost of $51,000 per vehicle.
- Fourteen signs and one bench are proposed for FY2014; and
- Purchase, installation and deployment of a GPS/AVL system are proposed for FY2014.

FY2015

- Three revenue vehicles and one non-revenue vehicle are proposed to be replaced in FY2015;
- Two expansion vehicles are proposed for FY2015 to expand demand response services to all of Pulaski County with an estimated cost of $51,500 per vehicle;
- Four signs, three benches, and one bus shelter are proposed for FY2015; and
- Deployment of a comprehensive website about the PAT system is proposed for FY2015.

FY2016

- One revenue vehicle (spare) is proposed to be replaced in FY2016;
- One expansion vehicle is proposed for FY2016 to serve Floyd County at an estimated cost per vehicle of $54,000; and
- Five signs, two benches, and one bus shelter are proposed for FY2016.

FY2017

- Two expansion vehicles are proposed for FY2017 to serve Giles County and to increase the spare ratio of vehicles available for service at an estimated cost per vehicle at $55,620; and
- Four signs, two benches, and one bus shelter are proposed for FY2017.

6.0 Capital Improvement Program

This chapter of the TDP describes capital programs required to carry out the operations and services set forth in the TDP service and facility recommendations that were presented in the prior chapter.

6.1 Revenue Vehicle Replacement Program

PAT's entire current fleet of nine revenue vehicles is scheduled to be replaced during the timeframe of the TDP. Additionally, this TDP recommends service expansion that will require an additional 10 vehicles. PAT has traditionally used federal funding sources (80%), and local funding sources (20%) for new vehicles, and thus, the same is assumed for this TDP. Traditionally, PAT has received 15 percent state assistance for vehicles, with a five percent local match. If federal and state funding becomes unavailable for vehicle replacement, local contributions are assumed to absorb the balance.

The proposed fleet replacement plan is presented in Table 6.1. With the current replacement plan, the average bus fleet age in FY2012 is 2.7 years with the addition of several new vehicles and declines to 3.2 years in 2014 and increases to 2.3 years in FY2016.

6.2 Non-Revenue Vehicle Replacement Program

PAT has two supervisor vehicles scheduled for replacement during the six-year time frame of the TDP. These are assumed to use federal sources as well, with 80 percent federal, and 20 percent local contributions. The proposed non-revenue vehicle replacement program is provided in Table 6.2.

6.3 Vehicle Expansion Program

PAT has 10 expansion vehicles needed during the six-year time frame of the TDP. These are assumed to use federal and state funding sources as well, with 80 percent federal, and 20 percent local contributions. The proposed vehicle expansion program is provided in Table 6.3.

With the proposed fleet expansion, PAT's spare ratio will be 20 percent in FY2012, and will decline to 11 percent by FY2017. This assumes that the trolley is not included in the vehicles available for service. If the trolley is included in the fleet, PAT's spare ratio is 20 percent in FY2014, and reduces steadily to 15 percent in FY2017. The spare vehicle is proposed to be replaced in FY2016. If the current spare continues in service with the purchase of an additional spare, PAT's spare ratio would be 21 percent in FY2016, and 19 percent in FY2017.

TABLE 6-1: REVENUE VEHICLE REPLACEMENT SCHEDULE

PAT Vehicle #	Date Delivered	Use	2011	2012	2013	2014	2015	2016	2017
Existing Vehicles			***Vehicle Age - Replacement Year (R)***						
37	2006	Transit Vehicle	**R**						
31	2005	Transit Vehicle	6	**R**					
32	2005	Transit Vehicle	6	**R**					
35	2007	Transit Vehicle	4	5	**R**				
34	2007	Transit Vehicle	4	5	6	**R**			
25	2010	Transit Vehicle	1	2	3	4	**R**		
28	2010	Transit Vehicle	1	2	3	4	**R**		
30	2010	Transit Vehicle	1	2	3	4	**R**		
26	2005	Transit Vehicle - Spare	6	7	8	9	10	**R**	
New Vehicles									
n/a	2011	Transit Vehicle	0	1	2	3	4	5	6
n/a	2012	Transit Vehicle		0	1	2	3	4	5
n/a	2012	Transit Vehicle		0	1	2	3	4	5
n/a	2013	Transit Vehicle			0	1	2	3	4
n/a	2014	Transit Vehicle				0	1	2	3
n/a	2015	Transit Vehicle					0	1	2
n/a	2015	Transit Vehicle					0	1	2
n/a	2015	Transit Vehicle					0	1	2
n/a	2016	Transit Vehicle - Spare						0	1
Total Vehicles			**9**	**9**	**9**	**9**	**9**	**9**	**9**
Average Vehicle Age			**3.2**	**2.7**	**3.0**	**3.2**	**2.6**	**2.3**	**3.3**
Vehicles Replaced			**1**	**2**	**1**	**1**	**3**	**1**	**0**
Total Vehicle Cost			**$49,500**	**$99,000**	**$50,000**	**$51,000**	**$154,500**	**$54,000**	**$0**

TABLE 6-2: NON REVENUE REPLACEMENT VEHICLE PROGRAM

PAT Vehicle #	Date Delivered	Use	2011	2012	2013	2014	2015	2016	2017
Existing Vehicles			***Vehicle Age - Replacement Year (R)***						
22	2004	Supervisor Vehicle	**7**	8	**R**				
9	2008	Supervisor Vehicle	3	4	5	6	**R**		
New Vehicles									
n/a	2013	Supervisor Vehicle			0	1	2	3	4
n/a	2015	Supervisor Vehicle					0	1	2
Total Vehicles			**2**	**2**	**2**	**2**	**2**	**2**	**2**
Vehicles Replaced			**0**	**0**	**1**	**0**	**1**	**0**	**0**
Total Vehicle Cost			**$0**	**$0**	**$26,523**	**$0**	**$28,138**	**$0**	**$0**

TABLE 6-3: EXPANSION VEHICLES

Expansion Vehicles	2011	2012	2013	2014*	2015	2016	2017
Total Expansion Vehicles	0	1	2	2	2	1	2
Vehicles For Base Service	*8*	*8*	*10*	*12*	*14*	*15*	*17*
Total Vehicles Available	*9*	*10*	*12*	*14*	*16*	*17*	*19*
Total Fleet Spare Ratio	11%	20%	17%	14%	13%	12%	11%
Total Vehicle Cost	**$0**	**$49,500**	**$100,000**	**$102,000**	**$103,000**	**$54,000**	**$111,240**

6.4 FACILITY IMPROVEMENT PROGRAM

In addition to the replacement and addition of vehicles to the PAT fleet, PAT has identified a number of capital projects (described below) that are required to maintain and enhance the system. The facilities improvement program and other capital needs scheduled during the time frame of this TDP are listed in Tables 6.4 and 6.5.

1. **Feasibility Study for a Dedicated PAT Facility:** In FY2013, PAT proposes to conduct a feasibility study for a dedicated facility that houses all their needs in one location, including office space for all of PAT's staff, a breakroom for drivers, vehicle storage, and

a paved gas area and bus wash station. Options that would be evaluated include acquiring an existing site or building a new facility.

2. **Bus Stop Amenities:** As listed in Table 6.4, thirty five signs, ten benches and six bus shelters are proposed to be purchased during the timeframe of this TDP. The bus stop amenities will be installed at key transit stops along the existing service alignments, as well as along proposed route alignments. This includes a regional transit hub at the Fairlawn Walmart, where the Pulaski Area Transit could make connections with transit service in Radford and Blacksburg, as well as park and rides and other areas where multiple routes connect.
3. **Technology**: As the PAT system expands, introducing technology will help PAT to continue to operate efficiently. PAT proposes to conduct an ITS study in FY2012 to identify appropriate technology and assess the costs of acquisition, installation, training, operation and maintenance. At a minimum, PAT would like to introduce a GPS/AVL system in FY2014 and develop a comprehensive website about the bus system in FY2015.

Other ongoing capital expenditures for smaller items are expected to include bicycle racks and child safety seats.

TABLE 6-4: BUS STOP AMENITIES

Bus Stops	Total Improvements			Total Cost of Improvements		
	Signs	Benches	Shelters	Signs	Benches	Shelters
FY2011	0	0	0	$ -	$ -	$ -
FY2012	0	0	0	$ -	$ -	$ -
FY2013	8	2	3	$ 1,236	$ 2,060	$ 30,900
FY2014	14	1	0	$ 2,228	$ 1,061	$ -
FY2015	4	3	1	$ 656	$ 3,278	$ 10,927
FY2016	5	2	1	$ 844	$ 2,251	$ 11,255
FY2017	4	2	1	$ 696	$ 2,319	$ 11,593
Total	**35**	**10**	**6**	**$ 5,659**	**$ 10,969**	**$ 64,675**

TABLE 6-5: OTHER CAPITAL NEEDS

Year	Other Capital Needs			Estimated
FY2012	ITS Study	1	$57,000	$57,000
FY2013	Facility Study	1	$200,000	$200,000
FY2014	GPS/AVL	1	$250,000	$250,000
FY2015	Website	1	$50,000	$50,000
Total				**$557,000**

7.0 Financial Plan

The financial plan is a principal objective of the TDP. It is in this chapter that an agency demonstrates its ability to provide a sustainable level of transit service over the TDP time period, including the rehabilitation and replacement of capital assets. This chapter identifies potential funding sources for annual operating and maintenance costs, as well as funding requirements and potential sources for bus and service vehicle purchases and other capital improvements.

7.1 Operating and Maintenance Costs and Funding Sources

PAT's proposed FY2012 operating budget is $390,183. With the implementation of new service as outlined in Chapter 5 of this TDP, the operating budget would increase to $573,692 in FY2012. This cost includes all salaries, fringe benefits, purchased services, fuel, vehicle maintenance, supplies, materials and other charges related to PAT service. Transit-related revenues in PAT's budget are assumed from the following sources:

Local Partners/Jurisdictions

- Pulaski Town
- Pulaski County
- Other Local and Business Contributions

State/Federal Sources

- FTA Section 5311 Funds
- State Formula Assistance Funds
- New Freedom Grant
- Job Access Reverse Commute (JARC) Grant (not awarded)

Key expense and revenue assumptions utilized in the TDP Financial Plan (Table 7.1) are as follows:

- Annual O&M costs during the TDP time period are based on a rate of $37.85 per revenue bus-hour (FY2012 dollars). Costs in Table 7.1 reflect Year of Expenditure (YOE) dollars. A three percent annual inflation rate has been assumed during the TDP six-year time period beginning in FY2013.
- Vehicle costs are assumed to be $49,500 in FY2012; $50,000 in FY2013; $51,000 in FY2015; $54,000 in FY2016 and $55,620 in FY2017.
- Federal Section 5311 Funds are assumed to provide 50% of the required funds for FY2012. Federal Section 5311 funds in FY2013 through FY2017 are assumed to increase

based on DRPT's Six-Year Improvement Program Budget (SYIP) for FY2011-FY2016. FY2017 are assumed to increase at the same rate as FY2016.

- This TDP assumes PAT will apply for and will be awarded a grant for JARC funds with a 50 percent federal match for the service between New River Community College Dublin and New River Valley Mall/Smartway Connection in Christiansburg. Local contributions are categorized as "regional" to allow for regional partnerships with the New River Community College and Blacksburg Transit to provide this service.
- State formula assistance funds are projected to grow based on DRPT's Six-Year Improvement Program Budget for FY2011 through FY2016. FY2017 is assumed to increase at the same rate as FY2016.
- This TDP assumes PAT will continue to seek out new local funding sources and business partners to support new service expansion. Service recommendations in Floyd and Giles Counties are assumed to be 100 percent local funding in this TDP; however, federal and state funding sources may become available. Annual updates to this TDP will provide updates to funding sources for this service as the date of implementation moves closer.
- Farebox revenues are assumed based on PAT's FY2011 farebox recovery ratio 11.8 percent. With the implementation of new service in 2012 and 2013, this TDP assumes fare revenues will grow at a recovery ratio of 9.6 percent in FY2012, 10.7 percent in FY2013 and 11.8 percent in FY2014. The farebox recovery ratio for FY2015 through FY2017 is assumed to remain at 11.8 percent. No fare increases are assumed during the timeframe of this TDP.
- PAT's New Freedom Grant is renewed annually. This TDP assumes PAT will continue to receive this grant at $75,000 per year for the duration of the six-year TDP time frame.
- Capital assumptions include $150 per bus stop sign, $1,000 per bus stop bench, and $10,000 per bus stop shelter. Other capital items identified in this TDP will be assessed in the ITS study scheduled for FY2012. The results of this study will likely result in changes to the capital assumptions such as GPS/AVL equipment and website enhancements, and may reveal additional capital requirements not identified in this TDP. PAT will utilize the annual TDP update to modify or add these items in the appropriate year.

It is important to note that local funding requirements shown in Table 7.1 are based on several assumptions that may or may not occur. These assumptions will need to be revisited and revised in each year's budget process. Similarly, projects identified in the six-year TDP period can be moved forward or back, depending on availability of funding, regional grants, demographics, etc.

Federal Section 5311 and state formula assistance funds are based on the DRPT's Six Year Improvement Program (SYIP). This includes PAT's FY2011 Federal and State Funds as identified in the SYIP, and PATs proposed budget for FY2012. These state funds are assumed to increase at

a rate of 4.0 percent in FY2013, 4.1 percent in FY2014, 4.3 percent in FY2015, and 3.2 percent in FY2016 and FY2017. This is based on the FY2011 SYIP's total projection of operating assistance for the FY2011-FY2016 TDP timeframe. Any service expansion that exceeds these percentages is allocated to local contributions. Federal operating funds are assumed to increase at a rate of two percent per year beginning in FY2013. Future financial conditions may warrant changes to these percentages through annual TDP updates.

TABLE 7-1: TDP FINANCIAL PLAN FOR ANNUAL O&M COSTS
(Costs in Year of Expenditure Dollars)

TDP Financial Plan for: Service O&M Costs		FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Annual Service-Hours								
Demand Response	DR	8,330	11,844	15,358	15,358	19,374	20,880	22,637
Deviated Fixed Route	FR	2,134	3,313	7,313	10,699	12,205	14,213	16,221
Total Transit Service-Hours		***10,464***	***15,157***	***22,671***	***26,057***	***31,579***	***35,093***	***38,858***
Projected Costs		***$ 380,889.60***	***$ 573,692***	***$ 883,840***	***$ 1,046,321***	***$ 1,306,099***	***$ 1,494,980***	***$ 1,705,032***
PAT Operating & Maintenance Costs								
Base Service from Previous Year		$ 380,890	$ 396,062	$ 590,903	$ 910,355	$ 1,077,710	$ 1,345,281	$ 1,539,829
Change from Previous Year	*Pulaski*	$ -	*$ 177,630*	*$ 214,966*	*$ 135,965*	*$ 228,388*	$ -	$ -
	Regional	$ -	$ -	*$ 77,971*	$ -	$ -	$ -	$ -
	Floyd	$ -	$ -	$ -	$ -	$ -	*$ 149,698*	$ -
	Giles	$ -	$ -	$ -	$ -	$ -	$ -	*$ 165,203*
Total Projected O&M Costs		***$ 380,890***	***$ 573,692***	***$ 883,840***	***$ 1,046,321***	***$ 1,306,099***	***$ 1,494,980***	***$ 1,705,032***

TDP Financial Plan for: Service O&M Costs	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Anticipated Funding Sources							
Federal	**$ 167,937**	**$ 170,531**	**$ 251,913**	**$ 257,731**	**$ 263,689**	**$ 269,789**	**$ 276,037**
FTA Section 5311 (50%)	$ 167,937	$ 170,531	$ 173,942	$ 177,421	$ 180,969	$ 184,588	$ 188,280
JARC Section 5316 (50%)	$ -		$ 77,971	$ 80,310	$ 82,719	$ 85,201	$ 87,757
State	**$ 50,779**	**$ 51,159**	**$ 53,219**	**$ 55,409**	**$ 57,767**	**$ 59,606**	**$ 61,504**
Formula Assistance Funds	$ 50,779	$ 51,159	$ 53,219	$ 55,409	$ 57,767	$ 59,606	$ 61,504
Farebox Revenues (Based on 11.8% Farebox Recovery)	**$ 45,000**	**$ 55,000**	**$ 94,571**	**$ 123,617**	**$ 154,308**	**$ 176,624**	**$ 201,440**
Farebox Revenues	$ 45,000	$ 55,000	$ 94,571	$ 123,617	$ 154,308	$ 176,624	$ 201,440
Local Contributions for O&M	**$ 117,174**	**$297,002**	**$484,137**	**$ 609,564**	**$ 830,335**	**$ 988,961**	**$ 1,166,051**
Pulaski	$ 62,174	$ 242,002	$ 351,166	$ 474,254	$ 692,616	$ 699,062	$ 703,902
Regional (50%)	$ -		$ 77,971	$ 80,310	$ 82,719	$ 85,201	$ 87,757
Floyd	$ -					$ 149,698	$ 154,189
Giles	$ -						$ 165,203
Other Contributions	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000
Total Projected Operating Revenues	***$ 380,890***	***$573,692***	***$883,840***	***$ 1,046,321***	***$ 1,306,099***	***$ 1,494,980***	***$ 1,705,032***

Farebox	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
Farebox Revenue/Revenue Hour	$ 4.30	$ 3.63	$ 4.17	$ 4.74	$ 4.89	$ 5.03	$ 5.18
Farebox recovery Ratio	11.8%	9.6%	10.7%	11.8%	11.8%	11.8%	11.8%

TDP Financial Plan for: New Freedom Program Grant	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
New Freedom Program	**$ 75,000**	**$ 75,000**	**$ 75,000**	**$ 75,000**	**$ 75,000**	**$ 75,000**	**$ 75,000**
Federal Operating Funds (50%)	$ 37,500	$ 37,500	$ 37,500	$ 37,500	$ 37,500	$ 37,500	$ 37,500
State Paratransit Program Funds (47.5%)	$ 35,625	$ 35,625	$ 35,625	$ 35,625	$ 35,625	$ 35,625	$ 35,625
Local Match (2.5%)	$ 1,875	$ 1,875	$ 1,875	$ 1,875	$ 1,875	$ 1,875	$ 1,875

TABLE 7-2: TDP FINANCIAL PLAN FOR CAPITAL COSTS
(Year of Expenditure Dollars)

TDP Financial Plan for: Fleet Replacement and Expansion	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Number of Vehicles							
Replacement	1	2	1	1	3	1	0
Expansion	0	1	2	2	2	1	2
Service/Pool Vehicles	0	0	1	0	1	0	0
Total Vehicles	1	3	4	3	6	2	2
Vehicle Costs							
Replacement	$ 49,500	$ 99,000	$ 50,000	$ 51,000	$ 154,500	$ 54,000	$ -
Expansion	$ -	$ 49,500	$ 100,000	$ 102,000	$ 103,000	$ 54,000	$ 111,240
Service/Pool Vehicles	$ -	$ -	$ 26,523	$ -	$ 28,138	$ -	$ -
Total Projected Vehicle Costs	***$ 49,500***	***$ 148,500***	***$ 176,523***	***$ 153,000***	***$ 285,638***	***$ 108,000***	***$ 111,240***
Anticipated Funding Sources							
Federal Section 5310(80%)	$ 39,600	$ 118,800	$ 141,218	$ 122,400	$ 228,510	$ 86,400	$ 88,992
State (Capital Assistance Grant)	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Local	$ 9,900	$ 29,700	$ 35,305	$ 30,600	$ 57,128	$ 21,600	$ 22,248
Total Vehicle Revenues	***$ 49,500***	***$ 148,500***	***$ 176,523***	***$ 153,000***	***$ 285,638***	***$ 108,000***	***$ 111,240***

TDP Financial Plan for: Facility, Equipment, and Other Capital	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Projected Facility, Equipment, and Other Capital Improvements							
Bus Stop Signs	$ -	$ -	$ 1,236	$ 2,228	$ 656	$ 844	$ 696
Bus Stop Benches	$ -	$ -	$ 2,060	$ 1,061	$ 3,278	$ 2,251	$ 2,319
Bus Stop Shelters	$ -	$ -	$ 30,900	$ -	$ 10,927	$ 11,255	$ 11,593
ITS Study	$ -	$ 57,000	$ -	$ -	$ -	$ -	$ -
GPS/AVL	$ -	$ -	$ -	$ 250,000	$ -	$ -	$ -
New Facility Study	$ -	$ -	$ 200,000	$ -		$ -	$ -
Website Enhancements	$ -	$ -	$ -	$ -	$50,000	$ -	$ -
Total Projected Capital Expenses	***$ -***	***$ 57,000***	***$ 234,196***	***$ 253,289***	***$ 64,861***	***$ 14,350***	***$ 14,607***
Anticipated Funding Sources							
Federal	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Other Capital Items (From SYIP)	$ -			$ -	$ -		
State	**$ -**	**$ 57,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
State Capital Assistance		$ 57,000					
Other Capital Items (From SYIP)				$ -	$ -		
Local	**$ -**	**$ -**	**$ 234,196**	**$ 253,289**	**$ 64,861**	**$ 14,350**	**$ 14,607**
Total Other Capital Revenues	***$ -***	***$ 57,000***	***$ 234,196***	***$ 253,289***	***$ 64,861***	***$ 14,350***	***$ 14,607***

8.0 TDP Monitoring and Evaluation

This TDP has presented a comprehensive evaluation of Pulaski Area Transit's (PAT) service and cost characteristics. Key elements that have been addressed in this TDP include:

- Development of goals, objectives and performance standards that guide further development of PAT services;
- A detailed evaluation of existing service characteristics, with identification of system strengths and weaknesses;
- A peer agency review that compares PAT service and financial characteristics to other similar-sized systems;
- A summary of rider survey results from a transit on-board survey conducted in October 2010;
- A listing of potential service and facility improvements for consideration in the TDP;
- Recommended service improvements and vehicle purchases for inclusion in the TDP, with improvements identified by year; and
- Funding requirements and potential funding sources for recommended service improvements and vehicle purchases.

This TDP reflects an initial step in future service improvements for PAT. It will be important to coordinate closely with other transportation and land use planning efforts, to continue to monitor service performance, and to provide DRPT with annual updates regarding implementation of TDP service and facility improvements.

8.1 Coordination with Other Plans and Program

Goals and objectives from this TDP should be reviewed and incorporated into the Comprehensive Plans for Pulaski, Floyd, and Giles Counties and included in the annual budgets for these jurisdictions. Close and continuous coordination with the New River Valley Planning Development Commission will also be required to ensure convenient transitions and connections to other regional transit systems, including Blacksburg Transit, City of Radford bus system, and Smartway Bus. PAT's existing Transit Advisory Committee would provide an avenue to reach out to regional stakeholders to begin dialogue and coordination for regional service connections. Coordination efforts are also needed as Amtrak works to provide connector service to Lynchburg in future years. The service plans set forth for PAT in this TDP should also be included in the Long Range Transportation Plan (LRTP) and short-range 3-year Transportation Improvement Program (TIP) for the region.

8.2 Service Performance and Monitoring

This TDP identifies specific systemwide service performance benchmarks to ensure PAT's existing performance characteristics do not degrade substantially. Corrective measures are to be taken if these monitoring efforts identify service performance degradation (e.g., through

route alignment adjustments, headway and/or span of service adjustments). This TDP recommends a monitoring program that could be used for periodic service evaluation as described in Chapter 2.

8.3 Annual TDP Monitoring

The DRPT requires submittal of an annual letter that provides updates to the contents of this TDP. Recommended contents of this "TDP Update" letter include:

- A summary of ridership trends for the past 12 months.
- A description of TDP goals and objectives that have been advanced over the past 12 months.
- A list of improvements (service and facility) that have been implemented in the past 12 months, including identification of those that were noted in this TDP.
- An update to the TDP's list of recommended service and facility improvements (e.g., identify service improvements that are being shifted to a new year, being eliminated, and/or being added). This update of recommended improvements should be extended one more fiscal year to maintain a six-year planning period.
- A summary of current year costs and funding sources.
- Updates to the financial plan table presented in Chapter 7 of this TDP. This table should be extended one more fiscal year to maintain a six-year planning period.