
BRISTOL VIRGINIA TRANSIT

TRANSIT DEVELOPMENT PLAN

FISCAL YEARS 2010 – 2015

Prepared for:
Bristol Virginia Transit



Prepared by:



Under Contract to:



September 2009

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1.0 OVERVIEW OF BRISTOL VIRGINIA TRANSIT

The City of Bristol is located in southwest Virginia and directly on the Tennessee-Virginia state line. State Street divides the Bristol Tennessee-Virginia twin cities. Bristol is part of the metropolitan statistical area that encompasses Bristol, Johnson City, TN and Kingsport, TN. Locally, this is called the Tri-Cities area. Bristol Virginia and Bristol Tennessee are independent cities. The City of Bristol, VA's census population in 2000 was 17,364 and the City of Bristol, TN's census population in 2000 was 24,821 for a total population of 42,185. The estimated 2006 population is 14,496 for Bristol, VA and 25,435 for Bristol, TN for a total population of 39,931 (i.e., a 5.3% loss in population for the twin cities).

Because of the unique geographic arrangement of the two cities, public transportation service is a shared duty, wherein each city has its own transit system. Bristol Virginia Transit (BVT) offers service on the Virginia side of the border, while Bristol Tennessee Transit (BTT) provides service on the Tennessee side.

Both transit systems operate on a fixed route, coordinated pulse system that meet at the Downtown Center on the Tennessee side of State Street in downtown Bristol. The Downtown Center serves not only as the transit system hub but also as the Farmer's Market of four jurisdictions. The Downtown Center is also the scene of downtown concerts and other cultural events. Both BVT and BTT offer point-to-point handicapped van service, as well as transportation services for the elderly and job access programs. BTT also provides a Jobs Access service, with operating hours from 5:30 a.m. to 8:30 p.m. on Mondays through Fridays, and from 5:30 a.m. to 5:30 p.m. on Saturdays. During special events at the Bristol Motor Speedway, a variety of private entities provide shuttle bus service to and from the speedway.

1.1 Organizational and Governance Structure

Transit service in Bristol, VA is administered as a City governmental service. Day-to-day operations are conducted by the Transit Manager. Administrative tasks such as grant applications are largely carried out by staff in the Community Development/Planning Department.

The City of Bristol Virginia has a council-manager form of government. The City Council has five elected members that meet twice monthly. The current elected Mayor and Vice Mayor are as follows:

Mayor: Jim Rector
Vice Mayor Fred Bowman

1.2 Transit Services Provided and Areas Served

Bristol Virginia Transit operates three fixed routes that cover some 400 miles each day. Service is operated on weekdays only, from 6:15 a.m. to approximately 6:15 p.m. Service operates hourly and departure times are coordinated with Bristol Tennessee Transit's fixed route service at the Downtown Center. Two of the three routes operate all-day, and the third route operates only in the morning and afternoon peak periods.

The vast majority of BVT's riders are transit dependent. Bus operators will make minor discretionary deviations to board and alight passengers at safe locations. BVT offers ADA services to persons unable to use regular bus service. BVT requires certification according to ADA guidelines and provides the necessary forms to individuals in need of special service.

Figure 1-1 illustrates both Bristol VA and Bristol TN bus routes. Descriptions of BVT's three routes follow:

East Bristol – East Ridge Route

This route provides service from downtown to the east side of Bristol, VA, with service primarily along the Kings Mill Pike and Old Airport Road corridor. Service terminates at the Food City shopping center on Bonham Road, with a timed transfer the Exit 7 – Wal-Mart route. Major residential areas served by this route include the Harbor Landing Apartments and East Ridge apartments. The Old Airport Industrial Park is also served by this route. The East Bristol-East Ridge route is the BVT one route that does not operate all-day. Service is provided from 6:15 to 10:00 a.m. and from 2:15 to 6:00 p.m.

Mall Route

This route provides service from downtown to the west side of Bristol, VA. Service on this route begins at 7:15 a.m. This route leaves downtown via State Street and enters the Bristol Mall. The route then continues north and east of the mall, serving various residential neighborhoods. A Kroger and Food City grocery store and Leisure Park Towers are also served by this route.

Exit 7 – Wal-Mart Route

This route provides service from downtown to the north along the Lee Highway corridor, with service ending at the commercial area at I-81's Exit 7. Service on this route begins at 7:15 a.m. Destinations served by this route include Leisure Park Towers, Virginia Intermont College, Food City at Bonham Road (where this route meets with the East Bristol-East Ridge route), Wal-Mart and various commercial locations at I-81's Exit 7.

Each route requires one bus to operate at 60-minute frequencies. All routes depart the Downtown Center at 0:15 after the hour, and arrive back at the Downtown Center between 0:05 and 0:10 after the hour.

1.3 Fare Structure

BVT buses accept cash fares as well as pre-purchased fare media. Adult fares for bus service is \$0.60. A reduced fare of \$0.30 is offered to persons with disabilities, senior citizens, and persons with a Medicare card during off-peak hours of service (10:15 a.m. to 2:15 p.m.). Transfers are \$0.10 and children under six years of age ride free. Table 1-1 outlines Bristol Virginia's fare structure.

**Table 1-1
Bristol Virginia Transit Fare Structure**

	Adults	Seniors & Disabled
One-way fare	\$.60	\$.30*
Transfers	\$.10	\$.10
Passes (\$6 for 10 trips)	\$6.00	\$6.00

** discount provided in off-peak periods only*

BVT accepts BTT passes and BTT accepts BVT tokens.

1.4 Vehicle Fleet

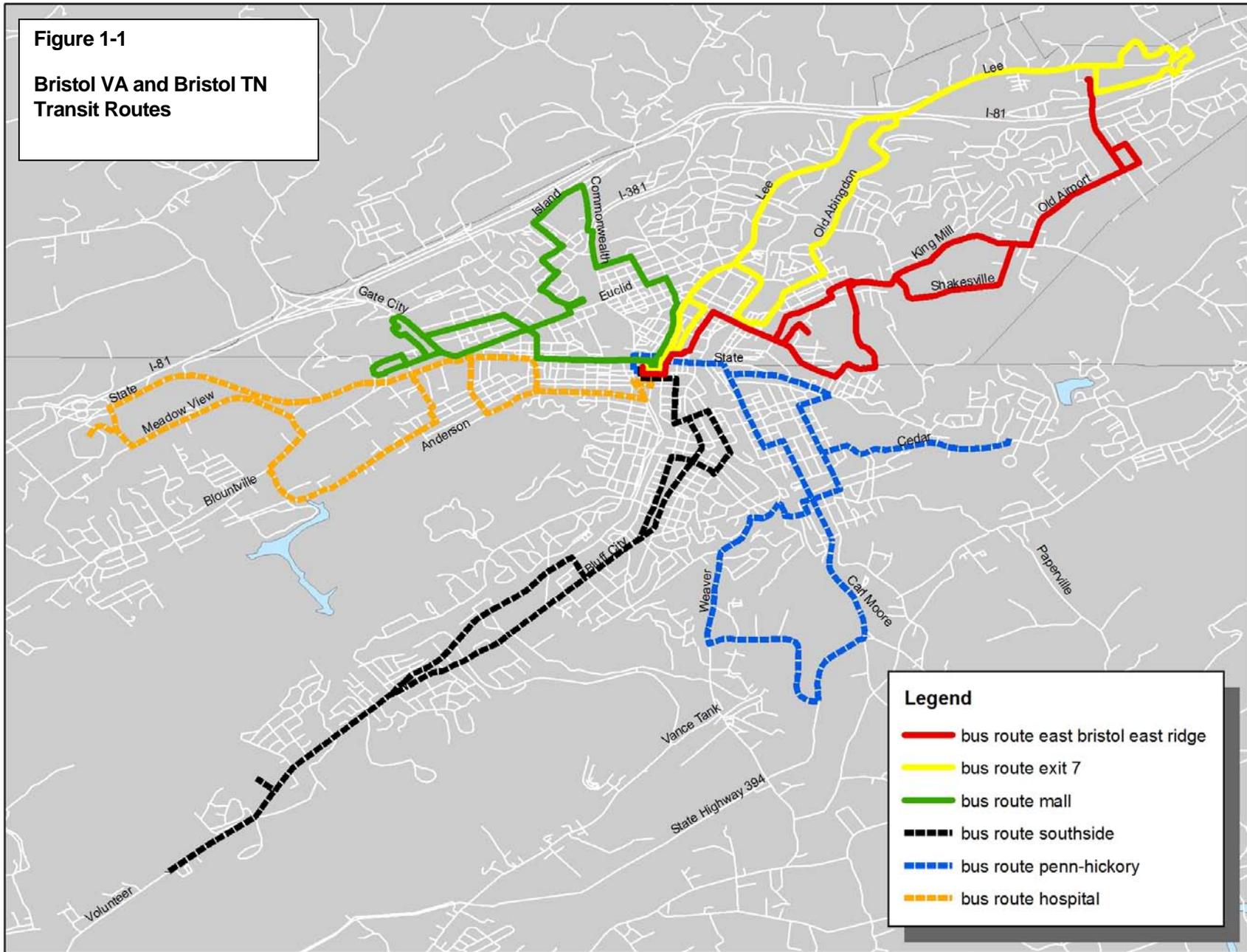
Bristol Virginia Transit owns and maintains five light-duty fixed-route buses and one paratransit van. Table 1-2 identifies Bristol's fleet composition.

**Table 1-2
Bristol Virginia Transit Revenue Fleet**

Vehicle ID #	Year	Make	Seated Capacity
20	1996	Ford 350	19
26	2001	Chevrolet	19
30	2004	Ford 350	19
34	2008	Ford E450	19
36	2008	Ford E450	19
n/a	2006	Econoline Van	10
		Total Fleet	6

Figure 1-1

Bristol VA and Bristol TN
Transit Routes



1.5 Facilities

Bristol Virginia Transit's day-to-day operations (including farebox recovery) are managed at 2107 Shakesville Road approximately two miles east of the city center. The Shakesville Road location also serves as BVT's maintenance, fueling and storage facility. BVT operates this facility, but it is also used by the Bristol School system and by other city divisions (for fueling and maintenance by city staff). Administrative tasks (e.g., grant applications, analytical tasks) are done at the City of Bristol's main office, 300 Lee Street. As previously noted, the other major facility used by Bristol VA Transit is the Downtown Center, which is located on the Tennessee side of State Street.

1.6 Transit Security Program

Bristol Virginia Transit has not invested significant capital monies toward security because the level of security-related incidents and potential threats do not warrant the additional expense. BVT continues to train drivers and supervisors on security issues, conducts background checks on new employees and updates security features on new vehicle procurements. BVT also coordinates with local emergency management services and is integrated into the city's Disaster Preparedness Plan and Hazard Mitigation Plan. In addition, the Shakesville Road maintenance facility is well lit at all hours and because it is a shared facility, police and other personnel are frequently present.

1.7 Public Outreach

Public Outreach is conducted and documented via Public Hearings whenever a major service reduction or fare adjustment is proposed. The public is also given the opportunity to provide comments at the designated time during each City Council meeting.

2.0 GOALS, OBJECTIVES AND STANDARDS

This chapter begins with a summary of transit-related goals and objectives from the City's existing 2002 Comprehensive Plan and the current Bristol MPO 2030 Long-Range Transportation Plan (LRT). Proposed goals, objectives and performance standards for this TDP are then presented.

2.1 Transit-Related Goals and Objectives from the City's Comprehensive Plan

Following are goals, objectives and implementation strategies from Chapter 14 of the City's Comprehensive Plan that are related to transit service within the City.

Goals:

- *Serve the community by providing a transportation system that moves people and goods safely and efficiently.*
- *Provide public transportation that is convenient and accessible for all residents.*

Objectives:

- *Stress energy conservation through highway design and by encouraging alternative forms of transportation such as mass transit and bicycling.*
- *Actively pursue and place emphasis on a passenger rail service to the area.*

Implementation Strategies

Work to improve public transit by:

- *Creating more stops,*
- *Extending service to weekends and hours during the week,*
- *Extending marketing campaign,*
- *More clearly mark transit stops,*
- *Increase number of paratransit vehicles,*
- *Find alternative sources of funding for transit,*
- *Working with Tennessee to establish a system to make each city's tokens interchangeable,*
- *Add a Virginia route that will go to the hospital,*
- *Coordinate routes with tourist events, and*
- *Improve regional transit to other cities in Tri-Cities.*

Downtown Transit-Related Goals & Objectives

Goal:

- *Provide adequate transit service to the downtown area.*

Objective:

- *Review the utilization of current downtown transit routes and evaluate the need for changes.*

Implementation Strategies

- *Provide better public transportation to and from public parking lots that may be several blocks from downtown.*
- *Provide a transit route to Randall Street, specifically the Train Station area once the Train Station becomes operational.*

In addition to the Goals, Objectives and Strategies identified above, Chapter 15 of the City's Comprehensive Plan presents a Strategic Plan with specific transit-related implementation strategies. The strategies include:

Work to improve public transit by:

- 1. Creating more stops.*
 - *Design and reprint new brochures*
 - *Acquire signage for new stops*
- 2. Extending service to weekends and hours during the week.*
 - *Labor and operating cost for extended time*
- 3. Extending marketing campaign.*
 - *Short term: Increase distribution of schedules, improve communication with social services*
 - *Long term: Weather proof schedule posters located at stops*
- 4. More clearly mark transit stops.*
 - *Short term: Increase marketing information*
- 5. Increase number of paratransit vehicles.*
 - *Research possible grant funds*
 - *Capital for operations and labor*
- 6. Find alternative sources of funding for transit.*
 - *Explore program grants/demo grants*
 - *Charter transit for non-operation hours*
 - *Advertising on buses*
 - *Coordinate with other agencies to "share" funds*
- 7. Working with Tennessee to establish a system to make each city's' tokens interchangeable.*
 - *Determine the source of payment for tokens*
 - *Create a token exchange program*

8. *Add a Virginia route that will go to the hospital.*
 - *Operation and labor cost*
 - *May be remedied with token exchange program*
9. *Coordinate routes with tourist events.*
 - *Charter system*
10. *Improve regional transit to other cities in Tri-Cities.*

2.2 Transit-Related Goals and Objectives from the MPO's LRTP

Transit-related goals and objectives from the MPO's 2030 Long-Range Transportation Plan are as follows:

Goal: System Efficiency and Maintenance:

- *Develop and maintain a transportation system to move people and goods at the most effective level of public and private cost.*

Objectives:

- *Maintain the efficiency and effectiveness of the existing transportation system.*
- *Maximize the cost-effectiveness of transportation investments.*
- *Select and program projects based on identified need and effectiveness.*

Planning Factors Addressed:

- *Promote efficient system management and operation.*
- *Emphasize the preservation of the existing transportation system.*

Goal: Economic Development:

- *Provide transportation resources to support economic growth and strengthen the local economy.*

Objectives:

- *Enhance the transportation access to commercial and industrial areas.*
- *Increase the accessibility options for freight movement.*
- *Provide business with adequate access to labor through affordable, multi-modal transportation options.*

Planning Factors Addressed:

- *Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.*
- *Increase the accessibility options available to people and freight.*
- *Promote consistency between transportation improvements and State and local planned growth and economic development patterns.*

Goal: Environmental Quality:

- *Develop a transportation system to preserve and enhance the natural environment.*

Objectives:

- *Minimize adverse environmental impacts of the urban transportation system.*
- *Reduce vehicle emissions to improve air quality.*
- *Coordinate and improve the provision of transportation facilities with land development activity.*

Planning Factors Addressed:

- *Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.*
- *Protect and enhance the environment, promote energy conservation, and improve quality of life.*

Goal: Mobility:

- *Develop a transportation system that provides an opportunity for a choice of mode for the movement of people and goods.*

Objectives:

- *Develop a transportation system that is accessible to all users.*
- *Encourage the development of bicycle facilities, sidewalks, and greenways.*
- *Enhance the connectivity of the transportation system.*
- *Maintain an efficient and cost effective public transportation system.*

Planning Factors Addressed:

- *Increase the accessibility options available to people and freight.*
- *Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.*

Goal: User Safety and Security:

- *Develop a transportation system for the movement of people and goods, which is safe and provides security for users of any mode.*

Objectives:

- *Reduce transportation related accidents, injuries, and fatalities.*
- *Minimize bicycle, pedestrian, rail, and motor vehicle conflicts.*
- *Promote safety in the design and construction of highways, bicycle/pedestrian links, and other modes.*

- *Work with state and local agencies to develop a transportation system that is secure for all users.*

Planning Factors Addressed:

- *Increase the safety of the transportation system for motorized and non-motorized users.*
- *Increase the security of the transportation system for motorized and non-motorized users.*
- *Improving the accessibility and safety of transit stops and transfer points.*

2.3 TDP Goals, Objectives and Implementation Strategies

Goals and objectives have been defined for this Bristol TDP based on input received during the preparation of this TDP, and based on a review of the City's Comprehensive Plan and the MPO's LRTP transit-related goals and objectives, as described above. Goals focus on specific themes and the objectives are defined within the context of each goal. Implementation strategies are meant to reinforce accomplishing the stated goals and objectives. It is suggested that future updates of the City's Comprehensive Plan and the MPO's Long-Range Transportation Plan should incorporate the goals and objectives presented in this TDP.

**GOAL 1:
Provide Safe and Reliable Fixed-Route and Demand Responsive Services that Meets the Transportation Needs of Bristol, Virginia Residents.**

Objective 1.1:

- *Provide transit service connections between residential areas and commercial areas with jobs, education, shopping and medical services.*

Implementation Strategies:

Objective 1.1 is to be accomplished through the following minimum activities:

- *Documentation and recording of customer service requests;*
- *Work on a regular basis with the City Planning and Economic Development staff to identify planned new developments that might warrant transit service;*
- *Survey riders at least once every five years to determine rider service needs;*
- *Conduct periodic ride check surveys to monitor boarding and alighting activity;*
and
- *Coordinate closely with Bristol, TN transit staff to provide comprehensive transit coverage to important destinations in both cities.*

Objective 1.2:

- *Provide easily identifiable stop locations along routes and passenger shelters when warranted.*

Implementation Strategies:

Objective 1.2 is to be accomplished through the following minimum activities:

- *Review survey data to determine ridership activity at stops and evaluate potential improvements for new passenger shelters, additional stops locations, route alignment changes, and new and/or extended sidewalks;*
- *Establish safe bus stop locations when modifying an existing alignment or implementing new service;*
- *Work with City Public Works staff in the improvement of sidewalks at stops with high ridership activity; and*
- *Acquire new and improved signage to increase the visibility of existing stops.*

GOAL 2: Market Existing Transit Services

Objective 2.1:

- *Actively market transit services as a travel option within the City of Bristol, VA.*

Implementation Strategies:

Objective 2.1 is to be accomplished through the following minimum activities:

- *Periodically reprint or redesign BVT's/BTT's brochure for users of the combined transit system (i.e., Catch the Bus!);*
- *Distribute the BVT/BTT brochures at locations around the community for patron use;*
- *Timely updates of the transit information on the City's web site;*
- *Participate in community events to promote public transportation;*
- *Maintain a mailing list of organizations and social service agencies that represent markets with high ridership potential, and provide service information to those organizations and agencies; and*
- *Create additional marketing materials.*

Objective 2.2:

- *Explore potential demand for expanding transit service to other cities in the region.*

Implementation Strategies:

Objective 2.2 is to be accomplished through the following minimum activities:

- *Continue service coordination activities with Bristol Tennessee Transit;*
- *Explore likely transit demand, service options and potential funding sources for service expansion to Abingdon and other destinations within Washington County; and*
- *Coordinate with Bristol Tennessee, Bristol MPO and Sullivan County staff regarding potential regional transit service needs to Kingsport and Johnson City.*

<p style="text-align: center;">GOAL 3: Deliver Fixed Route and Demand Responsive Services in a Cost-Effective Manner</p>
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Objective 3.1:

- *Maintain a systemwide farebox recovery ratio (farebox revenues/total operating expenses) that meets or exceeds standards identified in Section 2.4 of this TDP.*

Implementation Strategies:

Objective 3.1 is to be accomplished through the following minimum activities:

- *Record and monitor trends in passenger trips by route;*
- *Record and monitor monthly transit operations expenses and farebox revenues;*
- *In coordination with Bristol Tennessee Transit, investigate potential to increase fares as a means to improve the system farebox recovery ratio to 10 percent.*
- *Work with BTT to establish a system of interchangeable tokens.*

Objective 3.2:

- *Achieve systemwide fixed route ridership levels that meet or exceed standards identified in Section 2.4 of this TDP.*

Implementation Strategies:

Objective 3.2 is to be accomplished through the following minimum activities:

- *Maintain and monitor monthly ridership reports for fixed route and demand response service, with ridership reported on a route basis for fixed routes; and*
- *Implement corrective measures if ridership falls below established standards more than 2 months in a row. Such corrective measures may include: route alignment, service frequency and span of service adjustments and/or fare adjustments.*

GOAL 4:
Deliver Fixed Route and Demand Responsive Services in a Safe Manner

Objective 4.1:

- *Ensure that transit service operators maintain an accident rate of less than the standard identified in Section 2.4 of this TDP.*

Implementation Strategies:

Objective 4.1 is to be accomplished through the following minimum activities:

- *Maintain a training program for new employees; and*
- *Review Operating Policies and Procedures at least once a year and update as necessary. Review those policies and procedures as part of all training efforts with new staff. Also review with existing staff at least once every two years.*

Objective 4.2:

- *Ensure that an adequate fleet of vehicles is maintained for the fixed-route and demand-responsive services.*

Implementation Strategies:

Objective 4.2 is to be accomplished through the following minimum activities:

- *Identify the need for replacement vehicles based on industry standards for defined useful life of vehicles.*

GOAL 5:
Provide Transit Services that are Accessible to Citizens

Objective 5.1:

- *Provide transit services that are accessible to all population groups within the City of Bristol Virginia.*

Implementation Strategies:

Objective 5.1 is to be accomplished through the following minimum activities:

- *Comply with the applicable requirements of the Americans with Disabilities Act (ADA); and*
- *Provide the ADA-eligible population with paratransit service that is comparable to service provided by the fixed-route system;*

2.4 Service Performance Standards

This TDP work effort has also identified the following service standards that are to be monitored on a monthly basis by Bristol Virginia Transit's administrative staff

1. Ridership Service Productivity Measures

Monthly systemwide fixed route ridership should maintain levels equivalent to 8 passenger trips per revenue bus-hour. Corrective measures should be investigated if ridership on Bristol Virginia Transit's fixed route system and/or demand response system fall below the levels identified above for 3 months in a row.

2. Cost Effectiveness Measures

Bristol Virginia Transit's farebox recovery ratio (farebox revenues as a percentage of operating expenses) shall remain no less than 5 percent. Corrective measures should be investigated if the farebox recovery ratio falls below this standard for 3 months in a row.

3. Vehicle Maintenance Performance Measures

Bus Preventive Maintenance Inspections – Preventive maintenance shall be conducted on the transit fleet per vehicle manufacturer recommendations.

Revenue Vehicle Failures – Bristol Virginia Transit should maintain a standard of no more than 0.15 revenue vehicle failures per 1,000 revenue bus-miles of service.

3.0 SERVICE AND SYSTEM EVALUATION

As previously noted in Chapter 1 of this TDP, Bristol Virginia Transit operates three fixed routes and city-wide demand response service. Fixed route service is provided from approximately 6:00 a.m. to 6:00 p.m., Mondays through Fridays. Figure 3-1 presents the Bristol Virginia Transit fixed route transit system. Route descriptions were previously provided in Chapter 1 of this TDP. All Bristol Virginia routes operate at 60-minute frequencies, with timed meetings at the Downtown Transit Center with Bristol, Tennessee routes every 15 minutes after the hour. One route (East Bristol) does not operate in the midday. Some routes have minor service overlaps in close proximity to the downtown hub, resulting in a combined 30-minute service frequency. All routes take 60-minutes to complete a round trip. Thus, a total of 3 buses are required to provide fixed route service, one bus on each on route.

In addition to fixed-route service, Bristol Virginia Transit provides demand response service that is available for use by all city residents. Demand response is designed to provide transportation service to Bristol Virginia residents that are unable to use the fixed route service. City residents must be ADA-certified to be eligible to use the demand response service. Bristol Virginia Transit will try to accommodate ADA passenger trips with its fixed route service by allowing minor route deviations, when possible.

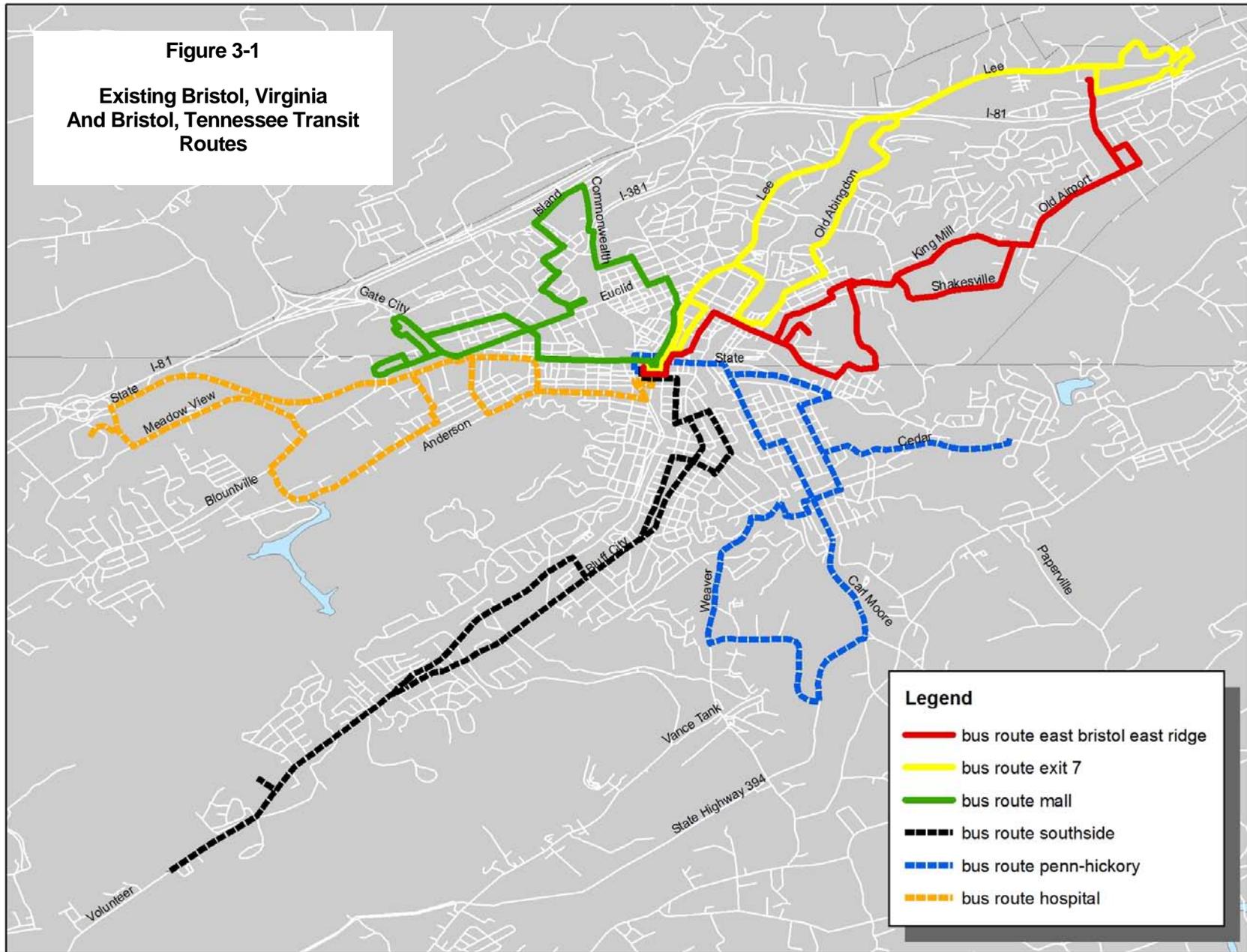
3.1 Existing Service Analysis

Existing ridership performance was analyzed by reviewing daily fixed route and weekly demand response ridership during February 2009, as well as aggregate monthly ridership data for a six-month period between from June 2008 to December 2008.

Fixed Route Service

During February 2009, BVT recorded 5,448 passenger boardings and averaged 287 boardings per day over 19 days of service. Figure 3-2 illustrates total boardings for each day and also for each of BVT's three routes. Boardings for the Exit 7/Wal-Mart route totaled 2,823 for the month, just over half of all system boardings. The Mall route had 1,663 riders or 30% of the month's total ridership activity. The East Bristol/East Ridge route added another 962 riders (18%) to the month's total ridership activity. The East Bristol/East Ridge route does not offer midday service, with the last a.m. trip occurring at 9:15 a.m. trip and the first p.m. trip occurring at 2:15 p.m. Overall, 9% of ridership utilized tokens and 25% were transfers from another route. BVT collected a total of \$1,670 in passenger fares in February.

Figure 3-1
Existing Bristol, Virginia
And Bristol, Tennessee Transit
Routes



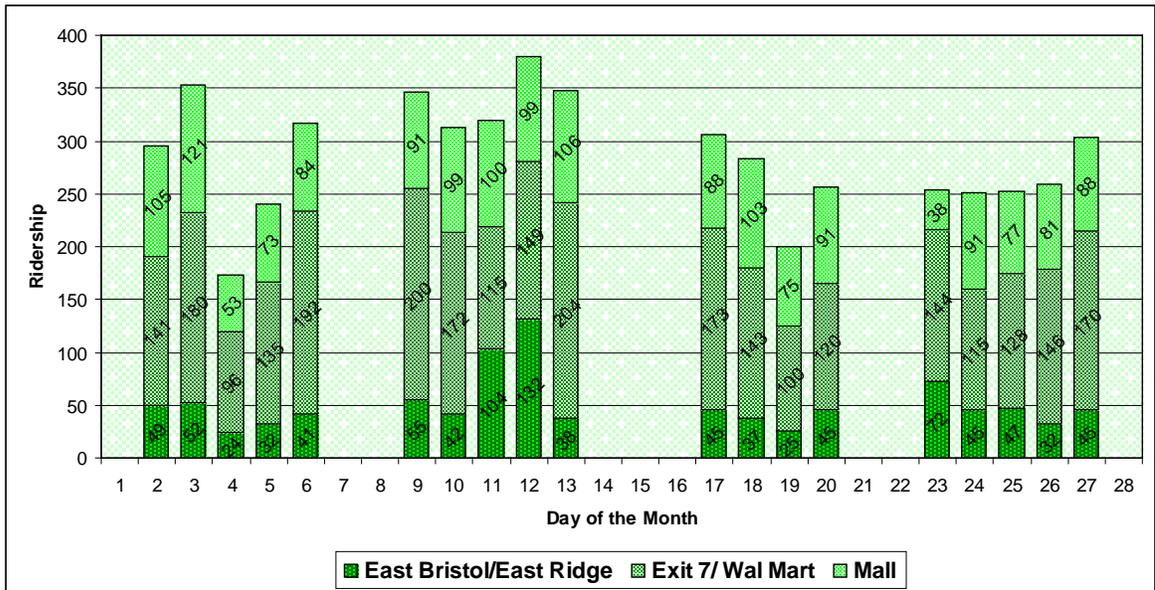
Legend

- bus route east bristol east ridge
- bus route exit 7
- bus route mall
- - - bus route southside
- - - bus route penn-hickory
- - - bus route hospital

Fixed Route Service (cont.)

Figure 3-3 graphs monthly Bristol Virginia Transit ridership between June 2008 and December 2008. Figure 3-4 graphs average daily ridership, based on monthly ridership and the number of operating days in each month. Over the six month period, Bristol Virginia Transit (BVT) recorded an average of 6,443 passenger boardings per month on their fixed routes. The estimated daily average over this same period was approximately 302 boardings per day. Ridership was higher in the summer months. BVT's lowest levels of ridership were recorded in November (5,069 boardings or an average 267 per day).

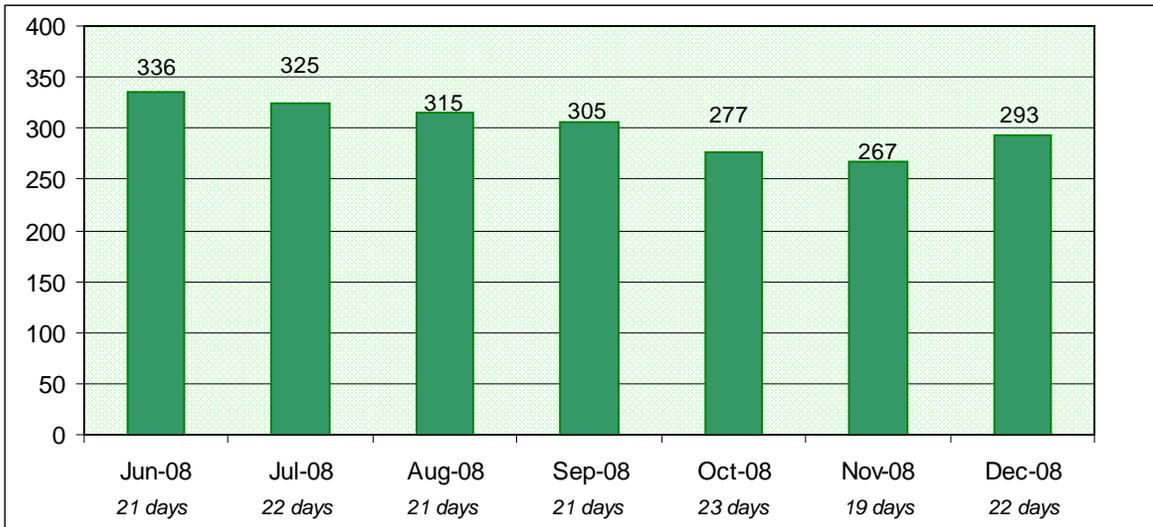
**Figure 3-2
Daily Fixed Route Ridership
(February 2009)**



**Figure 3-3
Monthly Fixed Route Ridership
(June 08 – Dec 08)**



**Figure 3-4
Average Daily Fixed Route Ridership
(June 08 – Dec 08)**



Demand Response Service

Figure 3-5 charts BVT's weekly ridership for demand response service during February 2009. Demand response ridership for all of February totaled 97, averaging approximately 5 riders per day for the 19-day period. BVT collected fees in the amount of \$128.20 for demand response service during February or an average \$1.32 per rider.

Figures 3-6 and 3-7 graph the respective monthly and daily BVT ridership for demand response services between June 2008 and December 2008. Daily ridership estimates are based on monthly ridership figures divided by the number of operating days in each month. BVT recorded an average of 121 passenger boardings per month on their paratransit services over the six-month period. Demand response ridership was highest in the summer months and lowest in November (73 boardings for the month).

**Figure 3-5
Weekly Demand Response Ridership
(February 2009)**

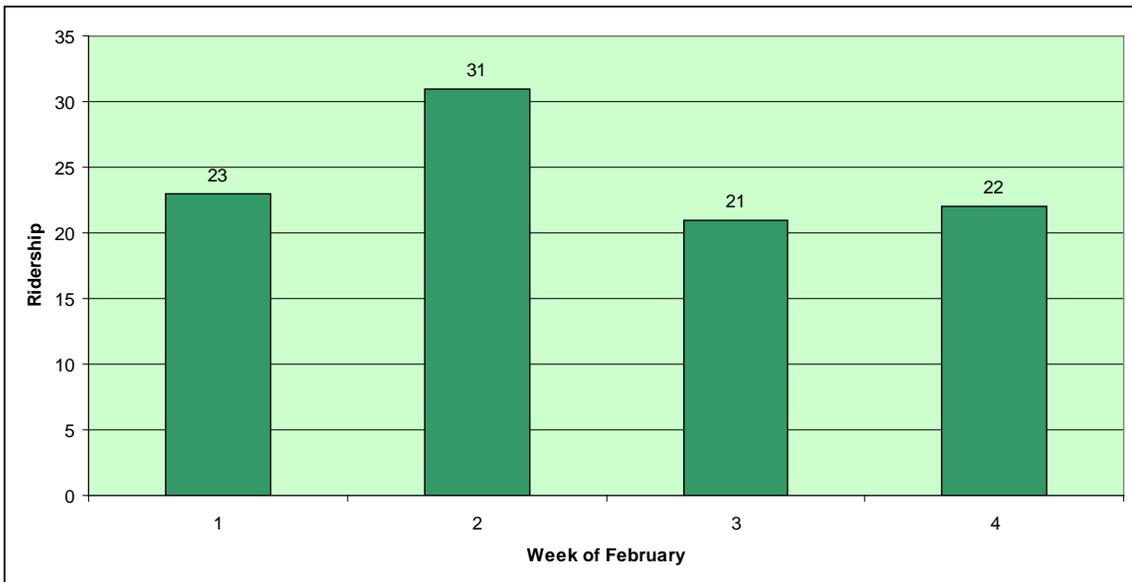


Figure 3-6
Monthly Demand Response Ridership
(June 08 – Dec 08)

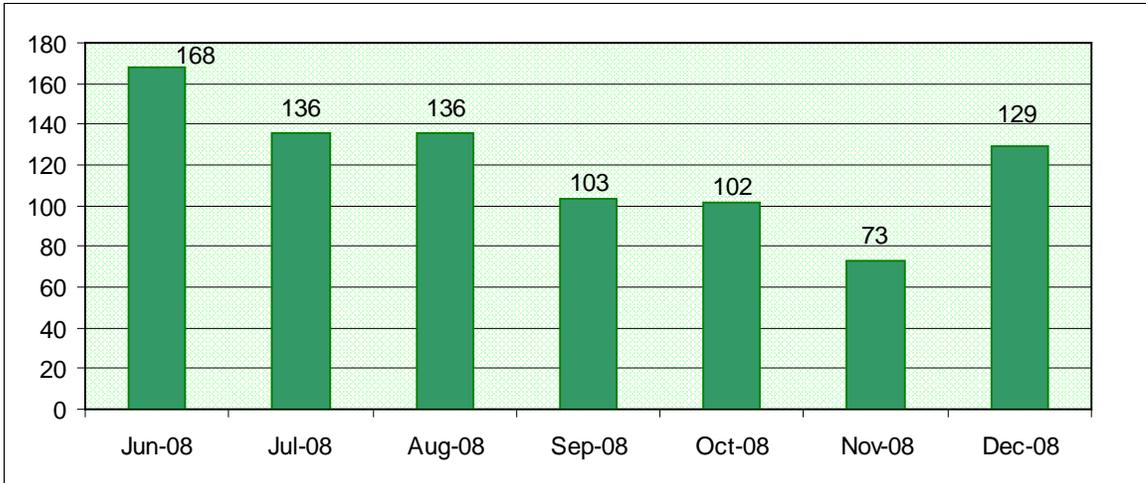
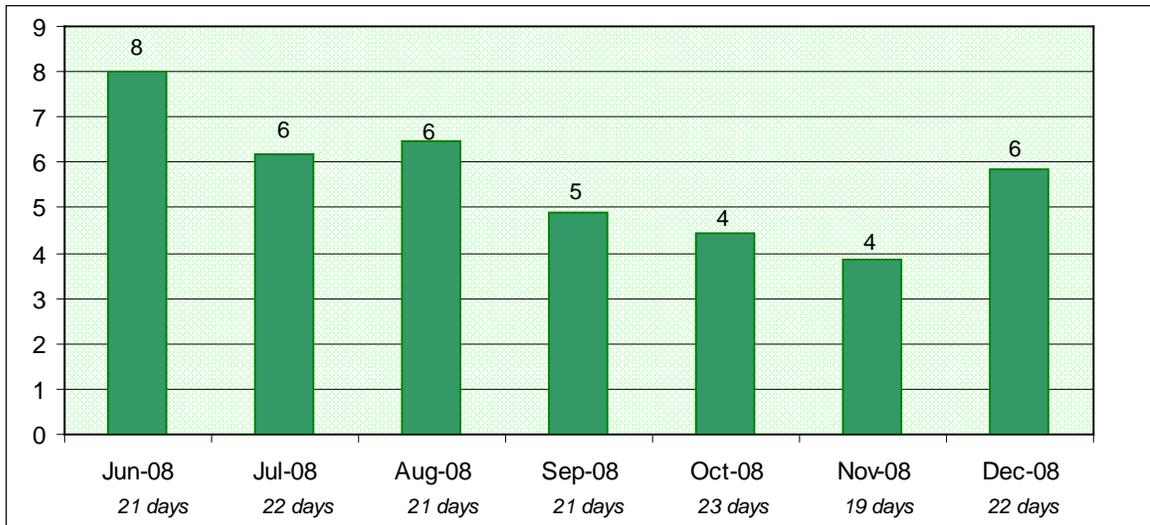


Figure 3-7
Average Daily Demand Response Ridership
(June 08 – Dec 08)



3.2 Historical Performance Evaluation

Annual ridership data and service statistics were collected for FY 2006 and 2007 to review pertinent ridership, service effectiveness and cost effectiveness trends for Bristol Virginia Transit. Prior year data (before 2005) was not readily available for this analysis. Table 3-1 presents annual ridership, service-hours and resulting riders per revenue service-hour over the past two years. This performance measure provides an indication of service effectiveness. Table 3-2 provides an evaluation of cost-effectiveness trends. This table presents passenger trips, annual O&M costs, and resulting cost per unlinked passenger trip for both fixed route and demand response service. The cost figures Table 3-2 are unadjusted for inflation.

**Table 3-1
Service Effectiveness Historical Trends**

Year	Passenger Trips		Revenue-Hours		Pass./Rev.-Hr.	
	MB	DR	MB	DR	MB	DR
2006	52,151	888	7,936	900	6.57	0.99
2007	617,076	751	7,781	751	79.31	1.00

*MB = Fixed Route
DR = Demand Response*

**Table 3-2
Cost-Effectiveness Historical Trends**

Year	Pass. Trips	O&M Costs	Cost/Pass. Trip
2006	53,039	\$497,462	\$9.38
2007	62,458	\$477,949	\$7.65

Fixed Route service effectiveness for the past two years has improved from 6.57 to 7.93 passengers per revenue-hour. Demand response ridership has remained at about 1 rider per revenue-hour. The recorded cost per passenger trip (fixed route and demand response combined) has also improved from \$9.38 to \$7.65 per passenger trip.

Annual transit data was also used to determine Bristol Virginia Transit's service efficiency trends. Table 3-3 presents annual O&M costs, annual revenue-hours, and the resulting cost per revenue hour for fixed route and demand response service. The cost figures presented in this table are unadjusted for inflation. The cost per revenue-hour for all transit services has decreased slightly from \$56.30 to \$56.02 per revenue-hour.

**Table 3-3
Service-Efficiency Historical Trends**

Year	Rev. Hours	O&M Costs	Cost/ Rev. Hr.
2006	8,836	\$497,462	\$56.30
2007	8,532	\$477,949	\$56.02

3.3 Peer Review Analysis

A peer review analysis was conducted as part of this TDP work effort to determine if Bristol Virginia Transit's service effectiveness, cost effectiveness and service efficiency characteristics are in-line with peer agencies. The following six agencies were used as peer systems in this analysis based on transit system size, days of transit operations, service area population and population density:

- Winchester Transit, Winchester, Virginia
- Bristol Tennessee Transit System (BTT), Bristol, Tennessee
- Kingsport Area Transit Service (KATS), Kingsport, Tennessee
- Henderson Area Rapid Transit (HART), Henderson, Kentucky
- Middletown Transit System (MTS), Middletown, OH
- City of Canton Transit, Canton, Georgia

FY 2007 data was used for the peer analysis, with the National Transit Database (NTD) used to collect data for four of the six systems, and phone calls made to the other two systems that do not report to NTD. Appendix A at the end of this report presents a Technical Memorandum with detailed findings from this peer analysis.

In general, Bristol Virginia Transit's ridership, service and financial characteristics appeared to be within the range of characteristics experienced by its peer systems. Key findings were as follows:

Vehicle Utilization: BVT's fleet size and peak utilization for fixed route service was similar to the peer average. BVT had fewer peak and fleet vehicles for demand response service. As noted in this paper, BVT tries to accommodate ADA riders by deviating fixed route service to the extent possible, thus reducing its need to accommodate ADA riders through the demand response fleet. BVT does operate slightly fewer revenue vehicle-hours than the peer systems, in part because BVT's East Bristol route does not operate all-day and BVT does not operate Saturday service, as do most of the peer systems.

Service Supplied: BVT operates comparable service-hours and service-miles of fixed route bus service per capita to the peer systems, with more service-hours and slightly less service-miles per capita. BVT operates less fixed route service-hours and service-miles per square mile of service area. This may be in part be affected by how BVT and the peer agencies define service area population and service area square miles.

Service Productivity: BVT's service productivity for fixed route service compared favorably to the peer systems on a per capita and per revenue-mile basis, but not on a revenue-hour basis. When including demand response riders, BVT service productivity is in general comparable to the peer systems.

Cost Efficiency: A break-out of fixed route vs. demand response cost efficiencies was somewhat difficult, because BVT and possibly some of the peer systems do not have the means to definitively break out shared costs. BVT's cost per passenger trip and cost per revenue bus-hour were slightly higher than comparable averages of the peer systems. BVT's cost per revenue-mile, however, was significantly higher than the peer average. This is in part due to BVT operating fewer revenue-miles per revenue bus-hour than the peer systems.

Transit fares were one area where there was a distinct difference between BVT and the peer systems. Four of the peer systems had cash fares of \$1.00 or more. Three of the peer systems also provided Saturday fixed route service.

3.4 On-Board Survey Findings

An on-board transit rider survey was also conducted as part of the TDP process. Specifically, the rider survey was used to determine rider characteristics, trip-making characteristics and perceptions regarding the quality of transit services and future transit service needs. Survey forms were prepared for Bristol Virginia Transit's fixed route service and Demand response service. The surveys were conducted during the week of February 16, 2009. Each survey instrument asked riders to respond to several questions pertaining to:

- Their socioeconomic status (labeled “About You” on the survey form);
- General characteristics of the trip they were making at the time of the survey such as trip purpose, origin and destination (labeled as “About Your Trip” on the survey form);
- Perceptions regarding Bristol Virginia Transit’s existing service (labeled as “Rate Bristol Virginia Transit’s Service” on the survey form); and
- Perceptions regarding needed improvements (labeled as “Identify Future Service Improvement Needs” on the survey form).

Appendix B at the end of this report presents a Technical Memorandum with detailed findings from the on-board transit rider survey. Using survey results presented in Appendix B, the typical Bristol Virginia Transit rider (for both fixed route and Demand response) is as follows:

- Female
- Over 40-years old
- Caucasian
- At least a High School Graduate
- Has a household income under \$20,000
- Uses BVT Transit service at least 2-3 days a week
- Has been riding for at least 2 years
- Uses transit primarily for work or shopping trips
- Accesses bus service by walking
- Rides transit because they don’t have a car

BVT received favorable ratings (very good or good) for most service categories such as areas served and cost of the bus fare. The lowest was for hours of bus service (80% rated hours of bus service as very good or good with the remaining 20% rating it as okay, poor or very poor).

When asked about potential service improvements, respondents rated all five potential categories as either very important or somewhat important (security, expanded service outside of city, late evening service, more direct bus routing and more frequent service). Saturday and late evening fixed route service received slightly more requests than the other categories.

3.5 Public Outreach Efforts

On March 13, 2009 key stakeholders that represent transit riders were invited to a TDP Stakeholder’s Meeting at Bristol City Hall Council Chambers. Meeting notes are provided in Appendix C of this TDP. Consultant staff made a presentation that covered the following topics:

- Purpose of the TDP
- TDP Requirements and Content
- Bristol TDP Tasks Underway
- Existing Bristol Service and Financial Characteristics

There was then discussion at this meeting regarding transit service needs in Bristol Virginia. Topics raised by stakeholders were as follows:

- There is a need to extend hours into the evening (at least 10 p.m.) and on weekends. People need access to jobs, and many of those jobs do not fit within the transit service's current 6 a.m. to 6 p.m. span. Participants indicated they have specific examples where people have not been able to get jobs because of lack of transportation.
- It was also noted that 53% of Bristol residents under 18 live in poverty – thus further reflecting the need for access to jobs.
- Service needs to be extended north to Virginia Highlands Community College in Abingdon (I-81 Exit 14) and to destinations on Lee Highway just north of Exit 7 (e.g., Highlands-Target shopping center and Washington County Department of Social Services building).
- No one indicated that the current fare structure is an impediment to persons using the service.
- Perhaps a transit center at Exit 7 would allow for coordination with other area transit services (e.g., District 3).
- There are also social serve agencies in Abingdon that would benefit with connections to Bristol VA Transit, such as the Regional Department of Social Services agency, Child Support Enforcement.
- It was asked if the City is pursuing available federal funding for service expansion, such as New Freedoms grant money. It was noted that District 3 has been able to use New Freedoms money for programs.
- More marketing and advertising of transit services is needed in the community. For example, make sure social agencies are aware of services offered and destinations served.
- Improved accessibility to and from bus stops and at bus stops is needed for disabled and elderly riders.
- There was discussion about the need for shelters, however it was noted that shelters are often the target of vandalism.
- There may also be perceptions regarding safety around the Downtown Transit Center. Can BVT and BTT jointly fund a security presence?
- Is there perhaps a demand for special events transit services in the summer.
- It was noted that BVT should meet and coordinate better with other area transit agencies.

3.6 Facility and Equipment Characteristics

As was noted in Chapter 1 of this TDP, Bristol Virginia Transit shares a Downtown bus facility with Bristol Tennessee Transit. The facility, located on State Line Road, serves as the transit system hub. The hub is regularly maintained and remains in good shape. It also is directly adjacent to the Farmer's Market which is also the scene of downtown concerts and other cultural events.

Bristol Virginia Transit's day-to-day operations (including farebox recovery) are managed at 2107 Shakesville Road some two to three miles east of the city center. The Shakesville Road location also serves as BVT's maintenance, fueling and storage facility. It is a shared facility, wherein vehicles from other city divisions are fueled and maintained by city staff. Administrative tasks (e.g., grant applications, analytical tasks) are done at the City of Bristol's main office, 300 Lee Street

BVT's vehicle fleet was noted in Chapter 1 of this TDP. BVT owns and operates 5 light duty buses and one passenger van. Model years for these vehicles range from 1996 to 2008.

3.7 Title VI and Triennial Review

Bristol Virginia Transit's Title VI program is in compliance with 49CFR Section 21.9(b). T's vehicle fleet was noted in Chapter 1 of this TDP. Bristol Transit went through FTA's Triennial Review Program in May 2008. Minor deficiencies were found in the following four areas: Legal, Financial, Planning, Drug and Alcohol. Corrective action was immediately taken and has been resolved to FTA's satisfaction.

4.0 TRANSIT SERVICE AND FACILITY NEEDS ASSESSMENT

This chapter of the TDP identifies potential service and facility needs for consideration in the TDP for the Bristol, VA Transit service area. This chapter begins with an analysis of demographic characteristics of the area. Service and facility needs are then identified based on the evaluation conducted in previous chapters of this TDP, stakeholder meetings and the demographic analysis that is provided in this chapter. Cost estimates and policy implications are included for each identified need.

4.1 Demographic Analysis

Public transportation services are most successful when serving areas of high housing and employment densities. One way to identify potential service needs is to analyze existing and future demographics of a particular area, and to identify those areas with high housing and employment densities. This analysis focuses on identifying minimum densities, or thresholds that are sufficiently supportive of fixed route transit service. Within this general context, population and employment data provided by the Bristol (TN-VA) MPO have been analyzed to get an understanding of how well BVT's existing fixed route service corresponds to the demographic character of Bristol Virginia.

The Bristol MPO has published demographic data by traffic analysis zone (TAZ) for a base year (2000) and horizon year (2030). An interpolation of these two databases was completed to obtain an estimate of 2015 data. Table 4-1 presents base year (2000) and interpolated 2015 demographic data for the Bristol area. Population and household growth for Bristol, VA is expected to be minimal, with less than 1% growth between the base year data and 2015. Higher growth rates are shown outside of Bristol. Employment for Bristol, VA reflects a higher growth rate, with a 6.3% growth rate between the base year data and 2015.

**Table 4-1
Demographic Estimates for Bristol, VA and Surrounding Areas**

MPO Areas	Population		Growth		Households		Growth		Employment		Growth	
	Y2000	Y2015	Population	%	Y2000	Y2015	Housholds	%	Y2000	Y2015	Employment	%
Bristol, VA	17,367	17,508	141	0.8%	8,449	8,514	65	0.8%	13,711	14,578	867	6.3%
Washington County, VA	11,469	11,700	231	2.0%	4,976	5,077	101	2.0%	5,011	5,060	49	1.0%
Bristol, TN	25,986	26,709	723	2.8%	12,077	12,397	320	2.6%	18,632	19,805	1,173	6.3%
Sullivan County, TN	35,778	37,386	1,608	4.5%	15,348	16,031	683	4.4%	8,759	9,429	670	7.6%
Totals	90,600	93,303	2,703	3.0%	40,850	42,018	1,168	2.9%	46,113	48,871	2,758	6.0%

Source: Bristol MPO, 2030 Long-Range Transportation Plan, Y2015 values are interpolated.

The propensity to use public transportation is closely associated with areas of dense housing and employment. *The Transit Capacity and Quality of Service Manual – 2nd edition* (Transit Cooperative Research Program, 2003) identifies density measures for a transit supportive environment as:

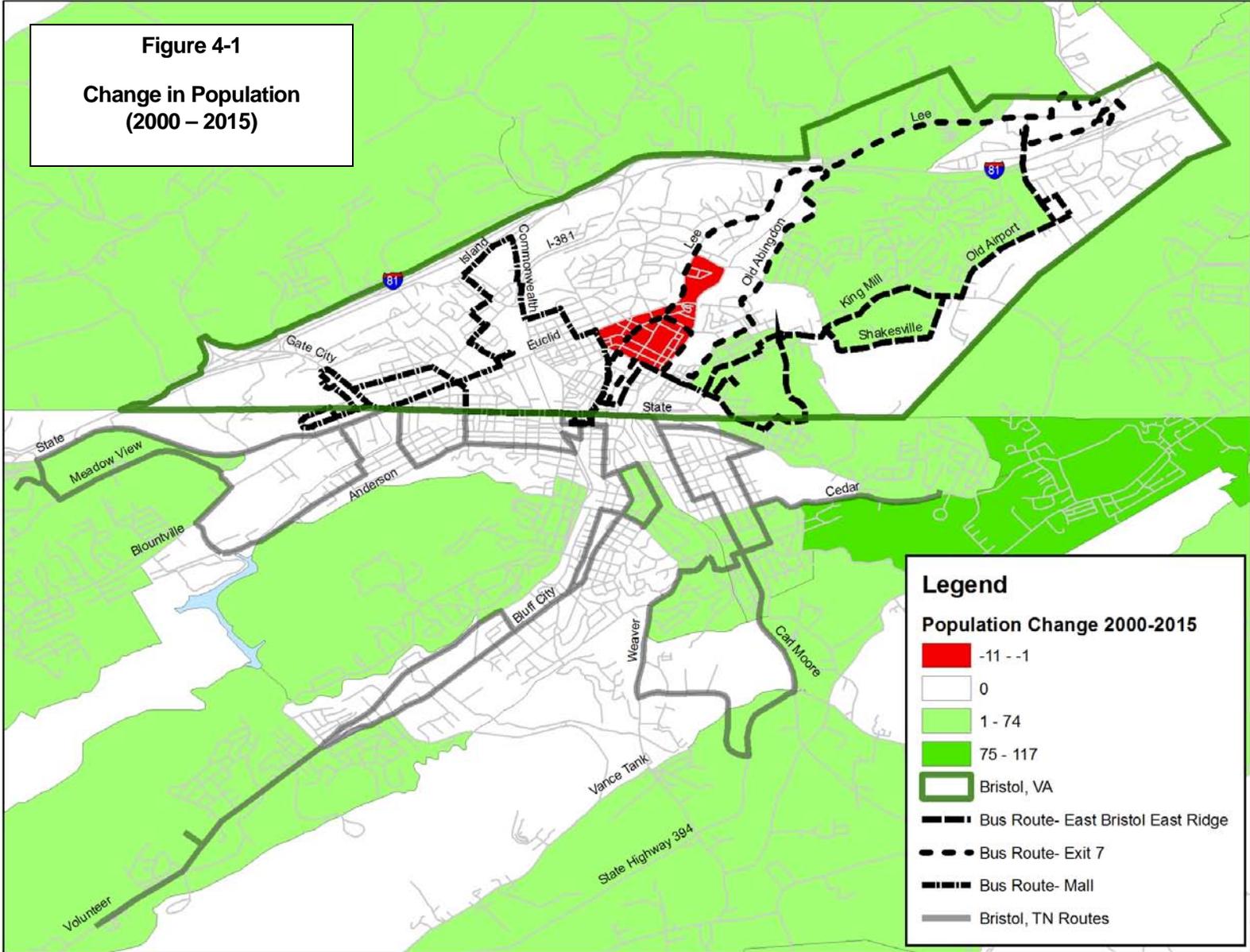
- 3 households per acre, and/or
- 4 jobs per acre.

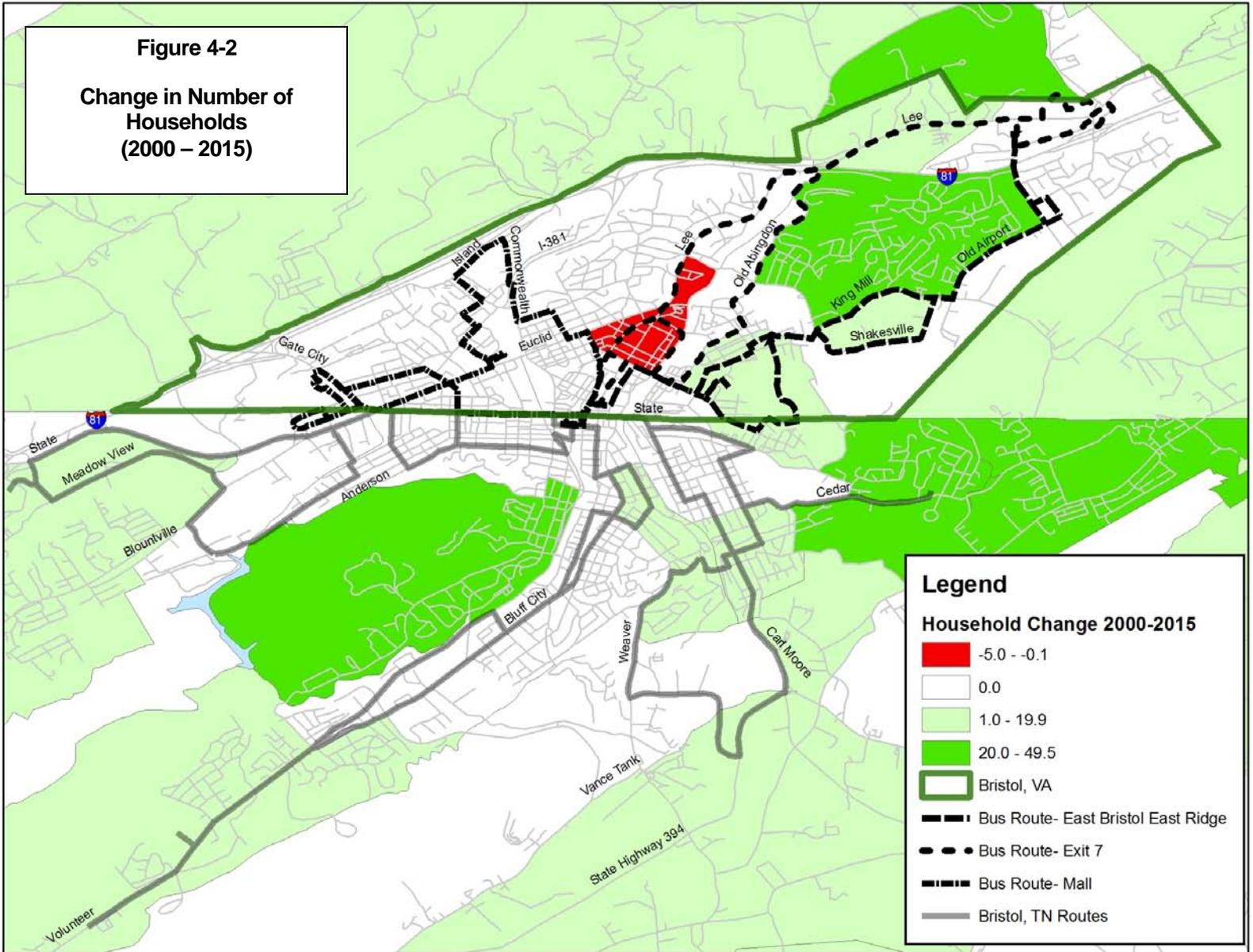
Figures 4-4 and 4-5 present 2000 and 2015 household densities in and around the City of Bristol, VA. For Bristol, VA alone, 2 Traffic Analysis Zones (TAZ's) meet the threshold of 3 or more households per acre in both the 2000 and 2015 datasets, with 3 more TAZ's being just under that threshold. The TAZ's that do have 3 or more households per acre are centrally located and to the north of State Line Road. All of these TAZ's are presently served by Bristol, VA Transit.

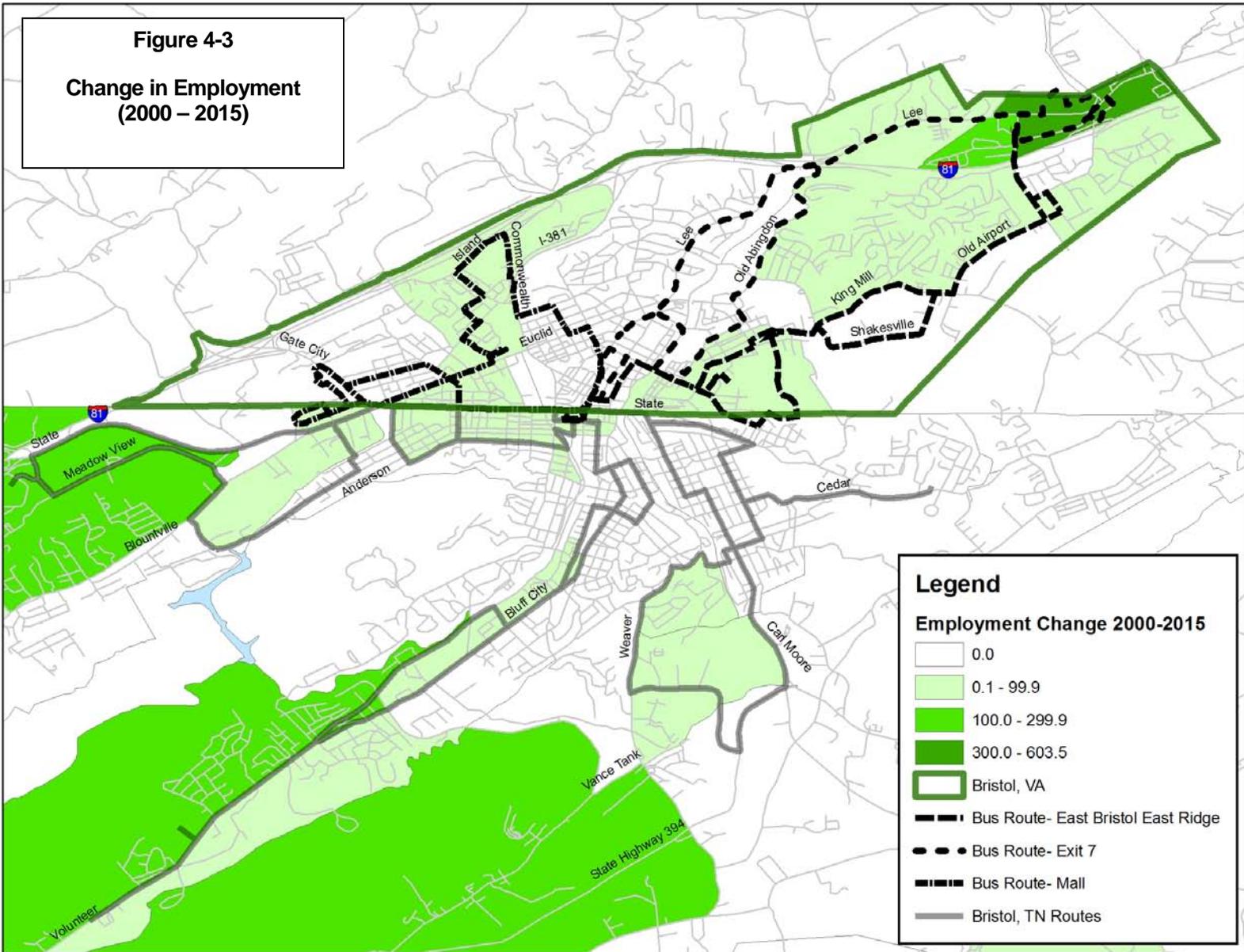
Figures 4-6 and 4-7 illustrate 2000 and 2015 employment densities in and around Bristol, Virginia. In both the 2000 and 2015 dataset, there are seven of Bristol's TAZ's that meet the transit supportive threshold of 4 or more employees per acre. Although most of these TAZ's are located along State Line Road, a northeast Bristol TAZ encompassing Exit 7 at Interstate 81 also meets the measure. Once again, all of these areas are presently served by Bristol, VA Transit.

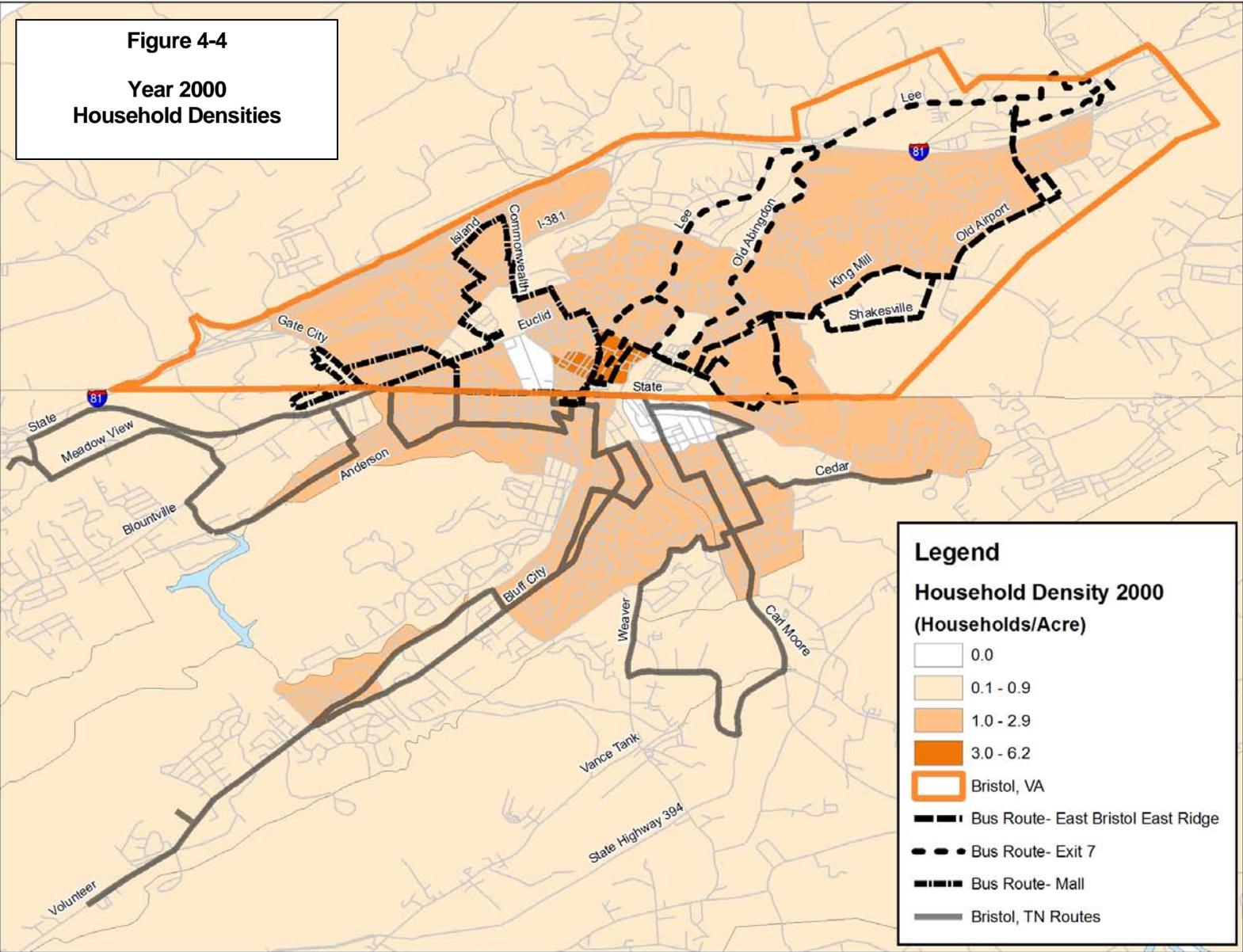
In addition to population and employment densities, the propensity to use transit is influenced by other factors such as availability of an automobile, income and age. The 2000 Census identified the following population characteristics for Bristol that are related to potential transit dependent groups:

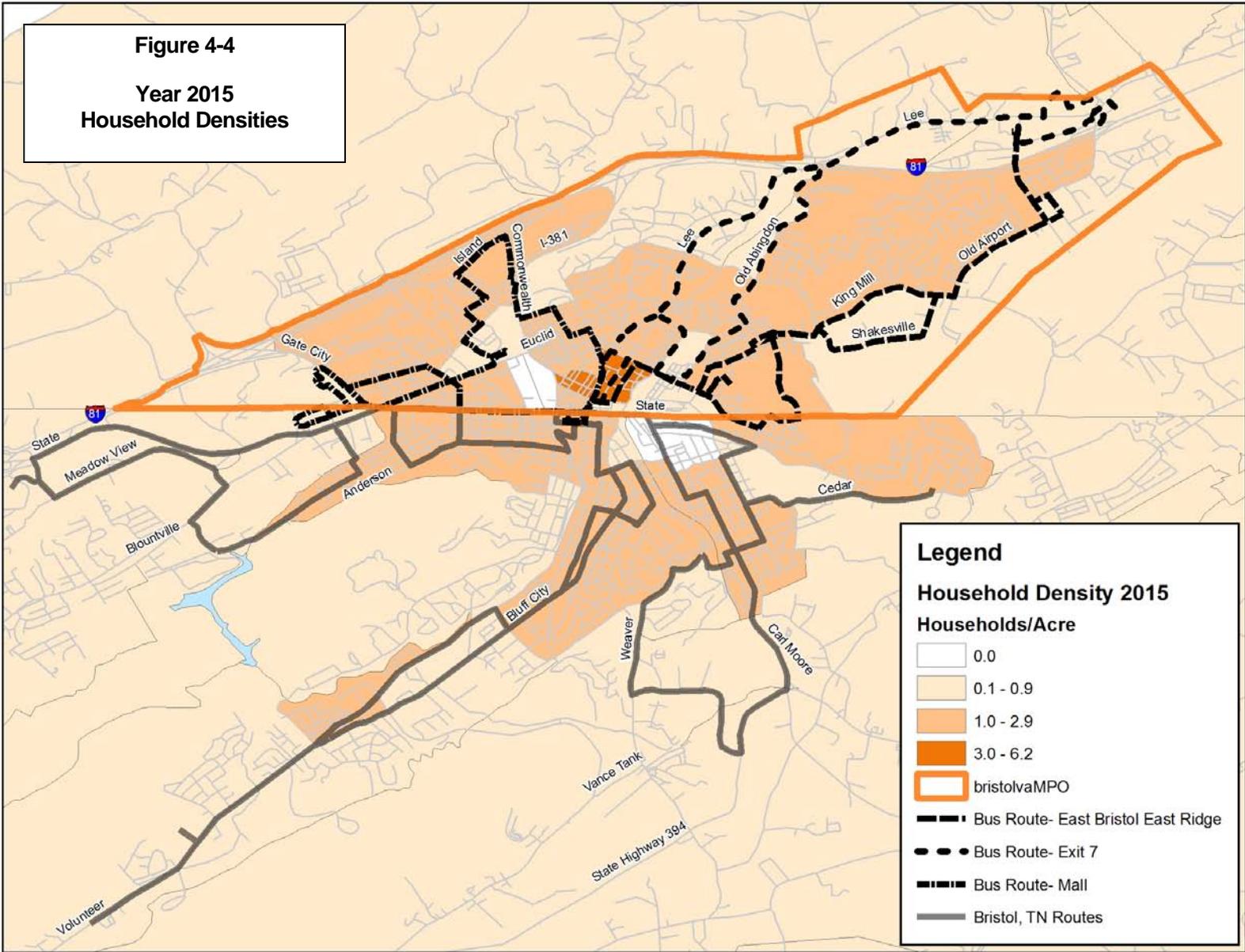
- Approximately 15% of Bristol's Households were identified as autoless.
- Approximately 16% of Bristol residents identified household incomes below the poverty line.
- Approximately 20% of Bristol residents were 65 years or older.
- Approximately 10% of Bristol residents identified themselves as mobility-disabled.

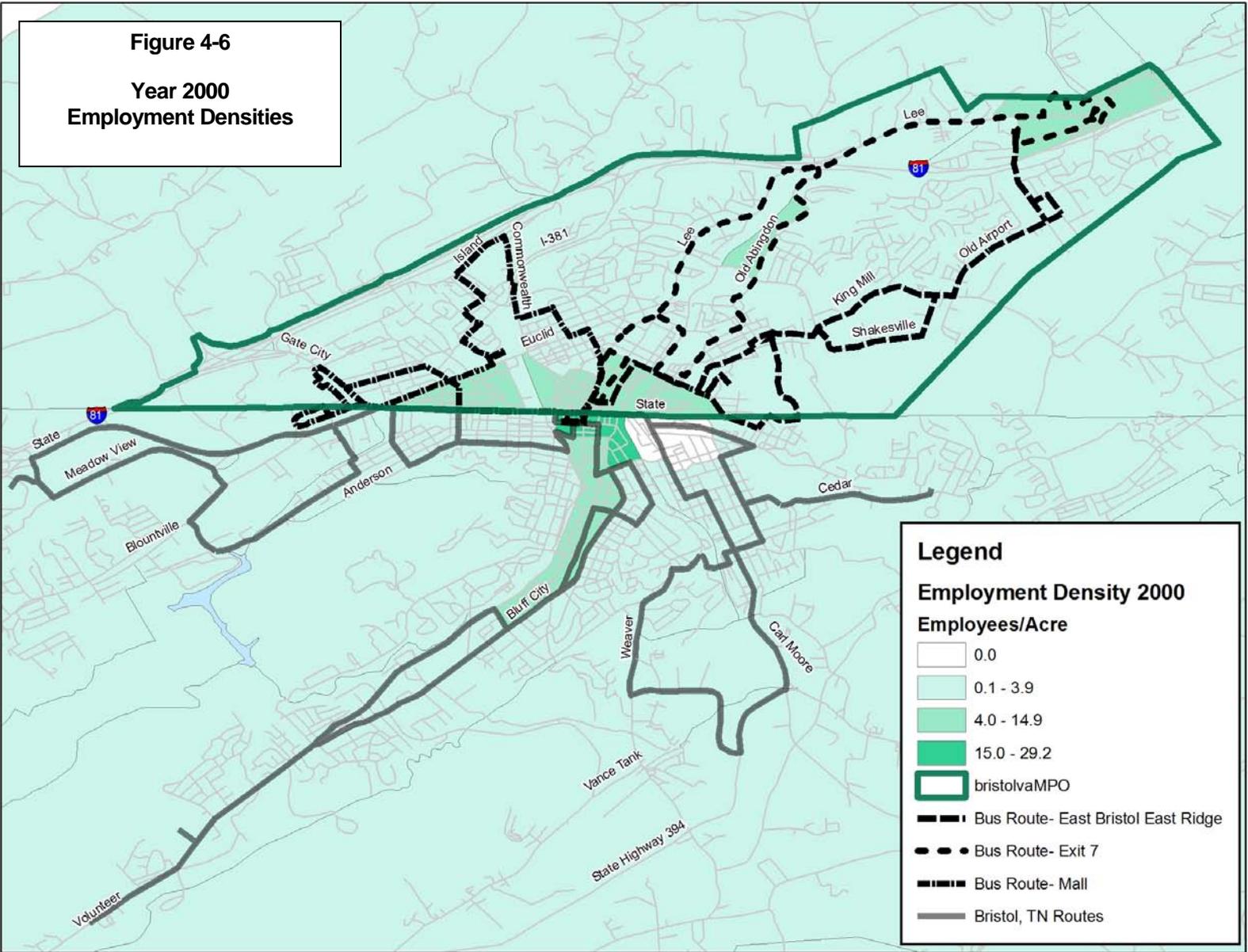


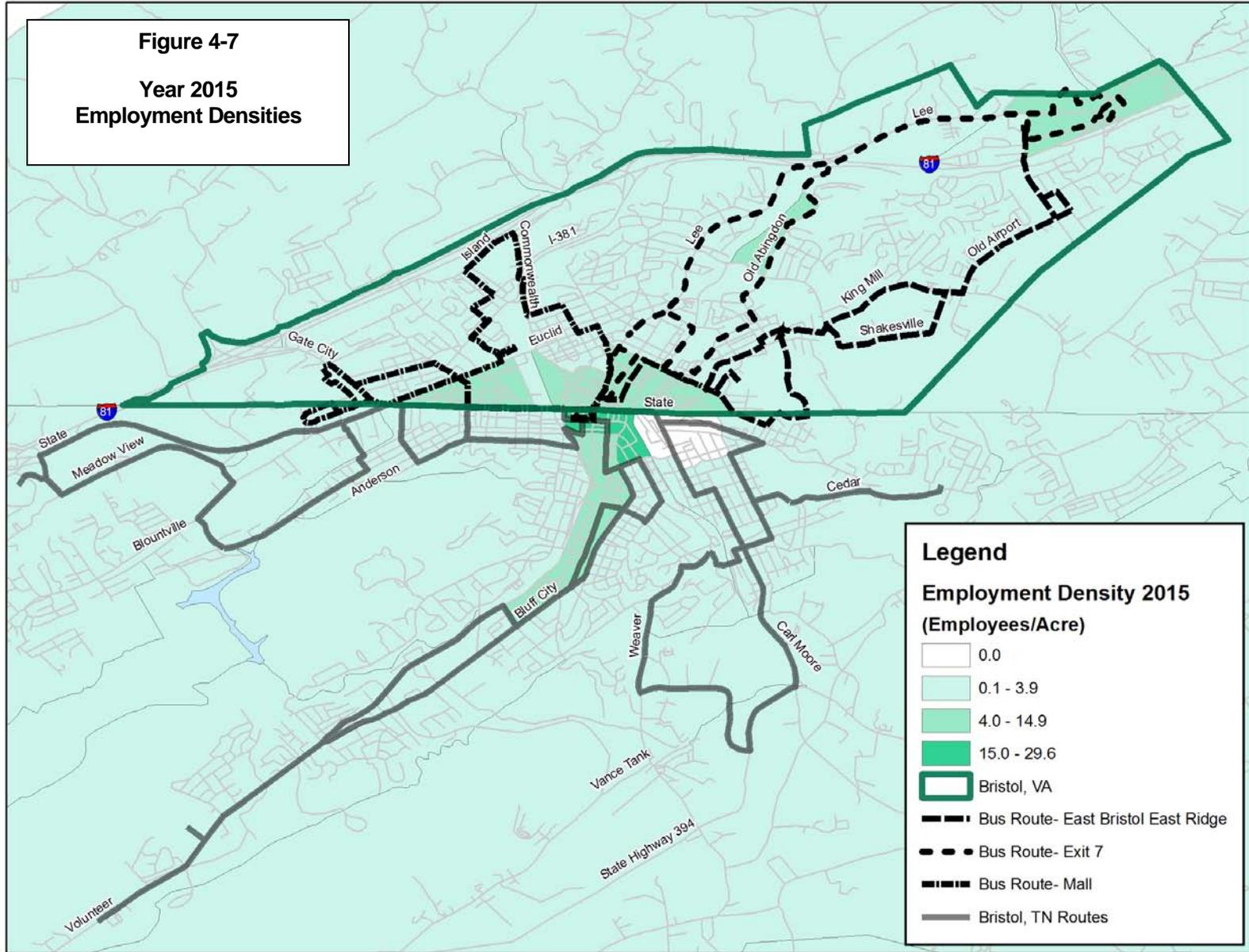












4.2 Service and Facility Needs

Previous chapters of the TDP included an analysis of existing ridership, service and cost characteristics, a peer agency review and a survey of Bristol riders. A meeting was also held with the City's Transportation Advisory Committee and representatives of stakeholder groups to gather input regarding service and facility needs. Conclusions drawn from these TDP work tasks and input received from riders, stakeholder groups and staff have been used to determine the following potential service and facility needs for consideration in this TDP.

Service Needs

1. *Early Weekday Service Hours for Fixed Routes*

At present, Bristol Virginia Transit's (BVT) Exit 7/Wal-Mart and Mall routes start into service at 7:15 a.m. The East Bristol/East Ridge route starts an hour earlier (6:15 a.m.) to accommodate patrons with early morning work schedules. Starting all BVT service at 6:15 a.m. would not only improve accessibility to jobs for Bristol, VA residents but would also add continuity to the twin cities overall system. All Bristol Tennessee Transit (BTT) routes start service at 6:15 a.m.

2. *Midday Service for the East Bristol/ East Ridge Route*

The East Bristol/East Ridge Route does not provide complete midday service. The last morning departure from the downtown hub is at 9:15 a.m. and service does not resume until 2:15 p.m. Providing a full day's service on this route would improve service to Bristol residents in and around Kingstown, Pebble Creek and Virginia Hills.

3. *Expanded Evening Service for Fixed Routes*

Survey results indicate that a number of BVT's riders have a desire for evening fixed route service. Representatives at the TDP Task Force meeting also identified this need. Many retail service sector jobs have shifts that start or end in the evenings. The provision of later fixed route service would also improve transit accessibility to jobs. If evening service were to be initiated, it is suggested that such service operate until 9:00 p.m. Thus, BVT would begin service from the downtown center at 6:15 a.m. and the last bus departure from the downtown transit center would be at 8:15 p.m., with service ending at about 9:00 p.m. This would add 15 revenue hours of service a week per route. Ideally, BVT and BTT should discuss the potential of jointly expanding evening service, if such improvements were to occur.

4. *More Direct Routing*

BVT staff has indicated that the Exit 7/Wal-Mart Route sometimes has difficulty maintaining schedule depending on traffic congestion around the Exit 7 area (e.g., around the Christmas holidays). A modified route structure with more direct routing would make transit more convenient and attractive to use. As an example, the Exit 7/Wal-Mart Route could be realigned to operate more directly by operating both inbound and outbound along Monroe Street, Oakview Avenue, and Lee Highway and eliminating exiting inbound segments along Old Abingdon Highway, Texas Avenue, Rhode Island Avenue and Randall Street. The East Bristol/East Ridge Route could also be realigned to eliminate inbound segments along Shakesville Road and Avondale Lane, thus both inbound and outbound routing would be on Old Airport Road and Kings Mill Pike. This change might provide sufficient travel time savings to allow for an extension of the East Bristol route to Wal-Mart. Stop-level ridership information will need to be collected to determine potential ridership impacts associated with route realignments. If it is determined such realignments have minimal adverse ridership impacts, these changes (i.e., Exit 7/Wal-Mart route realignment and East Bristol route realignment and extension to Wal-Mart could be implemented with no impacts to existing transit resources (i.e., no additional buses or additional revenue bus-hours of service).

5. *Limited Demand Response Saturday Fixed Route Service*

Adding Saturday service would improve access to jobs for workers – particularly retail sector employees. One option would be to provide a “Jobs Access” transit service on Saturdays, similar to the program BTT presently operates. This is essentially a demand response service that requires advance scheduling of trips. One bus could be dedicated to this service for 10 hours (e.g., 8:15 a.m. to 6:15 p.m.).

6. *Expanded Fixed Route Saturday Fixed Route Service*

An alternative to the above proposal is providing full fixed route service on Saturdays. This potential improvement would require all three routes to operate on Saturdays. Suggested service hour assumptions are from 8:15 a.m. to 6:10 p.m. BVT and BTT should discuss the potential of jointly implementing fixed route Saturday service, if such improvements were to occur.

7. *Service to the Town of Abingdon*

As was noted in Chapter 2 of this TDP, both the City of Bristol Comprehensive Plan and the MPO's LRTP have identified regional connectivity as an important objective. Indeed, individual travel patterns often cross city and county limits. Washington County, VA. is not only adjacent Bristol County, VA but surrounds Bristol County on three sides. The Town of Abingdon is the county seat of Washington County. Abingdon is also a part the Kingsport-Bristol, TN-Bristol, VA Metropolitan Statistical Area. As such, it represents a good place to begin implementing regional service. Abingdon presently has limited transit service through the District 3 Governmental Cooperative. Service is provided hourly from 12:00 p.m. to 4:00 p.m.

For the purposes of this TDP, it is assumed service to the Town of Abingdon would consist of 4 to 6 round trips per day, for a total of 12 hours of bus service. From the downtown transit center, buses would proceed west along State Street, turn north at US 11/ US 19 (Commonwealth Ave.) turn right at Euclid Ave. and travel to the Food City/Bonham Rd. transfer point in the Exit 7 area. The route would then continue to the Town of Abingdon via Lee Highway making limited stops enroute to Abingdon (e.g., Virginia Highlands Community College). Potential stops within Abingdon need to be identified, but should include the Community College.

Facility and Equipment Funding Needs

1. *Maintenance Facility Equipment Needs*

BVT staff has identified a need to update communications equipment. Other miscellaneous equipment needs have also been identified by staff.

2. *Bus Stop Signage, Shelters and Benches*

The addition of stop signage, passenger shelters and benches at bus stops provide an enhanced visual transit presence in the community, and provides an amenity that may encourage greater transit usage. Presently, there is limited signage, with few designated stops along bus routes. Service tends to operate as "flag stops", with drivers stopping when spotting a possible rider along the route. Additional designated stops and amenities would enhance the visual presence of transit in Bristol.

3. *Bus Replacement/Expansion*

Chapter 3 of this TDP presented a roster of Bristol Virginia Transit's existing bus fleet. Projected fleet replacement requirements during the TDP time period to maintain Bristol Virginia Transit's fleet of 5 light duty buses (16-20 passenger buses) and ADA passenger van are noted in the table below. Bus purchases in this table are based on an average vehicle life of five years, thus reflecting a total of 7 replacement bus purchases and one van replacement purchase are proposed during the TDP time period. Any expansion of service (e.g., an Abingdon route) will require buses in addition to those identified above.

Table 4-2
Bristol Virginia Transit Bus Replacement Requirements

Year	Light Duty Buses / Vans
FY 2009	1 bus
FY 2010	1 bus
FY 2011	1 bus
FY 2012	1 van
FY 2013	2 buses
FY 2014	1 bus
FY 2015	1 bus

Other Needs

1. Fare Policy

The peer agency analysis indicates that BVT has a low fare when compared to its peers. Passenger fares capture only 4 to 5% of BVT's operating costs. Thus, it is recommended that BVT investigate the feasibility of gradually increasing fares to levels that are comparable to its peers. Such actions, however, will require coordination and similar actions with BTT.

2. Marketing Efforts

Transit services require continual marketing efforts in order to retain existing customers and attract new customers. Bristol Virginia Transit maintains information on the City's website and prints service brochures (i.e., "catch the Bus!"). That information should also be updated periodically and in conjunction with any service changes. It is also proposed that Bristol Virginia Transit maintain a mailing list to key stakeholder organizations that represent likely transit riders (e.g., social service agencies, employment agencies) and send out periodic notices of any service changes.

3. Partnerships

Finally, opportunities for partnerships should always be kept in mind. Coordination with the City's economic development office to determine potential transit service needs for new industries coming to Bristol Virginia. Partnership opportunities may exist with those new industries. Coordination efforts are also continually required with Bristol Tennessee Transit.

4.3 Funding Requirements

Potential funding requirements were identified for the service and facility needs identified above. Potential service expansion operating costs are based on the following estimates of additional revenue bus-hours:

- Adding an additional hour of morning service for two of BVT's routes would add approximately 510 annual revenue-hours of service.
- Adding midday service to the East Bristol/ East Ridge Route is estimated to add 1,020 annual revenue-hours of service.
- Expanding evening service to 9:00 p.m. would add another bus 2,295 annual revenue-hours.
- Minor route modifications to the Exit 7/Wal-Mart and the East Bristol/East Ridge routes are assumed to be cost neutral.

- Committing one bus for Saturday demand response service is estimated to require 520 annual revenue-hours of bus service.
- Providing fixed route Saturday service for all three routes (10-hours of service for each route) is estimated to require 1,560 annual revenue bus-hours.
- Adding 4 to 6 trips per day between the Downtown Transit Center and the Town of Abingdon would require one bus and potentially add 3,060 annual revenue hours (assuming 12-hours of service each day).

Table 4-3 presents estimated funding requirements for each service and facility need. All costs are presented in 2009 dollars.

Table 4-3
Bristol Virginia Transit TDP
Service and Facility Needs Estimate of Funding Requirements

Improvement Type	Description of Improvement	Estimated Cost
Service Improvements	Additional Hour of Morning Service (2 Routes)	\$15,000 annually
	Midday Service for the East Bristol/East Ridge Route	\$31,000 annually
	Additional 3 Hours of Evening Service on all of BVT's Routes	\$103,000 annually
	Route alignment adjustments that include extension of East Bristol Route to Wal-Mart	Potentially No Cost
	Saturday Demand Response Service (1 bus)	\$31,000 annually
	Saturday Fixed Route Service (3 buses)	\$94,000
	Abingdon Route (12 hours of service each day)	\$184,000 annually
Facility Improvements	Maintenance Facility Equipment	\$10,000
	Bus Stop Signage	\$5,000
	Shelters/Benches	\$10,000
	Bus Fleet Replacement over 6 years (8 buses/ vans each at \$50,000 per bus)	\$400,000
	Potential Bus Fleet Expansion (1 additional bus assumed for potential Abingdon service)	\$50,000

1. *Operating costs for minor service improvements based on \$30 per revenue bus-hour. Cost for weekday evening service is based on \$45 per revenue bus-hour, and cost for Saturday service and new regional service (i.e., Abingdon service) is based on \$60 per revenue bus-hour.*
2. *O&M cost estimates reflect costs prior to consideration of potential farebox and other revenues.*

5.0 SERVICE AND FACILITY RECOMMENDATIONS

This chapter presents service and facility improvements that are recommended over the TDP 6-year time period. Potential service and facility improvements were identified for consideration in the prior chapter. This chapter presents those service and facility improvements that are recommended for inclusion in the TDP based on likely funding availability 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:

- An additional early morning service hour for two of BVT's routes
- Midday service for the East Bristol/East Ridge route
- Weekday evening fixed route service
- More direct routing
- Saturday demand response service
- Saturday fixed route service
- Service to the Town of Abingdon

Unfortunately, the reality of Bristol's financial condition is unlikely to allow for transit service expansion in the near-future. In addition, potential expansion of state funding for operations is also uncertain at this point.

Thus, this TDP's service plan reflects maintaining Bristol Virginia Transit's existing fixed route and demand response service through FY 2012. Beginning in FY 2012, the following service improvements are proposed:

FY 2012

Extend the East Bristol/East Ridge route from the Bonham Food City to the Wal-Mart. Minor route modifications may possibly be needed to accommodate this route extension (detailed travel time analysis is required). This extension will expand transit access to and from the Wal-Mart. This extension would not require an additional bus, and thus will not have any adverse impacts to BVT's operating costs.

FY 2013

Add 1 hour of morning service to BVT's Exit 7/Wal-Mart and Mall routes. This will provide a consistent start-up time for all BVT bus routes, and will also be consistent with Bristol Tennessee Transit's start-up time. As previously noted, this service improvement is anticipated to generate an additional 510 annual revenue bus-hours of service.

If additional funding were to be available, participants in the TDP process indicated a desire to first see evening service and new service to Abingdon (perhaps through a joint District 3/Bristol project) prior to consideration of expanded midday or weekend service.

5.2 Facility Recommendations

Chapter 4 of this TDP also identified the following potential vehicle and facility improvements for consideration over the TDP's six-year time period:

- Maintenance facility – communication equipment
- Bus stop signage
- Bus stop shelters and benches
- Bus and van replacements
- An additional bus if Abingdon service were to be implemented.

Funding from the American Recovery and Reinvestment Act (ARRA) is providing an opportunity to fund some of the above-noted improvements. The Federal Register has identified \$310,000 in potential ARRA funds for Bristol Virginia Transit. Initial "Phase 1" funds have already been identified for BVT and those funds will be used to replace one bus and purchase the communication equipment at the maintenance facility.

Other improvements recommended during the TDP's six-year time period include vehicle replacements and additional bus stop signage and passenger amenities at high volume bus stops. A full list of proposed facility improvements during the TDP's six-year time period are as follows:

FY 2009

- One replacement bus (ARRA funds – replaces Bus #26, 2001 model year)
- New communications and office equipment (ARRA funds)

FY 2010

- One replacement bus (replaces bus #20, 1996 model year)

FY 2011

- One replacement bus (replaces bus #30, 2004 model year)
- Bus signage, shelters, benches

FY 2012

- One replacement van (replaces 2006 van)
- Bus signage, shelters, benches

FY 2013

- Two replacement buses (replaces bus #34 and #36, 2008 model years)
- Bus signage, shelters, benches

FY 2014

- One replacement bus (replaces 2009 bus purchase)

FY 2015

- One replacement bus (replaces 2010 bus purchase)

5.3 Other Recommendations

Finally, it is important to note that this TDP identified BVT's fare structure as being lower than most of its peers, resulting in a low farebox recovery rate. As noted earlier, state funding availability is uncertain during the TDP time period. This is expected to result in increased needs for additional local funds (to cover increased costs associated with inflation/cost of living increases and increased costs associated with the proposed service expansion in FY 2013). It is recommended that BVT evaluate a potential fare increase in FY 2013. Any fare increase must be coordinated with Bristol Tennessee Transit.

6.0 CAPITAL IMPROVEMENT PROGRAM

This chapter of the TDP describes capital programs (vehicles, facilities and equipment) required to carry out the operations and services set forth in the TDP service and facility recommendations that were presented in the prior chapter. Funding from the American Recovery and Reinvestment Act (ARRA) is providing an opportunity to fund some of the improvements.

6.1 Vehicle Replacement Program

As was noted in prior chapters of this TDP, Bristol, VA Transit presently has five 25-vans with a seating capacity of 19 passengers. The agency also has one ADA van with a seating capacity of 10 passengers. The anticipated lifespan for these vehicles is typically 4 to 5 years, depending on use. The TDP's capital improvement plan calls for replacing all of these vehicles during the TDP time period. The proposed fleet replacement plan is presented in Table 6-1. No fleet expansion is proposed during the TDP time period.

Funding for the first replacement vehicles (FY 2010) has been identified through ARRA funds. Funding for the remaining replacement vehicles is assumed to come from standard Section 5307 funding that assumes 80% federal funds, with the remaining amount funded by the State and City.

6.2 Facility Improvement Program

Chapters 4 and 5 also included proposals for other facility improvements. Specifically, communications equipment needs to be replaced at the maintenance facility. Additional bus stop signage and passenger amenities (benches/shelters) are also proposed at key bus stops. There are presently few designated stops with signage along BVT bus routes, and few passenger shelters and benches. Communications equipment upgrades are also proposed for FY 2010 and are to be funded through ARRA funds. Passenger stop amenities have been proposed for implementation from FY 2011 through FY 2013. The passenger stop amenities assume federal 5307 funding, with a state and local match.

TABLE 6-1
Bristol, VA Transit
Proposed Vehicle Fleet Replacement Program

Bus #	Bus Type	Model Year	FY 2009	FY 2010	FY 2011	FY2012	FY 2013	FY 2014	FY 2015
20	Ford 350	1995	14	<i>R</i>	1	2	3	4	<i>R</i>
26	Chevrolet	2001	<i>R</i>	1	2	3	4	<i>R</i>	1
30	Ford 350	2004	5	6	<i>R</i>	1	2	3	4
34	Ford E450	2008	1	2	3	4	<i>R</i>	1	2
36	Ford E450	2008	1	2	3	4	<i>R</i>	1	2
n/a	Econoline Van	2006	3	4	5	<i>R</i>	1	2	3

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, funding requirements and funding sources for bus purchases, and funding requirements and funding sources for other equipment purchases.

7.1 Operating and Maintenance Costs and Funding Sources

In FY 2009, Bristol Virginia Transit's operating budget for all modes of operation (fixed route and Demand Response) was approximately \$569,300. Funding sources for the FY 2009 budget were as follows:

- Federal funds - \$198,500 (35%) – Section 5307 and Preventive Maintenance fund)
- State funds - \$93,600 (16%) – State Mass Transit Trust Fund
- Farebox - \$27,000 (5%)
- Other - \$4,000 (1%) – Advertising, miscellaneous revenues
- Bristol VA local government funds - \$246,261 (43%)

This TDP's financial plan begins with these costs and funding sources as the "base year". For FY 2010, BVT's current proposed budget is \$542,892. Thus, the FY 2010 budget reflects a slight reduction in costs without a change in operating service levels. By FY 2010, this TDP financial plan reflects an increase in annual O&M costs to \$616,200 by FY 2015. This growth in operating and maintenance costs assumes a 2% per year inflation rate and includes one service improvement that will add to BVT's costs in FY 2013 – an additional hour of service on two of BVT's routes in the early a.m. (6:15 a.m. trips, as described in Chapter 5 of this TDP).

Transit operating revenue sources are:

- Federal (Section 5307 and Preventive Maintenance funds)
- State (Mass Transit Trust Fund)
- Farebox
- Advertising/miscellaneous revenues
- City of Bristol general funds

This financial plan assumes the following annual increases in state funding for operating assistance:

- FY 2010-2011 – 1.77%
- FY 2011-2012 – 2.90%
- FY 2012-2013 – 3.50%

FY 2013-2014 – 3.16%

FY 2014-2015 – 3.16%

It is important to note that State formula assistance grants for public transportation operating expenses are awarded on the basis of the total annual amount of state funds available expressed as a percentage of the total annual amount of transit operating expenses, subject to a cap of 95% of eligible expenditures. Eligible expenditures are defined as costs of administration, fuel, tires, and maintenance parts and supplies (payroll costs of mechanics and drivers are excluded). Projections for state operating assistance, as identified in the TDP financial plan, have been provided for planning purposes and may fluctuate up or down based on the aforementioned parameters.

Federal funding was also assumed to increase at similar levels as state funding. The TDP financial plan assumes BFT farebox revenues remain constant between FY 2009 and FY 2012. Additional farebox revenues are reflected in FY 2013, for the TDP financial plan assumes a 10% fare increase in FY 2013. Funds from advertising and other sources are also assumed to increase 2% per year beginning in FY 2011.

Table 7-1 presents the TDP financial plan for funding annual O&M costs through the TDP six-year time period. Using the assumptions identified above, local government funding requirements are anticipated to remain below \$250,000 throughout the TDP time period.

Table7-1
TDP Financial Plan for
Funding Annual O&M Costs
(Costs in Year of Expenditure Dollars)

TDP Financial Plan for: Service O&M Costs	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Annual Service-Hours							
Fixed Route	7,781	7,781	7,781	7,781	8,291	8,291	8,291
Demand Response	751	751	751	751	751	751	751
Projected O&M Costs	\$569,338	\$542,892	\$553,700	\$564,800	\$592,300	\$604,100	\$616,200
Anticipated Funding Sources							
Federal	\$198,456	\$198,456	\$202,000	\$207,900	\$215,200	\$222,000	\$229,000
State	\$93,621	\$93,795	\$95,500	\$98,300	\$101,700	\$104,900	\$108,200
Farebox	\$27,000	\$27,000	\$27,000	\$27,000	\$30,800	\$30,800	\$30,800
Advertising/Miscellaneous	\$4,000	\$4,000	\$4,100	\$4,200	\$4,300	\$4,400	\$4,500
Local Gov't. Funding Required	\$246,261	\$219,641	\$225,100	\$227,400	\$240,300	\$242,000	\$243,700

1. Service-hour increases based on service plans described in Chapters 4 and 5 of the TDP.
2. Projected O&M Costs assumed 2%/year inflation beginning in 2011, and also assume \$30/hour (2010 dollars) for service improvements in 2013 (2010 dollars).
3. State funding levels known for FY 2009 and FY 2010. Table assumes state levels remain constant beginning in FY 2010. State funding increase assumptions for 2010-11=1.77%, 2011-12=2.9%, 2012-13=3.5%, 2013-14=3.16%, 2014-15=3.16%.
4. State funding identified in this table are projections and subject to change.
5. Federal funding reflects Section 5307 and Preventive Maintenance funds. Federal fund assistance is assumed to increase at same rates as State funding.
6. Farebox revenues constant except for FY 2013, which assumes a 10% fare increase and add'l. revenues from service exp.
7. Miscellaneous income assumed to increase by 2%/year.
8. Local funding required captures remaining amount of funds required.

7.2 Bus Purchase Costs and Funding Sources

As noted in Chapter 6 of this TDP, bus purchases during the TDP time period are required solely for bus replacements. No service expansion has been proposed that would increase Bristol VA Transit's bus fleet size. A total of 7 buses and 1 van have been identified for replacement during the TDP time period. Recent bus purchases by Bristol Transit have been at about \$50,000 each. For purposes of this TDP, bus costs have been assumed to increase an average 5% per year.

Bristol Transit is in the process of replacing one bus (#26) at a cost of \$50,000 using ARRA funds. Funding for all other bus and van purchases in this TDP are assumed to be purchased through FTA's Section 5307 Program, with 80% funding provided by the federal government. The remaining 20% is funded equally by state and local funding sources. This TDP assumes a 10% match by the Commonwealth of Virginia, with the City of Bristol funding the remaining 10%.

It is important to note that State capital program grants from the Mass Transit Trust Funds (MTTF) are awarded to all public transportation capital projects deemed to be eligible, reasonable, and appropriate at a uniform level of state participation. The goal is to reach the maximum state share of capital expenses of 95%, but there have not been sufficient funds to support transit capital projects at this level since the Mass Transit Trust Fund was created in 1986. This level of participation or "state share" of capital project expenses is calculated by dividing the amount of state funds available for capital projects each year by the amount needed to support the non-federal share of all eligible transit capital projects for the year. Beginning in FY 2008, additional capital funds from the Transportation Capital Projects bond proceeds authorized under Chapter 896 of the 2007 Acts of Assembly have been available annually at a maximum state matching share of 80% in the Transit Capital Fund.

Table 7-2 presents the TDP financial plan for funding bus purchases through the TDP six-year time period.

Table 7-2
TDP Financial Plan for
Funding Bus Purchases
(Costs in Year of Expenditure Dollars)

TDP Financial Plan for: Bus Replacements	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Bus Replacements	1 bus	1 bus	1 bus	1 van	2 buses	1 bus	1 bus
Bus Replacement Costs	\$50,000	\$50,000	\$53,000	\$33,000	\$116,000	\$210,000	\$64,000
Anticipated Funding Sources:							
Federal - ARRA	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0
Federal - FTA programs	\$0	\$40,000	\$42,400	\$26,400	\$92,800	\$168,000	\$51,200
State	\$0	\$5,000	\$5,300	\$3,300	\$11,600	\$21,000	\$6,400
Local	\$0	\$5,000	\$5,300	\$3,300	\$11,600	\$21,000	\$6,400

1. FY 09 bus replacement is for Bus #26 (2001 model year bus)
 2. FY 10 bus replacement is for Bus #20 (1995 model year bus)
 3. FY 11 bus replacement is for bus #30 (2004 model year bus)
 4. FY 12 van replacement is for the 2006 Econoline van at an assumed cost of \$30,000 in 2010 dollars.
 5. FY 13 bus replacements are for Bus #'s 34 and 36 (2008 model year buses)
 6. FY 14 bus is to replace bus purchased in FY 2009
 7. FY 15 bus is to replace bus purchased in FY 2010
5. All bus purchases assume 80% funding through FTA Section 5307 program, 10% funding from State, and remaining 10% funding from local government, with exception for FY 09 bus purchase.

7.3 Facility Improvement Costs and Funding Sources

Finally, this TDP has identified the need for new communications and office equipment, as well some passenger amenities at bus stops (shelters, benches, etc.). Costs for most of these facility improvements are based on recent cost estimates obtained from contractors by the Bristol VA Transit and from past experiences.

Funding for new communications and office equipment are proposed to come from the American Recovery and Reinvestment Act (ARRA). As noted in the prior section, additional ARRA funds have already been identified for a bus replacement.

Improved bus stop signage, shelters and benches are proposed through FY 2011 to FY 2013. Purchases are assumed through from FTA Section 5309 funds at 80% of the total costs. A 50/50 match has been assumed for the state and local sources, resulting in the need for \$6,000 from each governmental entity. Table 7-3 presents the TDP financial plan for funding facility improvements through the TDP six-year time period.

Table 7-3
TDP Financial Plan for
Funding Facility Improvements
(Costs in Year of Expenditure Dollars)

TDP Financial Plan for: Facility Improvements	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Communications/Office Equipment	\$10,000						
Bus Stop Signage, Shelters & Benches			\$6,000	\$6,000	\$6,000		
<i>Total Facility Improvement Costs:</i>	<i>\$10,000</i>	<i>\$0</i>	<i>\$0</i>	<i>\$6,000</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>
Antipated Funding Sources:							
Federal - ARRA	\$10,000	\$0	\$0	\$0	\$0	\$0	\$0
Federal - FTA programs	\$0	\$0	\$4,800	\$4,800	\$4,800	\$0	\$0
State	\$0	\$0	\$600	\$600	\$600	\$0	\$0
Local	\$0	\$0	\$600	\$600	\$600	\$0	\$0

1. Facility improvement costs identified in Chapter 4 of TDP.
2. ARRA funded projects based on anticipated Bristol funding submittal to Virginia.
3. Other facility/equipment purchases assume 80% funding through FTA Section 5307 program, 10% funding from State, and remaining 10% funding from local government.

8.0 TDP MONITORING AND EVALUATION

This TDP has presented a comprehensive evaluation of Bristol Transit service and cost characteristics. Key elements that have been addressed in this TDP effort include:

- Development of goals, objectives and performance standards that are to guide further development of Bristol Virginia Transit's services;
- A detailed evaluation of existing service characteristics, with identification of system strengths and weaknesses;
- A peer agency review that compares Bristol Transit's service and financial characteristics to other similar-sized systems;
- A rider survey that identified existing rider satisfaction with existing services, and improvements that are desired by riders;
- A listing of potential service and facility improvements, for consideration in the TDP;
- Recommended service and facility improvements for inclusion in the TDP, with improvements identified by year; and
- Funding requirements and potential funding sources for recommended service and facility improvements.

This TDP reflects an initial step in future service and facility improvements for Bristol Virginia Transit. 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 Programs

The completion of this TDP comes at an opportune time for coordination with the City's Comprehensive Plan Update. Goals and objectives from this TDP should be reviewed and incorporated into the City's Comprehensive Plan. This plan should also be incorporated into the MPO's next Long-Range Transportation Plan Update.

8.2 Service Performance Monitoring

This TDP has identified specific system-wide service performance measures to ensure Bristol Virginia Transit'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). It is recommended that BVT establish a formal reporting process, with ridership, service-hours, service-miles and costs tracked on a monthly basis for both fixed route and demand response service. These reports should be reviewed monthly by BVT and

City staff, to ensure prompt responses to sudden changes in ridership, service or cost characteristics.

8.3 Annual TDP Monitoring

The DRPT will require 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 identified in this TDP.
- An update to the TDP's list of recommended service and facility improvements (e.g., identify service or facility 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 tables presented in Chapter 7 of this TDP. These tables should be extended one ore fiscal year to maintain a six year planning period.

BRISTOL VIRGINIA TRANSIT

TRANSIT DEVELOPMENT PLAN

APPENDIX A

PEER ANALYSIS RESULTS

April 2009

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1.0 OVERVIEW OF PEER ANALYSIS PROCESS

A peer analysis provides the means to compare various performance characteristics of a transit agency to their transit systems of similar size. Transit agencies report such information to the Federal Transit Administration (FTA), which records the information annually in the National Transit Database (NTD). Agencies have strict requirements with regards to the manner in which cost and service characteristics are reported to the NTD. Thus, the NTD provides a consistent set of measurable data that can be used in a peer systems analysis.

While a peer analysis based on NTD data provides operational service and financial information, it is important to keep in mind other aspects of service quality that are not reported in the NTD, such as passenger satisfaction, vehicle cleanliness and comfort, schedule adherence and route connectivity. It is also important to keep in mind unique operating and financial characteristics that may be associated with a particular transit agency.

The FTA's National Transit Database is the only comprehensive source of validated operating and financial data reported by transit systems nationwide. This database is updated annually with information submitted by each transit system. The FTA reviews and confirms the accuracy of the information received and publishes a final report after a reporting transit system successfully responds to all comments and inquiries. The NTD is used by the FTA and other federal, state, and local agencies as a resource to help guide public investment decisions, shape public policy, and develop planning initiatives. The NTD reports various standard measures of performance that allow decision makers and other stakeholders to determine the efficiency and effectiveness of transit services on a local, regional and national basis.

It is important to note that smaller systems (i.e., operating with fewer than 9 peak vehicles) have the option of taking an exemption from NTD reporting. Bristol Transit does not report its operational service and financial information to NTD. Many of Bristol Transit's peer agencies utilize the exemption as well (Winchester, VA, Bristol, TN, Kingsport, TN and Henderson, KY). Thus, for this peer analysis, data had to be gathered through other means, primarily by directly contacting peer agencies.

1.1 Technical Memorandum Contents

The remainder of this technical memorandum contains the following: Section 2 describes the process used to select peer transit systems for Bristol Virginia Transit (BVT). Section 3 provides an overview of the peer system's operating and capital budgets, ridership, service area and passenger fare characteristics of BVT compared to the peers. Section 4 provides a detailed comparison of specific service productivity measures. These productivity measures focus on: vehicle utilization, service supply, service productivity and cost efficiency. Section 5 summarizes the key findings of the Peer Analysis.

2.0 PEER SELECTION PROCESS

Primary criteria were used to narrow down the universe of all transit systems to those that have similar service area characteristics. As shown in Table 2-1, primary criteria included service area size, population and the number of peak vehicles in operation on a typical weekday.

Table 2-1: Criteria for Selecting Peer Transit Systems

Criteria for Peer Transit Systems	Selection Criteria
Service area size	Primary
Population	Primary
Vehicles operated during peak periods	Primary

The following six candidate peer transit systems were identified based on the application of the selection criteria.

- Winchester Transit, Winchester, Virginia
- Bristol Tennessee Transit System (BTT), Bristol, Tennessee
- Kingsport Area Transit Service (KATS), Kingsport, Tennessee
- Henderson Area Rapid Transit (HART), Henderson, Kentucky
- Middletown Transit System (MTS), Middletown, OH
- City of Canton Transit, Canton, Georgia

Table 2-2 summarizes general population, service area size and service characteristics for the peer transit systems selected for analysis. Days of service and span of service for BVT and the peer systems are noted in Table 2-3. Of the six peer systems, five have a larger number of peak vehicles and one has a smaller number of peak vehicles than Bristol VA Transit (BVT). With regard to service area population, five are larger and one is smaller than BVT's service area population. With regard to the service area size, one is smaller and five are larger than BVT's service area size. It may initially appear that that these agencies are inappropriate as peer systems for Bristol, VA. However, it is important to take into consideration the unique setting of Bristol VA and Bristol TN. In many respects, they function as a single, and much larger city. Thus, it seemed appropriate to utilize slightly larger cities and transit systems for peer transit performance comparisons.

Of the six peer agencies, only one does not operate service on Saturdays. It is important to note that the Bristol TN Saturday service is a limited jobs access service, and not fixed route service.

Table 2-2: Peer Transit Agency General Comparisons

City	FY 2007 Service Area			Peak Vehicles Demand			Annual Rev. Vehicle-Hours			Annual Rev. Vehicle-Miles		
	Population	Square Miles	Population Density	Bus	Response	Total	Bus	Response	Total	Bus	Response	Total
Winchester Transit (WTS)	26,000	9	2,889	4	2	6	11,976	3,388	15,364	204,610	24,124	228,734
Bristol Transit System (BTS)	24,821	30	827	3	4	7	8,066	8,615	16,681	104,000	34,139	138,139
Kingsport Area Transit System (KATS)	34,000	25	1,360	4	5	9	13,056	14,720	27,776	132,500	143,700	276,200
Henderson Area Transit System (HART)	27,000	16	1,688	3	3	6	13,700	3,744	17,444	205,484	72,347	277,831
Middletown Transit System (MTS)	49,490	20	2,475	4	2	6	13,856	4,260	18,116	209,226	53,528	262,754
City of Canton Transit (CTS)	17,685	17	1,040	3	n/a	3	3,576	n/a	3,576	95,436	n/a	95,436
Peer System:												
Low	17,685	9	827	3	2	3	3,576	3,388	3,576	95,436	24,124	95,436
High	49,490	30	2,889	4	5	9	13,856	14,720	27,776	209,226	143,700	277,831
Average	29,833	20	1,713	4	3	6	10,705	6,945	16,493	158,543	65,568	213,182
Bristol, VA	17,367	13	1,336	3	1	4	7,936	900	8,836	73,713	10,578	84,291

Notes:

- (1) Canton, GA and Middletown, OH statistics are from FY 2007 National Transit Database transit agency profiles,
(2) Bristol, TN statistics are from Bristol TN's 2007 Annual Report Submittal to the State of Tennessee.
(3) Winchester, VA; Kingsport, TN and Henderson, KY statistics are from direct contact with the agency.
(4) Bristol, VA statistics are from Bristol, VA's 2006 submittal to Virginia's Transit Performance Report.

Table 2-3: Peer Transit Agency Days and Hours of Service Comparisons

City	Days of Service	
	Days of Service	Hours of Service
Winchester Transit (WTS)	Mon-Sat	M-F: 6 am-8 pm; Sat: 9 am-5 pm
Bristol Transit System (BTS)	Mon-Sat*	M-F: 6 am-6 pm for fixed route service*
Kingsport Area Transit System (KATS)	Mon-Fri	8:30 am-4:30 pm
Henderson Area Transit System (HART)	Mon-Sat	6 am-5:30 pm
Middletown Transit System (MTS)	Mon-Sat	M-F: 6:30 am-6:30 pm; Sat: 8:30 am-4:30pm
City of Canton Transit (CTS)	Mon-Sat	9 am-4 pm
Bristol, VA	Mon-Fri	6 am-6 pm

* Note: Bristol TN provides Job Access service from 5:30 a.m. to 8:30 pm on Mondays through Fridays, and from 5:30 a.m. to 5:30 p.m. on Saturdays.

3.0 PEER SYSTEM OVERVIEW

A general overview of peer system's ridership, service area and passenger fare characteristics was completed prior to conducting a detailed assessment of specific financial, ridership and service characteristics.

3.1 Annual Ridership

Annual ridership, as measured in passenger trips, reflects is the total number of boardings made by users of the transit system. A passenger trip is recorded every time a person boards a transit vehicle, including multiple transfers that may occur between the trip origin and the final destination. As shown in Table 3-1, Bristol, TN and Canton, GA were most similar to BVT with respect to overall system, bus, and demand response ridership.

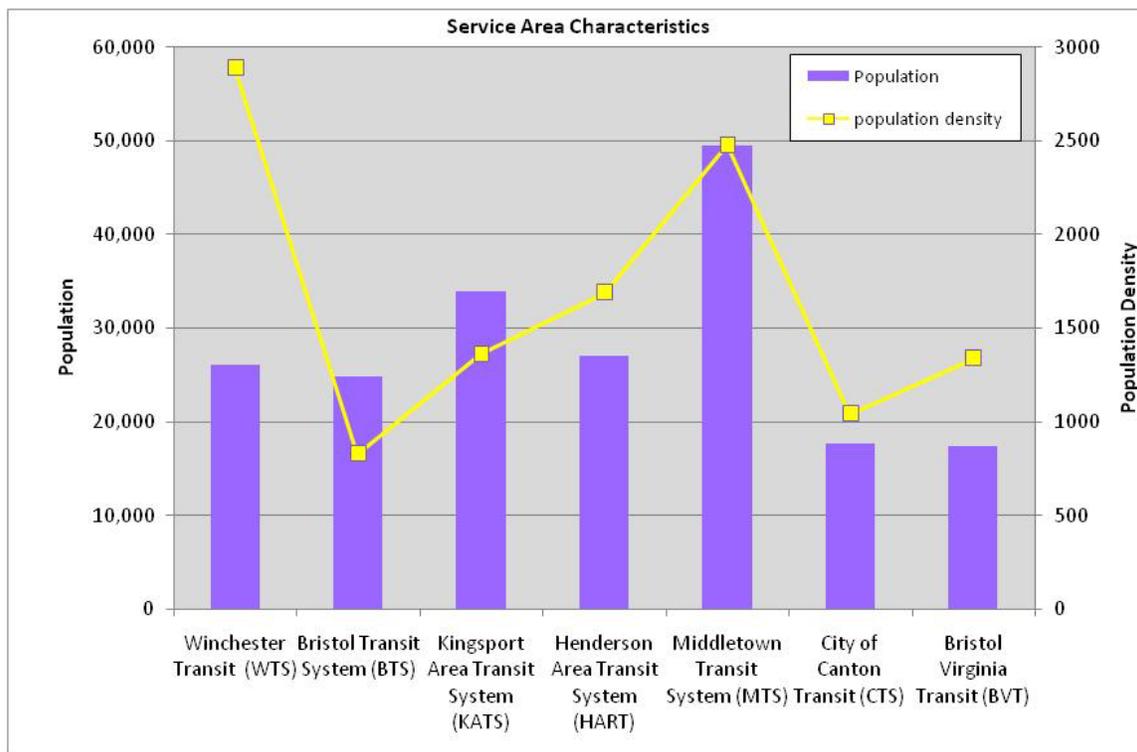
Table 3-1: Comparison of 2007 Annual Ridership

	Winchester, VA	Bristol, TN	Kingsport, TN	Henderson, KY	Middletown, OH	Canton, GA	Peer Average	Bristol, VA
Annual Ridership (passenger trips)	148,169	71,742	104,331	112,076	250,167	56,980	123,911	67,998
Bus	132,202	46,835	78,546	94,843	239,093	56,980	108,083	61,707
Demand Response	15,967	24,907	25,785	17,233	11,074	N/A	18,993	6,291

3.2 Service Area Characteristics

Figure 3-1 summarizes and compares the service area characteristic (service area population, service area miles and population density) for BVT and the peer systems. Although the NTD data is the best available source for this information, caution should be used when interpreting service area population and population-based measures. There are sometimes variations with regard to the way agencies report this information. NTD guidelines request that systems report service area size and population based on ADA definitions (i.e., ¼-mile boundary around all fixed routes). However, not all systems calculate their boundaries correctly or comply with NTD's system of calculation.

Figure 3-1: Peer Systems Service Area Characteristics



Source: 2007 FTA National Transit Database.

3.3 Services Provided

All peer systems operate both fixed route and demand responsive services except for Canton, GA, which provides route deviation service that meets ADA requirements. It should be noted that BVT will also try to accommodate ADA trips on its fixed route system by deviating fixed route service when possible. Thus, BVT's demand response statistics tend to be quite a bit lower than the peer systems.

3.4 Fare Structure

Table 3-2 provides a comparison of the fares charged by Bristol Virginia's Transit (bottom-most values) and fares of the peer systems. BVT's peak fare is \$0.60 and is 35% less than the peer system average. BVT's off-peak and discounted fares are half of the peak fare (i.e., \$0.30) and 47% less than the peer average. Demand Response fares are \$1.20 for BVT versus the peer average of \$1.68 (i.e., BVT charges 29% less than the peer average). BVT and Bristol Tennessee fares are identical to accommodate transfers between the two systems.

Table 3-2: Comparison of Fare Structure

City	Peak	Elderly/Disabled	Demand Response	Transfers
Winchester Transit (WTS)	\$1.00	\$0.50	\$2.00	\$0.00
Bristol Transit System (BTS)	\$0.60	\$0.30	\$1.20	\$0.10
Kingsport Area Transit System (KATS)	\$1.00	\$0.50	\$2.00	\$0.00
Henderson Area Transit System (HART)	\$0.50	\$0.25	\$1.00	\$0.00
Middletown Transit System (MTS)	\$1.25	\$0.60	\$2.50	\$0.00
City of Canton Transit (CTS)	\$1.25	\$1.25	N/A	N/A
Peer System:				
Low	\$0.50	\$0.25	\$1.00	\$0.00
High	\$1.25	\$1.25	\$2.50	\$0.10
Average	\$0.93	\$0.57	\$1.74	\$0.02
Bristol, VA	\$0.60	\$0.30	\$1.20	\$0.10

Note: Bristol VA and Bristol TN elderly/disabled fares allowed in off-peak hours only.

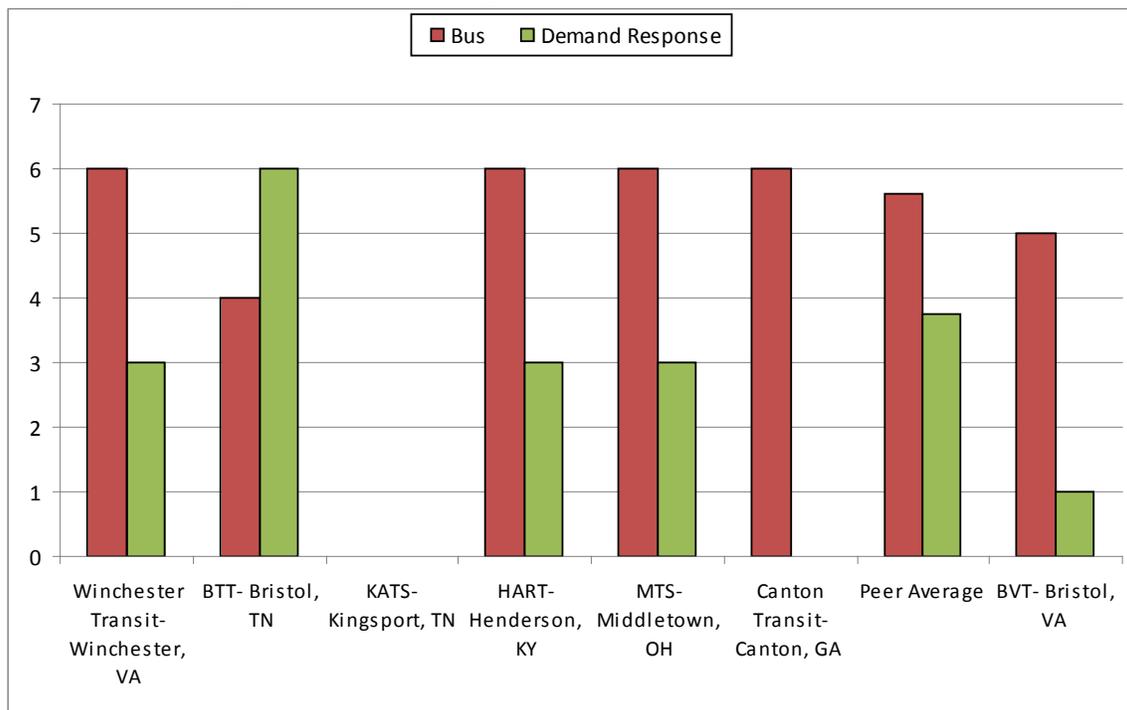
4.0 SERVICE PRODUCTIVITY COMPARISONS

This section presents a detailed comparison of specific service productivity measures. These productivity measures focus on: vehicle utilization, service supply, service productivity, cost efficiency and vehicle maintenance performance, characteristics.

4.1 Vehicle Utilization

- Vehicles Available** (Figure 4-1): The overall BVT fleet size reported in 2007 was 30 percent smaller than the peer average (BVT 6, peer average 9). There were 5 vehicles in the BVT fixed route bus fleet compared to a peer average of 6 vehicles, with 1 vehicle in the BVT demand response fleet compared to a peer average of 4 vehicles. The average age of the BVT bus vehicle fleet was 10 percent higher than the peer average (5 years vs. 4.3 years), while average age of the BVT demand response fleet was 70 percent lower (1 year vs. 3.8 years).

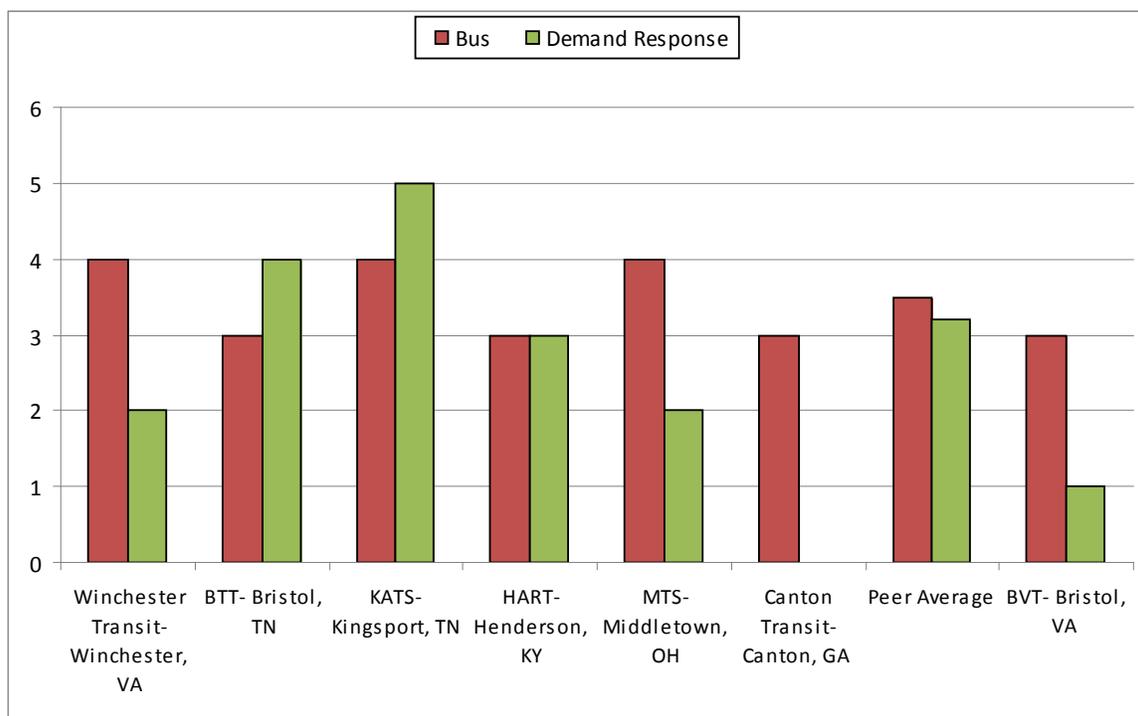
Figure 4-1: Peer Comparison - Total Vehicles Available



Note: Kingsport total vehicle information not provided.

- **Peak Vehicles:** (Figure 4-2): BVT operates about one less peak vehicle than the peer average (BVT 3, peer average 3.5). BVT only operates one demand response vehicle as opposed to the peer average 3.2 vehicles. It is worth noting that BVT fixed route operations allow for minor deviations to accommodate demand response (DR) and therefore, BVT only utilizes one van for demand response operations.

Figure 4-2: Peer Comparison - Peak Vehicles



- **Revenue Hours per Peak Vehicle** (Figure 4-3): When comparing fixed route bus service, BVT provided 2,645 hours per peak bus compared to the peer average of 3,028 hours. One of BVT's routes does not operate in the midday, thus dropping BVT's average revenue-hours per peak bus. In addition, several of the peer systems provide Saturday service, thus increasing their average revenue-hours per peak vehicle. BVT demand response provided much less revenue hours per peak vehicles (BVT 900 vs. the peer average of 2,034). As previously noted, BVT's demand response service-hours are quite low because the agency tries to accommodate ADA passengers on its fixed route system through route deviation.
- **Revenue Miles per Peak Vehicle** (Figure 4-4): BVT buses were traveling an average 46 percent fewer miles per peak vehicle than the peer average (BVT 24,571 compared to the peer average of 45,298). BVT demand response vehicles traveled 48 percent less miles per peak vehicle than the peer average (BVT 10,578, peer average 20,492).

Figure 4-3: Peer Comparison – Revenue Hours per Peak Vehicle

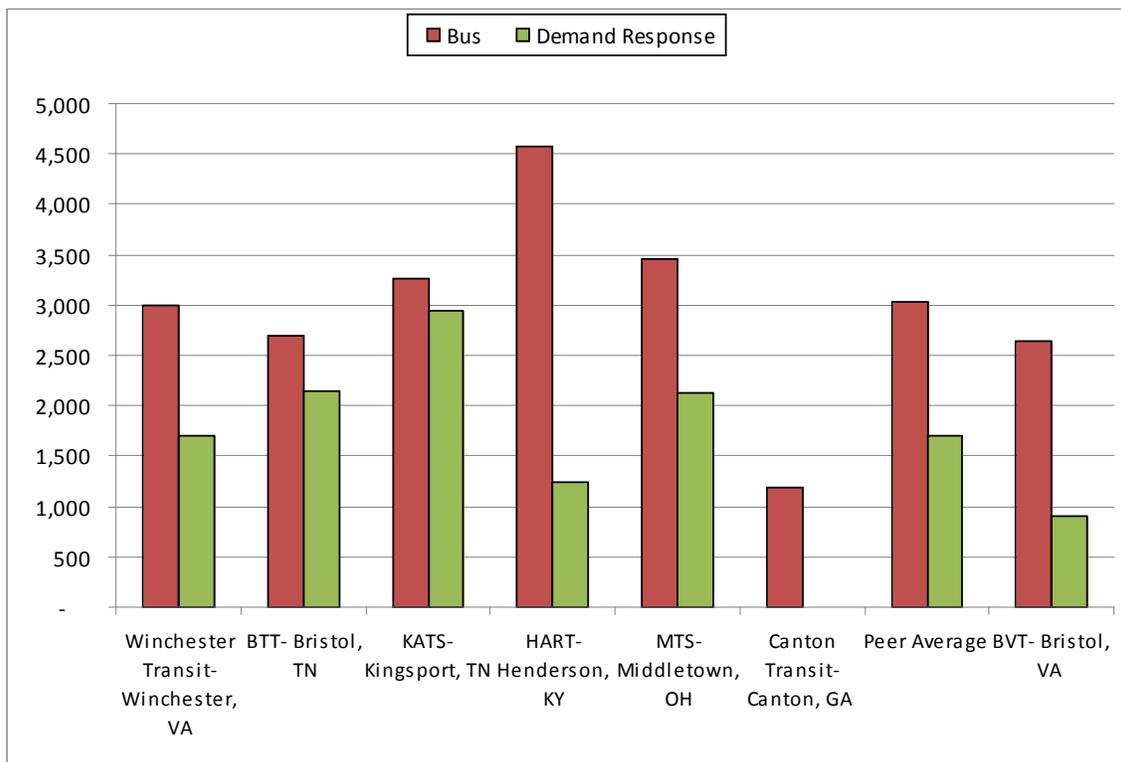
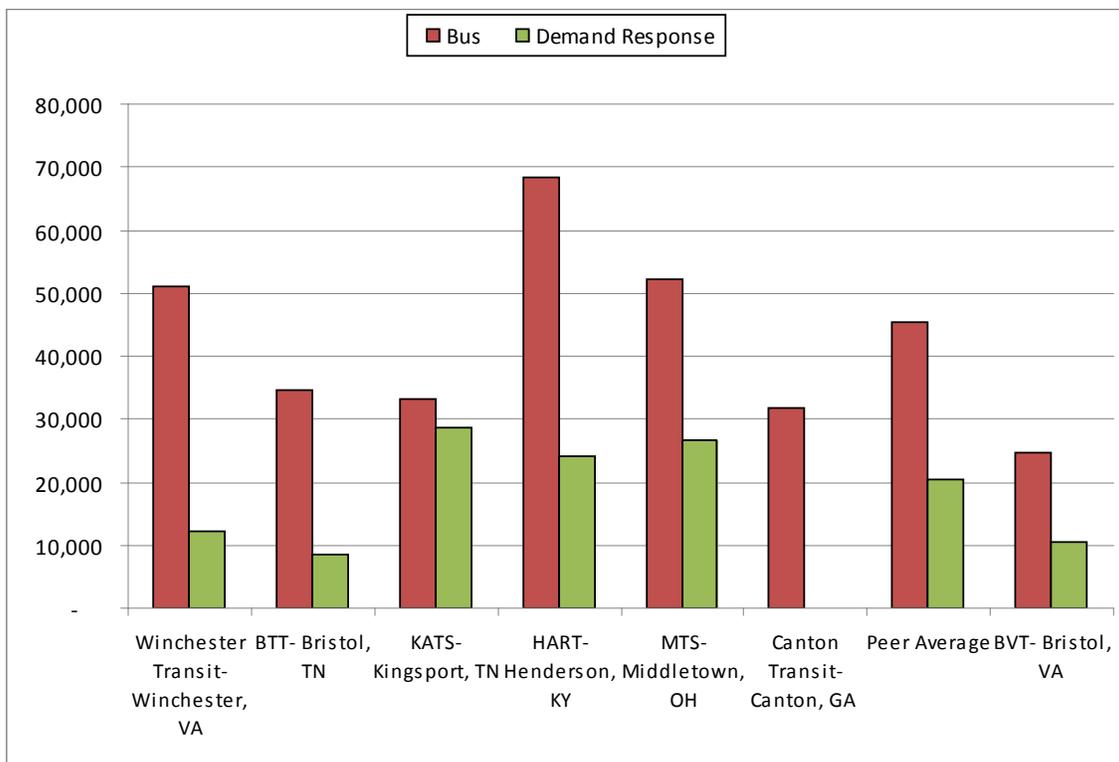


Figure 4-4: Peer Comparison – Revenue Miles per Peak Vehicle



4.2 Service Supplied

- **Revenue Hours per Capita (Service Area Population)** (Figure 4-5): For fixed route bus service, BVT provided 27 percent more revenue hours of service per capita (BVT 0.46, peer average 0.36). For demand response service, BVT's measure of revenue hours per capita (0.25) was slightly higher than the peer average (0.23), with BVT being 8 percent higher than the peer group.
- **Revenue Miles per Capita** (Figure 4-6): When comparing bus service miles per capita, BVT provided 5.14 revenue miles per capita or 7 percent less than the peer average (5.53). In addition, BVT provided 70 percent less demand response service revenue miles per capita (0.61) than the peer average (2.06).

Figure 4-5: Peer Comparison – Revenue Hours per Capita

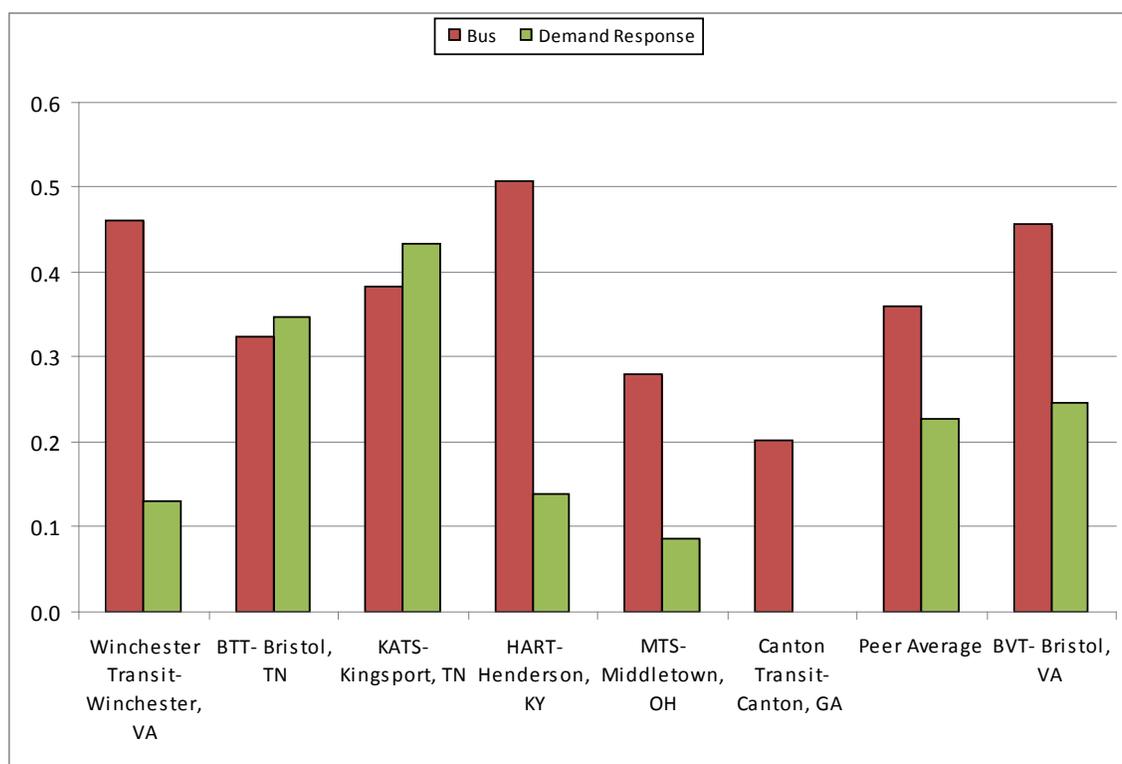
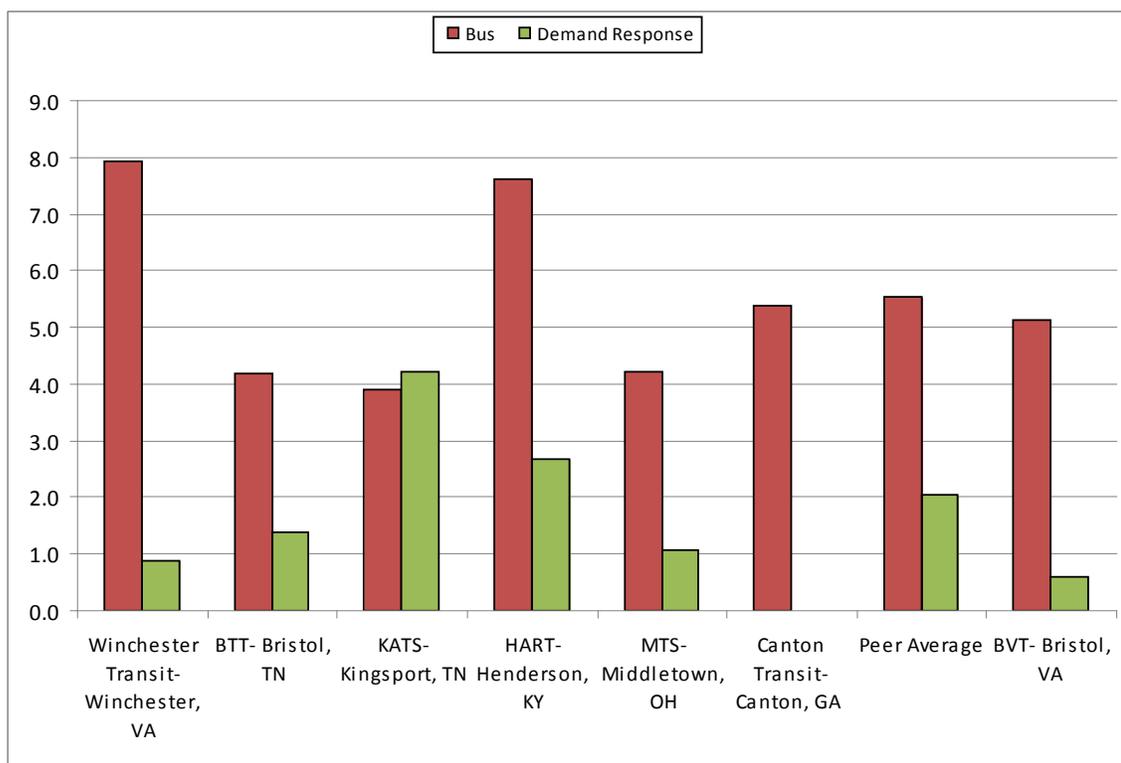


Figure 4-6: Peer Comparison – Revenue Miles per Capita



- Revenue Hours per Square Mile of Service Area** (Figure 4-7) For fixed route bus service, BVT provided 532 revenue hours per square mile of service area or roughly 18 percent less than the peer average (647). BVT provided 80 percent less revenue hours per square mile than the peer average in the comparison of demand response services (69 for BVT vs. 340 for peer agencies). Once again, it is important to point out that BVT's demand response service-hours and miles are quite a bit lower than peer systems because it tries to accommodate ADA service requests by deviating its fixed route service to the extent possible.

Revenue Miles per Square Mile of Service Area (Figure 4-8) Fixed bus route service was at 5,670 revenue miles per service area square miles while the peer average was 10,070, thus BVT was some 44 percent less than the peer group. For demand response, the comparison shows that the BVT service area measure was 76 percent less than the average for peer agencies (i.e., BVT 814 vs. peers 3,353 rev-miles per service area sq. mi.).

Figure 4-7: Peer Comparison – Revenue Hours per Square Mile of Service Area

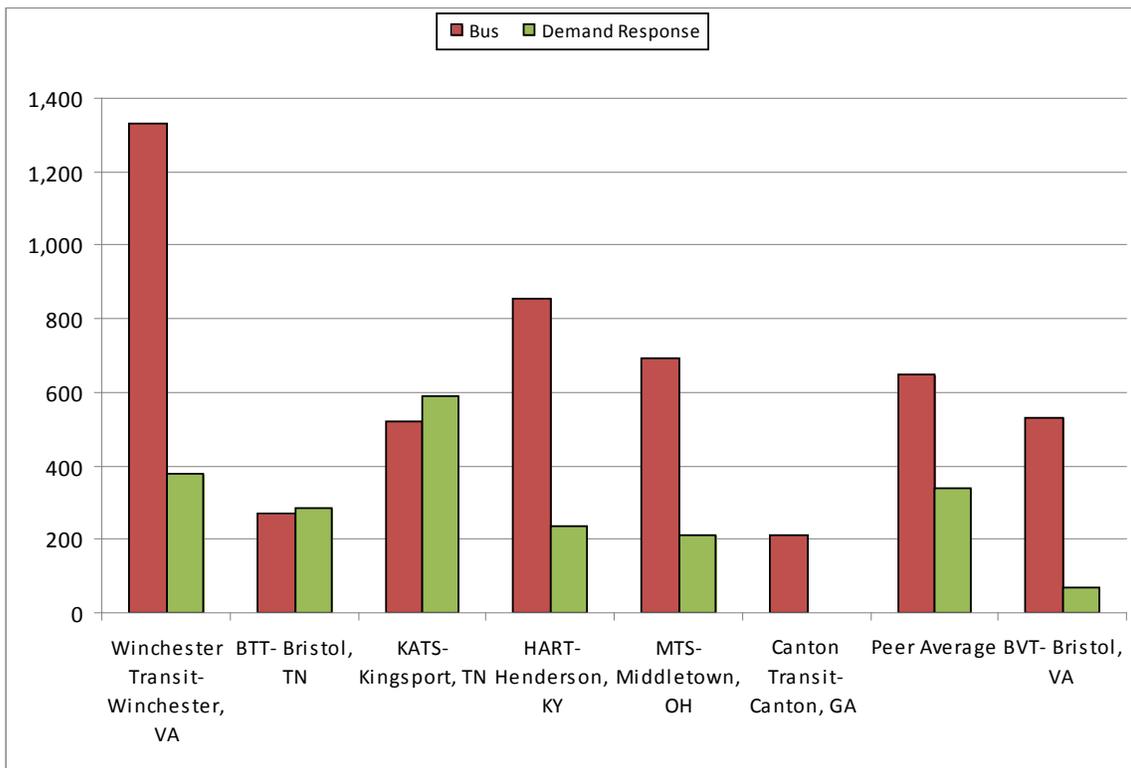
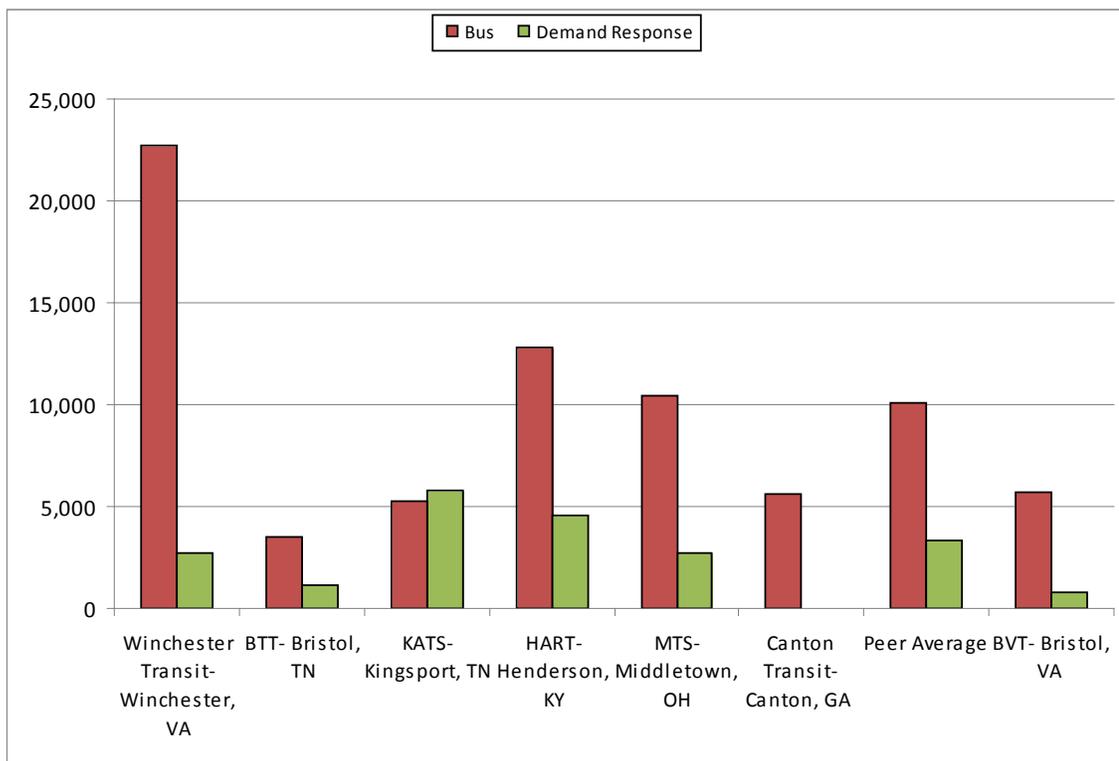


Figure 4-8: Peer Comparison – Revenue Miles per Square Mile of Service Area

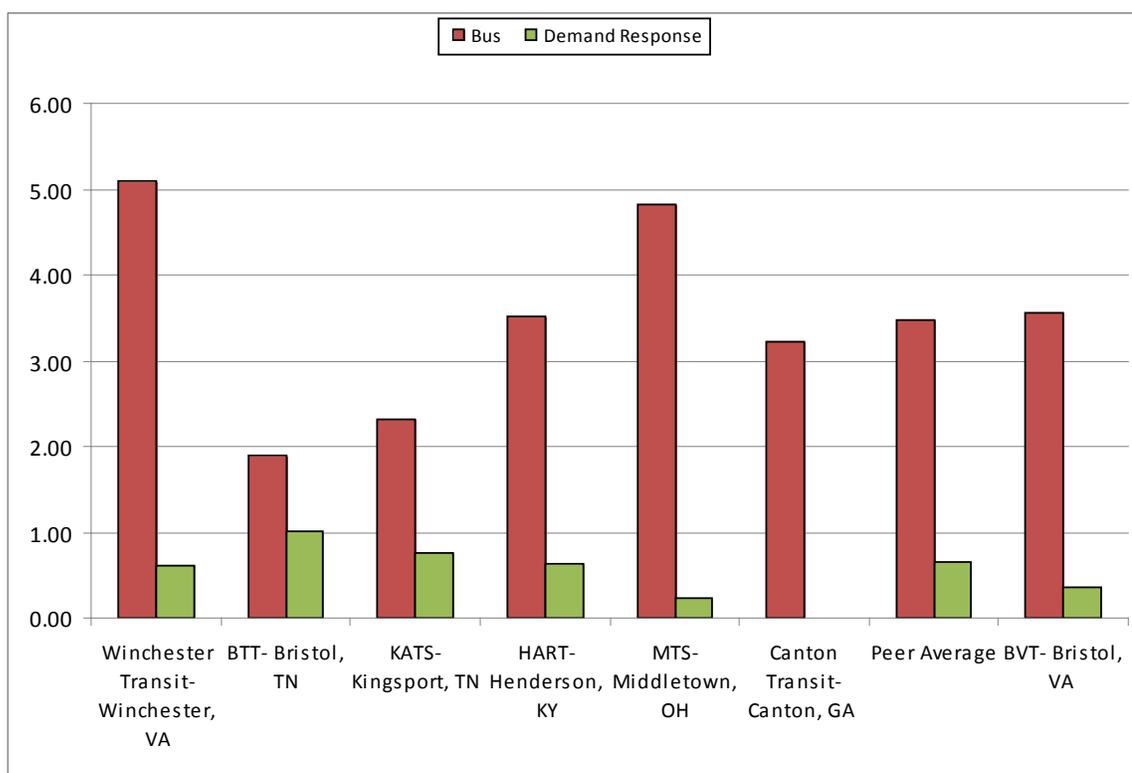


4.3 Service Productivity (Effectiveness)

Service Productivity or Effectiveness provides a method to evaluate if a transit agency's service is effectively transporting passengers, relative to the level of service provided. Three measures that reveal the service productivity of a transit system are passenger trips per capita, passenger trips per revenue hour, and passenger trips per revenue mile.

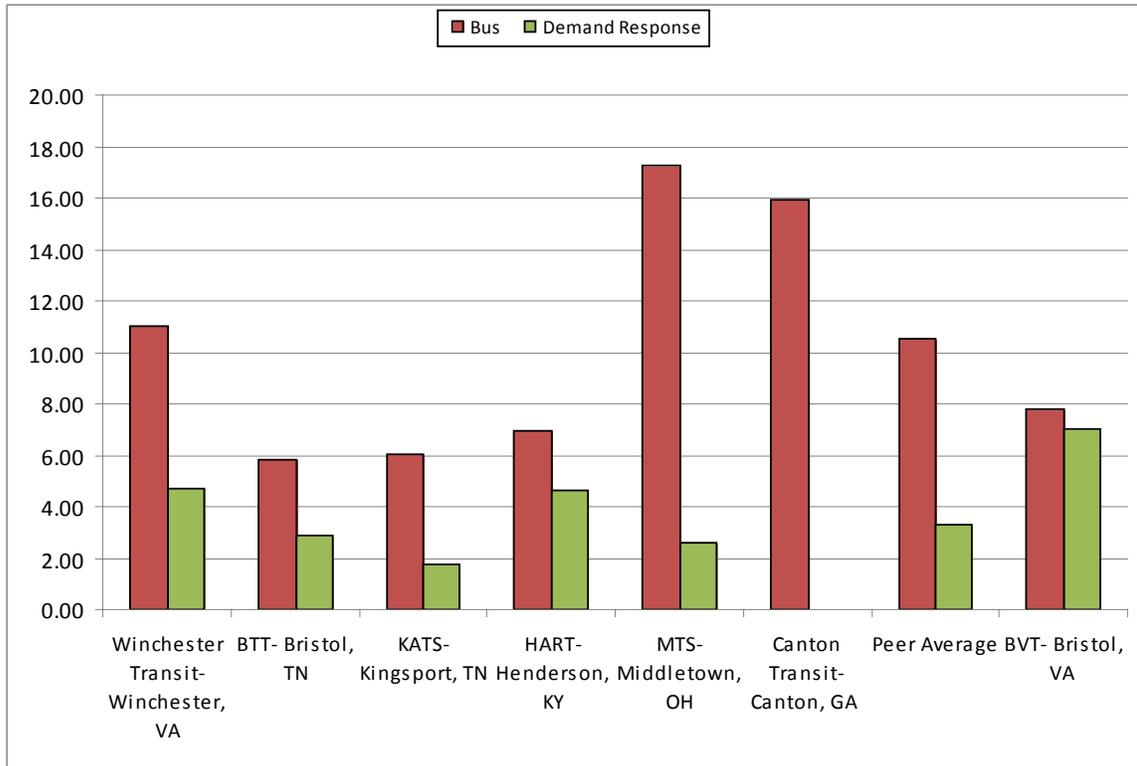
- Passenger Trips per Capita** (Figure 4-9) For fixed route bus service, BVT passenger trips per capita were 2 percent more than the peer average (BVT 3.55 vs. a peer average 3.47). For demand response service, BVT passenger trips per capita were 44 percent lower than the peer average (BVT 0.36, peer average 0.65). Of the peers, HART (Henderson, KY) was most similar to BVT for both bus and demand response.

Figure 4-9: Peer Comparison – Passenger Trips per Capita



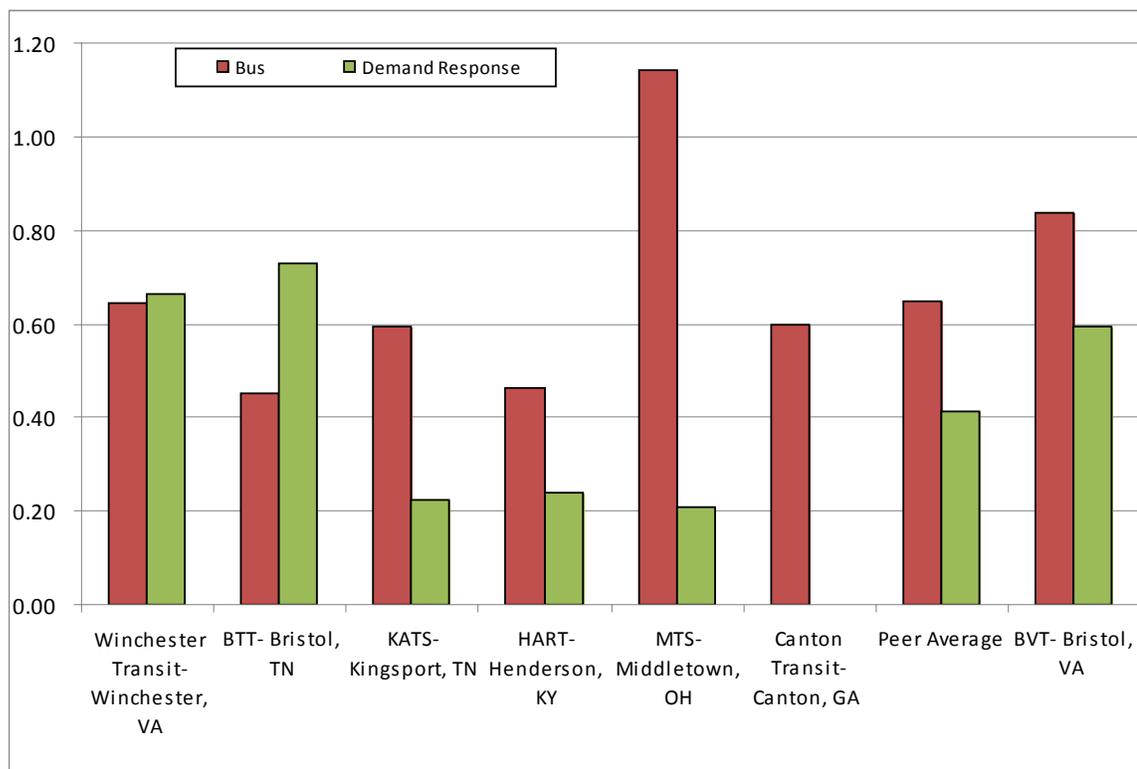
- Passenger Trips per Revenue Hour** (Figure 4-10): For fixed route bus service, BVT had 26 percent less passenger trips per revenue hour than the peer average (7.78 to 10.5). Demand response passenger trips per revenue hour for BVT were 2.1 times higher than the peer average (BVT 6.99 versus a peer average 3.31).

Figure 4-10: Peer Comparison – Passenger Trips per Revenue Hour



- Passenger Trips per Revenue Mile** (Figure 4-11): For fixed route bus service, BVT generated 29 percent more passenger trips per revenue mile than the peer average (.84 to .65) and demand response service generated 48 percent more passenger trips per revenue mile than the peer average (.59 to .40).

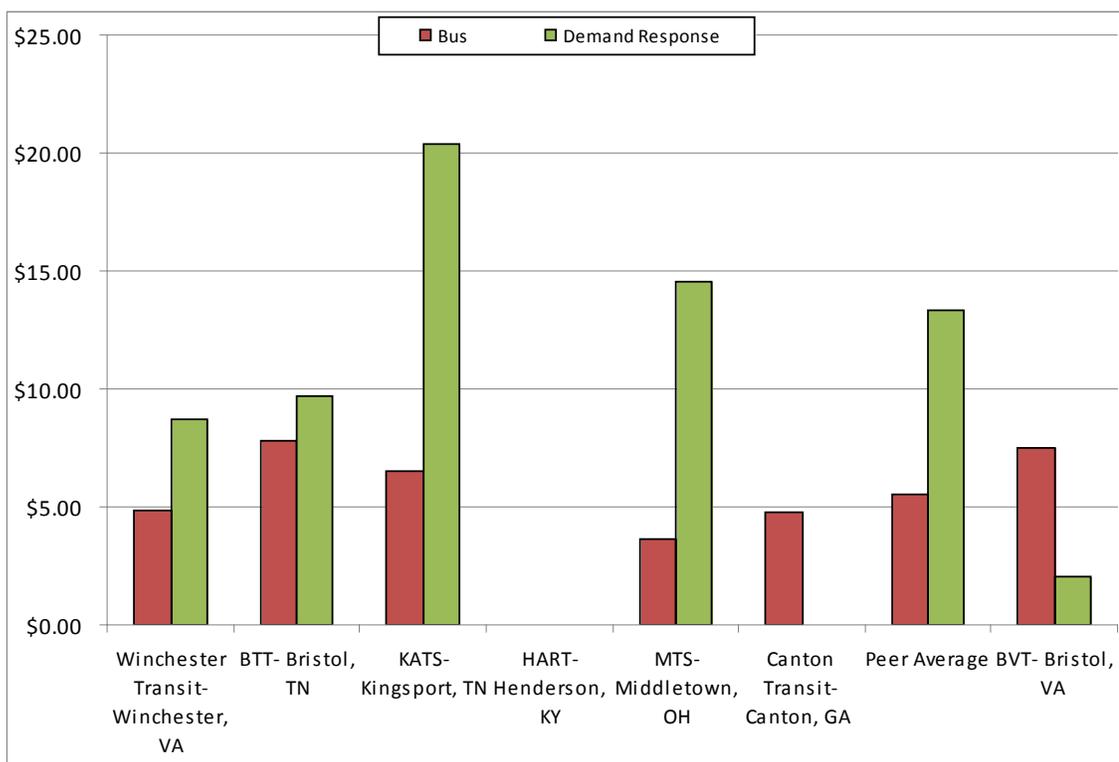
Figure 4-11: Peer Comparison – Passenger Trips per Revenue Mile



4.4 Cost Efficiency

- Operating Cost per Passenger Trip** (Figure 4-12); For fixed route bus, BVT's operating cost per passenger trip was 37 percent higher than the peer average, respectively, \$7.53 vs. \$5.51. For demand response, BVT's operating cost per passenger trip (\$2.07) was 85 percent lower than the peer average (\$13.35). No operating costs were available from HART in Henderson, Kentucky. It should be noted that BVT staff indicated that cost allocations between fixed route and demand response services are estimated and not necessarily accurate. Thus, perhaps a better comparison is total cost per passenger trip. BVT's total operating cost per passenger trip is \$7.03 compared to the peer average of \$6.51 (8 percent lower than the peer average).

Figure 4-12: Peer Comparison – Operating Cost per Passenger Trip



- Operating Cost per Revenue Hour** (Figure 4-13): BVT's overall operating costs per revenue hour were 5 percent higher than the peer average (\$54.09 compared to the peer average of \$51.48). For fixed route bus service, BVT's cost per revenue hour was \$48.59 to the peer average of \$55.35. For demand response service, BVT's cost was \$14.44 compared to the peer average of \$35.69. Once again, the allocation of costs between fixed route and demand response service is not necessarily accurate. Thus, overall comparisons are probably more appropriate.
- Operating Cost per Revenue Mile** (Figure 4-14): BVT's overall operating cost per revenue mile was 55 percent higher than the peer average (\$5.67 to \$3.67). When comparing fixed route bus service and demand response service, BVT's operating costs per revenue mile were 80 percent higher than the peer average (\$6.31 to \$3.50) and 75 percent lower than the peer average (\$1.23 to \$4.88). Once again, this comparison does not include HART in Henderson, KY, and the cost allocations between fixed route and demand response is not necessarily accurate.

Figure 4-13: Peer Comparison – Operating Cost per Revenue Hour

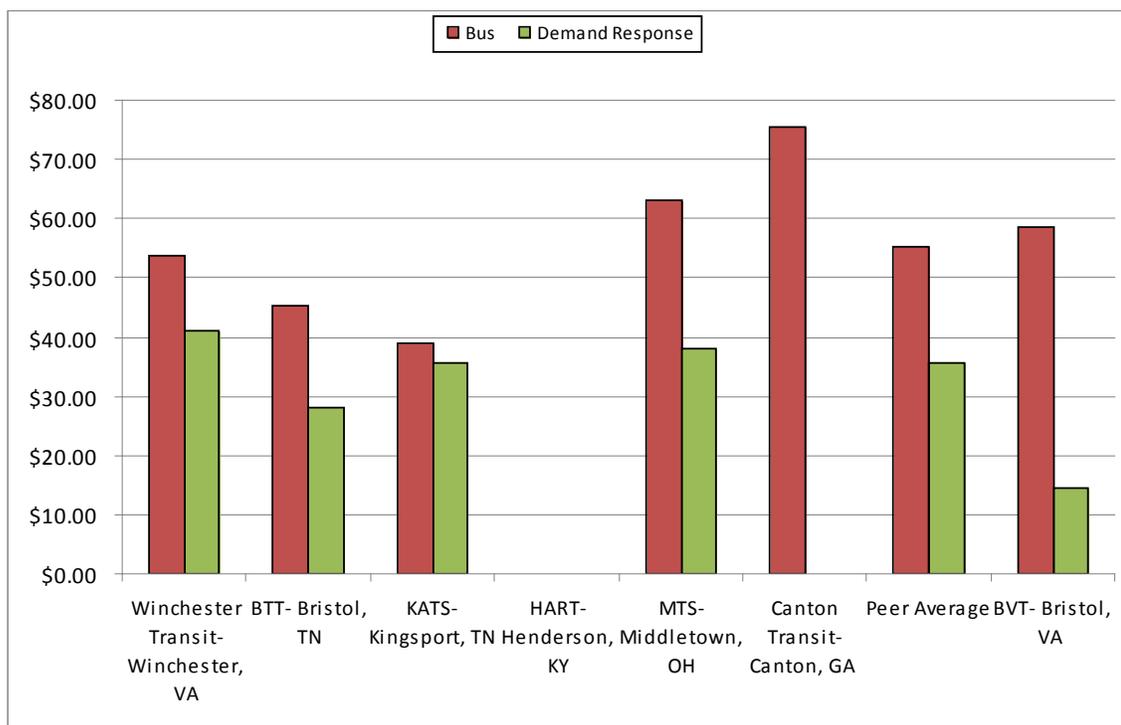
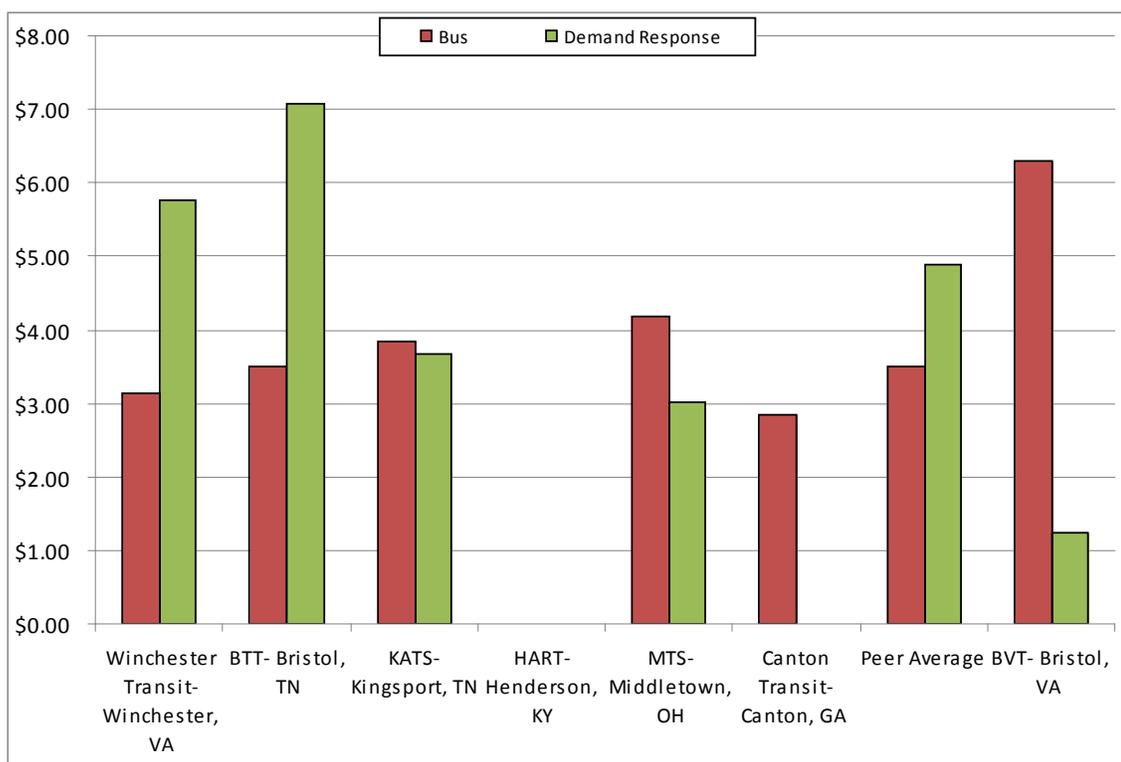


Figure 4-14: Peer Comparison – Operating Cost per Revenue Mile



5.0 KEY FINDINGS

This *Peer Analysis Appendix* compares Bristol Virginia Transit (BVT) to six peer transit systems with respect to operational and financial characteristics and performance. The Federal Transit Administration's (FTA) National Transit Database (NTD) was the source of data for two of the six systems, and data was collected directly from the other four systems. Additional information was derived from the individual websites of the peer agencies.

The transit systems selected as peers to BVT are:

- Winchester Transit, Winchester, Virginia
- Bristol Tennessee Transit System (BTT), Bristol, Tennessee
- Kingsport Area Transit Service (KATS), Kingsport, Tennessee
- Henderson Area Rapid Transit (HART), Henderson, Kentucky
- Middletown Transit System (MTS), Middletown, OH
- City of Canton Transit, Canton, Georgia

Many of these systems and the cities they serve are slightly larger than the Bristol, VA transit system. However, they have been selected because of the unique nature of BVT serving a "twin cities" area that functions as one city in many respects.

BVT operates similar service-hours as the peer systems, with only Winchester, VA providing evening service until 8:00 p.m. Five of the six peer systems provides Saturday service. Of those five systems, it is important to note that Bristol TN's Saturday service is a jobs access service, and not fixed route service. A fare comparison was also made as part of this analysis. Two of the six peer systems charge \$1.00 and two other systems charge \$1.25 per trip. Thus, BVT's fare was lower than most peer systems.

Key findings from this peer analysis are summarized below.

- **Vehicle Utilization:** BVT's fleet size and peak utilization for fixed route service was similar to the peer average. BVT had fewer peak and fleet vehicles for demand response service. As noted in this paper, BVT tries to accommodate ADA riders by deviating fixed route service to the extent possible, thus reducing its need to accommodate ADA riders through the demand response fleet. BVT does operate slightly fewer revenue vehicle-hours than the peer systems, in part because BVT's East Bristol route does not operate all-day and BVT does not operate Saturday service, as do most of the peer systems.
- **Service Supplied:** BVT operates comparable service-hours and service-miles of fixed route bus service per capita to the peer systems, with more service-hours and slightly less service-miles per capita. BVT operates less fixed route service-hours and service-miles per square mile of service area. This may be in part be affected by how BVT and the peer agencies define service area population and service area square miles.
- **Service Productivity:** BVT's service productivity for fixed route service compared favorably to the peer systems on a per capita and per revenue-mile basis, but not on a revenue-hour basis. When including demand response riders, BVT service productivity is in general comparable to the peer systems.
- **Cost Efficiency:** A break-out of fixed route vs. demand response cost efficiencies was somewhat difficult, because BVT and possibly some of the peer systems do not have the means to definitively break out shared costs. When comparing overall cost efficiencies,

BVT's cost per passenger trip and cost per revenue bus-hour were slightly higher than the peer system average. BVT's cost per revenue-mile, however, was significantly higher than the peer average. This is in part due to BVT operating fewer revenue-miles per revenue bus-hour than the peer systems.

Overall, this peer analysis found that BVT's operational and service performance characteristics were comparable to its peers, and that its cost efficiency characteristics were perhaps slightly higher than its peers, but not significantly higher. This peer analysis indicates that other systems of similar size may be charging higher fares to its passengers. However, BVT's fare structure is coordinated with BTT's fare structure. Thus, any change in fares would require coordination with BTT. It was not possible to perform a comparison of fare revenues because of limited data from the peer systems. However, BVT's farebox recovery ratio is around 5 percent. The peer analysis also indicated that a number of systems provide Saturday service, whereas BVT does not.

**BRISTOL VIRGINIA TRANSIT
TRANSIT DEVELOPMENT PLAN**

**APPENDIX B
ON-BOARD SURVEY ANALYSIS**

March 2009

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1.0 OVERVIEW OF TRANSIT RIDER SURVEY PROCESS

A transit rider survey has been completed for Bristol Virginia Transit (BVT) for use in the agency's 2009 Transit Development Plan (TDP). Specifically, results from this rider survey are being used to determine rider characteristics, trip-making characteristics and perceptions regarding quality of transit services and future needs. This Technical Memorandum presents the results of the survey effort. Individual transit rider survey forms were prepared for BVT's fixed route service. The survey was conducted during the week of February 16, 2009.

Survey questions were developed and reviewed with BVT's staff. The survey instrument asked patrons to respond to several questions pertaining to:

- Their socioeconomic status (labeled "About You" on the survey form);
- General characteristics of the trip they were making at the time of the survey such as trip purpose, origin and destination (labeled as "About Your Trip" on the survey form);
- Perceptions regarding Bristol Virginia Transit's existing service (labeled as "Rate Bristol Virginia Transit's Service" on the survey form); and
- Perceptions regarding needed improvements (labeled as "Identify Future Service Improvement Needs" on the survey form).

The survey form is provided at the end of this Tech Memo.

2.0 SURVEY RESPONSE RATES

As previously noted, fixed-route surveys were conducted during the week of February 16, 2009. In all, 61 Bristol Virginia Transit (BVT) patrons were surveyed. Weekday fixed route ridership averages approximately 300 riders per day. With the fixed route surveys, response rates were noted by route and by time of day. Figure 2-1 shows survey responses by route. Seventeen (17) responses were noted for each BVT route, while 10 responses did not indicate a route name (i.e., the missing).

Figure 2-1
Percentage of Fixed-Route Survey Responses by Bristol VA Transit Route

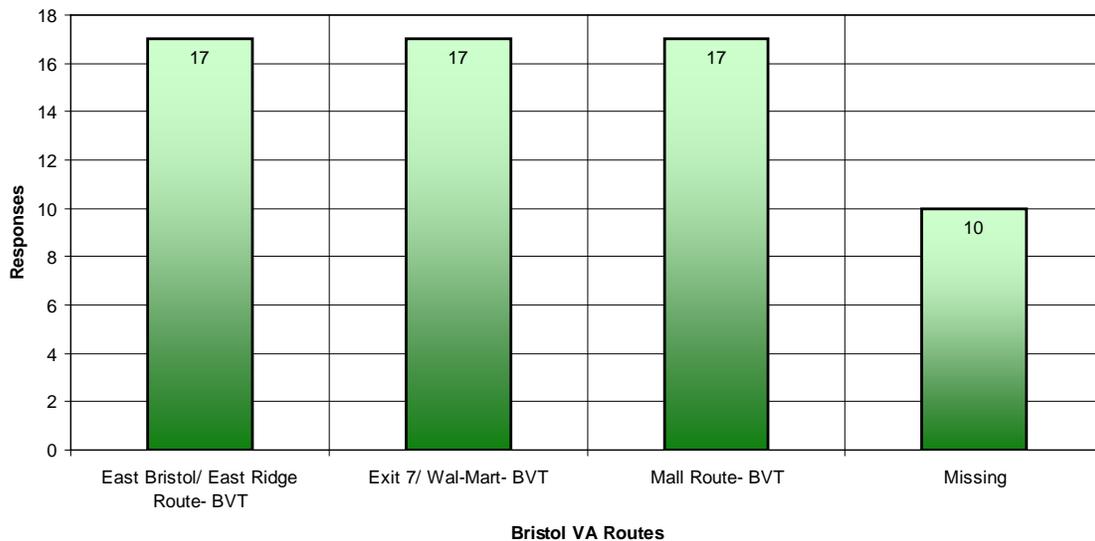
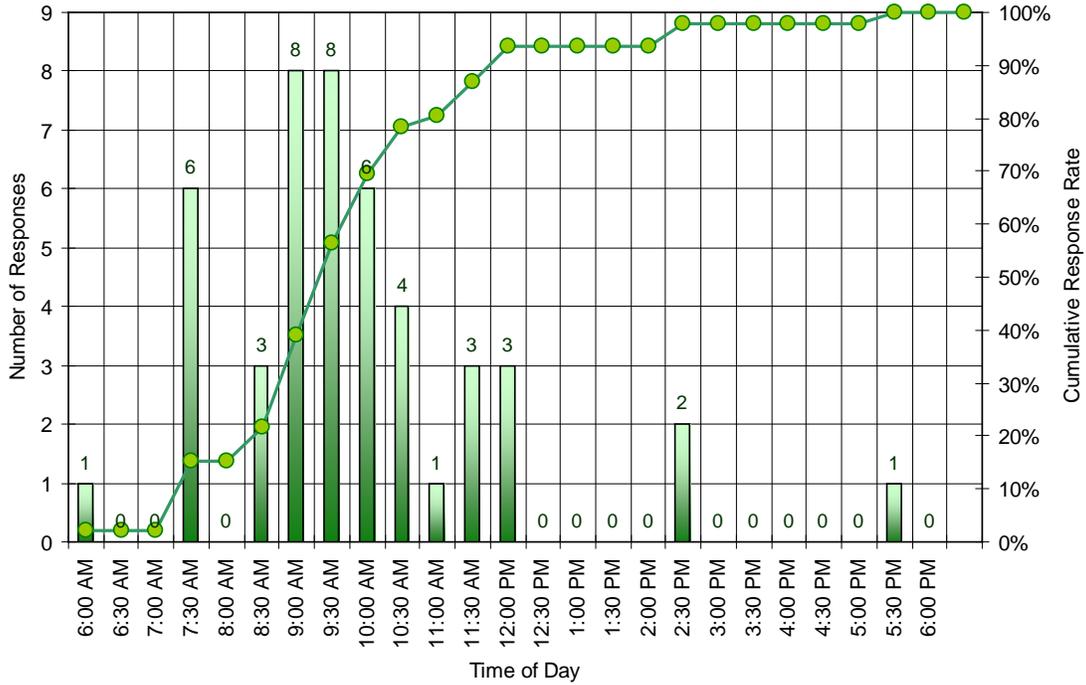


Figure 2-2 summarizes the responses by time-of-day. The green bars relate to the left chart axis and show the number of responses by time of day. The green line on the graph displays the cumulative time-of-day percentage in accordance with the right axis scale. Half of all responses were recorded in the morning between 6:00 AM and 9:30 AM.

Figure 2-2
Survey Responses by Time-of-Day



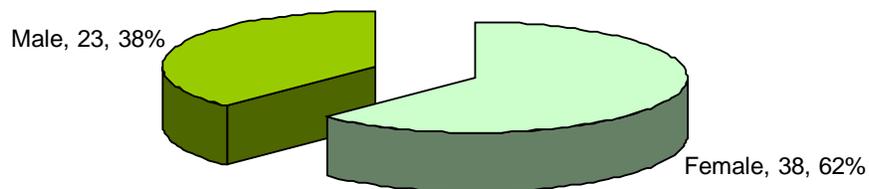
3.0 RESPONSES TO SURVEY QUESTIONS

Initial survey questions centered upon demographic characteristics of the rider (e.g., their gender, age, income, etc.).

Gender

The first survey question asked patrons to report their gender. The chart displays the category, the number of responses and the category's overall percentage. For example, the darker green pie piece represents male respondents, where there were a total of 23 responses, which is roughly 38% of all responses. Responses suggest that a majority of BVT riders are female (62%). There were 61 total responses or a 100% response rate to Question 1.

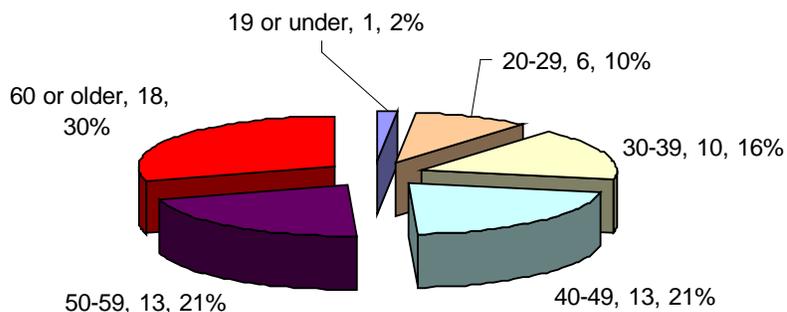
Figure 3-1
Responses to Survey Question 1: I am male or female?
(Category, # of Responses, % of All Responses)



Age

Figure 3-2 illustrates responses to the survey's age question (i.e., the 2nd question on each survey form). In general, BVT riders tend to be above the age of 40 (i.e., 72% of all responses). There was a 100% response rate for Question 2 (i.e., there were 61 responses out of 61 respondents).

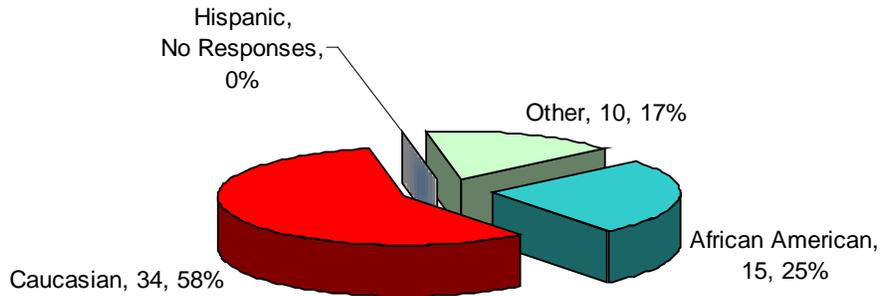
Figure 3-2
Responses to Survey Question 2: My age is?
(Category, # of Responses, % of All Responses)



Ethnicity

The third survey question asked patrons about their ethnicity. Results appear below in Figure 3-3. BVT riders were predominantly Caucasian - 58%. Another 25% of the respondents indicated African-American origins and 17% reported their ethnic origin as "Other." There were no responses for the ethnic category of Hispanic. There were 59 out of 61 total responses for Question 3 (i.e., 97% response rate).

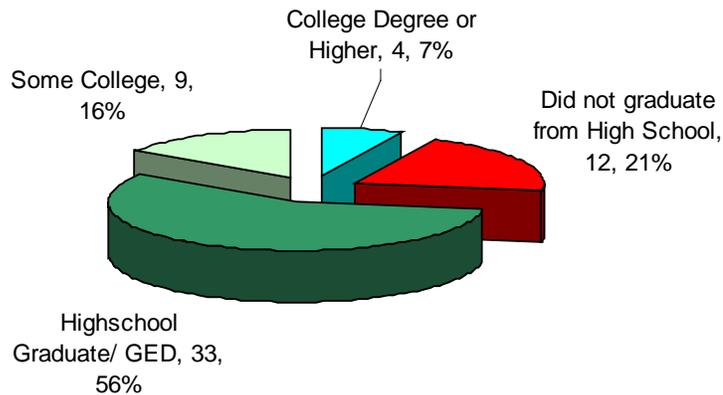
Figure 3-3
Responses to Survey Question 3: My ethnicity is predominantly?
(Category, # of Responses, % of All Responses)



Education

Question 4 of the survey asked about the rider's level of education. 23% of BVT's riders (Figure 3-4) reported having some college experience or obtaining a college degree, 56% reported graduating from high school or obtaining a high school equivalency and another 21% indicated they did not graduate from high school. The response rate for Question 4 was 95%.

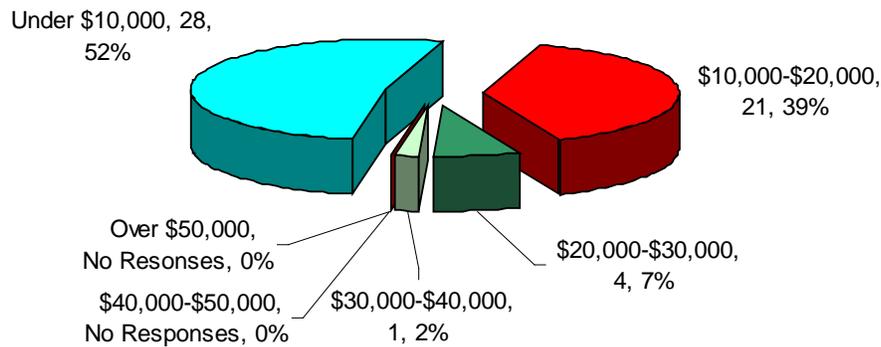
Figure 3-4
Responses to Survey Question 4: I have completed?
(Category, # of Responses, % of All Responses)



Annual Household Income

Patrons were asked about their annual household income in the fifth survey question. Some 91% of BVT's patrons indicated their household incomes were under \$20,000 per year (Figure 3-5). The overall response rate to this question was 89% (i.e., 54 of the 61 surveyed patrons responded to the question).

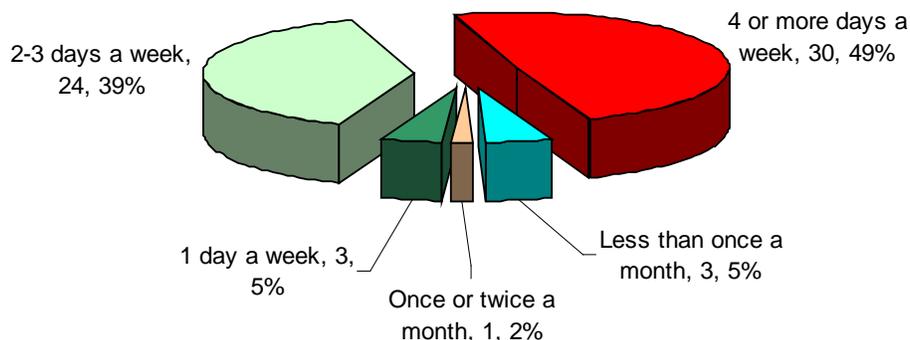
Figure 3-5
Responses to Survey Question 5: My home's total annual income is?
(Category, # of Responses, % of All Responses)



Frequency of Use

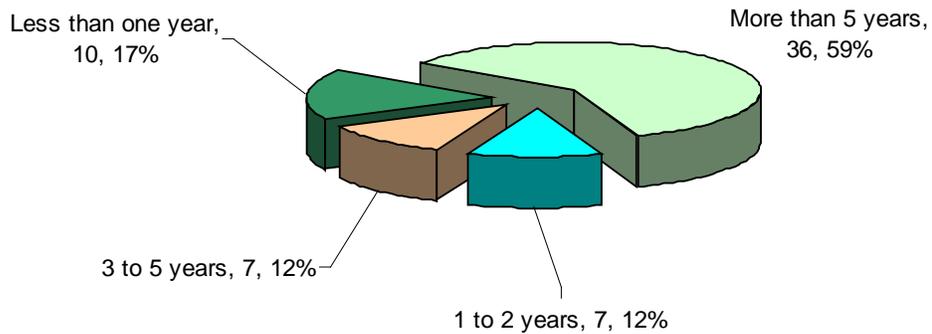
Figure 3-6 shows survey responses when patrons were asked how often they use Bristol VA Transit. 49% of the respondents indicated that they ride 4 or more days each week. Another 39% reported riding 2 to 3 days a week for a total of 88% riding at least 2 days a week. This indicates Bristol VA Transit has a stable base of regular riders. The response rate to this question was 100 percent.

Figure 3-6
Responses to Survey Question 6: How often do you ride Bristol VA Transit?
(Category, # of Responses, % of All Responses)



When riders were asked how long they have they been using BVT (Figure 3-7), 59% said they have been riding over 5 years. Only 17% indicated they had been riding less than a year.

Figure 3-7
Responses to Survey Question 7:
How long have you been a rider of Bristol Transit?
(Category, # of Responses, % of All Responses)



Trip Origins, Mode of Access and Destinations

Figures 3-8A through 3-8C summarize respectively the trip origins, modes-of-access and trip destinations from the survey. 69% of fixed route riders indicated their trip began at home (Figure 8A). Some 95% of fixed route patrons access BVT Transit by walking to buses (Figure 9B). For destinations (Figure 8C), work and shopping were cited most with each being 34%. In addition, home represented 11% of all destination responses.

**Figure 3-8A, 3-8B, 3-8C
Responses to Survey Questions 8, 10 and 11:**

- 8. Where did your current trip begin?**
- 10. How did you get to the bus?**
- 11. Where are you going now?**

Figure 3-8A – BVT Trip Origins

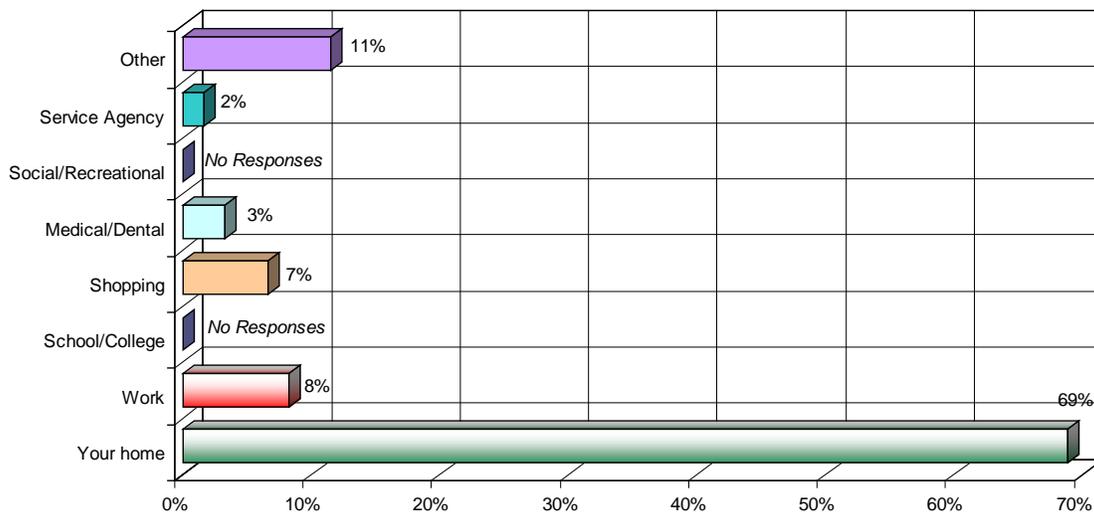


Figure 3-8B – Modes-of-Access

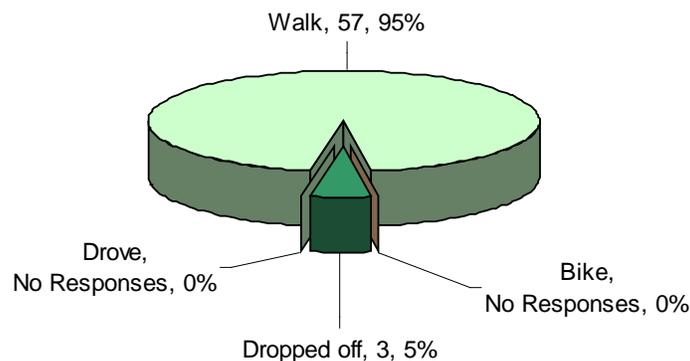


Figure 3-8C – BVT Destinations

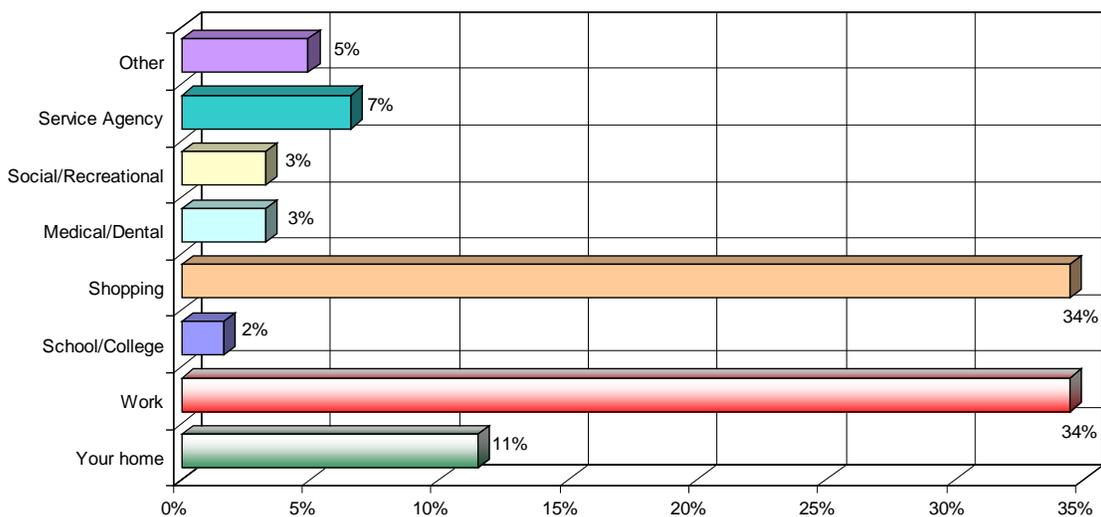


Figure 3-8 provides a cross tabulation that relates a specific origin response to a specific destination. Taking the reported Work origin category for example, the tabulation suggests that of the people traveling *from* their Work location, 20% then went *to* home, 60% went *to* another Work location and 20% went shopping. It merits some mention that there are questionable responses. For example, 10% of the respondents indicated that their trips originated at home and that they were destined to home.

Figure 3-8 – Origins and Destinations

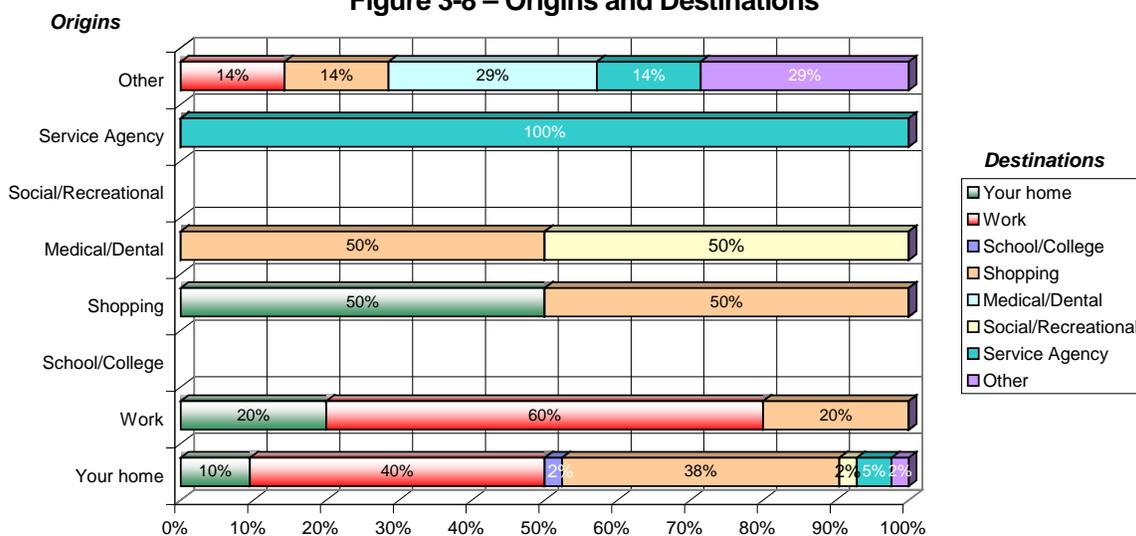
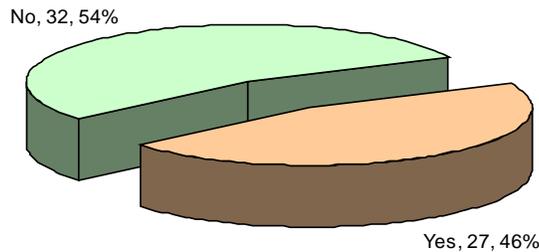


Figure 3-9 shows results from Question 13, wherein patrons were asked if the trip they were making on a BVT bus also involved a Bristol Tennessee bus. Responses were roughly equivalent with 46% (27 responses) saying yes and 54% (32 responses) answering no. Thus, this survey response indicates a high level of transfer activity between the two systems. This question's response rate was 97 percent.

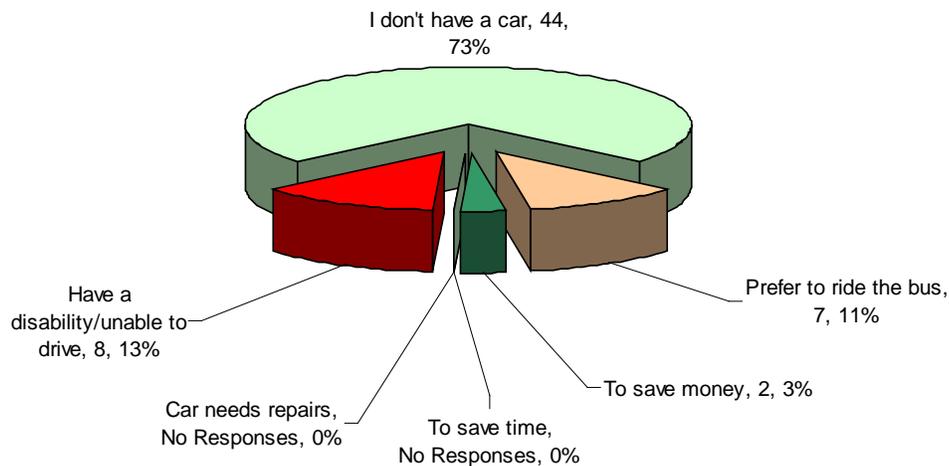
Figure 3-9
Responses to Survey Question 13:
Does this current trip include using a Bristol, TN transit route?



Reason for Riding Transit

Question 14 of the survey asked patrons why they were using BVT Transit. The predominant response (73%) was "I don't have a car." 13% of the respondents indicated that they were riding because they have a disability or were unable to drive. Another 11% responded with they prefer to ride the bus. This question's response rate was 100 percent.

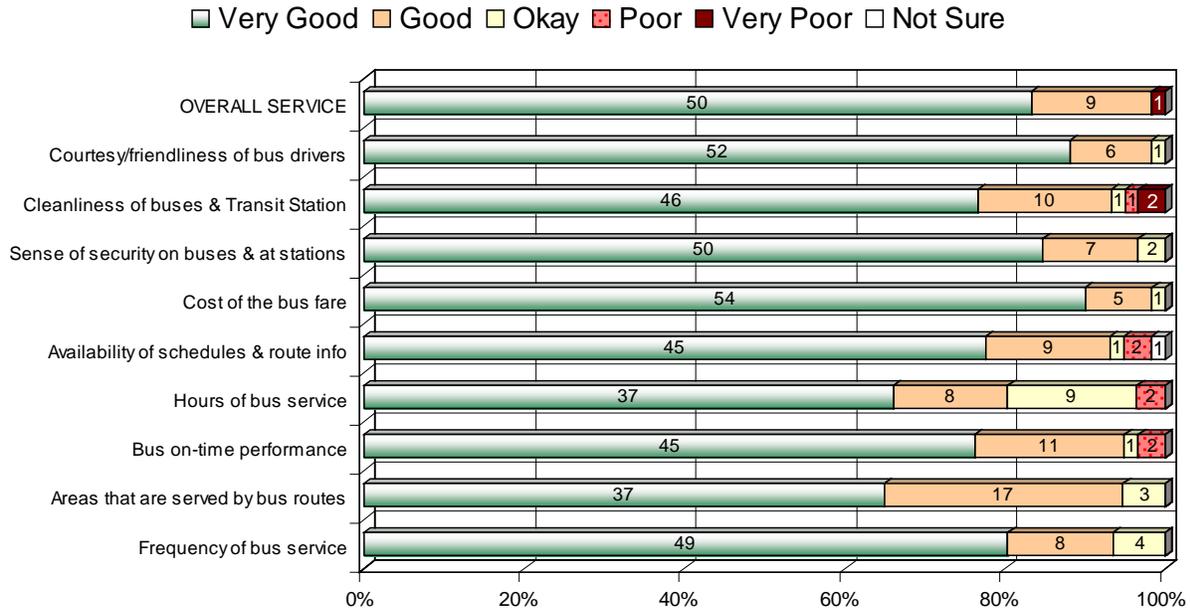
Figure 3-10
Responses to Survey Question 14: Why did you ride the bus today?



Opinions of BVT Transit Services

Survey questions 15A through 15J asked patrons to rate several qualitative aspects of BVT Transit. Figure 3-11 reflects the responses. Rating categories are shown at the top of the chart, ranging from “Very Good” to “Not Sure.” The chart displays the number of responses and the percentage breakdown of the responses to each question. For example, Figure 3-11 shows that 49 respondents rated the “Frequency of bus service” a being “Very good.” This is roughly 80% of all responses related to this particular category (i.e., service frequency). The lowest rating was for hours of service, with 20 percent of respondents indicating that hours of service was “okay” or worse. Overall, 98% of BVT riders rated service as being either “Very Good” (83%) or “Good” (15%).

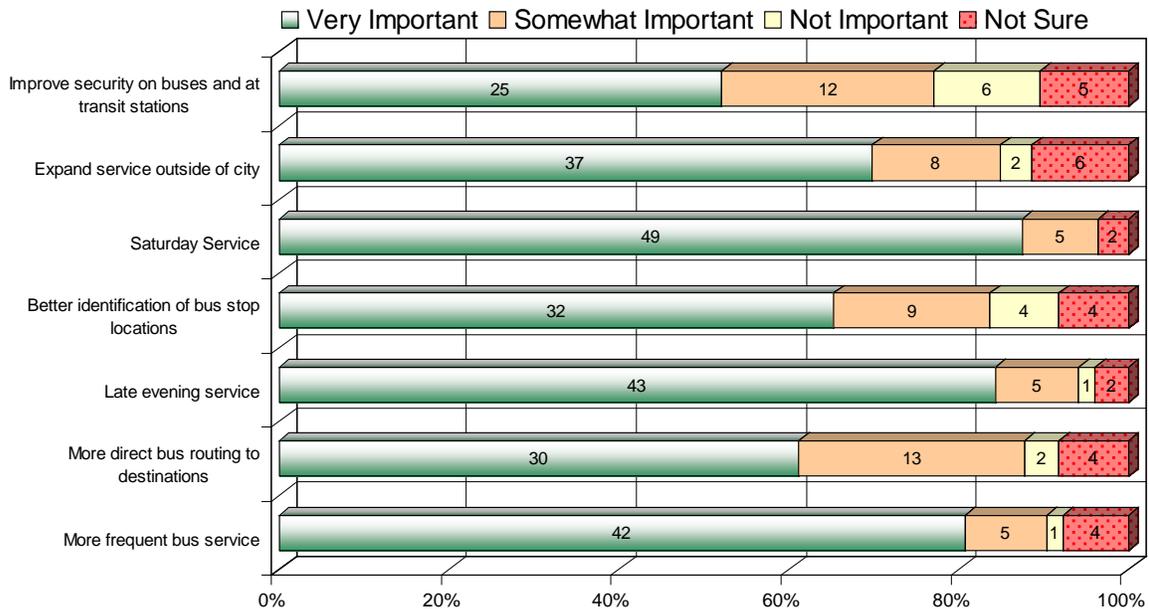
Figure 3-11
Responses to Survey Questions 15A – 15J



Service Improvement Needs

Questions 16A through 16G asked respondents to rate the importance of potential improvements to the BVT system. About 88% of fixed route survey respondents rated all categories as very important or somewhat important. Some 54 respondents identified Saturday service as being either very or somewhat important (96% of all responses to this question). Late evening service was nearly the same with 48 responses being very or somewhat important.

Figure 3-12
Responses to Survey Questions 16A – 16G



The survey form also included a line where riders could write any other future service improvement needs. Eight respondents wrote something on this line. Five of the eight respondents emphasized the need for weekend service. One respondent indicated the need for earlier morning service, one respondent indicated the need to restore midday service on the East Ridge route and one other respondent indicated the need to send a back-up bus when buses are full.

4.0 SUMMARY OF FINDINGS

Using survey results presented in the prior section, the typical BVT Transit rider (for both fixed route and Reserve-a-Ride) is as follows:

- Female
- Over 40-years old
- Caucasian
- At least a High School Graduate
- Has a household income under \$20,000
- Uses BVT Transit service at least 2-3 days a week
- Has been riding for at least 2 years
- Uses transit primarily for work or shopping trips
- Accesses bus service by walking
- Rides transit because they don't have a car

BVT received favorable ratings (very good or good) for most service categories such as areas served and cost of the bus fare. The lowest was for hours of bus service (80% rated hours of bus service as very good or good with the remaining 20% rating it as okay, poor or very poor).

When asked about potential service improvements, respondents rated all five potential categories as either very important or somewhat important (security, expanded service outside of city, late evening service, more direct bus routing and more frequent service). Saturday and late evening fixed route service received slightly more requests than the other categories.

**BRISTOL, VA
TRANSIT RIDER SURVEY**

Dear Rider: Bristol, VA Transit is presently evaluating existing and future transit service needs. Please take a minute and fill out this survey regarding your opinions of Bristol, VA Transit. **Thank you for your help.**

About You

1. **I am:** Male Female

2. **My age is:**
 19 or under 30-39 50-59
 20-29 40-49 60 or older

3. **My ethnic background is primarily:**
 Caucasian Hispanic
 African-American Other

4. **I have completed:**
 Did not graduate from High School
 High School graduate/GED
 Some College
 College degree or higher

5. **My home's total annual income is:**
 Under \$10,000 \$30,000-\$40,000
 \$10,000-\$20,000 \$40,000-\$50,000
 \$20,000-\$30,000 Over \$50,000

6. **How often do you ride Bristol VA Transit?**
 Less than once a month
 Once or twice a month
 1 day a week
 2-3 days a week
 4 or more days a week

7. **How long have you been a rider on Bristol, VA transit?**
 Less than one year 3 to 5 years
 1 to 2 years More than 5 yrs.

About Your Trip

8. **Where did your current trip begin?**
 Your Home Medical/Dental
 Work Social/Recreational
 School/College Service Agency
 Shopping Other _____

9. **Where was that located?**
 Address, Major Intersection or Nearby Landmark
(shopping center name, hospital, school name, etc)

10. **How did you get to the bus?**
 Walk Dropped off
 Bike Drive

11. **Where are you going now?**
 Your Home Medical/Dental
 Work Social/Recreational
 School/College Service Agency
 Shopping Other _____

12. **Where is that located?**
 Address, Major Intersection or Nearby Landmark
(shopping center name, hospital, school name, etc)

13. **Does this current trip include using a Bristol, TN Transit route?**
 Yes No

14. **Why did you ride the bus today?**
 I don't have a car Car needs repairs
 Prefer to ride bus To save time
 To save money Have a disability/ unable to drive

Rate Bristol VA Transit's Service

	Very Good	Good	Okay	Poor	Very Poor	Not Sure
15. Please rate the following characteristics of Bristol VA Transit's service:						
a. Frequency of bus service	<input type="checkbox"/>					
b. Areas that are served by bus routes	<input type="checkbox"/>					
c. Bus on-time performance	<input type="checkbox"/>					
d. Hours of bus service	<input type="checkbox"/>					
e. Availability of schedules & route information	<input type="checkbox"/>					
f. Cost of the bus fare	<input type="checkbox"/>					
g. Sense of security on buses & at stations	<input type="checkbox"/>					
h. Cleanliness of buses & transit station	<input type="checkbox"/>					
i. Courtesy/friendliness of bus drivers	<input type="checkbox"/>					
j. OVERALL SERVICE	<input type="checkbox"/>					

Identify Future Service Improvement Needs

	Very Important	Somewhat Important	Not Important	Not Sure
15. What service improvements would you like to see over the next several years?				
a. More frequent bus service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. More direct bus routing to destinations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Late evening service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Better identification of bus stop locations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Saturday service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Expand service outside of City	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Improve security on buses & at transit station	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thank You for Your Time!

BRISTOL VIRGINIA TRANSIT

TRANSIT DEVELOPMENT PLAN

APPENDIX C

STAKEHOLDER MEETING NOTES

MARCH 13, 2009

Bristol, VA TDP Stakeholder's Meeting
March 13, 2009 at Bristol City Hall Council Chambers
9:00 a.m.

Participants:

Name	Organization	Phone #	E-Mail
Jim Baker	Connetics	678-461-0969	jbaker@conneticsgroup.com
Chris Adkins	Connetics	706-855-0266	cadkins@conneticsgroup.com
Diana Farris	BRHA	276-821-6269	dfarris@brha.com
Danny Hunt	BV Transit		dhunter@bristolva.org
Brook Blaylock-Smith	Appalachian Independence Ctr.		aicbristol@bvunet.net
Greg Morrell	AIC		gmorrell@naxs.net
Lynn Pannell	BRHA	276-821-6270	lpannell@brha.com
Heather Hill	Bristol Mall	276-466-8331	heather@bristolmall.com
Jay Detrick	City of Bristol	276-645-7474	tranplan@bristolva.org

Meeting Notes

A brief presentation was made by Connetics staff that covered the following topics:

- Purpose of the TDP
- TDP Requirements and Content
- Bristol TDP Tasks Underway
- Existing Bristol Service and Financial Characteristics

There was then discussion regarding transit service needs in Bristol. Topics raised were as follows:

- There is a need to extend hours into the evening (at least 10 p.m.) and on weekends. People need access to jobs, and many of those jobs do not fit within the transit service's current 6 a.m. to 6 p.m. span. Participants indicated they have specific examples where people have not been able to get jobs because of lack of transportation.
- It was also noted that 53% of Bristol residents under 18 live in poverty – thus further indicating the need for access to jobs.

- Service needs to be extended north to Virginia Highlands Community College in Abingdon (I-81 Exit 14) and to destinations on Lee Highway just north of Exit 7 (e.g., Highlands-Target shopping center and Washington County Department of Social Services building).
- No one indicated that the current fare structure is an impediment to persons using the service.
- Perhaps a transit center at Exit 7 would allow for coordination with other area transit services (e.g., District 3).
- There are also social service agencies in Abingdon that would benefit with connections to Bristol VA Transit, such as the Regional Department of Social Services agency, Child Support Enforcement.
- It was asked if the City is pursuing available federal funding for service expansion, such as New Freedoms grant money. It was noted that District 3 has been able to use New Freedoms money for programs.
- More marketing and advertising of transit services is needed in the community. For example, make sure social agencies are aware of services offered and destinations served.
- Improved accessibility to and from bus stops and at bus stops is needed for disabled and elderly riders.
- There was discussion about the need for shelters, however it was noted that shelters are often the target of vandalism.
- There may also be perceptions regarding safety around the Downtown Transit Center. Can BVT and BTT jointly fund a security presence?
- Is there perhaps a demand for special events transit services in the summer.
- It was noted that BVT should meet and coordinate better with other area transit agencies.