Business Plan for Brookings Area Transit Authority
Brookings, South Dakota

Prepared by
Dr. James H. Miller, Faculty Affiliate
Jon Mielke, Associate Research Fellow
Marc Scott, Graduate Assistant
Small Urban & Rural Transit Center
a program of the
Upper Great Plains Transportation Institute
North Dakota State University
Fargo, North Dakota

December 2009

Acknowledgements

This research was funded by the Federal Transit Administration and the University Transportation Centers Program, both within the United States Department of Transportation, and the South Dakota Department of Transportation. It was conducted by the Small Urban & Rural Transit Center, a program of the Upper Great Plains Transportation Institute at North Dakota State University. Contributors to the preparation of this document include the management and staff of Brookings Area Transit Authority of Brookings, SD, and Jackie Mattheis of the South Dakota Department of Transportation.

The authors also acknowledge the guidance of Jill Hough of the Small Urban & Rural Transit Center and Henry Nejako, Federal Transit Administration project manager, for this research.

Disclaimer

The contents of this report reflect the work of the authors, who are responsible for the facts and the accuracy of the information presented.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1. INTRODUCTION AND PURPOSE OF BUSINESS PLAN

1.1 Brief History

Brookings Area Transit Authority Inc. (BATA) is the non-profit public transportation provider serving the Brookings County area of South Dakota. The county is on the eastern border of the state and about 60 miles north of Sioux Falls. The city of Brookings, with a population of 15,500 (2000 Census), is the county seat and home to South Dakota State University. The county had an estimated population of just over 29,000 in 2007.

For many years, the only public transportation available to county residents was a demand-response service which was offered beginning in 1973 as part of a senior center program. Prior to 1997 when BATA was incorporated, this limited human service transportation was provided in Brookings County as part of a multi-county program operated by the Inter-lakes Community Action Program based in Madison, SD.

For the first six years after its formation, BATA continued to provide somewhat limited human service transportation and operated four to six buses and vans. Then, beginning in 2004, BATA began to expand its services and ridership more than tripled between 2004 and 2009. Ridership and service levels have varied from year to year as BATA adds or drops contracts for services; however, the long-term trend has been increasing service with increased ridership.

The mission of BATA is to provide coordinated transportation services for all citizens of the Brookings area and to foster independence by providing mobility options. In 2006, in an attempt to more fully carry out this mission, BATA began offering Medicaid transportation and service to Sioux Falls. The demise of the only private taxi in Brookings in 2008 caused BATA to begin offering same-day service and to extend operating hours. It also began a cooperative program with the South Dakota State University Student Association to offer a late-night weekend bus service called Safe Ride.

A map of Brookings County is presented in Figure 1.1. BATA's primary service area includes the city of Brookings and outlying areas within 3-5 miles of the city. This area receives daily service. BATA also provides weekday transportation to Sioux Falls for special needs children and medical appointments. It also serves outlying communities in Brookings County on an as-needed basis including White, Volga, Arlington, Bruce, Bushnell, and Elkton. More detailed information on Brookings Area Transit Authority's market and current services is presented in Chapters 3 and 4.

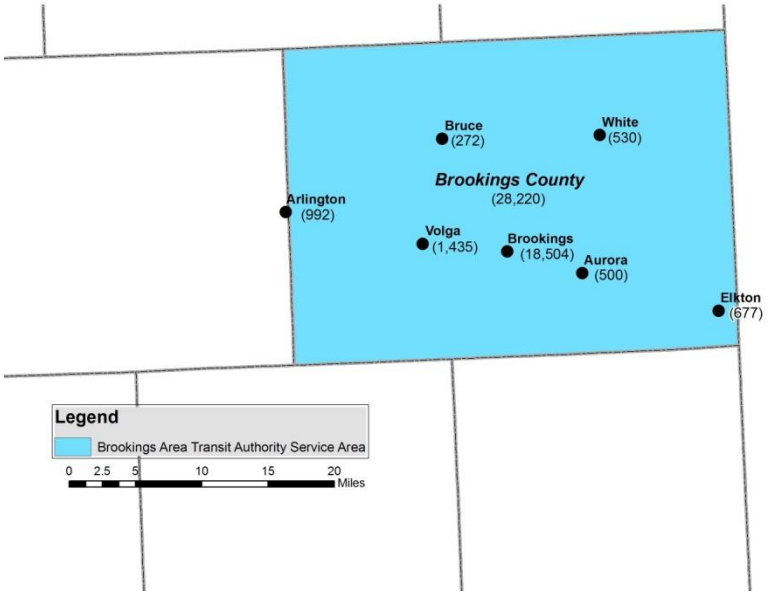


Figure 1.1 BATA Service Area

Figure 1.2 illustrates the growth in service as measured by vehicle miles and the corresponding growth in ridership over the past six years. While both indicators have increased over the entire six-year period, growth has been especially rapid during the past three years. Ridership decreased in 2007 because BATA lost a school-year program contract the required the use of larger buses than BATA could provide. While ridership has grown rapidly in the past few years, vehicle miles operated have grown even more rapidly, suggesting a downward trend in one-way passenger trips per vehicle mile. This apparent decline in vehicle utilization can be explained by several factors including the increased number of trips to Sioux Falls that result in long trip lengths per passenger and fewer passengers per mile. In addition, as BATA expands its hours of service, off-peak ridership is likely to be less productive than well-established mid-day service.

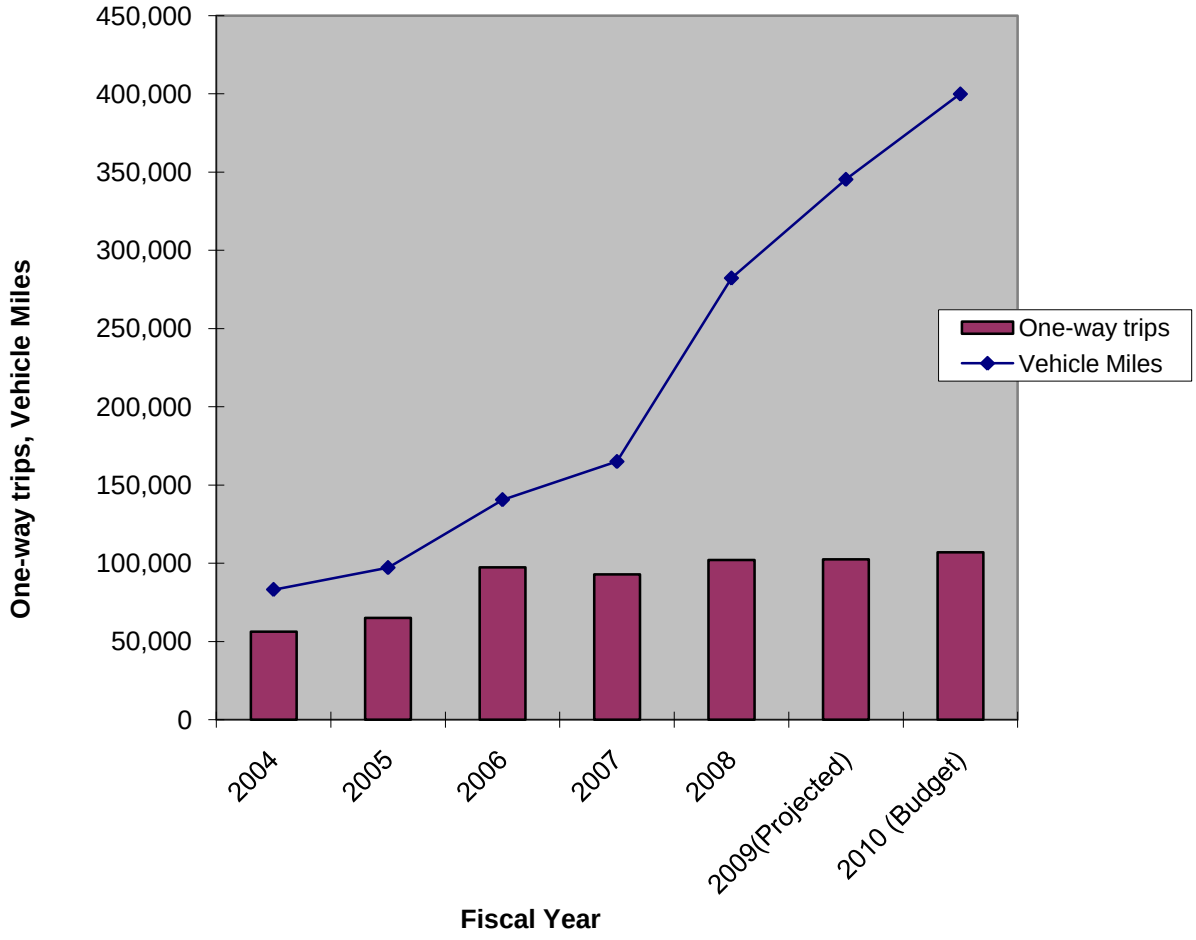


Figure 1.2 BATA Operating Trends 2004 – 2010

BATA's growth in recent years can be attributed to the efforts, skills, persistence and enthusiasm of the current staff. A new administrative and storage facility also enabled BATA to respond to more of the community's mobility needs and increased state and local support have allowed BATA to expand services. This growth has not been without setbacks. A 100% turnover of dispatchers in 2007 during the change over to the computerized scheduling and dispatching system caused BATA to retrench and regroup. During that period BATA gave up its designation as the Jefferson Line intercity bus agent in order to focus on rebuilding the dispatching function. Table 1.1 lists some of the key milestones in the development of BATA over the past 12 years.

Since virtually all public transportation services in the United States cost more to provide than the revenue generated from riders, all transit systems, including BATA, require federal, state, and local funds to supplement operating revenue and to acquire capital equipment and facilities. Fortunately, federal and state funding for transit has grown over the past few years and has been available to assist BATA. Perhaps even more importantly, the City of Brookings and Brookings County have invested local funds to help acquire equipment and facilities and to support on-

going operations. Further, the private sector has been solicited and has provided matching funds for vehicles. Table 1.2 summarizes key operating and financial data for the past five years and indicates the growth in revenue, expenses, and federal, state, and local support for BATA's operating budget.

As can be seen by reviewing BATA's historical milestones, the organization has grown by offering a wide range of public transportation service options including local demand-responsive on-call taxi and advanced reservation service. BATA's seven-day-a-week service offers a high level of transit to residents in the Brookings area and this service is expected to increase as BATA implements new services and expands its hours of operation.

Table 1.1 Milestones

Date	Milestone
1973	First public transportation service in Brookings as part of a senior center program operated by Inter-Lakes Community Action Program
1997	BATA created and took over ICAP services for Brookings County
2004	Opened new administrative and bus storage facility
2005	Began offering Medicaid transportation
2006	Began offering regular service to Sioux Falls
2006	Began Safe Ride pilot program
2007	Began Service Route
2007	Implemented scheduling and dispatching software, mobile data computers and automatic vehicle location technology
2007	Obtained city of Brookings matching funds for first time
2007	Added six vehicles to fleet
2006-2007	Completed gap analysis and campus transit plans with SURTC and city of Brookings
2008	City of Brookings created Transportation Board to advance transit opportunities in city and SDSU

Table 1.2 Operating and Financial Trends 2004-2010

	2004	2005	2006	2007	2008	2009 (Projected)	2010 (Budget)
One-way passenger trips	56,235	65,068	97,451	92,857	102,001	102,415	107,000
Total vehicle miles	83,129	97,138	140,570	164,958	282,294	345,400	400,000
Total vehicles	6	7	10	16	20	21	23
Operating revenue		$59,159	$60,110	$73,519	$106,521	$110,140	$150,000
Operating expense	$202,532	$245,435	$384,112	$559,952	$687,136	$809,518	$841,840
Federal 5311 funds	$88,134	$116,770	$206,569	$301,625	$372,877	$433,557	$537,972
Title III funds	$7,552	$7,930	$9,168	$9,168	$9,397	$9,585	$9,585
State funds	$15,560	$15,560	$40,855	$37,628	$41,432	$29,750	$41,677
Local effort	$91,286	$105,175	$127,520	$211,531	$263,430	$232,834	$296,479

1.2 Nature and Purpose of Business Plan

In the summer of 2008, the South Dakota Department of Transportation (SDDOT) asked the Small Urban & Rural Transit Center (SURTC) at North Dakota State University to deliver a hands-on workshop to assist interested transit agencies in preparing business plans for their organizations. BATA was one of four agencies that responded to this invitation. Following an intensive two-day workshop in August 2008 where managers and staff of the participating systems worked on their plans, SDDOT asked SURTC to assist each of the systems in completing their plan.

Though it had been successful in building an organization to respond to the most pressing public transit needs of the Brookings area, BATA wished to obtain outside assistance to review its existing organization and operations, and to formulate a detailed business plan to guide it for the next three to five years. The plan will allow BATA to define its strengths and weaknesses and identify additional public transit markets that it could effectively serve. Further, the plan will forecast future capital and operating fund needs and will help BATA communicate its plans and vision to local stakeholders and funding agencies. The plan is also seen as a logical follow up to the campus transit plan that SURTC completed in 2007 because the business plan can address changes to the BATA organization that would be needed to implement the expanded transit service for SDSU. The plan would also consider the financial implications of such a service addition.

1.3 Plan Outline

This chapter has provided a brief overview of the history of BATA and a summary of operating and financial trends. The next chapter describes and evaluates the BATA organizational structure and governance and presents BATA's mission, vision, and goals. Chapter 2 also presents a series of goals, objectives, and specific performance measures that can be used to evaluate future options

Chapter 3 provides demographic data on the area served by BATA and identifies other personal mobility options that are available to area residents. Chapter 4 provides a detailed discussion and evaluation of current operations and functional areas within the BATA organization. The findings presented in this chapter provide much of the justification for the recommended plan presented in this document.

Chapter 5 presents a number of service expansion options and quantifies the impact that these additions will have on operating and financial measures. The chapter also contains a capital improvement plan that includes replacement and additional vehicles, additional maintenance and storage space and other capital needs. Finally, Chapter 5 also presents a five-year operating and capital budget based on the proposed service changes and capital improvement plan. The last chapter, Chapter 6, presents a summary of key findings and recommendations from this plan. It also includes key issues that must be addressed for BATA to continue its successful operations. This chapter also includes suggestions for on-going performance monitoring and possible triggers to suggest the need for a plan update.

2. ORGANIZATION AND GOVERNANCE

2.1 Purpose and Mission

Since 1997, BATA has provided public transit to the residents of the Brookings area. Prior to the formation of this non-profit corporation, limited human service transportation focused on senior centers was provided by a multi-county human service agency. BATA's corporate bylaws state that the purpose of BATA is to "coordinate the public transportation activities and operations for all citizens of the Brookings area of South Dakota." More recently, BATA has modified and expanded this purpose statement into a mission statement that is widely publicized. The current mission is "to provide coordinated transportation services to all residents of the Brookings area and foster independence by providing mobility options."

The current mission statement not only states what BATA will do, (i.e. provide coordinated transportation services), but it also highlights the reason for such service which is to foster independence of residents by providing mobility options. This statement implies that BATA is to concentrate on basic mobility so that individuals who cannot afford private transportation or who are unable to drive (elderly, disabled), can partake of social, economic, and medical benefits within the Brookings community. This is a necessary and realistic mission for a small urban transit system.

BATA's service area, as stated in its bylaws, is the "Brookings area." Though most of BATA's service is concentrated in the most populous areas of Brookings County, BATA considers its service area to be all of Brookings County. Because no other provider offers service in the outlying portions of the county, BATA attempts to respond to needs as they become apparent. Service to outlying communities is offered on an as-needed basis throughout the entire county with some areas receiving almost daily service.

BATA is successfully fulfilling its mission, especially in the past few years as its operations have matured and as it has sought opportunities to coordinate services with other agencies in the community. It works closely with the Brookings Area United Way and other community agencies to identify unmet transportation needs. BATA also contracts with a number of private and public agencies to provide transportation for agency clients. Recently, BATA began providing transportation to Sioux Falls for special education students under a contract with the Brookings school system and it also contracts for special education transportation within the Brookings area.

BATA has worked to strengthen its relationship with South Dakota State University over the past few years. One of the tangible results of this effort is the SafeRide evening bus service sponsored by the SDSU Student Association. This fixed-route bus service operates on Thursday, Friday, and Saturday nights to assure students a safe way home late at night. Further, SDSU's disabilities coordinator serves on the BATA board, thus increasing opportunities for enhanced communication and coordination. BATA and SDSU worked together to direct a recently completed study of campus transit options performed by SURTC. The resulting report outlines three levels of fixed-route transit service that would provide both on-campus circulator service,

and routes into the Brookings community. (*Campus Transit Development Planning: A Case Study*. UGPTI Staff Paper 166, Upper Great Plains Transportation Institute, North Dakota State University, authored by David Ripplinger and available at www.surtc.org.) The fixed-route options outlined in this report will be evaluated more fully as part of this business plan.

In summary, BATA is currently carrying out its coordination and service mission to the community. It is also seeking opportunities to expand this mission to include offering public transit options to the SDSU community and to expand work trip transportation to employers in the Brookings area and from the Brookings area to Sioux City. The campus and work-trip-transit plans imply a larger vision for BATA beyond basic mobility, and recognize the ability of transit to address other community goals such as energy conservation and economic development. Consequently, at some point in the future, BATA may wish to revise and expand its mission statement to include this more comprehensive view of its contribution to the community.

2.2 Board of Directors

As is the case for all non-profit corporations, overall responsibility for BATA's activities is vested with a board of directors. BATA's bylaws call for the board to include seven to ten members to be appointed to the board. BATA's board currently has eight voting and two ex-officio members. The bylaws call for four officers including a president, vice-president (president-elect), secretary and treasurer. Along with the immediate past president, this group makes up the board's executive committee. Current members and their affiliation are listed in Table 2.1.

Board members serve for three-year terms and may be reappointed without limit. New members are to be elected at the board's annual meeting and the executive committee may remove members that have three or more consecutive unexcused absences. The bylaws are silent concerning the affiliation and special qualifications of members. However, the board seeks to ensure broad representation of community interests on the board.

It is common for boards to place a limit on the number of consecutive terms that a member can serve. Such a provision encourages broad participation in the organization helps bring fresh perspectives to the board. Conversely, seasoned board members add continuity and create institutional knowledge that is helpful in advancing the organization's goals. BATA may wish to consider a revision to its bylaws to limit board member terms to two or three consecutive terms.

According to its bylaws, the board of directors has all the usual powers of directors of a corporation. The board serves as the financial control body for the organization and is authorized to receive and expend funds for the corporation. It is authorized to enter into contracts on behalf of the organization, it establishes policies, and it conducts studies to determine the transportation needs of the region. The board, through the budget process, approves staffing levels and salaries. It hires the executive director and then hold that person accountable for hiring and dismissing employees within salary and staffing levels approved by the board.

The bylaws require monthly meetings of the board of directors but no meetings are held if there are no pressing agenda items. The current board and executive director have a good and mutually supportive relationship that allows for good communication flexibility to respond to issues and opportunities without an overly bureaucratic structure. The board receives operating and financial updates at each meeting and approves budgets, new positions, all contracts, and major service changes.

Table 2.1. Board of Directors (May 2008)

Sandy McClemans, President 1310 Main Ave S Brookings, SD 57006	Teresa McKnight 815 Medary Ave - Suite 102 Brookings, SD 57006
Nancy Crooks, Vice President SDSU Disabilities Coordinator SDSU Box 2201 Brookings, SD 57007	Larry Franklin 301 Division Ave Brookings, SD 57006
Steven Rames, Secretary 265 Indian Hills Rd. Brookings, SD 57006	Bridget Fuller 315 Samara Ave Volga, SD 57071
Jerry Raabe 1310 Main Ave S Brookings, SD 57006	Deanna Santema, Ex-Officio Director City of Brookings 1621 Robin Rd Brookings, SD 57006
Lloyd Hanson 312 17th Ave Brookings, SD 57006	Brenda Schweitzer, Ex-Officio Executive Director, BATA 418 Western Ave Brookings, SD 57006

2.3 Organization and Management Structure

All transit systems, regardless of their size, must perform the same operations, maintenance, and administrative functions. The only difference between the largest and smallest systems is the number of individuals needed to perform each function and the degree to which a transit system outsources some of its functions. For example, a large transit system will have in-house marketing, planning, and legal staff while a small system will use independent contractors to provide these functions on an as-needed basis. Furthermore, in a large organization, functional specialization is possible while in a small system the general manager and just a few other staff members must be jacks-of-all-trades in order to keep a system in operation.

BATA has evolved from a very small system to a small to medium-sized system in the past five years. Five years ago the staff consisted of a part-time manager, two part-time dispatchers, and four drivers. It has now evolved into a system with several administrative and dispatching positions, but it is still a small system requiring most staff members to wear multiple hats. The following section describes the existing organizational structure. Each functional area is

described in more detail in Chapter 4. That chapter also includes recommended organizational and staffing changes.

Figure 2.1 shows BATA's current organizational chart. As can be seen, the executive director reports to the board of directors. The executive director is assisted by an assistant director whose duties include those usually assigned to an operations manager such as hiring and firing, customer relations/complaints handling, and direct supervision and scheduling of drivers. The statistics manager supervises several full and part-time dispatchers and the SafeRide supervisor who schedules and manages this weekend and evening program serving SDSU students.

In addition to the assistant director, the executive director has two other positions directly reporting to her. These positions include the office manager who serves as a receptionist and accountant/finance director and a statistics manager who is responsible for compiling ridership data for funding agencies, maintaining maintenance records, and overseeing the operation of BATA's computerized routing and scheduling hardware and software. The statistics manager also assists with dispatching duties as needed. Maintenance is provided at the Brookings County highway garage that is adjacent to the BATA facility, and it is also outsourced to local garages. The assistant director schedules maintenance.

BATA's organization chart shows the general delineation of duties and responsibilities. However, as is the case in many small transit systems, it over-simplifies actual functional activities. For example, some administrative employees have a commercial driver's license (CDL) and are trained as drivers so they may take a run or two as needed to fill peak trip needs. Finally, many administrative functions such as marketing, grant preparation and administration that might be performed by distinct employee positions in a larger system are performed by BATA's executive director. More detail on the division of duties is included in Chapter 4.

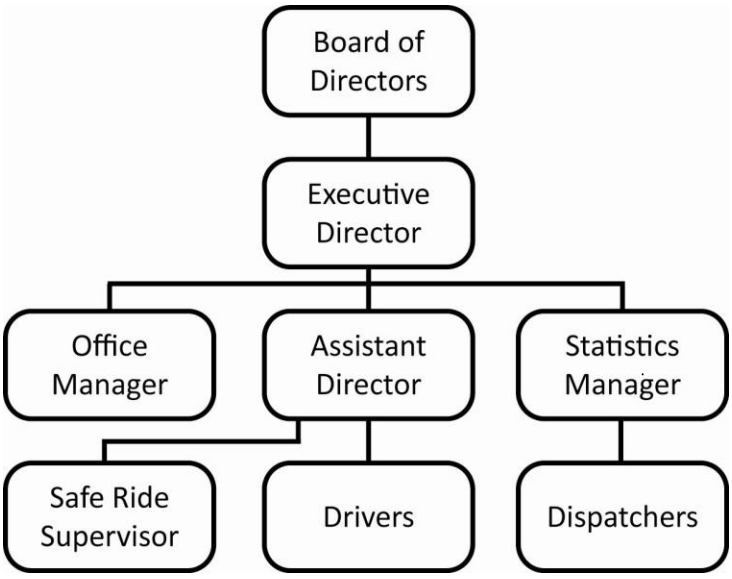


Figure 2.1 Organizational Chart

BATA's current organization is not only typical of small transit systems, it represents a creative use of long-term employees who have taken on increased responsibilities as the organization has grown. Over the next five years, changes in the organization chart and the number of positions will depend largely on growth of BATA into new services, in particular, campus transit fixed routes.

Figure 2.2 shows an organizational structure that would support the greatly expanded BATA operation that would result from adding fixed-route services to the SDSU community. This chart reflects the addition of several positions to the BATA organization and the reclassification of three others. First, if BATA added a number of larger fixed route buses and provided its own maintenance services at a new facility, it would need to hire at least two mechanics and would also need a maintenance manager. The manager might also be a working mechanic, but would have additional management duties.

As BATA expands it might want to rename two existing positions to recognize their functions. The office manager is, in reality, the accountant and could be given the title of finance director to recognize the scope and duties of the position. Likewise, the statistics manager might be renamed as the information systems manager since the position includes responsibility for both the infrastructure and the output of the various computerized systems. Finally, the addition of the fixed-route services will require additional drivers and, because of the demands of running a regularly scheduled service, the organization chart reflects the addition of a fixed-route supervisor who would manage the fixed route drivers, and attend to the many operational and planning issues associated with fixed-route services. The current assistant director would be responsible for supervising the current demand responsive services and would be the demand response supervisor. More details on these organizational changes are presented in Chapters 4 and 5.

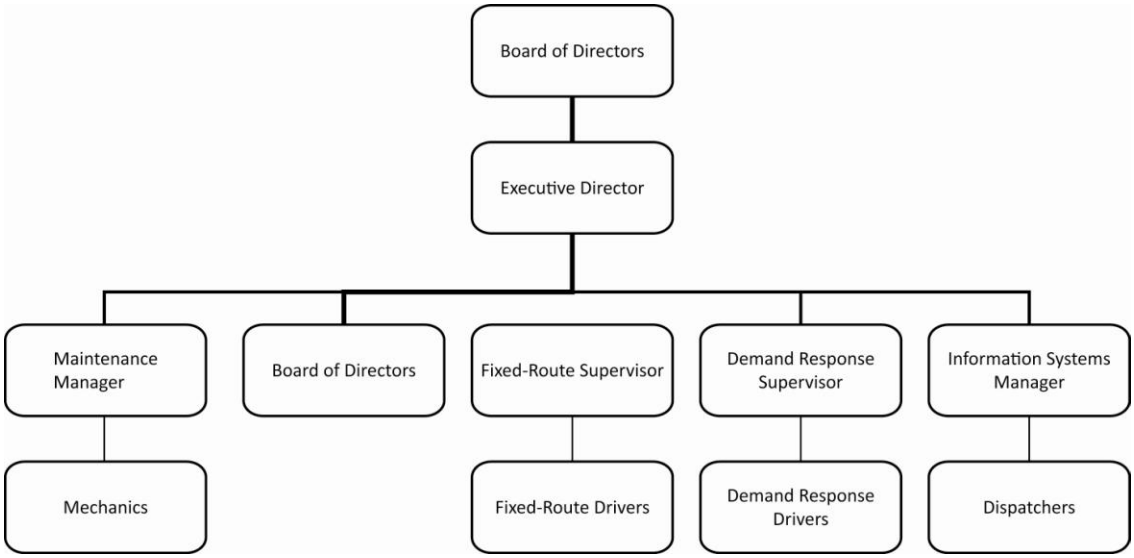


Figure 2.2 Possible Future Organizational Chart

2.4 Goals and Objectives

As stated earlier in this chapter, the currently adopted mission of BATA is "to provide coordinated transportation services to all residents of the Brookings area and foster independence by providing mobility options." As BATA formulates its business plan, this mission statement, or a revised one, should guide it as it determines the types and levels of service it needs to provide its customers and the way it organizes itself to carry out the mission. Further, the mission statement can be used to formulate specific goals, objectives that can be used to evaluate future service options and the performance of the agency as it continues operations. At present, BATA does not formally track specific performance measures; however, tracking key performance indicators will benefit BATA so a specific set of performance measures is proposed at the end of Chapter 6 to help guide this business planning process and to assist BATA in managing its operations.

BATA's current mission statement is oriented toward providing and coordinating transportation services for persons without access to private transportation and stresses the need for BATA to help individuals maintain their independence. BATA has been very successful in fulfilling this mission. Now as it considers expanding into a significant fixed-route service for the South Dakota State University community of students, faculty and staff, it may wish to expand its mission statement. An expanded mission statement would reflect the intent to provide a high level of transit service to the SDSU community to allow for a broad range of support for land use, employment, and housing options. The BATA board and others in the community should be consulted as part of this process and should agree on the direction and priorities that such an expanded mission implies.

The following list of specific objectives flow from both the present mission statement and an expanded one that would reflect the campus fixed-route services. These specific objectives then suggest some performance measures that BATA can track to monitor its success in achieving its mission.

Provide high-quality demand responsive service seven days a week in the City of Brookings and immediate surrounding area.

- Provide appropriate demand-responsive service to outlying communities based on need and local financial support.

- Provide medical and work trip transportation to Sioux Falls, the major regional center.

- Provide high-quality fixed-route transit services on the SDSU campus and between the campus and surrounding community to reduce the need for vehicle ownership and use and to support other university and community goals.

- Lead coordination efforts among human service agencies and others needing transportation for clients, especially persons with disabilities, the elderly, and low income persons.

- Provide appropriate work trip transportation via employer-directed shuttles to locations within Brookings County and other major employment areas such as Sioux Falls.

The service additions and other recommendations included in Chapter 5 support this mission and objectives.

3. SERVICE AREA DEMOGRAPHICS AND EXISTING PUBLIC TRANSPORTATION SERVICES

3.1 Demographics

Brookings Area Transit Authority provides dial-a-ride services in the city of Brookings and to a number of outlying communities including Volga, White, Arlington, Bruce, Bushnell and Elkton, all of which are located in Brookings County. Related services are provided both within these communities and from these communities to other service hubs within the region. A fuller description of the services provided by BATA is presented in Chapter 4.

Brookings County is located in east central South Dakota and it the state's fifth largest city. It is the county seat of Brookings County. Figure 3.1 shows the location of Brookings within the state and its location relative to the state's other major cities. Census population estimates from 2000 are also provided.

Figure 3.1 South Dakota Cities and Populations

Figure 3.2 shows Brookings County and each of the county's seven cities, along with their 2000 population.

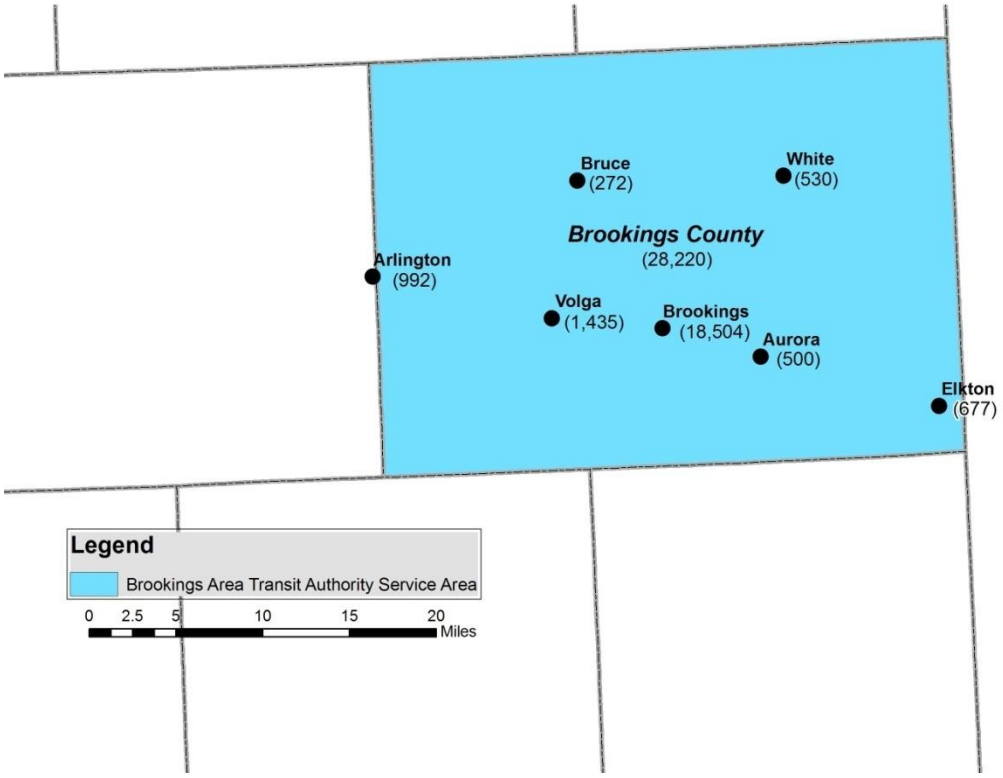


Figure 3.2 Brookings County Cities and Populations

According to the 2000 Census, Brookings County had a population of 28,220. As Table 3.1 indicates, 2008 Census estimates show that the county increased in population to 29,241, an increase of 5.1%. The county has a population density of 37.4 people per square mile, considerably higher than the state's 10.6 per square mile.

Table 3.1 Population Trends and Densities

	2000 Population	2008 Population	Population Change	Square Miles of Land	Population / Square Mile
Brookings County	28,220	29,668	+5.1%	794	37.4
South Dakota	754,894	804,194	+6.5%	75,885	10.6
National	281.4M	304.1M	+8.1%	3.5M	86.9

Nationally, transit clientele typically includes minorities, disabled, senior citizens, and low-income individuals. Table 3.2 presents related 2000 census data for Brookings and Brookings County. This table also includes a comparison with state and national statistics.

Table 3.2 Transportation Disadvantaged Populations

	Total Population	Minorities	Age 65+	Disabled Age 16-64 (Able to Go Outside Home)	Individuals Living in Poverty Age 16-64	Individuals Living in No-Vehicle Households
Brookings (City)	18,504	834 / 4.5%	1,834 / 9.9%	317 / 1.7%	2,240 / 13.1%	897 / 4.8%
Brookings County	28,220	1,026 3.6%	3,065 / 10.9%	491 / 1.7%	2,791 / 9.9%	1,110 / 3.9%
South Dakota	754,844	11.3%	14.3%	2.4%	7.5%	6.1%
National	281.42M	24.9%	12.4%	4.1%	7.3%	10.3%

It should be noted that there is some obvious overlap and possible double or triple counting related to data presented in Table 3.2. For example, a minority individual may also be low income, elderly, and disabled. The data presented in this table was compiled to minimize such occurrences but they cannot be totally eliminated. Despite these overstatements, this table does give some indication of the size of the mobility disadvantaged populations in the area.

A comparison of the county statistics in Table 3.2 with comparable national and state figures indicates that Brookings and Brookings County have significantly lower-than-average minority populations; their senior populations are also lower than average. The proportion of persons over 65 years of age is lower than average, in large part, due to the significant presence of younger-than-average SDSU students. Brookings' proportion of senior citizens is likely to increase in coming years as more elderly persons retire to the Brookings area. The current "Vision Brookings" planning effort specifically calls for steps to attract senior citizens to the college community.

The area's disabled population is lower than average while the number of individuals living in poverty is higher than average. The number of individuals living in households without automobiles is much lower than is the case nationally. This deviation is typical of rural areas, where alternative forms of transportation are limited and vehicle ownership is more of a necessity.

In addition to the traditional mobility dependent populations discussed above, it should also be noted that Brookings is the home of South Dakota State University and its 11,300 students. Discussions have been ongoing concerning the provision of expanded local transit services to move students and faculty within the campus and the community.

3.2 Existing Transportation Services

As indicated earlier, Brookings County is located in east central South Dakota. The city of Brookings is the county seat and the fifth largest city in South Dakota. Brookings is situated on Interstate I-29 and U.S. Highway 14 and is located approximately 60 miles north of Sioux Falls, the state's largest city. It is a regional employment, trade, retail, and medical center. As indicated earlier, it is also the home of South Dakota State University and its 11,300 students. The school also has more than 2,000 full and part-time teachers and staff.

The primary means of personal mobility that are typically available in a community include:

- Automobiles
- Transit services
- Taxi services
- Intercity bus
- School buses
- Commercial air service
- Pedestrian and bicycle transportation

Each of these forms of personal mobility will be discussed in the following subsections. Given the relatively current nature of the *Transportation Gap Analysis & Recommendations* report prepared by SURTC for the City of Brookings in October 2007 (Ripplinger and Mielke), much of the information from that report in incorporated into the remainder of this chapter.

3.2.1 Automobiles

Personal automobiles are used to satisfy most of the personal mobility needs of area residents. Based on the estimates presented earlier in Table 3.2, more than 95% of the residents in the Brookings and Brooking County live in households that have a personal automobile. This number is slightly higher than the statewide average (94%) and considerably higher than the national average (90%). This finding is typical of rural areas where fewer personal mobility options are available.

As indicated earlier in Table 3.2, it is estimated that approximately 900 people in Brookings reside in households that do not have a personal automobile. There are more than 200 people in other portions of Brookings County that live in no-vehicle households.

According to the U.S. Department of Transportation's 2001 National Household Transportation Survey, American's average about four trips per day and 87% of all trips are made via personal vehicle. As would be expected, persons without a driver's license tend to make the fewest trips per day. Based on a 2.6 trips per day average, Brookings residents without direct access to automobiles need to make an estimated 2,300 trips per day.

According to the 2000 Census, the city of Brookings had 10,648 workers age 16 and older. Of these workers, 87% reported that they commute to work in personal vehicles and nearly 89% of these commuters drive alone. Another 8.5% of Brookings' workers reported that they walk to

work and 2.8% work at home. Less than 1% indicated that they commute to work via public transportation or taxi. These private vehicle usage statistics are comparable to the rest of South Dakota and the nation.

3.2.2 Transit Services

Brookings Area Transit Authority provides daily demand-response dial-a-ride public transportation services in Brookings and outlying communities including Volga, Arlington, Bruce, Bushnell, and Elkton. These services will be discussed in detail in Chapter 4.

In addition to the public transportation services provided by BATA, ADVANCE, a local private non-profit organization, operates 29 vehicles to serve its developmentally disabled clientele. It provides support to seven group homes, two apartment complexes, and many individuals who live independently.

There is a high degree of coordination between ADVANCE and BATA. ADVANCE regularly relies on BATA to provide service to its clients when it is unable to do so. BATA also provides transportation to employees working at Larson Manufacturing. Individuals living independently make more regular use of BATA than other ADVANCE clients. Brian Ardry, an ADVANCE employee, is a member of the BATA board of directors and is able to represent ADVANCE in this capacity.

ADVANCE and BATA work jointly to procure a vehicle for ADVANCE's fleet. ADVANCE provides the 20% local match required for purchase of vehicles. ADVANCE is responsible for the cost of vehicle maintenance and operation while BATA is able to count rides delivered for state reporting.

Additional local transit services are provided by the Brookings Boys & Girls Club for after school, evening, and weekend programming for area youth and by Vocational Rehabilitation Services for their clients' unique transportation needs. Vocational Rehabilitation's assistance may include purchasing trip tickets for use with BATA.

3.2.3 Taxi Services

There are no traditional taxi services available in Brookings at the present time. Until 2008, Brookings Area Cab (BAC) operated a sedan and a minivan and provided traditional taxi services within the city and between Brookings and neighboring communities.

When BAC chose to discontinue business in 2008, BATA began offering same day service with a fare differential that encouraged patrons to order service one day in advance. BATA's related services will be discussed in Chapter 4.

Limited local taxi service is provided by Easycab which operates out of the neighboring community of Volga, located seven miles west of Brookings. Easy Cab operates Thursday, Friday, and Saturday evenings from 8 p.m. to 3:30 a.m. and provides services related primarily to late night entertainment.

3.2.4 Intercity Bus

Intercity bus services are provided to area residents by Jefferson Lines. Jefferson operates in 11 states throughout the country's mid-section. Brookings is served by the carrier's route which runs along I-29 from Kansas City to the Canadian border and northward to Winnipeg, Canada. Jefferson Line routes in the vicinity of Brookings are presented in Figure 3.3.

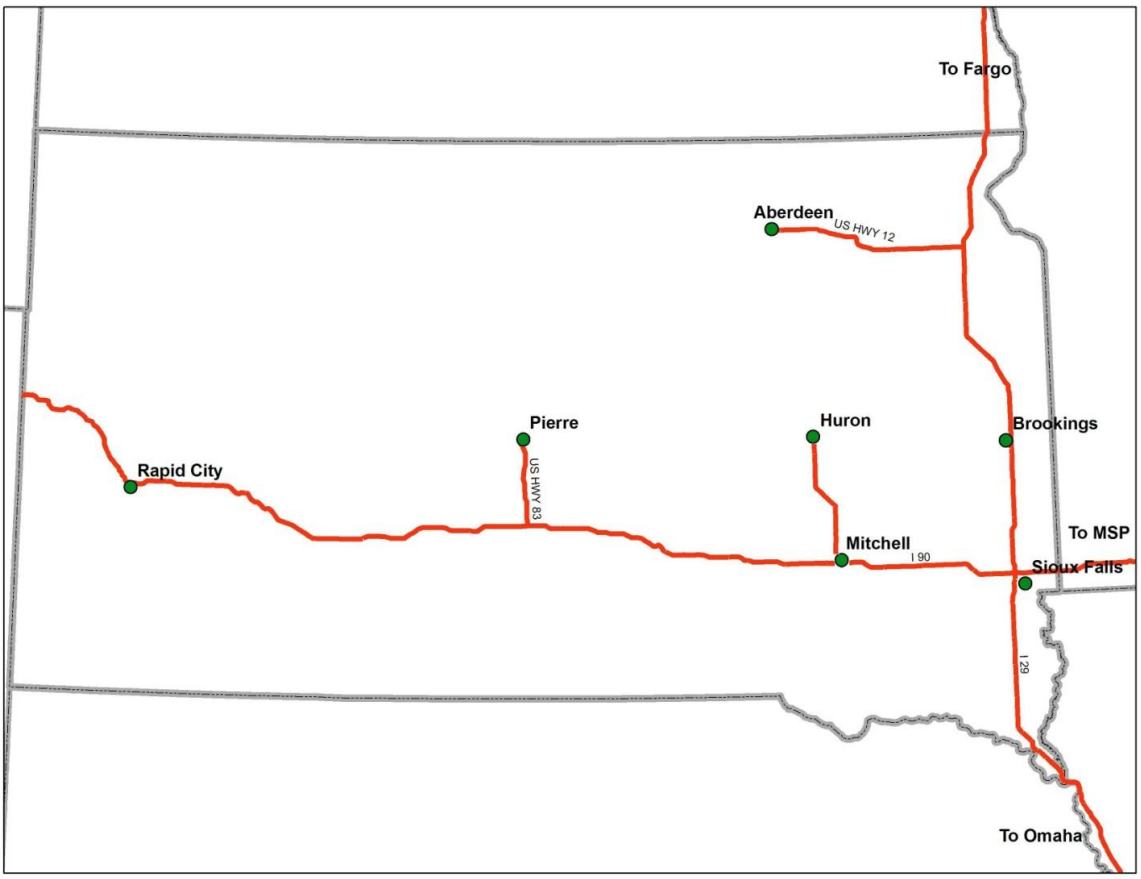


Figure 3.3 Jefferson Lines Route Map

Jefferson runs one northbound and one southbound bus daily through Brookings. Travelers wishing to travel east or west can make corresponding bus connections at either Fargo, ND, or Sioux Falls, SD. These and other connections provide area travelers with access to the bus services that traverse the nation. Area residents can use BATA to travel to and from Jefferson Lines local depot.

Area residents also have access to an airport shuttle service that operates between Brookings and Sioux Falls. This service is run by GP Auto, which also operates a service station, auto tire and repair business, and car rental company.

This shuttle service runs on demand but normally requests bookings one day in advance. The company uses up to three minivans and charges one passenger $70 for a one-way trip and $110

for a roundtrip. Additional passengers are transported at a rate of $15 each for one-way travel and $20 each for round trips.

3.2.5 School Buses

The Brookings public school district encompasses the city of Brookings and the surrounding area. The district has approximately 2,750 students enrolled in kindergarten through grade 12. The district operates three elementary schools, one middle school, and one high school, all of which are in the city of Brookings. There are two small, church-run private schools which may be opening in Brookings in the near future. Both of these schools will be grade schools.

The school district operates nine rural bus routes which transport rural students to and from school each day. The district strives to limit one-way travel times to 60 minutes or less. As these buses enter the city, they travel to the nearest school, drop students off, and then travel on to other schools to drop off other students.

The district does not operate any in-town bus routes. Rural route buses will, however, transport in-town students from one school to another. Students may, therefore, travel to a nearby school and ride a bus to one of the district's other campuses. These riders must, however, make their own travel arrangements to get to a nearby school in order to ride a bus to another district school. Reverse travel arrangements are available at the end of each school day.

In addition to these nine rural route buses, the district also operates two special needs buses which transport students between schools and to various local activities during the school day. These buses are 9-12 passenger vehicles and are handicap accessible. The school district contracts with BATA to provide daily trips to Sioux Falls for educational programs for special needs students.

The district also owns and operates activities buses which are used to transport students to out of town extracurricular activities. One of these vehicles is handicap accessible.

3.2.6 Commercial Air Service

Until recently, Brookings area residents had access to the nation's air passenger network via the Brookings Regional Airport. Local air service was provided by Great Lakes Airlines with daily service to and from Pierre, the state capital, with continuing service to Denver and beyond. This service was discontinued in 2009. Community leaders continue to recruit new carriers in an effort to resume this service.

Local air travelers have the option of traveling to Sioux Falls to access air service. The Sioux Falls Regional Airport is located near the intersection of I-29 and I-90, approximately 55 miles from Brookings. Sioux Falls Regional Airport is served by six airlines and has non-stop service to Minneapolis-St. Paul, Chicago, Denver, Cincinnati, Las Vegas, Orlando, Atlanta, and Salt Lake City. BATA provides service between Brookings and the Sioux Falls airport upon request.

3.2.7 Pedestrian and Bicycle Transportation

Walking and bicycling can be very viable and efficient forms of transportation but usage is dependent on a number of factors, including the distances involved, available facilities such as sidewalks and bike paths, an individual's physical condition, and weather.

Brookings, with a surface area of approximately 12 square miles and a relatively flat terrain, is well-configured to promote pedestrian and bicycle transportation. Weather extremes may, at times, inhibit walking and bicycling but the climate is generally conducive to non-motorized commuting several months per year.

Census data indicates that 8.5% of the commuters in Brookings County report that they walk to work. For Census purposes, this category includes bicycling. Brookings County's level of participation in this means of commuting is considerably higher than is reported in either South Dakota or the nation, where such reports reflect participation levels of 4.5% and 2.9%, respectively.

4. SERVICES, OPERATIONS, VEHICLES, AND FACILITIES

The purpose of this chapter is to document current BATA operations as background for recommendations that will be presented in later chapters. This chapter consists of three parts including a description and evaluation of existing transit services, a description and evaluation of major functional areas within the organization, and finally, an assessment of the transit system's vehicles and facilities. The chapter concludes with a summary of the key findings and recommendations.

4.1 Description of Public Transit Services

BATA's mission is to provide public transportation to residents of Brookings County, South Dakota. The majority of BATA's service is advanced reservation demand-response service and is concentrated in the City of Brookings and immediate surrounding area. Service is provided seven days a week. Monday through Friday service is available between 5 a.m. and 10 p.m.; Saturday service is provided between 7 a.m. and 10 p.m., and Sunday, from 7 a.m. to 6 p.m. In addition to service in Brookings and the immediate area, BATA also provides local transportation to residents of outlying communities, including Volga, White, Aurora, Arlington, and Bruce, on an as-needed basis. Medical trips to Sioux Falls are made on an as-needed basis, often several times per week.

Prior day reservations are required for the demand-response service; however, premium, same-day service is available for persons needing an accessible vehicle and for the general public on a space-available basis. A significantly higher fare is charged for the same day reservations. In 2007 BATA established this higher fare to encourage riders to use the more efficient, advanced reservation service it provided, and also to encourage the use of the private taxi that operated in Brookings until the end of 2007. Since that time, BATA has seen a significant increase in same-day reservations even with the higher price. Current routes and service areas are shown in Figure 4.1.

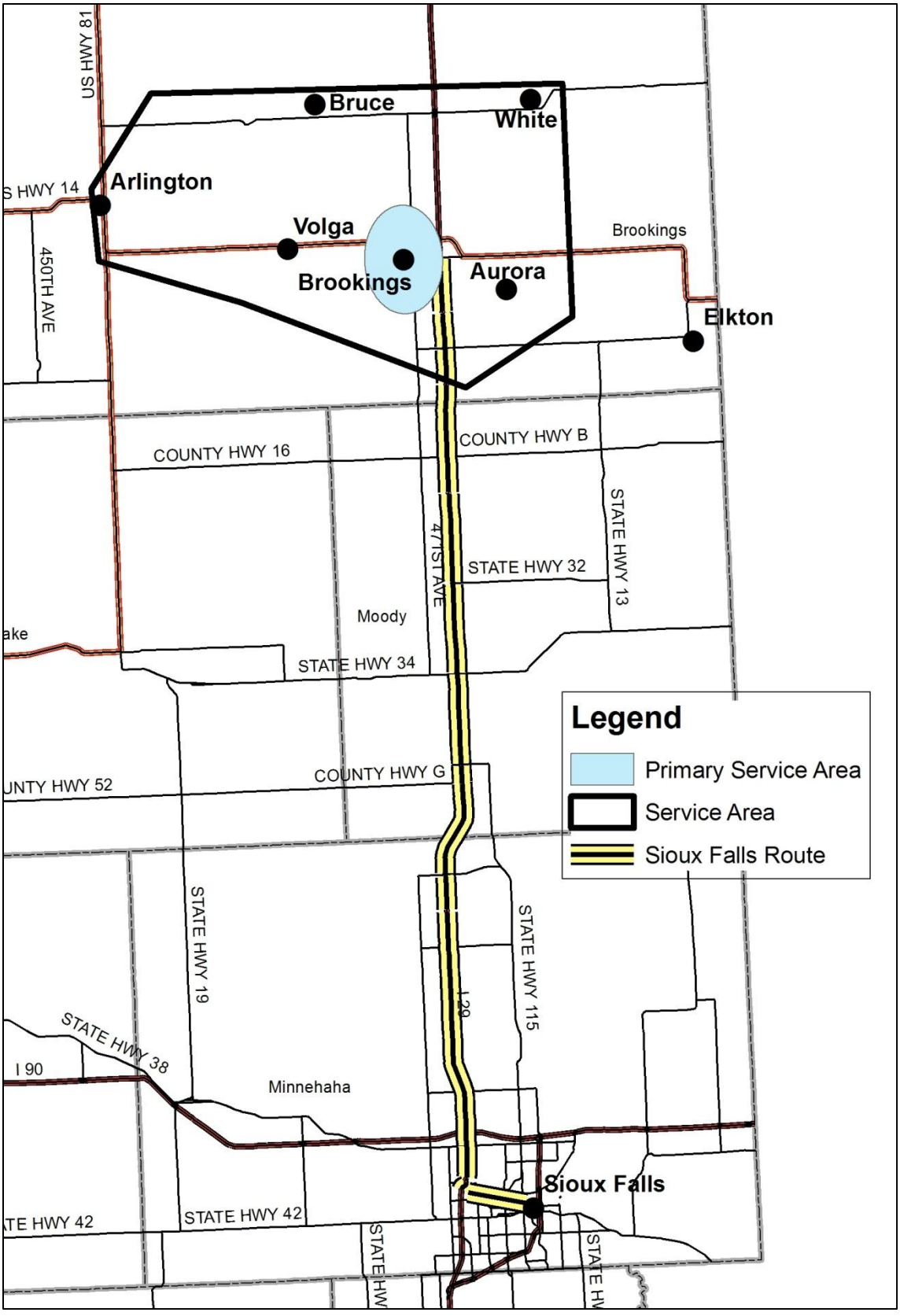


Figure 4.1 Current Service Areas and Routes

In addition to the demand-response transportation, BATA also operates two fixed routes. One route is called the Safe Ride service and is sponsored by the South Dakota State University Student Association. It provides late-night transportation on campus and to points in and around Brookings. It operates this free service from 10:00 p.m. – 3:00 a.m. on Thursday, Friday, and Saturday nights. The Safe Ride Route is shown in Figure 4.2.

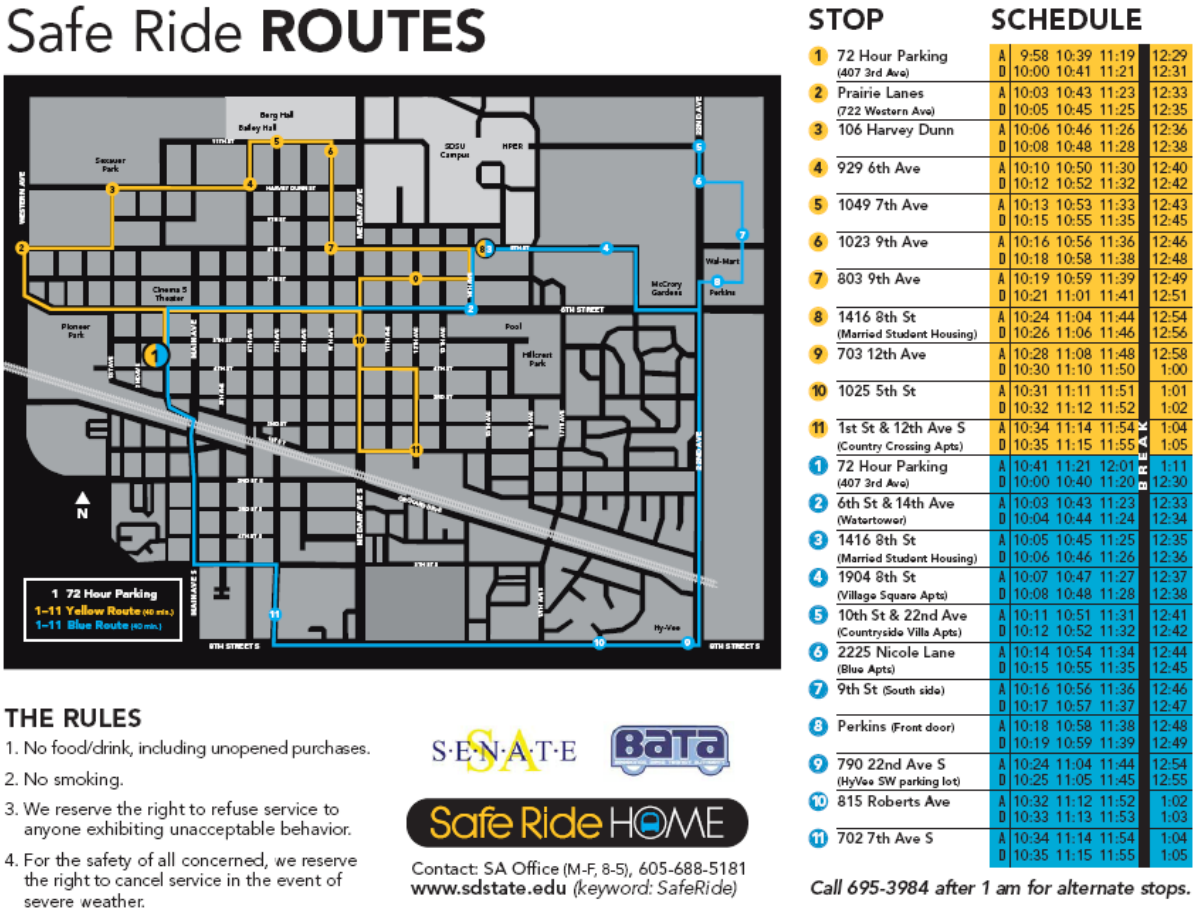
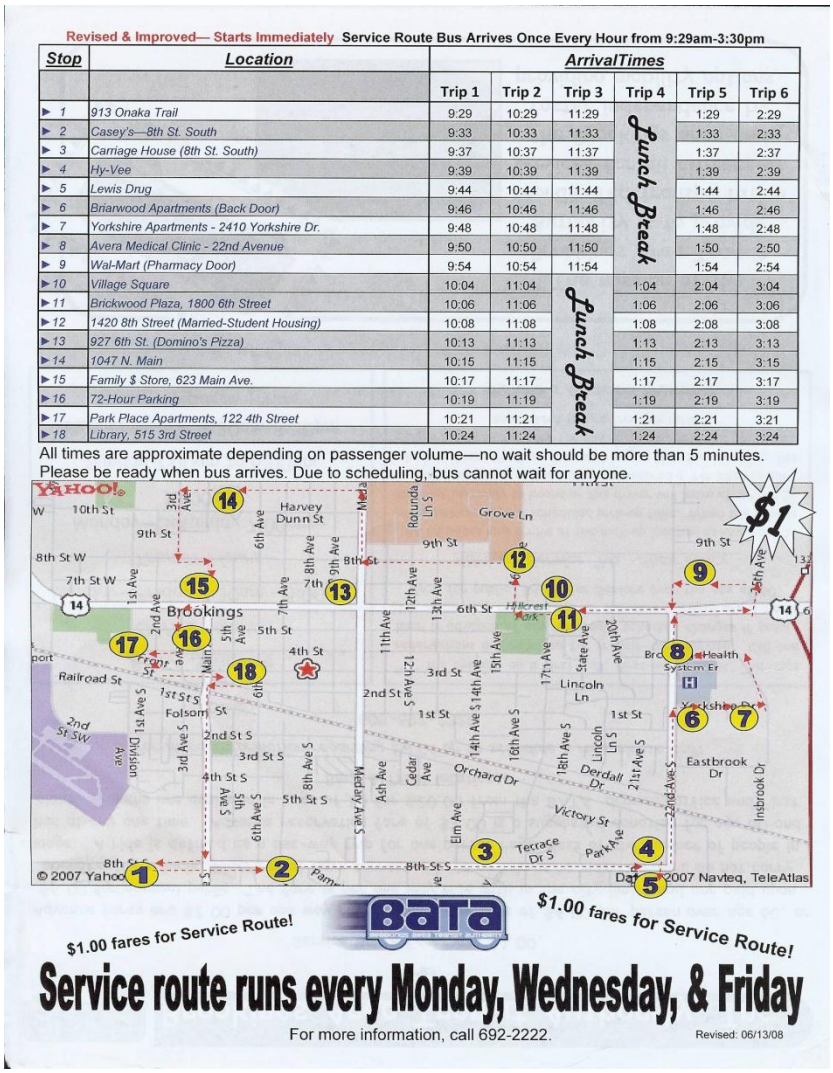


Figure 4.2 Safe Ride Routes and Schedule (Fall 2009)

BATA's other fixed-route service is called the Service Route and it operates from 9:30 a.m. to 3:30 p.m. on Monday, Wednesday and Friday. As shown in Figure 4.3, it follows a prescribed route that serves major medical, shopping and high-density residential areas between 3rd Avenue on the west to 25th Avenue on the east and between 8th St. South and 10th St. North. Persons can access this route by boarding the bus at one of the specified stops.



Revised & Improved— Starts Immediately **Service Route Bus Arrives Once Every Hour from 9:29am-3:30pm**

Stop	Location	Arrival Times					
		Trip 1	Trip 2	Trip 3	Trip 4	Trip 5	Trip 6
▶ 1	913 Onaka Trail	9:29	10:29	11:29	Lunch Break	1:29	2:29
▶ 2	Casey's—8th St. South	9:33	10:33	11:33		1:33	2:33
▶ 3	Carriage House (8th St. South)	9:37	10:37	11:37		1:37	2:37
▶ 4	Hy-Vee	9:39	10:39	11:39		1:39	2:39
▶ 5	Lewis Drug	9:44	10:44	11:44		1:44	2:44
▶ 6	Briarwood Apartments (Back Door)	9:46	10:46	11:46		1:46	2:46
▶ 7	Yorkshire Apartments - 2410 Yorkshire Dr.	9:48	10:48	11:48		1:48	2:48
▶ 8	Avera Medical Clinic - 22nd Avenue	9:50	10:50	11:50		1:50	2:50
▶ 9	Wal-Mart (Pharmacy Door)	9:54	10:54	11:54		1:54	2:54
▶ 10	Village Square	10:04	11:04	Lunch Break	1:04	2:04	3:04
▶ 11	Brickwood Plaza, 1800 6th Street	10:06	11:06		1:06	2:06	3:06
▶ 12	1420 8th Street (Married-Student Housing)	10:08	11:08		1:08	2:08	3:08
▶ 13	927 6th St. (Domino's Pizza)	10:13	11:13		1:13	2:13	3:13
▶ 14	1047 N. Main	10:15	11:15		1:15	2:15	3:15
▶ 15	Family $ Store, 623 Main Ave.	10:17	11:17		1:17	2:17	3:17
▶ 16	72-Hour Parking	10:19	11:19		1:19	2:19	3:19
▶ 17	Park Place Apartments, 122 4th Street	10:21	11:21		1:21	2:21	3:21
▶ 18	Library, 515 3rd Street	10:24	11:24		1:24	2:24	3:24

All times are approximate depending on passenger volume—no wait should be more than 5 minutes.
Please be ready when bus arrives. Due to scheduling, bus cannot wait for anyone.

$1.00 fares for Service Route!

BATA

$1.00 fares for Service Route!

Service route runs every Monday, Wednesday, & Friday

For more information, call 692-2222.

Revised: 06/13/08

Figure 4.3 BATA Service Route

In addition to the demand-response and fixed route services described above, BATA has also contracted with employers and human service agencies to provide other types of demand-response service. Until bankruptcy reorganization required Verasun, a major Brookings employer, to downsize, Verasun contracted with BATA to provide work trip service for its employees that lived in Brookings but worked in Sioux Falls. Likewise, BATA has had several contracts over the years that reimburse BATA for rides taken by youth participating in after school and summer programs. These contracts have declined in recent years. BATA does, however, still operate regular service between Brookings and Sioux Falls to transport special education students for the Brookings Area School District. Finally, BATA offers monthly passes so students can travel on BATA's regular demand-response service to and from school and for after school activities.

In 2008 BATA provided approximately 101,000 one-way passenger trips. According to its records, about half this ridership was accounted for by general public and elderly riders, about a fourth by youth, and another fourth by disabled persons. Figure 4.4 shows the distribution of ridership by rider characteristic. BATA's youth and disabled ridership percentage is exactly the same as the statewide average for all rural systems; however, BATA's 39% general public ridership is significantly higher that the state average of 24% while the senior citizen ridership is less than half (12% vs. 27%) of the statewide average. Undoubtedly, the presence of a major university and the resulting younger population, explains much of this variation.

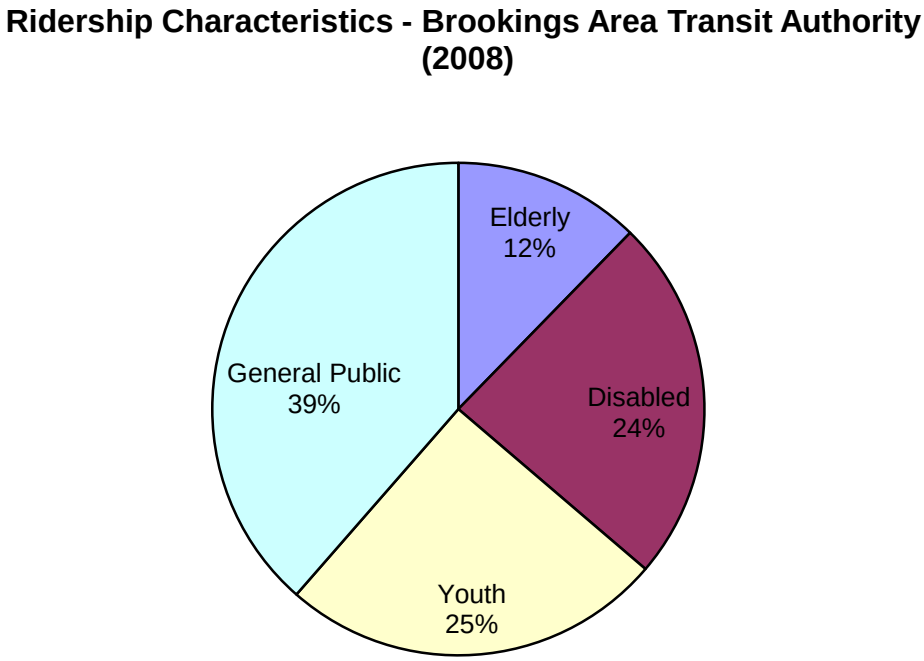


Figure 4.4 BATA Ridership Characteristics

Figure 4.5 shows the 2008 distribution of trip purposes for BATA riders. BATA's pattern is similar to the statewide average except that it has significantly more trips taken for social/recreational trips that the state average, and even though it provides a significant number of school-related trips, it provides a lower percentage of school trips than the state average.

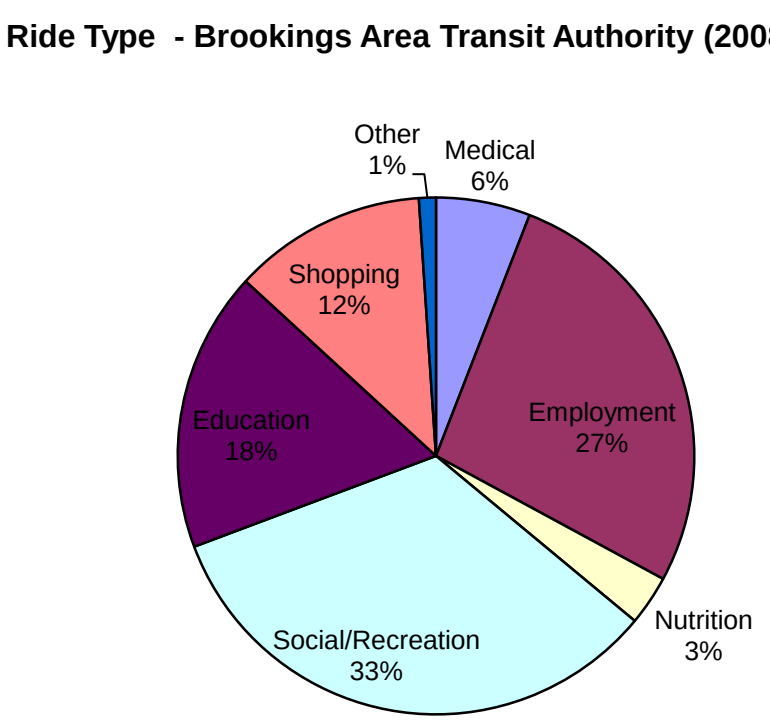


Figure 4.5 BATA Ridership by Trip Purpose

Over the past six years BATA's ridership has doubled while its vehicle miles of service have more than tripled. This expansion has allowed BATA to respond to more trip needs both in the Brookings area and throughout the county, but it has resulted in a reduction in efficiency as measured by passenger trips per mile or per vehicle hour. Further, in 2009, BATA lost a major contract to transport Boys and Girls Club participants. This contract involved transporting a large number of individuals relatively short distances with high vehicle occupancy rates thus resulting in high productivity as measured by passenger trips per vehicle hour. Therefore, the overall BATA system average trips per hour declined. Nevertheless, in 2009 BATA provided an estimated 4.5 passenger-trips per vehicle hour, a good performance level for rural demand responsive services. Figures 4.6 and 4.7 show recent trends in total expenses and expenses per mile, two frequently used measures of efficiency. While total expenses have increased each year, the expenses per mile have decreased as BATA operates significantly more miles without proportionately increasing its administrative expenses.

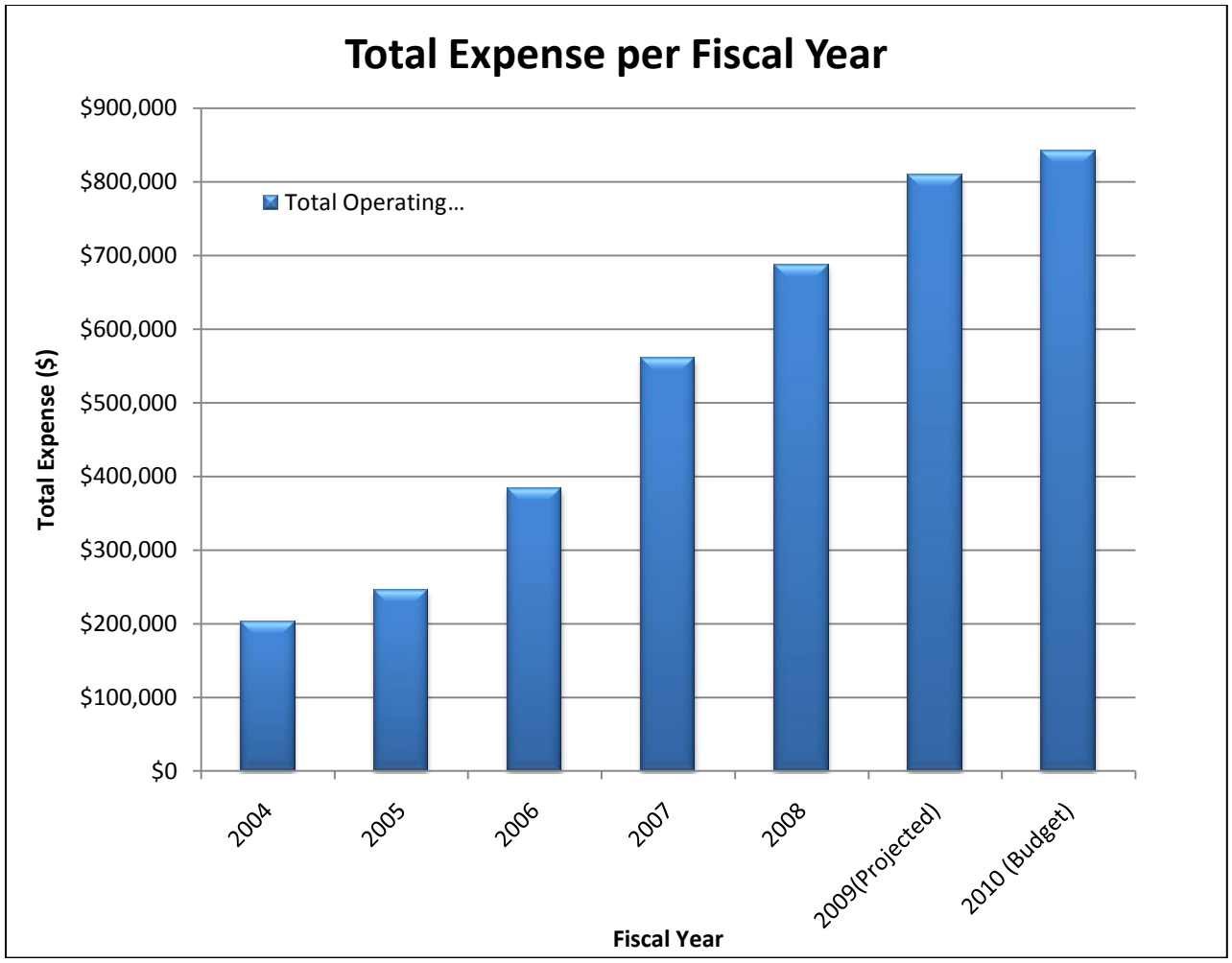


Figure 4.6 Operating Expenses 2004-2010

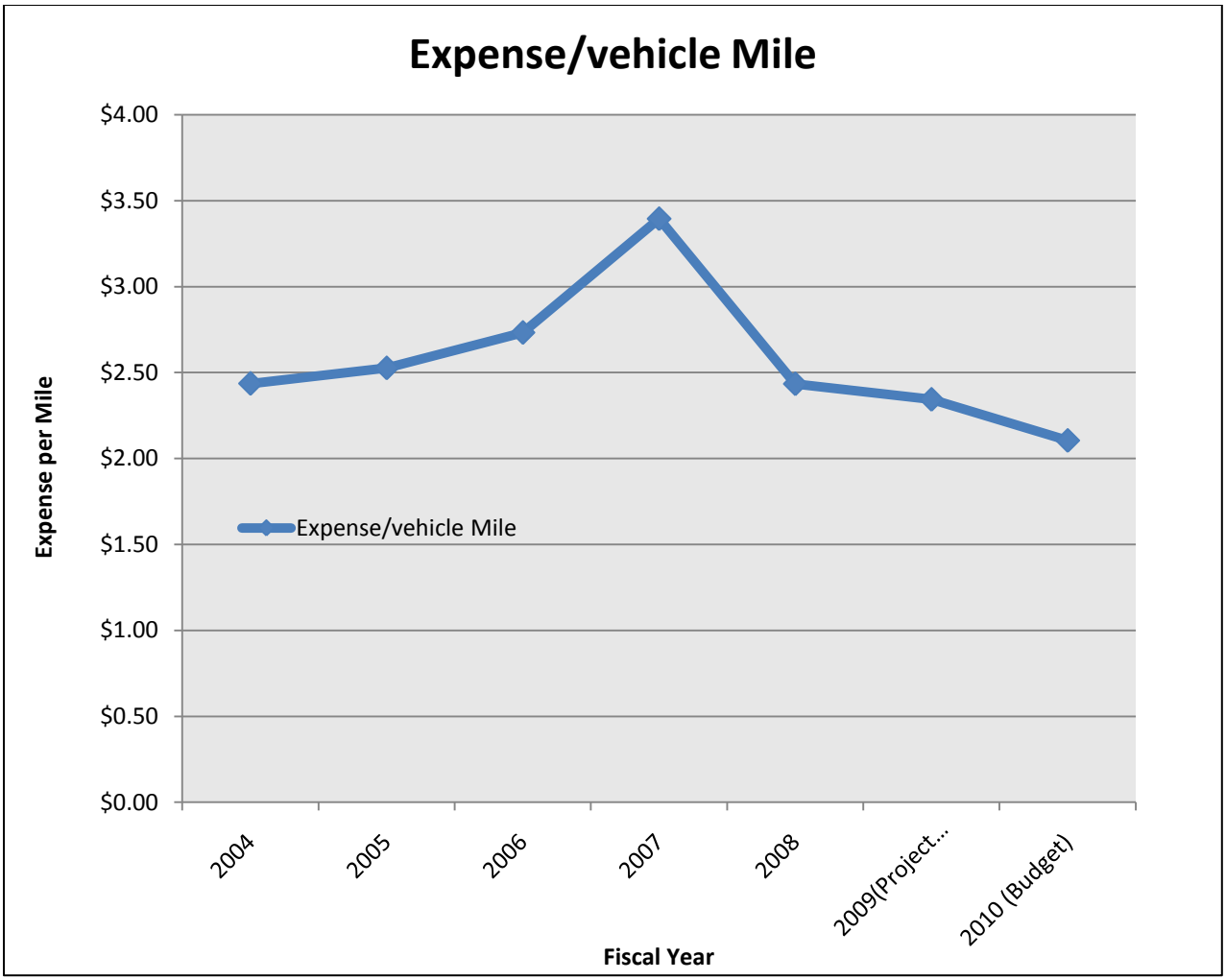


Figure 4.7 Operating Expenses Per Vehicle Mile

Each of BATA's services (in-town demand response, out-of-town, and fixed routes) perform differently when compared on the basis of one-way trips per vehicle hour – a key measure of performance. While BATA's overall performance is comparable to or better than other similar systems, some of the services may be under-performing. For example, BATA staff report that they are disappointed with the performance of the Service Route. BATA's scheduling and dispatching software can produce reports on miles, hours and passenger trips by route, vehicle, time of day, etc., that should be used to conduct a more thorough analysis of BATA's individual service performance.

4.2 Fare Structure

BATA 's current fare structure is shown in Table 4.1 The fare level depends on whether the rider makes an advanced reservation or requests same-day service, the length of the trip (for out-of-town trips), and the type of service. The Safe Ride fixed route is free because the service is sponsored by the SDSU Student Association. The Service Route fixed-route fare is $1. As a

convenience, BATA offers rolls of tokens and offers a discount by selling them at a rate of 11 tokens for $20 for use on its regular in-town services.

BATA also offers parents the opportunity to purchase monthly or semester passes to cover the cost of transporting their children to and from school and for after school activities. The current pass rates represent a slight discount over cash fares for regular use, but they allow riders to travel without worrying about carrying cash or tokens.

Table 4.1 BATA Fare Structure

Service Type	Advanced Reservation	Same Day
Local Demand Response Services		
Local demand-response service within city of Brookings	$2.00	$5.00
Demand-response within 5 miles of Brookings	$5.00	$10.00
Out-of-Town Transportation		
Brookings – Sioux Falls (Scheduled on Mondays)	$15.00	NA
Volga and Aurora	$5.00	$10.00
Bruce and White	$12.00/round trip	$20.00/round trip
Other communities	$1.75/mile	NA
Watertown (First Tuesday of Month)	$15.00	
Fixed Routes		
Service route	NA	$1.00
Safe Ride route	Free	Free
School Student Passes		
Semester	$125 one-way	$250 round trip
Monthly	$40 one-way $70.00 round trip	
Tokens for local services	$20 for 11, $2.00 ride	

4.3 Scheduling and Dispatching

BATA uses state-of-the-art call-taking, scheduling, and routing software and hardware to improve the efficiency of its operation and to take advantage of efficiencies that reduce expenses and increase the number of trips that can be performed within a limited number of driver hours that are available. BATA is one of nearly a dozen South Dakota and North Dakota rural transit systems that joined in a consortium in 2006 and 2007 to install routing and scheduling software provided by Shah Software. BATA can also track the location of all vehicles using the automatic vehicle location (AVL) capabilities of the Greyhawk Technologies software and on-board mobile data computers (MDC) installed on each vehicle.

BATA's policy is to require advanced reservations for most trips. Trips requiring advanced reservation must be called in the prior day during regular business hours of Monday – Friday from 8 a.m. – 5 p.m.

BATA employs three full-time dispatchers who take reservations. After regular office hours, dispatch center calls are forwarded to a driver's cell phone to allow for same-day reservations and to schedule return trips. However, these drivers are not allowed to take future reservations. Weekend drivers also use a cell phone, but they do take reservations and write them on a form and give them to the dispatchers on Monday morning. Increasing call volumes, combined with the possibility of driving distractions related to talking on a cell phone or text messaging, may warrant longer hours by BATA's dispatch office.

BATA, as is the case with all demand response transportation providers, must deal effectively with the problem of no shows in order to maintain efficient operations. BATA's policy is that riders must be ready for a pick-up as much as 15 minutes before the scheduled pick-up time, and the bus will wait only five minutes past the pick-up time. Failure to be ready within this window results in a no-show violation. No shows must pay the full fare for the trip they miss and may also lose riding privileges for excessive no shows.

4.4 Maintenance

BATA's vehicle maintenance is provided by the Brookings County Highway Department garage located on the same parcel of land as the BATA's office and storage facility at 418 Western Avenue just south of U.S. Highway 14 west of downtown Brookings. This outsourcing of the maintenance function began years ago when BATA operated only five or six buses. However, now that the fleet has grown to more than 20 vehicles and the size and type of vehicles has become larger and more complex, this arrangement is less satisfactory than it was several years ago. Nevertheless, BATA has received a high level of service from the county at an extremely reasonable expense.

BATA's assistant director and statistics manager are responsible for scheduling and tracking maintenance. When a driver reports a problem with a vehicle, or if the assistant manager needs to schedule routine maintenance, the assistant manager places a work order with the county garage supervisor. The county garage provides a detailed work order for each repair or service and this information is entered into the maintenance tracking portion of the Shah Software by the statistics manager.

BATA uses the county garage for most non-warranty service on the buses and vans. However, as BATA has grown and its needs have strained the county's ability to provide prompt service, BATA has begun using private garages for some maintenance.

BATA's maintenance needs already exceed what the county garage can absorb without jeopardizing maintenance service for other county vehicles. As BATA's regular demand response fleet grows, this problem will get worse. Furthermore, this business plan calls for the significant expansion of BATA's services to include up to six fixed route buses serving the

SDSU campus and community. These larger (perhaps 30' transit coaches) will require maintenance space and capabilities beyond those now available through the county and therefore will be another reason for BATA to consider changing the way it handles maintenance. A corresponding recommendation for a new BATA transportation center, office, maintenance, and storage facility is presented in Chapter 5.

4.5 Human Resource Management

BATA is a stand-alone nonprofit corporation that currently employs 12 full-time and 16 part-time individuals. This employment roster includes three full-time administrative staff, three full-time dispatchers, six full-time drivers, and 16 part-time drivers. Because it outsources its maintenance activities, BATA employs no mechanics. None of the employee groups is represented by a collective bargaining unit.

BATA has a personnel manual that outlines policies, rules, and benefits for all employees. Full-time employees receive health insurance, accrue vacation and sick leave plus they are eligible for BATA contributions to retirement savings. Part-time employees receive proportional benefits for health insurance, sick leave, and vacation time. BATA's personnel policy was approved by BATA's board of directors, but one of the action items for this business plan is to conduct a thorough review and consider revisions to the current policies within the next year.

BATA's executive director is hired by the board and manages human resources including hiring and firing all other employees. She is assisted by the office manager who keeps all employee records, and by the assistant manager who maintains employee performance and discipline records.

4.6 Financial and Management Information Systems

BATA's office manager is responsible for all bookkeeping operations. BATA uses QuickBooks software to keep its accounting records and is aided by a local accounting firm that prepares IRS 1099 forms and performs an annual audit. The office manager is responsible for depositing fares and other receipts and works with the executive director to manage accounts payable and receivables. The office manager is also responsible for preparing monthly, quarterly, and annual reports needed to obtain federal, state, and local contract reimbursement. Operating statistics and ridership records required for some of these programs are provided by the statistics manager who generates the reports using the scheduling and dispatching software.

BATA uses an accrual accounting system and has been able to meet all federal requirements of the National Transit Database. However, additional work is required to fine tune the collection of operating data for these reports.

BATA faces continued and increasing difficulty in raising the local match required for capital and operating grants. Like most other rural transit operations, the organization is not in a position to build meaningful reserves to cover future capital purchases and has difficulty with cash flow because it is unable to maintain an adequate working capital level. Because nearly all

of BATA's funding is provided by federal, state, and contracting agencies on a reimbursement basis, BATA must float about two months' expenses on a regular basis. It does not, however, have the equivalent of one-sixth its operating budget as a working capital reserve. One of the action items for this business plan is to work to build support through local match and increase the working capital available to the organization.

4.7 Marketing and Public Awareness Activities

The responsibility for BATA's marketing effort falls on the executive director with assistance from other administrative staff members. Like most small rural transit operations, the marketing function has a small budget ($13,000 for 2010). Therefore, marketing activities must be low-cost, but effective. Some of the activities undertaken by BATA within the past year include:

1. Project presentations
2. Job and service fairs
3. Collaboration with city, county, United Way, Chamber of Commerce, Boys and Girls Club, GAP, Advance, SDSU, etc.
4. Brochures (distribution to healthcare facilities, senior housing, projects, chamber, various businesses, SDSU, etc.)
5. Radio ad sponsorship
6. Newspaper advertising
7. Vehicle advertising that also promotes BATA services
8. Professional uniforms
9. Internet website www.brookingsareatransit.com that provides detailed information on services, routes, and fares.

Future marketing efforts will be required as the SDSU fixed-route services are introduced. These efforts will include bus stop signs and a much more robust website with route and schedule information, and perhaps real-time vehicle location information that is available through the existing AVL technologies on the buses.

4.8 Vehicle Fleet

BATA operates its transit services using a fleet of 21 vehicles. Approximately 16-17 vehicles are required during periods of maximum service so BATA usually has four to five vehicles in reserve. Several types of vehicles are used to meet current needs including minivans, small cutaway buses, larger buses, and, more recently, Sprinter vans.

Table 4.2 shows the current roster of vehicles. The average age of BATA's fleet is 4.8 years. However, if the two 1995 vehicles which are used very occasionally are omitted from this calculation, the fleet age is 2.8, a relatively "young" fleet age. Because BATA has been successful in acquiring new vehicles in the past few years, its fleet is up to date with the exception of the 2003 Ford E-450 cutaway buses that are nearing the end of their useful life.

BATA's mix of vehicle size is sufficient for its current operations and has been greatly enhanced by the acquisition of the fuel-efficient Sprinter buses in 2007 and 2008. The only major fleet issue facing BATA, in addition to routine vehicle replacement, is the acquisition of up to six large transit coaches for use on the SDSU campus service that is proposed in this plan. These buses will be at least 30' long and have a capacity of 30+ passengers. Heavy duty transit buses of this type require different maintenance equipment and practices and cost significantly more than the typical bus now used by BATA and other rural demand-response systems. More will be said about this fleet need later in Chapter 5.

Table 4.2 BATA Vehicle Roster (September 2009)

ID #	Year	Chassis	Body	Fuel	Accessible?	Capacity	WC Positions	Mileage*	Life Expectancy	Earliest Replacement	Desired Replacement
1	2003	Ford E-450	Star Trans	Diesel	Yes	18		129,693	5	2008	2010
2	2003	Ford E-450	Star Trans	Diesel	Yes	18	2	123,768	5	2008	2010
3	2003	Ford E-450	Star Trans	Diesel	Yes	18	2	123,056	5	2008	2010
4	2003	Ford E-450	Star Trans	Diesel	Yes	16	2	125,047	5	2008	2011
5	2005	Dodge	Sprinter	Diesel	No	9	0	69,190	6	2011	2011
6	2006	Dodge	Sprinter	Diesel	Yes	7	2	98,972	6	2012	2012
7	1995	Ford	Winstar	Gas	Yes	2	1	53,117	6	2001	2010
9	1991	International	School Bus	Diesel	No	47	0	262,333	5	1996	2014
10	2007	Chevrolet	Champion	Diesel	Yes	22	2	54,974	6	2013	2013
11	2007	Chevrolet	Champion	Diesel	Yes	20	2	55,641	6	2013	2013
12	2007	Dodge	Sprinter	Diesel	Yes	12	2	50,888	6	2013	2013
14	2007	Chevrolet	Supreme	Diesel	No	25	0	18,147	5	2012	2014
15	2008	Chevrolet	Uplander	Gas	Yes	3	1	47,224	4	2012	2012
16	2004	Chevrolet	Venture	Gas	No	5	0	112,094	4	2008	2011
17	2006	Dodge	Sprinter	Diesel	Yes	7	2	37,562	6	2012	2012
19	2008	Chevrolet	Uplander	Gas	Yes	3	1	20,669	4	2012	2013
20	2008	Dodge	Sprinter	Diesel	No	16	0	6,129	6	2014	2014
21	2008	Dodge	Sprinter	Diesel	Yes	11	2	5,162	6	2014	2014
22	2008	Dodge	Sprinter	Diesel	No	16	0	887	6	2014	2014
23	2009	Dodge	Caravan	Gas	Yes	3	1	763	4	2013	2014
26	1995	Ford E-350	Cutaway	Diesel	Yes	16	1		5	2000	2012

4.9 Facilities

BATA's administrative offices and bus storage facilities are housed in a 113' x 62' pre-engineered building that BATA constructed in 2004 on land adjacent to the Brookings County Highway maintenance department yard in Brookings. The building is adequate for BATA's current administrative and dispatching office needs, but only provides indoor storage for about half of BATA's current fleet. The building includes one bay that can be used for minor maintenance such as oil changes and inspections, but has no capability to accommodate major maintenance activities. The office portion of the building contains a second floor that is in the process of being finished to create a meeting and training room.

These facilities are barely adequate for BATA's current needs. BATA has proposed new services such as the campus transit system and a regional transportation center and these programs will require significant new space at a new, more central location. More details about the proposed facility are included in Chapter 5.

4.10 Summary of Key Findings and Recommendations

The purpose of this chapter has been to provide a review of each major aspect of BATA's service and internal organization for the purpose of identifying changes and initiatives that BATA can undertake within the next five years to accomplish its mission and objectives. The following are the key findings from each of the nine areas addressed.

4.10.1 Services

1. BATA provides a high level of demand-response service to the Brookings area along with modest coverage of outlying areas throughout the county.

2. Overall operating efficiency, as measured by one-way trips per vehicle hour, is good and in the range of 4.0 trips/hour. More detailed analysis of individual services and service areas should be undertaken using data available from Shah Software reports.

3. The most significant new service that BATA should consider is a fixed-route service for the SDSU community. Adding up to six fixed-route buses could nearly double BATA's budget and greatly increase its ridership.

4. BATA should consider the addition of at least one vehicle to its rural services, perhaps to the Arlington area.

5. If BATA is able to construct a transportation center, it should seek to reestablish itself as the intercity bus agent for Brookings.

4.10.2 Fare Structure

1. BATA has a simple fare structure that reflects the distance traveled and whether riders make advanced reservations or request same-day service.

2. BATA may need to raise its $2.00 per trip fare within the next several years to obtain additional revenue.

3. The proposed campus service should use the UPASS model whereby students and/or the university prepay fares so that students, faculty, and staff ride free.

4.10.3 Scheduling and Dispatching

1. BATA uses state-of-the-art scheduling, dispatching, routing and AVL hardware and software.

2. BATA may need to add dispatchers to cover evening hours and weekends as its services grow.

4.10.4 Maintenance

1. BATA's fleet and the attendant maintenance needs have outgrown the Brookings County Highway Department's ability to provide maintenance. BATA will need to continue to outsource some maintenance services to private garages unless it is able to build a new facility and employ its own maintenance staff.

2. BATA should plan for a new maintenance, storage, and office facility that is adequate to maintain the existing fleet plus the fixed route buses that are required to operate the SDSU routes.

4.10.5 Human Resource Management

1. No changes recommended.

2. BATA should review and revise its personnel manual within the next year.

4.10.6 Financial Management

1. Office manager's title should be changed to finance director to recognize present duties.

2. BATA's board of directors should adopt a working capital policy that specifies a goal of having from one to two months expenses in reserve to cover working capital.

4.10.7 Marketing

1. No changes are suggested concerning the marketing of current services.
2. With the addition of the SDSU fixed-route services, the website should be expanded to offer more information and perhaps real-time schedule information.

4.10.8 Vehicle Fleet

1. The current fleet of 21 buses and vans is up to date and meets BATA's current needs.

2. BATA will need to program the replacement of 3-4 vehicles per year in order to keep its fleet up to date, efficient and reliable.

3. BATA will need at least six full-sized (30 ft.) transit coaches to operate the SDSU service.

4.10.9 Facilities

1. BATA's current facility located on the property of the Brookings County Highway Department is barely adequate for its existing operations, especially in terms of indoor bus storage and maintenance space.

2. BATA should plan for a new administrative, maintenance, storage, and transportation center building in order to accommodate current and future operations.

5. SERVICE OPTIONS AND FIVE-YEAR OPERATING AND CAPITAL BUDGET

The purpose of this chapter is to project five-year operating and capital budgets for BATA. These estimates will consider the expenses associated with the continued operation of existing services, plus the impact of several service improvements; most notably, the addition of fixed-route service for SDSU and the construction of a new transportation center that will house all BATA activities.

The challenge facing BATA, and most other rural transit systems, is to obtain sufficient funding to operate all of the services needed within their communities because the needs almost always out-strip funding. In BATA's case, the ability to raise local matching funds will in large part determine the extent to which BATA can implement this plan. Without significant new sources of funds for the campus service and the transportation center, these opportunities will not be realized. Furthermore, without growth in the levels of existing federal, state, and local funding, BATA will not be able to maintain its existing services.

The next section of this chapter summarizes and forecasts the financial aspects of BATA's existing and proposed services. It includes a five-year projection of operating revenue, expenses, and federal, state, and local financial support requirements based on assumptions about inflation of expenses and growth in revenue.

5.1 Proposed Service Changes

BATA has identified six service initiatives that it would like to pursue over the next five years. These initiatives include:

1. Construction of a transportation center and new administration, maintenance and storage facility for BATA.

2. Fixed-route bus service on the SDSU campus and between the campus and surrounding areas within Brookings

3. Intercity bus depot located at the transportation center with BATA acting as intercity bus agent.

4. Expanded rural service to Arlington (one or more days per week)

5. At least one additional work shuttle between outlying areas and Brookings.

6. Expand demand-response service in Brookings area to 24/7.

The first three initiatives are the highest priority and most expensive and will only be implemented if capital and operating funds can be obtained for both the building and the fixed-route buses. Expansion of service to around the clock, 24/7 coverage is the next priority. It is

also the highest short-term priority since it could be implemented without significant lead time or capital expense. Adequate funding, especially local share, is the key to the start of the 24/7 service. The other initiatives, expanded rural service and additional work shuttle service, may also be possible if modest increases in federal, state, and local matching funds can be obtained. Each of these options is described below along with estimates of capital and operating expenses, ridership and revenue.

5.1.1 Transportation Center and Administrative, Maintenance, and Bus Storage Facility

Since building its current office and bus storage facility in 2004, BATA has more than tripled the number of buses and the amount of service it offers and has outgrown the space available. Because expansion options are extremely limited on the present site, BATA has explored options for moving its entire operation to another larger facility. At the same time that it has been considering this expansion, it has also been studying the feasibility of greatly expanding service to the SDSU community through the addition of up to five fixed routes that would be served by large transit buses. Maintenance and storage of up to six of these larger buses is beyond the capacity of the existing maintenance and storage capabilities at the county site.

BATA has also explored ways that it could better serve local residents seeking intercity bus connections by reestablishing itself as the Jefferson Bus Lines agent and providing a high-quality intercity bus station for Brookings. More detailed information on the intercity bus depot option and the SDSU fixed route plans are presented later in this section. The following paragraphs identify the requirements of a new transportation center and BATA facility that would accommodate both BATA's current administrative, storage, and maintenance needs while allowing BATA to offer the SDSU fixed route service and intercity bus connection.

A new BATA building will need to provide for four functions: administrative offices, bus maintenance, bus storage, and an intercity bus station/transportation center. The size and capabilities of each functional area will need to accommodate BATA's projected operations, assuming further growth in its existing demand-response service, the intercity bus station/transportation center, and the significant expansion in the fleet and personnel needed to operate the SDSU campus transit fixed routes. Table 5.1 summarizes the current and projected staffing and fleet requirements for this future service level. Table 5.2 presents preliminary square footage requirements for each function for the present operations and the proposed system. At this point, these space requirements are preliminary, as is any specific layout arrangement for the new facility.

Table 5.1 Personnel and Vehicle Requirements – Current and Proposed

Staffing	**Current**	**Proposed with SDSU Service and Intercity Bus Transportation Center**
Administrative	General manager Office manager	General manager Administrative assistant Office manager/bookkeeper
Dispatchers	3 - FT dispatchers	3 - FT dispatchers 2 - PT dispatchers
Jefferson Lines agent	NA	1 - PT agent that also dispatches demand response services
Drivers and operations manager	Operations manager 6 - FT drivers 14- PT drivers	Operations manager PT operations supervisor 12 - FT drivers 20 - PT drivers
Mechanics	0 (Provided by Brookings County)	2 - FT (1 lead, one assistant) 2 - PT (2 assistants)
Vehicle requirements	**Current**	**Proposed with SDSU Service and Intercity Bus Transportation Center**
Small buses and vans	18	22
30' transit buses	0	6-8

Table 5.2 Comparison of Current Facility with Future Expansion Options

Function	Current	New Facility
Administrative offices	1st floor - 1,400 sf (reception area, two offices, restrooms, and dispatch office 2nd floor – 1,400 sf unfinished space	2,000 sq ft, reception area, 4 offices, restrooms, training/meeting room
Jefferson Lines terminal	NA	Separate area – 500 sq ft. including customer waiting room, and agent's office plus restroom and secure storage. 5 customer parking spaces and separate entrance.
Scheduling/dispatching office	20' x 30' area for dispatchers and operations manager	Separate area of about 700 sq. ft. including separate office for operations supervisor
Driver lounge/locker room	Combined with dispatching area	Separate area of about 500 sq. ft.
Maintenance bays	1 bay approximately 20' x 30'	3 bays, one for small vehicles (minivans and cutaways), one for major maintenance and one for routine maintenance on larger buses Separate isolated bus washing area
Bus storage	Current capacity 12 vehicles	Storage for 30 vehicles including 22 small buses and vans, and 8, 30' transit buses plus plan for future expansion of storage area Also, at least 30 outside parking spaces for employees and visitors

Table 5.3 provides preliminary estimates of the space requirements and capital costs of the new facility. In the spring of 2009, in response to the South Dakota DOT's request for funding for "shovel -ready" projects to be funded by federal stimulus funds, BATA undertook an intensive, but ultimately unsuccessful search for a suitable location for the proposed facility that would not only be central to BATA's services, but also convenient for users of the transportation center. BATA focused on publicly owned land because the value of that land could be contributed and provide all or most of the matching funds required for this multi-million dollar project. Brookings County has expressed interest in purchasing BATA's existing facility and the proceeds of this sale would be netted out of the new facility cost.

Table 5.3 Estimated Cost and Funding Plan for Facility Expansion

Cost Category	Current	New Facility	
	Units	Units	Cost
Land	Approx. 1 acre	4 acres @ $125,000/acre	$500,000
Maintenance, wash bay, bus storage	4,600 sq. ft.	16,000 sq. ft. @ $80/ sq. ft.	$1,280,000
Office space (including Jefferson Lines terminal, driver area, and dispatching area)	1400 sq. ft.	3,700 sq. ft @ $125/sq. ft.	$462,500
Maintenance equipment, office furnishings			$100,000
Total cost			$2,242,500
Less sale of existing site			$200,000
Net project cost			$2,042,500

5.1.2 Fixed Route Transit Service

Brookings is the home to the South Dakota State University (SDSU), the largest institution of higher learning in South Dakota, with 12,400 students (Fall 2008), and nearly 2,000 full- and part-time employees. SDSU has grown rapidly in the past few years with enrollment now 30% higher than it was in 2000. This growth has led to the addition of buildings and facilities, but it has also expanded the size of the built-up part of campus so that residences, parking, research, and classroom buildings are further apart and walking distances have greatly increased.

Over the past few years, BATA has worked with student and SDSU administrative staff to determine the need for transit services to support current and proposed university development. As a result of this collaboration, BATA, in partnership with the SDSU Student Association, provides the Safe Ride program that offers fixed-route service between downtown Brookings and residential areas on Thursday, Friday, and Saturday nights between 10 p.m. and 3 a.m. This service, which began in 2006, has been well received and has helped foster a positive relationship and ongoing communication between BATA and SDSU student leaders.

In 2006, BATA, in cooperation with a steering committee whose membership represented SDSU students, administration, BATA, and the city of Brookings, contracted with the Small Urban & Rural Transit Center (SURTC) at North Dakota State University, to perform a more detailed analysis of the need for and interest in an increased level transit service for the SDSU community. The study included a survey of students and faculty/staff that documented a high level of interest in increased transit service, and a willingness to help pay for it through student fees. The study also developed fixed-route service alternatives and included recommendations for specific routes and preliminary revenue and expense estimates. Complete results of the survey and the analysis of service alternatives are documented in the study's final report, *Campus Transit Development Planning: A Case Study.* UGPTI Staff Paper 166, Upper Great Plains Transportation Institute, North Dakota State University, authored by David Ripplinger and available at www.surtc.org.

The study evaluated several configurations of campus circulator and town routes including two campus circulator and three town routes. Campus circulator routes would operate during the academic year and town routes would run year round. From five to seven transit buses would be required to provide the recommended level of service. While several of the town routes could be served with the smaller vehicles BATA now operates, the demand expected for the campus circulator routes would require larger, 30 foot transit vehicles.

Implementation of any of the campus transit options would result in a major expansion of BATA's operations. The fixed route options would increase annual vehicles miles of service by up to 100% over current levels and they would require six to eight additional vehicles, primarily large transit buses. Likewise, the number of drivers, supervisors, and maintenance staff would also increase dramatically. BATA's current facility is not capable of accommodating this growth and implementation of the campus transit plans will require significant new maintenance, storage, and office space.

For purposes of this business plan, the route and schedule configurations described in the 2006 plan will be used to estimate operating and capital expenditures. This plan outlined three service level alternatives. The first called for two on-campus routes, a Blue and a Yellow loop running in opposite directions on more or less the same route; and an Eastside route that would serve shopping and residential locations east of the campus. A second level of service would add additional hours to the Blue route to cover SDSU weekends and holidays and a Downtown route. The third option would include the other services and add a Central route.

The first option was estimated to require five buses that operated a total of 13,510 vehicle hours/year; the third option requires six buses operating 24,580 vehicle hours/year. For purposes of budgeting, the first level of service is proposed to be implemented in 2012 and then expanded the following year to include the complete five-route service option. Buses to operate this service would be purchased during the year prior to the start of service. The proposed routes are shown in Figure 5.1.

The 2006 study recommends that the UPASS revenue model be followed for this service whereby students and/or the university prepay for the fixed route service via a student fee or other contribution. Many universities have successfully implemented this approach that then makes the service fare free for all students, faculty, and staff. A possible fee of $2/semester credit hour would result in a student fee of $48 per year and an estimated total income of $540,000. Ridership estimates of 40 trips per vehicle hour were based on experience at other universities that used the UPASS model and that were similar in characteristics to SDSU. These findings from the 2006 study were used to formulate the operating and financial estimates presented in Table 5.4.

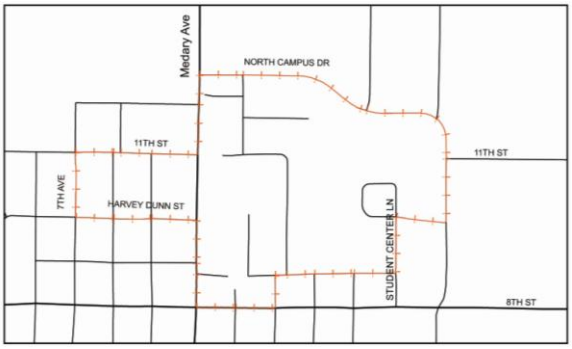
5.1.3 Intercity Bus Depot and Agent

Brookings is served by Jefferson Lines intercity bus service that operates a route north and south on I-29. Prior to 2007, BATA served as the local agent for Jefferson Lines. However, because of space limitations at its current facility and because of staff turnover and shortages, BATA gave up this agent function. Since that time, Jefferson Lines has contracted with several other businesses to be the local agent, but none has been satisfactory for either the businesses or customers. The current stop is an Arby's restaurant on 6th St. (U.S. Highway 14).

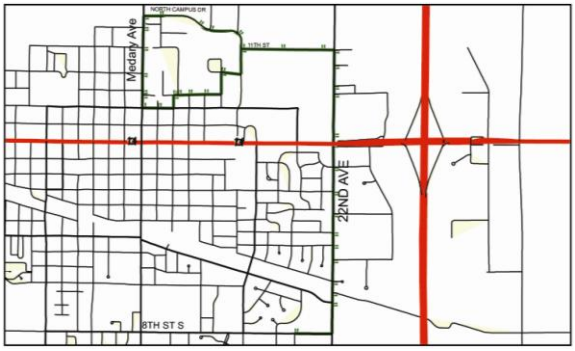
BATA would like to become the intercity bus agent and provide customers with a quality transportation center that would serve as a local station for the intercity bus, as well as an intermodal transportation facility for BATA. BATA's current location at the Brookings County Highway department is not a good location because there is no room for a waiting area, no place for customers to park, and the facility is within the highway department's fenced compound and not easily accessible to motorists or pedestrians.

Jefferson Lines has expressed interest in reestablishing BATA as their local agent and BATA would like to include a transportation center in a new facility to accommodate intercity passengers. The transportation center must have at least one covered bay for loading/unloading passengers although two or even three bays would be desirable to allow for special situations or for buses to lay over. In addition, five or more parking spaces should be provided for intercity bus passengers who leave vehicles while traveling or need to conduct short-term business with the bus office. Interior space needs to be provided for a customer waiting room, bathrooms (separate from BATA employee facilities), and a separate agent's office and work area. Secure storage for packages and baggage is also required. The intercity bus station/transportation center should have its own entrance and be easily accessed from adjacent roadways.

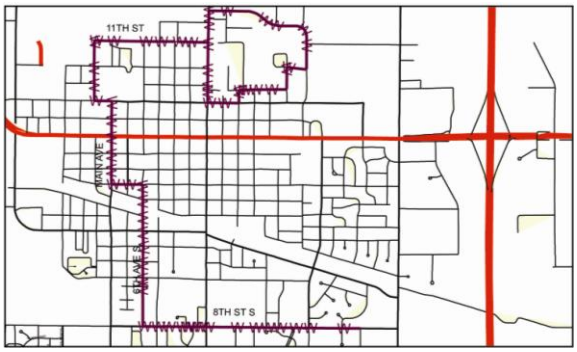
Blue Route - Campus



Yellow Route - Campus



Eastside Route



Downtown Route

Central Route

Figure 5.1 Proposed SDSU Fixed Routes

Table 5.4 Operating and Financial Estimates for SDSU Fixed-Routes

Item	3-Route Option (2012)	5-Route Option (2013)
Routes in operation	On-campus Blue and Yellow Loops, Eastside Route	3-route option plus Downtown and Central Route
Number of buses required	5 + 1 spare	7 + 2 spares
Total vehicle hours	13,510	24,580
Annual ridership	500,000 one-way trips	800,000 one-way trips
Revenue from student fees	$540,000	$540,000
Total operating expense	$495,500	$769,500

The intercity bus depot would likely be self-supporting from ticket sale commissions. Further, separate federal funding may be available through federal 5311(f) intercity bus grants that are allocated through states. The primary expense associated with this service option would be the addition of a full-time staff member to serve as the agency manager. This person could also assist BATA with dispatching during off-peak times.

5.1.4. Rural Demand Response Service

BATA currently operates limited, as needed, service to outlying rural areas of Brookings County. The equivalent of about one vehicle is assigned to this type of service. BATA would like to increase the availability of its service in rural areas and has considered increased service to the Arlington area as the highest priority. Therefore, this option would allow for two additional vehicle days of service each week to serve outlying areas. Table 5.5 outlines key service and financial assumptions.

Table 5.5 Operating and Financial Estimates for Rural Demand-Response Service

Service Characteristics	Value
Days of service per week	2
Hours per day	8
Number of vehicles required	1
Annual vehicle hours	832
Annual vehicle miles	15,000
Annual ridership	1,600
Estimated revenue	$5,000
Estimated expense	$27,250

5.1.5 Work Shuttle Service

BATA has received inquiries from major employers to operate work shuttles to bring employees into the Brookings area and to take workers from the Brooking areas to outlying work sites. Until it downsized due to bankruptcy reorganization, Verasun Corp. contracted with BATA for a shuttle from Brookings to Sioux Falls. While requests for such shuttles decreased once gasoline prices fell below $4/gallon, both BATA and some employers are still interested in providing this service. Therefore, this business plan includes a proposal for one work shuttle. If demand increases and funding is available, this type of service could be expanded at a later date assuming that BATA could find appropriate vehicles. Therefore, a limited rural service, two days per week, is proposed. Table 5.6 outlines key service and financial assumptions. For the purposes of this plan, one shuttle using a single vehicle that would operate up to six hours a day would be used for a work shuttle.

Table 5.6 Operating and Financial Estimates for Work Trip Shuttle Service

Service Characteristics	Value
Days of service per week	5
Hours per day	6
Number of vehicles required	1
Annual vehicle hours	1,530
Annual vehicle miles	23,000
Annual ridership	5,000
Estimated revenue	$15,000
Estimated expense	$45,500

5.1.6 24/7 Service in Brookings Area

BATA currently operates seven days a week; service ends at 10 p.m. Monday – Saturday and at 6 p.m. on Sundays. Since Brookings residents no longer have access to private cab service, no public transportation is available once BATA ends its service day. No service after 10 p.m. means that employees whose shifts start or end after 10 p.m. may not have a way to or from work. Likewise, visitors to the area wishing to use public transportation must plan around BATA's hours. Extending service to around-the-clock would allow for more employment choices for SDSU students and local residents and it would benefit visitors to the community.

The service proposed would require the addition of one vehicle in service for a total of 57 additional hours per week. The driver would take calls for service via a calls-forwarded feature from BATA's scheduling phone number. The fare for this late-night service would be $5/one-way trip. The service would only be available in the city of Brookings and immediate surrounding area. Table 5.7 outlines key service and financial assumptions.

Table 5.7 Operating and Financial Estimates for 24/7 Service

Service Characteristics	Value
Days of service per week	7
Hours per day (average)	8.14
Number of vehicles required	1
Annual vehicle hours	2,972
Annual vehicle miles	35,600
Annual ridership	4,500
Estimated revenue	$22,300
Estimated expense	$63,100

5.2 Five-Year Operating Revenue and Expense Budget

Continuation of adequate funding is the most important issue facing BATA within the next five years. BATA has developed the capacity in terms of vehicles, facilities, organization, and personnel to provide a high level of demand-responsive transportation in the Brookings area and to several outlying communities within Brookings County. BATA has grown rapidly within the past five years to meet the public transportation needs of its community, but the agency has additional opportunities to serve untapped markets and provide greater mobility within the region.

The most significant untapped market is for service on and between the SDSU campus and the surrounding community. Perhaps the only limit to the ability to respond to these unmet needs is adequate federal, state, and local capital and operating funding. The purpose of this section is to present five-year capital and operating cost projections that include the operating expenses associated with continuation of existing services and also the addition of the fixed-route campus service, 24/7 local service, increased rural demand-response service, and a work shuttle.

The operating expense projections are based on assumptions that include the continuation of existing services with modest growth in ridership and expenses plus the service expansion options presented above. The capital budget presented later in Section 5.3 reflects the on-going cost of replacing vehicles and routine office and maintenance capital equipment. It also reflects large, one-time expenses associated with the construction of the transportation center/administrative/ maintenance/storage facility and the purchase of large transit buses for SDSU fixed-route service.

Table 5.8 presents an estimate of revenue, expenses, and deficit shares for state, federal and local entities. The table shows three sets of projections: the first is for continuation of existing services, the second shows the impact of adding the three new services discussed earlier in this chapter, and the third combines the existing and new services to show total amounts if the 24/7 local service, the rural service and work shuttle were started in 2010 (fiscal year 2011), and the campus transit was phased in starting in 2012.

These projections include a number of assumptions, the most basic of which are that expenses will increase by 4% per year and revenue will increase by 2%. Further, since federal funding shares vary depending on type of expenses (e.g., operating versus administrative), the overall federal share is a blend of the two ratios and was about 62% federal in 2010. This same ratio is assumed for future years.

The revenue assumptions for the SDSU fixed-route service require special explanation. Table 5.4 assumed annual income of $540,000 derived from a per-student fee equal to $2/credit hour. Subject to approval by the SDDOT and local partners, it is assumed that this income could be used to cover several expense needs related to the service. In Table 5.8, revenue is assumed to be $115,000, an amount equal to 15% of total expenses, in accordance with Section 5311 requirements that grantees must cover that proportion of their operating expenses from fares or local contributions (including contract income) before applying federal share matching ratios. The remainder of the student fees is assumed to be applied to local matching requirements for capital and operating grants.

Assumptions about the number of vehicles required, as well as vehicle hours, miles of service, and ridership estimates, were presented earlier in Tables 5.4-5.7. This data was used to estimate revenue and expenses associated with the new service. Related results are presented in Table 5.9.

Table 5.8 Five-Year Operating Budget Forecasts for Current and Expanded Services

Assumptions:	4.00%	Annual Increase in Expenses
	2.00%	Annual Increase in Revenue
	63.90%	Average Percentage Federal Funding

Existing Service

	2010 Budget	2011	2012	2013	2014	2015
Total expense	$991,841	$1,031,515	$1,072,776	$1,115,687	$1,160,314	$1,206,727
Total revenue	$150,000	$153,000	$156,060	$159,181	$162,365	$165,612
Net project expense	$841,841	$878,515	$916,716	$956,505	$997,949	$1,041,114
Federal share	$537,972	$561,408	$585,820	$611,247	$637,732	$665,316
Total local share	$303,869	$317,107	$330,895	$345,258	$360,217	$375,798
Total federal and local share	$841,841	$878,515	$916,716	$956,505	$997,949	$1,041,114
% Increase in federal share from base year	0.00%	4.36%	8.89%	13.62%	18.54%	23.67%
% Increase in local share from base year	0.00%	4.36%	8.89%	13.62%	18.54%	23.67%

Additional Services

	2010 Budget	2011	2012	2013	2014	2015
Total expense	$0	$135,856	$905,467	$941,686	$979,353	$1,018,527
Total revenue	$0	$41,691	$157,091	$160,233	$163,437	$166,706
Net project expense	$0	$94,165	$748,376	$781,453	$815,916	$851,821
Federal share	$0	$60,175	$478,244	$499,381	$521,405	$544,350
Total local share	$0	$33,990	$270,132	$282,071	$294,511	$307,471
Total federal and local share	$0	$94,165	$748,376	$781,453	$815,916	$851,821

(Table 5.8 continued)

Existing Plus Additional Services

	2010 Budget	2011	2012	2013	2014	2015
Total expense	$991,841	$1,167,371	$1,978,243	$2,057,372	$2,139,667	$2,225,254
Total revenue	$150,000	$194,691	$313,151	$319,414	$325,802	$332,318
Net project expense	$841,841	$972,680	$1,665,092	$1,737,958	$1,813,865	$1,892,935
Federal share	$537,972	$621,584	$1,064,064	$1,110,629	$1,159,136	$1,209,666
Total local share	$303,869	$351,096	$601,028	$627,329	$654,728	$683,270
Total federal and local share	$841,841	$972,680	$1,665,092	$1,737,958	$1,813,865	$1,892,935
% Increase in Federal Share from base year	0.00%	15.54%	97.79%	106.45%	115.46%	124.86%
% Increase in Local Share from base year	0.00%	15.54%	97.79%	106.45%	115.46%	124.86%

The expense estimates presented in Tables 5.8 and 5.9 are based on the application of a costing formula that takes into account how specific line items vary by mileage and hours of service and if they are fixed or variable. Table 5.10 shows the application of this model to BATA's 2010 budget. The result of the cost allocation is a formula for calculating expenses based on the number of miles and vehicle hours involved in providing a service.

As can be seen from Table 5.10, each line item in the budget is assigned to one of the three cost categories – miles, hours, or fixed. Mileage-related expenses include fuel, tires, and maintenance. Hour-related expenses include driver wages and fringe expenses. Nearly all other expenses do not vary as service is added or subtracted and therefore are considered fixed in the short run. It should be noted that approximately 40% of BATA's expenses fall into this fixed category. Therefore, when calculating the expense associated with a new service, only the mileage and hour-related expenses are considered. The only exception to this is the inclusion of the cost of vehicle insurance. In addition, for the campus transit option, additional expenses for an operation supervisor and two mechanics are added to the variable cost formula because these positions will be required to operate the much larger system and are not reflected in the other portions of the cost estimate.

The most significant conclusion for this forecasting effort is to note the growth in required federal and local funding. Assuming no growth in the system, federal and local shares will need to increase by about 24% over the next five years. If the proposed service expansions are implemented, federal and local shares will need to more than double.

To date, BATA has been successful in obtaining additional federal and local funds to support its expansion. More growth in each funding category may be possible, but probably not as readily as in the past. The funding partnership that would be required between BATA and SDSU's students and administration offers the most promise for increased funding for the main driver of the higher expense and subsidy requirements – the campus fixed route buses. However, federal, state, and other local funds will need to increase to make this plan a reality.

Table 5.9 Revenue and Expense Estimates for Proposed New Services

Service Proposal	Vehicles	Miles	Hours	Ridership	Expense	Revenue	Average Fare
SDSU campus route	7	249,200	24,920	872,200	$633,010	$654,150	$0.75
Rural demand-response	1	14,976	832	1,664	$20,916	$3,328	$2.00
Work shuttle	1	22,950	1,530	5,355	$35,129	$16,065	$3.00
24/7 local service	1	35,666	2,972	4,458	$63,106	$22,291	$5.00
Total	9	287,126	27,282	879,219	$689,055	$673,543	

Table 5.10 Operating Expense Unit Cost Model (Using 2010 Budget Data)

Budget Line Item	**Total System**	**Cost Factor Allocation**			
		1=Hours, 2=Miles, 3=Fixed	Hours	Miles	Fixed
Transportation Operations					
Driver wages	$350,633	1	$350,633	$0	$0
Driver benefits	$79,919	1	$79,919	$0	$0
Dispatcher wages	$64,734	3	$0	$0	$64,734
Dispatcher benefits	$15,942	3	$0	$0	$15,942
[Transport position benefits]			$0	$0	$0
Transportation expense			$0	$0	$0
Fuel	$85,689	2	$0	$85,689	$0
Other	$9,000	2	$0	$9,000	$0
Total Transportation Operations	$605,916				
Maintenance Expense					
Mechanic wages	$0	2	$0	$0	$0
Mechanic benefits	$0	2	$0	$0	$0
Maintenance/repairs	$39,925	2	$0	$39,925	$0
Garage utilities/maintenance	$13,000	2	$0	$13,000	$0
Total Maintenance Expense	$52,925				
Insurance					
Vehicle	$45,000	3	$0	$0	$45,000
Workman's comp./building	$6,000	3	$0	$0	$6,000
Other	$0	3	$0	$0	$0
Total Insurance Expense	$51,000	3	$0	$0	
Administrative Expense					
Director salary	$51,500	3	$0	$0	$51,500
Director benefits	$18,000	3	$0	$0	$18,000
Bookkeeper salary	$35,000	3	$0	$0	$35,000
Bookkeeper benefits	$13,000	3	$0	$0	$13,000
Secretary salary	$27,000	3	$0	$0	$27,000
Secretary benefits	$13,000	3	$0	$0	$13,000
Assistant director	$40,000	3	$0	$0	$40,000

Budget Line Item	Total System	Cost Factor Allocation			
Assistant director benefits	$14,000	3	$0	$0	$14,000
Marketing/promotion	$13,000	3	$0	$0	$13,000
Office supplies/phone	$22,000	3	$0	$0	$22,000
Audit	$5,000	3	$0	$0	$5,000
Travel	$5,500	3	$0	$0	$5,500
Other	$25,000	3	$0	$0	$25,000
Total Administrative Expense	$282,000				
Total Expense	$991,841		$430,552	$147,614	$413,676
		Units	26,667	400,000	23
		Unit Cost Factor	$16.15	$0.37	$17,985.91

5.3 Capital Improvement Plan and Budget

The on-going operation of BATA will require, at a minimum, the replacement of existing vehicles and the acquisition of additional vehicles to allow for expansion. Furthermore, BATA will need to replace and upgrade office technology and maintenance equipment. These capital needs will total between $267,000 and $486,000 per year.

BATA now owns 21 vehicles, 16-17 of which are needed meet peak daily needs. The other vehicles are older buses that are spares or are used for special trip purposes. Assuming that BATA can efficiently operate vehicles for five or six years and about 250,000 miles, BATA will need to replace one-fifth of its fleet (about four vehicles) annually to preserve the current average fleet age and condition. The replacement plan shown in Table 5.11 reflects such an approach.

The other major capital needs for BATA relate to the construction of a transportation center and BATA administration and maintenance facility and the related start-up of the SDSU fixed-route service. The new building is estimated to cost between $2.0 and $2.5 million. If BATA bought six full-sized transit buses to operate the SDSU service, an additional $1.8 - $2.0 million would be required ($300,000 - $350,000/ bus). The rural service and work shuttles proposed in this plan can be operated by already-existing vehicles in the fleet. The capital costs of the facility and the campus fixed-route service are shown separately in Table 5.11, along with the total capital program projected for the next five years.

Construction of the transportation center and purchase of fixed route buses require significant funding – more than $4.1 million in 2011 for the building, four buses, and routine replacements, and more than $1 million in 2012 for fixed route buses and routine replacements. Eighty percent of the funding is projected to be obtained from federal funds and 20% from local funds. The federal funding requirement for routine replacements is in line with past BATA experience. Major expenditures for the transportation center and the fixed route buses will, however, require extraordinary grants from either the regular state apportionment of federal funds or one-time funding programs similar to the current federal stimulus program or a Congressional earmark.

Unusually high levels of local matching funds will also be required – more than $827,000 in 2011 and more than $200,000 in 2012. The good news is that the value of public land contributed for the transportation center may provide a large portion of the match for the building and a portion of the student fee or SDSU contribution to the fixed route service may help pay the capital costs of the fixed-route buses. As planning for this service proceeds, negotiations with the SDSU, SDDOT and other local parties should occur to work out possible funding arrangements.

Table 5.11 Five-Year Capital Budget

Routine Vehicle Replacement

Vehicle Type	Estimated	2010		2011		2012		2013		2014	
	2009*	No.	Total Cost	No.	Total Cost	No.	Total Cost	No.	Total Cost	No.	Total Cost
Minivan	$28,000	1	$29,120	1	$30,240	1	$31,360	1	$32,480	1	$33,600
Cutaway bus 12/2	$70,000	3	$218,400	1	$75,600	0	$0	0	$0	0	$0
Sprinter	$80,000	0	$0	1	$86,400	2	$179,200	1	$92,800	3	$288,000
Mid/bus	$120,000	0	$0	1	$129,600	1	$134,400	2	$278,400	1	$144,000
Total number		4		4		4		4		5	
Total cost			$247,520		$321,840		$344,960		$403,680		$465,600
Federal/state share (80%)			$198,016		$257,472		$275,968		$322,944		$372,480
Local share (20%)			$49,504		$64,368		$68,992		$80,736		$93,120

*Future Years increased by: **4.0%** percent per year

Other Routine Capital Expenditures

Capital Item		2010		2011		2012		2013		2014	
Office technology			$5,000		$5,000		$5,000		$5,000		$5,000
Maintenance equipment			$15,000		$15,000		$15,000		$15,000		$15,000
Total cost			$20,000		$20,000		$20,000		$20,000		$20,000
Federal/state share (80%)			$16,000		$16,000		$16,000		$16,000		$16,000
Local share (20%)			$4,000		$4,000		$4,000		$4,000		$4,000

Fixed-Route Buses for SDSU Service

Vehicle Type	Estimated	2010		2011		2012		2013		2014	
	2009*	No.	Total Cost	No.	Total Cost	No.	Total Cost	No.	Total Cost	No.	Total Cost
30' transit coach	$300,000	0	$0	4	$1,296,000	2	$672,000	0	$0	0	$0
Federal/state share (80%)			$0		$1,036,800		$537,600		$0		$0
Local share (20%)			$0		$259,200		$134,400		$0		$0

Transportation Center and Administrative, Maintenance and Storage Facility

Capital Item		2010		2011		2012		2013		2014	
Building, land, furnishings			$0		$2,500,000		$0		$0		$0
Federal/state share (80%)			$0		$2,000,000		$0		$0		$0
Local share (20%)			$0		$500,000		$0		$0		$0

Total Capital Budget

Capital Item		2010		2011		2012		2013		2014	
Routine vehicle replacement			$247,520		$321,840		$344,960		$403,680		$465,600
Other routine capital expenses			$20,000		$20,000		$20,000		$20,000		$20,000
Fixed route buses			$0		$1,296,000		$672,000		$0		$0
Transportation center facility			$0		$2,500,000		$0		$0		$0
Total cost			$267,520		$4,137,840		$1,036,960		$423,680		$485,600
Federal/state share (80%)			$214,016		$3,310,272		$829,568		$338,944		$388,480
Local share (20%)			$53,504		$827,568		$207,392		$84,736		$97,120

5.4 Revenue Sources to Finance Capital and Operating Needs

This business plan outlines a very aggressive growth agenda for BATA, including the addition of a major new fixed route system serving the SDSU community and the construction of a transportation center and an administrative, maintenance, and bus storage facility. This expansion, plus BATA's ability to continue operating and gradually expanding its existing demand-responsive services, can only be accomplished if BATA can obtain the needed operating revenue, state and federal grants, and most important, the local matching funds needed to qualify for the other grants.

On one hand, the total funding requirements and especially the local match required to implement this plan appear daunting. The five-year capital program alone is more than $6 million and assumes a federal share of nearly $5 million plus more than a $1 million in local matching funds. On the operating side, nearly a 25% increase in federal, state, and local funding is required over the next five years just to maintain existing services. The addition of the campus fixed routes and other services will more than double the financial need. On the positive side, however, major new sources of revenue may be available as part of the SDSU service expansion through a combination of student fees and university contribution. Nevertheless, federal and state funding will need to grow substantially to help pay for the new services.

The challenge to BATA's board and management is to put forward a growth plan and then seek every funding opportunity to make the plan a reality. The success of this plan will depend on factors beyond BATA's control such as the future level of regular federal transit funding, state funding programs, and special programs such as the recent stimulus efforts and congressionally designated grants. Local governments and other local agencies will also need to be willing to maintain and even increase their support of BATA.

The following sections identify the key sources of revenue available to BATA to implement this plan. The requirements of the funding sources, plus recent trends in levels of these sources, are presented to provide a perspective on how BATA might achieve corresponding funding needs. These sources of funds are divided into two major categories, including revenues that are generated by the services provided and grants, charitable donations, and local government funding that cover the match for capital expenses and most of the operating expenses incurred by BATA.

5.4.1 Operating Revenue

Operating revenue for a transit system such as BATA comes from three sources - fares and donations, other income, and third-party contracts for services. BATA receives income from two of these sources, namely fares and donations and third-party contracts. Each of these sources is discussed below along with the prospects for increasing future income.

Operating revenue, defined as income received through fares or contracts for providing rides and donations by riders and other individuals, provides a significant portion of BATA's non-grant income. Most of this income is received through fares paid by individual riders or third parties.

As discussed in Chapter 4, BATA's two most common fares are $2/trip for advance reservations and $5/trip for same-day rides.

For fiscal 2010, BATA has budgeted fare revenue to be $150,000 or about 14% of its total operating budget. The only ways for operating revenue from fares to increase is to increase ridership or increase fares. In 2007 BATA increased its advanced reservation fare from $1.50 to $2; other fares were increased proportionately. However, it does not want to consider a fare increase in the foreseeable future because of the negative impact such an action would have on low-income riders. Further, any significant increase in fare, while likely increasing overall revenue, will result in lower ridership – an outcome contrary to the mission of BATA.

Regarding contract services, BATA provides transportation under contract to human service agencies, educational institutions such as the Brookings School District and SDSU, and private employers. The level of contract funding varies significantly from year to year as BATA obtains new contracts and loses others. In 2008, for example, BATA lost a significant contract to provide work-trip transportation from Brookings to Sioux Falls for employees of VeraSun, a major ethanol producer based in Brookings. The company filed for bankruptcy began downsizing. BATA also lost a contract with the local Girls and Boys Club to provide after school and summer transportation when the organization acquired its own vehicles. It believed that it could provide rides at a lower cost than BATA charged.

On a more positive note, BATA continues to contract for Medicaid rides ($8,000/year), the Safe Ride Program for SDSU students ($20,000-$25,000/ year), and the Brookings School District for transportation between Brookings and Sioux Falls for special education students ($60,000/year). In fiscal 2008 these contracts generated revenue totaling nearly $200,000.

One feature of federal and state funding programs that is unique to transit operations is that transit systems may use these contracts either as operating revenue, which is the more traditional way of accounting for revenue received for providing a service, or they may use it as local match. The only requirement for transit systems is that they must cover 15% of their operating expenses from fares or local contributions (including contract income), so most rural transit systems, including BATA, treat a small portion of their contract income as operating income to reach the 15% threshold, but then use the remainder meeting the local match requirement, a more significant challenge.

In the future, BATA is likely to receive significant contract funding. However, unless new contracts are obtained, the growth of this funding source is limited. The most promising new source of funds that would be considered a contract, but could also be used in whole or in part for the local match, would be the proceeds of a student fee to support the SDSU fixed-route service. Depending on the level of that fee, BATA may be able to not only cover the required match for its fixed-route service, but may also be able to use a portion of the contract revenue to help match its other services and support the administrative expenses of the transit program. The exact details of this arrangement will need to be negotiated as the financing plan for the campus service is fine tuned.

5.4.2 Federal Funding Programs

The primary source of federal support for small urban and rural transit systems such as BATA is federal Section 5311 formula funding that is provided to states for the purposes of supporting public transportation in areas of less than 50,000 population. Such funding for rural and small urban transit was first authorized in 1978 and was most recently reauthorized by Congress as part of the Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA–LU) (Pub. L. 109–059), signed into law on August 10, 2005. Eighty percent of the appropriated funds are distributed by a formula that is based on the non-urbanized population of the states. Twenty percent of the formula is based on land area.

Funds may be used for capital, operating, and administrative assistance to state agencies, local public bodies, Indian tribes, and nonprofit organizations, and operators of public transportation services. Approved grantees may use 5311 funds to pay for up to 82.82% of their system's administrative expenses and up to 51.76% of other operating expenses. Capital funding through this program provides up to 80% of the project expense. The nonfederal portion of the operating or capital expense must be paid from state or local sources.

Future funding levels for the 5311, as well as the 5316 and 5317 programs described below, will depend on the outcome of the reauthorization of SAFETEA-LU which expired September 30, 2009. Because of other Congressional priorities, reauthorization is behind schedule and transit and other transportation funding has been extended at the 2009 levels through a series of continuing resolutions. Therefore, as this plan is written, the level of future federal funding is unknown. However, rural transit programs remain popular with the Congress and future reauthorization levels are likely to be higher than current levels.

The federal Job Access and Reverse Commute Program (JARC - Section 5316) is another revenue source for many transit programs such as BATA. JARC was first authorized in 1998 as part of The Transportation Equity Act for the 21st Century (TEA-21) and then reauthorized and expanded as part of SAFETEA-LU in 2005. It was established to address the unique transportation challenges faced by welfare recipients and low-income persons seeking to obtain and maintain employment. Twenty percent of the funding for the JARC program is made available to non-urbanized areas through grants to individual states. The states, in turn, accept applications and plans for these grants and decide on the transit systems that will be awarded grants. Federal funds can reimburse up to 50% of program operating expenses and up to 80 percent of associated capital expenditures.

Another popular funding program to transit systems such as BATA is the federal New Freedom Program (Section 5317). This program was authorized by SAFETEA-LU to provide funding to allow transit organizations to offer transit services that are above and beyond those required by the Americans with Disabilities Act. Like the JARC program, the New Freedom Program for non-urbanized areas is administered through the states. Federal funds can reimburse up to 50% of operating expenses and up to 80% of capital expenditures.

BATA was one of five South Dakota rural transit systems to receive JARC and New Freedom funds and has received between $50,000 and $90,000 per year since fiscal 2007. Both JARC and New Freedom program funds must be reauthorized by Congress in order to continue beyond the

current continuing resolutions. Therefore, it is difficult to project future grants to BATA from these programs. However, one alternative being considered as part of the reauthorization process is to combine these programs with other operating grant programs and to allocate associated funds using the same formula. Under this scenario, and assuming that rural transit continues to receive favorable support, BATA should be able to obtain the same level, or perhaps increased levels of operating funds, for the types of jobs and accessible transportation services funded by the 5316 and 5317 programs.

5.4.3 State Funding Programs

SDDOT provides operating assistance to rural transit systems using state general funds. In fiscal 2008, SDDOT distributed $696,212 in operating assistance to the 21 rural systems eligible for the program. The state funding allocation has two components, a base level funding and an incentive program. The allocation of base level funds is based on past assistance levels and the amount of funding appropriated. For the past few years, base level funding has remained constant and SDDOT has used new state monies to fund the incentive portion of the grant program. Systems receive incentive funds if they have increased ridership, added service (vehicle miles), and/or reduced operating expenses per vehicle mile. Not all systems receive incentive funds. BATA, however, has received extra funding for the past few years because of its efforts to significantly expand services.

The level of state funding is determined annually by the state legislature. While the transit industry continually works with members of the legislature to increase state funding, no specific legislation is pending to identify new sources of funds or to significantly increase funding.

SDDOT's Office of Local Transportation Programs and the South Dakota Department of Social Services (Division of Adult Services and Aging) work closely on matters pertaining to transportation services for elderly and disabled individuals. Each year, the Division of Adult Services and Aging allocates federal Oder Americans Act Title III-B funding which is disbursed through the SD DOT to offset related transportation costs incurred by eligible agencies.

In fiscal 2008, $285,811 of Title III-B funding was distributed to the 21 rural transit operations. Total funding for this program has not grown in recent years and future funding is expected to remain stable. Furthermore, the amount received by each system is based on shares determined many years ago and may have little to do with the number of seniors or disabled persons currently being transported. BATA receives less than $10,000 per year from this program and little growth can be expected.

5.4.4 Local Government Funding

While operating revenue (fares and contracts) and federal and state grants cover the majority of the capital and operating expenses incurred by rural transit systems like BATA, the programs also require direct local contributions for match. Obtaining these local funds is a significant problem, not only for BATA but also for most rural transit systems. Fortunately, BATA is able to cover most of its local match requirements with contracts and charitable grants such as the one it receives from the Brookings Area United Way. Nevertheless, local government contributions are crucial to BATA's current and future success. For the past few years BATA has received

contributions from both the city of Brookings and Brookings County. The city of Brookings' contribution has been around $50,000 per year while the county's share has been between $30,000 and $35,000. Together, these allocations represent about 10% of BATA's overall operating budget. In addition, BATA seeks matching grants for bus purchases; the level of these allocations varies from year to year.

While all local governments have increasing demands on their often dwindling resources and both the city and county, as well as other communities within the county, face severe fiscal pressures, the case can and should be made for continued and increasing support of transit because it supports many other local programs and economic development. To implement this plan, BATA will need to obtain additional local matching funds, along with increased revenue from contracts and other sources.

6. SUMMARY AND KEY ACTION ITEMS

Brookings Area Transit Authority can trace its roots to a senior nutrition program started more than 35 years ago to respond to the mobility needs of residents of Brookings County. BATA, a stand-alone nonprofit corporation, was established in 1997 to expand mobility options for residents by providing public transit and also to promote coordination of all transportation services in the region. BATA has been successful in achieving its mission and, especially in the past five years, has experienced rapid growth in ridership and the amount of service it provides.

While BATA has seen its ridership double in the past five years and the number of miles travelled nearly triple, exciting service opportunities still remain. The most important and challenging of these opportunities is to provide a high level of fixed route transit to the students, faculty, and staff of South Dakota State University. In 2007, BATA, with assistance from the Small Urban & Rural Transit Center at North Dakota State University, completed a comprehensive planning study that recommended a five-route, seven-bus system to serve the campus and provide a link between the campus and the surrounding Brookings community. If implemented, the SDSU service would double BATA's budget and quadruple its ridership.

The challenge facing BATA is to obtain the funding needed for on-going operation of this expanded service, to obtain the capital to acquire required buses, and to build a new administrative/maintenance/storage facility that would also serve as a regional transportation center for local and intercity bus transit. Because of BATA's rapid growth, even without the campus transit, BATA has outgrown the current five-year-old facility.

Therefore, the two biggest challenges facing BATA are to obtain adequate federal, state, and, most importantly, local funding to continue and expand its services and to obtain funding to provide the facilities needed to carry out its mission. It is hoped that this business plan will lend direction to these future initiatives and aid BATA in communicating its vision for the future of public transportation in the Brookings area to residents, policymakers, and funding agencies.

The preceding chapters of this business plan included a review of BATA's current services, organization, management, vehicles, and facilities. That review also included an analysis of BATA's current financial condition and projections regarding future financial requirements for both capital and operating expenses. The following subsections present related findings and recommendations.

6.1 Organization and Governance

BATA is organized as a non-profit corporation – a typical and effective structure for providing public transportation services. BATA is governed by an active nine-member board of directors that is representative of the clientele. The board has been very supportive of BATA's growth initiatives.

BATA's organization chart includes four administrative positions, dispatchers, and drivers. The current structure has evolved over the years in response to service needs and to maximize the contributions made by existing employees. The current structure and number of positions is

adequate for the present level of service, but the addition of the campus transit service would require substantial additions to staff and some restructuring of existing positions. The two most significant impacts relate to the need to construct a new administrative/maintenance/storage facility and the need to take over responsibility for bus maintenance that is now outsourced to the Brookings County Highway Department. At least two mechanics would be needed. Likewise, the addition of five new routes and many additional drivers would require at least one additional operations supervisor.

BATA's mission statement that was included in its 1997 bylaws and modified several years ago is to "provide coordinated transportation services to all residents of the Brookings area and foster independence by providing mobility options." In recognition of BATA's opportunity to expand public transit options to the SDSU community and provide a much higher level of transit, BATA may wish to expand its mission to reflect its more comprehensive contribution to the community.

6.2 Market for Transit in Service Area

BATA provides extensive public transportation services within the city of Brookings and the immediate surrounding area. It also provides limited service to several rural communities and between Brookings and Sioux Falls. Its services are concentrated in the Brookings area since that area contains more than two-thirds of the county's population. The population density of that portion of the county also contributes to service efficiency. Furthermore, until recently only the city of Brookings provided local matching funds; the county is now contributing about $30,000 per year. BATA faces severe pressures to obtain local matching funds and depends on communities served to assist with the funding. Nevertheless, BATA recognizes some unmet needs in the rural areas and hopes to offer more service as funding permits.

BATA began offering same-day service for persons with disabilities several years ago but some of the greatest increases in demands for service occurred in 2008 when a local taxi service ceased operations and BATA became the only public transit option in the Brookings area. Furthermore, because of Brookings proximity to Sioux Falls (60 miles), BATA has experienced increasing demand for medical- and education-related trips and for connections to intercity air and bus transportation.

In summary, BATA provides a high-level of service to the majority of its service area. It looks continuously for opportunities to expand service but it is limited by a lack of operating funds. This plan addresses several major opportunities to expand service including the SDSU fixed-route service, additional service in rural areas, and work shuttle service.

6.3 Services, Management, Vehicles, and Facilities

Chapter 4 provided a review of each major aspect of BATA's service and internal organization for the purpose of identifying changes and initiatives that BATA can undertake within the next five years to accomplish its mission and objectives. The following are the key findings from each of the nine areas addressed.

6.3.1 Services

BATA provides a high level of demand response service to the Brookings area along with modest coverage of outlying areas throughout the county.

Overall operating efficiency, as measured by one-way trips per vehicle hour, is good and in the range of 4.0 trips/hour. More detailed analysis of individual services and service areas should be undertaken using data available from Shah Software reports.

The most significant new service that BATA should consider is a fixed-route service for the SDSU community. Adding up to six fixed-route buses could nearly double BATA's budget and greatly increase its ridership.

BATA should consider the addition of at least one vehicle to its rural services, perhaps to the Arlington area.

If BATA is able to construct a transportation center, it should seek to reestablish itself as the intercity bus agent for Brookings.

6.3.2 Fare Structure

BATA has a simple fare structure that reflects the distance traveled and whether riders make advanced reservations or request same-day service. BATA may need to raise its $2 per trip fare within the next several years to obtain additional revenue.

The proposed campus service should use the UPASS model whereby students and/or the university prepay fares so that students, faculty, and staff ride free.

6.3.3 Scheduling and Dispatching

BATA uses state-of-the art scheduling, dispatching, routing and AVL hardware and software. BATA may need to add dispatchers to cover evening hours and weekends as its services grow.

6.3.4 Maintenance

BATA's fleet and the attendant maintenance needs have outgrown the Brookings County Highway Department's ability to provide maintenance. BATA will need to continue to outsource some maintenance services to private garages unless it is able to build a new facility and employ its own maintenance staff.

BATA should plan for a new maintenance, storage, and office facility that is adequate to maintain the existing fleet plus the fixed route buses that are required to operate the SDSU routes.

6.3.5 Human Resources

BATA's existing administration of human resource-related activities appears to be adequate and well-suited of an operation of its size. No significant changes are recommended. BATA should, however, review and revise its personnel manual within the next year.

6.3.6 Financial Management

Office manager's title should be changed to finance director to recognize present duties.

BATA's board of directors should adopt a working capital policy that specifies a goal of having from one to two months expenses in reserve to cover current working capital needs.

6.3.7 Marketing

No changes are suggested concerning the marketing of current services. With the addition of the SDSU fixed route services, the website should be expanded to offer more information and perhaps real-time schedule information.

6.3.8 Vehicle Fleet

The current fleet of 21 buses and vans is up to date and meets BATA's current needs. BATA will need to program the replacement of 3-4 vehicles per year in order to keep its fleet up to date, efficient and reliable. BATA will need at least six full-sized (30 ft.) transit coaches to operate the SDSU service.

6.3.9 Facilities

BATA's current facility located on the property of the Brookings County Highway Department is barely adequate for its existing operations, especially in terms of indoor bus storage and maintenance space. BATA should plan for a new administrative, maintenance, storage, and transportation center building in order to accommodate current and future operations.

6.4 Funding

BATA's operating budget is more than $900,000 and has grown rapidly over the past five years as services have expanded. This growth period for BATA was made possible by substantial increases in federal funding for the federal Section 5311 rural transit program and by BATA's success in being awarded special funding grants for job access and new services for persons with disabilities (Section 5316 and 5317).

The addition of the campus service and the other modest service expansions proposed in this plan would nearly double BATA's annual operating budget and also double its needs for federal, state, and local matching funds. Obtaining these funds will be BATA's greatest challenge and opportunity. Likewise, the capital program that includes the transportation center facility, new fixed-route buses, and routine bus replacement totals more than $6 million. These funds will not come from a single source, but rather, from a combination of funding sources including fares,

contracts, donations, and federal, state, and local financial assistance. BATA's ability to continue its existing level of service is most severely constrained by its ability to obtain local matching funds.

6.5 Key Action Items

This business plan contains a number of recommended service changes, major capital projects, and recommendations for internal changes to help BATA more effectively accomplish its mission and deliver high quality public transit service to Brookings County. To help focus attention on these key action items and to provide milestones for accomplishing these actions, five key action items are presented in Table 6.1, along with key dates and assignments of responsibility. This table can be used to monitor the success of the plan over the next few years.

Table 6.1 Key Action Items for 2010-2014

Action Item	Implementation Date(s)	Total Operating and Capital Costs	Person Responsible for Implementation	Key Milestones
1. Finalize plans and obtaining funding for the proposed Transportation Center and BATA Administrative, Maintenance and Bus Storage Facility	Occupy facility Spring 2012	$2.5 million	Executive director and board	Site selection by 3/31/10 Seek funding 11/1/09 Begin construction 4/1/11 Occupy new facility 4/1/12
2. Develop implementation plan for SDSU campus transit including an operating and UPASS financing plan	Begin service Fall Semester 2012	$800,000 operating expenses $1.6 million capital for buses	Executive director and board	Form Planning Committee 2/1/10 Finalize service and funding plan by 7/1/10 Obtain capital grants for buses and bid them by 6/1/11 Begin service 8/12
3. Become Jefferson Bus Lines intercity bus agent	With opening of transportation center	$25,000/year operating	Executive director and operations manager	Negotiate agreement with Jefferson Bus Lines by 1/1/12 Obtain intercity bus grant from SDDOT by 10/1/11 Begin operations spring 2012
4. Establish work shuttle to Arlington	Begin 10/1/10	$46,000 operating	Operations manager	Operations plan by 6/30/10 Include service in 2011 budget
5. Expand rural service 2-days/week	Begin 10/1/10	$27,000 operating	Operations manager	Operations plan by 6/30/10 Include service in 2011 budget

6.6 Proposed Performance Measures

The business plan proposed for BATA is a very ambitious one that will require attention to details to ensure the efficiency and effectiveness of the service it provides. One way that a public transit system can track its success in meeting its overall goals and objectives is to identify and report results of key performance indicators. These indicators can be used to help policy board members and management monitor and modify policies and procedures. They can also be used to communicate the accomplishments of the system to funding agencies and the general public.

Table 6.2 presents a suggested list of statistics and indicators that BATA should compile, use for internal management, and report to its board and outside organizations and individuals. Most indicators can be reported monthly, though the financial indicators require revenue and expense data that might only be available on a quarterly basis. BATA already collects most of the data required to develop this performance report. BATA only began collecting vehicle hour statistics within the past two years as a result of changes in FTA reporting requirement, but this statistic is key to monitoring both fixed-route and demand-response services. When BATA begins fixed-route services, it should track these performance measures separately for each type of services. Further, the expense per hour statistic, to be most meaningful, should reflect expense data reported on an accrual basis, not a cash basis, becuase the hours and expenses should cover the same time period.

The three quality-of-service measures identified in Table 6.2 will require collection of three new pieces of information. The complaint and road call measure will require BATA to develop a tracking system for these items that could be as simple as having maintenance personnel fill out a road call slip when an unscheduled vehicle switch-out occurs and then tabulating the results in the office each month or quarter. Likewise, complaint tracking can be accomplished by a short form that indicates the time, date, person complaining, and nature of the complaint along with follow-up actions which resulted. BATA's Shah Software scheduling and dispatching system can provide the important, but typically hard-to-track, on-time performance information.

Table 6.2 Proposed Approach to Performance Monitoring

Key Performance Statistics	Definition and Purpose	Source of Data	Method of Comparison	Goal	Guideline or Standard
One-way trips	The number of one-way passenger trips provided during the period for the entire system. Purpose is to track growth or decline in the use of the service	Scheduling and dispatching software reports	Time series by month for your system	In line with budget and increasing	NA
Total vehicle miles	Vehicle miles driven to provide transit service. Indicates the amount of service you offer, and is important to compare to budget assumptions	Scheduling and dispatching software reports based on driver logs	"	In line with budget	NA
Total vehicle hours	Measures the total amount of time measured as vehicle hours, that were available to offer service. Since driver wages and benefits are the largest single expense, this is a key measure to track to ensure budget compliance.	Scheduling and dispatching software reports based on driver logs	"	In line with budget	NA
Total operating expense	Measures the total operating fund outlays reported monthly on an accrual basis		"	In line with budget	NA
Total revenue	Measures total income from riders, other operating revenue, and service contracts		"	In line with budget	NA
Expense per vehicle hour	Total operating expense divided by vehicle hours of service provided during the period	Financial reports and reports from scheduling and dispatching software	Time series by month, also compare annually to other peer systems	In line with budget	Increasing by less than inflation
One-way trips/vehicle hour	Key measure of overall system productivity that measure the fit between the number of hours of service provided and the demand for the service. Calculated by dividing one-way trips by vehicle hours. Can be calculated and tracked for system and for individual routes or services.	Scheduling and dispatching software reports	Time series by month, also compare annually to other peer systems	Improvement from year to year	Typical range for demand response system is 2 - 6 one-way trips/hour

Key Performance Statistics	Definition and Purpose	Source of Data	Method of Comparison	Goal	Guideline or Standard
Percent trips on time	Defined as percentage of trips provided within the "on-time" window for the demand response service, e.g., within + or - 15 minutes of the scheduled time. A key measure of quality of service	Scheduling and dispatching software reports	Time series by month	100 percent on time is goal	Set an internal standard of say 90 percent + or - 15 minutes of requested pick up
Number of road calls	Defined as the number of vehicle service interruptions that result in passenger delays and/or require a non-scheduled vehicle switch. A key measure of service quality and maintenance effectiveness	Either separate paper log or from entries in scheduling and dispatching software reports	Time series by month	0 is the goal, but not likely so reduction over time	No standard
Number non-policy complaints	A non-policy complaint is one that related to on-time performance, driver conduct or attitude or other concern about the quality or safety of service. It does not include complaints such as areas not served, hours of service, or fare level, for example	Separately kept paper log and file	Time series by month	0 is the goal, but unlikely, so reduction over time is the goal	No standard

6.7 Future Business Plan Updates

The information presented in this plan and resulting recommendations are based on a snapshot of BATA's operations. As has been apparent over the past five years, large and often unexpected changes occur in both the opportunities to serve and the challenges to assemble the resources needed to provide service. Such uncertainty about the challenges and opportunities will not change in the future.

One of the biggest uncertainties facing BATA and other rural transit providers is the level of funding and priority initiatives that will result from reauthorization of federal transit programs. This reauthorization should have been completed by now, but will surely occur during the first two years of this business plan. Since federal funding provides such a significant part of BATA's funding, the new legislation is sure to impact BATA's ability to implement this plan.

Likewise, there will be other funding and service opportunities and challenges that may alter this plan. Certainly BATA's staff and board must be ready to respond to new opportunities when they present themselves and also be able to adjust to both external and internal events. Therefore, this plan should be viewed as a roadmap for the next five years that must be constantly reviewed and revised as circumstances change.

BATA should review this plan at least once a year and perhaps prepare a short addendum that updates financial and operating trends and, more importantly, reports on success in accomplishing key milestones. Adjustments in the specifics or timing of key milestones can be addressed at that time.

In addition to this annual review, BATA should consider a major update of the plan in three to five years or sooner if some sort of disruptive challenge or opportunity presents itself. Likewise a significant change in service priorities or new program opportunities might trigger a major revision. Such changes may result from federal or state transit legislation, significant increases or decreases in funding, new service opportunities, significant personnel changes, or local or regional opportunities related to the coordination of services.