



# CITY OF RAPID CITY

RAPID CITY, SOUTH DAKOTA 57701-2724

## PUBLIC WORKS DEPARTMENT

### Rapid Transit Division

PW093008-03

Rich Sagen, Transit Manager  
City web: [www.rcgov.org](http://www.rcgov.org)

Phone: 605-394-6631  
Fax: 605-394-6608  
e-mail: [rich.sagen@rcgov.org](mailto:rich.sagen@rcgov.org)

## MEMORANDUM

TO: Mayor/City Council

FROM: Rich Sagen, Transit Manager

DATE: September 22, 2008

RE: Rapid Transit System Transit Development Plan 2009-2013

Please find attached a PowerPoint presentation which outlines in brief the contents of the 2009-2013 Transit Development Plan for the City of Rapid City.

The five year plan is a requirement of the Federal Transit Administration (FTA) for all grantees receiving FTA capital/operating assistance. Development of the plan commenced in January, 2008. The plan documents existing demographic trends, growth trends, and current transit services and performance. Characteristics of the community and analysis of transit system performance were compared against a backdrop of needs identified by transit stakeholders obtained at a series of public hearings, and person to person interviews conducted in March, 2008. Stakeholder comments as well as technical analysis were used to arrive at a series of recommended goals and performance standards for the transit system.

The cornerstone of the report is a service plan with recommendations for restructuring the fixed route service (RAPIDRIDE) and the demand response service (Dial-A-Ride). Detailed financial information is provided for both capital and operational changes.

A formal presentation will be made by the consultant during the city council meeting on October 6, 2008. Following the presentation the city council will be asked to adopt the plan and to act on the recommendations as presented.

If you have any questions, please feel free to contact me.



## Purpose of the Plan

- Document existing community conditions and transit services
- Evaluate performance of existing transit services
- Identify emerging needs for transit
- Develop service plan to meet highest priority needs 2009-2013
- Identify costs to implement

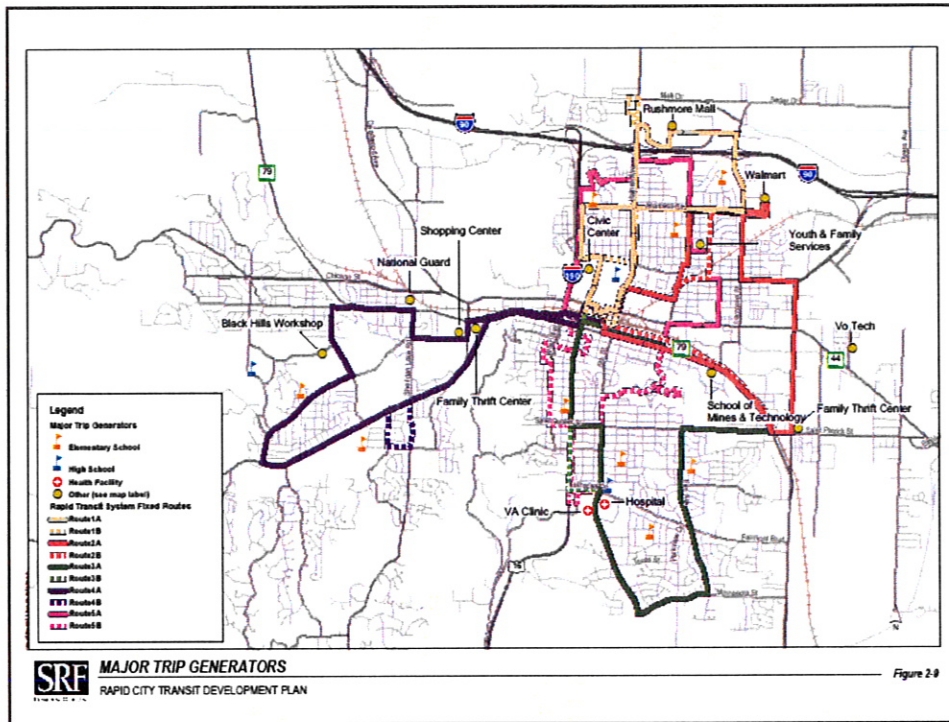
## Community Characteristics

- Fast population growth from Year 2000 (10 percent increase by 2006)
- 1.5 percent annual growth in population expected through 2025 (population to reach almost 80,000)
- 12 percent of population are age 65+
- 25 percent of population are age 17 or less
- 18 percent of population has some type of disability
- Land area grew dramatically from 1990 to 2007

## Existing Fixed Route Transit Service

- Five fixed routes
  - 35-minute headway
  - Pulse service meets at Milo Barber
  - Operates 6:25 am to 5:55 pm, Monday – Friday
  - \$1 fare with free transfers (discount for seniors)
  - 7 buses (5 in operation daily), all lift-equipped
  - Routes serve many key activity centers in community
  - No fare increase in 16 years
  - 220,000 passengers in 2007, up 16 percent in 2008
  - \$600,000 to operate in 2007 (39% of total system)





## Existing Demand Response Service

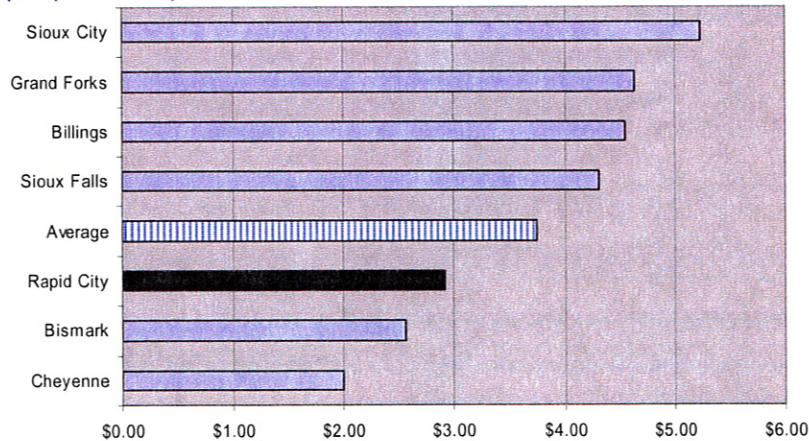
- On-Demand Service
  - Curb-to-curb service, advanced reservation required
  - Users must be certified as having a disability
  - Operates 6:30 am to 6:00 pm, Monday to Friday plus 8:00 am to 7:00 pm on Saturdays
  - \$2.00 fare
  - Service available to entire community
  - 17 buses, all lift equipped
  - Almost 90,000 passengers in 2007
  - \$950,000 to operate in 2007 (61% of total system)



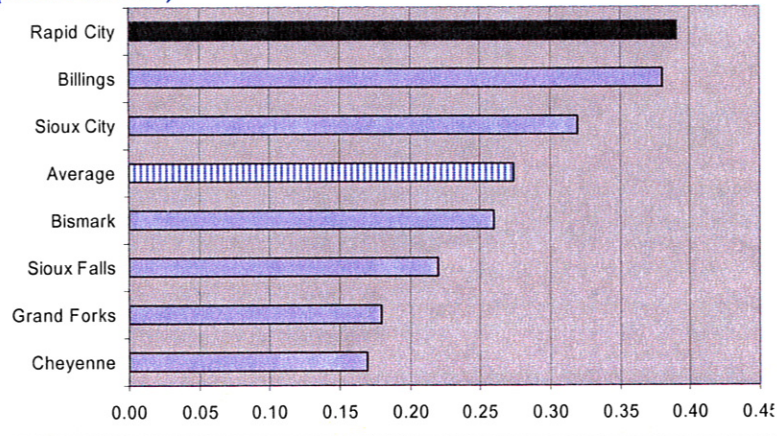
## Performance Trends

- Since 2003, fixed route passengers are up over 50 percent and demand response passengers are up almost 30 percent
- Operating costs increased by almost 60 percent, includes costs for adding a 5th fixed route, significant increases in demand response mileage and significant increases in fuel costs (up 56% in 2008).
- Compared to peers, very efficient operation (low cost per mile) and high productivity (passengers per mile)

## Operating Expense per Vehicle Revenue Mile (Rapid Ride)



## Passenger Trips per Revenue Mile (Dial-A-Ride)



## Stakeholder Input

- Interviews and listening sessions conducted
- Overall impression is that RTS has become more of a community transit service from earlier years
- A/B route system can be confusing for customers
- Fixed route service should be extended to more parts of the community
- All services should operate evenings and weekends
- Could another transfer hub (not downtown) be set up
- Need to make sure all shelters, benches and bus stop signs are current with routes

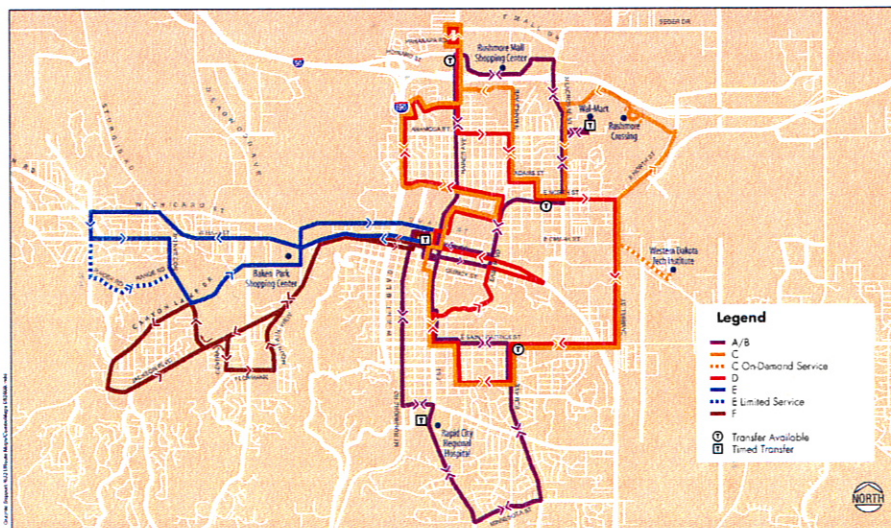


## Service Planning Strategies

- Optimize one-seat rides by connecting routes serving biggest activity sites thereby reducing transfers
- Reduce the need for long transfer pulses downtown to reduce customer travel time
- Look for ways to serve new areas in town
- Expand coverage on west side by splitting current route into two pieces
- Establish multiple transfer points within the system
- Expand route coverage in downtown



2009-2013  
Transit Development Plan  
City of Rapid City, SD



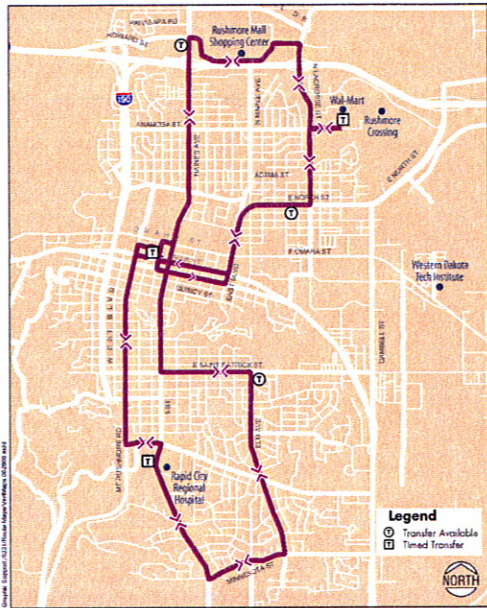
Proposed Rapid City Transit Routes  
RAPID CITY TRANSIT DEVELOPMENT PLAN

2013  
McChick



2009-2013  
Transit Development Plan  
City of Rapid City, SD





**SRF** Proposed A/B Transit Route  
RAPID CITY TRANSIT DEVELOPMENT PLAN

SRF  
April 2011  
08/26/08

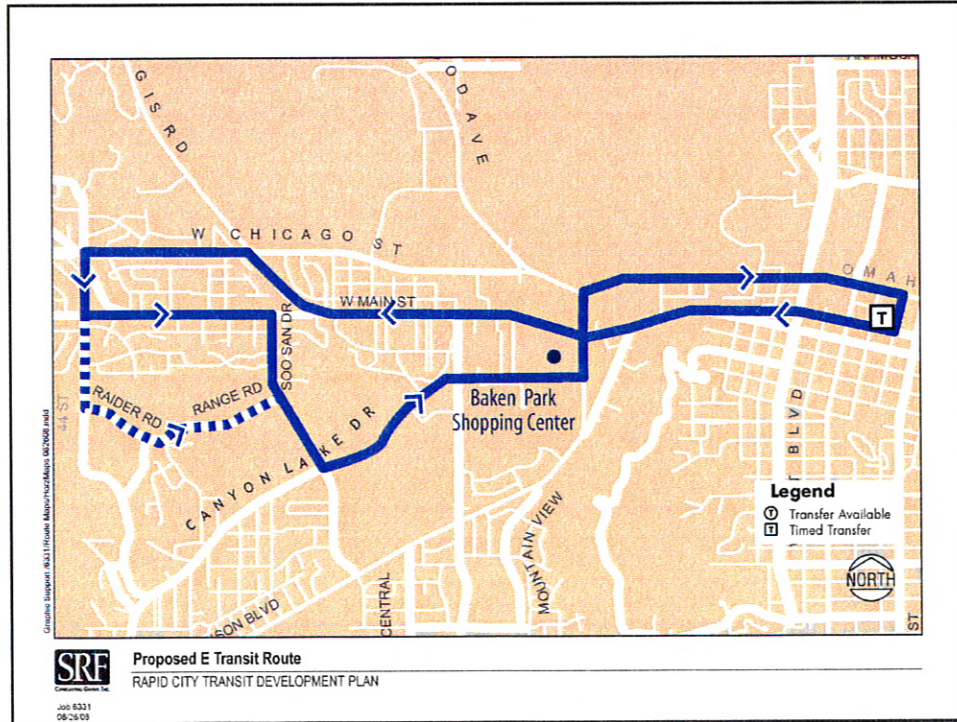
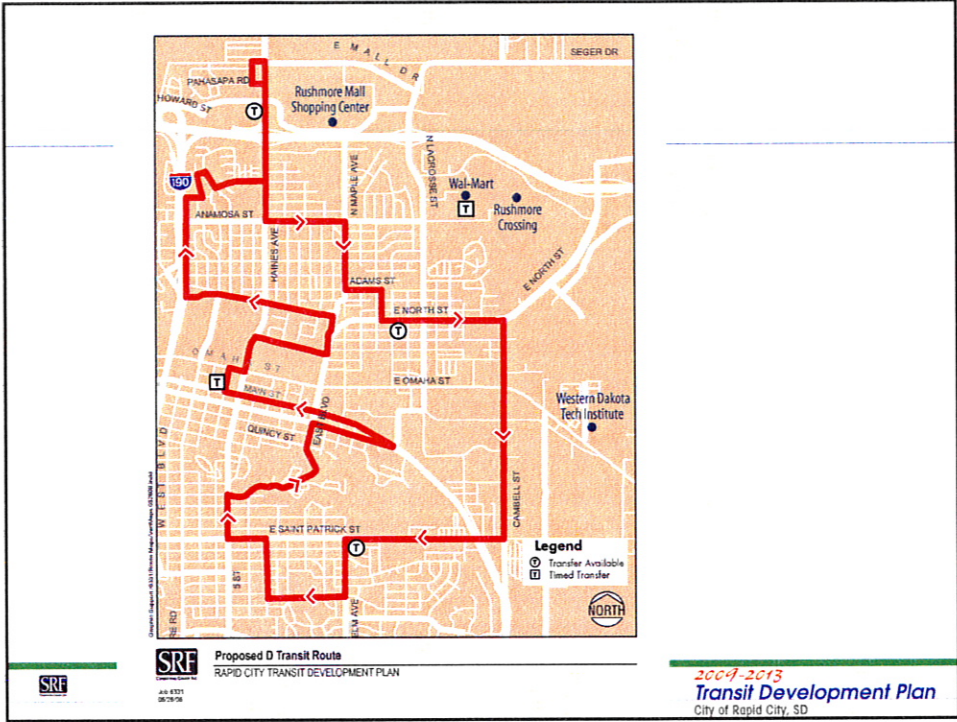
2009-2013  
**Transit Development Plan**  
City of Rapid City, SD



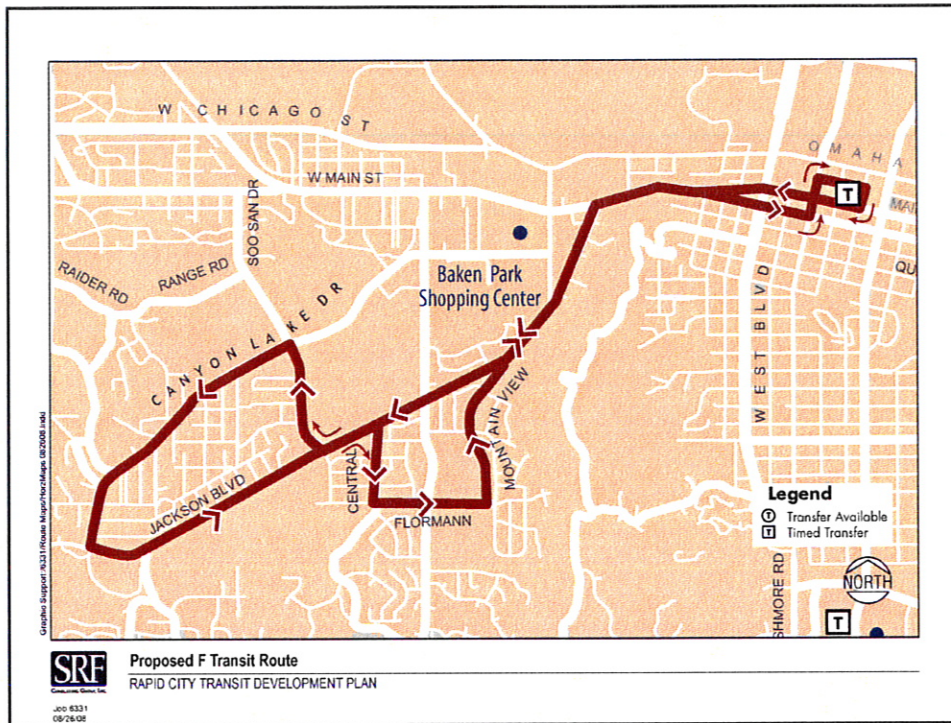
**SRF** Proposed C Transit Route  
RAPID CITY TRANSIT DEVELOPMENT PLAN

SRF  
April 2011  
08/26/08

2009-2013  
**Transit Development Plan**  
City of Rapid City, SD







## Major Benefits of New Route System

- Increased number of bus trips per day per route (from 10 to 12)
- Increased number of one seat rides between most popular destinations (decrease transfers)
- Reduced transfer time for customers
- Opportunity for in-line transfers
- Expanded downtown coverage
- New service to: Vo-Tech, Stevens High School, West Middle School, curb service for Black Hills Workshop, Canyon Lake Senior Center, NW Rapid, E. St. Pat, Rushmore Crossing



## System Performance

	<u>Alternative 1</u>	<u>Alternative 2</u>
	Keep Existing Routes	Implement New Routes
Operating Cost (Year 2011)	\$1.85 m	\$1.85 M
Passengers	329,000	356,000
Net Cost	\$1.32M	\$1.28M
Net Cost Per Passenger	\$4.00	\$3.58
Fare box Recovery (%)	29%	31%

Conclusion: More passengers for same cost as decreased travel time and directness of travel will foster faster ridership growth.



## Cost/Benefits of Evening and Saturday Service

(Year 2011)

		<u>Alternative 1</u>	<u>Alternative 2</u>
		Existing Routes	New Routes
Evening Service (Wednesday, Friday) 6:30pm – 9:30 pm)	Costs	\$185,000	\$185,000
	Passengers	14,800	16,900
	Net cost per Passenger	\$10.87	\$9.96
Saturday Service (9:00 am – 6:00 pm)	Costs	\$308,000	\$308,000
	Passengers	17,100	18,500
	Net cost per passenger	\$12.79	\$11.73

Conclusion: Evening service more reasonable to test before Saturday if resources are available.



## Other Suggestions

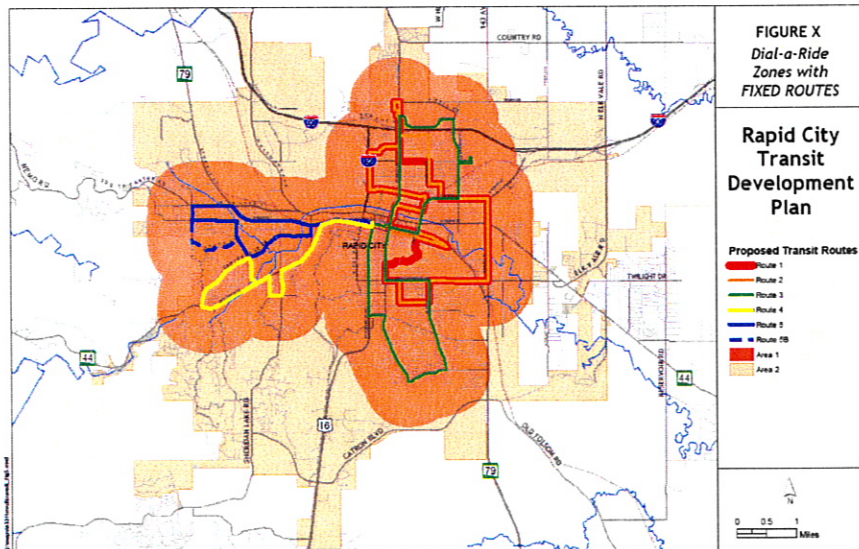
- Standardize bus stops at 8 per mile
- Provide route numbers and schedules at all bus stops
- Build ADA pads at all stops with shelters and benches
- Encourage use of accessible fixed route service for some current Dial-A-Ride trips to slow growth of demand response costs
- Sell monthly "all-you-can-ride" card for Dial-A-Ride
- Print RapidRide pocket schedules
- Sell visitor "one-day" passes

## Other Suggestions

- Look for outlying area park and ride opportunities
- Test a downtown free or reduced fare zone promotion
- Test evening service before expanding fixed route to Saturday
- Separate demand response dispatch function from customer service function
- Increase user fares
- Adopt zone fare system for Dial-A-Ride to reflect cost of long distance travel

# Suggested Fare Increases

Single Ride		RapidRide		Dial-A-Ride	
Current:	Adults	\$1.00	\$2.00		
	Seniors	\$0.50			
Suggested 2009:	Adults	\$1.50	Zone 1	Zone 2	
	Seniors	\$0.75	\$2.50	\$3.00	
Suggested 2011:	Adults	\$1.50	Zone 1	Zone 2	
	Seniors	\$0.75	\$3.00	\$3.50	
Monthly Pass					
Current:	Adults	\$25.00	NA		
	Students	\$15.00			
Suggested:	Adults	\$30.00	\$90.00		
	Students	\$20.00			







Rapid City

*2009-2013*

*Transit Development Plan*



**SRF** CONSULTING GROUP, INC.

Prepared for:  
Rapid City Growth Management  
Department

# **Rapid City Transit Development Plan**

**2009-2013**

**Prepared for:**

**Rapid City Growth Management Department**

**Prepared by:**

**SRF Consulting Group, Inc.**

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# 1. INTRODUCTION

The purpose of this report is to present the results of tasks completed as part of the 2009 to 2013 Rapid City Transit Development Plan. This document establishes the community's existing conditions in terms of demographic trends, growth trends, and current transit services and performance. It also presents a comprehensive route-by-route summary of RapidRide's current fixed-route system, and compares Rapid Transit System performance to a select group of peer city transit systems. The characteristics of the community and analysis of transit system performance is compared against a backdrop of needs identified by Rapid City transit stakeholders at a series of preliminary listening sessions held in March 2008. This report concludes with a series of recommended goals and performance standards for the Rapid Transit System, which were developed from the community input sessions as well as technical analysis of system performance. The cornerstone of the plan is a service plan containing recommendations for restructuring RTS services. The financial implications for both capital and operational changes to RTS are also presented in the final chapter of this report

## **2. COMMUNITY CHARACTERISTICS**

This chapter presents an overview of the region's geographic, economic and residential characteristics. This information helps define the potential markets for transit service within the community.

### **AREA DESCRIPTION**

Rapid City is the second largest city in the state of South Dakota. It is located in the foothills of the Black Hills and is the county seat of Pennington County. The city serves as a regional center for a large geographic area including portions of Wyoming, Nebraska, North Dakota, Montana and South Dakota (see Figure 2-1).

In Rapid City, the Rapid Transit System (RTS) serves the metropolitan area carrying more than 215,000 passenger trips annually on a total of five fixed routes, and demand response service is provided for those who need curb-to-curb transit service. Ridership on Dial-A-Ride in 2007 was almost 90,000 trips. The study area for the transit analysis is shown in Figure 2-2.

### **DEMOGRAPHIC CHARACTERISTICS**

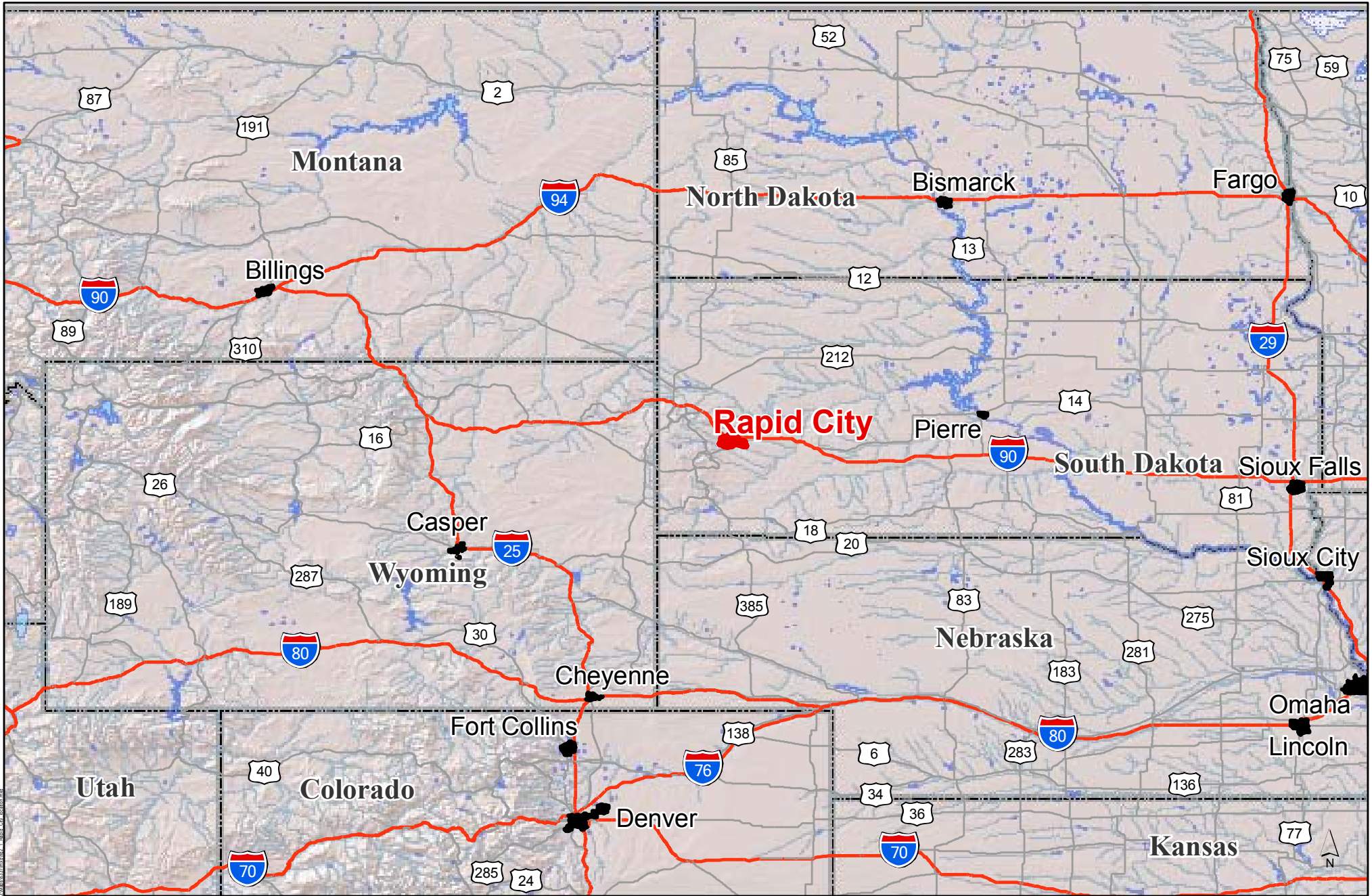
This section profiles the demographic and socio-economic characteristics of Rapid City. These factors influence the overall need for transit service in the community and are often indicators of potential use.

#### **Population Trends**

Since the 2000 Census, the population of Rapid City has grown almost 10 percent with (2006 estimates putting the population at 65,398. Future estimates suggest that the city's population will continue to grow steadily. The 2010 population is expected to reach 69,383 and estimates for 2025 project the population to reach 79,006 (see Figure 2-3).

Rapid City experienced its fastest rate of growth between 1940 and 1960, which coincides with the opening of Ellsworth Air Force Base. From 1960 to 1980, population growth was relatively flat. Between 1980 and 1990, Rapid City experienced a significant growth spurt of 18.6 percent and between 1990 and 2000, the population grew by 9.3 percent.

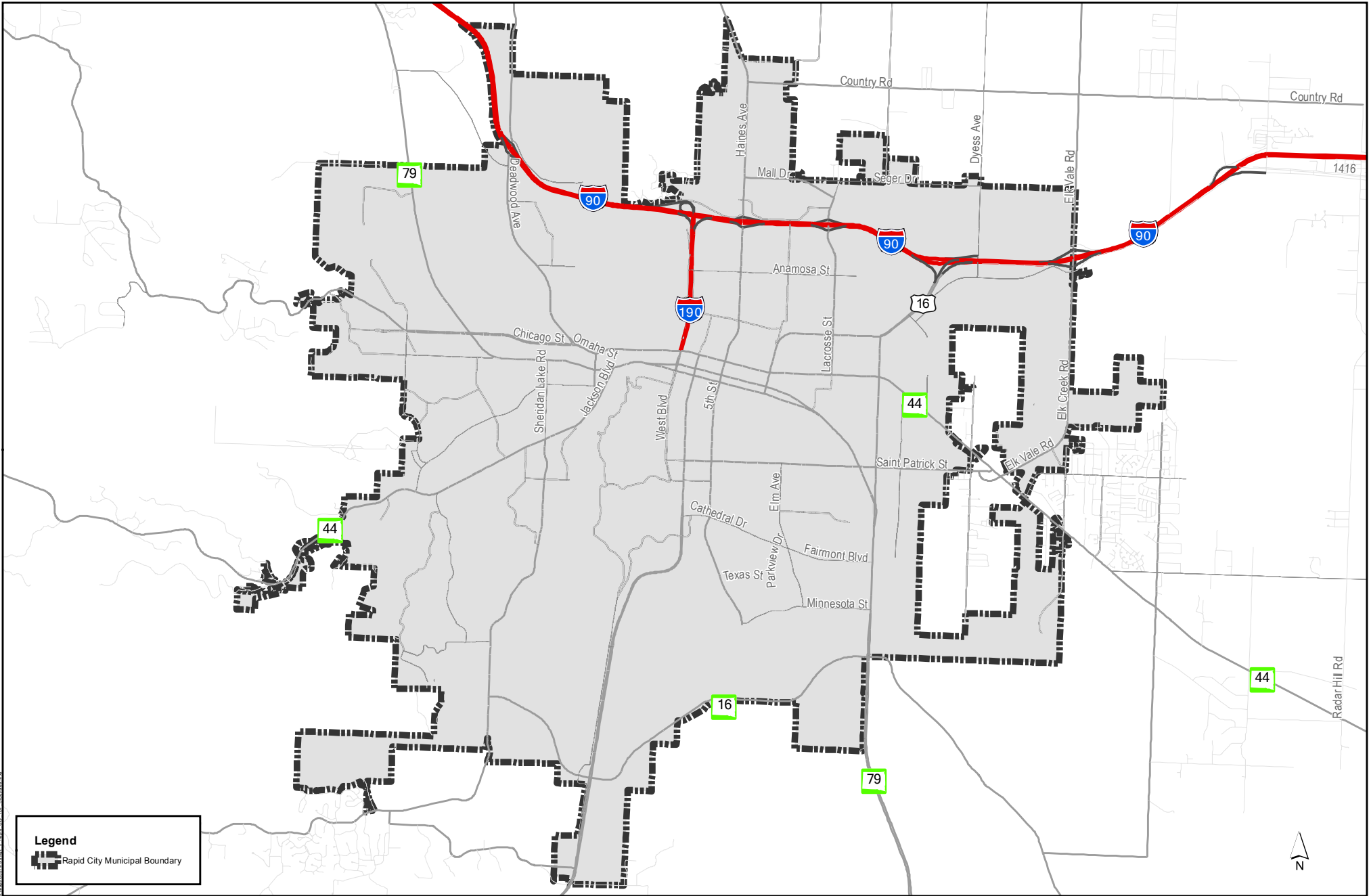




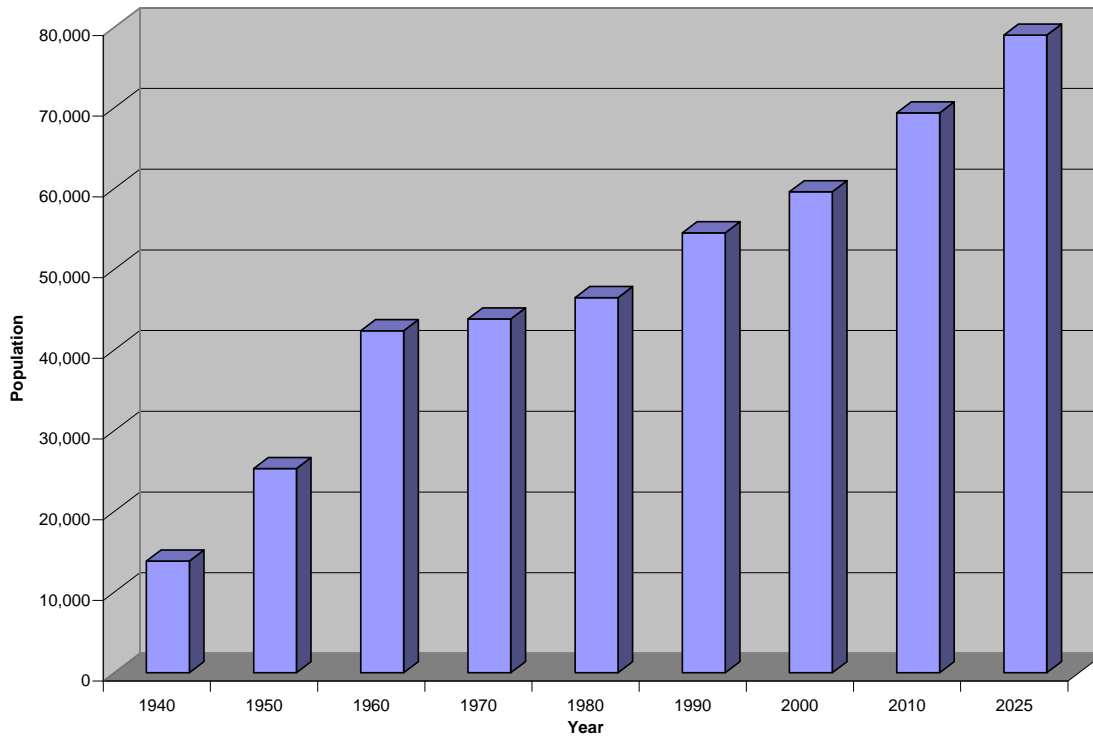
**RAPID CITY, SOUTH DAKOTA AND VICINITY**

RAPID CITY TRANSIT DEVELOPMENT PLAN

Figure 2-1



**Figure 2-3  
Population Growth**



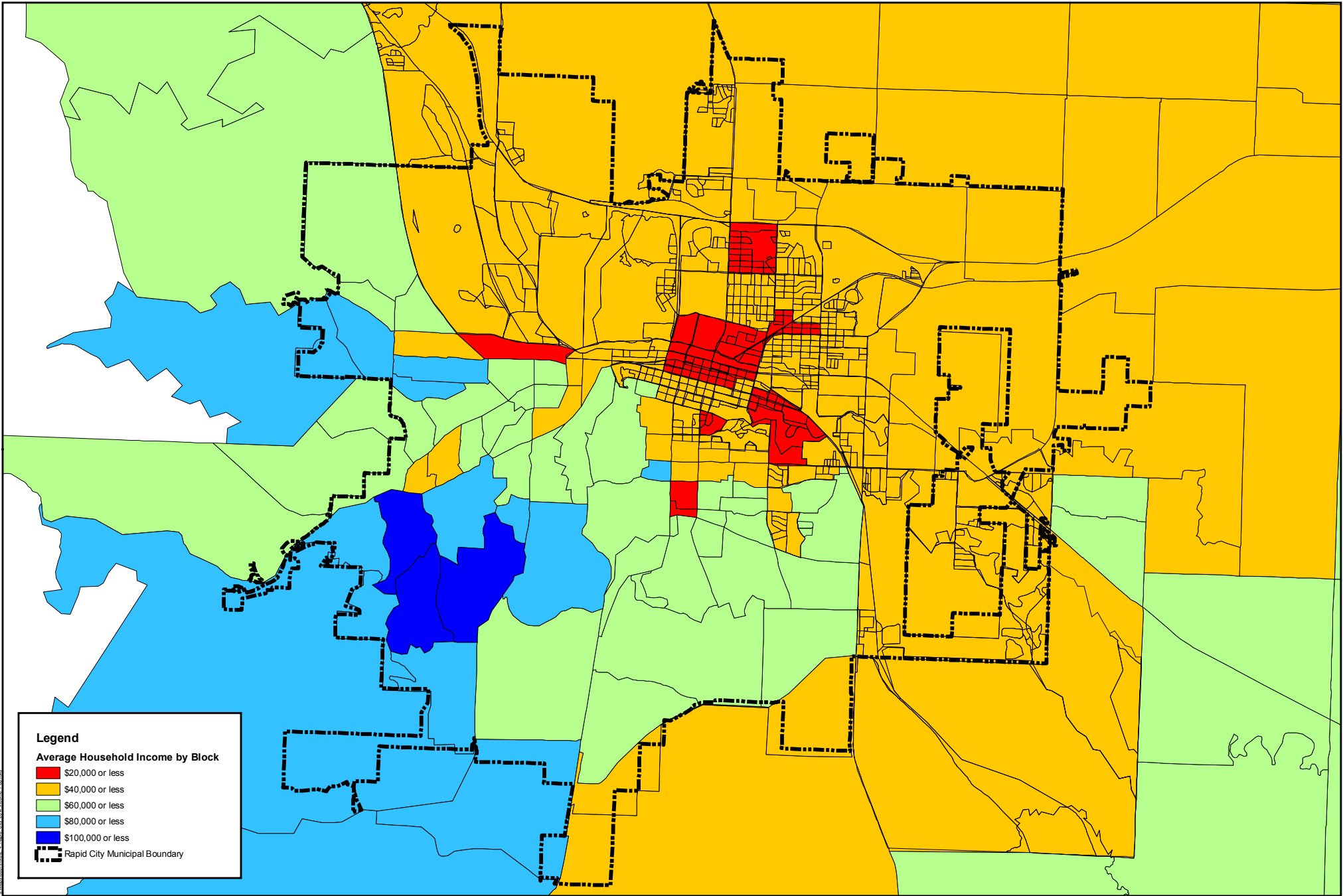
### Current Employment

According to the South Dakota Department of Labor, Labor Market Information Center, employment in Rapid City was 63,315 in 2007. The service sector represents the largest share of total non-farm employment in Rapid City at 40 percent. This is followed by governmental services at 17 percent and retail trades at 15 percent of total non-farm employment.

### Income

Transit dependent populations often include those with low or fixed incomes because they have less ability to provide reliable transportation for all members of the household using a private transportation. The median household income for Rapid City in 2006 was \$40,678, which is lower than the Pennington County median of \$43,508, and lower than the median household income for the State of South Dakota (\$42,791). Concentrations of lower income residents are located near downtown, in the central and eastern portions of the city (Figure 2-4). There are also clusters of lower-income households to the west of downtown along Jackson Boulevard and West Main Street. The current fixed route service operates extensively through these areas.





### Rapid City Land Area Growth

Information on city land area growth and population density is presented in Table 2-1 based on information provided by the Rapid City Growth Management Department. Since 1970, the land area of the city has increased significantly. As a result, Rapid City has become a less densely populated city, a trend that is in line with many urbanized areas around the country. Figure 2-5 depicts current population densities. There are significant challenges for a transit system to provide quality service to a population that is spreading over a greater land area over time.

**Table 2-1  
Population Density**

Year	City Land Area (square miles)	Population	Population Density (persons/mi <sup>2</sup> )
1950	11.70	25,310	1,180
1960	14.59	42,399	1,735
1970	16.75	43,836	2,530
1980	22.08	46,492	1,985
1990	34.32	54,523	1,590
2000	41.55	59,607	1,435
2010	52.37	69,383	1,325
2025	123.00	79,006	642

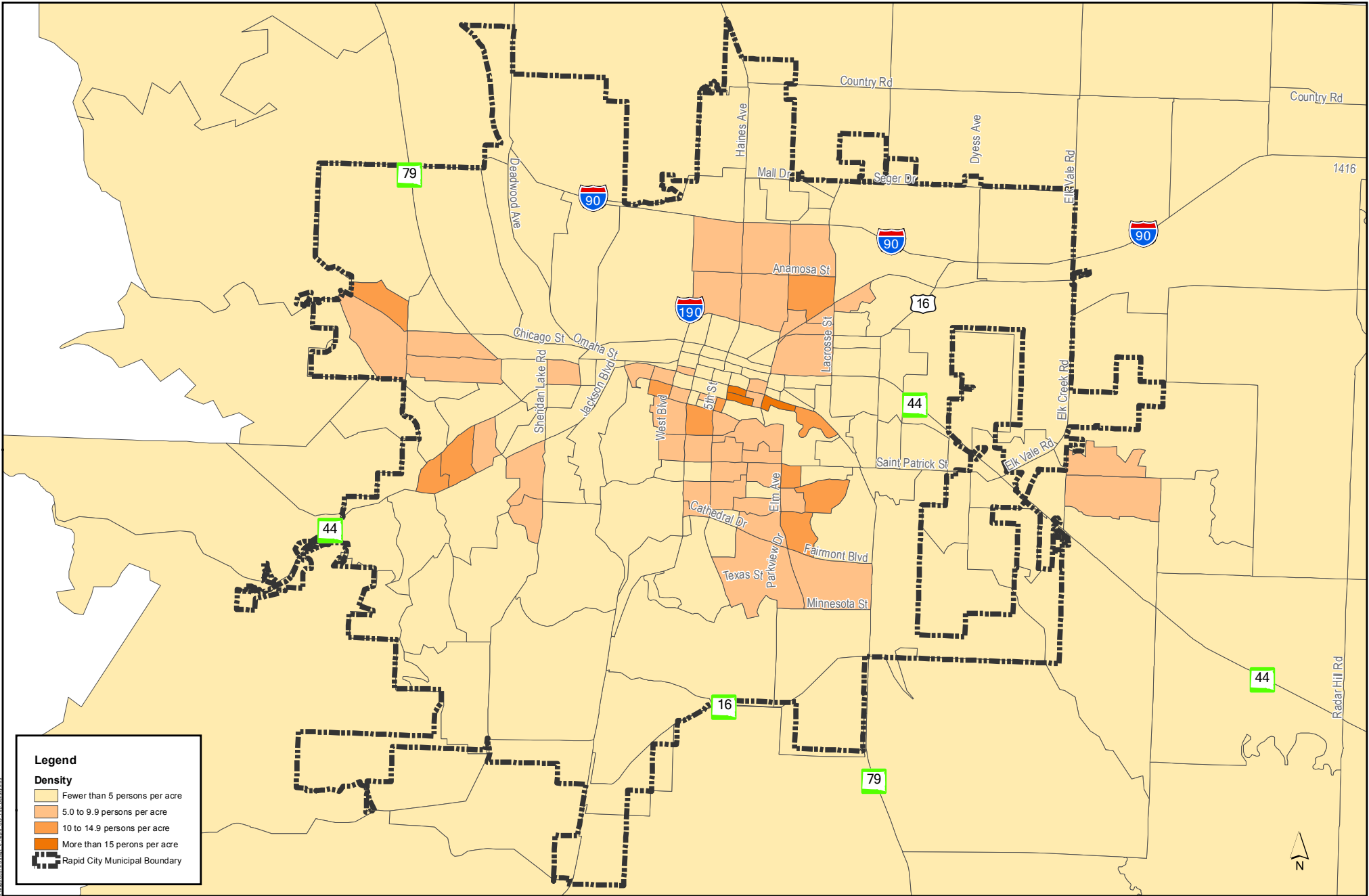
### Future Growth Areas

Growth continues to occur in the areas surrounding the city limits. The city's growth is constrained by an urban growth boundary that limits development through 2025 to a 123 square mile area around the city center. A Long-Term Annexation Plan has been prepared by the city describing the process by which developing areas will be annexed. (See Figure 2-6 for a depiction of the urban growth boundary and growth areas.)

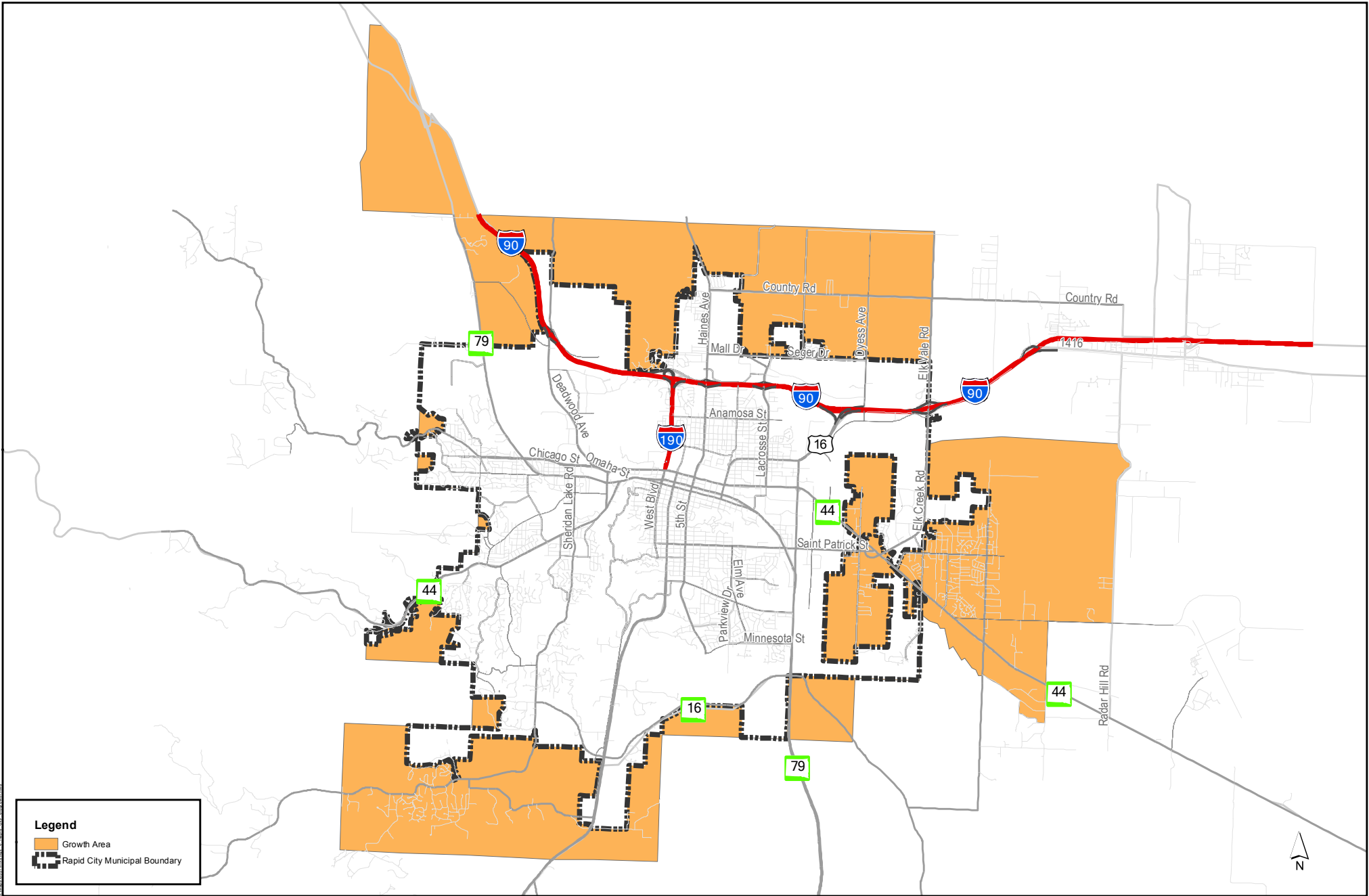
### Senior and Youth Populations

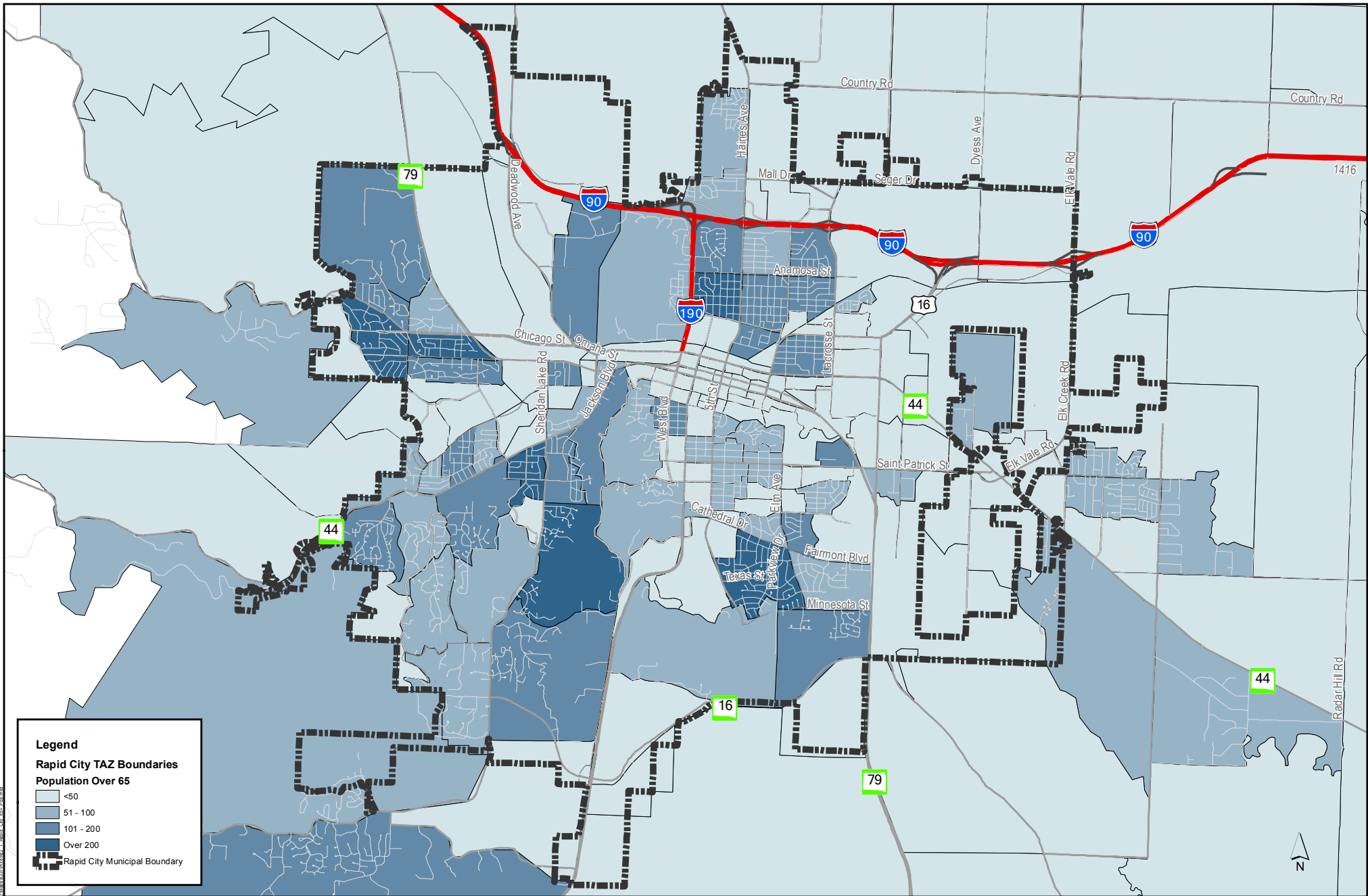
Transit-dependent populations often include senior citizens and youth. Some of the elderly may not be able to afford a car, may be physically unable to drive, or prefer not to drive. Youth typically have limited incomes and need to cope with age restrictions and competency testing before they may obtain a driver's license. This results in a percentage of youth who are mobility-limited and may consider transit as a valid transportation option.

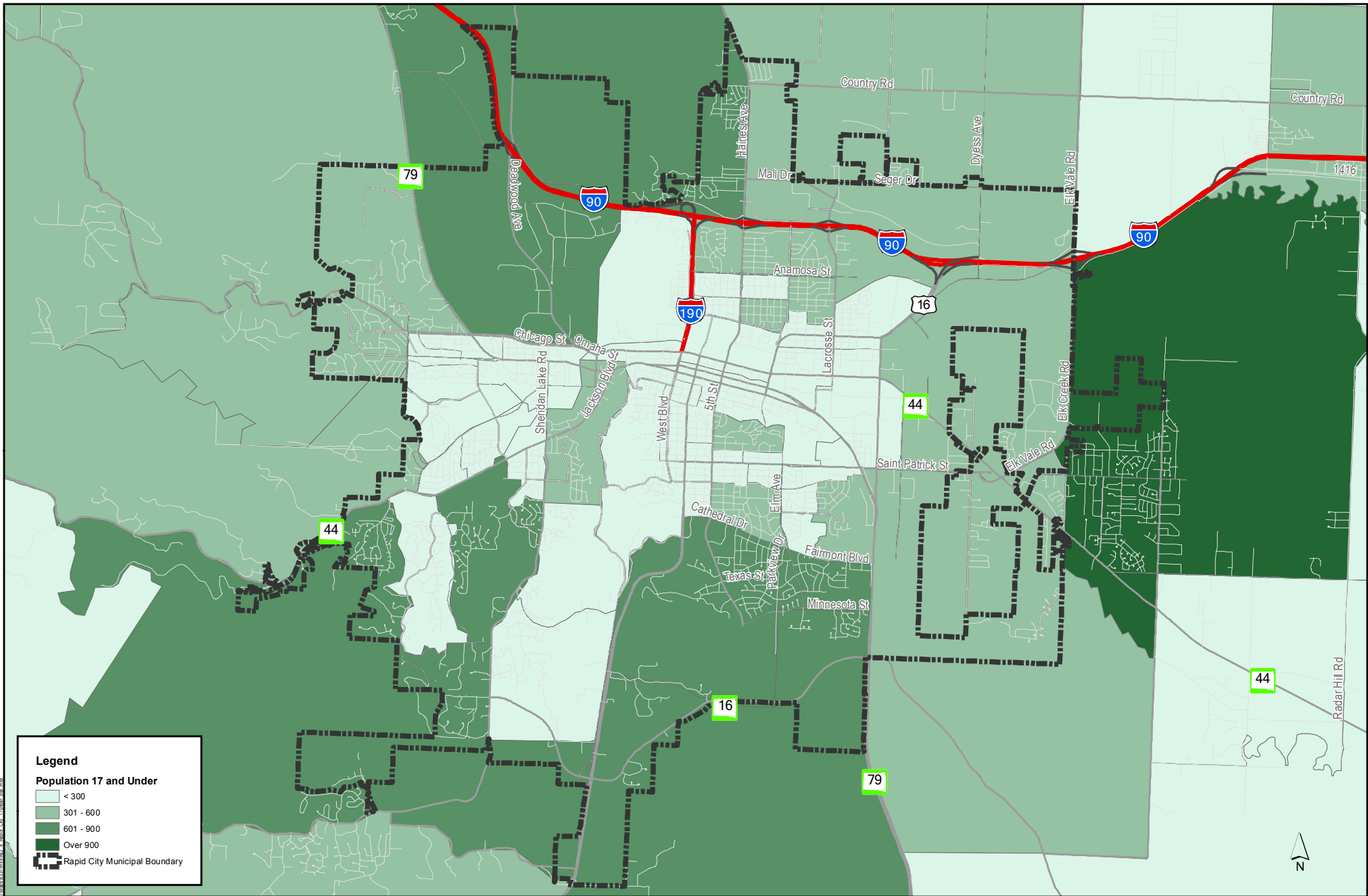
Of the 65,398 residents in Rapid City there are approximately 8,097 people aged 65 or older. This represents about 12 percent of the total population. There are approximately 16,500 people aged 17 and younger living in the city. This represents about 25 percent of the total population. Figure 2-7 presents the concentrations of the population aged 65 or older. Figure 2-8 presents the concentrations of the population aged 17 and younger. Some of the most significant concentrations of seniors are in the north central part of town (north of downtown and south of I-90), southeast section (south of Fairmont Boulevard, east of 5th Street), southwest section (Sheridan Lake Road and Jackson Boulevard areas), and west section (West Main Street, West Chicago Street area).













## Disabled and Mobility Limited Populations

Rapid City has about 10,000 disabled residents over 5 years old or about 18 percent of the population. This is slightly below both the statewide and national averages of 22 percent and 19 percent, respectively. A number of these individuals qualify for use of the demand-response service in the community.

## MAJOR TRIP GENERATORS

In serving transit markets, important geographic points of interest typically include shopping centers, office and commerce concentrations, schools and learning institutions, health care facilities, and major employment centers. All of these generators should be considered when evaluating the adequacy of a region's transit service. Figure 2-9 shows some of the major trip generators in Rapid City.

### Major Employers

The top employment locations outside of federal, state, and local government include the following:

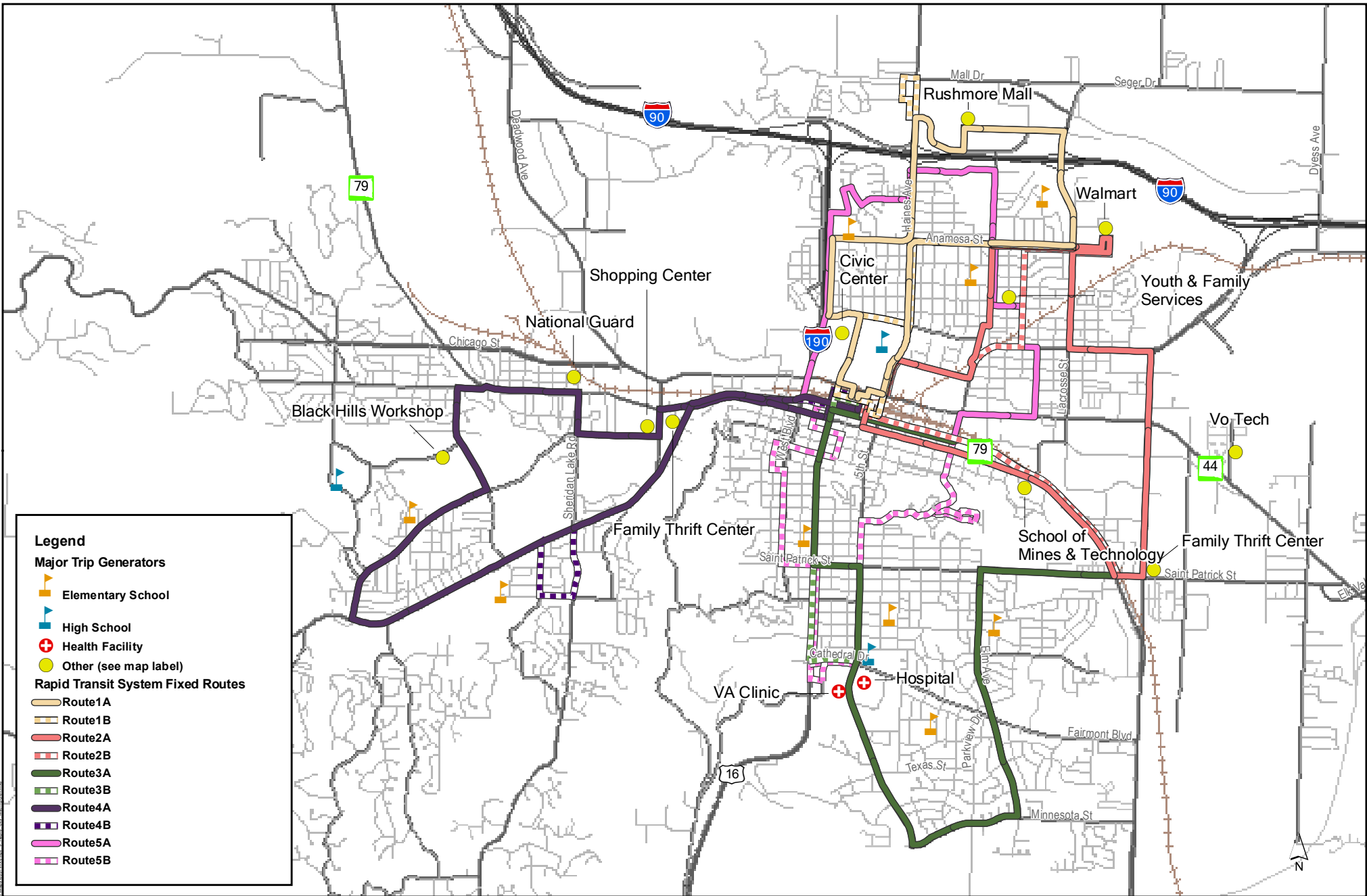
Rapid City Regional Hospital	2,700	BH Surgery Center	287
Wal-Mart/Sam's Club	857	Menards	250
Sanmina	460	Merrillat Industries	216
Green Tree	415	GC Dacotah	163
NEW Finance Corporation	410	Black Hills Gold by Coleman	156
Black Hills Workshop	380	J.C. Penney	150
ASI, Inc.	373	Assurant Preneed	143
GE Money	330	Mileage, Plus, Inc.	139
Beverly Healthcare	298	Lowe's	125
School of Mines and Technology	298	Dakota Craft Inc.	123

### Shopping and Retail Centers

Major shopping and retail areas in Rapid City tend to be located along major transportation corridors and include the Rushmore Mall, the East Family Thrift Center, the Midland Shopping Center, Baken Park, and the city's central business district.

Rapid City serves as the region's healthcare center. The sector employs over 8,000 people in the Black Hills area. Hospitals and health centers represent important destinations for the community. For this reason, it is of critical importance that these facilities are well served by the transit network. Major health care facilities in Rapid City are:

- Rapid City Regional Hospital
- Rapid City Regional West – Center for Behavioral Health
- Rapid City Indian Hospital (Sioux San)
- Rapid City Community Health Center
- Black Hills Rehabilitation Center



## Schools and Training Centers

Schools and training centers are also important travel destinations, often with large transit-dependent clientele. In addition to the elementary and high schools, Rapid City is the home of the South Dakota School of Mines and Technology, a four-year college specializing in engineering and related fields. National American University provides two- and four-year degrees in business. Western Dakota Technical Institute provides vocational training in areas such as drafting and computer technology, and the University of South Dakota's School of Nursing offers a training program for nursing students. Black Hills State University offers a variety of courses offered at four locations around Rapid City: Ellsworth Air Force Base, Western Dakota Technical Institute, Rapid City Regional Hospital Health Sciences Building, and the South Dakota School of Mines and Technology.

## Quality of Life

Rapid City's reputation as one of the top tourist centers in the nation makes for a wide variety of leisure and recreational opportunities

- Five national parks in close proximity: Mount Rushmore, Badlands, Wind Cave, Jewel Cave, and Devil's Tower.
- 17 area golf courses plus tennis facilities in town.
- 14 mountain lakes, more than 300 miles of streams and reservoirs for water sports and fishing.
- Rapid City bike trail measuring 13.5 miles along Rapid Creek.
- Two area ski resorts.
- 400 miles of nature walks and hiking systems in the Black Hills.
- Diverse religious community, with more than 80 area churches representing various denominations and congregations of all sizes.
- 75 hotels/motels with 5,156 available sleeping rooms and six convention properties.
- Western South Dakota's largest shopping center, specialty shops, boutiques, and antique stores. Downtown Rapid City's business contains some 400 businesses.
- Rushmore Plaza Civic Center is a modern facility for conventions, entertainment and athletic events. Complete convention complex includes two arenas, 150,000 square feet of exhibit space, 1,774 seat theater, meeting rooms and catering facilities, conveniently located in downtown Rapid City.

### **3. EXISTING TRANSIT SERVICES AND FACILITIES**

This chapter presents an overview of the fixed route transit service and demand response service operated by Rapid Transit System (RTS). It presents data on the current fixed route system in terms of service levels, fare structure and ridership, as well as operating statistics and regional service coverage. The chapter also analyzes trends in the operating and financial data for all RTS services. These descriptions provide a baseline for understanding the current RTS from which further evaluations and recommendations can be made.

#### **RAPID CITY TRANSIT SERVICES**

RTS is responsible for providing safe, convenient and affordable local bus service within the city limits of Rapid City. RTS operates both fixed route service, RapidRide, and demand-response service, called Dial-A-Ride for those individuals that qualify under the Americans with Disabilities Act (ADA). The city has also recently begun operation of a seasonal trolley service.

#### **FIXED ROUTE SERVICE DESCRIPTION**

The RTS fixed-route system, known as RapidRide, consists of five routes that serve the north, south, and west parts of the community (see Figure 3-1). This service was initiated in 1992, well after the city's Dial-A-Ride service began (1982).

##### Days & Hours of Operation

RTS operates RapidRide Monday-Friday 6:25 a.m. through 5:55 p.m. RapidRide does not operate on weekends or holidays.

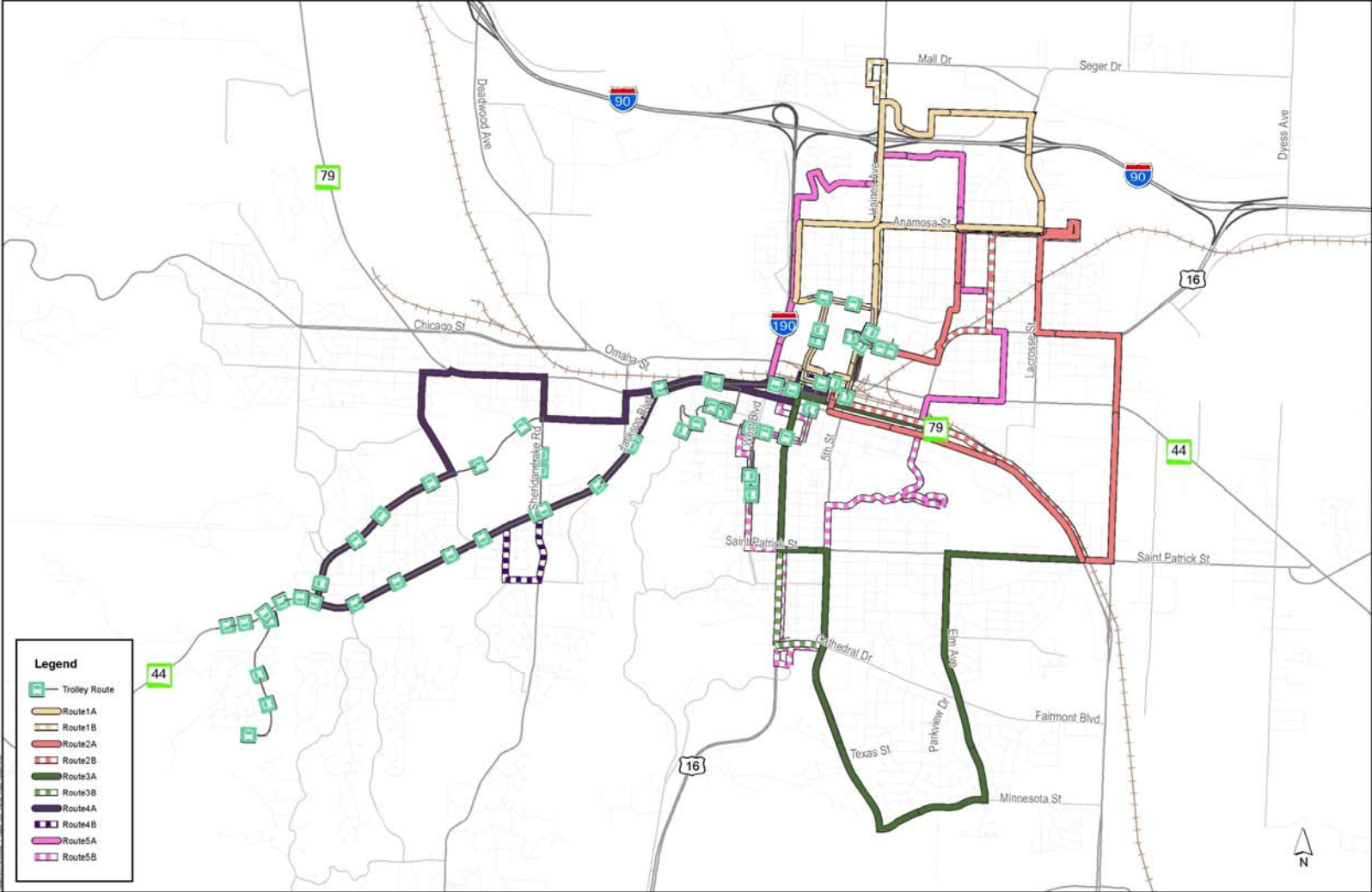
##### Service Frequency

Each of the RapidRide routes operates on 35-minute headway during regular weekday service utilizing an "A" and a "B" configuration. The two loops for each route differ by direction (clockwise or counter-clockwise) and are intended to improve safety for riders and provide better coverage by providing bus stops along both sides of the main street system. Slight modifications between A and B routing occur on all routes except Route 4.

For each route, buses depart from the Milo Barber Transportation Center (MBTC), travel the loop route in one direction and arrive back at the MBTC 25 minutes later. The buses then have a 10-minute layover before they depart from the MBTC on the same route but in the opposite direction. The buses arrive back at the MBTC 25 minutes later, completing the trip. Thus, a full round trip, including both "A" and "B" loops takes 70 minutes. There are 10 round trips (A and B loops completed) daily on each route. Table 3-1 summarizes currently scheduled RapidRide service.



Figure 3-1



**SRF** **RAPID TRANSIT SYSTEM FIXED ROUTES**  
CONSULTING GROUP, INC. **RAPID CITY TRANSIT DEVELOPMENT PLAN**

**Table 3-1  
RapidRide Route Length & Running Times**

A Route		MBTC Layover	B Route		MBTC Layover
Begin	End		Begin	End	
6:25 a.m.	6:50 a.m.	10 minutes	7:00 a.m.	7:25 a.m.	10 minutes
7:35 a.m.	8:00 a.m.	10 minutes	8:10 a.m.	8:35 a.m.	10 minutes
8:45 a.m.	9:10 a.m.	10 minutes	9:20 a.m.	9:45 a.m.	10 minutes
9:55 a.m.	10:20 a.m.	10 minutes	10:30 a.m.	10:55 a.m.	10 minutes
11:05 a.m.	11:30 a.m.	10 minutes	11:40 a.m.	12:05 p.m.	10 minutes
12:15 p.m.	12:40 p.m.	10 minutes	12:50 p.m.	1:15 p.m.	10 minutes
1:25 p.m.	1:50 p.m.	10 minutes	2:00 p.m.	2:25 p.m.	10 minutes
2:35 p.m.	3:00 p.m.	10 minutes	3:10 p.m.	3:35 p.m.	10 minutes
3:45 p.m.	4:10 p.m.	10 minutes	4:20 p.m.	4:45 p.m.	10 minutes
4:55 p.m.	5:20 p.m.	10 minutes	5:30 p.m.	5:55 p.m.	NA

In February 2008, each of the RapidRide routes were surveyed in order to determine actual running times. The survey was conducted over a five-day period in February of 2008. Table 3-2 summarizes the results. Generally, the A.M. routes run slightly ahead of schedule and the P.M. routes slightly behind.

**Table 3-2  
RapidRide Complete Loop Times and Layovers**

Route	Running Time		Layover	
	AM	PM	AM	PM
1A	22 min	26 min	13 min	9 min
1B	25 min	27 min	10 min	8 min
2A	29 min	31 min	6 min	4 min
2B	25 min	28 min	10 min	7 min
3A	25 min	29 min	10 min	6 min
3B	26 min	28 min	9 min	7 min
4A	26 min	27 min	9 min	8 min
4B	29 min	30 min	6 min	5 min
5A	24 min	25 min	11 min	10 min
5B	29 min	27 min	6 min	8 min
AVERAGE	26 min	27.8 min	9 min	7.2 min
Average Layover/Complete Route (35 min)			26%	20%

### Route Length/Running Times

For ease of transfer at the MBTC, all routes have 25-minute one-way running times (see Table 3-3). However, each of the four routes has a slightly different route length.

**Table 3-3  
RapidRide Route Length & Running Times**

Route	Route Length	Scheduled Running Time	Average Speed
1 A	6.6 miles	25 minutes	15.8 mph
1 B	7.1 miles	25 minutes	17 mph
2 A	7.6 miles	25 minutes	18.2 mph
2 B	7.1 miles	25 minutes	17 mph
3 A	8.5 miles	25 minutes	20.4 mph
3 B	8.6 miles	25 minutes	20.6 mph
4 A	8.7 miles	25 minutes	20.9 mph
4 B	9.5 miles	25 minutes	22.8 mph
5 A	6.2 miles	25 minutes	14.9 mph
5 B	6.7 miles	25 minutes	16.1 mph

Source: City of Rapid City.

### Transfer Policies

RapidRide allows transfers to another bus, but does not allow transfers for stopovers or return trips. All transfers must be made at the MBTC. Based on a six-day sample, approximately 17 percent of average daily ridership transfers use paper transfers. Additional transfers occur through passengers using their monthly passes to reboard another vehicle, although it is believed that this is a relatively modest number. The number of transfers between routes varies (see Table 3-4). The highest amount of transferring involves passengers from Routes 1 and 2 transferring to Route 3 to complete their trip.

**Table 3-4  
Average Transfers per Day**

		To Route:				
		1	2	3	4	5
From Route:	1		8.0	3.6	3.6	1.8
	2	8.2		17.6	8.8	11.4
	3	7.6	9.8		4.6	2.8
	4	3.4	7.4	3.6		1.4
	5	2.2	12.4	4.0	3.6	

## Fare Structure

RapidRide accepts cash fares and coupons for individual trips and sells unlimited ride monthly passes. The standard adult/student (5-59 yrs) fare is \$1 per ride. The elderly, disabled and Medicare passengers ride for \$0.50 per trip. Children (4 years and under) ride for free. Books of coupon (10 coupons) can be purchased (for convenience purposes), at rates of \$10 for adult/student passengers and \$5 for elderly, disabled and Medicare passengers. Monthly passes can be purchased, for potential savings (depending upon use), at rates of \$25 for adults and \$15 for students (K-12).

## DIAL-A-RIDE SERVICE DESCRIPTION

This service operates as a curb-to-curb service for Americans with Disabilities (ADA) certified passengers. An individual with a disability must complete an application form and be approved prior to using this service. Upon determination and approval, riders receive a laminated card to document their eligibility. (No similar card system is currently in use for elderly and handicapped discount riders on RapidRide.) All individuals whose disabilities are so significant that they are unable to use regular, lift-equipped, fixed-route, bus service are approved for use of this service. Riders may schedule rides up to 14 days in advance of their trip, and a significant subscription service exists for recurring trips for Dial-A-Ride. A qualified rider must contact the dispatcher in order to schedule service. This is a shared ride service, and as such the length of a trip depends on the number of stops the bus will make for other passengers. However, every effort is made to ensure the shortest trip possible for the passenger. The City has a no-show policy that is in effect if a rider is more than five minutes late from the scheduled pick-up time. Dial-A-Ride on-time performance is judged by the vehicle arriving within 20 minutes of the scheduled pick-up time.

This service is available Monday through Friday, 6:30 a.m. to 6:00 p.m., and Saturdays 8:00 a.m. to 7:00 p.m. Dial-A-Ride service is not available on major holidays. Currently all passenger scheduling and vehicle dispatching is done using trip scheduling software.

## ORGANIZATIONAL STRUCTURE

RTS is operated as a service of the City of Rapid City. A transit manager oversees all activities and is supported by an operations coordinator, two route supervisors, a dispatcher and 29 drivers (17 full-time positions). A couple of temporary bus cleaners and a temporary receptionist round out the organization. Dispatchers and drivers are unionized municipal employees. All vehicle maintenance is sub-contracted out. The city is hoping to begin using city staff for some light maintenance in the near future.

The Rapid Transit Advisory Board (RTAB) was established in 1991 to inform and advocate for various groups regarding transit and transportation related issues. The membership is drawn from the community and appointed by the Mayor to represent social service organizations, transit passengers, persons with disabilities, the elderly and private business. The board consists of seven members who serve three-year terms with a maximum of three consecutive terms.

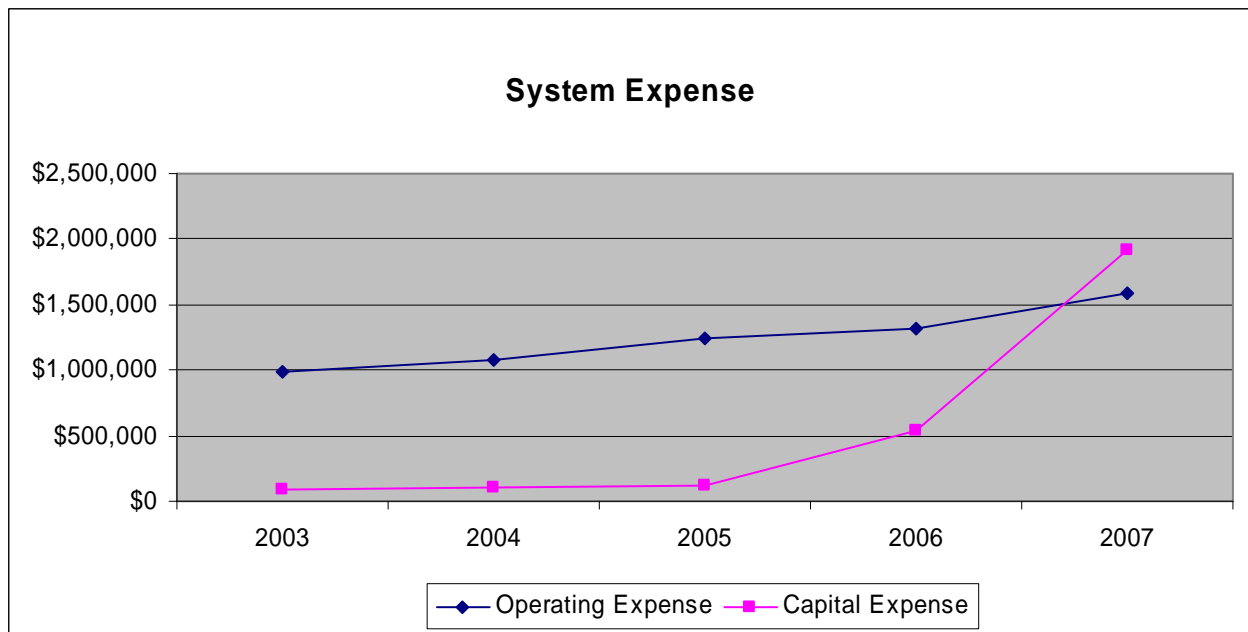


## FINANCIAL & OPERATING DATA

### System Expenses

RTS's annual operating expenses have been increasing since 2003, climbing from \$990,160 in 2003 to \$1,585,624 in 2007 (see Figure 3-2). This is an average annual increase of approximately 12.6 percent. Annual capital costs held relatively steady at around \$100,000 from 2003 to 2005 before increasing to well above \$500,000 in 2006, and then to \$1,919,236 in 2007 (see Figure 3-2). The sharp increase in capital spending in 2007 was due to the procurement of a new fleet storage facility.

**Figure 3-2**



### System Revenues (By Source)

Like most transit systems, the services operated by RTS rely heavily on a variety of funding sources to cover annual operating expenses. In addition to farebox revenue, RTS receives local, state, and federal assistance. Advertising is also a steady revenue source for RTS.

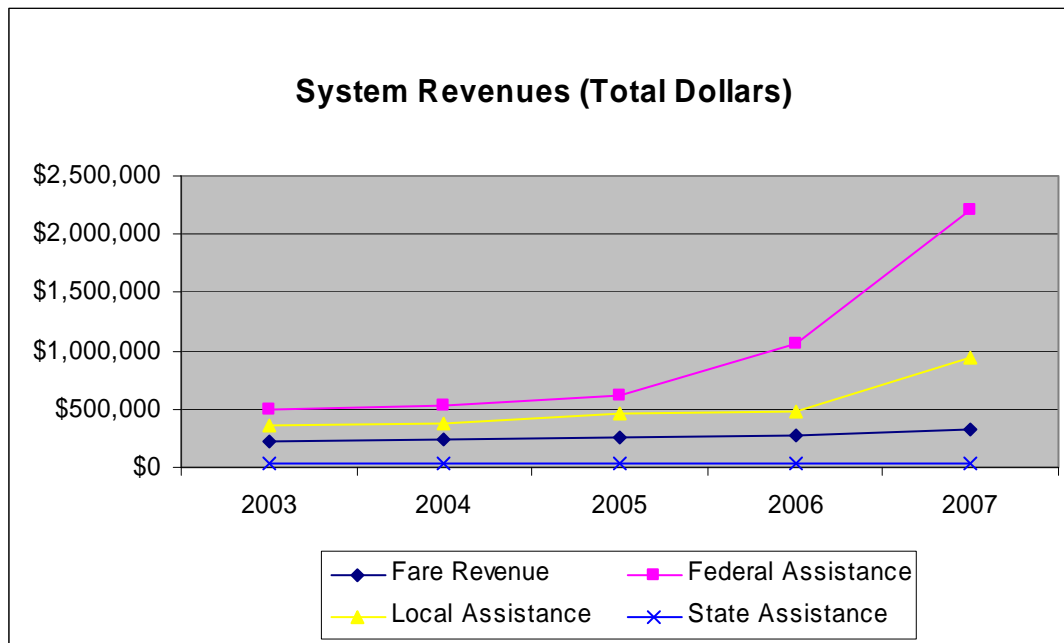
Farebox revenue, in terms of total dollars, experienced an overall increase between 2003 and 2007, climbing from \$215,469 in 2003 to \$325,191 in 2007 (see Figure 3-3). Passenger fares as a percentage of total revenues have held fairly steady between 2003 and 2007 at 20 percent in 2003 to 21 percent in 2007.

Local assistance, in terms of total dollars, experienced a substantial increase between 2003 and 2007, climbing from \$351,171 in 2003 to \$939,173 in 2007 (see Figure 3-3). As a percentage of total revenues, local funds remained constant at approximately 30 percent between 2003 and 2007.

State assistance, in terms of total dollars, remained constant at \$28,425 between 2003 and 2007. State assistance, as a percentage of total revenues, exhibited a slight decrease between 2003 and 2007, falling from 3 percent in 2003 to 1 percent in 2007.

Federal assistance experienced an overall increase between 2003 and 2007, climbing from \$456,645 in 2003 to \$2,212,071 in 2007 (see Figure 3-3). As a percentage of total revenues, federal assistance increased from 45 percent in 2003 to 63 percent in 2007.

**Figure 3-3**



### System Performance (Fixed-Route Only)

The ridership of RapidRide, the fixed route service of the RTS system, experienced an overall increase between 2003 and 2007, rising from 145,823 in 2003 to 217,617 in 2007, for an approximate average annual increase of 12 percent.

The revenue miles of RapidRide have experienced an overall increase since 2003, rising from 143,915 in 2003 to 200,549 in 2007, for an overall gain of 39 percent.

The revenue hours of RapidRide have experienced an overall increase since 2003, rising from 11,044 in 2003 to 15,562 in 2007, for an overall gain of 41 percent.

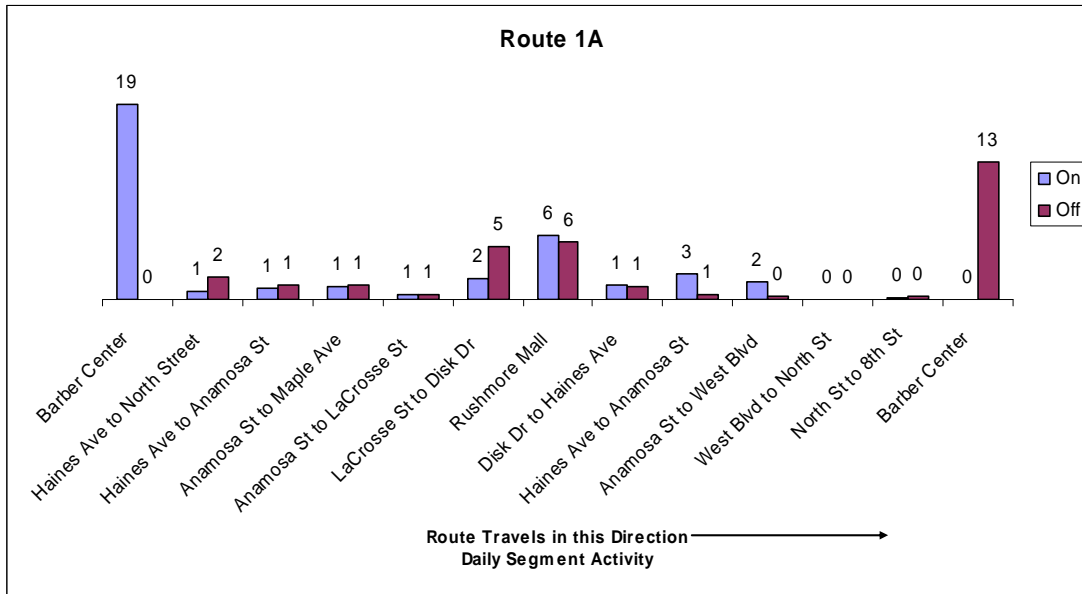
### Passenger Boarding

Passenger boarding and alighting data collected from a sample survey conducted in February 2008 is portrayed in the following charts. The on and off activity for a full day's schedule is shown by route segments, with each segment about one-half mile in length. As all transit routes begin and end at the MBTC, the stops shown in the graphs that follow are the transit stops with the highest passenger boarding and alighting activity.

### Route 1

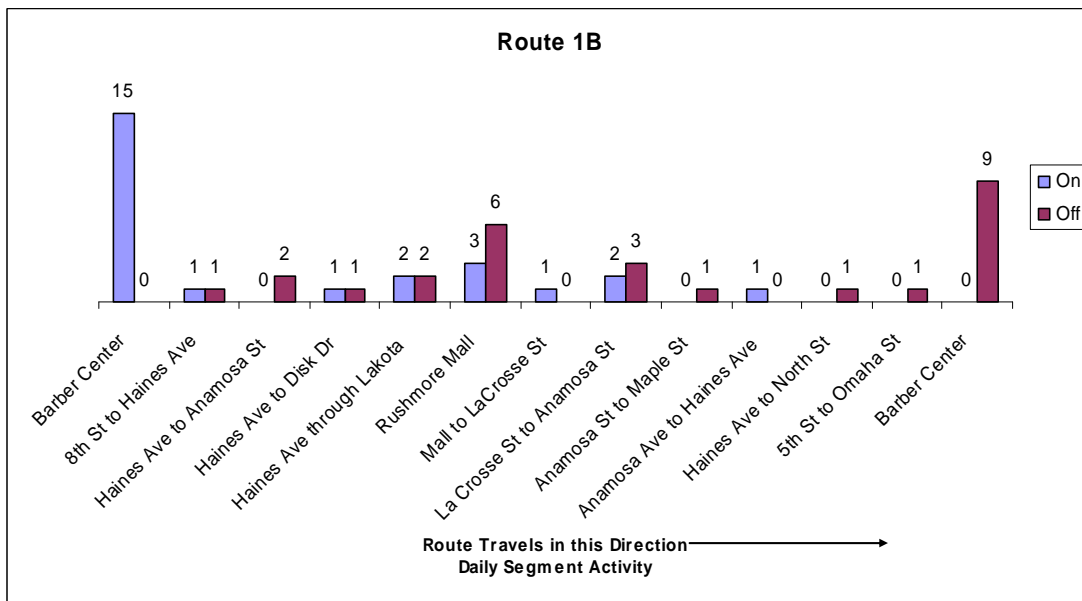
Excluding the MBTC, the main origin and destination for riders on RapidRide Route 1A is the Rushmore Mall and nearby stops. This route shows steady ridership along most of its way, with a decrease at the stops near the end of the line.

**Figure 3-4**



The main origin and destination for riders on RapidRide Route 1B is also the Rushmore Mall area. This route has reasonable ridership along most of its length.

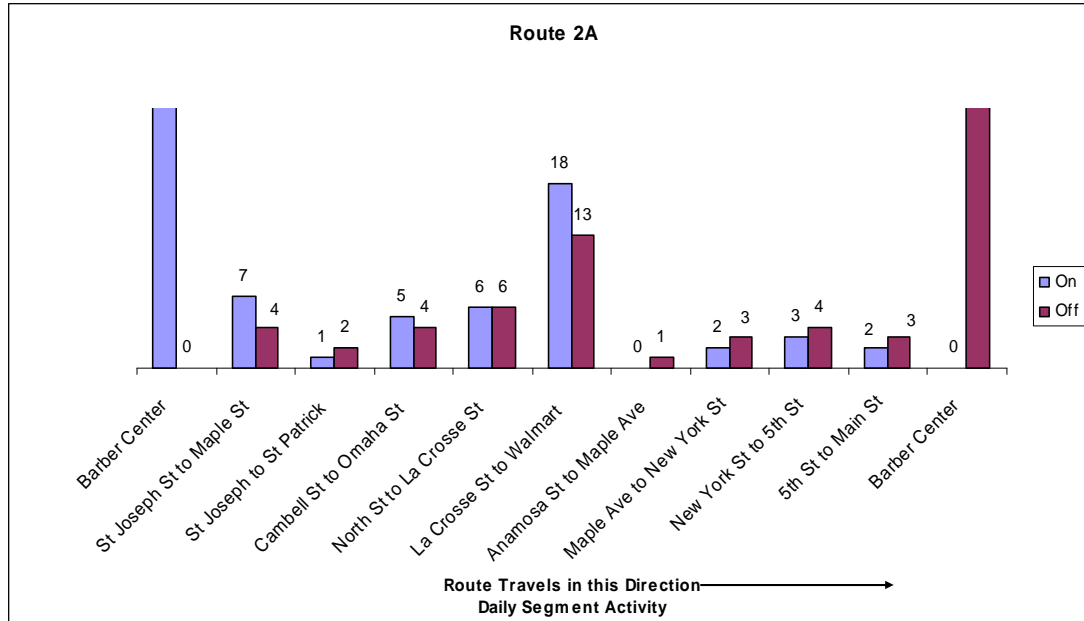
**Figure 3-5**



## Route 2

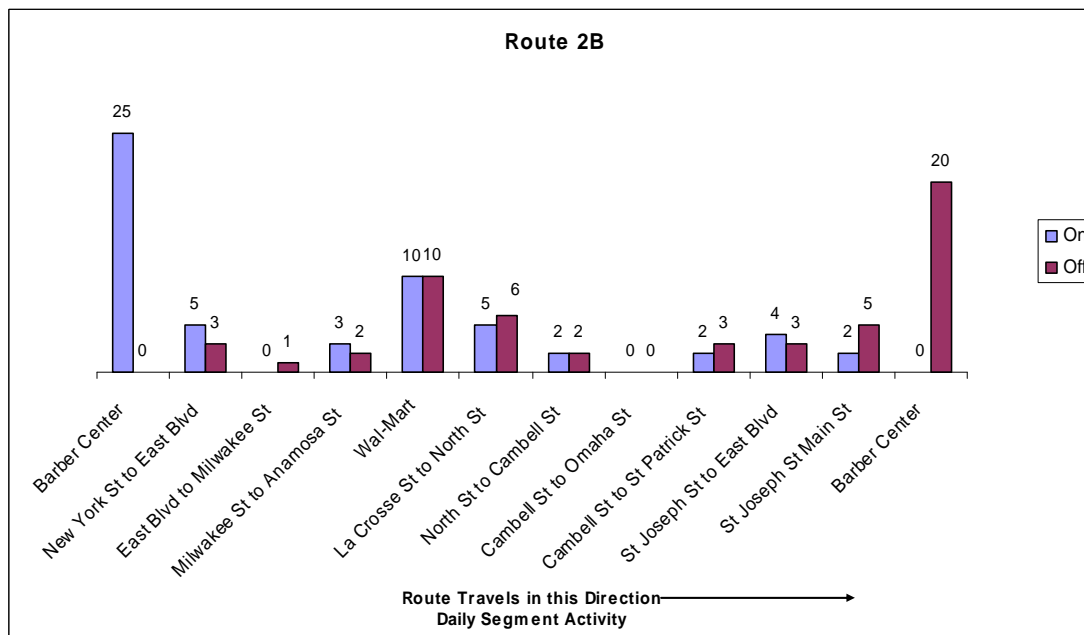
On RapidRide Route 2A, the main origin and destination for riders is the Wal-Mart. This route has strong ridership along most of its length

**Figure 3-6**



The main origin and destination for riders on RapidRide Route 2B is the Wal-Mart. This route has reasonable ridership along most of its length.

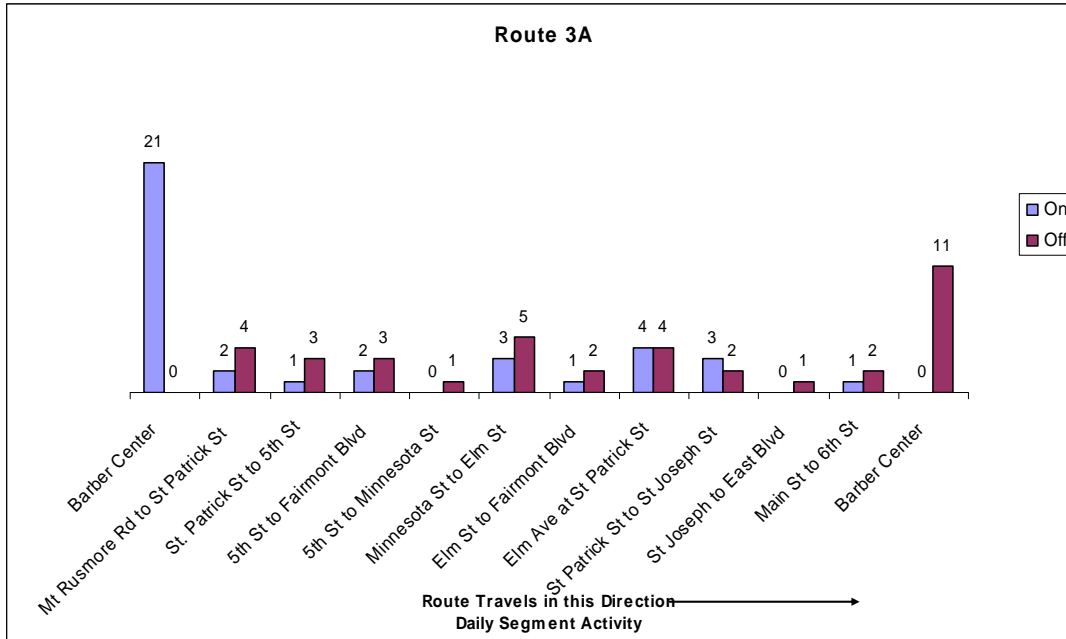
**Figure 3-7**



### Route 3

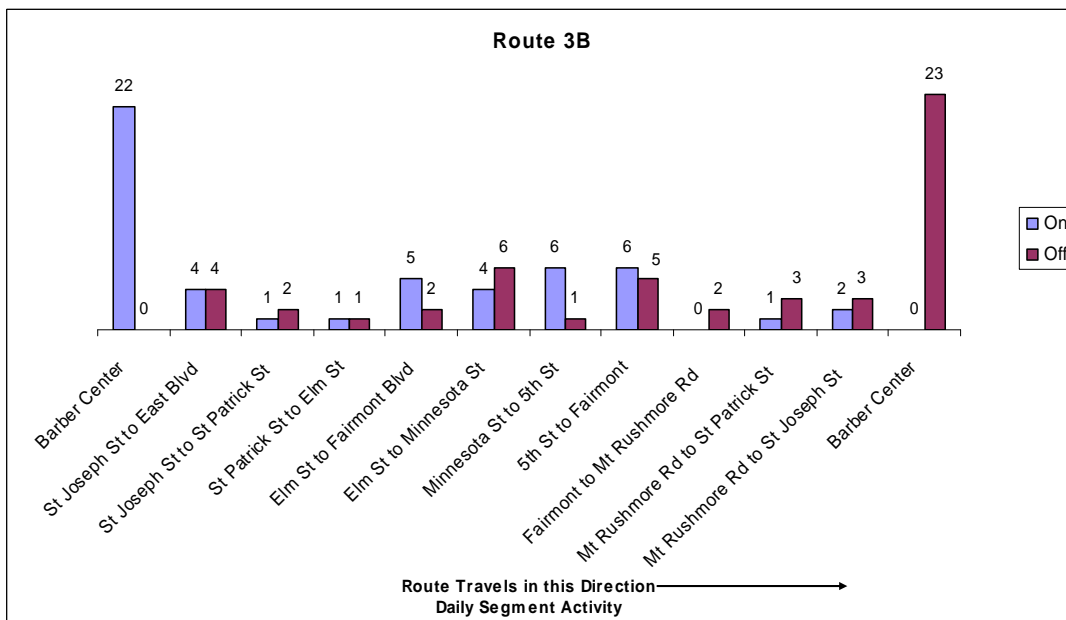
Ridership on Route 3A is fairly evenly distributed the length of the route.

**Figure 3-8**



Ridership peaks slightly throughout the middle of Route 3B, including the major medical facilities.

**Figure 3-9**

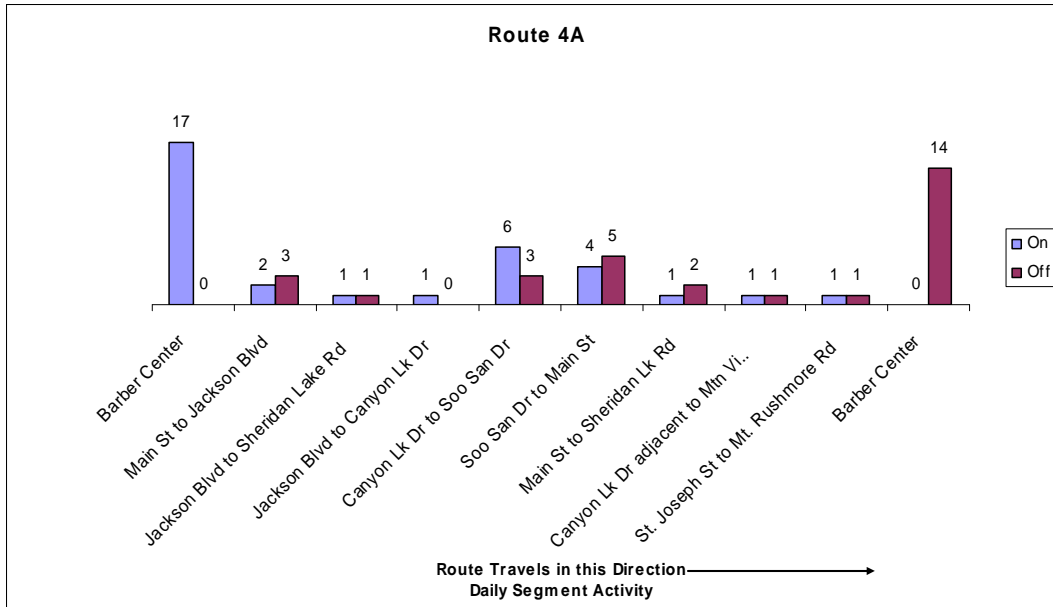




### Route 4

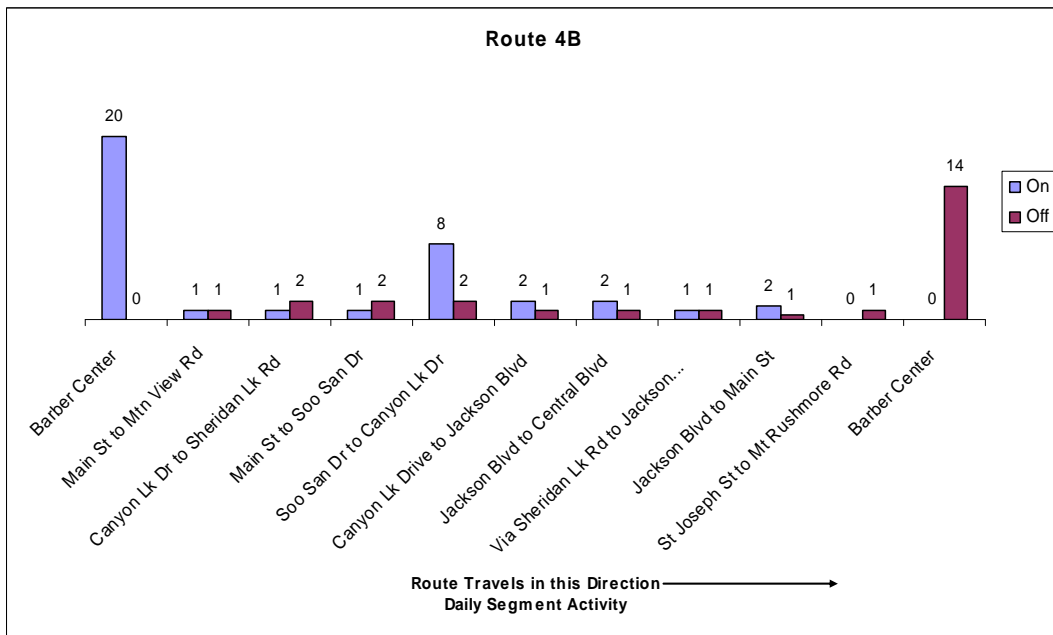
High points of passenger boarding and alighting activity on RapidRide Route 4A occur at the Black Hills Workshop and Training Center.

**Figure 3-10**



The main origin for riders on RapidRide Route 4B is the Black Hills Workshop and Training Center. Ridership along this route is limited.

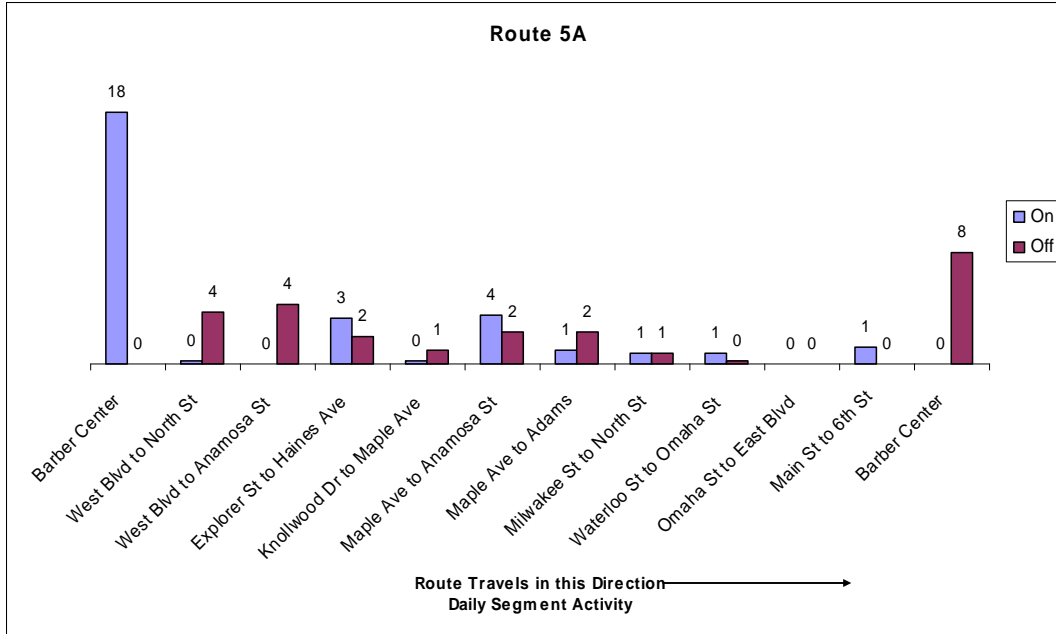
**Figure 3-11**



### Route 5

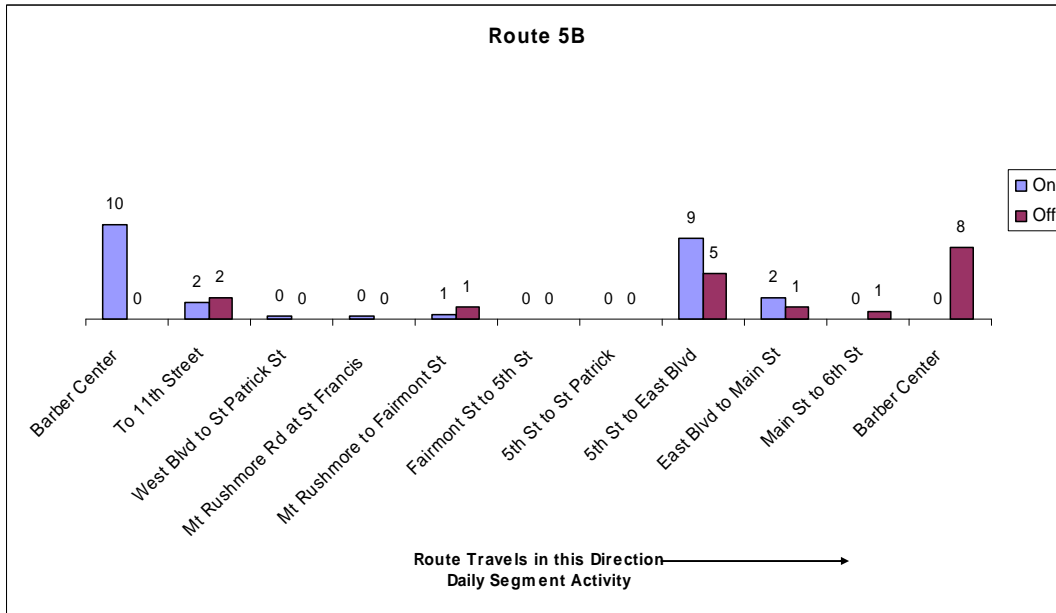
High points of passenger boarding and alighting activity on RapidRide Route 5A occur at transit stops located near retail shopping areas.

**Figure 3-12**



High points of passenger boarding and alighting activity on RapidRide Route 5B occur at Star Village.

**Figure 3-13**



Based on this sample, the top 10 bus stops are identified in Table 3-5.

**Table 3-5  
Top 10 Most Active Bus Stops**

Rank	Route	Segment	On	Off	Total
1	2A	La Crosse Street to Wal-Mart	18	13	31
2	2A	Wal-Mart	10	10	20
3	5B	5th Street to East Boulevard	9	7	16
4	5A	Rushmore Mall	6	6	12
5	2B	North Street to La Crosse Street	6	6	12
6	3B	St. Joseph Street to Maple Street	7	4	11
7	2B	La Crosse Street to North Street	5	6	11
8	3A	5th Street to Fairmont	6	5	11
9	2B	Elm Street to Minnesota Street	4	6	10
10	3B	Soo San Drive to Canyon Lake Drive	8	2	10

### System Trends

This section examines the operating and financial indicators of efficiency over a five-year time period, from FY 2003 to FY 2007. This historical evaluation is useful to identify trends in system performance, as well as determining the causes of performance fluctuations.

Table 3-6 displays the total expenses for RTS for the years 2003 through 2007. During this five-year period, operating expenses have gone up at a moderate pace, whereas capital expenses have gone up dramatically, particularly in the last two years, due to the acquisition of a renovated storage facility.

**Table 3-6  
RTS Expense Trends, 2003 – 2007**

	2003	2004	2005	2006	2007	Percent Change
Operating Expense	\$990,160	\$1,080,658	\$1,236,122	\$1,316,858	\$1,585,624	60%
Capital Expense	\$95,586	\$102,522	\$113,667	\$537,020	\$1,919,236	1908%
<b>Total</b>	<b>\$1,085,746</b>	<b>\$1,183,180</b>	<b>\$1,349,789</b>	<b>\$1,853,878</b>	<b>\$3,504,860</b>	223%

Source: City of Rapid City

Table 3-7 displays the total revenues for RTS for the years 2003 through 2007. During this five-year period, federal assistance increased by 351 percent, local assistance increased by 167 percent, and state assistance remained constant.

**Table 3-7  
RTS Revenue Trends, 2003 – 2007**

	2003	2004	2005	2006	2007	Percent Change
Fare Revenue	\$215,469	\$242,457	\$251,726	\$270,344	\$325,191	51%
Federal Assistance	\$490,681	\$528,314	\$612,994	\$1,067,323	\$2,212,071	351%
State Assistance	\$28,425	\$28,425	\$28,425	\$28,425	\$28,425	0%
Local Assistance	\$351,171	\$383,984	\$456,645	\$479,832	\$939,173	167%
<b>Total Expense</b>	<b>\$1,085,746</b>	<b>\$1,183,180</b>	<b>\$1,349,789</b>	<b>\$1,853,878</b>	<b>\$3,504,860</b>	<b>223%</b>

Source: City of Rapid City

Table 3-8 presents a summary of the core operating data for RTS transit services between 2003 and 2007. In total, the RTS system has expanded between 2003 and 2007. Revenue miles increased 45 percent from 2003 to 2007, indicating an increase in service during these five years. Correspondingly, passenger trips have increased by 43 percent during the same period, from 213,953 in 2003 to 306,620 in 2007. Fixed route passenger trips per mile have increased by 17 percent from 2003 to 2007 while Dial-A-Ride trips per mile have decreased by 19 percent.

**Table 3-8  
RTS Operating Statistics Trends, 2003 – 2007**

TOTAL SYSTEM		2003	2004	2005	2006	2007	Percent Change
	Passengers	213,953	228,905	255,074	275,246	306,620	43%
Miles	317,209	347,360	381,213	408,529	459,800	45%	
Trips/Mile	0.67	0.66	0.67	0.67	0.67	0%	
FIXED ROUTE		2003	2004	2005	2006	2007	Percent Change
	Passengers	143,915	152,996	174,947	192,422	217,540	51%
Miles	164,077	166,493	192,845	198,931	212,678	30%	
Trips/Mile	0.88	0.92	0.91	0.97	1.02	17%	
DIAL-A-RIDE		2003	2004	2005	2006	2007	Percent Change
	Passengers	70,038	75,909	80,127	82,824	89,003	27%
Miles	162,943	191,610	200,158	222,233	254,635	56%	
Trips/Mile	0.43	0.40	0.40	0.37	0.35	-19%	

Nearly 70 percent of RTS's operating expenses are associated with labor costs. The maintenance and operation (fuel and supplies) of the fleet represent approximately 18 percent of the annual operating costs (see Table 3-9).

**Table 3-9  
RTS Operating Expenses, 2007**

<b>Operating Expense Item</b>	<b>Total Expense</b>	<b>Percent of Total</b>
Personnel (salaries, wages, & fringe benefits)	\$1,078,308.75	68.0%
Professional Services	\$139,755.68	8.8%
Insurance	\$29,644.00	1.9%
Maintenance	\$101,790.71	6.4%
Fuel and Supplies	\$190,280.39	12.0%
Rentals	\$28,800.00	1.8%
Other <sup>1</sup>	\$17,044.66	1.1%
<b>Total Expenses</b>	<b>\$1,585,624.19</b>	<b>100.0%</b>

Source: City of Rapid City, 2007 Operation Statistics.

Table 3-10 displays the core operating and revenue data for RTS Fixed Route transit service between 2003 and 2007. Farebox revenue has almost doubled, while ridership has increased by half over this period. Table 3-11 displays the core operating and revenue data for RTS Dial-A-Ride transit service between 2003 and 2007. Both ridership and farebox revenue have increased by approximately 25 percent over this period.

**Table 3-10  
RTS RapidRide Fare Revenue Trends, 2003 – 2007**

	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Percent Change</b>
Passengers	143,915	152,996	174,947	192,422	217,617	51.2%
Fare Revenue	\$97,272	\$105,621	\$114,753	\$122,818	\$177,015	82.0%

**Table 3-11  
RTS Dial-A-Ride Fare Revenue Trends, 2003 – 2007**

	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Percent Change</b>
Passengers	70,038	75,909	80,127	82,824	89,003	27.0%
Fare Revenue	\$118,197	\$136,837	\$136,973	\$147,526	\$148,176	25.4%

<sup>1</sup> Includes advertising, travel, utilities, interdepartmental charges, and miscellaneous items.



Table 3-12 summarizes the revenues and expenses for RTS Dial-A-Ride services in 2007. Fixed route services account for the majority of passenger trips (71%) and over half of the total fare revenues (54%) for the RTS system. More than half of the operating expenses (55%) are incurred in the provision of Dial-A-Ride service, which accounts for less than 30 percent of the total passenger trips.

**Table 3-12  
RTS Revenue and Expense Summary, 2007**

	<b>RapidRide</b>	<b>Dial-A-Ride</b>	<b>Total System</b>
Passengers	217,617	89,003	306,620
Fare Revenues	\$177,015	\$148,176	\$325,191
Miles of Service	200,549	254,635	455,184
Operating Expense	\$711,419	\$874,205	\$1,585,624

*Source: City of Rapid City*

### Facility Inventory

This section describes the capital program for RTS's transit services. It presents an inventory of the current RTS vehicle fleet and primary operating facilities.

### Fleet Inventory

Table 3-13 shows the characteristics of the current RTS vehicle fleet. There are a total of 26 vehicles in the RTS fleet, including 7 large buses (fixed route service), 2 trolleys, and 17 smaller buses (Dial-A-Ride service). Most of the fleet is less than five years old, and the average vehicle mileage is approximately 56,800.

**Table 3-13  
RTS Current Active Fleet**

<b>Make and Model</b>	<b>Year</b>	<b>Bus Number</b>	<b>Seating Capacity</b>	<b>Mileage</b>
<b>RapidRide</b>				
GMC - Glaval	2006	106	24 + 1, or 20 + 2	47,150
GMC - Glaval	2006	206	24 + 1, or 20 + 2	48,670
GMC - Glaval	2006	306	24 + 1, or 20 + 2	49,811
GMC - Glaval	2006	406	24 + 1, or 20 + 2	47,584
GMC - Glaval	2006	506	24 + 1, or 20 + 2	45,510
GMC - Glaval	2006	606	24 + 1, or 20 + 2	40,635
GMC - Glaval	2007	107	24 + 1, or 20 + 2	16,430
Ford Supreme	2007	CV1 - trolley	28 + 2	6,061
Ford Supreme	2007	CV2 - trolley	28 + 2	6,073

Make and Model	Year	Bus Number	Seating Capacity	Mileage
<b>Dial-A-Ride</b>				
Ford Starcraft	2006	061	20 + 1	32,871
Ford Starcraft	2007	071	20 + 1	15,776
Ford Starcraft	2007	072	20 + 1	15,788
Ford Starcraft	2007	073	20 + 1	15,953
Ford Starcraft	2002	401	20 + 1	134,525
Ford Starcraft	2002	402	20 + 1	130,781
Ford Starcraft	2002	403	20 + 1	136,450
Ford	2003	501	18 + 1	103,105
Ford	2003	502	18 + 1	104,174
Ford Starcraft	2004	601	20 + 1	71,534
Ford Starcraft	2004	602	20 + 1	68,957
Ford Starcraft	2005	701	20 + 1	58,045
Ford Starcraft	2005	702	20 + 1	55,498
GMC Glaval	2008	81	20 + 1	New
GMC Glaval	2008	82	20 + 1	New
GMC Glaval	2008	83	20 + 1	New
GMC Glaval	2008	84	20 + 1	New

Source: City of Rapid City.

### Other Facilities

The center of the RTS passenger operations is the MBTC, which was built in 1982. The facility is the primary transfer point and hub for transit service in the City of Rapid City. The facility contains offices for the RTS management, supervisors, dispatching, and ticketing as well as other office space, a barbershop, and common area for passengers. In addition to RTS, Jefferson Lines operates nationwide intercity bus service out of the facility.

In 2008, RTS was able to move all vehicles to a renovated storage facility located at 760 Centre Street. The facility is approximately 1.6 miles from the MBTC. It has adequate indoor climate controlled storage space for the entire fleet, bus washing capability and a general purpose maintenance bay.

### PEER REVIEW

The performance of the RTS system was compared and contrasted with the performance of a group of selected transit systems from around the region. The intent of the analysis was to see how RTS performs relative to some comparable cities and transit systems operating in similar environments with similar characteristics. Each peer comparison employs a variety of performance indicators, including cost efficiency, productivity and measures of cost effectiveness. The peer group for this review consists of six systems that were selected based on a variety of factors, including population, system size, service area, and climate. Operating and financial data for this comparison were taken from the 2006 National Transit Database (NTD), (most recent period for all systems reporting).

The following peer review cities were chosen:

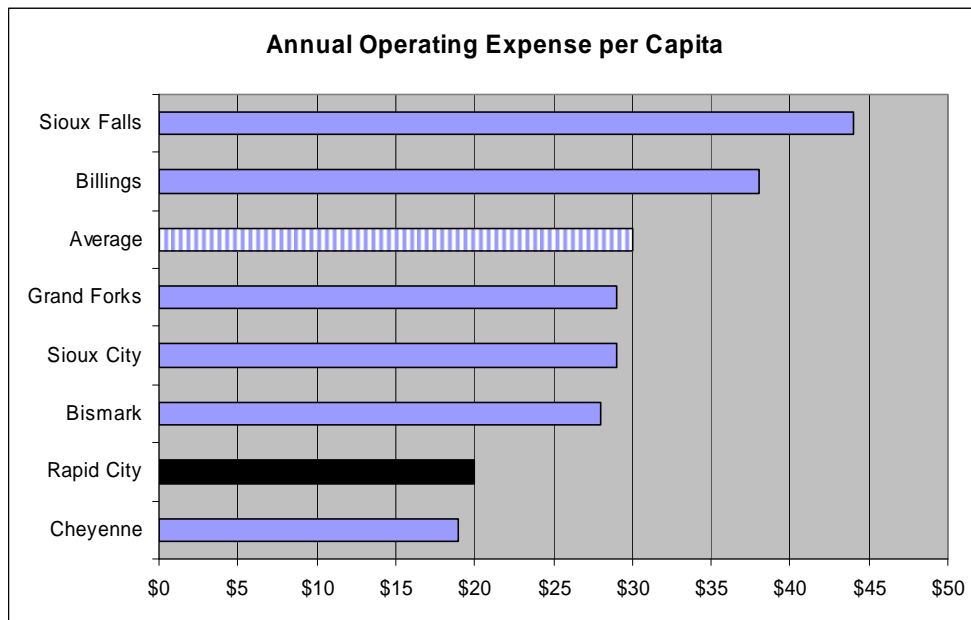
- Cheyenne, Wyoming
- Bismarck, North Dakota
- Sioux Falls, South Dakota
- Sioux City, Iowa
- Grand Forks, North Dakota
- Billings, Montana

For each performance measure, with exception of operating expense per capita and passenger trips per capita, RTS's RapidRide and Dial-A-Ride services were compared to their respective peer system counterparts rather than as a system total.

### Community Impact

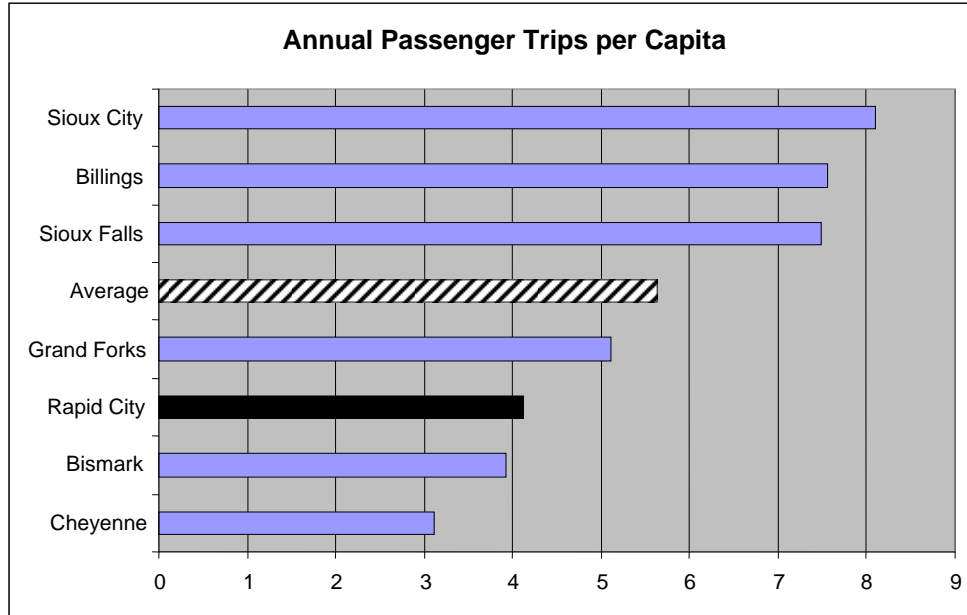
RTS has a low system-wide operating cost per capita compared to its peers (see below) and is providing service at a relatively low cost for the population size that it is serving.

**Figure 3-14**



Conversely, RTS is serving a lower number of passengers per capita in comparison to its peers. Although RTS is doing a good job at keeping operating costs per capita low, the net result is that service use is also low as measured by annual passenger trips per capita.

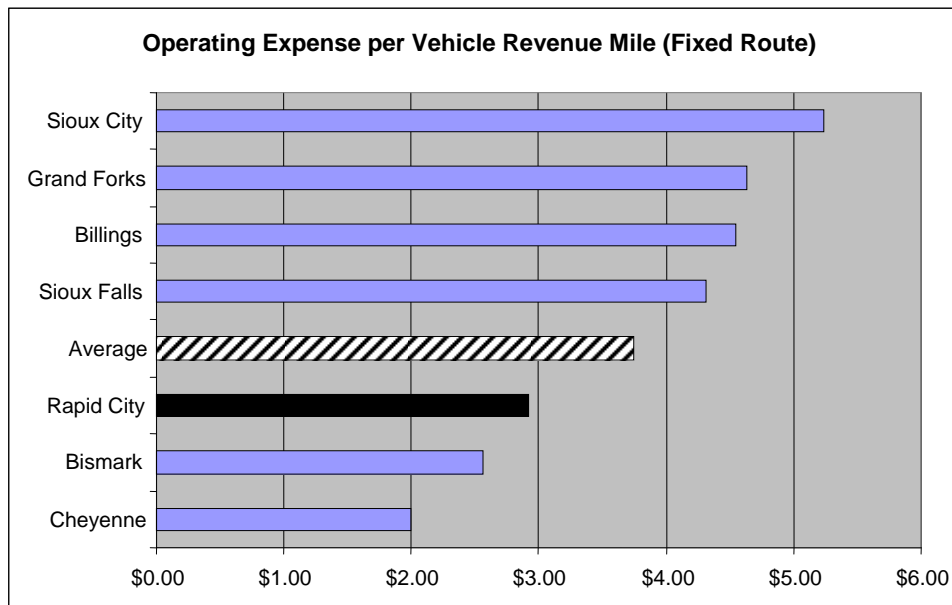
**Figure 3-15**



Financial Efficiency

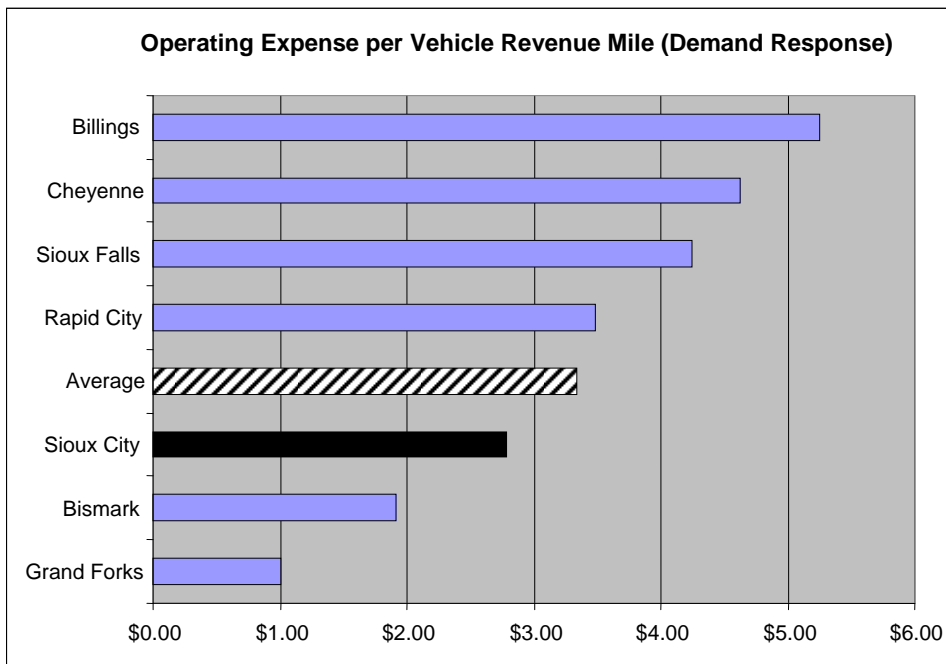
RTS's RapidRide cost per mile is lower than the peer average.

**Figure 3-16**



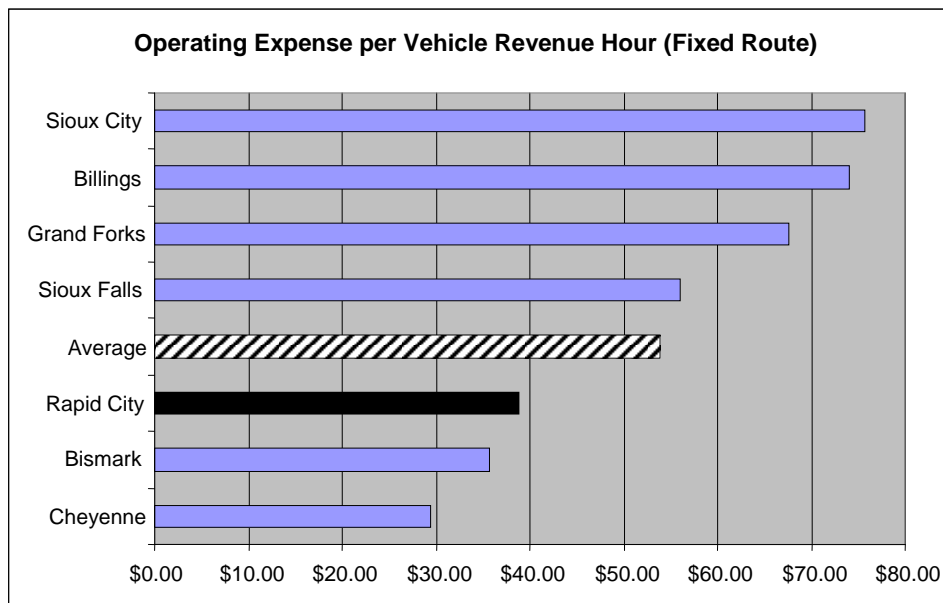
Dial-A-Ride cost per mile is also lower than the peer average.

**Figure 3-17**



RTS's RapidRide cost per hour is lower than the peer average.

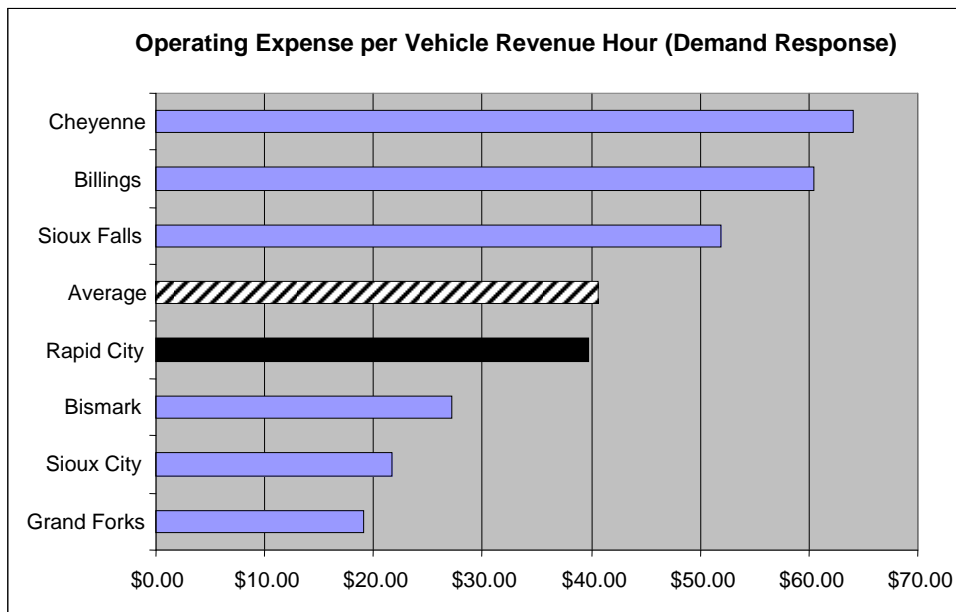
**Figure 3-18**





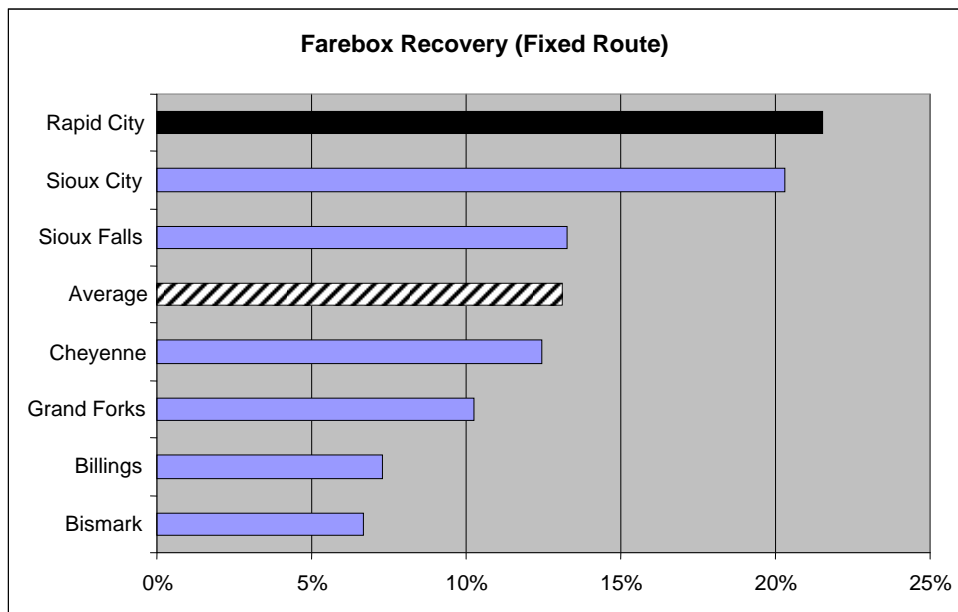
RTS's Dial-A-Ride cost per hour is lower than the peer average.

**Figure 3-19**



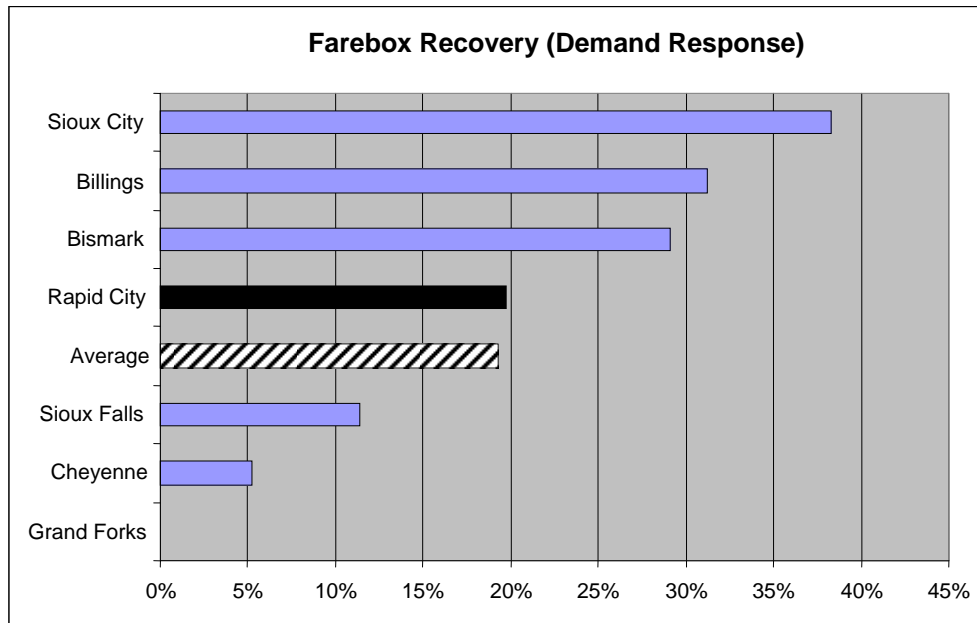
RapidRide has the highest farebox recovery rate of any of its peer fixed-route systems (see below).

**Figure 3-20**



RTS's Dial-A-Ride farebox recovery rate is higher than the peer average.

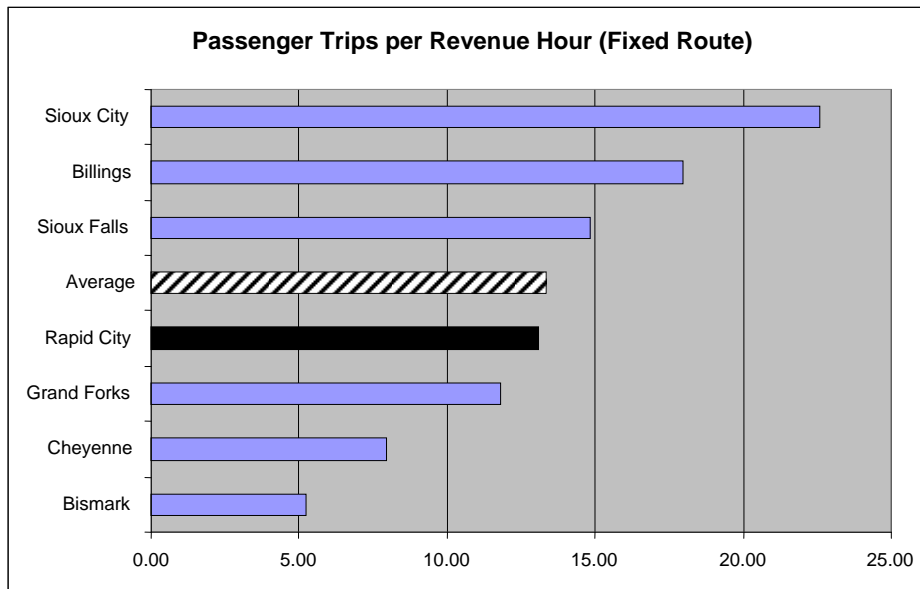
**Figure 3-21**



Service Effectiveness

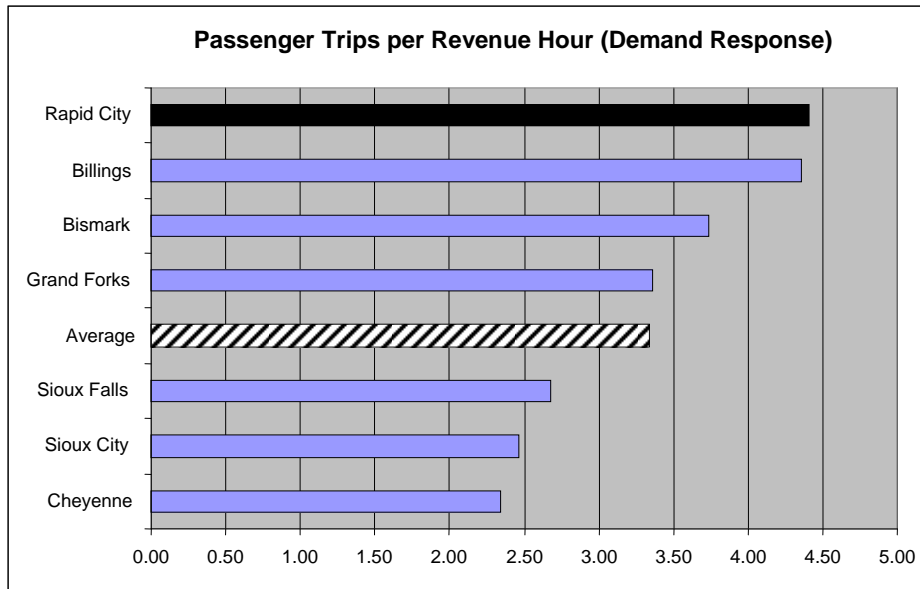
The total number of RapidRide trips per hour is lower than the peer average.

**Figure 3-22**



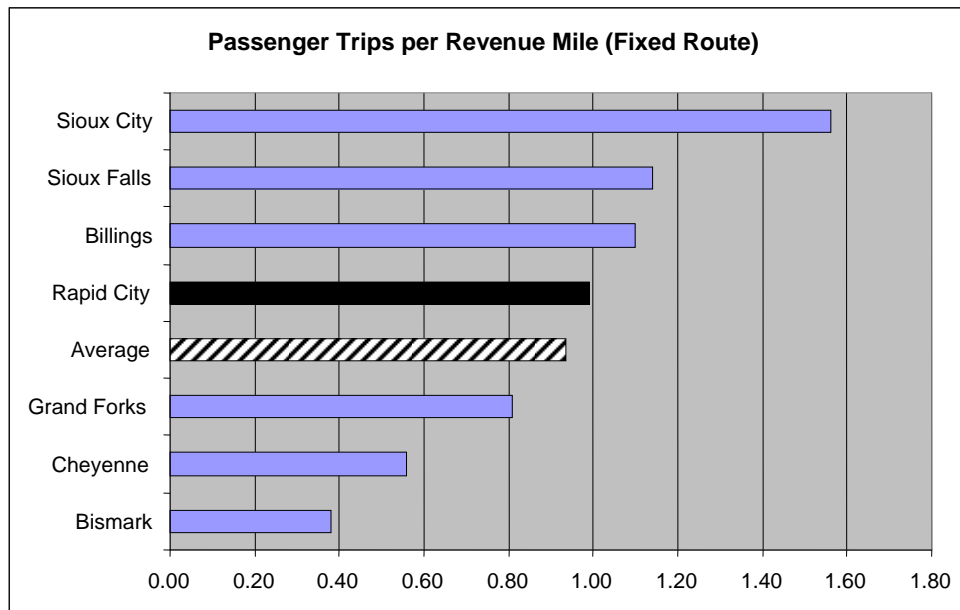
Rapid City has the highest trips per hour of any of its peer demand response systems.

**Figure 3-23**



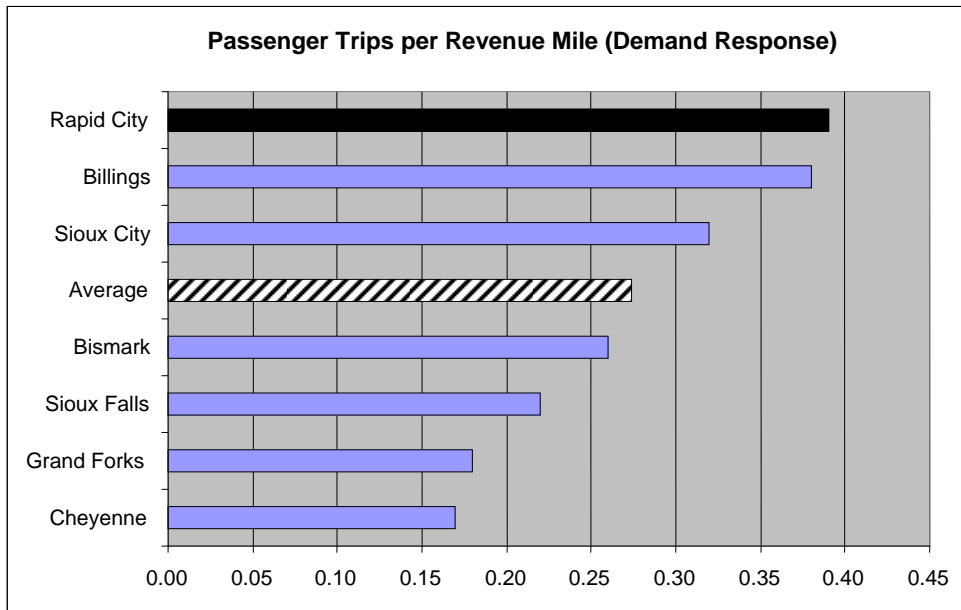
The number of trips per mile generated by RapidRide is above the peer average.

**Figure 3-24**



Rapid City has the highest trips per mile of any of its peer demand response systems.

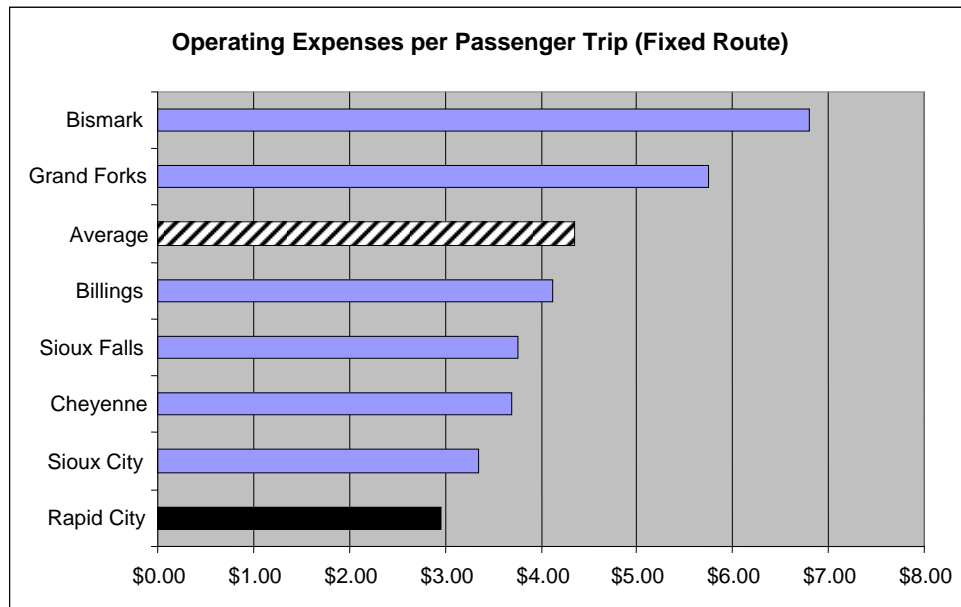
**Figure 3-25**



Cost Effectiveness

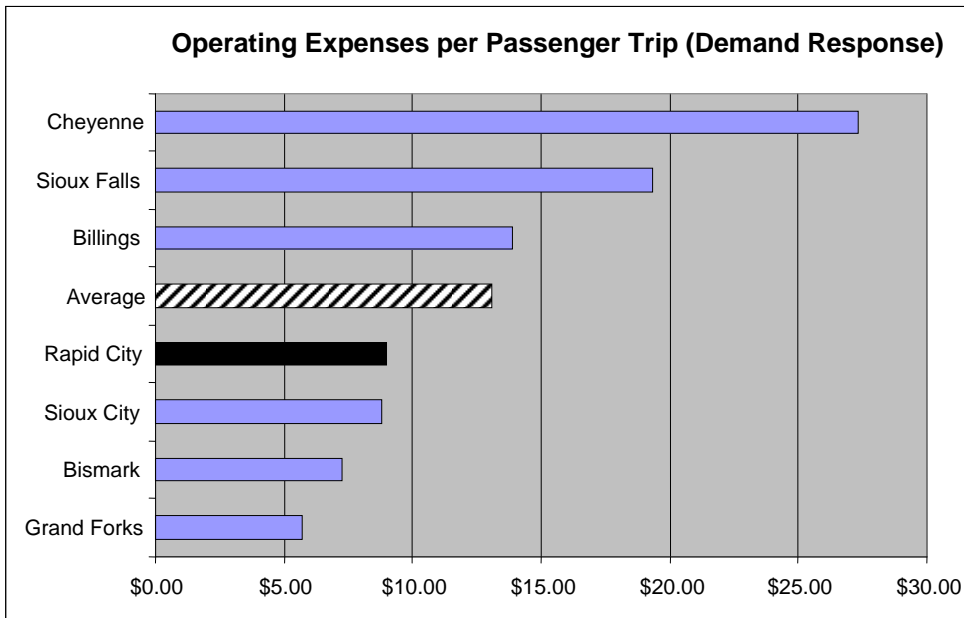
Rapid City has the lowest cost per trip of any of its peer fixed route systems.

**Figure 3-26**



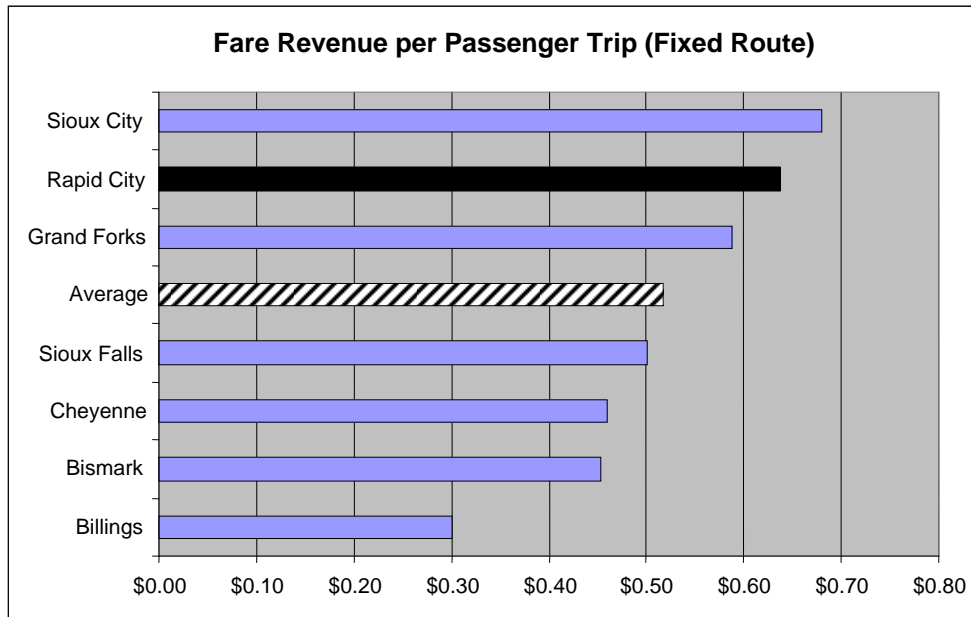
RTS's Dial-A-Ride cost per trip is lower than the peer average.

**Figure 3-27**



RapidRide revenue per trip is relatively high and above the peer group average.

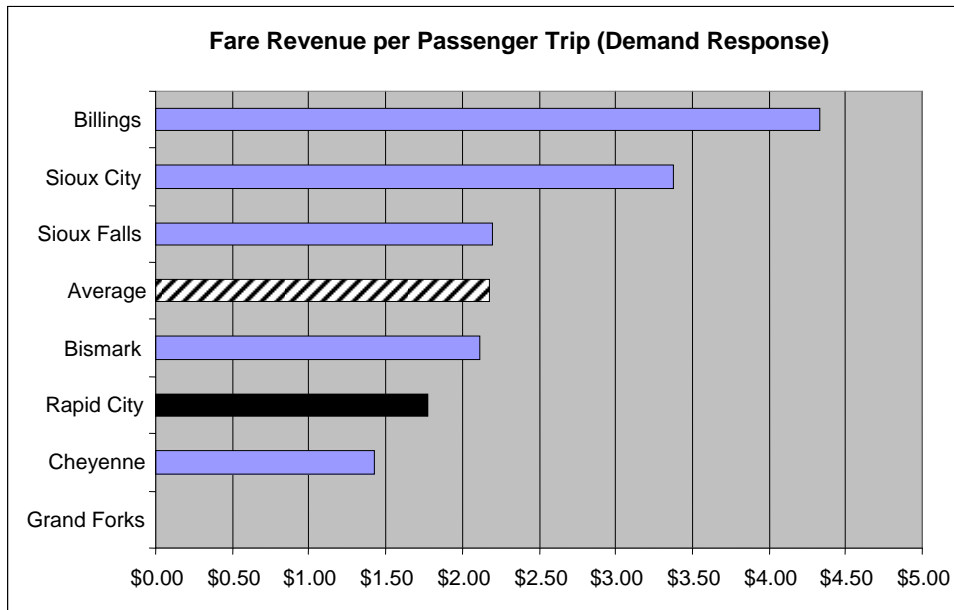
**Figure 3-28**



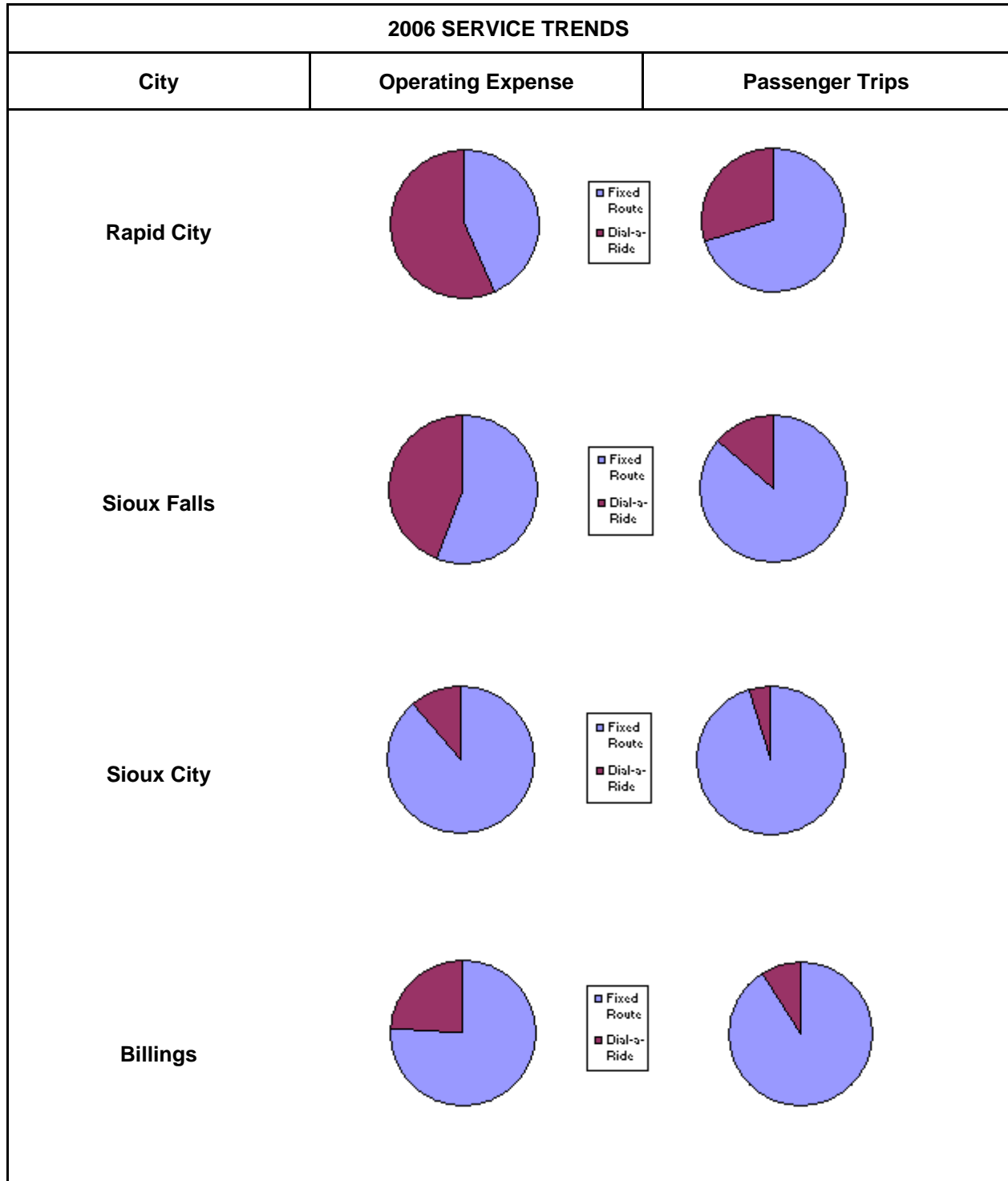








RTS's Dial-A-Ride revenue per trip is relatively low and below the peer average.

**Figure 3-29**



The following figure shows how the overall Rapid City system compares to the peer cities in terms of the percentage of local service cost and passengers that is related to the respective fixed route and demand response components. Most of the peer cities spend a greater proportion of their total system cost on fixed route service than Rapid City does.



2006 SERVICE TRENDS		
City	Operating Expense	Passenger Trips
Bismark		
Cheyenne		
Grand Forks		

## Peer Review Summary

- RTS's RapidRide and Dial-A-Ride services operate at a very low per capita cost; however, RapidRide generates a low number of per capita trips in comparison to its peers. The conclusion to be drawn is that RTS is a financially efficient system. However, the level of fixed route service provided may not be sufficient to generate the level of ridership found in other communities.
- Both RapidRide and Dial-A-Ride services score very high for financial efficiency when compared to other peer systems. For cost per mile, cost per hour and farebox recovery, both RapidRide and Dial-A-Ride services are above the peer average, and in some instances are either the best performing or second best performing system.
- RapidRide service scores about average on service effectiveness as measured by passenger trips per hour and per mile, while its Dial-A-Ride service scores very high as compared to the other peer systems.
- RapidRide service scores high for cost effectiveness when compared to other peer systems. For cost per trip and revenue per trip, RapidRide service is above the peer average and is the best and second best performing respectively.

The peer review analysis indicates clearly that the RTS is very efficient in producing transit services as compared to its peers within the region. The utilization of RTS service as measured by passengers per mile and per hour of service produced is extremely high for Dial-A-Ride and runs about average for fixed route comparisons. What also comes forward in the review is that the amount of service available per capita is quite low compared to peers. In many instances, this is an indication that unmet needs for fixed route services probably exist in the community.

## NATIONAL RIDERSHIP TRENDS

In addition to the peer group analysis, a review of national transit ridership trends was conducted, using information from the 2006 National Transit Database (NTD). These findings are presented here.

- Small-urbanized transit systems (between 50,000 and 200,000 population), make up 41 percent of all agencies reporting to the NTD.
- Over the last 10 years, small decreases in the farebox recovery ratio have occurred in small-urbanized areas. This is consistent with Rapid City's experience.
- Small-urbanized areas had a rate of increase for subsidy per passenger greater than for large urbanized areas. Demand response accounts for a substantial portion of the service provided in small-urbanized areas.
- From 1997 to 2006, there was no substantial change in fare revenues in small urbanized areas. Small-urbanized areas are more dependent on operating subsidies than large urbanized areas. Nationwide, fare revenues account for less than 19 percent of operating funds for small-urbanized areas.
- In general, there was a sharp increase in Federal capital assistance per passenger from 1997 - 2006.
- In small-urbanized areas, fare revenues typically comprise 19 percent of funding sources, with local assistance accounting for 22 percent, state assistance for 20 percent, Federal assistance for 25 percent, and other assistance of 14 percent. The most startling difference between national trends and Rapid City is in state support, with Rapid City state assistance at less than 2 percent of total revenues in 2006. Fare revenues account for approximately 15 percent of RTS funding (consistent with national trends), with local assistance at 31 percent, and Federal assistance at 52 percent (both greater than national trends).
- Federal funds account for more than 70 percent of all capital invested in small urbanized areas.

## FEDERAL AND STATE POLICIES

RTS is influenced by several different federal and state programs and policies. RTS participates in and is compliant with these various programs in order to maintain access to funding streams and perform its functions as a public agency in a responsive, legal, and safe manner.

## FTA REGULATIONS AND AUDITS

As part of requirements to qualify for receipt of federal transit funding assistance, RTS must annually comply with and sign off on a list of congressionally and administratively mandated certifications and assurances. Failure to do so may result in both funding suspension and personal disciplinary action against key management. There are currently 23 areas of program compliance that must be certified. There is at least one additional area, transportation coordination, which may be added to this list in the near term. The current areas are as follows:

1. Legal Capacity
2. Financial Capacity
3. Technical Capacity
4. Satisfactory Continuing Control
5. Maintenance
6. Procurement
7. Disadvantaged Business Enterprise
8. Buy America
9. Suspensions and Debarments
10. Lobbying
11. Planning and Program of Projects
12. Title VI Compliance
13. Public Comment Process for Fare and Service Changes
14. Half Fare Policy
15. Americans with Disabilities Act
16. Charter Bus Rules
17. School Bus Rules
18. National Transit Database Submissions
19. Safety and Security
20. Drug-Free Workplace
21. Drug and Alcohol Program
22. Equal Employment Opportunity
23. ITS Architecture

The FTA has the legal right to audit the books and practices of any funding recipient, including primary and secondary beneficiaries, at any time by law. The FTA is also required by law to conduct a biennial review of the agency's drug and alcohol program, and perform a full certification audit every three years, known as the Triennial Review.



RTS has undergone two Triennial Reviews since the last TDP was adopted. The most recent Triennial Review was conducted in August 2007. RTS was found to have only four minor deficiencies, all of which were corrected to the satisfaction of FTA before the end of the year 2007. These almost all involved inclusion of full certification and assurance language in operating and procurement contracts, as well as a deficiency in policy language covering negative-dilute retest policy in the Drug and Alcohol program. This level of deficiency finding was exceptionally low in comparison with the average for Triennial Reviews, and speaks very well for the success of compliance efforts by the agency.

National Transit Database submissions represent one of the certifications, and represent a significant workload and effort to collect and report both operating and financial data by transit, with both routine partial data submissions during the year, and a comprehensive annual submission due each spring. RTS must submit two reports, for both the fixed route system and the demand-response system. Delay in the submissions, or incomplete or inaccurate data can automatically result in a suspension of funding and the start of legal actions against representatives of the agency. Because of the high priority given to this data by the FTA, since it controls funding allocations in the formula funding programs, no extensions or exceptions are usually allowed.

Because of Homeland Security issues, safety and security are currently a high priority with the FTA in their reviews. An additional initiative that currently has national prominence is Human Services Transit and Transportation Coordination, an effort to promote cooperation and shared efficiencies between government providers of transportation services. This is exemplified by the federal "United We Ride" program as well as parallel state programs mandated by an Executive Order and the USDOT. With RTS being the primary transit provider for both regular route service and demand response in the region, little coordination is possible or required in this instance.

## 4. SYSTEM NEED ASSESSMENT

### STAKEHOLDER INTERVIEWS

Direct interviews were conducted with several stakeholders from the community to gain insight on how well current transit services are meeting community needs and if there are new areas that transit should try to serve. Interviews were conducted in person or over the phone during March 2008

The following individuals were interviewed:

- Mayor Alan Hanks
- Councilman Ron Weifenbach
- Councilman Lloyd LaCroix
- Ms Shelly Shock
- Ms. Ellen Sylliaasen
- Ms. Nadine Zeller
- Ms. Joy Rehfield
- Mr. Mike Kenton

### SUMMARY OF COMMENTS

- The mix of transit services seems to be doing a pretty good job in the community.
- Overall impression is the system looks professional and is well managed.
- There are several areas that should be evaluated for expanded route service:
  - Rapid Valley (includes connections to schools)
  - Deadwood Avenue
  - Rushmore Crossing
  - Cabelas area
  - North Haines area
  - Lower income housing developments on periphery of town

- Some better connections should be evaluated to longer distance destinations including:
  - Rapid City Regional Airport
  - Ellsworth Air Force Base
- Current route structure emphasizes east side of town, perhaps need more service on the west side for better balance.
- Generally, OK with the concept of fixed-route service operating in key parts of the community but demand response service needs to be available across the entire community
- Some people have been asking for service to operate later in the evening and more on weekends.
- The transfer/wait time in downtown tends to get pretty long for customers
- A downtown promotion zone (free or reduced fare) might be a good idea.
- Stakeholders and customers could use more information on services available, consider more advertising on TV and in the newspapers.
- Most users probably can't afford much more (with regard to a possible fare increase)
- Equipment seems to be pretty good
- Could use more shelters in town
- Cost of monthly bus pass is good deal
- Need to over come "perception" problem (that service is for elderly, disabled or low-income in town)
- If we could improve on "directness" of travel to better compete with car travel, we might attract new riders.

## DRIVER'S INPUT SESSION

- A meeting was held with drivers from the RTS to gather input on operational needs. The session was held on March 18, 2008 from 6:30 to 7:30 pm at the CSAC Building.
- 12 drivers attended the session.

## SUMMARY OF COMMENTS

- All bus routes should be top priority in the city for snow and ice control (plowing and sanding)
- A/B system of routes appears to be confusing to lots of riders as they are never quite sure which route is running; possibility that this detracts from the overall safety of the system as customers tend to cross streets at the last minute, sometimes mid block, to reach the bus.

- There is inconsistent spacing of bus stops along routes leading to passenger complaints
- Need a line painted on the curb or some other type of marking to let driver's know where to line up to match the wheelchair loading area at the bus stops.
- Customers asking for fixed route service to:
  - Deadwood Avenue
  - West Main
  - Stevens High School
  - Western Dakota Vo-Tech
  - Rapid Valley
- Shelters that are not longer used for routes should be removed to reduce customer confusion
  - North Street/East Boulevard North
- Shelter northbound on 5th is too close to the intersection at the Hospital
  - Shelter on west side should be down by the flashing light
- Lakota Homes pick up should be switched to "B" lap instead of "A": to eliminate traffic crossing issue.
- Can another hub be identified so not all routes have to come downtown
- Impacts of blockages by trains are very significant on schedules
- Drivers should have procedural training/books for what to do in emergency situations – example of an elderly customer medical situation given where the driver was unsure of proper response.
- Can day passes be sold for visitors
- Any possibility of adding a step to assist elderly getting on the vehicles.
- Can drivers have a list of bus stops to give to customers
- The trolley should be hubbed out of the downtown area and not the MBTC.
- More information on who can use the trolley should be available in town.
- Perhaps trolley ticket can come with a discount to other merchant services in town.

## COMMUNITY INPUT SESSION

- Two (2) public meetings were conducted to gather input on:
  1. March 18, 2008: 12:00 pm to 2:00 pm
  2. March 18, 2008: 3:00 pm to 5:00 pm

Both sessions were held at the CSAC Building.

- Thirty-seven (37) individuals attended and signed in to the meetings. Staff from the City and RTS also attended.
- Comment cards were available for those that wanted to provide written comments (attached).
- Each session began with an overview of the meeting. Background information on the available transit services in Rapid City was also presented.
- The primary discussion topic of each session was “how well are current transit services meeting the needs of the community”. From that general theme, many service and operations changes were discussed:
  - Areas served in town
  - Time service is available
  - Cost to users
  - Information about services
  - Facilities and equipment
  - Destinations in town that should have the highest degree of regular route service
- Many positive comments regarding current services were received.

## SUMMARY OF COMMENTS

### Service Coverage

- Expand routes to cover Sheridan Lake Road and the Sandstone Ridge residential area
- Need weekend service (fixed route and demand response)
- Provide Sunday service at least from 8:00 am to noon
- Need service later in the evening (to 8:00 pm or 9:00 pm) (fixed route and demand response)
- Provide evening service at a minimum on Fridays and Saturdays (fixed route and demand response)
- Provide route to Canyon Lake Senior Citizen Center
- Need an east-west route connector running fully across the community (Ellsworth Air Force Base to west city limits)
- Will need route service to new mall (Rushmore Crossing)
- Need route service to Rapid Valley (at least to call center locations)
- Will need route service extension to new residential developments soon to be annexed area (east side)

- Need route service to Western Dakota Vocational Technical School
- Need route service to Department of Motor Vehicles
- A second transfer point is needed (perhaps the mall)
- Expand routes to serve Eagle Ridge residential area
- Expand routes to serve North Rapid (Haines) residential areas
- Need to coordinate bus schedules better with school schedules to provide better access to Central High School
- Establish better coordination between all transportation providers in town to provide better after school options for youth (Boys & Girls Clubs, YMCA)
- Need route service to Industrial Park area
- Need route service to Deadwood Avenue
- Need to add a stop to Route 1B along Anamosa at Holcomb (long distance between current stops)
- Look at options to provide some degree of 24/7 service coverage through use of a private provider like Bismarck uses
- Consider opening demand response service to general public during evening hours
- Request to keep stop at Elm/East St. Anne if restructuring routes

### Operations

- Some drivers not keeping to routes (#5)
- Route service users understand increases in operating costs and would generally support increase in fares
- Demand response service users are aware of operating cost increase but are concerned that many users might have a tough time if fares increased.
- Should allow demand response users to change trip reservations within 4 hours of scheduled trip time if urgent situation arises (like poor weather).
- Consider using travel trainers/transit ambassadors to work with new customers to reduce confusion/fear over using services.
- Can list of individual bus stops be placed on web site (or made available in other forms)?
- Can a yearly transit pass be sold
- City should be working more with developers to incorporate plans for transit early on in developments

- Look at patterns of demand response users to see if some of those trips can be shifted to more economical fixed route service
- Transit service information packets should be available at locations across the city

### Key Destinations for Fixed Route Service

The following locations were identified as places that should have the highest degree of fixed route service in the community:

- Downtown retail areas
- Library
- Post office
- Civic Center
- Hospitals and medical centers
- Department of Social Services
- Black Hills Workshop
- Senior centers
- Shopping centers (malls, neighborhood centers, and major stand-alone stores)
- Entertainment centers (restaurants, movie theaters)



## 5. SERVICE OPTIONS

The current route structure and schedules have some several significant shortcomings. The 35-minute frequency is not a multiple that can easily be comprehended by customers. The A-B alternating route configurations are not exact mirror images of each other and are viewed as confusing by new and existing customers. The hubbed route configuration requires through riders to transfer downtown and endure on average an 8-minute layover at the MBTC. The pulsed schedule requires all buses to wait for each other before departing on the next scheduled trip.

The TDP considered several options to reconfigure the fixed route portion of the service. The overall goal for the development of service options was to improve the travel time and level of convenience for the regular route system in order to improve services for current riders and attract more “choice” and general public riders. Before undertaking the evaluation of service options, several service planning strategies were developed to help guide that effort.

### SERVICE PLANNING STRATEGIES

1. Consolidate two or more high-ridership routes into a run-through configuration. Extended route would cover as much of the city as possible within the schedule allowance (example: Rushmore Mall to Medical Center) with one route, with two buses assigned to run in opposing directions.
2. Overlap routes in the community to enable route crossings or meets in other parts of city outside of downtown thereby maximizing the number of inter-route transfer points to ultimately shorten trips and improve travel options.
3. Reduce layover time to no more than 15 per cent of the operating schedule. Routes meeting at the MBTC should operate as much as possible as timed transfers.
4. Routes should be configured as bi-directional service, with minimized route deviations by directions or time of day.
5. Route coverage in core areas should result in three blocks or less walking distance to bus routes with service frequency of once per hour or better on the regular route.
6. Service headways should be multiples of 30 or 60 minutes to allow for repeating schedule offsets throughout the day.
7. Evaluate the costs and benefits of expanded service for evenings and weekends.
8. Consider using Dial-A-Ride for low-ridership route segments and service during fringe periods (i.e., evenings) with same-day or short-response calls.
9. Reduce reliance on using existing MBTC bus bays for all route connections as the current pull-in/back-out configuration hinders operations. During pull-outs, this movement requires buses to back up and to leave in sequence. The configuration also hinders use of wheelchair lifts and restricts accessibility.
10. Look for opportunities to serve emerging development areas in Rapid City.

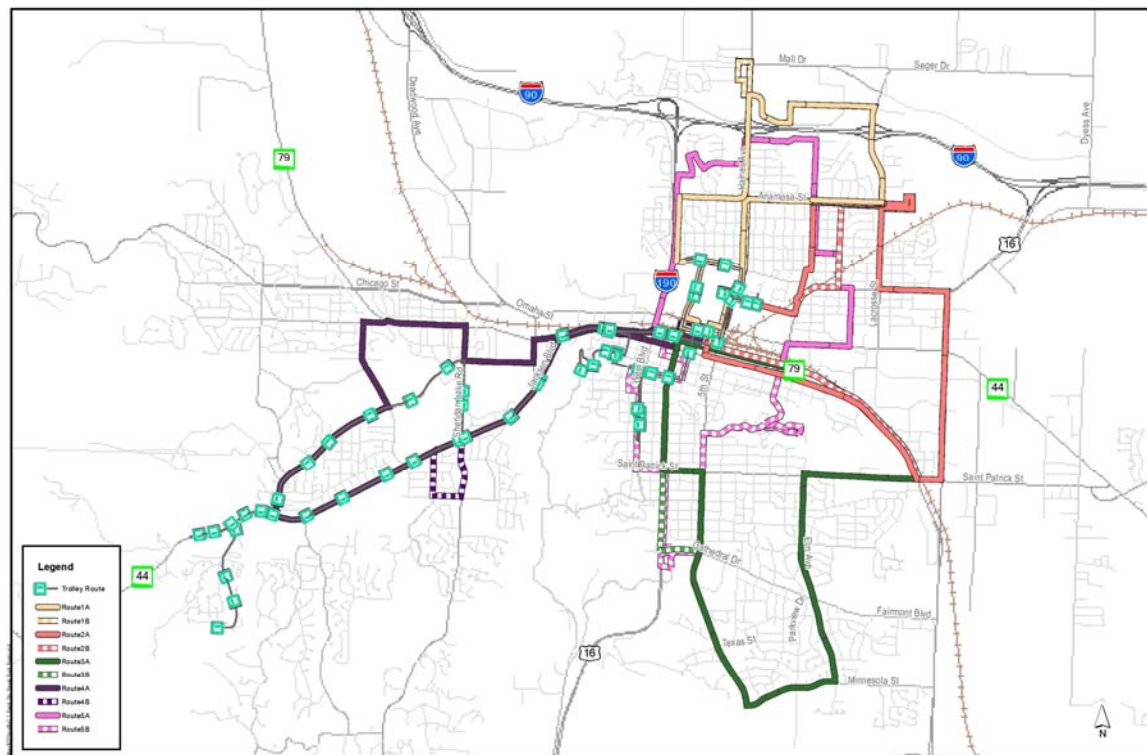
The key analysis assumptions were as follows:

- An annual population growth rate of 1.5 percent for the city per estimate of 2030 population. This rate is used to estimate annual system ridership changes if no significant service changes are implemented.
- System costs will increase 5.9 percent from 2008 to 2009 based on recent budget proposals. Beyond that, costs are estimated to increase 4.0 percent each year through 2013 based on recent trends.
- A fare increase of 50 percent was assumed since no fare increase has been implemented in 16 years.
- Ridership may potentially decrease initially in response to any fare increase. A one-time drop of 5 percent was included to present the anticipated worst-case budget estimates.

### Fixed Route Alternative 1: Maintain Existing Routes

Under this alternative, there would be no significant route or schedule changes. The case for maintaining the existing service can be made as the system has reversed the downward ridership trend from the early years of the decade and added a fifth route to the core service area. The route structure would be as shown on Figure 5-1.

**Figure 5-1**



**SRT** RAPID TRANSIT SYSTEM FIXED ROUTES  
RAPID CITY TRANSIT DEVELOPMENT PLAN

The estimated costs to operate the fixed route and demand response services for the period 2009 through 2013 are shown in Table 5-1. The costs do not anticipate any service changes from current levels.

The ridership estimates do anticipate continued growth in the system at the rate of growth of the community population but do account for a modest drop in the initial year following a suggested fare increase.

The suggested fare increase allows the system farebox recovery level to climb from the anticipated 2008 level of 25 percent to 29 percent by 2011 if the modest growth in ridership is achieved.

The cost to extend existing route service to evenings and weekends and to offer demand response was also evaluated. The costs were based on the following service scenarios:

- Weekday evening service offered initially two days per week (perhaps Wednesday and Friday) for three hours beyond the current close of service.
- Weekend service offered initially one day per week (most likely Saturday before Sunday) for a period of eight hours.

The costs, ridership and revenue estimates for evening, weekend and combined service are presented in Tables 5-2 through 5-4.

**Table 5-1  
Existing Service with 12 Weekday Service Hours per Route**

	2008 (est)	2009	2010	2011	2012	2013
Fixed Route Costs	\$629,551	\$666,695	\$693,362	\$721,097	\$749,941	\$779,938
Demand Response Costs	\$984,693	\$1,042,790	\$1,084,501	\$1,127,882	\$1,172,997	\$1,219,917
Total Costs	\$1,614,244	\$1,709,484	\$1,777,864	\$1,848,978	\$1,922,937	\$1,999,855
Fixed Route Ridership	235,826	226,430	229,827	233,274	236,773	240,325
Demand Response Ridership	93,272	92,998	94,393	95,809	97,246	98,705
Total Ridership	329,098	319,428	324,220	329,083	334,019	339,029
Fixed Route Revenue	\$238,294	\$275,113	\$279,239	\$283,428	\$287,679	\$291,994
Demand Response Revenue	\$172,236	\$201,899	\$204,927	\$248,001	\$251,721	\$255,497
Total Revenue	\$410,530	\$477,011	\$484,167	\$531,429	\$539,401	\$547,492
Net Cost	\$1,203,714	\$1,232,473	\$1,293,697	\$1,317,549	\$1,383,537	\$1,452,363
Farebox Recovery	25%	28%	27%	29%	28%	27%

The cost estimate to operating limited evening service (two days per week, three hours per day) using the existing route structure is shown in Table 5-2:

**Table 5-2  
Existing Service with 12 Weekday Service Hours per Route plus Limited Evening Service**

	2009	2010	2011	2012	2013
Fixed Route Costs	\$733,364	\$762,699	\$793,206	\$824,935	\$857,932
Demand Response Costs	\$1,147,069	\$1,192,952	\$1,240,670	\$1,290,296	\$1,341,908
Total Costs	\$1,880,433	\$1,955,650	\$2,033,876	\$2,115,231	\$2,199,840
Fixed Route Ridership	236,619	240,169	243,771	247,428	251,139
Demand Response Ridership	97,183	98,641	100,120	101,622	103,146
Total Ridership	333,802	338,809	343,892	349,050	354,286
Fixed Route Revenue	\$287,493	\$291,805	\$296,182	\$300,625	\$305,134
Demand Response Revenue	\$210,984	\$214,149	\$259,162	\$263,049	\$266,995
Total Revenue	\$498,477	\$505,954	\$555,344	\$563,674	\$572,129
Net Cost	\$1,381,956	\$1,449,696	\$1,478,533	\$1,551,557	\$1,627,712
Farebox Recovery	27%	26%	27%	27%	26%
Net Cost Above Base	\$149,483	\$155,999	\$160,984	\$168,021	\$175,348
Ridership Above Base	14,374	14,590	14,809	15,031	15,256
Net Cost per New Rider	\$10.40	\$10.69	\$10.87	\$11.18	\$11.49

The cost estimate to operating limited evening service (two days per week, three hours per day) using the existing route structure is shown in Table 5-3:

**Table 5-3  
Existing Service with 12 Weekday Service Hours per Route plus Saturday**

	2009	2010	2011	2012	2013
Fixed Route Costs	\$755,587	\$785,811	\$817,243	\$849,933	\$883,930
Demand Response Costs	\$1,181,829	\$1,229,102	\$1,278,266	\$1,329,396	\$1,382,572
Total Costs	\$1,937,416	\$2,014,912	\$2,095,509	\$2,179,329	\$2,266,502
Fixed Route Ridership	238,204	241,778	245,404	249,085	252,822
Demand Response Ridership	97,834	99,301	100,791	102,303	103,837
Total Ridership	336,038	341,079	346,195	351,388	356,659
Fixed Route Revenue	\$289,418	\$293,760	\$298,166	\$302,639	\$307,178
Demand Response Revenue	\$212,398	\$215,584	\$260,898	\$264,811	\$268,783
Total Revenue	\$501,816	\$509,343	\$559,064	\$567,450	\$575,961
Net Cost	\$1,435,600	\$1,505,569	\$1,536,445	\$1,611,880	\$1,690,541
Farebox Recovery	26%	25%	27%	26%	25%
Net Cost Above Base	\$203,127	\$211,872	\$218,896	\$228,343	\$238,178
Ridership Above Base	16,610	16,859	17,112	17,369	17,630
Net Cost per New Rider	\$12.23	\$12.57	\$12.79	\$13.15	\$13.51

The cost estimate to operating limited evening service (two days per week, three hours per day) using the existing route structure is shown in Table 5-4:

**Table 5-4  
Existing Service with 12 Weekday Service Hours per Route plus Limited Evening plus Saturday**

	2009	2010	2011	2012	2013
Fixed Route Costs	\$822,257	\$855,147	\$889,353	\$924,927	\$961,924
Demand Response Costs	\$1,286,108	\$1,337,552	\$1,391,054	\$1,446,696	\$1,504,564
Total Costs	\$2,108,364	\$2,192,699	\$2,280,407	\$2,371,623	\$2,466,488
Fixed Route Ridership	248,394	252,120	255,902	259,740	263,636
Demand Response Ridership	102,019	103,549	105,102	106,679	108,279
Total Ridership	350,413	355,669	361,004	366,419	371,915
Fixed Route Revenue	\$301,798	\$306,325	\$310,920	\$315,584	\$320,318
Demand Response Revenue	\$221,483	\$224,805	\$272,058	\$276,138	\$280,281
Total Revenue	\$523,281	\$531,131	\$582,978	\$591,723	\$600,598
Net Cost	\$1,585,083	\$1,661,568	\$1,697,429	\$1,779,900	\$1,865,889
Farebox Recovery	25%	24%	26%	25%	24%
Net Cost Above Base	\$381,369	\$429,095	\$403,731	\$462,351	\$482,353
Ridership Above Base	21,315	36,241	36,784	37,336	37,896
Net Cost per New Rider	\$17.89	\$11.84	\$10.98	\$12.38	\$12.73

## Fixed Route Alternative 2: Revise Existing Routes

Under this alternative, there would be significant route and schedule changes implemented following the service planning strategies previously identified. A number of route configuration options were considered and tested in the field before selecting the following route structure for possible implementation. The proposed routes are shown in Figures 5-2 through 5-6.

**Figure 5-2**

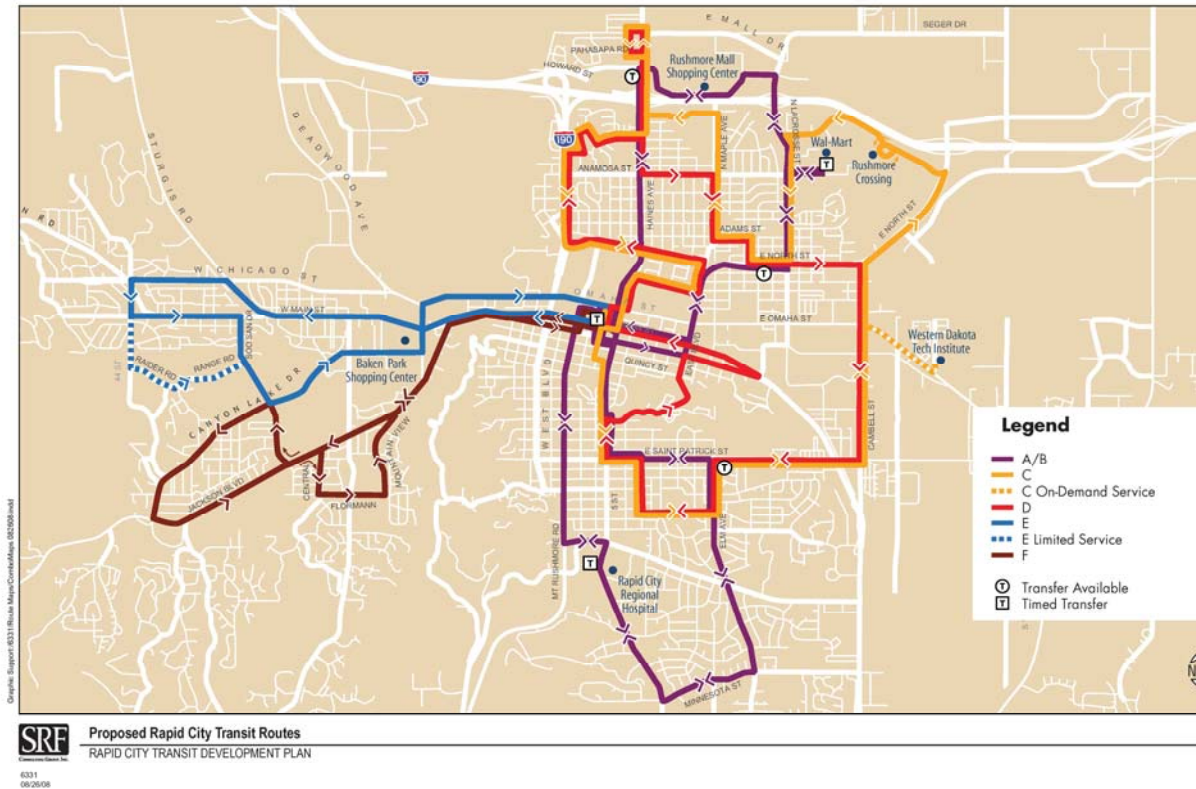
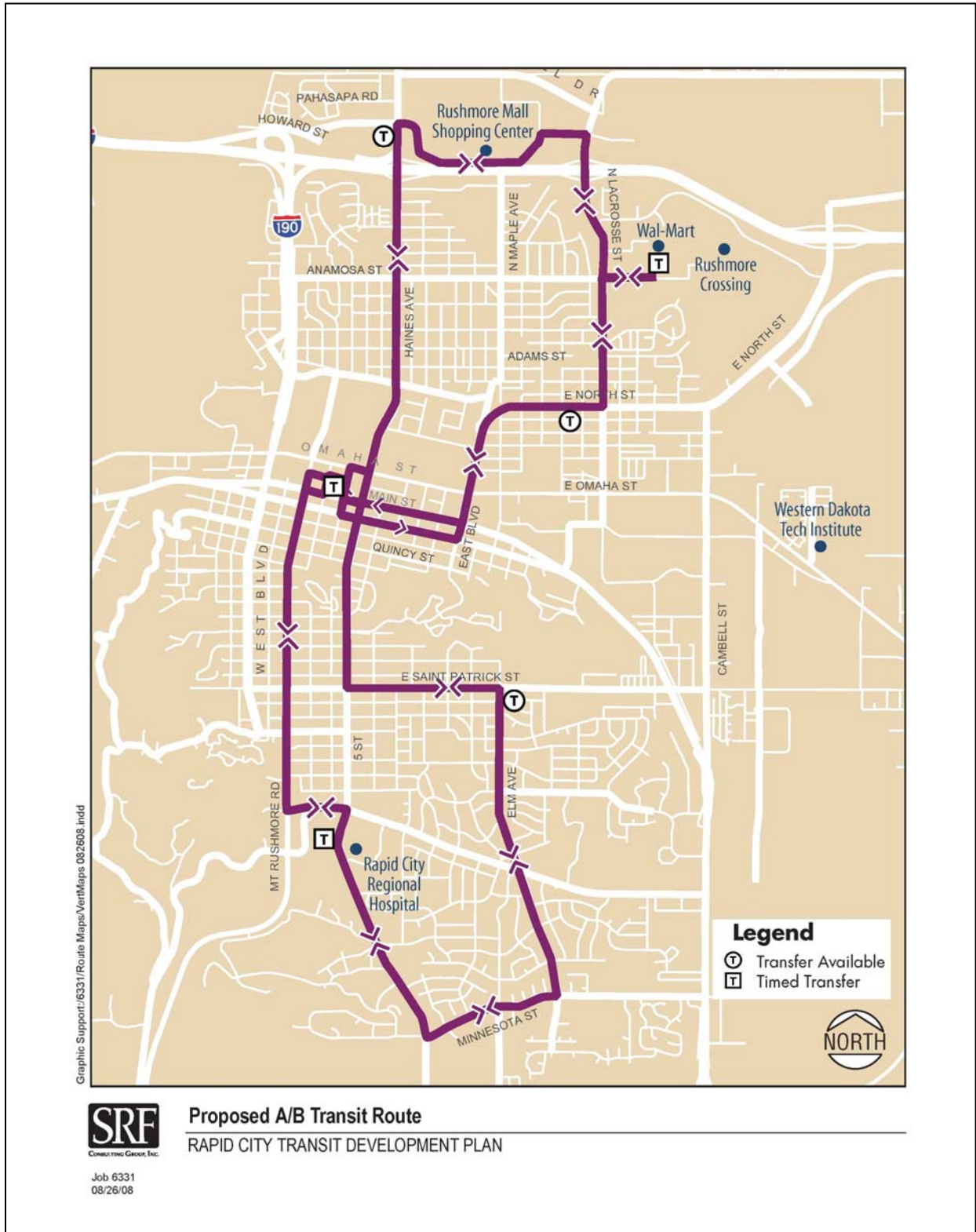




Figure 5-3



**Figure 5-4**



**Proposed C Transit Route**  
RAPID CITY TRANSIT DEVELOPMENT PLAN

Job 6331  
08/26/08

Figure 5-5

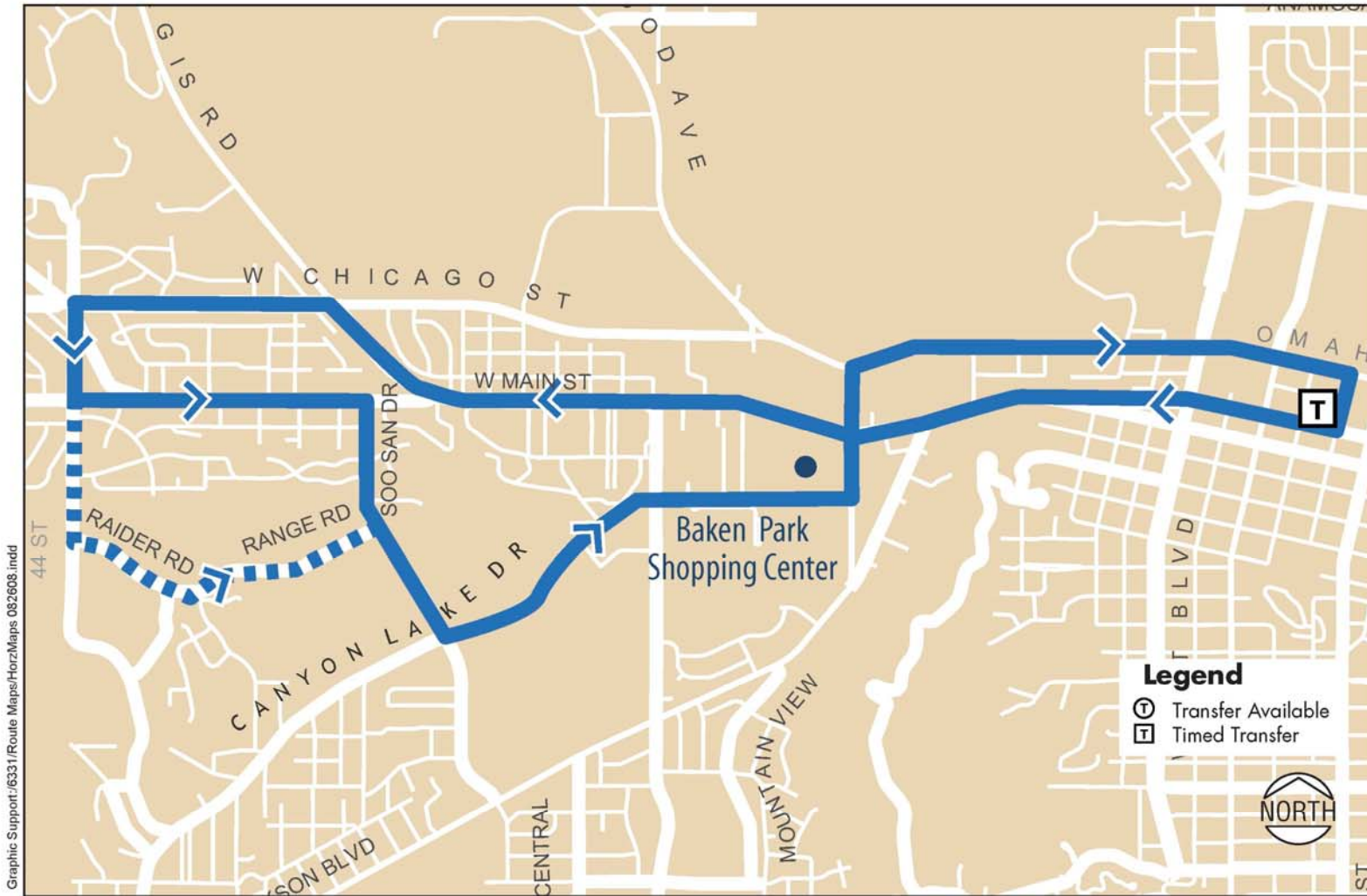


**Proposed D Transit Route**  
RAPID CITY TRANSIT DEVELOPMENT PLAN

Job 6331  
08/26/08



**Figure 5-6**



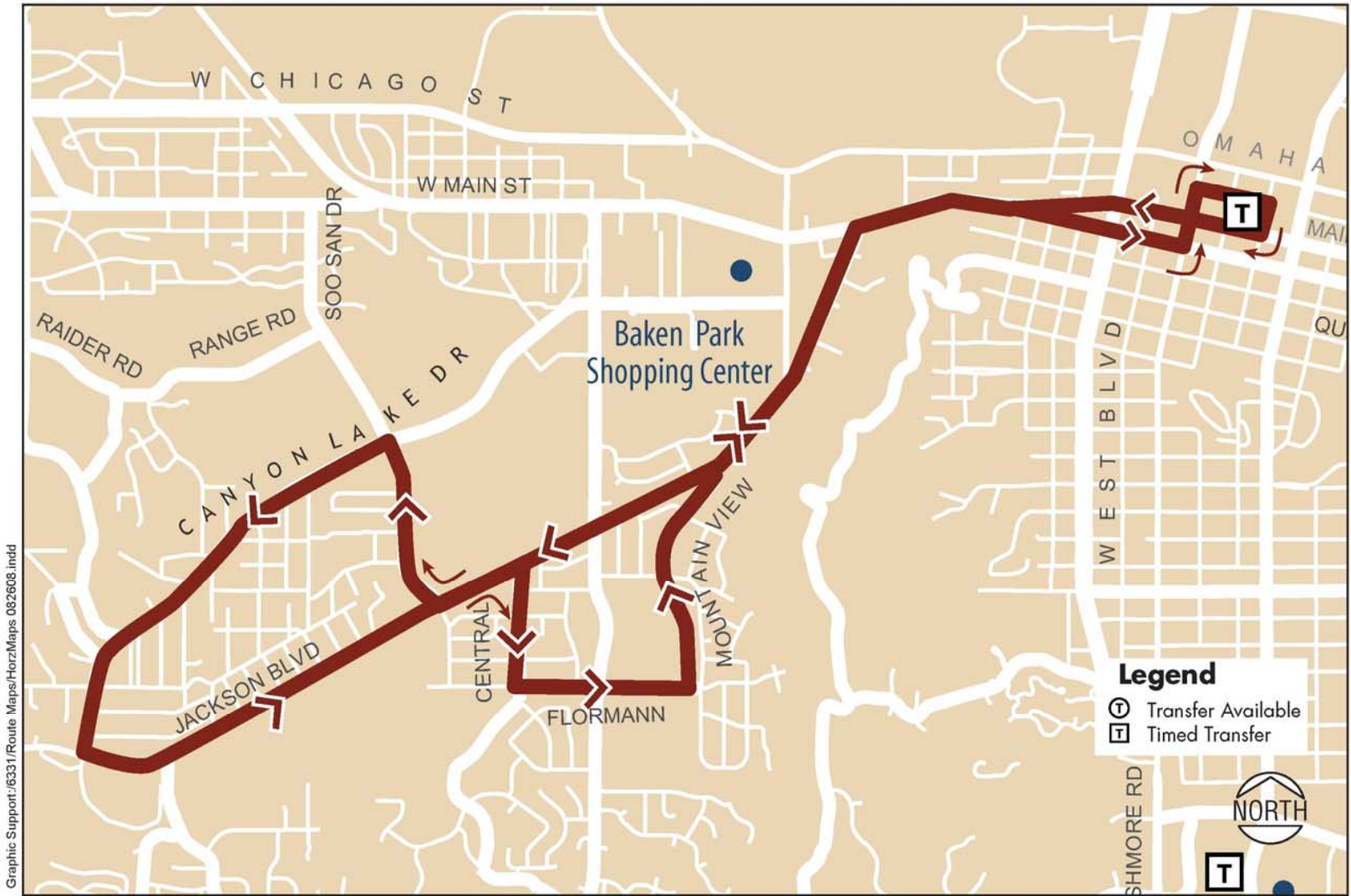
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**Proposed E Transit Route**  
RAPID CITY TRANSIT DEVELOPMENT PLAN

Job 6331  
08/26/08

**Figure 5-7**



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**Proposed F Transit Route**  
RAPID CITY TRANSIT DEVELOPMENT PLAN

The cost to implement the revised route structure for weekday service along with the expected ridership and resulting revenues are shown in Table 5-5. The costs for weekday service are the same as would be expected to continue operating the existing routes but the ridership is expected to grow under the new route configuration because of reductions in customer travel times and increased number of daily bus trips resulting from the schedule modifications. Under this alternative, the system farebox recovery level is expected to be around the 30 percent level for all years of the TDP incorporating the proposed fare increase.

**Table 5-5  
Revised Routes Weekday Service**

	2008 (est)	2009	2010	2011	2012	2013
Fixed Route Costs	\$629,551	\$666,695	\$693,362	\$721,097	\$749,941	\$779,938
Demand Response Costs	\$984,693	\$1,042,790	\$1,084,501	\$1,127,882	\$1,172,997	\$1,219,917
Total Costs	\$1,614,244	\$1,709,484	\$1,777,864	\$1,848,978	\$1,922,937	\$1,999,855
Fixed Route Ridership	235,826	248,466	254,714	258,535	262,413	266,349
Demand Response Ridership	93,272	92,998	95,337	96,767	98,219	99,692
Total Ridership	329,098	341,464	350,051	355,302	360,632	366,041
Fixed Route Revenue	\$238,294	\$308,097	\$315,846	\$320,584	\$325,392	\$330,273
Demand Response Revenue	\$172,236	\$201,899	\$206,977	\$250,481	\$254,239	\$258,052
Total Revenue	\$410,530	\$509,996	\$522,823	\$571,065	\$579,631	\$588,326
Net Cost	\$1,203,714	\$1,199,488	\$1,255,041	\$1,277,913	\$1,343,306	\$1,411,529
Farebox Recovery	25%	30%	29%	31%	30%	29%

The cost and benefits of implementing limited evening and weekend service along with the proposed routes restructuring were also evaluated. The results are presented in Tables 5-6 through 5-8.

**Table 5-6  
Revised Routes with Evening Service**

	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Fixed Route Costs	\$733,364	\$762,699	\$793,206	\$824,935	\$857,932
Demand Response Costs	\$1,147,069	\$1,192,952	\$1,240,670	\$1,290,296	\$1,341,908
<b>Total Costs</b>	<b>\$1,880,433</b>	<b>\$1,955,650</b>	<b>\$2,033,876</b>	<b>\$2,115,231</b>	<b>\$2,199,840</b>
Fixed Route Ridership	259,646	266,177	270,169	274,222	278,335
Demand Response Ridership	97,183	99,627	101,122	102,638	104,178
<b>Total Ridership</b>	<b>356,829</b>	<b>365,804</b>	<b>371,291</b>	<b>376,860</b>	<b>382,513</b>
Fixed Route Revenue	\$321,962	\$330,059	\$335,010	\$340,035	\$345,136
Demand Response Revenue	\$210,984	\$216,291	\$261,753	\$265,679	\$269,665
<b>Total Revenue</b>	<b>\$532,946</b>	<b>\$546,350</b>	<b>\$596,763</b>	<b>\$605,714</b>	<b>\$614,800</b>
Net Cost	\$1,347,487	\$1,409,301	\$1,437,113	\$1,509,517	\$1,585,040
Farebox Recovery	28%	28%	29%	29%	28%
Net Cost Above Base	\$147,999	\$154,259	\$159,200	\$166,210	\$173,511
Ridership Above Base	15,366	15,752	15,989	16,228	16,472
Net Cost per New Rider	\$9.63	\$9.79	\$9.96	\$10.24	\$10.53



**Table 5-7  
Revised Routes with Saturday Service**

	2009	2010	2011	2012	2013
Fixed Route Costs	\$755,587	\$785,811	\$817,243	\$849,933	\$883,930
Demand Response Costs	\$1,181,829	\$1,229,102	\$1,278,266	\$1,329,396	\$1,382,572
Total Costs	\$1,937,416	\$2,014,912	\$2,095,509	\$2,179,329	\$2,266,502
Fixed Route Ridership	261,386	267,960	271,979	276,059	280,200
Demand Response Ridership	97,834	100,295	101,799	103,326	104,876
Total Ridership	359,220	368,254	373,778	379,385	385,075
Fixed Route Revenue	\$324,118	\$332,270	\$337,254	\$342,313	\$347,447
Demand Response Revenue	\$212,398	\$217,739	\$263,506	\$267,459	\$271,471
Total Revenue	\$536,516	\$550,009	\$600,760	\$609,772	\$618,918
Net Cost	\$1,400,900	\$1,464,903	\$1,494,748	\$1,569,557	\$1,647,584
Farebox Recovery	28%	27%	29%	28%	27%
Net Cost Above Base	\$201,411	\$209,862	\$216,835	\$226,251	\$236,054
Ridership Above Base	17,756	18,203	18,476	18,753	19,034
Net Cost per New Rider	\$11.34	\$11.53	\$11.74	\$12.06	\$12.40

**Table 5-8  
Revised Routes with Evening and Saturday Service**

	2009	2010	2011	2012	2013
Fixed Route Costs	\$822,257	\$855,147	\$889,353	\$924,927	\$961,924
Demand Response Costs	\$1,286,108	\$1,337,552	\$1,391,054	\$1,446,696	\$1,504,564
Total Costs	\$2,108,364	\$2,192,699	\$2,280,407	\$2,371,623	\$2,466,488
Fixed Route Ridership	272,567	279,422	283,613	287,867	292,185
Demand Response Ridership	102,019	104,585	106,153	107,746	109,362
Total Ridership	374,586	384,006	389,767	395,613	401,547
Fixed Route Revenue	\$337,983	\$346,483	\$351,680	\$356,955	\$362,310
Demand Response Revenue	\$221,483	\$227,053	\$274,778	\$278,900	\$283,083
Total Revenue	\$559,466	\$573,536	\$626,458	\$635,855	\$645,393
Net Cost	\$1,548,898	\$1,619,162	\$1,653,948	\$1,735,768	\$1,821,095
Farebox Recovery	27%	26%	27%	27%	26%
Net Cost Above Base	\$349,410	\$364,121	\$376,035	\$392,461	\$409,565
Ridership Above Base	33,122	33,955	34,464	34,981	35,506
Net Cost per New Rider	\$10.55	\$10.72	\$10.91	\$11.22	\$11.54

## REVENUE ANALYSIS

There has been no fare increase for the RTS in some 16 years. Since that time, the cost of operations has grown dramatically because of increased labor, fuel and maintenance costs. In recent times, operating costs have been significantly affected by rapidly rising fuel costs. In the first half of 2008, the cost of fuel for RTS increased over 50 percent from the previous year. Around the region, many systems have already adopted or are planning for fare increases to respond to the rapidly changing operating costs.

As a result, the TDP considered options to increase the user fares across the system. After evaluating many options, the Fare Alternative 1 was developed for consideration.

### Fare Alternative 1

#### Single Ride

	RapidRide		Dial-A-Ride	
<b>Current:</b>	Adults	\$1.00	\$2.00	
	Seniors	\$0.50		
<b>Suggested 2009:</b>	Adults	\$1.50	Zone 1 \$2.50	Zone 2 \$3.00
	Seniors	\$0.75		
<b>Suggested 2011:</b>	Adults	\$1.50	Zone 1 \$3.00	Zone 2 \$3.50
	Seniors	\$0.75		

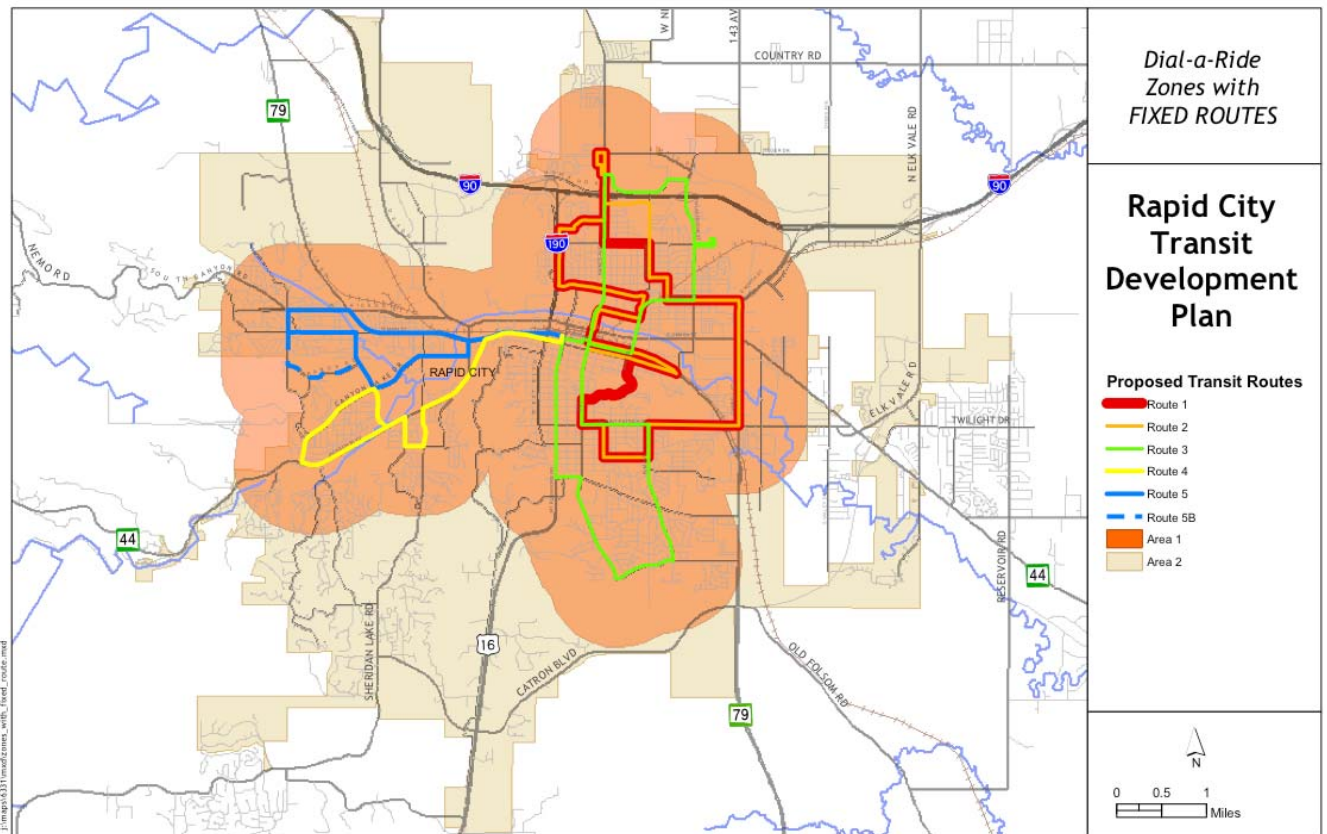
#### Monthly Pass

<b>Current:</b>	Adults	\$25.00	NA	
	Students	\$15.00		
<b>Suggested:</b>	Adults	\$30.00	\$90.00	
	Students	\$20.00		

The alternative incorporates several significant changes for RTS. First, a \$0.50 increase in the single ride fixed route fare is suggested. That results in an increase of \$0.25 in the senior fare. The fixed route monthly pass is suggested to increase by \$5.00 for both adults and students.

For Dial-A-Ride, it is suggested that an increase be implemented that will result in the base fare being twice the fixed route base fare for the majority of users but that increase should be phased in along with the adoption of a zone system for Dial-A-Ride. The zone system is suggested to recognize that the cost of serving trips on the far edges of the community are very costly to provide and that users should be expected to pay a part of that additional cost. The definition of the zones is suggested to follow the ADA guidance for providing Dial-A-Ride service in that Zone 1 is suggested to be all areas in the community within 3/4-mile of the fixed route system. Zone 2 would then be all areas outside of 3/4-mile of the fixed route system out to the edges of the community. Exceptions could be made for key activity generators right along the boundaries if there is a need. Over 85 percent of the city population is within Zone 1 so the impacts are limited to a modest group. The shape of the zone structure is shown in Figure 5-7.

**Figure 5-8**



To ease the impact of the fare increase and the zone system for Dial-A-Ride, it is suggested that the increase be phased in with the Zone 1 fare at \$2.50 for 2009 and 2010 and then increase to twice the fixed route rate at \$3.00 by 2011. The Zone 2 fare would be \$0.50 more during each period.

Another suggested modification is to offer an unlimited ride pass for Dial-A-Ride users as a means of convenience for regular users. It is recommended that the monthly rate be set at \$90.00 and that would be accepted for Zone 1 and Zone 2 trips.

## 6. SYSTEM PERFORMANCE MEASURES

Performance measures are a routine, repeatable, and meaningful way to gauge the performance of the bus system and to allow the regular examination of performance trends. The following suggested measures reflect industry practice to gauge comparative travel performance, reliability and customer satisfaction.

### SERVICE PERFORMANCE MEASURES

#### RapidRide:

- A. Subsidy per trip: Net cost of operations divided by ridership
  - 1. System level: identify trends and perform peer group comparison
  - 2. By route: comparable efficiency between routes
- B. Boardings per hour. Number of all boardings per revenue hour.
  - 1. System level by month and year
  - 2. Route level by month and year
- C. Total ridership (unlinked trips)
  - 1. System-level trends by month and year
  - 2. By individual route by month and year
- D. Schedule Adherence
  - 1. Percentage of on-time trip starts
  - 2. Percentage of on-time, late and early, on route. Measured by regular observation of supervisors, at randomly selected stops and times (ahead-of-schedule or “hot” running to be prohibited)
- E. Travel time – record elapsed travel time between 6 pairs of representative O-D’s within the City, including at least two transfer options (linked trips):
  - 1. Reported beginning-to-end travel time and trends
  - 2. Comparable travel time by Dial-A-Ride
  - 3. Comparable travel time by car
- F. Road Failures and mechanical breakdowns by buses in service – target of one per month or less.
- G. Number of Customer Complaints – trend

## Dial-A-Ride:

- A. Subsidy per trip:
  - 1. System level: identify trends
  - 2. Compare to fixed route and peers
- B. Boarding per hour
  - 1. System level, by month and year, including illustration of trends
- C. Total ridership
  - 1. System level, by month and year, including trends
- D. Road Failures – should be two per month or less.
- E. Number of customer complaints – numbers and trend
- F. Percentage of no-shows
  - 1. System level, by month and year, including trends

While these measures are simple to maintain and use, staff directly involved in monitoring local transit performance should also avail themselves of the public records produced annually for the Federal Transit Administration’s National Transit Database (NTD). These standardized reports are required of all public transit systems of all sizes and types throughout the United States and are the basis for distributing Federal Formula Funds (Program 5307) for annual capital and operating assistance. The statistics are particularly useful in looking at peer systems for comparisons and to equalize trends and measures across transition periods and system reconfigurations.

The possible fixed route redesign could impact the Rapid City NTD reports in the coming years. Consolidating two of the “loop” routes into a single cross-city route would undoubtedly improve customer service and travel times by reducing the number of transfers. However, since ridership is counted by “unlinked” trips per federal standards (each segment of a trip using a transfer gets counted separately), this would reduce reported ridership even though the same number of people are traveling over the same number of miles. The NTD statistics will recognize the increase in passenger miles traveled per trip that result from the reduced trip count, and federal funding should be essentially unchanged.

## 7. RECOMMENDATIONS

Based on the review of current system performance and the assessment of community needs, the following recommendations are made for the 2009-2013 Rapid City Transit Development Plan.

### SERVICE

1. Implement fixed routes in accordance with Route Alternative 2 by the end of first quarter 2009.
2. Extend fixed-route service day, which is currently 6:30 am - 6:00 pm, to 6:30 am - 6:30 pm

### FARES

1. Modify RapidRide, single-ride fare structure in accordance with Fare Alternative 1 by January 1, 2009.
2. Modify Dial-A-Ride single-ride fare structure in accordance with Fare Alternative 1 including graduated implementation of zone fare structure by January 1, 2009. Establish Zone 1 boundary as outside edge of 3/4 mile from fixed routes. Zone 2 boundary is the edge of the community.
3. Modify RapidRide monthly pass fare structure for adults and students in accordance with Fare Alternative 1 by January 1, 2009.
4. Implement Dial-A-Ride monthly pass fare structure in accordance with Fare Alternative 1 by January 1, 2009.
5. Sell one-day all you can ride passes targeted at visitors.

### OPERATIONS

1. Implement a pilot program to evaluate use of City staff to handle light vehicle maintenance activities. If successful, add up to 1.5 FTE for maintenance staffing.
2. Modify current staffing arrangement for daily bus cleaning to improve performance. If possible, add up to 1.0 FTE for cleaning at the storage facility or contract out for service.
3. Separate call-taker/dispatch functions from customer service functions by adding 1.0 FTE for customer service and general administrative needs for the system.
4. Set policy to standardize fixed route bus stops at eight per mile.
5. Provide route schedule and map information at all bus stops.
6. Build ADA wheelchair loading pads at all stops with shelters (minimum) and benches (desirable).

7. Evaluate connections to local sidewalks, work with city to extend or connect sidewalks to bust stops where appropriate and not prohibitive in cost.
8. Review current city ordinance on placement of benches to clarify positioning, if needed.
9. Print pocket schedules for customer information for all routes and distribute at MBTC, on-board busses and at distribution outlets throughout the community as can be arranged.
10. Expand general marketing and advertising activities for RTS to reflect the need to inform customers of system information on an on-going basis. Annual budge expenditures in the 2 to 3 percent range of total operating costs are desirable.
11. Establish an “extra board” of available drivers for daily substitution by utilizing a rotating “on-call” procedure.
12. Ensure MBTC is open during all hours of fixed route operations.
13. Modify bus bays at MBTC to eliminate pull-in/back-out maneuver to improve safety and speed up operations.
14. Establish eastside and southside stops and canopies/shelters at MBTC for run through routes.
15. Expand deployment of on-board surveillance cameras to entire fleet to improve system security.
16. Upgrade fareboxes to handle new fare media (magnetic cards) to speed boarding and reduce revenue-handling costs.
17. Replace use of punch cards with magnetic card media.
18. Promote monthly passes through employers, with possible employer-paid discounts to support employee use.
19. Eliminate on-vehicle sales of monthly passes and punch cards to eliminate drivers from handling revenue. In conjunction with this, sell monthly cards through customer service outlets and mail order.
20. Expand deployment of automate vehicle location (AVL) technology to entire fleet to allow monitoring of operations and improving overall passenger and driver safety.
21. Implement next bus arrival information system at key fixed route bus stops with shelters utilizing AVL information. Consider testing concept at key locations as first step.
22. Modify website to reflect any new route schedule or fare information.
23. Advertise availability of information on in-town after hours’ services through 211 information line.

24. Conduct regular (once per month) driver route checks on Dial-A-Ride services to ensure directness of service meets expectations.
25. Expand utilization of Dial-A-Ride scheduling software data reports. This may require training sessions on use of software tools.
26. Review Dial-A-Ride client certifications to ensure compliance with current eligibility standards.
27. Promote shifting some Dial-A-Ride trips to the regular route system where appropriate through promotion of lower fares and flexibility (possible rides the MBTC without advanced reservations or incentive.)
28. Conduct annual public/customer open house session to identify on-going needs and present overview of upcoming annual program and budget.
29. Revise route-naming conventions to incorporate more local identity. Ideas to connect more to the local area including using historical names such as presidents or explorers or natural environment features.
30. Move administrative staff and dispatch services to same facility as fleet to improve operations. Maintain customer service and street supervision activities at MBTC.
31. Work directly with city planning staff to identify transit service and operations needs related to new developments in town, as plans are still early in review.
32. Fixed routes should be identified as high priority for snow and ice removal activities.
33. Drivers should remain on their vehicles until all passenger transfers are completed during stops at MBTC.
34. City Public Works and transit staff should confer early on potential street closures that affect bus operations to allow reasonable time to plan detours and advise customers and driver.
35. Use transit ambassadors to help promote use and understanding of system components including routes and schedules, and use of regular routes in place of Dial-A-Ride.



## Additional Service Options to Consider for Implementation as Opportunities Become Available

1. Implement downtown shuttle concept using spare fleet or trolley on a trial basis following modification of fixed route system. Potential trial period from 11:00 a.m. to 1:00 p.m., Monday through Friday along main downtown corridors such as Main Street and St. Joe. Incorporate low price fare for the downtown shuttle as an introductory service concept.
2. Implement expanded weekday RapidRide and Dial-A-Ride service on a trial basis. Consider starting service two-days per week from 6:30 p.m. to 9:30 p.m. to gauge utilization patterns.
3. Implement Saturday fixed route service on a trial basis. Consider operation of service from 9:00 a.m. to 6:00 p.m., and adjusting Dial-A-Ride service to match those service hours.
4. Implement Park and Ride service concept on a trial basis to connect outlying parking area to activity center. Possible connections would relate to employment locations or local special events.
5. Implement long-distance service connection to Ellsworth Air Force Base or Rapid Valley Call Centers on a trial basis to provide connections to Rapid City.

## 8. FINANCIAL PLAN

This section of the TDP presents a comprehensive picture of anticipated costs and revenues associated with all of RTS's operations over the five year planning horizon. Current budget figures are the basis for future projections outlined below. Future operating cost projections are based on the number of service miles anticipated to result from proposed RapidRide route changes.

The five-year capital plan is shown in Table 8-1.

Assumptions used in developing the financial plan (presented in Table 8-2) are discussed below:

- An inflationary factor of our percent per year, consistent with recent trends.
- RTS ridership is anticipated to increase by 1.5 percent per year consistent with forecast rates of Rapid City population growth.
- User fares will change for RTS services. RapidRide fares will increase to \$1.50 and Dial-A-Ride will use a zone-fare system. Dial-A-Ride fares will increase to \$2.50 in Zone 1 until 2011 when those fares increase to \$3.00. Dial-A-Ride fares will be \$3.00 in Zone 2 until 2011 when those fares increase to \$3.50.

The anticipated local share of costs by year is presented in Table 8-3 as a summary of local fiscal impacts resulting from TDP implementation.

**Table 8-1  
Capital Plan**

	2009	2010	2011	2012	2013
<b>CAPITAL COST</b>					
Replacement Vehicles for ADA Service	\$420,000	\$200,000	\$410,000	\$210,000	\$440,000
Trolley Purchase	\$135,000	--	--	--	--
<b>Total Capital Cost</b>	<b>\$555,000</b>	<b>\$200,000</b>	<b>\$410,000</b>	<b>\$210,000</b>	<b>\$440,000</b>
<b>REVENUE</b>					
FTA Capital Assistance	\$460,650	\$166,000	\$340,000	\$174,300	\$365,200
Local Funds	\$94,350	\$34,000	\$69,700	\$35,700	\$74,800
	<b>\$555,000</b>	<b>\$200,000</b>	<b>\$410,000</b>	<b>\$210,000</b>	<b>\$440,000</b>

**Table 8-2  
Financial Plan**

	2009	2010	2011	2012	2013
<b>CAPITAL COST</b>					
Operating Cost	\$1,709,484	\$1,797,864	\$1,848,978	\$1,922,987	\$1,999,855
Capital Projects	\$555,000	\$205,000	\$410,000	\$210,000	\$440,000
<b>Total System Cost</b>	<b>\$2,264,484</b>	<b>\$1,977,864</b>	<b>\$2,258,978</b>	<b>\$2,132,937</b>	<b>\$2,439,855</b>

<b>REVENUE</b>					
Federal Capital Assistance	\$460,650	\$166,000	\$340,300	\$174,300	\$365,200
Federal Operating Assistance	\$732,473	\$750,062	\$572,564	\$795,741	\$819,612
SD State Assistance					
Passenger Fares	\$509,996	\$522,823	\$571,065	\$579,631	\$588,326
Local Capital Assistance	\$94,350	\$34,000	\$69,700	\$35,700	\$74,800
Local Operating Assistance	\$467,015	\$504,979	\$505,349	\$547,565	\$591,917
	<b>\$2,264,484</b>	<b>\$1,977,864</b>	<b>\$2,258,978</b>	<b>\$2,132,937</b>	<b>\$2,439,855</b>

**Table 8-3  
Total Local Assistance**

	2009	2010	2011	2012	2013
Capital Assistance	\$94,350	\$34,000	\$69,700	\$35,700	\$74,800
Operating Assistance	\$467,015	\$504,979	\$505,349	\$547,565	\$591,917
	<b>\$561,365</b>	<b>\$538,979</b>	<b>\$575,049</b>	<b>\$583,265</b>	<b>\$666,717</b>