

**SRTA FIXED ROUTE SYSTEM
RIDERSHIP SURVEY
IN THE CITIES OF
FALL RIVER AND NEW BEDFORD**

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Southeastern Regional Planning and Economic Development District



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INTRODUCTION

During the month of July 2008 SRPEDD undertook a comprehensive survey of all of Southeastern Regional Transit Authority's (SRTA) bus routes in an attempt to gather as much information as possible concerning the origin and destination of riders, route load or density, and fare structure. SRTA's service area is comprised of two divisions, Fall River and New Bedford. The Fall River division has 13 routes that service the city of Fall River, and the towns of Swansea, Somerset, and Westport. The New Bedford division has 11 routes that service the city of New Bedford and the towns of Dartmouth and Fairhaven. The SRPEDD staff surveyed each route in both divisions an average of seven (7) times during morning and evening rush hours for a two to three-week period.

PURPOSE

This study was engendered by SRTA because of the decrease in State funding and the increase in fuel expenses. Additionally, the Federal Transit Administration's Boston Region I Office has expressed a concern over fare equity in their review of SRTA's Title VI report and has requested a review of the SRTA fare structure. This study examines several elements of SRTA's fare structure and ridership and offers comments and options for SRTA to consider when responding to FTA and assessing their financial position in light of escalating fuel costs. SRTA concerns included:

- (1) Federal Transit Administration Letter dated April 24, 2008, Re: Title VI Program – Conditional Approval. This Letter requests SRTA to analyze its fare structure to determine why minority riders appear to pay higher fares than non-minority riders.
- (2) The escalating cost of diesel fuel and the impact this cost is having on SRTA's annual budget.
- (3) Assessing SRTA's current fare and transfer system to ensure equity and to examine impacts on its annual budget through restructuring.

The study examines fare equity and possible changes to the fare structure based on:

- (1) Survey data collected by SRPEDD in July 2008.
- (2) Assessing the impact of the Title VI findings and examining the US Census data on which SRTA's Title VI program is based.
- (3) The fare structures of the other Massachusetts Regional Transit Authorities in the vicinity of SRTA.
- (4) Data provided by the Union Street Bus Company's (USBC) monthly reports to the National Transit Database and USBC's revenue reports.

There were seven survey questions asked in the July SRPEDD survey, however, for the purpose of this study only the Fare Paid and Transfers are important. The rest of the data collected during the survey period is for SRTA's use as a baseline when contemplating future service changes.

BACKGROUND

FALL RIVER DIVISION

The city of Fall River has an estimated population of 92-thousand, with a per capita income of \$18,456; 18.6% of individuals live below poverty level.¹ The makeup of the labor force is .2% executive and professional, while 31% are working in health care and social assistance, 38% work in manufacturing, and the remainder is involved in non-professional retail/administrative jobs.²

NEW BEDFORD DIVISION

The city of New Bedford has an estimated population of 99-thousand, with a per capita income of \$17,503; 24.5% of individuals live below poverty level.³ The makeup of the labor force is 3% executive and professional, while 30% are working in health care and social assistance, 30% work in manufacturing, and the remainder is involved in non-professional retail/administrative jobs.⁴

SRTA SERVICE TO NEW BEDFORD + FALL RIVER

During the month of July 2008, Union Street Bus Company, SRTA's operator, submitted their Safety Data General Information 2008 report to the SRTA Administrator. Data from this report are condensed below. Clearly, 90%+ of SRTA's patrons are riding the buses Monday through Friday with less than 7% - 8% on Saturdays (there is no Sunday service at this time).

USBC July 2008 Report	Fall River	New Bedford	SRTA Total
July Total	44,172	91,560	135,732
July Weekday	40,613	85,144	125,757
% Weekday	92%	93%	92.6%
FY 2008 Average Monthly Ridership	51,671	81,168	132,839

¹ 2006 American Community Survey/Data Profile Highlights, US Census Bureau

² Selected Statistics from the 2002 Economic Census, US Census Bureau

³ 2006 American Community Survey/Data Profile Highlights, US Census Bureau

⁴ Selected Statistics from the 2002 Economic Census, US Census Bureau

USBC July 2008 Report	Fall River	New Bedford
Revenue Miles	44,682	58,558
Percentage of Total Revenue Miles	43%	57%
Revenue Hours	3,469	4,316
Average Monthly Riders	52,000	83,000
Percentage of Total Riders	38%	62%

Service supplied is comparable for both cities, with SRTA providing buses during the same operating hours and days. SRTA operates buses on all New Bedford routes for a total of 58,558 revenue miles⁵ and on the Fall River routes for a total of 44,682 revenue miles. Total hours of revenue service for New Bedford routes equal 4,316 hours per month and for Fall River routes 3,469 hours per month. Computing ridership for FY-2008, New Bedford carries an average of 83,000 riders per month, and Fall River carries an average of 52,000 riders per month.

The SRTA bus system design is called a pulse system, wherein hubs are identified and the buses emanate from and return to the hubs. Hubs are terminals where many bus lines converge. The two hubs of the SRTA system are the downtown New Bedford terminal and downtown Fall River terminal. Almost every SRTA route originates and terminates at a Hub (the exception being the North End of New Bedford Shuttle which travels a circumferential route in the North End). The Pulse and Hub radial design provides high quality service cost effectively. The Pulse designation is the design feature that has the buses arriving at the hubs at almost the same time in order to make timely transfers. The main attributes of the pulse and hub system are they minimize average trip times, maximize ridership, and optimize asset utilization (in this case the assets being the buses and drivers). In other words, all routes travel outward from downtown to the farthest reaches of the service area in a north to south and east to west direction. However, if the rider must pass through a hub on his/her way to their destination SRTA treats it as two trips (one into the Hub and one out of the Hub, to their destination). This is called a transfer and requires the rider to pay a second Adult fare of \$1.25, equaling a total of \$2.50 for their ride.

Percent of Transfers by Hub					
	<u>Yes</u>	<u>%</u>	<u>No</u>	<u>%</u>	<u>Total</u>
Fall River	158	27%	421	73%	579
New Bedford	78	18%	359	82%	437

⁵ Revenue miles are those miles when buses are available to riders.

The FTA's findings that SRTA's fare structure appears to have minority riders pay higher fares than non-minority riders is a direct result of SRTA's transfer system. It is completely unintentional, as the transfer system was undertaken as a fare structure design without regard to US Census tracts. The minority areas (or census tracts determined by the US Census of 2000) of Fall River and New Bedford are located directly adjacent to the downtown terminals going out in a circumference of about one mile. Any passenger getting on a bus in those census tracts, traveling via the terminal to a destination (such as a group of medical offices) on the other side of the terminal is paying two Adult fares. Whereas, a passenger traveling from north of the city (e.g., from the Somerset area that is designated by the US Census as a non-minority census tract) to the group of medical offices surrounding St Ann's, thus, getting off the bus before it reaches the terminal will only pay one Adult fare. Even though the trip from Somerset to downtown Fall River is much longer, since the rider did not reach the terminal before deboarding there is only one Adult fare charged. Once the underlying problem was identified, that of transfers, SRPEDD undertook the July 2008 Survey to collect enough data for SRTA to make an informed decision regarding that issue. SRPEDD looked at the transfer issue and its antithesis to affordable public transit travel from minority census tracts. Suggestions on possible solutions for mitigating the Transfer expense to riders without adversely affecting fare income to the Authority are discussed in the following summary of pertinent Survey Data, Conclusions, and Suggestions.

Survey Data

SRPEDD's Survey asked each rider how much he or she had paid for the current bus fare. Half of the riders paid a full adult fare. A little more than 25% paid the discounted fare charged for Seniors and those with a Discounted Pass (those having a diminished mental and/or physical capacity for work). The rest were scattered, all below 10%. The following table illustrates what fares were paid by those interviewed for the Survey. Two items of note, (1) School was not in session so the student pass category is abnormally low since there are more than 27,000 student passes distributed annually, and (2) the monthly/unlimited passes make up a trifle of the fares paid.

2008 SRPEDD Survey – FARES PAID		
	No. Of Fares	% Of Fares
\$0.60 Discount Adult Fare	273	26.1%
\$1.25 Adult Fare	525	50.3%
10 Ride Pass	30	2.9%
40 Ride Pass	15	1.4%
Monthly/Unlimited Pass	95	9.1%
Other	52	5.0%
Student Pass	43	4.1%
Weekly Pass	11	1.1%
TOTAL	1044	100.0%

There are three advantages to buying the monthly pass; the fare is based on 22 days of round trip full adult fare (44 times \$1.25) or \$55.00, making it advantageous to own a pass for transferring, extra weekday trips, and/or Saturday trips, which are then free. Also, buying a pass at the beginning of the month, one does not have to carry \$1.25 for each trip; especially since the bus drivers do not make change. It is most advantageous to buy a monthly pass if the rider's trip involves a stop at the terminal on the way to his/her destination. SRTA's fare system requires a rider to pay another fare any time the bus stops at the Fall River or New Bedford Terminal to pick up or discharge passengers. Unless a rider's final destination is downtown New Bedford or Fall River he/she must pay two full adult fares to travel from the origin via the terminal to their destination.

One such example was the young woman who traveled by bus from her home to deliver her small child to a day care center. Her home was south of the Fall River terminal, the day care center was north of the Fall River terminal. It cost her two fares to the day care center, or \$2.50. After dropping off her child she then traveled to the school where she was learning a trade; again via the terminal for an additional cost of \$2.50. She then repeated the process at the end of the day for a total transit cost of \$10.00 per day. When queried by a SRPEDD surveyor she explained that she used to have a car but it got too expensive and she had to give it up. She further explained that on her limited income she could not spend \$55.00 on a pass at the beginning of the month and so she scraped up the transit fare on a daily basis toward the end of the month. This was a recurring theme where riders invariably replied that they could not afford the cost of \$55.00 at the beginning to the month. Others said they did not know what a monthly pass was or how much it cost. There is a sore lack of advertising of monthly passes. A monthly pass mitigates the transfer cost since transfers are included in the cost of the pass. Only 9% of those surveyed paid their fare with a monthly pass and USBC reports that only 5% of all passes sold are monthly passes.

USBC DISTRIBUTION OF BUS PASSES FOR SALE

TYPE OF PASS	NUMBER DISTRIBUTED		% OF TOTAL	PROJECTED REVENUE
	New Bedford	Fall River		
Unlimited Monthly Pass	2,000	1,000	5%	\$165,000
10 Single Zone Unlimited	3,000	2,150	9%	\$ 64,375
10 Single Zone Reduced	5,250	3,595	15%	\$ 53,070
10 Ride School	7,607	19,501	44%	\$162,648
One-Way NB to FR	2,000	2,000	7%	\$ 15,000
One Zone (lime green)	13,000	0	21%	\$ 16,250
TOTAL	32,857	28,246		\$476,343

REVENUES

Union Street Bus Company's Income Statement for the month ending July 31, 2008 contains the following information:

Passenger Revenues	July 2008	% Of Total
Total	\$ 129,276	
Adult	\$ 122,979	95%
Seniors	\$3,759	3%
School	\$2,538	2%

The revenue for July 2008 divided by the number of trips taken indicates an average fare of \$.95 per unlinked passenger trip (UPT). The disparity in the cost per UPT cannot be correctly calculated because Union Street Bus Company does not keep detailed information concerning the type of bus fares collected. The Adult Passenger Revenues shown above include cash fares and revenues from monthly passes, 10-ride passes, 1-way passes, 10-zone passes, and 1-zone pass sales. The drivers do keep track of riders who show a pass instead of paying cash but the USBC does not differentiate the cash fares from pass sales. Ride-pass sales are sold for the equivalent of \$1.25 per Unlinked Passenger Trip (UPT)⁶ or the regular Adult fare per UPT. The

⁶ An Unlinked Passenger Trip is defined by the Federal Transit Administration as a trip where the passenger boards a vehicle and arrives at his/her destination without changing to another vehicle or route.

same applies to reduced fare school passes and senior passes since they are both sold at \$.60 per unlinked trip (or half the regular Adult fare).

Calculations can be made to estimate the percentage of UPT's resulting in a full Adult fare by applying the USBC financial data for July 2008 to the passenger data. It is estimated that 78.5% of all non-student and non-senior reduced rate trips earn the full Adult fare of \$1.25, while 21.5% of all Adult trips earn \$.55.

Type of Fare	Revenue Collected July 2008	Number of Riders (Revenue/Fare)
Senior - \$.60/UPT	\$ 3,759*	6,265 (calculated)
Student - \$.60/UPT	\$ 2,538*	4,230 (calculated)
Adult - \$1.25/UPT (78.5%)	\$ 96,539	77,231 (calculated)
Adult - \$.55/UPT (21.5%)	\$ 26,440	48,006 (calculated)
	\$129,276*	135,732**
	*Per USBC Financial Report	**Per USBC Operations Report

On a system-wide basis, transfers represent only 23% of full Adult fares. Thus, if a patron wishes to go from one side of the city to the other side they are required to board a bus and ride it to the New Bedford or Fall River terminal. At that point, if they wish to travel on to their final destination the patron must pay another full Adult fare. A patron may or may not have to change buses to continue on with his/her trip. In many cases the bus simply changes its Route # designation and continues on to another route in the city. The system of establishing zones in and around the city has pretty much become inactive. The original purpose was to have each patron pay his fair share for a ride based on distance. Instead the zones have convulsed into changing route numbers or changing buses to get to one's final destination. Charging riders twice the fare within either of the city's borders has resulted in environmental justice problems for SRTA because those living in proximity of the terminals are the ones who most often need to be transported via the terminal to their final destination. It is with this in mind that SRPEDD closely studied the subject of Transfers or Zones. If the zones/transfers were eliminated SRTA would lose approximately 23% of its revenue in full Adult fares. This reduction in revenues, while addressing the inner city issue of environment justice, would require that there be comparable reductions in service or an increase in fares – both of which are not acceptable solutions to address this problem.

Conclusions

SRPEDD concludes that the environmental justice element of SRTA's service and the ridership on the whole would be better served if transfers could be eliminated. However, since Transfers represent 23% of SRTA's Adult fare revenue, restructuring the fare system would have a severe monthly impact on their revenue stream. The table below illustrates the monthly impact to the budget of the revised/elimination of transfers:

MITIGATION OF TRANSFER FARE			
REVISED FARE	Full Fare OF Transfer	LOSS OF INCOME	IMPACT ON % LOST MONTHLY INCOME BUDGET
\$0.00	(\$1.25)	(\$1.25)	100% (\$29,149.74)
\$0.25	(\$1.25)	(\$1.00)	80% (\$23,319.79)
\$0.50	(\$1.25)	(\$0.75)	60% (\$17,489.84)
\$0.75	(\$1.25)	(\$0.50)	40% (\$11,659.90)
\$1.00	(\$1.25)	(\$0.25)	20% (\$5,829.95)

Obviously, the cost of transportation becomes more affordable by purchasing an Unlimited Monthly Pass. An education process would be very helpful to those that do not feel they have the money. They may decide that it is an expense they cannot forgo. SRPEDD suggests that SRTA undertake extensive advertising of the cost and benefits of Monthly Passes. This could be done through the use of bus cards on the interior of the buses and through public announcements in the local papers and on the cable TV channels of both Fall River and New Bedford.

It would be ideal if there were enough revenue to restructure fares to eliminate transfers, cover the escalating cost of fuel, and lower the monthly pass cost. Since SRTA does not believe there is enough revenue to cover this year's expenses, especially in light of the reduction in state aid, the reduction in fares and/or passes would seem to be an impossible request.

Certainly, comparing SRTA's fare structure to other RTA's in Southeastern Massachusetts and across the state, there is parity.

Recommendations

Continue to explore the possibility of a revised fare structure. While it is understood that Seniors do not have flexible incomes an additional \$.10 per ride, even if taking the bus every day of the week, would only result in an additional \$4.00 per month.

Explore Student fares for possible expanded use. SRTA could expand the use of the student pass to allow for after school and weekend trips. The original student pass that was unlimited resulted in truancy problems when students used the pass during the school day to travel to the mall and destinations other than school. The student pass then became a restricted pass whereby it could only be used during school days and

hours to travel from home to school and back. Allowing students to use the pass in an unlimited manner, after school hours and on weekends would solve the issue of how to get to an after-school job and where to go on weekends to avoid the pitfalls of “hanging around.” Providing for added trips on weekends and in the afternoons would make an increased fare slightly more palatable to the purchaser. In any case, expanding the use of the student fare results in more ridership for the Authority and attempts to solve a social problem identified by local groups.

Do blanket advertising of the Monthly Pass

Conduct an advertising campaign to educate SRTA’s ridership of the cost-benefits of a monthly pass. This advertising should begin this year and continue well into next year and include posters, flyers, on-bus advertisements and public service announcements.

Below are tables depicting possible increases in fares for SRTA’s information. As a starting place these tables address the minimum increase in fares allowable to offset the elimination of transfers from SRTA.

Samples of Revised Fare Structure Options

- (1) Option (1) table of revised fares to offset elimination of Transfers and to reduce the cost of an unlimited Monthly Pass to \$45.00. The increased income on a monthly basis can be used to offset the spiraling cost of diesel fuel for the SRTA buses.

(1) Revised Fare	Present	Proposed	% Inceas
Senior	\$. 60	\$. 70	14%
Student	\$. 60	\$. 80	25%
Full Adult	\$1.25	\$1.75	29%
Unlimited Monthly Pass	\$55.00	\$45.00	(18%)
Increased Income/Monthly	\$7,800	X 12 months	\$94,000 annually

(2) Option (2) is more drastic in the percentage increase of the full Adult fare but it does provide \$320,000 in added income to offset the rising cost of diesel. It provides for SRTA lowering the Monthly Pass to \$40.00 to be more in line with income levels of the population it serves. This option makes the Monthly Pass more affordable to lower income riders. This is not to say that SRTA’s monthly pass is out of line with its closest geographic RTA’s. SRTA is bracketed by BAT (Brockton Area Transit) to the north, whose Ashmont monthly pass is \$55.00, and RIPTA (Rhode Island Public Transit Authority) to the south whole monthly pass if \$55.00. Based on the percentage of the population of each city that lives below poverty level, considering lowering the cost of the monthly pass would have a decided impact on the affordability of transit and would surely improve monthly sales.

(2) Revised Fare	Present	Proposed	% Inccreas
Senior	\$. 60	\$. 70	14%
Student	\$. 60	\$1.00	40%
Full Adult	\$1.25	\$2.00	63%
Unlimited Monthly Pass	\$55.00	\$40.00	(27%)
Increased Income/Monthly	\$27,000	X 12 months	\$321,000 annually

The increased income that would be realized on a monthly basis could reasonably be used to offset the spiraling cost of diesel fuel for the SRTA buses. The increase to the seniors and those with discounted passes remains at a 14% increase due to the fact that most seniors are on fixed incomes.

For comparison purposes, below is a condensed table of Regional Transit Authorities in Massachusetts and their Regular Fares, Transfers, and Monthly Passes

Other Regional Transit Authority's Fare Structures

RTA	Regular Fare	Transfers	Monthly Pass Cost
BAT	\$1.00-\$1.50	Free- 1 hour	Local \$30.00 Brockton to Ashmont \$55.00
CCRTA – Cape Cod	\$2.00	No Free Transfer	20-Pass = \$30.00
GATRA – Taunton + Attleboro	\$2.00	\$1.50	\$30.00
LRTA - Lowell	\$1.00-\$1.50	Free in city	\$35.00
Martha's Vineyard	\$1.00	No Free Transfer	\$35.00
MVRTA – Merrimack	\$1.00	Free Transfer	\$27.00
MWRTA-Framingham + Natick	\$1.50	Free – 30 mins.	10-Ride Pass = \$11.00
Montachusett	\$1.00	\$1.00	\$20.00
Nantucket	\$1.00-2.00	\$1.00	None
Pioneer Valley	\$1.25	\$.25	\$45.00
SRTA	\$1.25	\$1.25	\$55.00
Worcester	\$1.25	\$.25	\$38.00-50.00
RIPTA – Rhode Island	\$1.75	\$.50	\$55.00