

The Future of Fares At WRTA

CMRPC Report, October 2021

Introduction

Like many transit agencies across the United States, the Worcester Regional Transit Authority (WRTA) stopped collecting fares across its entire system in late March 2020, as a response to the Covid-19 pandemic. Since the fall of 2020, however, most other agencies across the state of Massachusetts began collecting fares again on some or all of their services, leaving the WRTA as one of two agencies in the state still operating entirely fare-free at the time of this writing, in fall 2021.

The temporary suspension of fares was enacted as a pandemic safety measure, to protect drivers from coming in frequent direct contact with passengers during the fare-payment process. However, it came at a time of growing advocacy for free fares as a tool of equity and improved mobility. Thus, many would like to see the WRTA become a model for a fare-free system even after the pandemic's effects subside in the Worcester area. Many others point out, though, that the agency has taken a financial hit from its lack of fare collection that is unlikely to be easily replaced in the event of permanent fare suspension.

This report seeks to examine the impact of fare suspensions and reintroductions on transit ridership, in the context of an ongoing pandemic, and also the potential options now facing the WRTA, including permanent fare suspension, income-based fare policies, and a resumption of pre-pandemic fare policies. We seek to offer the pros and cons of each option, and provide a clear path forward for the WRTA to emerge from the pandemic era in strong financial health while also providing the best and most equitable possible service to its users in and around the Worcester area.

Methodology

First, from a quantitative standpoint, we compared the WRTA's ridership month-by-month, from July 2018 through June 2021, to examine the effects the pandemic had on ridership as it waxed and waned over the seasons. Next, we compared the WRTA's ridership over that time frame to those of the other 12¹ Massachusetts bus transit agencies, to see if the WRTA had better or worse rider retention than the statewide average. We also considered dates of fare-reintroduction for other agencies where we had them, to see if they had an impact on ridership in any way.

Next, from a qualitative standpoint, we spoke with several experts and stakeholders in the field to gather their thoughts on WRTA's fare policies as well as the fare policies at other agencies around the state. We asked about the financial impacts of fare suspension, as well as its impacts on rider

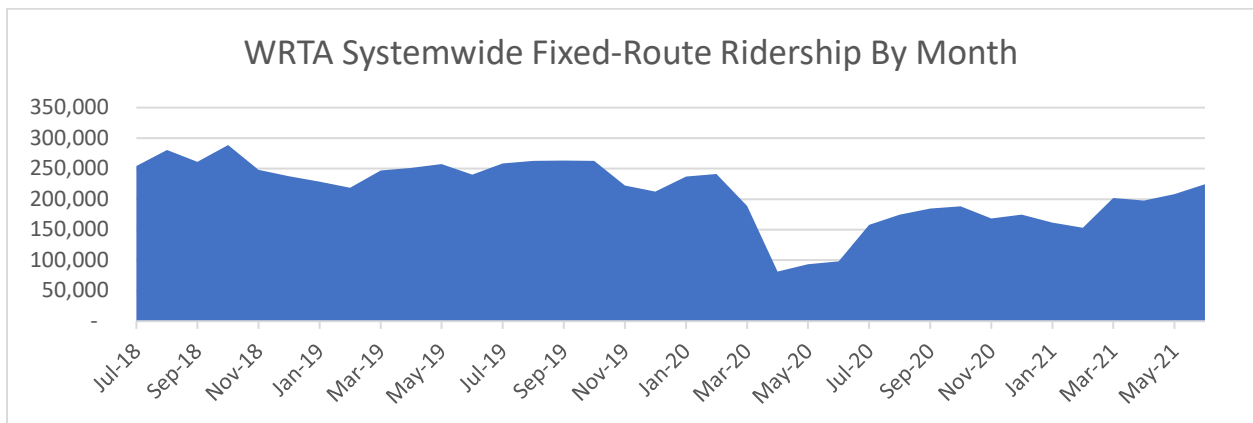
¹ Of the 15 Regional Transit Authorities in Massachusetts, 12 agencies report monthly data to FTA's National Transit Database (NTD).

experience, ease of use, equity, and public safety. We also conducted research on new fare concepts such as mobile fare payments, income-based fare structures, and inclusive fares to gauge what their applicability could be to the WRTA.

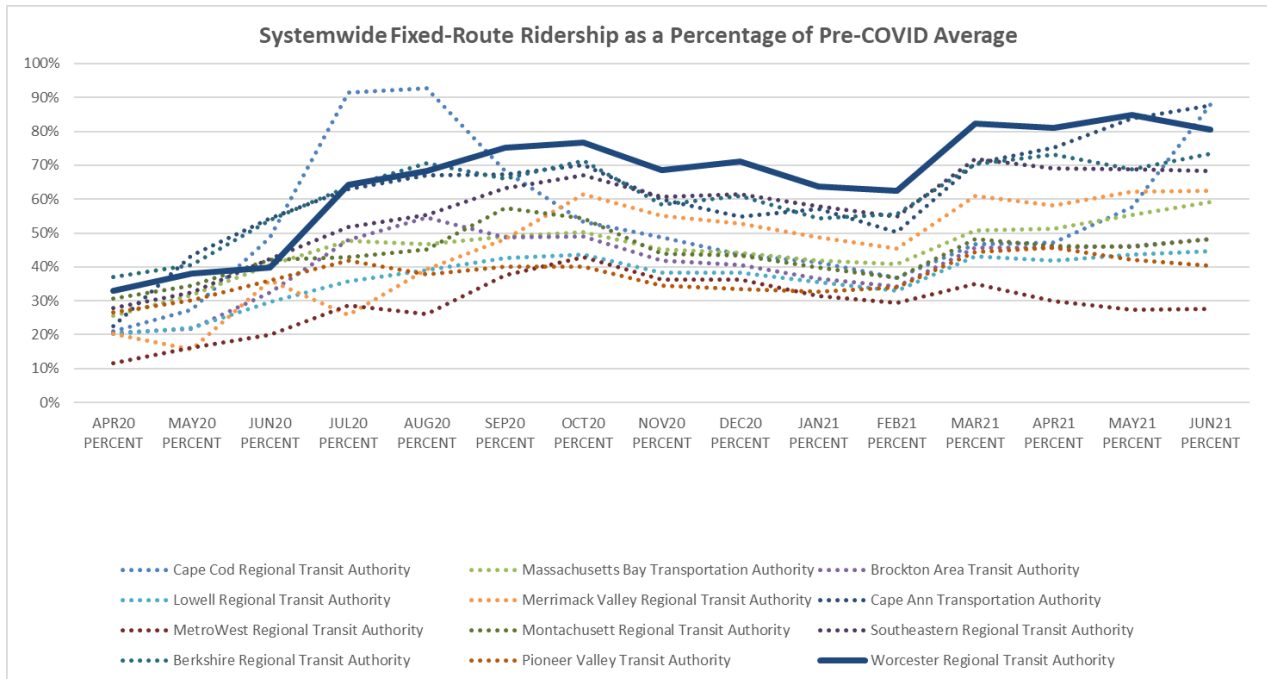
Lastly, we considered the totality of the data and evidence we had collected, to provide a series of options and recommendations for the WRTA Advisory Board to consider as they decide whether to re-instate fares as they were, continue their suspension, abolish them altogether, or pursue a new fare structure and method of fare collection.

Results

Quantitatively, we produced two important charts of bus ridership over time. The first is a chart of WRTA’s monthly systemwide fixed-route ridership from July 2018 to June 2021. This gives a good sense of what the pre-pandemic ridership patterns looked like, and then how ridership reacted to each phase of the pandemic.



The second chart compares WRTA’s ridership throughout the pandemic to that of each other transit agency in Massachusetts. The key difference to note about this chart is that, in order to adjust for the differing scale of the state’s 12 bus transit agencies, each agency’s monthly ridership is displayed as a percentage of that agency’s pre-pandemic average monthly ridership. In this case, “pre-pandemic” means from July 2018 to March 2020. This way, we can compare relative shifts in ridership which would get lost if trying to view the data in absolute terms. To better show the WRTA, it is marked in solid dark blue, while all other agencies are marked in lighter dashed lines. All agencies went fare-free in the last month before the beginning of this chart (March 2020). All but the WRTA, and one other agency have re-instituted fares in the second half of 2020.



In addition to this quantitative data, we conducted interviews with other experts and officials involved in bus transit and fare collection in Massachusetts. Our findings are summarized below:

Pros of Free Fare

- Equitable for all users
- Brings transit in line with other public services which are free at point of access
- Faster, more reliable boarding process
- Smaller-than-expected fiscal losses due to costs associated with fare collection
- Remaining fiscal losses can be made up for with state and federal funding, if current bills like SB4278 are passed to provide for this

Cons of Free Fare

- Perceived negative effects on public safety and rider/driver experience
- Fiscal losses can be significant, including increased service delivery costs
- Not easy to make up fiscal losses with currently-available additional state/federal funding
- Fiscal losses can mean reduction in service which winds up hurting everyone, can cause “death spiral” permanently crippling agency’s operability

Analysis

The quantitative data yielded surprisingly clear results. The WRTA retained an average of 67% of its pre-pandemic ridership throughout the first 15 months of fare-free period (from April 2020-June 2021). In FY2021 Q4 (April-June 2021), as vaccines became more available in Massachusetts, the system reached 85% of its pre-pandemic average ridership, and 84% of its ridership from comparable months in 2019. These felt like surprisingly resilient numbers, so the next analysis was even more enlightening.

When compared to the other Massachusetts bus transit agencies, the WRTA was the best statewide at retaining ridership throughout the pandemic. The two large summer bumps that can be seen in the chart are the results of a statistical anomaly- the Cape & Islands bus services have very seasonal ridership patterns with large summer ridership spikes. Looking at the last 15 months as a whole, the WRTA sees the best ridership retention of any bus transit agency in the state, although the gap does begin to close as widespread vaccination began to improve the state's economic activity in the spring of 2021. While it is hard to necessarily attribute this consistently strong performance to the impact of WRTA's fare suspension, this factor cannot be overlooked either.

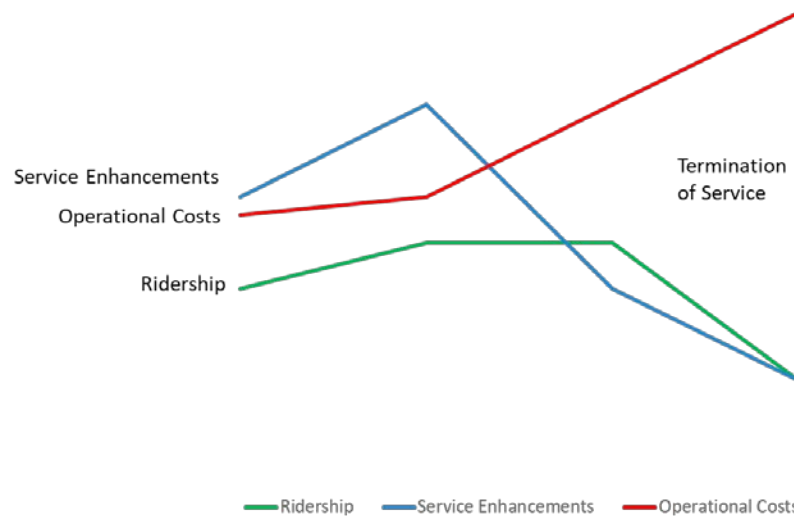
Taken together, the two charts indicate that, during a period of extreme crisis for public transportation worldwide, suspending fares was one way to keep ridership from falling through the floor, and hopefully retain a customer base for a future post-pandemic world. It removed a barrier to entry for those essential workers who needed transit the most, and helped keep drivers somewhat safer so they could continue to operate their services. However, it must also be noted that the Covid-19 pandemic represented in many ways a worst-case scenario for public transit ridership, and that any fare-policy lessons learned from the pandemic may not be applicable to a future time period when more leisure riders and casual commuters return to the system en masse. In addition, the lack of farebox data or rider surveys during this period means there is no way to know what percentage of these riders are new to the system, or how many distinct riders have ridden the system at any point in time.

In addition, the qualitative data collected shows a wide variety of opinions. There are clearly potential positive outcomes from permanently abolishing fare collection on all or parts of the system. However, without guaranteed state or federal funding to make up for it, these positive outcomes would be counteracted by financial uncertainties stemming from the elimination of farebox revenues. In an ideal world, there would be a way to retain most or all of the system's pre-pandemic farebox revenue, while also improving service efficiency and improving access and equity for underserved populations.

Options & Possible Ramifications

- Permanent Systemwide Fare Abolition
 - From a rider's perspective, this would look like the service that WRTA has been running since March 2020. From an operational perspective, it would mean removal of fareboxes and a cancellation of all contracts related to fare collection. It would also likely lead to a need for state, regional, or federal funding to help make up any fiscal losses incurred by this policy.

An illustrative snapshot of the potential financial and ridership impacts of this decision can be seen below:



- Traditional Fare Payments & Traditional Fares
 - From a rider's perspective, this would look like the service that WRTA ran up until March 2020, with swipe passes/CharlieCard payments on all fixed-routes and discounts for seniors, persons with disabilities, and some students depending on school participation. It would also allow for on-board cash payments at the same fare, for riders needing to pay cash. Potential consequences of this option would be slower boarding time compared to fare-free or mobile fare payments, expensive maintenance of fareboxes, and lack of flexibility to introduce new fare tiers.
- Mobile Fare Payments
 - With Traditional Fares:
 - The WRTA stands ready to implement mobile fare payment if fares are re-introduced in the near future. This would replace the swipe pass/CharlieCard system currently in place, but would retain the same fare structure as it existed before the pandemic. It would allow cash to be used for fare payment, but off-board the bus. Potential improvements represented by mobile fare payments as

compared to traditional fare payments include: more flexibility, better data collection, and potential interoperability with other transit agencies.

- With Income-Based Fares
 - This would replace the existing swipe pass/CharlieCard fare payment system with the aforementioned mobile payment system. It would also, however, utilize the mobile fare technology to allow for a fare structure which includes free or discounted payments for riders registered with other social services, such as EBT, SNAP, TANF, and many others. More research on mobile fare payments and income-based fares can be found in the appendix to this report.

Assessment of Options

To generate the assessment table below, CMRPC considered feedback from WRTA public meetings, public comment from transit-related meetings, comment from MassDOT and FTA, discussions with WRTA Administration and Operations, interviews with other RTAs, and analysis of available reports and related information.

Each category had to be considered to fully assess the overall impact of fares and fare-collection decisions.

- Social Impact discusses how decisions about fares and fare collection systems impact low-income individuals and unbanked individuals. It also examines the 'appearance' of WRTA to the non-rider.
- Financial Impact discusses the loss of fare revenue and how the loss could influence the future of WRTA service.
- Ridership Impact is heavily influenced by the needs of the community.
- Service Impact explores the ways that frequency, reliability and availability can be influenced by different fare policies
- Reporting Impact explores the importance of collecting data to display why federal, state, local and grant funding is needed and how it will be used.

CMRPC SUMMARY OF FARE OPTIONS AND IMPACTS

	The way things were Past Fare Box	The way things are Present Fare Free	The way things could be Future MFPS*
Social Impact			
Service to Social Justice population	--	++	+
Perceived Impact on Onboard Safety	+	-	+
Financial Impact			
State government influence on future funding	+	-	+
Farebox Recovery	+	--	++
Ridership Impact			
Total Ridership Levels	-	++	+
Measure of new and distinct riders	--	+	-
Service Impact			
On-Time Performance	-	++	-
Service Expansion and Enhancements	+	-	++
Reporting Impact			
Data needed for monthly, quarterly and annual reporting	+	--	++
Data needed in order to request (future grant applications) additional funding for service enhancements	+	--	++
Net Impact	Neutral	Negative	Positive

*Mobile Fare Payment System

Appendices

A) A Brief Introduction of Mobile Fare Payment Technology

WRTA has explored the possibility of replacing its existing Scheidt & Bachmann fare collection systems with a new mobile fare payment system across all buses. The system has not been purchased and likely will not be purchased unless the WRTA board votes to re-instate fare collection. If the system is purchased, experts we spoke with indicate it will take about 6 months to install, test, and become fully operational. A pilot program could be implemented during this period to familiarize WRTA operators and riders with the new system. Whether or not the system is purchased, WRTA's contract with Scheidt & Bachmann runs through February 2022.

At the outset, the new system will most likely work as follows: a WRTA customer downloads a new WRTA payment app on their smartphone. The customer then creates an account and enters their payment information. When the customer boards a WRTA bus, they open the app, then open a "Ride" tab within the app, which brings up a distinct QR code on their phone's screen. They hold their phone screen up to a validator installed on the bus, which scans their code and deducts the fare from their account.

In addition, for customers without smartphone access, the onboard validators will also be compatible with "smart cards," which are essentially a pre-paid card that can be purchased and refilled at participating retail locations around the Worcester area. When boarding the bus, customers can hold the card up to the validator and it will deduct the fare from their card in the same manner as it would from the smartphone app.

Further into the future, the mobile fare payment system could also accommodate smartphone "wallet" payments such as Apple Pay or Android Pay, which could allow an even more seamless boarding process for customers who opt to integrate their accounts with those programs. The system can also be designed to automatically give customers a monthly pass if they board the bus enough times in a given month, allowing them to then board for free for the rest of the month.

This system holds a lot of promise for smoother boardings, more flexible fare policies, better data collection, and easier integration into passengers' daily lives. However, it will also require a major marketing and outreach effort to inform passengers prior to its arrival, and, without proper mitigation efforts, could lead to bus operators serving as emergency on-board customer support agents during the initial rollout.

B) A Brief Introduction of Income-Based Fares

Income-based fares are also known as fair fares or equity transit fares, because they benefit those who need it the most. They can include free fares or discounted fares for those who qualify.

The eligibility criteria should reflect the service area's socio-demographic characteristics. For instance, households below the poverty line (which can differ based on geographic area), rent-burdened households, or household income divided by the number of people in the household can all be used as criteria for determining eligibility.

Structurally, the program works best by tying in with other pre-existing social programs, such as SNAP, WIC, TANF, Medicaid, Fuel Assistance, housing assistance, free meal programs, refugee resettlement programs, participation in job training programs, and others. Management of these partnerships is likely to fall to WRTA staff, but the paperwork and eligibility should already be on file with the other agencies and qualification could be instantaneous upon registration and approval. Providing an income-based fare policy would thus open new opportunities for the WRTA to expand partnerships with the non-profit sector and other government and social service agencies.

Multiple transit agencies are using or piloting this model across the country. Some examples include New York City, Salt Lake City, Seattle, and Los Angeles, among others.

As mentioned above, implementation of income-based fares could be easily supported by a mobile fare payments system. The new system would allow for individual accounts for all WRTA riders, and their eligibility could be automatically included in their account once they were registered into the system. The mobile fare payment system could also provide WRTA with new, granular ridership data that could help support more targeted service changes and enhancements.

It is also important to note that income-based fares almost certainly be combined with existing, federally required programs for seniors and persons with disabilities, as well as existing WRTA student discounts.