



Charlie

Proof of Payment & Fare Verification Overview

Introduction

The MBTA is developing an improved fare payment system (launching in 2023) that will make paying for transit easier and service faster. The system will incorporate new ways to pay, expand access to fare cards and passes, and allow for innovative approaches to fare structures and products. These improvements are one step in the effort to modernize, improve, and streamline the MBTA.

One major goal of this modernization is to improve the speed of service on our buses and Green Line vehicles. Trips on these services are made up of several components. These include waiting for the vehicle (i.e., wait time), the time the vehicle is travelling (i.e., travel time), and the time in which the vehicle is at a stop or station and passengers are boarding (what we call dwell time). All of these components together make up the total trip time. By decreasing the amount of time that each of these steps take, we can provide faster service for our customers. Through other initiatives (like the Better Bus Project, Bus Network Redesign, and Green Line Transformation) the MBTA is aiming to decrease wait and travel times. The MBTA is also working with municipal partners to implement transit priority projects like bus lanes and transit signal priority, to decrease travel times. Finally, in order to decrease dwell times (among many other benefits), the MBTA is moving to all-door boarding through Fare Transformation.

Currently, when boarding MBTA buses, all customers enter the front doors of the vehicle and interact with the farebox and bus operator (to use their CharlieCard or CharlieTicket, or pay with cash). In the new system, we will install fare readers at both the front door and rear doors to allow customers to board in multiple places on the vehicle. We expect this change to decrease dwell times by up to 50% (that means riders will spend half as much time waiting for other riders to board). And due to the impact of dwell times on total trip time, this change will make trips up to 10% faster.

However, we recognize that allowing riders to board at rear doors eliminates the ability of bus and Green Line operators to ensure that everyone has paid. To address this, the MBTA is launching a Proof of Payment system (PoP) alongside the modernized fare payment system.

Payment and Using the New System

The modernized fare system will change how riders interact with the system, and will require that each customer keeps their proof of payment with them throughout their journey.

On the Commuter Rail, riders will be required to tap at a gate or at one of several readers located along the platforms before boarding their train. Once onboard, Commuter Rail conductors will walk through the cars and verify that everyone has tapped on. Riders will tap again when they disembark the train. The payment system will then charge the fare for the trip.

On buses and surface Green Line vehicles, riders will tap one of the readers located at each door of the bus or train car. MBTA personnel will travel throughout the system and verify that customers paid upon boarding.

On ferry, as customers board the vessel, they will tap a handheld reader that ferry agents will utilize to validate their pass or deduct from their stored value for the ferry ride.

For gated subway stations, riders will still be required to tap in order to enter through the gate and access the platform to board the vehicle.

What is Proof of Payment?

Under Proof of Payment, a customer enters the system and pays by tapping a validator on a gate, station platform, or at any door on a bus or Green Line vehicle. The rider then carries whatever they used to pay (Charlie Card, smartphone, or contactless credit/debit card) for the entirety of their trip. At any point in their trip, MBTA personnel may board the vehicle to verify that everyone has paid.

To ensure fares are paid and promote a sense of accountability, riders will encounter MBTA personnel conducting fare verifications throughout the system. These personnel will be equipped with handheld devices that will verify that passengers have paid the correct fare for the service they are on. They will check all passengers onboard on a vehicle to minimize discretion and bias.

Not every rider will interact with a member of the fare verification team every time they ride the system, and not every person who evades their fare will be fined. The fare verification team will be distributed throughout the service area in order to increase the chances of all passengers being regularly verified. The times and locations will change every day in order to maintain the expectation of being verified at any point while being cognizant of equity in fare enforcement. The goal

is to have an efficient and equitable verification process that encourages everyone to pay their fare.

If a passenger is checked and has not paid to be on board, they will first be given a warning and the MBTA personnel will ensure the passenger understands how the new system works. Subsequent failures to pay before boarding will result in a civil citation. The citation carries a fine that could vary depending on how many times that passenger has been cited before and the type of fare violation (e.g., lack of payment, underpayment, and fraudulent use of another person's Reduced Fare credential). There will be an appeals process for citations to allow passengers to dispute a citation. Moreover, there will be alternative methods to resolve fines.

Benefits and Challenges

Studies of other transit agencies that employ a PoP system found that PoP brings numerous operational benefits. In 2012, the San Francisco Municipal Transportation Agency (SFMTA) implemented all-door boarding on buses. By allowing passengers to board at all doors and spread more evenly throughout the bus, "the average dwell time per boarding and alighting decreased 38% from 3.93 to 2.45 seconds" at nine of SFMTA's busiest stops (SFMTA). These results have also been replicated here at the MBTA. In 2017 and in partnership with the Barr foundation, the MBTA piloted all-door boarding on the Silver Line and found that the shift decreased dwell times by around 50%.

While PoP systems are likely to decrease dwell times and improve system efficiency, their increased openness can make them particularly vulnerable to fare evasion (Clarke et al 6). However, having staff dedicated solely to verifying fare payment serves a number of benefits. By removing the requirement that bus and light rail operators collect fares, operators are able to focus on their primary responsibility: safely operating vehicles (Transportation Research Board, 2002, p. 2-5). In some situations this also improves fare payment since operators often have difficulty ensuring that all customers pay their fares at busy stops. Beyond the operational and financial benefits, PoP has non-monetary utility. By carrying

out spot checks to ensure that fare is collected, transit agencies can combat the perception that some individuals ride for free.

The PoP system would bring about a number of changes that MBTA customers have long been calling for. In public comments collected during the 2020 fiscal year fare increase process, 56% of customers who provided feedback voiced concerns over MBTA service quality (which included, but was not limited to on-time performance and reliability) and another 13 percent were critical of fare evasion within the system; the new PoP system would improve both of these areas of concern.

Along with the benefits, a PoP system raises a number of concerns that the MBTA is aiming to understand and avoid. A key concern is ensuring the fare verification process is equitable, not discriminatory, and is implemented to prioritize customer service and de-escalation. The MBTA plans to address these concerns through a mix of data analysis, training and monitoring of the fare verification personnel as well as community feedback. In addition, the MBTA will release an annual report documenting the use of warnings and citations for riders and assessing equity in that process.

This April the MBTA plans to host a public outreach campaign to make sure we are hearing and addressing community concerns. As part of this process, we will review our Fare Verification principles and gain feedback from the public on them. The MBTA pledges that these principles will guide the verification process. We'll also be seeking input on training for fare verification staff and other components of the process.

Outstanding Questions

Before implementing the PoP system, the MBTA is working to answer a number of questions related to the system.

The MBTA seeks to receive input from community members on how to make the process of fare

verification efficient, fair, and equitable. Some questions that the MBTA is looking for public input on, include:

- What data should the MBTA collect to ensure the system is equitable?
- What should the process of a fare verification look like? How should the personnel announce themselves? What types of training should they receive?
- What should the fare evasion fine levels be? What are other alternative payment options? How should the appeals process work?
- How do we transition to this new system in a way that minimizes confusion? What communities do we need to be especially mindful of as we develop the process?

Case Studies

In order to effectively create our own PoP system here at the MBTA, we engaged in several conversations in the spring of 2019 with other transit agencies that have already successfully integrated PoP into their systems. TriMet in Portland, Oregon, SFMTA in San Francisco, California, BART in the Bay Area, TfL in London, England, and King-County Metro in King County, Washington all serve as case studies as we begin to design and create our own PoP system in the years to come.

Tri-County Metropolitan Transportation District - TriMET

TriMet in Portland, Oregon features a dual proof-of-payment and tap-to-validate system. They have an inspections team, which consists of TriMet Inspection Personnel, contracted security officers, and Transit Police Officers. As it stands now, inspectors are currently contracted police and security. Further, any peace officer (i.e., any member of the Oregon State Police, a sheriff or deputy sheriff, or a city police officer) in Oregon can enforce TriMet code. To become a TriMet inspector or security officer, you must first complete sixty (60) hours of academy training that consists of disability training, street smarts, customer experience, de-escalation techniques,

procedure for issuing citations, Title VI, diversity, and TriMet focus, values, and Standard Operating Procedures (SOPs). TriMet's SOPs cover requesting police assistance, bus and MAX platform inspections, prohibiting physical force, other prohibited practice, code enforcement role and job duties, and guidelines for issuance of citations, warnings, and exclusions.

Anyone using the TriMet system is subject to inspection, including youth. Demographic information is collected for those who are cited. This information is compared to an annual fare evasion survey where in lieu of being issued a citation riders without fare are asked why they do not have fare, as well as demographic information. This information is used to inform additional outreach or program needs as well as ensure no disparity exists in enforcement outcomes. The citation fine is a sliding scale from \$75-\$175 and have additional resolution options such as, community service ranging from 4-15 hours or enrollment in a reduced fare program. Unresolved citations are filed with the court after 90 days.

San Francisco Municipal Transportation Agency - SFMTA

SFMTA's inspection unit dates back to the late 1990s and is still in use today. Currently, their inspection force consists of 48 inspectors who are subdivided into teams of eight. SFMTA inspectors are distinct and separate from police officers. To become a SFMTA inspector, you must have a high school diploma or GED and complete classroom and field training. Before beginning field training, four weeks of classroom training must be completed. Topics learned in the classroom include legal authority, city policies, SFMTA policies, revenue collection and fare media, and SOPs (e.g., how to inspect buses, how to deal with passengers, citations and appeals processes, etc.). After classroom training is completed, field training last for at least four weeks and is followed by a probationary period before the inspector is fully instated. Every person across the entire SFMTA system is inspected to ensure equity. Demographic data is not collected during inspections. When

encountering a person suspected of fare evasion, the inspector has the discretion to determine if a warning or citation should be issued.

Bay Area Rapid Transit - BART

BART's proof-of-payment and inspection system was established by ordinance. The ordinance requires BART to primarily issue civil citations, as opposed to criminal citations. If a subject has received two civil citations within a twelve-month period, any subsequent violations within the twelve-month window may result in a criminal infraction citation, per the ordinance. Any subject who fails to cooperate with a Fare Inspection may also receive a criminal infraction citation, per the ordinance. Civil citations have \$55 fines for juveniles and \$75 fines for adults. A criminal infraction citation may have a fine of up to \$250. BART created a new job classification of Fare Inspector to conduct proof of payment inspections. Fare Inspectors are civilian employees. Currently, there are twelve fare inspectors working for BART who are distinct and separate from police officers. The program has been increased to 20 budgeted positions. There is a fare inspection training manual that's developed and utilized in house. BART's SOPs are included in this training manual as well. In addition to learning from this manual, all inspectors are given field training. Anyone using the BART system is subject to proof of payment checks by Fare Inspectors, including youth. BART Police Officers may only request proof of payment when they have reasonable suspicion that the subject may have fare evaded or in conjunction with a detention for another violation.

Transportation for London - TfL

TfL in London, UK currently employs a revenue inspection and collection system that accepts a variety of fare media (paper tickets, smartcards and EMV Contactless payments). Each route has its own inspection model that is specific to the mode and system hardware. A team of revenue inspectors that is local to the mode carries out inspections; each mode has its own separate team. The number of inspectors varies, but London Underground has about 250 and bus routes have about 150. TfL also employs plain clothed inspectors that work with police on the London

Underground. Training is delineated in a training manual and includes TfL's SOPs. Anyone using the TfL system is subject to inspection, including youth. However, unlike the aforementioned transit agencies, TfL does not issue citations for fare evasion. Instead, they issue penalty fares—the goal is to “continue” your fare instead of issuing a fine. A penalty fare is £40 if you pay on the spot or within a set amount of time and £80 if you pay later. There is a full appeals process in place and the option for TfL to take further legal action against persistent fare evaders if required. In terms of escalation for Contactless customers, if an evader fails to validate correctly they will be charged a back office revenue inspection charge and this could lead to the contactless token being put on a secure list, preventing the token from being used for future travel and is sent to every inspection device for detection. This allows a penalty fare to be issued when the token is inspected again. In terms of escalation, if an evader receives a revenue inspection charge twice, then their name is put on a list that is sent to every inspection device.

King County Metro - KC Metro

King County Metro's Fare Enforcement Program was established in 2010 to minimize fare evasion on all six of their branded bus rapid transit service lines (aka RapidRide). In March 2019, Metro expanded off-board fare payment to other (non-RapidRide) routes to optimize bus service in downtown Seattle. When first deployed, KCM's training model included basic security officer training, de-escalation techniques, physical detentions, and fare enforcement specific on the job training. In their new contract, which began in April 2019, additional courses were included to accommodate the changing landscape of Seattle, especially the homeless population. The additional required courses cover implicit bias awareness, mental health crisis, and interactions with youth. Anyone riding the KCM system is subject to inspection, including youth over the age of six. However, youth (18 years old and younger) receive two warnings before being issued a violation, as opposed to one. When an evader is issued a

violation, they receive an envelope delineating five different options for resolving their violation. If the evader pays within 30 days, then they pay a reduced fine of \$25; after 30 days, the full fine of \$50 may be paid. Alternative payment resolution options, in lieu of paying the fine, include adding a minimum value to an existing ORCA card, performing two hours of community service, enrolling into a reduced fare program as a new cardholder if qualified, and/or appealing your violation through an in-house adjudication process. KCM no longer refers their fare evasion violations to district courts.

Contact Us

Do you have feedback to share? Starting in April 2021, the MBTA will be launching a public outreach process on Proof of Payment. Please visit www.mbta.com/fares/fare-transformation/get-involved for more information. If you'd like to schedule a meeting with us to discuss this project please email us at: publicengagement@mbta.com.

Accessibility

For more information or to request a reasonable accommodation and/or language services, please email publicengagement@mbta.com.

Para más información o para pedir arreglos razonables y/o servicios lingüísticos, por favor envíe un e-mail publicengagement@mbta.com.

如需進一步瞭解或要求合理的便利設備和/或語言服務，請電郵 publicengagement@mbta.com。

如需进一步了解或要求合理的便利设备和/或语言服务，请电邮 publicengagement@mbta.com。

Para mais informações, ou para solicitar serviços de acesso e/ou linguísticos em termos razoáveis, contactar por email publicengagement@mbta.com.

Pour plus d'informations ou pour obtenir un accommodement raisonnable et/ou des services linguistiques, veuillez envoyer un publicengagement@mbta.com.

Tri-Met	Citation Amount	1st: \$75; 2nd: \$100; 3rd: \$150; 4th+: \$175
	Time to Appeal	45 days
	Alternative Options to Resolve Citations	Community service option within 90 days of citation Enroll in reduced fare program and add at least \$10
SMFTA	Citation Amount	\$120
	Time to Appeal	21 days
	Alternative Options to Resolve Citations	Community service option Payment plan option
BART	Citation Amount	\$75; \$55 for minors
	Time to Appeal	28 days
	Alternative Options to Resolve Citations	Community service option
TfL	Citation Amount	£80; Reduced to £40 if you pay on the spot or within 21 days
	Time to Appeal	21 days
	Alternative Options to Resolve Citations	No alternative options
KC Metro	Citation Amount	\$50; Reduced to \$25, if paid within 30 days
	Time to Appeal	45 days
	Alternative Options to Resolve Citations	2 hours of community service within 90 days of citation; Enroll in reduced fare program & add at least \$5; if already in low-income program add minimum of \$10 (only once per year)

References

Barabino, Benedetto, et al. "Fare Evasion in Proof-of-Payment Transit Systems: Deriving the Optimum Inspection Level." *Transportation Research Part B: Methodological*, vol. 70, 2014, pp. 1-17., doi:10.1016/j.trb.2014.08.001.

Clarke, Ronald V, et al. "Deterrence and Fare Evasion: Results of a Natural Experiment." *Security Journal*, vol. 23, no. 1, 2009, pp. 5-17., doi:10.1057/sj.2009.15.

"Fare Collection." Federal Transit Administration, United States Department of Transportation, 7 Dec. 2015, www.transit.dot.gov/research-innovation/fare-collection.

Jacobson, Lisa. "The Results Are In: All-Door Boarding a Boost for the MBTA's Silver Line Bus." *Barrfoundation.org*, 12 Oct. 2017, <https://www.barrfoundation.org/blog/all-door-boarding-boosts-mbta-silver-line-bus>.

Lee, Jason. *Uncovering San Francisco Muni's Proof-of-Payment Patterns to Help Reduce Fare Evasion*. 2010, *Uncovering San Francisco Muni's Proof-of-Payment Patterns to Help Reduce Fare Evasion*.

Paradkar, Shree. "Black Teen Claims Excessive Force by TTC Fare Inspectors and Police." *Thestar.com*, 6 Apr. 2018, www.thestar.com/opinion/star-columnists/2018/04/06/black-teen-claims-excessive-force-by-ttc-fare-inspectors-and-police.html.

SMFTA. *All-Door Boarding Evaluation Final Report*. 2014, *All-Door Boarding Evaluation Final Report*.

"Sustaining the Metropolis: Light Rail Transit and Streetcars for Super Cities." *Transportation Research Board*, 2013, doi:10.17226/22467.

Toolkit for Self-Service, Barrier-Free Fare Collection. *Transportation Research Board*, 2002.

Zipper, David Zipper David. "Want to End Discrimination in Transit Fare Enforcement? Get Rid of Fares." *CityLab*, 15 Feb. 2019, www.citylab.com/perspective/2019/02/washington-fare-evasion-free-public-transport-train-ticket/582160/.