



Fast Break “Smart Card” Program Fare Equity Analysis (Update)



Prepared by the
Pioneer Valley Planning Commission for the
Pioneer Valley Transit Authority

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Executive Summary

The Pioneer Valley Transit Authority (PVTA) is implementing its Fast Break Card program, an electronic “smart card” fare payment technology. The Fast Break Card will allow PVTA customers to use a single durable plastic card to use passes and pay fares on bus routes, rather than having to carry cash or repeatedly buy paper magnetic strip passes.



The Fast Break Card will offer several features, including “tap-and-go” capability at the farebox for faster boarding, as well as online reloading and balance read-out.

Importantly, customers will be able to securely register their cards with PVTA to insure their balance is protected in case the card is lost.

There will be no increase to PVTA’s existing fares and no changes to fare policies when the Fast Break Card becomes available. All of PVTA’s existing fare payment options and pass purchase locations will be available as they are today for riders who do not wish to use the Fast Break Card. There will be no changes to any of PVTA’s fixed route or paratransit services associated with the Fast Break Card.

This document is an update to a fare equity analysis for the Fast Break Card program dated October 12, 2016, which did not include the project phasing described herein that was subsequently been developed by PVTA to assure sufficient there are sufficient locations for Fast Break Card sales and reloading. There are no substantive differences in the conclusions of these two documents.

The Fast Break Card program is being implemented in phases to assure a smooth roll-out of this technology to PVTA customers. A project pre-test was carried out with students of Springfield Technical Community College during Summer and Fall of 2016. Information from that test project has been used to develop the phased roll-out of the Fast Break Card to PVTA customers who wish to use it.

This fare equity analysis has been performed consistent with federal law to insure that the features of the Fast Break Card program are equitably available to all PVTA bus customers. Four public hearings were conducted, and additional informal outreach sessions were conducted at the Springfield Bus Terminal, Holyoke Transportation Center, and Northampton Academy of Music bus route hubs to provide PVTA riders with information about Fast Break and opportunities to comment.

This analysis concludes that the addition of the Fast Break Card program fare payment options will not disproportionately discriminate against customers of color customers as compared to white customers, and it will not pose disparate impacts to low-income customers with the mitigation measures proposed.

1. Conformance with Regulatory Requirements

This analysis has been prepared to comply with the requirements of Title VI of the Civil Rights Act of 1964 in 49 CFR Section 21.5(b)(2), 49 CFR Section 21.5(b)(7), and Appendix C Section 3 to 49 CFR part 21, and in accordance with the guidance in Federal Transit Administration Circular 4702.1B of October 1, 2012 and related guidance to FTA recipients with service areas containing 200,000 or more residents.

Under these regulations and guidelines, the Pioneer Valley Transit Authority (PVTA) is required to conduct a Title VI equity analysis in the course of planning a major service change or any magnitude of change to fare prices or fare media (method of payment) to determine whether service or fare changes will have a discriminatory impact with regard to race, color, income, or national origin. Equity analyses are required whether or not the proposed changes would be beneficial or detrimental to customers.

In this case, an equity analysis is required because PVTA is proposing a change in its fare media by adding the Fast Break Card, a “smart card” electronic fare payment option that will provide customers with additional and more convenient options for paying their fares. There will be no changes to PVTA’s existing fares and no changes to existing fare policies and payment options. All existing fare media and payment options will be retained. There will be no changes to PVTA bus or paratransit services.

The purpose of this equity analysis is to determine whether or not the new fare media may have an adverse impact on PVTA customers of color and/or low-income riders, depending on where and when [the new fare media] can be purchased, as well as the costs, bank account requirements, and internet access needs associated with new fare payment options.

A demographic analysis of the customers who using PVTA’s current fare media and estimating who among them will or will not be able to use the new fare media is required by FTA so that PVTA can determine whether there are adverse or disproportionate burdens on minority or low-income populations and what are the effective and appropriate measures to mitigate those impacts on those transit customers.

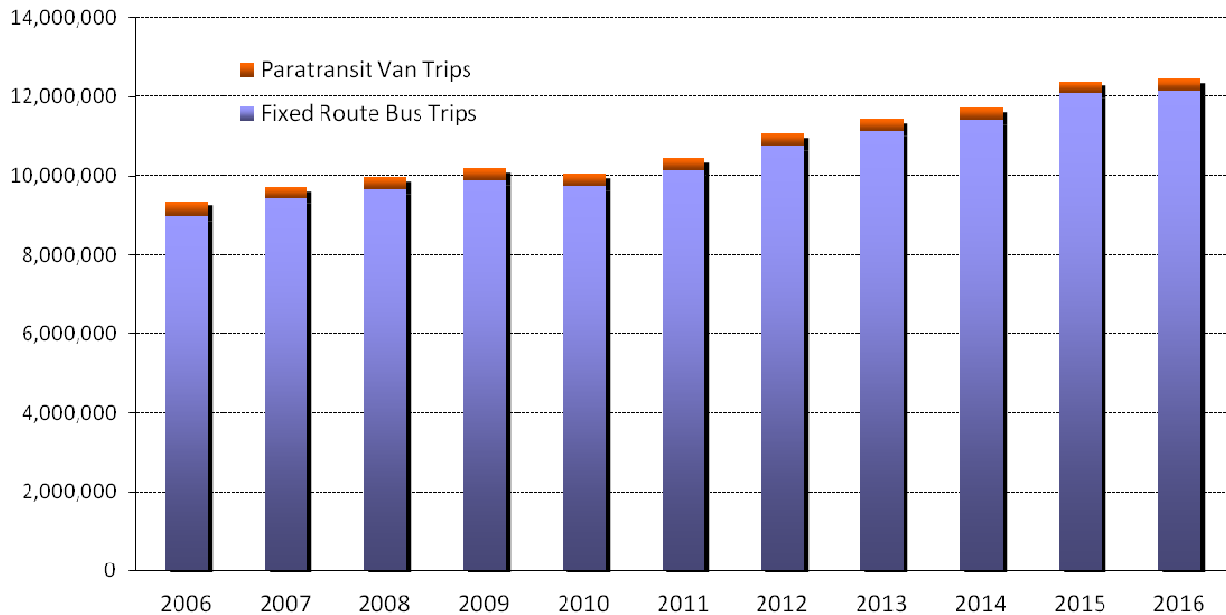
(In accordance with FTA guidance, this report uses the term “minorities” where necessary to conform to federal regulations and guidance that refer collectively to people who are not white. However, in PVTA’s view the use of the term “minorities” is not consistent with the intent and purpose of an equity analysis because the majority of PVTA customers—at least 62%—are one or more races that are not white. Therefore, PVTA uses more inclusive language with respect to race where ever possible.)

2. PVTA Background Information

The Pioneer Valley Transit Authority (PVTA) serves 24 communities in Western Massachusetts with a population of 580,230 (ACS 2014 five-year estimates). PVTA is a designated recipient of FTA funds that provides fixed route bus and ADA demand response public transportation to a geographic area measuring some 600 square miles that contains the Cities of Springfield, Chicopee, and Holyoke; the Five Colleges area of Northampton and Amherst, including more than 30,000 students and employees at the University of Massachusetts Amherst; and outlying suburban and rural communities.

PVTA operates a fleet of 186 heavy duty transit buses, 144 paratransit vans, and five 18-passenger vans. There are 45 scheduled bus routes (fixed routes), with paratransit van provided within ¼ mile of those routes when they are operating to comply with the Americans with Disabilities Act (ADA). PVTA provided 12.3 million passenger trips in FY2015 (July 1 to June 30), up 18.1% since FY2010.

Fig. 2-1: PVTA Ridership FY2006 to FY2016



Source: PVTA

Created in 1974, PVTA had an operating budget of \$45 million in FY2015. Under Massachusetts law, PVTA and the Commonwealth's 13 other regional transit authorities may not directly operate transit services. Therefore, PVTA competitively contracts with private companies to operate its fixed routes bus routes and paratransit van services. Currently, these contract operators are UMass Transit Services, First Transit, and Hulmes Transportation Services.

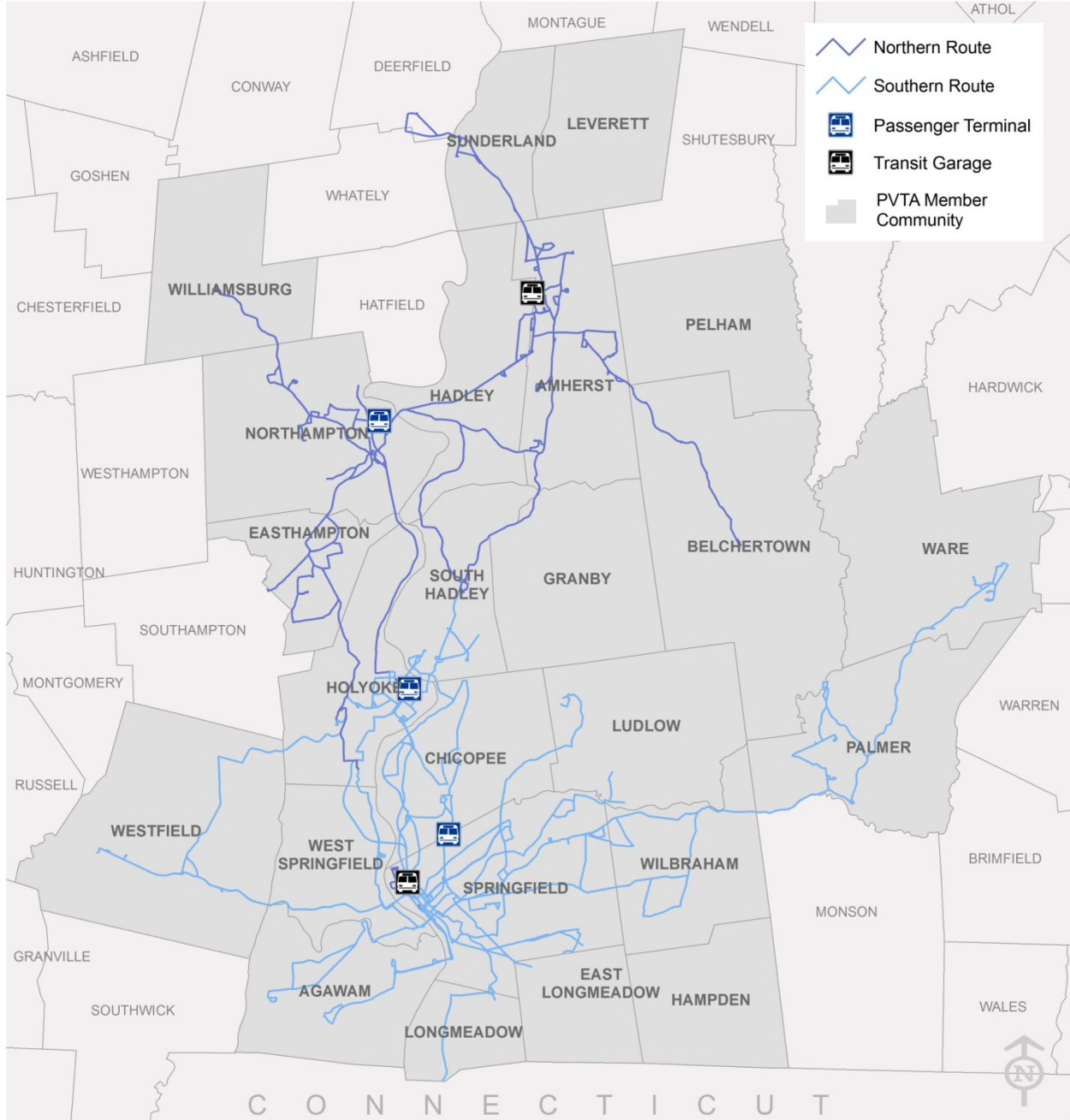
Funding for PVTA operations and capital improvements comes from several sources: federal grant programs; state and local governments; institutions; advertising; and passenger fares, which accounted for 18% of the total cost of services in FY2015.

Fig. 2-2: PVRTA Service Area

Pioneer Valley Transit Authority



Service Area Map



3. PVTA Ridership Profile

PVTA customers are highly dependent on public transit. “Transit dependent” is generally defined as having no means other than public transit to make a typical trip. A total 68% of PVTA riders surveyed said they have “No other way to make my trip” (PVTA 2015-2016 onboard rider surveys, n=2,798).

FTA defines transit dependency as: 1) people without private transportation or private car; 2) elderly age 65 and older; 3) youths under age 18; and 4) persons below poverty or median income. With respect to these characteristics, PVTA’s most recent customer surveys found:

- 52% of PVTA customers do not own or have access to a private auto.
- 3.7 % are age 65 or older.
- Approximately one-fifth are 18 or younger.
- More than half (55.2%) of PVTA riders have incomes at or below the federal poverty level.

Therefore, it is reasonable to conclude that at least 2 of every 3 PVTA riders meet at least one of the criteria for being transit dependent. Based on ridership, fare payment data, and customer trip frequencies reported on rider surveys, there are an estimated 15,000 to 20,000 people in the region who use PVTA on a regular basis (at least once a week). This means that between 10,000 and 13,400 regular PVTA riders are considered transit dependent.

The Fast Break Card will be available to all customers of PVTA’s fixed route buses, as the card works only with PVTA fare boxes. PVTA’s paratransit vans are not equipped with fare boxes; therefore paratransit customers will not experience any changes in fare payment and are not included in this equity analysis.

3.1 Fixed Route Customer Demographics

Demographic information presented in this section was compiled from surveys of 2,799 riders performed in 2015 (Hampden County PVTA routes) and 2016 (Hampshire and Franklin County routes). Additional information is presented from 2014 American Community Survey five year estimates.

3.1.1 Income

PVTA customers on average have personal incomes that are significantly less than the regional average. In fact, the majority of PVTA customers report personal income that is at or below the federal poverty level, which is shown below for 2015.

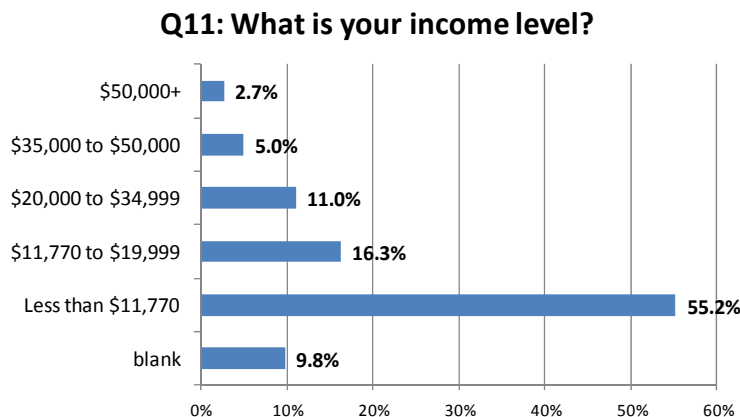
Fig 3.1.1-1: Federal Poverty Thresholds 2015

Household Size	Annual Income
1 person	\$11,770
2 people	\$15,930
3 people	\$20,090
4 people	\$24,250
5 people	\$28,410
6 people	\$32,730

Source: U.S. Department of Health and Human Services

Results from the 2015 and 2016 PVTA Customer Survey presented below show that more than 55% of PVTA customers are at or below the federal poverty level.

Fig. 3.1.1-2: PVTA Customers' Annual Income



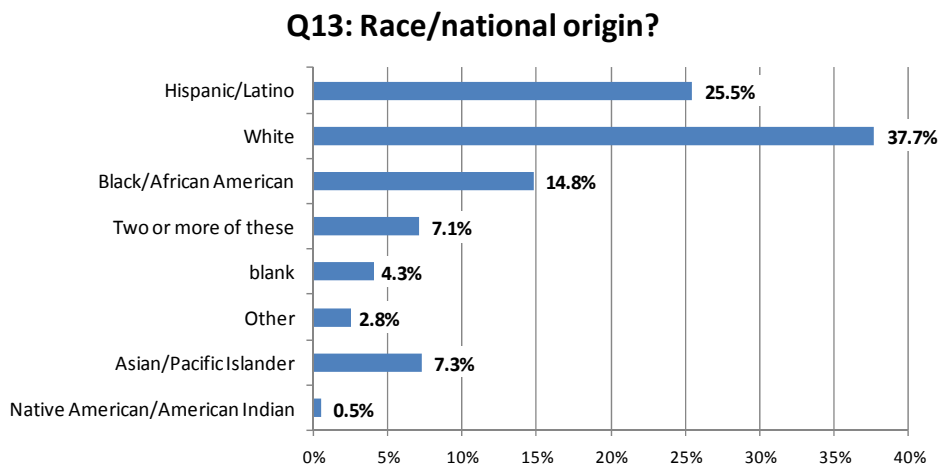
PVTA On Board Customer Surveys 2015 and 2016. N=2,798

This finding is generally supported by U.S. Census American Community Survey 2014 five-year estimates, which report that 55% of commuters who take transit to work make less than \$10,000/year. Another 29% make between \$10,000-14,999, of which approximately 6% can reasonably be estimated to be below the \$11,700 federal poverty threshold shown below. Therefore, the estimated proportion of transit commuters only in the region below the poverty level is at least **61%**.

3.1.2 Race and Ethnicity

People of color are the majority of PVTA riders, constituting at least 62% of customers surveyed in 2015 and 2016.

Fig 3.1.2-1: Racial Characteristics of PVTA Customers



PVTA On Board Customer Surveys 2015 and 2016. N=2,798

The proportion of transit commuters in the PVTA service region who are people of color is approximately four times greater than the proportion of persons of color in the region as a whole.

Fig 3.1.2-2: Regional Commuting by Public Transportation by Race

Race	Proportion of Commuters Who Take Public Transportation to Commute to Work		
	Hampden County	Hampshire County	PVTA Riders Who Use Bus to Commute to Work
American Indian/Alaska Native	0.4%	0.0%	0.6%
Asian	1.4%	24.4%	3.1%
Black/African American	27.5%	3.1%	19.8%
Hawaiian/Pacific Islander	0.0%	0.0%	0.0%
Hispanic/Latino	41.8%	9.5%	33.8%
White	45.5%	70.1%	29.8%
Another Race	20.2%	0.6%	3.3%
Two or more races	5.1%	1.7%	9.7%

Source: American Community Survey 2014 five-year estimates; PVTA Customer Surveys 2015 and 2016

3.1.3 Language and English Proficiency

For languages spoken, the proportion of PVTA customers surveyed in 2015-2016 who said they speak only Spanish was 1.1%. This is much lower than the regional average of 6.3% estimated by the American Community Survey (ACS). However, 6% of PVTA riders who took the survey chose the Spanish language form, which suggests the actual proportion of PVTA customers who speak only Spanish is greater than 1.1% and probably closer to the regional average of 6.3% estimated by the ACS.

Also, in Hampden County (where two-thirds of PVTA riders live) the proportion of PVTA customers who speak both Spanish and English is nearly double (31.5%) the countywide average (16.8%). While the PVTA survey was not able to ask how well bilingual customers speak English, the ACS 2014 five-year estimates for Hampden County suggests that approximately one-third of Spanish/English bilingual persons “Do Not Speak English Well or At All.” Therefore, it is likely that at least one-third of PVTA customers in Hampden County (approximately 10%) also do not speak English well or at all. It is for this critical reason that PVTA provides all rider information in Spanish, as well as English.

4. Paratransit Customer Impacts

There will be no impacts to PVTA paratransit van customers (ADA and Senior Service) because there will be no change in fare payment media for paratransit customers. Currently, van riders pay their fares using cash, check, or a credit card from the PVTA Customer Service office, PVTA.com, or local councils on aging (most of which do not accept credit card payments).

5. Fast Break Card Program Description and Features

PVTA’s Fast Break Card is an electronic fare collection system for bus riders. The Fast Break Card program will increase overall convenience to PVTA customers by offering an additional way to pay fares (in addition to existing cash onboard payments and multi-ride discount passes, which will remain) that will allow riders to board more rapidly and reduce bus “dwell” times at each stop, thereby improving the reliability and on-time performance for all riders. Importantly, holders of a Fast Break Card will be able to register it with PVTA so that any pass or cash value stored on it can be recovered if the card is lost—a feature that is not available with any of PVTA’s magnetic strip passes. There are no fare increases or service changes proposed as part of the Fast Break Card program.

5.1 Fast Break Card Program Features

The Fast Break Card program involves the addition of two new fare media options:

- Fast Break Card and Fast Break Elderly & Disabled (“E&D”) Card:** A plastic, reusable wallet-size card with an embedded radio frequency identification (RFID) electric chip with a usable lifespan of five years. The card can be produced with photo ID on the back to serve as a PVTA Elderly & Disabled Transportation Access Pass (TAP) card. A single card can be loaded with up to 3 passes, or two passes and cash value up to \$100. PVTA intends to implement these features using a phased approach (31-day passes will be introduced first, followed by multiple passes and cash value) to improve customer adoption and familiarity with the card.
- Fast Break Limited Use Card:** A paper card with magnetic strip that is similar to PVTA’s existing passes which can be used for up to two months (62 days). May be loaded with up to two passes or stored value up to \$100 (but not both). Once a limited use card is loaded with a specific pass or value, it cannot be reloaded. Functionality will also be implemented on a phased basis.

PVTA’s fare boxes on fixed route buses are equipped with RFID and magnetic strip readers to work with both these types of new fare media, while continuing to read existing paper magnetic strip passes and accept cash payments for cash fares and 1-day passes on board.

Fig 5-1: PVTA Fast Break Card Program Media Features Summary

Feature	Existing	Fast Break and Fast Break E&D Cards	Limited Use Card
Card acquisition fee (waived during first 6-months)	\$0.00	\$3.00	\$0.00
Minimum stored value	N/A	\$5.00	\$0.00
Expiration period	31 days	5 years	62 days
Replacement fee: 1st time (if lost before expiration)	N/A	\$3.00	N/A
Replacement fee: 2nd time	N/A	\$5.00	N/A
Replacement fee: 3 or more more times	N/A	\$15.00	N/A
Online stored value reloading	No	Yes	No
Can be linked to credit/debit card	No	Yes	No
Automatic replenishment with credit/debit card	No	Yes	No
Activation and reloading wait period	No	48 hrs	TBD
Balance check function at farebox	No	Yes	No
Balance protection for lost/stolen card (register at pvta.com or Customer Service window)	No	Yes	No

5.2 Fast Break Card Program Implementation

To assure a smooth transition for PVTA customers who wish to adopt electronic fare payment, the Fast Break Card program is being implemented in phases during 2017-2018. Each successive phase will add card functionality and expand the number of geographic and online outlets where cards can be purchased and reloaded to a total of 24 (9 PVTA-run, 5 municipal partners, and 10 retail outlets).

Pre-testing

A limited pre-test of approximately 200 Fast Break Cards was conducted during the summer and fall of 2016 with students of Springfield Technical Community College. The purpose of the pre-test was to establish technical operability practices and field test the function of the cards and farebox equipment, as well as to develop a training program for bus drivers and staff for the handling and integration of data from the smart cards into PVTA's overall fare information and reporting database. STCC is located in an environmental justice neighborhood.

Phase 1: Rollout to PVTA Customer Service Facilities and Online

Outlets: 8

Timeframe: February through July 2017

The focus of Phase 1 will be the launch of Fast Break Card sales and reloading outlets at PVTA's Customer Service facilities, as well as on www.pvta.com. Fast Break Cards will be sold at the Customer Service windows at Springfield Union Station (to open at 55 Frank B. Murray St. in early 2017) and the Holyoke Transportation Center (206 Maple St.), as well as ticket vending machines (TVMs) installed in the customer waiting areas of these facilities. In addition, two TVMs (one interior and one exterior) will be installed at the Westfield Transit Pavilion (to open at Elm and Arnold Streets in mid-March 2017).

(PVTA will consolidate its downtown Springfield area bus hub, currently at the Springfield Bus Terminal at 1776 Liberty St, with its Customer Service Center Main Office, currently at 1341 Main St., at Springfield Union Station at 55 Frank B. Murray St. in early 2017. Therefore, the future pass sale location for this analysis will be the future PVTA Customer Service Office at Springfield Union Station.) More than half of Hampden County PVTA riders begin their trips or transfer at one or more of these three PVTA facilities on a typical weekday. Also, these are the only locations in the Hampden County service area where PVTA has access to Customer Service staff and indoor waiting areas that will provide shelter and information to riders who wish to purchase or reload a Fast Break Card. All locations are within, or electronically accessible to, environmental justice neighborhoods.

Card functionality during Phase 1 will be limited to the 31-day pass only (\$45.00). The reason for this is that a total 21.7% of all riders pay their fares using the 31-day pass (10.2% regular fare and 11.5% E&D discount). These 31-day pass users are essential to the overall success of the Fast Break Card program, and so during Phase 1 the functional emphasis will be on converting these 31-day pass users from the current paper magnetic strip cards that are disposed of each month to the more durable plastic Fast Break Card. Regular and E&D 31-day pass users are already familiar with how the PVTA pass system works and how to acquire their pass each month, so it is anticipated that this group of customers will be successful early adopters of the Fast Break Card. Customers will be able to load up to three passes at a time on their card, thereby reducing the number of times they must reload the card.

Card registration for balance protection through the E-fare web portal will be available during Phase 1. A credit card is not necessary for registration through E-fare, though customers must have internet access. Balance protection registration will also be available at time of purchase at Customer Service

Windows in Springfield and Holyoke (but not at ticket vending machines at those locations or in Westfield). For customers buying their cards at TVMs or who otherwise do not register their cards at time of purchase, registration can be performed by Customer Service staff at either the Springfield or Holyoke Customer Service Windows. Registration is only required once for each card.

Phase 2: Rollout to Municipal Office Locations

Outlets: Add 5 (total 13)

Target timeframe: August through December 2017

During Phase 2, PVTA will work with its member communities to establish up to five Fast Break Card sales outlets at municipal buildings, such as city halls and councils on aging, that are convenient to bus riders in high-volume transit corridors. Up to five locations are anticipated, and could include such places as Northampton City Hall, Chicopee Public Library, South Hadley Town Hall, Ludlow City Hall, the future Springfield Senior Center, or Mason Square Public Library. Sales locations require sufficient space and electricity for a device that dispenses and encodes the plastic cards, as well as brief training for the staff who will perform the transactions. These locations will sell and reload value on the regular Fast Break Card, and will also reload value on Fast Break E&D Cards; however, Fast Break E&D Cards may only be purchased initially at PVTA Customer Service Windows, as verification of Medicare status is required for their issue.

Phase 2 card sales outlets will be in areas defined as Environmental Justice census tracts to assure the availability of the Fast Break Card to low-income residents (who are a majority of PVTA customers).

Card functionality during Phase 2 will be expanded to include the cash value pre-loading feature so that card users may load up to \$100 of stored value on their card pay for single fares, transfers, and 1-day passes. Also, 7-day pass functionality will be added.

Phase 3: Rollout to Retail Outlets

Outlets: Add 10 (total 23)

Target timeframe: January through June 2018

During Phase 3, PVTA will establish up to 10 additional outlets where Fast Break Cards may be purchased and reloaded (and Fast Break E&D Cards reloaded). These are likely to be grocers, drug stores, or discount merchandise stores that are located near high-volume PVTA bus stops, and which also offer diverse geographic coverage. As with the municipal sales locations to be added during Phase 2, these Phase 3 locations will also be located in Environmental Justice neighborhoods.

Program Evaluation

PVTA will evaluate Fast Break Card use patterns and survey customers (both card users and non-users) as part of the implementation program to better understand customer needs, opportunities for program improvement, and to update the disparate and disproportionate impact analysis and mitigation measures of this equity analysis. This will include:

- Determination of the number and percent of users of each fare media and changes;
- Review of fares before the change and after program implementation;
- Comparison of differences for each fare media between users of color and overall users; and
- Comparison of differences for each fare media between low-income users and overall users.

Fig 5-2: Fast Break Smart Card Transaction Types and Availability by Purchase Location (Phase 3 Full Implementation)

Purchase Location	Type of Transaction							
	Purchase and load regular passes and stored value on Fast Break Card	Purchase and load reduced fare passes and stored value on E&D Fast Break Card ¹	Reload existing Fast Break and Fast Break E&D Cards with passes and stored value	Check balance of passes or stored value remaining on any card	Apply for and obtain E&D Fast Break Card with photo ID, Medicare verification	Purchase and load passes and stored value on Fast Break Limited Use Card ²	Purchase 1-day pass (magnetic strip paper card) and/or transfer ³	Register card for balance protection
Springfield Union Station Customer Service Window	●	●	●	●	●	●	●	●
Springfield Union Station Interior TVM	●		●	●			●	
Holyoke Transportation Center Service Window	●	●	●	●	●	●	●	●
Holyoke Transportation Center Interior TVM	●		●	●			●	
Westfield Transit Pavilion Interior TVM	●		●	●			●	
Westfield Transit Pavilion Exterior TVM ⁴	●		●	●			●	
E-fare at www.pvta.com ⁵	●		●	●				●
Customer Service via U.S. Mail ⁶	●					●		
Municipal and Retail Outlets (to be indentified)	●		●	●				
Farebox on bus				●			●	

1. Fast Break E&D Cards may be purchased at Union Station and HTC Customer Service windows and may be reloaded using E-fare, TVM, or Customer Service window.

2. Magnetic strip paper card

3. 31-day and 7-day magnetic strip card passes will continue to be available at all current sales outlets; 1-day passes still available for cash purchase aboard bus.

4. Credit/debit transactions only.

5. 48-hr activation period for E-fare transactions: after an E-fare transaction is completed, up to 48 hours is needed before the pass or value is available at the farebox.

6. Cash or check only by mail.

Future locations will be selected on proximity to the greatest number of riders, as well as environmental justice neighborhoods.

Smart card fare payment is available at peer transit authorities in New England, as summarized below.

Fig 5-3: Smart Card Availability at Peer New England Transit Authorities

Agency	Basic Full Cash Fare	SmartCard Name	Acquisition Cost	Minimum Balance	Fare Discount	Expiration
PVTA	\$1.25	Fast Break	\$5	\$0	none	5 yrs
CDTA	\$1.50	Navigator	TBD	TBD	TBD	TBD
CTTransit	\$1.50	None (<i>no card</i>)	N/A	N/A	N/A	N/A
BRTA	\$1.75	Charlie Card	\$0	\$0	15-20%	10 yrs
WRTA	\$1.50	Charlie Card	\$0	\$0	13%	10 yrs
MBTA	\$2.00	Charlie Card	\$0	\$0	15-20%	10 yrs

MBTA Charlie Cards are accepted at the following transit authorities in Massachusetts: MetroWest Regional Transit Authority, Brockton Area Transit Authority, Lowell Regional Transit Authority, Merrimack Valley Regional Transit Authority, Montachusett Regional Transit Authority, Worcester Regional Transit Authority, Cape Ann Transportation Authority, Cape Cod Regional Transit Authority, Southeastern Regional Transit Authority, and Berkshire Regional Transit Authority.

MassDOT is now beginning planning efforts to implement a new type of cash-free electronic fare collection technology for MBTA riders, which could begin as early as 2019. This technology could also be available to Massachusetts regional transit authorities; however, the demographic profile of PVTA riders is significantly different from that of MBTA riders, and PVTA is concerned about the ability of its customers to conveniently purchase fares and passes in a cash-free system. Therefore, the Fast Break Card program will provide important information about PVTA’s customer preferences and utilization patterns of electronic fare payment media so that PVTA can make informed decisions about future fare payment methods for its customers.

6. Public Outreach and Consultation

Public outreach for the implementation of the Fast Break Card included the following activities:

- PVTA Finance Committee briefings and consultation on May 25 and June 29, 2016.
- Ongoing PVTA Advisory Board briefings and consultation from 2012 through 2016.
- Two PVTA Bus Rider Forums on April 1 and May 3, 2016.
- Contacts and information flier provided to approximately 60 bus riders at Springfield Bus Terminal and Northampton Academy of Music on August 29 and September 6, 2016.
- Four public hearings with information about the Fast Break Card program and opportunities for public feedback.
- Telephone line and email comment address set up to accept additional public input.

PVTA staff held public hearings and informational meetings on these dates at the following locations:

- Monday, August 18, 2016 from 4:00 to 5:30 PM – Springfield Area – 60 Congress St., Springfield (Pioneer Valley Planning Commission Office).
- Tuesday, August 19, 2016 from 3:00 to 4:30 PM – Chicopee Area – 449 Front St., Chicopee Public Library.
- Wednesday, August 20, 2016 from 5:00 to 6:30 PM – Northampton Area – 210 Main St, City Council Chambers.
- Monday, August 22, 2016 from 5:00 to 6:30 PM – Holyoke Area – 206 Maple St., Holyoke Transportation Center.

PVTA conducted additional information outreach to provide customers with informational fliers:

- Springfield Bus Terminal on September 1 and 7, 2016 (approximately 40 contacts)
- Holyoke Transportation Center on August 29 and 30, 2016 (approximately 50 contacts)
- Northampton Academy of Music bus shelter on September 7, 2016 (approximately 25 contacts)

At these meetings and through individual contacts, these main themes and questions were identified:

- General interest and support for new fare payment option.
- Interest in knowing when the Fast Break Card will be available.
- Questions about whether or not use of Fast Break card will be mandatory.
- Questions about whether or not the PVTA Elderly & Disabled Pass and TAP pass will be affected.

In October 2016, PVTA met with its anticipated retail Fast Break Card vendor, Big Y Supermarkets, and was informed that the 15 Big Y stores that currently sell PVTA 31-day passes will not be able to also sell and reload Fast Break and Fast Break E&D Cards (though these 15 stores will continue to sell PVTA 31-day passes as they currently do).

PVTA is therefore seeking other outlets for the sale and reloading of Fast Break Cards. Up to five municipal sales locations are anticipated to be added during Phase 2 (3rd and 4th quarter 2017), and up to 10 retail sales locations are anticipated to be added during Phase 3 (1st and 2nd quarter 2018).

7. Impact Analysis and Mitigation Measures

This section presents information to identify and analyze potential impacts of the proposed Fast Break Card program that may be either disproportionate for low-income riders (Section 7.1) and/or disparate for PVTA customers of color (Section 7.2). This analysis, as required by FTA's guidance, is offered to produce a clearer understanding of actual and potential differences in existing and proposed fare media.

The following matrix (Fig 7-1 on next page) summarizes existing PVTA fare media and the proportion of fares paid with each in the most recent fiscal year (FY2015). The matrix also shows the three proposed future fare media options that will be available, which are: 1) Regular Purchase (existing fare media); 2) Purchased on a Fast Break or Fast Break E&D Card; and 3) Purchased on a Fast Break Limited Use Card.

FTA guidance requires PVTA to determine or estimate of the number and proportion of users who will be affected by each fare media being changed. In this case, no existing fare media will be changed. Instead, two new fare media will be added for fixed route bus riders (Fast Break Smart Card and Fast Break Limited Use Card). There will be no fare media change for ADA paratransit users.

FTA guidance requires PVTA to review fare use patterns before and after the proposed fare media change. Figure 7-1 presents this review, which shows there will be no increase in the dollar amount of any fares paid through existing Regular Purchase fare media, as compared to the new Fast Break and Limited Use Cards. PVTA will continue to track proportions of fares paid through existing passes and cash fares, and will require monthly reporting by its fixed route operators of the proportion of those products purchased using the Fast Break Smart Card and Fast Break Limited Use Card.

In accordance with FTA guidance, if PVTA finds potential disparate impacts and then modifies the proposed changes in order to avoid, minimize or mitigate those impacts, the proposed changes must be refined to determine whether the modifications actually remove the potential disparate impacts of the proposed changes. Sections 7.1 and 7.2 identify potential disproportionate and disparate impacts and describe the mitigation measures that will be implemented to avoid or minimize these impacts.

PVTA anticipates that customer adoption will be gradual. This was the implementation pattern at peer transit agencies in Massachusetts: the Berkshire Regional Transit Authority implemented the MBTA-based Charlie Card for its customers in 2011, and adoption has grown over the past five years to the point where approximately half of customers use it. The Worcester RTA reports a similar adoption pattern for its Charlie Card users since it was implemented there in 2012. Therefore, it is reasonable to expect PVTA will see similar adoption rates when all phases of the program are implemented.

Fig 7-1: Summary Analysis of Existing and Proposed PVTA Fare Media

Fare Classification/Media (Existing and Proposed for Fast Break and Limited Use Cards)	Existing Farebox		Proposed Future Fare Payment Options (3)					
	Fare and Pass Prices	% of All Fares Paid ²	1. Regular Purchase ⁴	% Change	2. Purchased on Fast Break Card	% Change	3. Purchased on Limited Use Card	% Change
Basic Fares								
Adults Basic Fare	\$1.25	19.5%	\$1.25	0%	\$1.25	0%	\$1.25	0%
Adult Transfer ³	\$0.25	10.1%	\$0.25	0%	\$0.25	0%	\$0.25	0%
Elderly & Disabled Fare	\$0.60	5.7%	\$0.60	0%	\$0.60	0%	\$0.60	0%
Elderly & Disabled Transfer ³	\$0.10	1.5%	\$0.10	0%	\$0.10	0%	\$0.10	0%
Child Fare (6-12)	\$0.75	1.3%	\$0.75	0%	\$0.75	0%	\$0.75	0%
Child (6-12) Transfer ³	\$0.25	0.1%	\$0.25	0%	free		free	0%
Child under age 6	free	4.7%	free	0%	free		free	0%
Passes								
31-Day Pass (regular fare)	\$45.00	10.2%	\$45.00	0%	\$45.00	0%		0%
<i>If purchased at PVTA Customer Service, SBT, HTC</i>	\$45.00		\$45.00	0%	\$45.00	0%		0%
<i>If purchased at PVTA.com with Paypal/eFare; incl. postage</i>	\$46.50		\$46.50	0%	\$45.00	-3%	n/a	
<i>If purchased at Big Y</i>	\$43.00		\$43.00	0%	\$43.00	0%		0%
Elderly & Disabled 31-day pass (TAP pass)	\$22.00	11.5%	\$22.00	0%	\$22.00	0%		0%
<i>If purchased at PVTA Customer Service</i>	\$22.00		\$22.00	0%	\$22.00	0%	\$22.00	0%
<i>If purchased at Big Y</i>	\$20.00		\$20.00	0%	\$20.00	0%	\$20.00	0%
7-Day Pass	\$12.50	2.0%	\$12.50	0%	\$12.50	0%	\$12.50	0%
1-day Pass	\$3.00	21.7%	\$3.00	0%	\$3.00	0%	\$3.00	0%
College and Public School Passes (WSU, HCC, STCC, WNEU, etc) ¹	varies	8.9%	varies		no change		no change	
Tickets								
1-ride Ticket (Customer Service, HTC, social service agencies, Amherst Big Y, municipal councils on aging)	\$1.15	0.9%	\$1.15		n/a		n/a	
1. Paid by affiliated institutions; excludes Five Colleges/UMass system, which has no fare boxes								
2. FY2015								
3. Transfers are always purchased with a basic fare, so no "% Fares Paid" is reported								
4. Cash, check, credit, or debit								

7.1 Disproportionate Impact Assessment (to Low-income Customers)

This section presents an assessment of the potential disproportionate impacts of the Fast Break Card program on customers who have low incomes. The threshold for such an impact is established by the PVTA Advisory Board's Disproportionate Impact Policy:

"If a PVTA planned transit fare rate, fare media or major service change results in low-income populations bearing a variance that is **20 percentage points greater** in comparison to non-low-income populations, the resulting effect will be considered a low-income disproportionate impact." (September 23, 2015)

Federal guidance requires PVTA to compare the differences for each particular fare media for low-income users versus all users to determine whether or not this 20-percent threshold is reached.

7.1.1 Geographic and Sales Hours Availability of Fast Break Card and Mitigation

FTA guidance requires an assessment of the availability of new fare media with respect to point of sale locations and hours. This information is presented in Figures 7.1.1-1 and 7.1.1-2 below.

Fig 7.1.1-1: Locations and Hours of PVTA Fare and Pass Sales and Income

Location	Address	Low Income Area?	Hours of Availability				
			Days	Open	Close	HRS/WK	
PVTA-operated outlets (10)							
Bus fareboxes		YES	Mon-Sun	6:00 AM	8:00 PM	98	
Union Station Cust Serv Window	55 Frank B. Murray St, Springfield	YES	Mon-Fri	9:00 AM	4:45 PM	39	
Union Station TVM	55 Frank B. Murray St, Springfield	YES	Mon-Sun	5:00 AM	11:00 PM	126	
Holyoke Trans Cntr Cust Serv Wind	206 Maple St, Holyoke	YES	Mon-Sat	8:00 AM	4:45 PM	52	
Holyoke Trans Cntr TVM	206 Maple St, Holyoke	YES	Mon-Sat	6:00 AM	8:00 PM	84	
Westfield Trans Pavil TVM (int.)	Elm and Maple St, Westfield	YES	Mon-Sat	8:00 AM	6:00 PM	60	
Westfield Trans Pavil TVM (ext.)	Elm and Maple St, Westfield	YES	Mon-Sun	8:00 AM	6:00 PM	70	
E-fare service	www.pvta.com/e-fare	YES	Mon-Sun	12:00 AM	11:59 PM	168	
PVTA website with PayPal	www.pvta.com/cart	YES	Mon-Sun	12:00 AM	11:59 PM	168	
PVTA Pass by Mail (cash/check)	U.S. Mail	YES	Mon-Sun	12:00 AM	11:59 PM	168	
Municipal partners (5)							
Northampton City Hall	210 Main St., Northampton	YES	Mon-Fri	8:30 AM	4:30 PM	40	
Phase 2 municipal off. (4)	TBD	YES ¹	TBD	TBD	TBD	TBD	
Retail Partners (15)							
Big Y Amherst	175 University Dr, Amherst	YES	Mon-Sun	7:00 AM	10:00 PM	105	
Big Y Chicopee	650 Memorial Dr, Chicopee	NO	Mon-Sun	7:00 AM	10:00 PM	105	
Big Y East Longmeadow	441 N Main St, East Longmeadow	NO	Mon-Sun	7:00 AM	10:00 PM	105	
Big Y Longmeadow	802 Williams St, Longmeadow	NO	Mon-Sun	7:00 AM	10:00 PM	105	
Big Y Ludlow	433 Center St, Ludlow	YES	Mon-Sun	7:00 AM	10:00 PM	105	
Big Y Northampton	136 N. King Street Rt 5, Northampton	YES	Mon-Sun	7:00 AM	10:00 PM	105	
Big Y Palmer	1180 Thorndike St, Palmer	NO	Mon-Sun	7:00 AM	10:00 PM	105	
Big Y South Hadley	44 Willimansett St, South Hadley	NO	Mon-Sun	7:00 AM	9:00 PM	98	
Big Y Springfield (Cooley S)	300 Cooley St., Springfield	YES	Mon-Sun	7:00 AM	10:00 PM	105	
Big Y Springfield (St. James Ave)	1090 St. James Ave, Springfield	YES	Mon-Sun	7:00 AM	10:00 PM	105	
Big Y Ware	148 West St, Ware	YES	Mon-Sun	7:00 AM	10:00 PM	105	
Big Y West Springfield	503 Memorial Ave, W. Springfield	NO	Mon-Sun	7:00 AM	10:00 PM	105	
Big Y Westfield (East Main St)	475 East Main St., Westfield	YES	Mon-Sun	7:00 AM	10:00 PM	105	
Big Y Westfield (East Silver St)	10 East Silver St, Westfield	YES	Mon-Sun	7:00 AM	10:00 PM	105	
Big Y Wilbraham	2035 Boston Rd, Wilbraham	YES	Mon-Sun	7:00 AM	10:00 PM	105	
Phase 3 retail partners (10)	TBD	YES ¹	TBD	TBD	TBD	TBD	

1. Phase 2 and 3 Fast Break Card sale and reloading locations will be located in Environmental Justice neighborhoods

Fig 7.1.1-2: Future Fare Media Sale Locations and Income Status

Location	Address	Low Income Area?	Fare Payment Options Available						
			Cash: single fare or ticket	Purchase 31-day Pass (mag strip card)	Purchase 7-day Pass (mag strip card)	Purchase 1-day pass (mag strip card)	Purchase Fast Break Card	Purchase Fast Break E&D Cards	Reload Fast Break and Fast Break E&D Cards
PVTA-operated outlets (10)									
Bus fareboxes		YES	●			●			
Union Station Cust Serv Window	55 Frank B. Murray St, Springfield	YES	●	●	●		●	●	●
Union Station TVM	55 Frank B. Murray St, Springfield	YES					●		●
Holyoke Trans Cntr Cust Serv Wind	206 Maple St, Holyoke	YES	●	●	●		●	●	●
Holyoke Trans Cntr TVM	206 Maple St, Holyoke	YES		●			●		●
Westfield Trans Pavil TVM (int.)	Elm and Maple St, Westfield	YES	●				●		●
Westfield Trans Pavil TVM (ext.)	Elm and Maple St, Westfield	YES					●		●
E-fare service	www.pvta.com/e-fare	YES					●		●
PVTA website with PayPal	www.pvta.com/cart	YES		●					
PVTA Pass by Mail (cash/check)	U.S. Mail	YES	●	●	●		●		
Municipal partners (5)									
Northampton City Hall	210 Main St., Northampton	YES		●			●		●
Phase 2 municipal off. (4)	TBD	YES ¹					●		●
Retail Partners (15)									
Big Y Amherst	175 University Dr, Amherst	YES		●					
Big Y Chicopee	650 Memorial Dr, Chicopee	NO		●					
Big Y East Longmeadow	441 N Main St, East Longmeadow	NO		●					
Big Y Longmeadow	802 Williams St, Longmeadow	NO		●					
Big Y Ludlow	433 Center St, Ludlow	YES		●					
Big Y Northampton	136 N. King Street Rt 5, Northampton	YES		●					
Big Y Palmer	1180 Thorndike St, Palmer	NO		●					
Big Y South Hadley	44 Willimansett St, South Hadley	NO		●					
Big Y Springfield (Cooley S)	300 Cooley St., Springfield	YES		●					
Big Y Springfield (St. James Ave)	1090 St. James Ave, Springfield	YES		●					
Big Y Ware	148 West St, Ware	YES		●					
Big Y West Springfield	503 Memorial Ave, W. Springfield	NO		●					
Big Y Westfield (East Main St)	475 East Main St., Westfield	YES		●					
Big Y Westfield (East Silver St)	10 East Silver St, Westfield	YES		●					
Big Y Wilbraham	2035 Boston Rd, Wilbraham	YES		●					
Phase 3 retail partners (10)	TBD	YES ¹					●		●

1. Phase 2 and 3 Fast Break Card sale and reloading locations will be located in Environmental Justice neighborhoods

The preceding figures show that in addition to the existing five PVTA-operated fare and pass sale locations (Customer Service Windows at the downtown Springfield and Holyoke hub stations, plus bus fareboxes, pvta.com, and passes by mail), there will be five additional Fast Break Card sales and reloading locations (TVMs at Springfield Union Station, Holyoke Transportation Center, Westfield Transit Pavilion, and the E-fare online portal)—all of which are located in, or are electronically accessible to, people who live in low-income neighborhoods. Impact analysis and mitigation is presented below.

Fig. 7.1.1-2 Fast Break Card Sales Locations and Hours Impacts and Mitigation Measures

#	Potential Disparate Impact	Mitigation
7.1.1-1	<p>The geographic availability and sales hours for Fast Break Smart Card and Limited Use Card could be less than those of all other PVTA fare media and payment options.</p>	<p>All existing regular passes and tickets will continue to be sold at all existing sales locations during existing hours.</p> <p>During Phase 1, all new locations for Fast Break Card sales and reloading will be in addition to those for existing fare media. There will be no reduction in the types or number of fare media available, the locations where they are sold, or the hours during which they can be purchased.</p> <p>During Phase 1, customers who request a Fast Break Card or have a fare product loaded or reloaded on it at a location that is not equipped to do so (i.e., at the bus farebox) will be provided with information by PVTA employees, bus drivers, or contractors about the most convenient way (sales office or online or by mail) for them to do so.</p> <p>During Phases 2 and 3, PVTA will actually increase the geographic availability of fare media, because different types of passes and cash value can be loaded and reloaded on the card. With this increase in the number of outlets during Phases 2 and 3, PVTA will also increase the number of hours during which fares are sold.</p> <p>Therefore, during each phase of the Fast Break Card program, there will be more opportunities for people with low incomes to media to purchase fare products. Therefore, the program does not exceed the 20% threshold established by the PVTA Advisory Board’s Disparate Impact Policy and mitigation is not required.</p>

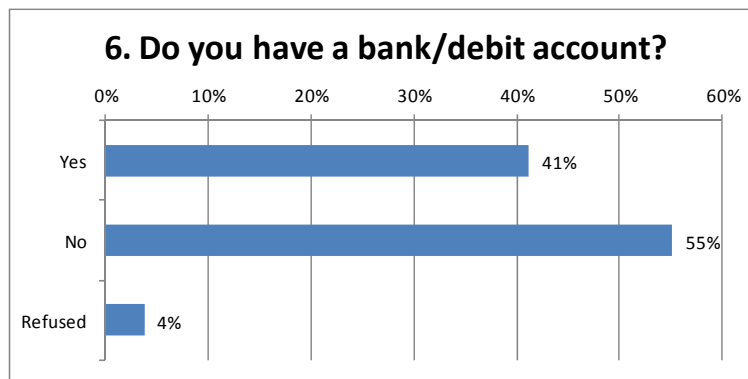
7.1.2 “Banked” Customer Impacts and Mitigation

Some of the new purchase options and features for the Fast Break Card require the card holder to have a bank account and/or credit card. For purposes of this analysis, a “banked” customer is one who has a checking or debit account with a traditional bank or financial institution.

All transactions at PVTA Customer Service windows will continue to accept cash, personal checks, debit, and credit cards. Online transactions at www.PVTA.com for Fast Break Card products, however, cannot accept cash or debit cards; only credit/debit cards may be used for online purchases of either Fast Break Card or Fast Break Limited Use Card, manual replenishment of the Fast Break Card, and automatic replenishment of Fast Break Card features.

In general, it is more likely than not that people who have lower incomes do not have a bank account, as compared to people with higher incomes (U.S. Federal Reserve 2015). To better understand the proportion of PVTA customers who are “unbanked” and would therefore have limited or no access to the additional features of the Fast Break Card program that require a bank account and/or credit card, a survey of 158 customers was conducted at two rider outreach events: one at the Springfield Bus Terminal on April 1, 2016, and the other at the Holyoke Transportation Center on May 3, 2016. This limited survey found that a majority of PVTA customers (55%) do not have a bank account.

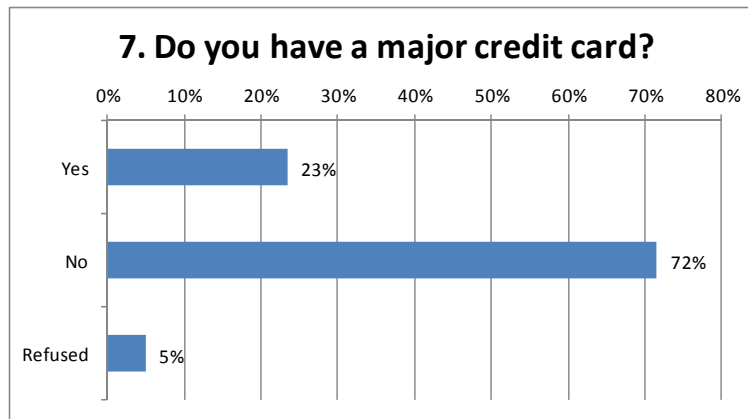
Fig 7.1.2-1: Proportion of PVTA Customers Surveyed with Bank Accounts



Customer surveys April 1 and May 3, 2016. N=158

Also, some online features of the Fast Break Smart Card (but not the Limited Use Card) are available only with a credit card (such as VISA or Master Card). These features include the manual card value replenishment of the Fast Break Card and setting up the Auto Buy feature to automatically add stored value to registered cards via secure funds transfer from a credit card (debit cards are not accepted online) on a scheduled basis. The survey results suggest that a majority of PVTA customers do not have credit cards and would therefore not be able to use these features.

Fig 7.1.2-2: Proportion of PVTA Customers Surveyed with Major Credit Card



Customer surveys April 1 and May 3, 2016. N=158

Based on these survey findings that 55% of customers do not have a bank account and 72% do not have a credit card, it is likely that the 20% threshold for disparate impacts to customers would be exceeded, as a limited number of the card’s convenience features would not be readily available to them. Therefore, PVTA has developed the following mitigation measures to address this potential impact in accordance with PVTA’s Disproportionate Impact Policy.

Fig. 7.1.2-1 Fast Break Card Sales Locations and Hours Impacts and Mitigation Measures

#	Potential Disparate Impact	Mitigation Measure
7.1.2-1	Customers without a checking or debit account will not be able to purchase the Fast Break Card or Limited Use Card online or perform manual replenishment or set up the Auto Buy features.	PVTA will make available a Limited Use Card that can be purchased with cash or check or debit. PVTA will also continue to make all existing forms of fare payment available, so there will be no change for customers who do not have a bank account or debit card.
7.1.2-2	Customers who do not have a credit card will not be able to use the manual and Auto Buy online replenishment features of the Fast Break Card.	PVTA will make available a Limited Use Card that can be purchased with cash or check or debit. PVTA will also continue to make all existing forms of fare payment available, so there will be no change for customers who do not have a credit card.
7.1.2-3	Customers who do not have a credit or debit card will not be able to use TVMs.	TVMs will accept cash for Fast Break Card purchases and reloading. Customer service windows will also accept cash and checks for purchases and reloading.

7.1.3 Internet Access Analysis

Internet access is required to use some features of the Fast Break Smart Card and Limited Use Card, including online purchase of either card, manual replenishment, and “Auto Buy” automatic replenishment of the Smart Card. Also, Balance Protection registration for stolen or lost cards requires card registration via an online service with PVTA (E-fare).

If purchased online, a Fast Break Smart Card can be registered immediately; if purchased at a Customer Service outlet or Big Y store, the user must wait 48 hours before going online to register.

No specific data on the internet access capacities of PVTA customers is available (no such question was asked on the 2015-2016 customer surveys). According to 2013 information from U.S. Census, internet access is proportionally less for people with lower incomes and non-white races. In 2013, an estimated 80.5% of households in the Springfield Metropolitan Statistical Area had broadband internet access, which exceeds the national average of 73.4%. However, the Census 2013 data show that low-income persons, who are the vast majority of PVTA customers, have significantly less internet access than average: just 48.4% of people who earn less than \$25,000 per year or less have internet access.

Based on these general population characteristics, it is reasonable to estimate that at least 20% or more of PVTA customers, the majority of who are low-income, do not have regular internet access and would therefore be impacted by this requirement. Therefore, additional mitigation measures have been developed and are described below to assure that customers will have equal access to the convenience features of the Fast Break Card, consistent with the PVTA Disproportionate Impact Policy.

Fig. 7.1.3: Internet Access Requirement Impacts and Mitigation

#	Potential Disparate Impact	Mitigation Measure
7.1.3-1	General lack of online among persons of low income may reduce their access to web-based Fast Break Smart Card and Limited Use Card online purchase and reloading convenience features.	All existing cash fare, pass, and ticket purchase options will continue to be available, including the 31-day pass for \$43 (\$2 discount) at Big Y grocery stores. There will be no change in the existing availability of fares and passes; and the majority of Phase 2 and 3 Fast Break Cards and reloading locations will be located in low-income neighborhoods.
7.1.3-2	Lack of online access among low-income riders may reduce the availability of manual and Auto Buy Fast Break Card replenishment for low-income customers.	All existing cash fare, pass, and ticket purchase options will continue to be available, including Big Y grocery stores. There will be no change in pass availability for any customers.
7.1.3-3	The likely lack of online access among a large proportion of low-income riders could reduce the availability of card registration for lost/stolen balance protection on the Smart Card for these customers.	Fast Break Card registration will be available in person at PVTA Customer Service windows in Springfield and Holyoke. PVTA will also educate card holders about online registration and the ability to do so at public libraries, as an alternative. Card registration will not be required for the Limited Use Card and existing regular cash fare and pass purchases.

7.1.4 Fast Break Smart Card Fees and Minimum Stored Value Impacts and Mitigation

The Fast Break Smart Card will require the card holder to pay a \$3.00 acquisition fee. The Smart Card also has the following fee schedule for replacement if lost before expiration: \$3.00 for first loss; \$5.00 for second loss; \$15.00 for third and all subsequent losses. Therefore, a customer who wishes to use a Smart Card must have \$3.00 on hand to acquire. As a mitigation measure, this \$3.00 minimum balance at time of acquisition can be applied to cash fare or pass products immediately.

Customer survey data for existing fare payment by income level (below) finds that the breakdown of types of fare payment is relatively consistent for all income ranges. The ratio of 1-ride and 1-day pass cash on board purchases (column 2 vs. column 6) is approximately the same (31.5% vs. 10.3%) for the lowest income range “Less than \$11,700/year” as it is for the highest range “More than \$50,000/year,” which is 29.3% vs. 9.3%.

Fig. 7.1.4-1: Fare Payment by Income Level (as Percentage of Fares Paid by each Income Category)

Income Range	Full Fare Cash (includes 1-day pass)	E&D Discount Cash	Free (prepaid)	31-day E&D pass	31-day or 7-day pass
Less than \$11,700/year	31.5%	3.5%	48.5%	6.3%	10.3%
\$11,700 to \$19,999/year	43.5%	5.1%	28.3%	8.0%	15.0%
\$20,000 to \$34,999/year	47.7%	2.3%	25.8%	8.7%	15.4%
\$35,000 to \$50,000/year	47.4%	6.6%	22.6%	8.8%	14.6%
More than \$50,000/year	29.3%	5.3%	52.0%	4.0%	9.3%
blank	45.5%	6.6%	19.3%	11.5%	17.2%

PVTA On Board Customer Surveys 2015 and 2016. N=2,798

Reviewing the existing fare media patterns by income range as a percentage of all fares collected by PVTA in FY2015, it is evident that customers with lower incomes are also buying the 1-ride and 1-day cash on board fares in roughly the same proportion as than those customers with higher incomes. In the “Less than \$11,700/year” income range, customers bought approximately three times as many 1-ride and 1-day pass cash fares than 31-day and 7-day passes (17.6% vs. 5.7%, or approximately 3:1 ratio), as compared to customers in the “More than \$50,000/year” range (0.8% vs. 0.3%, also an approximate 3:1 ratio).

Fig. 7.1.4-2: Fare Payment by Income Level (as Percentage of All Fares Paid)

Income Range	Full Fare Cash (includes 1-day pass)	E&D Discount Cash	Free (prepaid)	31-day E&D pass	31-day or 7-day pass
Less than \$11,700/year	17.6%	1.9%	27.1%	3.5%	5.7%
\$11,700 to \$19,999/year	7.2%	0.8%	4.7%	1.3%	2.5%
\$20,000 to \$34,999/year	5.2%	0.3%	2.8%	1.0%	1.7%
\$35,000 to \$50,000/year	2.4%	0.3%	1.1%	0.4%	0.7%
More than \$50,000/year	0.8%	0.1%	1.4%	0.1%	0.3%
blank	4.1%	0.6%	1.7%	1.0%	1.5%

It is reasonable to conclude that low-income customers will not be disproportionately affected by additional fees associated with the Fast Break Smart Card than customers who earn higher incomes because the additional fees will apply to customers of all income levels equally. Therefore, the impact of these fees does not trigger the 20% threshold of the PVTA’s Disproportionate Impact Policy.

Fig. 7.1.4-3: Smart Card Fee Impacts and Mitigation

#	Potential Disparate Impact	Mitigation Measure
7.1.4-1	The initial \$3.00 acquisition cost for the Fast Break Card may be a burden to customers with low income levels.	The \$3.00 acquisition cost will be waived during a 6-month Fast Break introductory promotional period (dates to be established), and may be further extended upon review of Phase 1 evaluation. After that period, the Limited Use Card and all existing pass products will continue to be available with no acquisition cost. Both the Fast Break Card and the Limited Use card will not require a minimum balance be carried, so the eventual \$3.00 acquisition cost may be applied entirely to fare payment.
7.1.4-2	The initial \$3.00 minimum balance requirement for the Smart Card may be a burden to customers of all income levels.	The initial \$3.00 of stored value on the Smart Card will be only required at time of purchase. The Smart Card balance may be as little as \$0.00 and the card will still be active (but the customer will need to reload value to purchase a ride or pass product). Also, the Limited Use Card will continue to be available with no minimum stored value balance. And all existing passes and cash fares will be available with no minimum balance requirement.
7.1.4-3	The Smart Card replacement fees if lost before the five-year expiration (\$3.00 for first loss; \$5.00 for second loss; \$15.00 for third and all subsequent losses) may be a burden to customers of all income levels.	Customers may insure against having to pay Smart Card replacement fees (due to loss or theft) by registering it with PVTA. Registration may be accomplished online at www.PVTA.com or at the Customer Service Center offices in Springfield or Holyoke. This card replacement fee is the same that is currently in effect for PVTA's Elderly & Disabled ("E&D") fare discount program.

7.2 Disparate Impact Assessment (to Customers of Color)

This section assesses whether or not there will likely be differences for each particular fare media between users who are not white and overall users. This is known as a “disparate impact.” The threshold for this impact is established in the Disparate Impact Policy adopted by the PVTA Advisory Board:

“If a PVTA planned transit fare rate, fare media change, or major service change results in minority populations bearing a variance that is **20 percentage points greater** in comparison to non-minority populations, the resulting effect will be considered a minority disparate impact.

“In the course of performing a Title VI Equity Analysis, PVTA must analyze how the proposed action would impact minority as compared to non-minority populations. This analysis would also be performed for low income populations as compared to non-low income population. In the event the proposed action has a negative impact that affects the low income or minority populations more than the non-low income or non-minority populations with a disparity that exceeds the adopted 20% thresholds, PVTA must evaluate whether there is an alternative that has a more equitable impact. Otherwise, PVTA must take measures to mitigate the impact of the proposed action on the affected minority population or low income population and demonstrate that a legitimate business purpose cannot otherwise be accomplished and that the proposed change is the least discriminatory alternative.” (September 23, 2015)

The Fast Break Card will be available to all riders, regardless of ethnic background. Analysis of potential disparate impacts to riders of color are presented below.

7.2.1 Fare Payment by Race Analysis

Surveys of PVTA customers completed in 2015 (Hampden County routes) and 2016 (Hampshire County routes) found that people of color use the 31-day and 7-day passes (combined regular fare and E&D) in greater proportion than white customers (17.6% of white customers use these types of passes, compared to 22.5% for Black/African American, 26.3% for Hispanic/Latino customers, and 20.7% for customers of two or more races). The Fast Break Card program is intended to benefit PVTA customers who use passes; therefore, a greater proportion of customers of color will have access to these benefits.

Fig 7.2.1-1: Fare Payment Types as Percentage of Fares Paid by Racial Group

Race	Full Fare Cash (includes 1-day pass)	E&D Discount Cash	Free (prepaid)	31-day E&D pass	31-day or 7-day pass
Asian/Pacific Isl	6.0%	0.0%	91.5%	0.0%	2.5%
Black/African American	50.1%	5.1%	22.2%	7.1%	15.4%
Hispanic/Latino	54.8%	4.9%	14.0%	9.1%	17.2%
Native American/Am Indian	28.6%	14.3%	28.6%	14.3%	14.3%
Other race	44.2%	0.0%	41.6%	2.6%	11.7%
Two or more races	46.6%	1.0%	31.6%	5.2%	15.5%
White	23.8%	4.5%	54.0%	8.4%	9.2%
(blank)	43.8%	6.3%	28.1%	7.3%	14.6%

* “Free (prepaid)” means the fare was purchased through a prepaid institutional reimbursement pass program.

Viewing fare payment by race with respect to all fares paid, a total 12.4% of all fares are paid by customers of color using regular and E&D 31-day and 7-day passes, compared to 6.7% paid by white customers using these fare payment options. Again, the information suggests that customers of color are paying a greater proportion of fares using the 31-day and 7-day passes—which are the very pass holders for which the Fast Break Card program has been developed to make more convenient.

Fig 7.2-2: Fare Payment by Racial Group as Percentage of All Fares

Ethnicity	Full Fare Cash (includes 1-day pass)	E&D Discount Cash	Free (prepaid)	31-day E&D pass	31-day or 7-day pass
Asian/Pacific Isl	0.4%	0.0%	6.7%	0.0%	0.2%
Black/African American	7.5%	0.8%	3.3%	1.1%	2.3%
Hispanic/Latino	13.9%	1.2%	3.6%	2.3%	4.4%
Native American/Am Indian	0.1%	0.1%	0.1%	0.1%	0.1%
Other race	1.2%	0.0%	1.2%	0.1%	0.3%
Two or more races	3.3%	0.1%	2.2%	0.4%	1.1%
White	9.1%	1.7%	20.7%	3.2%	3.5%
(blank)	1.5%	0.2%	1.0%	0.3%	0.5%

During Phase 1, the Fast Break Card will be available at 10 PVTA-operated sales locations and other outlets. The figure below demonstrates that all 10 of these outlets are located within, or are electronically accessible to, neighborhoods where the proportion of people of color exceeds the combined average of for Hampden and Hampshire Counties of approximately 23% (analysis at U.S. Census block group level).

Fig 7.2.3-1: Locations and Hours of PVTA Fare and Pass Sales and Income

Location	Address	Envir. Justice Area?	Sales Hours	
			Days	HRS/WK
PVTA-operated outlets (10)				
Bus fareboxes		YES	Mon-Sun	98
Union Station Cust Serv Window	55 Frank B. Murray St, Springfield	YES	Mon-Fri	39
Union Station TVM	55 Frank B. Murray St, Springfield	YES	Mon-Sun	126
Holyoke Trans Cntr Cust Serv Wind	206 Maple St, Holyoke	YES	Mon-Sat	52
Holyoke Trans Cntr TVM	206 Maple St, Holyoke	YES	Mon-Sat	84
Westfield Trans Pavil TVM (int.)	Elm and Maple St, Westfield	YES	Mon-Sat	60
Westfield Trans Pavil TVM (ext.)	Elm and Maple St, Westfield	YES	Mon-Sun	70
E-fare service	www.pvta.com/e-fare	YES	Mon-Sun	168
PVTA website with PayPal	www.pvta.com/cart	YES	Mon-Sun	168
PVTA Pass by Mail (cash/check)	U.S. Mail	YES	Mon-Sun	168
Municipal partners (5)				
Northampton City Hall	210 Main St., Northampton	YES	Mon-Fri	40
Phase 2 municipal off. (4)	TBD	YES ¹	TBD	TBD
Retail Partners (15)				
Big Y Amherst	175 University Dr, Amherst	YES	Mon-Sun	105
Big Y Chicopee	650 Memorial Dr, Chicopee	NO	Mon-Sun	105
Big Y East Longmeadow	441 N Main St, East Longmeadow	NO	Mon-Sun	105
Big Y Longmeadow	802 Williams St, Longmeadow	NO	Mon-Sun	105
Big Y Ludlow	433 Center St, Ludlow	YES	Mon-Sun	105
Big Y Northampton	136 N. King Street Rt 5, Northampton	YES	Mon-Sun	105
Big Y Palmer	1180 Thorndike St, Palmer	NO	Mon-Sun	105
Big Y South Hadley	44 Willimansett St, South Hadley	NO	Mon-Sun	98
Big Y Springfield (Cooley S)	300 Cooley St., Springfield	YES	Mon-Sun	105
Big Y Springfield (St. James Ave)	1090 St. James Ave, Springfield	YES	Mon-Sun	105
Big Y Ware	148 West St, Ware	YES	Mon-Sun	105
Big Y West Springfield	503 Memorial Ave, W. Springfield	NO	Mon-Sun	105
Big Y Westfield (East Main St)	475 East Main St., Westfield	YES	Mon-Sun	105
Big Y Westfield (East Silver St)	10 East Silver St, Westfield	YES	Mon-Sun	105
Big Y Wilbraham	2035 Boston Rd, Wilbraham	YES	Mon-Sun	105
Phase 3 retail partners (10)	TBD	YES ¹	TBD	TBD

1. Phase 2 and 3 Card sale and reloading locations will be located in Environmental Justice neighborhoods

During Phases 2 and 3, PVTA will add up to 15 more Fast Break Card sales and reloading locations, for a total of 25. Every effort will be made to locate these additional sales locations in neighborhoods where the proportion of people of color exceeds the regional average, reflecting the fact that the proportion of people of color who are PVTA customers (62.3%) exceeds the regional average by nearly 40%.

Because all future Fast Break Card sales and reloading locations are anticipated to be in neighborhoods with a greater proportion of residents of color than the regional average, there are no disparate impacts expected with respect to geographic availability of card purchase and reloading locations.

In the future, PVTA will update customer satisfaction surveys to include Fast Break Card use for comparison with race to determine if a disparate impact occurs as the card comes into wider use.

There is no information in PVTA customer surveys to suggest that riders of color will be disproportionately more or less likely to use the new payment media, as there is no data available yet on its use. PVTA will survey riders at one year intervals during the Fast Break roll out period to assess whether or not disproportionate impacts occur.

7.2.2 English Proficiency Impacts and Mitigation

In looking at the fare payment choices of the 6% of PVTA riders (165 individuals) who filled out the survey in Spanish (shown below), riders who filled out the Spanish version of the survey were more likely to pay cash on board (for either a cash fare or a 1-day pass).

	Full Fare or 1-day pass Cash on board	E&D Discount Cash on board	Free (prepaid)	E&D 31-day pass	31-day or 7-day pass
English Survey Respondents	36.4%	3.7%	41.2%	6.5%	12.2%
Spanish Survey Respondents	50.3%	10.2%	1.3%	22.3%	15.9%

Fig. 7.2.2-1: English Proficiency Impacts and Mitigation

#	Potential Disparate Impact	Mitigation Measure
7.2-1	Customers who are not proficient in English or do not speak English may not have access to all information about the features and requirements of the Fast Break Card Program.	All Fast Break Card program materials (for both the Smart Card and Limited Use Card versions) will be translated to Spanish. PVTA will provide Spanish speaking staff at outreach events. News releases and advertisements will be produced for and distributed to Spanish language media in the PVTA service area.
7.2-2	Spanish-speaking customers are more likely to pass cash onboard for a 1-ride basic fare or 1-day pass.	Outreach materials will emphasize that 1-ride fares and 1-day passes may be paid using the Smart Card and Limited Use Card.

8 Conclusion: Additional Fare Media is Equitable

PVTA's implementation of the Fast Break Card program is equitable with the mitigation proposed in this analysis. The analysis presented in this report demonstrates that the addition of the Fast Break fare media options will not disparately affect more than 20% of customers of color, and it will not disproportionately affect more than 20% of low-income riders, consistent with PVTA's publicly developed policy for impact thresholds.

This analysis finds that there are a limited set of circumstances related to bank account, credit card, and internet access requirements that could potentially disproportionately affect less than 20% of low-income PVTA customers. In these cases, PVTA has proposed a series of mitigation measures that will allow customers to avoid or minimize these impacts to the greatest extent possible within the program's technical capabilities and where practicable. Importantly, all existing fare media and payment options will be retained. There will be no change for people who do not wish to use the Smart Card program, and no fare discounts for people who do. PVTA has determined that retaining existing fare payment is the most feasible and equitable alternative that will still accomplish the Fast Break Card Program goals.

As the Fast Break Program is implemented, PVTA will conduct regular follow up customer surveys at intervals of no less than one per year to monitor the effectiveness of proposed mitigation measures and develop and implement any new ones that may be necessary to address Title VI impacts.

Appendices