NORTHERN VIRGINIA TRANSPORTATION COMMISSION

NVTC 2021 White Paper

Zero-Fare and Reduced-Fare Options for Northern Virginia Transit Providers

Published by the Northern Virginia Transportation Commission
September 2, 2021

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Executive Summary

The purpose of this white paper is to provide Commissioners and Northern Virginia's bus system decision-makers with policy and technical considerations for zero-fare and reduced-fare transit service. Its provides a high-level overview of the options and topics to consider when evaluating new potential fare programs that eliminate or reduce fares. Further analysis may be needed beyond this informational white paper to make policy decisions.

Following comments and questions from NVTC Commissioners, NVTC staff commenced work on a white paper examining a wide variety of zero-fare or reduced-fare transit options. The result is this document, which serves as both a policy and technical resource for decision makers regarding zero-fare or reduced-fare transit opportunities and challenges.

Its purpose is to provide a high-level overview of the options and topics to consider when evaluating zero or reduced fares for a community's transit system.

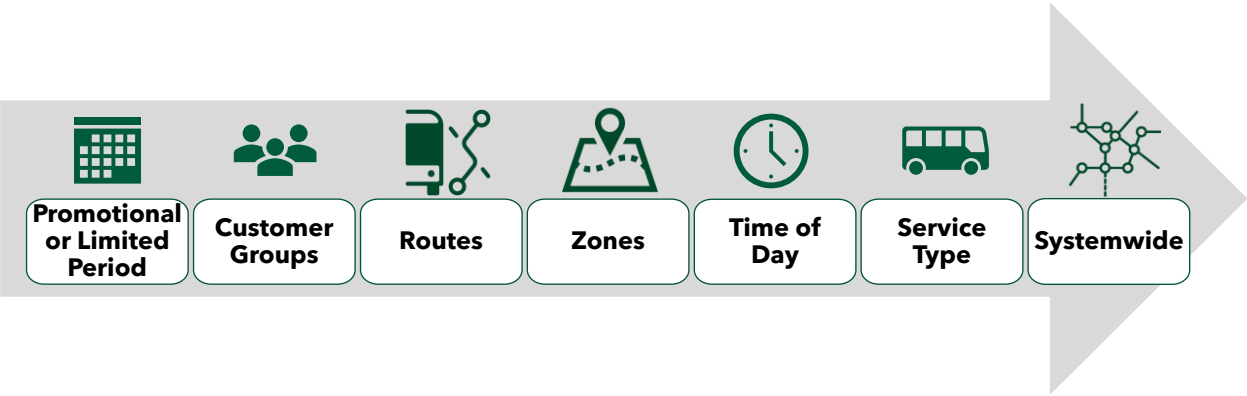
Nationally, momentum and interest has been building for zero- or reduced-fare transit, particularly after temporary fare elimination was put into practice as part of the COVID-19 pandemic response. Even prior to the pandemic, there are examples of transit systems around the U.S. and internationally eliminating or reducing fares.

Transit systems around the U.S. and internationally that have eliminated or reduced fares have prioritized investing in transit as a tool that enhances overall community benefits over associated cost challenges. Zero- and reduced-fare options ultimately rely on community support and political willingness.

Zero-Fare and Reduced-Fare Implementation Options

The following figure shows the continuum of common implementation options. These are not mutually exclusive, and a transit system could implement multiple options together. Either zero- or reduced-fare policies could be developed for each option as well.

Figure 1: Continuum of Implementation Options



The following are key observations from the white paper:

- **Northern Virginia's unique transit environment provides both opportunities and challenges for new fare programs.** Local bus providers operate alongside the Metrobus and Metrorail regional transit system, which raises the importance of considering regional impacts when planning fare programs. There are several examples of transit systems across the U.S. that have eliminated fares, but none are direct peers to the Northern Virginia environment.
- **Eliminating fares can grow ridership.** Transit systems that have done so have seen ridership increase between 20% and 85%. U.S. examples have not shown strong evidence on mode shift from automobiles to transit, but this is highly dependent on local factors.
- **Reduced-fare programs may result in a net cost increase.** Additional expenses may be due to extra program administration costs.
- **Full systemwide zero-fare options may reduce fare collection costs, but other expenses may increase.** Increased system usage or potential service adjustments can add costs.
- **Funding is available to help establish these types of fare programs, but long-term sustainable revenue replacement sources are needed**. Virginia's Transit Ridership Incentive Program (TRIP) is one funding source available to Northern Virginia transit operators. However, the TRIP program and similar types of grant programs are typically designed for fixed time periods.
- **Zero- and reduced-fare programs are already underway in Virginia.** The Alexandria Transit Company (DASH) will eliminate fares for all customers in September 2021 alongside a major network change. OmniRide has eliminated local bus fares through June 2022, as has the Greater Richmond Transit Company (GRTC)—a prominent Virginia advocate for zero-fare polices.
- **Northern Virginia transit operators have expressed desire to consider eliminating or reducing fares for improved accessibility, increased ridership, and other community benefits.**

1. Introduction

Purpose of Effort

While the COVID-19 pandemic required transit systems to quickly adapt their day-to-day fare collection practices, it also created an opportunity to fundamentally reexamine fare collection policy and practices. Most transit systems temporarily eliminated fares for a portion of the pandemic as a safety measure, but there are several examples of transit systems across the country considering, testing, or implementing zero-fare transit service even prior to 2020. Reduced fares are also commonplace with traditional programs like reduced fares for people with disabilities, seniors, children, and students. Many transit systems are currently examining whether and how zero-fare or reduced-fare transit programs can be expanded as a tool to promote mobility, reduce a barrier to using transit, boost ridership, and achieve other community goals.

Definitions

Zero-Fare Transit: Public transit funded in full by means other than collecting fares from passengers (may also be called Fare-Free or Fareless)

Reduced-Fare Transit: Special programs providing particular passengers with discounted fare options for public transit

Following several comments and questions presented by NVTC Commissioners, NVTC staff commenced work on a white paper examining a wide variety of zero-fare or reduced-fare transit options. The result is this document, which serves as both a policy and technical resource for decision makers regarding the opportunities and challenges related to zero-fare or reduced-fare transit.

This white paper is not intended be a detailed step-by-step guide to eliminating fares for Northern Virginia transit services nor define how every consideration should be handled. Its purpose is to provide a high-level overview of the options and topics to consider when evaluating zero or reduced fares for locally operated, fixed route bus transit systems.

Overview

The white paper is organized as follows:

1. **Introduction**: overview and purpose of the white paper
2. **Options and Key Considerations**: definition of the continuum of implementation options and key opportunities and challenges to consider
3. **Existing Conditions in Northern Virginia**: status of fare collection in Northern Virginia and recent or upcoming initiatives
4. **United States and International Examples**: summary of the case studies and research used to inform the white paper
5. **Conclusion**: summary of opportunities, challenges, implementation considerations
6. **Commissioner Questions and Feedback**: summary of comments and questions received from Commissions at the July 2021 Commission meeting

Northern Virginia Transit Systems

NVTC recognizes the complexity of the Northern Virginia transit environment with local bus service provided by multiple transit operators alongside the regional authority, WMATA, which provides Metrorail, Metrobus, and MetroAccess services. While the white paper may be valuable for any transit system, its development was focused on considerations for local bus service in NVTC's member jurisdictions in addition to Prince William County which includes:

- Arlington Transit (ART)
- City of Fairfax City-University Energysaver (CUE)
- Alexandria Transit Company DASH
- Fairfax (County) Connector
- Loudoun County Transit
- OmniRide

2. Options and Key Considerations

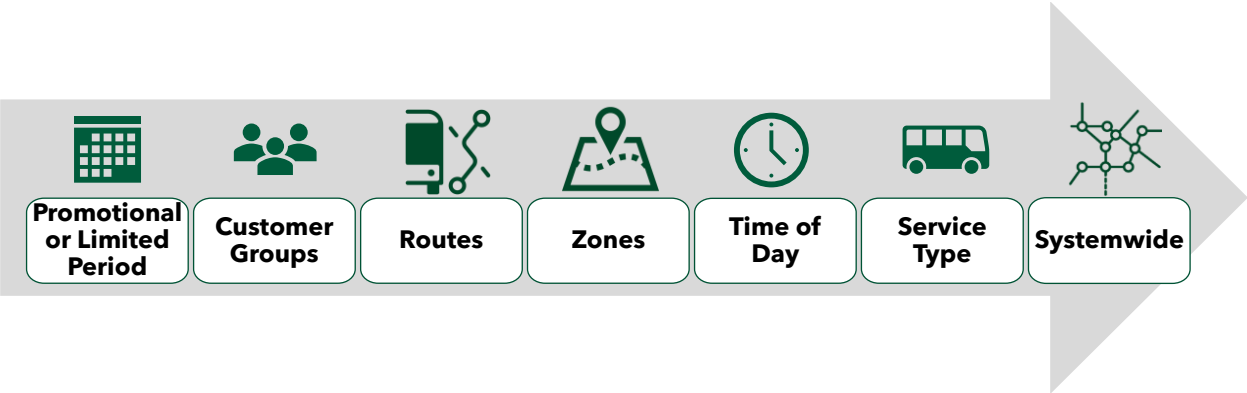
There are several implementation options, opportunities, and challenges to consider when evaluating zero-fare or reduced-fare transit. This section describes the continuum of options across the following four main categories of opportunities and challenges—all based on industry examples:

1. Community Benefits and Access to Transit
2. Ridership
3. Transit Service Delivery
4. Cost and Revenue

Zero-Fare or Reduced-Fare Implementation Options

Figure 2 shows the most common implementation options for reduced fare transit ranging from limited scope on the left to the broadest scope on the right. The options are not mutually exclusive, and a transit system could implement multiple options together. Either zero- or reduced-fare policies could be developed for each option as well.

Figure 2: Continuum of Implementation Options



The following describes each of the implementation options, along with examples:

Promotional or Limited Time Period	
Description	Zero- or reduced-fare rides during a pre-defined limited time period to promote a behavior shift towards public transit.
Examples	Free Ride Days, promotional period when launching new service

Customer Groups	
Description	Zero- or reduced-fare programs for customers that meet eligibility requirements such as low income; age (seniors, children); persons with disabilities; K-12 students; university students, faculty and staff; or employees of a specific organization or employer. U.S. transit systems that receive federal funding are required to offer, at minimum, half fares to the older adults and people with disabilities during off-peak travel. WMATA Metrobus is the only local bus service operating in Northern Virginia that accepts federal funding. A summary of their reduced fare programs can be found here. Programs have associated administrative costs to accept participants, issue fare cards or passes as applicable, and verify eligibility. Low-income or mean-based reduced-fare programs in the U.S. typically require individuals to have incomes of no more than 150% to 200% of the federal poverty line to qualify.
Examples	Fairfax County and Fairfax City Student Bus Pass Program (Fairfax, VA), Kids Ride Free Program (Washington, D.C.); TriMet Low-Income Honored Citizen program (Portland, OR); LA Metro Low-Income Fare is Easy (LIFE) program (Los Angeles, CA); LA Metro zero-fare pilot program for low-income, K-12, and community college students (Los Angeles, CA)

Routes	
Description	Zero- or reduced-fare rides on specific routes in the transit system. Routes often serve a specialized purpose such as tourism, downtown circulation, or an employment area / specific employer.
Examples	King Street Trolley (Alexandria, VA), Leesburg Safe-T-Ride (Leesburg, VA), Merrimack Valley Regional Transit Authority—three zero-fare downtown routes (Lawrence, MA)

Zones	
Description	Zero-fare rides for customers that travel within a predefined geography or zone. Enforcement is needed to verify customers entering or exiting the zone pay fares.
Examples	UTA Free Fare Zone (Salt Lake City, UT), King County Metro Ride Free Area (Seattle, WA; discontinued in 2012), Portland Fareless Square (Portland, OR; discontinued in 2012).

Time of Day	
Description	Zero- or reduced-fare rides at defined times of the day such as off-peak or weekend when there is available capacity. This option can be used to incentivize travel during less congested times and provide benefits to non-commuter trips.
Examples	CTransit Weekend Wheels zero-fare local bus service during summer 2021 (CT), zero-fare off-peak service (Mercer County, NJ; historical test in 1979)

Service Type	
Description	Zero- or reduced-fare rides on subsystem transit modes such as local circulators, light rail/streetcar, or local bus but not premium services.
Examples	Charm City Circulator (Baltimore, MD), DC Streetcar (Washington, D.C.)

Systemwide	
Description	Zero-fare rides on all transit services in the system.
Examples	DASH (Alexandria, VA; planned for September 2021), OmniRide local services (FY 2022), Intercity Transit (Olympia, WA), Corvallis Transit (Corvallis, OR), Park City Transit (Park City, UT).

Other Emerging Ideas

There may be implementation options and new ideas that do not fit within those outlined above. These could include other transit benefits, loyalty, rewards or fare programs. NVTC and Northern Virginia transit systems should monitor emerging concepts in the industry.

Opportunities and Challenges

Based on the experiences of transit systems that have adopted zero-fare and reduced-fare options, each approach offers opportunities and challenges. Opportunities include improving access, ridership growth, improved transit performance, and sustainability goals. Challenges include additional costs, identifying funding to replace lost fare revenue, and day-to-day operational logistics, all of which require advanced consideration and planning.

Opportunities and challenges for zero-fare and reduced-fare programs will vary by transit system, so additional evaluation may be needed to determine the best option(s) for each transit provider.

The primary opportunities and challenges related to zero-fare and reduced-fare options are discussed in this section and categorized by their associated improvement goal or factor. Overall, opportunities and challenges do not represent standalone reasons for adopting or dismissing zero-fare or reduced-fare options, but instead are intended as topics transit systems should consider when determining fare options. These will vary by transit system so additional evaluation may be needed.

Community Benefits and Access to Transit

Opportunities

- **Transit Access:** Zero-fare options, which do not require direct user payment, allow transit service to be equally available to everyone, regardless of ability to pay. Reduced-fare programs also enhance transit access by lowering fares and allowing more individuals access to services, especially when oriented toward vulnerable communities. In general, these options reduce the cost-related barriers that prevent all community members from being able to access transit.
- **Access to Jobs and Services:** By enhancing access, zero-fare and reduced-fare options enable more individuals to access employment opportunities, health care, social services, shopping opportunities, and other essential resources.
- **Livability:** Both zero-fare and reduced-fare options can potentially enhance community livability and economic sustainability through the elimination of barriers to transit. Specifically, a community's livability is enhanced when it offers more mobility options to its population, improving the quality of life and overall attractiveness of a community. These factors then support economic sustainability by helping the community become a more attractive place to do business, with a more mobile and accessible workforce. Furthermore, by enhancing transit access and potentially encouraging a mode shift away from personal vehicles to transit, zero-fare and reduced-fare applications could work to reduce emissions and support a community's sustainability goals.
- **Support for Local Economies:** By reducing or eliminating individuals' transportation costs, zero-fare and reduced-fare options help keep money in people's pockets. This allows more people around a community to have income available to spend on day-to-

day needs as well as in local businesses and institutions; therefore, enhancing local economies with newly accessible funds.

Challenges

- **Safety and Security:** Providing increased or unlimited transit access for all individuals has the potential to cause safety and security issues related to passengers riding buses for long periods without a specific destination and causing disturbances for other riders. Therefore, when considering the adoption of zero-fare or reduced-fare options, transit systems may want to also consider operator training practices, ongoing collaboration with transit public safety agencies, and adopting policies that require customers to have a destination or limiting trip length.
- **Mode Shift:** While zero-fare and reduced-fare options tend to increase transit ridership, they are not always effective at getting people out of their automobiles. According to analyses of zero-fare applications enacted in the past, including those in Denver and Austin, only small percentages of added transit trips experienced were made by riders who switched from using their car or another motorized transportation mode. The new transit trips were made by individuals who formerly walked, rode their bike, or would not have made the trip at all. Furthermore, the Transit Cooperative Research Program's (TCRP's) "Implementation and Outcomes of Fare Free Transit" study states that ridership increases and mode shift rates because of zero-fare implementation depends widely on various local factors, including transit availability and driving conditions[1]. Transit systems may want to consider accompanying their introduction of zero- or reduced-fare programs with strategies to encourage mode shift, such as marketing campaigns or other targeted approaches.
- **Eligibility Limits:** Reduced-fare programs, specifically, are sometimes based on individual eligibility. For example, transit systems may offer reduced fares only to individuals who can prove that they are under a certain income level or are over a specific age. Depending upon the requirements and the complications of the qualification process, reduced-fare programs of this type may inadvertently introduce an added barrier to accessing transit and would dissuade individuals from participating in these programs at all. Identifying eligible population groups also introduces risks of bias and stigmatizing beneficiaries. Many transit systems that have targeted reduced-fare programs determine eligibility using existing processes or methods to simplify eligibility for both the customer and transit system.
- **Transfers:** Customers who currently receive a discount when transferring between two services may not benefit if only one of those transit systems implements zero fares. Unless alternate transfer agreements are made, (which could incur operating costs) these customers may see the same price for their overall trip even though one leg of

[1] http://www.trb.org/Publications/Blurbs/167498.aspx

their overall trip is zero cost. Since Northern Virginia is served by multiple transit providers, customers transferring between a zero-fare bus and fare-charging systems would not receive the same financial benefits. This potential complication would also affect customers that receive tax-free employer commuter benefits through the SmartBenefits program, who would have less of a direct financial benefit from a zero-fare system. Customers traveling solely on the zero-fare transit system would receive the most financial benefit.

- **Overlapping Service:** In corridors with overlapping service provided by separate operators with differing fare policies, customers may face confusion or varied levels of transit access. For example, if two transit providers operate bus service on the same corridor, but only one has eliminated fares, the zero-fare service could be overutilized while the fare-charging service is underutilized. This could potentially result in longer wait or travel times for customers. In Northern Virginia, these cases could arise along corridors across the region on which Metrobus routes overlap existing service provided by local operators. Collaboration between overlapping transit systems in advance of fare policy changes could help define strategies for service optimization that benefits both the zero-fare and fare-charging systems, including coordinated service planning, clearer definition of the role and purpose of both services, and targeted messaging that explains reasons for using one service versus another.

Ridership

Opportunities

- **Ridership Impacts:** Under typical operating conditions characterized by a normal public health environment, the introduction of zero-fare or reduced-fare options almost always leads to increased ridership. Prior to the pandemic, transit systems that launched zero-fare programs, even if only temporarily, experienced ridership increases from 20% to as high as 85%. While transit systems tended to see the biggest increases upon program launch, which was usually accompanied by targeted marketing efforts, they were often able to sustain at least somewhat higher ridership levels over the long-term.
- **Ridership Recovery:** Offering zero- or reduced-fare options is one tool transit systems have to recover lost ridership after significant disruptions such as the COVID-19 pandemic or major transit capital projects that disrupt regular service.

Challenges

- **Operational Needs Associated with Increased Ridership:** Before launching zero- or reduced-fare options, transit systems should anticipate higher ridership and prepare for the operational adjustments that may be required based on higher levels of use. For example, if ridership grows enough, routes may serve more stops along each run which affects travel times and reliability. Higher ridership may also require a larger fleet to serve demand. Transit systems that anticipate these higher usage levels and prepare

for service adjustments or added costs are best equipped to accommodate the added ridership.

Transit Service Delivery

Opportunities

- **Travel Times and Reliability:** Zero-fare and reduced-fare options have the potential to reduce transit travel times and enhance on-time performance by reducing boarding times at stops. For zero-fare options, fare collection is no longer necessary, removing the need for riders to queue to pay fares while boarding buses. While reduced-fare programs do not eliminate the need for fare collection, they do reduce the need among certain rider groups, allowing some riders to board buses more quickly. Overall, with either shorter or nonexistent queues for fare payment, the boarding process can be quicker, which can reduce delays at stops, improve on-time performance, and enhance travel times. These improvements can be boosted even further with all-door boarding, often introduced along with zero-fare options, which enables riders to enter vehicles through all doors, reduces queueing at the front door, making the boarding process more efficient.
- **Operator Safety:** With elimination of the fare payment process for zero-fare options, customers will largely no longer have fare-related questions and disputes to negotiate with bus operators upon boarding; a common reason for operator/customer conflict. This allows operators not only to stay on schedule more easily, but to also focus on delivering quality service in a more secure driving environment.

Challenges

- **Service Schedule:** Service schedules may need to be adjusted to respond to operating conditions that may result from zero- or reduced-fare options—for example, faster travel times due to reduced boarding times or slower service due to higher ridership. In some cases, transit systems that implemented zero-fare or reduced-fare options found that operators were reporting greater difficulty in adhering to schedules. If transit systems are not prepared to make schedule changes, reliability could sharply decline and deter customer use. When eliminating or reducing fares, transit systems should anticipate the potential need for schedule revisions.

Cost and Revenue

Opportunities

- **Fare Collection Costs:** For zero-fare options, some costs related to fare collection may no longer be required. These include:
    - Capital costs for fareboxes and garage equipment, as well as future replacement costs related to technology updates
    - Fare collection system operating and maintenance costs

- SmarTrip regional operating costs
- Fare policy planning costs related to staff time devoted to analyzing and implementing fare changes
- Public communications costs related to disseminating fare information

- **Average Subsidy per Passenger:** For zero-fare options, higher ridership levels can mean a decrease in overall average subsidy per passenger, even though fare revenue would no longer be collected and the total cost and subsidy related to operating transit could increase.
- **Additional Funding:** Where transit system funding allocations are based on ridership levels, increased ridership resulting from fare elimination or reduction options could generate additional funding. The Virginia Department of Rail and Public Transportation (DRPT) allocates operating assistance funds based on a performance-based methodology that is partially based on ridership[2].

Challenges

- **With Zero-Fare, a Lost Revenue Source:** When fares are eliminated, the revenue that transit systems generate from fares is also eliminated, although this is often a smaller part of overall revenue. This includes the revenue generated through the SmartBenefits program. Cost savings from fare collection elimination may also be offset by increased operating costs. Transit systems should compare the revenue they generate from fares with the costs spent on fare collection to determine if the full loss of a revenue source is sustainable by alternate funding sources.
- **With Reduced-Fare, a Potential Cost Increase:** Since reduced-fare options do not eliminate the need for fare collection, costs for fare collection activities remain after the introduction of these programs. Furthermore, reduced-fare options, which may involve different fare levels for different rider types based on age, income level, etc., may require added administration costs, and could result in a net cost increase for transit systems. Transit systems can leverage existing processes or methods of proving eligibility to minimize administration costs.
- **Technology Costs:** In some cases, fare elimination or reduction programs could have impacts on a transit system's technology costs. For example, some transit systems collect ridership statistics using farebox data. When considering these options, transit systems should consider the impacts that fare collection systems have on other technologies, and anticipate potential costs related to technologies, such as automatic passenger counters (APCs). Alternatively, for temporary zero-fare programs, such as a pilot project, fareboxes would likely remain in place and would have to continue to be maintained. When fareboxes are removed in zero-fare programs, alternative data collection methods should be identified.

[2] http://www.drpt.virginia.gov/transit/merit/operating-and-capital-assistance/

- **Long-Term Financial Sustainability:** When identifying alternate funding sources to address the revenue loss associated with eliminating or reducing fares, transit systems should consider each source's long-term sustainability and availability. Transit systems that have reduced or eliminated fares have utilized a variety of alternative funding sources, including:
    - State assistance
    - Local general funds
    - Regional funds
    - Federal funds
    - Private partnerships—hospitals, businesses, non-profits, colleges, and universities

Business Case Considerations for Zero-Fare or Reduced-Fare Transit

The case for zero- or reduced-fare transit varies from community-to-community depending on its goals, the type of program under consideration, and community characteristics.

The goals and objectives of the Northern Virginia transit systems documented in recent Transit Development Plans (TDP) or Transit Strategic Plans (TSP) reveal some common themes. These can potentially be supported by zero- or reduced-fare options, or they could be in conflict. **Table 1** summarizes common themes related to fare collection, the majority of which could be supported by zero- or reduced-fare options.

Table 1: Common Transit System Goals

Goal Themes	Potential Impacts of Zero-Fare or Reduced-Fare Options
Accessibility	Supportive
Affordability for Customer	Supportive
Cost-Effectiveness and Fiscal Sustainability	Potential Challenge
Minimize Single-Occupancy Vehicle (SOV) Travel	Supportive
Ridership Growth	Supportive
Quality of Life	Supportive
User Friendliness	Supportive

The opportunities and challenges identified earlier in this section should be evaluated and, where possible, quantified by a transit system when determining its business case.

The following set of prompting questions, categorized by improvement goal or factor, can assist in determining a business case:

Community Benefits and Access to Transit

1. Who is riding transit in your community, and who stands to benefit most from zero-fare and reduced-fare options?
2. How do residents select a transportation mode? Is cost keeping people away from using transit?
3. What do local communities and economies stand to gain with eliminated or reduced transit fares?
4. Overall, what are the short-term and long-term benefits that zero-fare and reduced-fare options may provide to your community?

Ridership

1. Is ridership growth a priority for the transit system implementing zero- or reduced-fare options?
2. To what extent can your transit system accommodate increased ridership without requiring substantial added investment in vehicles, maintenance, etc.?

Transit Service Delivery

1. How does Northern Virginia's mobility environment lend itself to zero-fare or reduced-fare options, especially in consideration of transit reliability issues?
2. To reduce queueing and dwell times at stops after fare collection is eliminated, how easily can your transit system accommodate all-door boarding with sufficient space at stops to allow front and rear-door boarding and with updated information to inform customers about this new practice?
3. Can your transit system make schedule adjustments when needed, based on new mobility conditions?

Cost and Revenue

1. For zero-fare options, to what extent does the removal of fare collection costs offset the loss of revenue associated with the elimination of fares?
2. What overall effects will zero-fare or reduced-fare options have on funding, such as access to additional funding through increased ridership levels?
3. Are sustainable long-term funding sources available to help replace the loss of revenue associated with reduced or eliminated fares?
4. How would zero-fare affect regional transfer agreements, as well as the revenue flow associated with them?
5. What impacts will reducing or eliminating fares have on technology costs and capabilities?

3. Existing Conditions in Northern Virginia

Northern Virginia's Post-COVID-19 Mobility Environment

Shortly after the onset of the pandemic in the Spring of 2020, most transit systems in Northern Virginia, as well as nationwide, eliminated fares as a way of enhancing access to transit while reducing the surface/human-to-human contact and crowding issues associated with on-board fare payment. Transit systems' recent experimentation with operating without fares for an extended period, accompanied by a newfound need for ridership recovery, has spurred serious consideration of long-term or permanent fare elimination.

The pandemic has altered the mobility needs of major segments of the region's population. For instance, many office workers are still working from home, and have less need for the traditional weekday morning and evening commute. The individuals who do continue to ride transit are most often essential workers and others who may not have easy access to other forms of transportation and whose mobility needs are more widely varied.

By eliminating or reducing fares, transit access is broadened to a wider spectrum of customers and benefits those who have few transportation options and count on transit for daily commuting, shopping, medical services and other community access.

Status of Fare Collection in Northern Virginia

Historically, the Northern Virginia local bus systems (ART, DASH, Fairfax Connector, CUE, Loudoun County Transit, and OmniRide) have collected fares through the regional SmarTrip system managed by WMATA. SmarTrip, deployed by WMATA in 1999 and joined by the Northern Virginia bus systems between 2006 and 2008, is a smart card-based fare collection system that also supports cash payment on buses via the farebox. During the onset of the COVID-19 pandemic in 2020, the majority of bus systems temporarily eliminated fares both as a safety measure and to allow customers to board through the rear door instead of the front door where the farebox is. In 2021, fares were reinstated on most services as summarized in **Table 2**.

Table 2: Status of Northern Virginia Fare Collection During COVID-19 Pandemic

Bus System	Elimination of Fares	Resumption of Fares (status as of September 2021)
Arlington Transit	April 17, 2020	January 3, 2021
Alexandria DASH	March 20, 2020	March 15, 2021
Fairfax County Connector	March 24, 2020	January 4, 2021
Fairfax City CUE	March 19, 2020	N/A
Loudoun County Transit	March 30, 2020	May 3, 2021
OmniRide	March 25, 2020 (local and Metro Express)*	Local and Metro Express service zero-fare through June 2022*
Metrobus	March 23, 2020	January 3, 2021

*OmniRide continued fare collection on commuter service using SmarTrip only and no cash

While there is some variability in local bus fare programs and levels from system to system, SmarTrip provides payment consistency across the region and is the mechanism for offering regional bus-to-bus, bus-to-rail, and rail-to-bus transfer discounts to customers. The number of transferring customers is an important consideration for zero-fare or reduced-fare options, because transferring customers may not receive the same financial benefits as non-transferring customers. This is because many of the transit systems in the region have transfer agreements that effectively provide free transfers to their customers even when transferring between two systems. **Table 3** shows the percentage of SmartTrip transactions the involved a transfer for each transit system in October 2019. ART, DASH, Fairfax Connector, and CUE all had over half of their SmarTrip transactions involve a transfer.

Table 3: Transfer Rate for SmarTrip Users (October 2019)

Transit System	SmarTrip-Based Ridership Transferring Between Transit System and the Following:				Total Transferring
	Same Operator	Metrobus	Metrorail	Other Regional Operator	
Arlington Transit	6%	17%	25%	7%	**55%**
Alexandria DASH	7%	13%	28%	10%	**58%**
Fairfax County Connector	11%	8%	35%	13%	**67%**
Fairfax City CUE	6%	9%	37%	14%	**66%**
Loudoun County Transit	<1%	<1%	<1%	<1%	**1%**
OmniRide	3%	1%	7%	5%	**17%**

Source: WMATA

SmarTrip transactions only; excludes ridership recorded from cash transactions and farebox button presses.
One transfer is counted for each system in the data above. For example, a transfer from Fairfax County Connector to Fairfax City CUE is considered a transfer for both systems.

Additionally, all Northern Virginia systems currently have some form of zero- or reduced-fare programs for eligible customer groups, as summarized in **Table 4.** Program administration and eligibility requirements vary between systems.

Table 4: Summary of Existing Zero- or Reduced-Fare Programs in Northern Virginia

Fare Program ◑ Reduced Fare ○ Zero Fare	Arlington Transit	Alexandria DASH[1]	Fairfax County Connector	Fairfax City CUE[2]	Loudoun County Transit	OmniRide[3]	Virginia Railway Express	Metrobus
Seniors	◑	◑	◑	◑	◑	◑	◑	◑
Persons with Disabilities	○	○	◑	◑	◑	◑	◑	◑
K-12 Students	◑	○	○	○				○
Children	○	○	○	○	○	○	◑	○
Select Routes		○			○			
Select Employers	○	○						
Select University Students, Faculty or Staff				○	○			◑

[1]DASH will provide zero-fare rides on all buses starting September 5, 2021
[2]CUE remained zero-fare at the time of this white paper
[3]OmniRide remained zero-fare on local and Metro Express services at the time of this white paper

In 2020, WMATA initiated its multi-year Next Generation Bus Farebox System project that will replace the aging fleet of fareboxes and related garage equipment for Metrobus and participating regional bus systems. The new fareboxes will still offer SmarTrip and cash payments but will modernize the technology and support rear-door SmarTrip transactions. Not all regional bus systems will be required to replace fareboxes at the same time, and it is anticipated that transition will occur over time based on local needs, priorities, and available funding. Given that new fareboxes are a significant investment, the cost and timing of these replacements are important factors for Northern Virginia systems to consider as they evaluate future fare collection plans and programs. Capital costs of the new technology is estimated at approximately $160,000 per garage and $30,000 to $45,000 per bus farebox depending on features and order timing. If all six Northern Virginia local bus operators replaced equipment for their entire systems, this would require $35 million to $45 million in capital investment. WMATA's project is timely and important to the region because fareboxes will still be required for many zero- or reduced-fare implementation options and for bus systems that continue

Replacing all the bus fareboxes in Northern Virginia would cost $35 million to $45 million.

collecting fares. In addition to the farebox project, WMATA has plans for other SmarTrip and SmartBenefits upgrades in the future, including back-office upgrades that could enable acceptance of new forms of payment such as contactless bank cards.

In 2019, Northern Virginia local bus systems collected approximately $21 million in fare revenue, approximately 23% of operating costs.

Table 5 shows 2019 operating expenses, fare revenues, and farebox recovery of Northern Virginia transit systems as reported to the National Transit Database (NTD). Typical farebox recovery, or the amount of annual operating expenses covered by fare revenue, ranged from 4% to 27% for local bus services. This equates to approximately $21 million in annual fare revenue excluding commuter bus and Metrobus. Commuter bus services of Loudoun County Transit and OmniRide had significantly higher recoveries of 73% and 60%, respectively. This data represents an order-of-magnitude of the revenue replacement needs if fares are eliminated not accounting for any potential increases in operating expenses. It is important to note that this latest-published NTD data is prior to cost and revenue impacts of COVID-19, and current farebox revenues and recoveries are lower than in 2019.

Table 5: 2019 Transit System Farebox Recovery

Transit System	Mode	Operating Expenses (2019)	Fare Revenue (2019)	Farebox Recovery (2019)
Arlington Transit	Bus	$14,893,708	$3,659,929	**25%**
Alexandria DASH	Bus	$19,888,055	$4,255,954	**21%**
Fairfax County Connector	Bus	$85,469,022	$10,908,090	**13%**
Fairfax City CUE	Bus	$4,208,277	$1,128,298[1]	**27%**
Loudoun County Transit	Bus	$4,524,862	$197,254	**4%**
	Commuter Bus	$12,894,969	$9,395,270	**73%**
	All	$17,419,831	$9,592,524	**55%**
OmniRide	Bus	$15,807,559	$742,295	**5%**
	Commuter Bus	$17,514,811	$10,493,227	**60%**
	All	$33,322,370	$11,235,522	**34%**
All Transit Systems Above (excluding Metrobus)	Bus	$144,791,483	$20,891,820	**14%**
	Commuter Bus	$30,409,780	$19,888,497	**65%**
	All	$175,201,263	$40,780,317	**23%**
Metrobus	Bus	$731,946,008	$124,011,141	**17%**

[1] *Inclusive of contribution from George Mason University*

Source: 2019 National Transit Database

State, Local and National Initiatives

This section provides an overview of several recent or ongoing initiatives related to zero or reduced transit fares in Virginia, the Washington D.C. region, and nationally.

Virginia Department of Rail and Public Transportation

DRPT administers Transit Ridership Incentive Program (TRIP), a new statewide grant program created by the 2020 General Assembly session. The program dedicates funding to improving regional connectivity in urban areas and reducing barriers to transit use by supporting low-income and zero-fare programs. The latter portion of the program focus on the following eligible projects:

- The provision of subsidized or fully free passes to low-income populations
- The elimination of fares on high-capacity corridors, establishing zero-fare zones
- The deployment of an entirely zero-fare system

Project applications can be up to a maximum of three years, and it is anticipated that the state's contribution would decrease and the local share would increase as the project progresses. More information on the program is available from DRPT[3].

City of Alexandria

In April 2021, the City of Alexandria, in partnership with the Metropolitan Washington Council of Governments (MWCOG), completed a study to understand options and impacts of making transit more affordable for low-income residents. The study found that zero fares for all DASH riders would be the most beneficial scenario compared with two other options that would either provide zero fares or half-price fares and passes for only low-income residents on DASH and WMATA services. The study led to Alexandria City Council approving its FY 2022 budget which funds the elimination of DASH bus system fares, starting September 5, 2021.

Washington, D.C.

The Government of the District of Columbia started planning for a low-income fare pilot program in 2019, but the pilot was delayed due to the COVID-19 pandemic[4]. The pilot will be a collaborative effort between the Lab @ DC, District Department of Transportation (DDOT), WMATA, and DC Department of Human Services (DHS) to study how different levels of transit discounts impact mobility and well-being.

Federal Programs

Nationally, momentum and interest has been building for zero- or reduced-fare transit after temporary fare elimination by most transit systems during the COVID-19 pandemic. The Federal government is active in reauthorization of transit funding and infrastructure programs, and these should be monitored.

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[3] http://www.drpt.virginia.gov/transit/trip-transit-ridership-incentive-program/
[4] https://thelabprojects.dc.gov/fare-subsidy

4. United States and International Examples

During the development of this white paper, research, literature, and case studies were reviewed. While each community and transit system is unique, these sources are informative and can be applied to considerations for Northern Virginia. A list of example transit systems and sources that were reviewed are included in the **Appendix**.

Overall, the key takeaways revealed by the examination of literary sources and case examples include the following:

- Aside from fare elimination during the COVID-19 pandemic, transit systems have most frequently considered zero-fare programs as temporary, often for the purpose of generating ridership in a promotional manner.
- Zero-fare and reduced fare programs have experienced the most success when applied by smaller transit systems, often operating in small urban, resort areas, or college towns; however, there are a growing number of larger transit systems considering these fare options to promote access and grow ridership.
- Concerns about lost revenue and financial sustainability have been the primary barriers preventing transit systems from implementing zero or reduced-fare programs long-term or reverting back to fare collection after a period of eliminating fares.

Case Studies

Three peer transit systems with similar ridership or service to one or more NVTC transit systems were reviewed during the development of the white paper: Greater Richmond Transit Company (GRTC), Charlottesville Area Transit (CAT), and Chapel Hill Transit (CHT).

Table 6. Characteristics of Case Study Transit Systems

Bus System	Location	Zero-Fare Years	Population (Density, per sq. mi.)	Number of Routes	Farebox Recovery Rate
GRTC	Richmond, VA	2020-present; will extend if funded	449,572 (1,980)	44	20%
CAT	Charlottesville, VA	2020-present; will extend if funded	92,359 (2,431)	12	7%
CHT	Chapel Hill, NC	2002-Present	80,218 (1,294)	21	0%

Greater Richmond Transit Company

Given her passion and experience with zero-fare service, NVTC met with the CEO of GRTC, Julie Timm, to discuss GRTC's experience with planning and eliminating fares and the lessons learned along the way.

GRTC serves the City of Richmond as well as portions of the neighboring counties. Although fares were eliminated at the start of the COVID-19 pandemic like most other transit systems, GRTC started considering doing so in December 2019. COVID-19 enabled GRTC to experience zero-fare service directly without having to conduct a pilot program, which helped CEO Timm and her team advocate for and garner Board approval for at least one more year of zero-fare service (ending June 30, 2022). Now, GRTC is working to apply for DRPT's TRIP funding and search for alternate funding sources to continue zero-fare service indefinitely on local bus, Pulse (bus rapid transit), express bus, and Community Assisted Ride Enterprise (CARE)/standard paratransit. GRTC's premium on-demand service, CARE Plus, will still charge passengers a fare.

Prior to the pandemic, GRTC studied the costs and benefits of a means-tested fares program but found that it would result in increased costs for the agency and a need for more staff. Zero-fare service was initially considered because of the relatively high costs for fare collection—costing approximately $2 million per year to collect $7 million in fares largely from residents with the lowest incomes and from the most economically distressed areas. In the fall of 2019, GRTC conducted a passenger survey which found that 54% of passengers who were reached earned less than $25,000 per year. Furthermore, in 2019 GRTC shifted focus away from implementing a costly account-based fare system, which would have resulted in fare increases. Fare elimination had large positive benefits to GRTC's customers. If fares had remained in place, customers may have lost jobs or homes, lost access to health care, had limited access to groceries, and more. GRTC views operating zero-fare service as putting $7 million directly back into the local economy instead of having low-income passengers put that into a farebox.

Another point that CEO Timm raised is that only a small percentage of GRTC's service is express, which tends to have a higher farebox recovery rate than local service and may be more difficult for certain transit systems with more express service to justify dropping fares. One more factor that helped GRTC successfully push for extended zero-fare service is their historically reliable APC system for counting passengers—another feature that is not ubiquitous among transit systems that have historically used their fareboxes to count passengers.

GRTC instituted a policy that requires passengers to exit after one round-trip on a bus, which has helped to mitigate concerns over customers dwelling on buses. GRTC allows for one round-trip because certain fixed routes act as circulators that serve one roadway for the outbound leg and a different one for the inbound so passengers will ride a vehicle to the end of the route and remain on the vehicle to reach their final destination. Furthermore, zero-fare service required GRTC planners to adjust route timetables because of travel time savings from faster boarding.

Despite these new challenges, CEO Timm emphasized that these challenges should instead be viewed as opportunities. Facility and vehicle constraints should not be the reason to reinstitute fares, they should instead be used to justify the need for additional funding for service improvements. GRTC also increased the frequency of facility and vehicle cleaning and expects maintenance costs to also increase if ridership rebounds significantly after the

pandemic subsides. GRTC is now focused on improving connectivity and benefiting the community as opposed to simply increasing ridership and maintaining the pre-COVID status quo.

Charlottesville Areas Transit

NVTC gathered information on CAT's plans for zero-fare service from the study team conducting CAT's Fare-Free Service Feasibility Study. CAT provides transit service to the City of Charlottesville, VA, and has a partnership with the University of Virginia (UVA) to allow UVA students to ride CAT vehicles for free, similar to the partnership in Fairfax City between City of Fairfax City-University Energysaver (CUE) and George Mason University. CAT initially adopted a zero-fare policy as a safety measure during the COVID-19 pandemic, requiring passengers to board buses via the back doors to provide ample distance between passengers and operators. CAT was able to supplement their revenues and offset their losses in fare revenue using funding from the Coronavirus Aid, Relief, and Economic Security (CARES) Act. In 2021, CAT initiated a feasibility study to assess impacts associated with continuing zero-fare service for a pilot period.

CAT has been using CARES/American Rescue Plan Act (ARPA) funds to replace fare revenue and has a significant amount of these funds that will be used over the next three to five years to replace fare revenue. CAT is currently evaluating whether additional local funds will be necessary and whether it will be able to use DRPT's TRIP funding. As ridership returns to typical levels, CAT is hoping that increased ridership resulting from zero-fare service will put the agency in an advantageous position for accessing additional state and federal operating assistance funds, based on the ridership-dependent formulas that DRPT uses.

Future zero-fare policy is under study, which CAT will share with the City of Charlottesville, Albemarle County, and the Regional Transit Partnership to gather formal support for CAT's application to the TRIP grant program. A similar effort may soon get underway for CAT's sister agency, Jaunt, which will review the potential for zero-fare service for paratransit riders in the CAT service area. A second Jaunt effort may be beginning soon to study zero-fare service in the rural areas outside of CAT's service area, which would require the buy-in of additional county boards (Louisa, Greene, Buckingham, Fluvanna, and Nelson counties).

Chapel Hill Transit

NVTC gathered information on Chapel Hill Transit's experience from public literature. CHT provides service to the Towns of Chapel Hill and Carrboro, North Carolina, as well as the University of North Carolina-Chapel Hill (UNC). Unlike CUE and CAT, however, CHT's partnership with UNC allows all passengers to ride CHT vehicles for free—not just UNC students. CHT stopped collecting fares in 2002, and the agency does not have capital or administrative systems in place to charge fares.

In 2001, UNC concluded that administering the fare subsidy program for UNC students and employees was too time intensive. Simultaneously, CHT determined that that they were collecting $250,000 annually in farebox revenue from passengers not travelling to or from the UNC campus (8% of operating total system costs), after removing university-related farebox

revenue from the equation. Given the low farebox recovery ratio, CHT decided to forego the farebox revenue to boost ridership.

CHT's costs are shared among the two towns and the university, with students prepaying UNC's share thus practically eliminating all administrative tasks for the university. A zero-fare system also eliminated the need for CHT to procure an expensive system for reading UNC identification cards. CHT and the three entities did not conduct a detailed cost-benefit analysis of eliminating fares; however, they presumed net costs would be very low given that they would likely be able to garner additional funding from both state and federal formula grants as CHT's ridership increased.

Given UNC's continuously increasing costs to administer the fare subsidy program, university administrators concluded that a zero-fare system was most the logical. With no capacity for more parking spaces on campus, it was also in the university's best interest to shift its focus to encourage motorists to use off-campus park-and-ride lots served by campus shuttles. Reducing demand for on-campus and downtown parking facilities has allowed for more residential and commercial development of those facilities while also enabling a safer pedestrian environment. The Town of Chapel Hill's Planning Department now plans new development to support transit ridership.

From January to September 2002, CHT's ridership increased 43% compared to the same period in 2001 (from 2,100,866 passengers in 2001 to 3,006,798 passengers in 2002). Although CHT's service hours also increased 11%, CHT concluded that implementing systemwide zero-fare service was the primary cause of the significant increase in ridership. Since 2002, CHT's ridership has continued to grow, and the system now carries 7.5 million passengers per year, making CHT one the largest zero-fare systems in the world.

CHT's zero-fare operations has two exceptions: the Chatham Transit (CT) Express, which Chatham Transit Network jointly operates for service between the Town of Chapel Hill and the Town of Pittsboro; and the Tar Heel Express, which provides transit service to and from sporting events on the UNC-Chapel Hill campus.

5. Conclusion

There are a variety of opportunities, challenges, and other considerations to evaluate when determining zero-fare or reduced-fare options. **Figure 3** summarizes the continuum of options that could be implemented as zero fares or reduced fares. **Table 7** summarizes considerations included throughout the white paper.

Figure 3: Continuum of Implementation Options

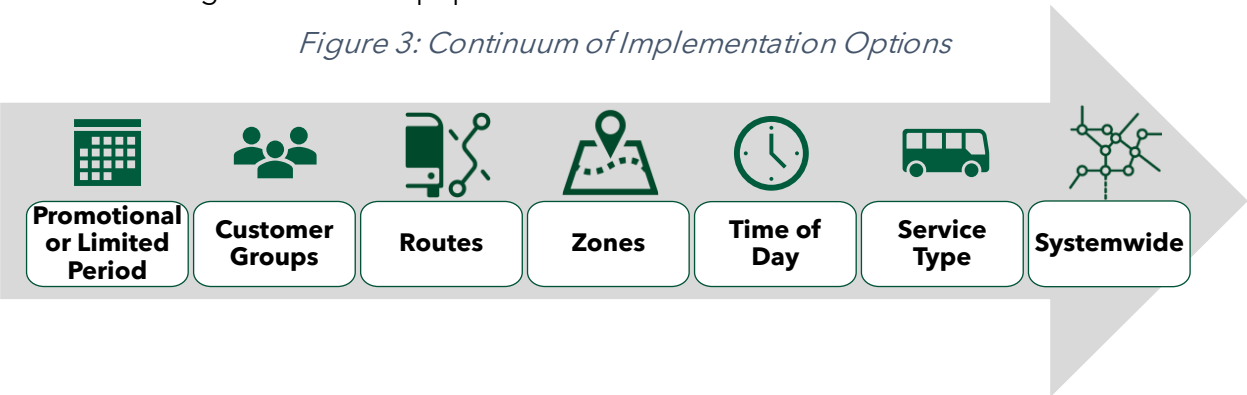


Table 7: Summary of Potential Opportunities, Challenges and Other Considerations for Zero-Fare and Reduced-Fare Transit

Opportunities	Challenges	Other Considerations
• Improved access to transit • Improved access to jobs and services • Enhanced livability (quality of life and environmental benefits) • Support for local economies • Increased ridership and post-pandmeic ridership recovery • Improved performance—faster boarding and reliability • Reduced cost of fare collection (capital and operations) • Decrease in average subsidy per passenger with increased ridership • Potential for additional funding with increased ridership	• Need for new policies to promote customer safety and security • Fare program eligibility limits • Operational needs associated with increased ridership • Service schedule revisions • With zero fares, a lost revenue source • With reduced fares, a potential cost increase • Technology costs for alternative data sources • Long-term financial sustainaiblity of revenue replacement	• Coordination with paratransit programs • Regional cohesion • Changes in mode share • Scalability • Experimental/pilot versus permanent program • Transfers between zero-fare and fare-collecting transit systems • Bus services from multiple providers in a shared corridor • Revenue coming from SmartBenefits

Implementation Considerations

In addition to the various opportunities and challenges previously discussed, transit system decision makers should consider the following to optimize implementation success:

- Potential fare replacement funding sources and longevity of these sources
- Strategic timing of the transition based on operational needs and process, as well as customer communication and marketing needs
- Defining fare program duration as either temporary—for promotional or short-term testing purposes—or ongoing as a permanent departure from previous fare policy
- Defining how new policies will be measured and evaluated against intended goals and benefits
- Quantitative financial, operational, and sustainability data analysis for decisions on policy
- Communication and marketing with Northern Virginia communities on benefits and changes to how customers ride the bus
- Coordinating rollout across multiple transit systems in the region to maximize access, regional cohesion, and customer ease-of-use
- The potential need for ongoing fare collection equipment maintenance, based on temporary fare programs with uncertain timeframes, as well as performance data collection needs

6. Commissioner Questions and Feedback

At the July 2021 meeting, the Commission received three presentations from NVTC, DASH and DRPT as part of a roundtable discussion regarding zero-fare and reduced-fare programs. Several comments and questions were raised by Commissioners for consideration in the white paper, and these are summarized in this section.

Data

What are the first-order impacts of reducing or eliminating fares to costs and revenues (understanding that second or third-order impacts are challenging to quantify)?

Potential changes to costs and revenues vary by transit system. The **Cost and Revenue** section provides an overview of cost and revenue areas that could be impacted. **Table 5** shows historical total operating costs, fare revenue, and farebox recovery by system for context. Further analysis and study of unique transit system fare collection cost and revenue data can be explored by NVTC or individual transit systems as a next step to this informational white paper.

Can differentiated analysis of farebox recovery be conducted? For example, it is more feasible to eliminate fares for a transit system with 5% recovery than 50% recovery.

Transit systems with lower farebox recovery may find it easier to eliminate fares because there is a lower share of total operating costs that needs to be funded through alternate revenue sources. **Table 5** shows 2019 total operating costs, fare revenue, and farebox recovery for Northern Virginia bus systems. Most of the U.S. transit systems that have or are considering eliminating fares range from 7% to 20% farebox recovery.

How much revenue comes from the SmartBenefits program?

The table below provides an example of monthly revenue received through the SmartBenefits program for May 2019. For context, 2019 total fare revenue for Northern Virginia operators (local bus and commuter bus) was approximately $41 million (see **Table 5**). SmartBenefits made up approximately 40% of total fare revenue for Northern Virginia operators.

Table 8: Monthly SmartBenefits Revenue

Monthly SmartBenefits Revenue	Pre-COVID (May 2019)
Northern Virginia Operators	$1,407,000
DC and Maryland Operators	$248,000
WMATA	$16,704,000
Total	**$18,359,000**

Source: WMATA; numbers rounded to nearest thousand

Further analysis and study of unique transit system fare revenue data can be explored by NVTC or individual transit systems as a next step to this informational white paper.

What is the impact to data collection—for example tracking transfer discounts and origin-destination data for planning purposes?

For zero-fare options, the farebox would serve a reduced function as a data collection method. For temporary or experimental zero-fare programs, transit systems may want to keep fareboxes in place until long-term fare policies are determined and for bus operators to manually track ridership counts. A source of origin-destination data would be lost if customers are not required to tap SmarTrip cards to the farebox. Transit systems could utilize alternate methods for collecting ridership data such as automatic passenger counters (APCs), manual sampling or surveys, or emerging forms of origin-destination information such as location-based services data from mobile devices. The **Cost and Revenue** section provides more information on technology cost considerations.

For transfers, customers would effectively receive a full fare credit when transferring between a zero-fare bus and a regional transit system charging fares. Since this is how bus-to-bus transfer credits currently work, transferring customers would not realize the same cost-savings of non-transferring customers. Customers transferring from a zero-fare bus to Metrorail would also not benefit from a lower cost overall trip because they would effectively get the same discount as they do today.

Equity and Access to Transit

What are examples of reduced-fare program for particular customer groups?

The **Zero-Fare or Reduced-Fare Implementation Options** section provides details and examples of reducing or eliminating fares for particular customer groups. Reduced-fare programs can result in less fare revenue in addition to increased program administration cost. These considerations are included in the **Cost and Revenue** section. Identifying eligible population groups can introduce risks of bias and stigmatizing beneficiaries. Other considerations are included in the **Community Benefits and Access to Transit** section.

What are examples of "pay what you can" approaches such those in Europe?

Pay-what-you-can models can be found in a variety of non-profit organizations (performing arts, museums, restaurants) but there are few examples of public transit systems formally adopting this type of fare policy. *Lets Go Services* is an example of a non-profit organization in Richmond, VA, that provides donation-based transportation services for veterans, families in need, the elderly, and persons with disabilities.

Many European transit systems have adopted honor-based proof-of-payment fare systems. Fares are enforced through random spot checks by inspectors to ensure passengers have paid their fare, but fines can be issued for fare evasion.

Financial Sustainability

How can long-term sustainability of fare programs be ensured?

The **Cost and Revenue** section notes the challenge of relying on federal or state programs for lost fare revenue. These programs are valuable to established new fare programs but they can fluctuate year-to-year are not intended to be long-term funding sources. Long-term sustainability ultimately comes down to political and community will to identify alternatives to fare revenue.

Further analysis and study of unique transit system fare collection cost and revenue data can be explored by NVTC or individual transit systems as a next step to this informational white paper.

Other

Goal setting is fundamental for Northern Virginia transit systems to consider, and these may be different from community to community.

Table 1 summarizes goal themes that appear among multiple transit systems. Many of these goals could be supported by zero or reduced fares, but goals of financial sustainability could be in conflict.

Does it matter if one system is zero-fare in the region and another is not?

Mixed fare policies across the region could contribute to customer confusion and require careful program marketing. Bus routes of multiple transit operators that run in the same corridor could experience demand shift towards the zero-fare service, resulting in underutilized parallel routes. Transfers between zero-fare buses and fare-charging buses would not provide additional cost-saving benefits to customers compared to today, given current regional bus transfer agreements. The same is true for bus-to-rail transfers and rail-to-bus transfers (if regional bus systems also adopt the free transfer policy WMATA plans to implement in Fall 2021). Regional sharing of SmarTrip costs could also be impacted, with the remaining transit systems paying a greater share of the total SmarTrip operating cost.

Appendix

Examples, Sources, and References

Table 9: Transit System Examples

Transit System	Relevance	Location Characteristics	Location	Service Population
CATbus	Zero-fare 1996 to present	Suburban	Clemson, NC	27,883
Advance Transit	Zero-fare 2000 to present	Urban, Suburban, Exurban	Lebanon, NH	216,923
Chapel Hill Transit	Zero-fare 2002 to present	Urban, Suburban	Chapel Hill, NC	80,218
Cache Valley Transit	Zero-fare 2003 to present	Suburban, Exurban, Intercity	Logan, UT	95,500
SMART Transit	Zero-fare 2004 to present	Suburban, Intercity	Moscow, ID	86,995
Corvallis Transit	Zero-fare 2011 to present	Urban	Corvallis, OR	62,433
Mountain Line	Zero-fare 2015 to present	Urban, Suburban	Missoula, MT	82,157
DC Circulator	Zero-fare February – September 2019	Urban	Washington, D.C.	317,779
MVRTA	Zero-fare on 3 routes September 2019 to present	Urban, Suburban, Intercity	Lawrence, MA	306,339
KCATA	Hoping to become zero-fare systemwide, need funding	Urban, Suburban, Intercity	Kansas City, MO	788,748
Intercity Transit	Zero-fare January 2020 to present	Urban, Suburban, Intercity	Olympia, WA	185,500
WRTA	Studied becoming zero-fare, recently voted to do so	Urban, Suburban, Exurban	Worcester, MA	479,329
GRTC	Zero-fare 2020 to present; evaluating funding	Urban, Suburban	Richmond, VA	449,572
CAT	Zero-fare 2020 to present; evaluating long-term feasibility	Urban, Suburban	Charlottesville, VA	92,359

Transit System	Relevance	Location Characteristics	Location	Service Population
Ride On	Currently studying becoming zero-fare; local	Urban, Suburban	Montgomery County, MD	971,777
TriMet	Zero-fare zone 1975-2012; means-tested fares 2018 to present	Urban, Suburban	Portland, OR	1,565,010
King County Metro	Means-tested fares February 2020 to present	Urban, Suburban	Seattle, WA	2,149,970
MBTA	Studying both zero-fare and means-tested fares	Urban, Suburban	Boston, MA	3,109,308
LA Metro	Low-income fare program 2018 to present Zero-fare pilot for low-income and students approved May 2021	Urban, Suburban, Intercity	Los Angeles, CA	8,621,928
CTransit	Zero-fare weekend service during summer 2021	Urban, Suburban, Intercity	CT	Multiple Transit Systems

There are several international examples of transit systems eliminating fares. These include:

- **Luxembourg**: first county in the world to offer free public transit nationwide starting in 2020 to alleviate congestion and bring environmental benefits
- **Dunkirk, France**: made its local bus system zero-fare in September 2018 and previously offered zero-fare weekend and holiday service starting in 2015
- **Tallin, Estonia**: first European capital city to offer zero-fare transit service starting in 2013 and eliminated fares on intercity bus services across the county in 2018. Non-residents are required to still pay fares, and residents are required to use a personalized smart card.
- **Changning, Hunan, China**: fares were eliminated on bus services in 2008
- **Tokyo, Japan**: three zero-fare shuttle buses serving tourist locations
- **Kuala Lumpur**: Go KL City Bus service started in 2012 and now has four zero-fare bus routes in the Central Business District and four zero-fare feeder routes

Many international transit systems also have honor-based proof-of-payment fare systems. Customers do not pay fares at the time of boarding a transit vehicle, but fares are enforced through random spot checks by inspectors to ensure passengers have pre-paid their fare and fines can be issued for fare evasion.

Additional Sources and References

Aguilar, M., Bénichou, L., Blanchard, S., George, J, & Subramaniam, S. (2021). After showing its worth during pandemic, momentum builds for free or reduced-fare transit. *The Washington Post*. https://www.washingtonpost.com/transportation/interactive/2021/public-transportation-free-fare-future/

Barry, E. (2020). Should public transit be free? More cities say, why not? *The New York Times*. https://www.nytimes.com/2020/01/14/us/free-public-transit.html.

ch2m. (2017). Regional means-based transit fare pricing study. https://mtc.ca.gov/sites/default/files/Summary_MTC_Mean_Based_Overview_DRAFT_FINAL.pdf.

Darling, W., Carpenter, E., Johnson-Praino, T., Brakewood, C., & Voulgaris, C. T. (2020). A comparison of reduced-fare programs for low-income transit riders. *Transportation Research Record*. https://trid.trb.org/view/1759614

DC Circulator. (2019). Mayor Bowser announces free rides on DC Circulator during #FareShotFebruary. https://www.dccirculator.com/mayor-bowser-announces-free-rides-on-dc-circulator-during-fairshotfebruary/.

DDOT. (2021). Kids ride free program. https://ddot.dc.gov/page/kids-ride-free-program

DRPT. (2021). MERIT: Operating and Capital Assistance. http://www.drpt.virginia.gov/transit/merit/operating-and-capital-assistance/.

DRPT. (2021). TRIP Transit Ridership Incentive Program. http://www.drpt.virginia.gov/transit/trip-transit-ridership-incentive-program/.

Fairfax County. (2021). Student bus pass program. https://www.fairfaxcounty.gov/connector/student-pass

Foursquare Integrated Transportation Planning. (2021). City of Alexandria low-income fare pass assessment final summary report. https://www.alexandriava.gov/uploadedFiles/tes/info/MWCOG-Alexandria-TLCLowIncomeFarePassAssessment-Final%20Report_Final.pdf

Johnson Hess, A. (2020). Americans spend over 15% of their budgets on transportation costs—these US cities are trying to make it free. CNBC. https://www.cnbc.com/2020/03/02/free-public-transportation-is-a-reality-in-100-citiesheres-why.html.

LA Metro Board. (2018). 2017-0813 - New Low Income Fare Subsidy Program (LIFE) Program. https://boardagendas.metro.net/board-report/2017-0813/.

LA Metro Board. (2021). 2021-0452 – Fareless System Initiative Next Steps Informational Report. https://boardagendas.metro.net/board-report/2021-0452/.

Mountain Line. (2021). Mountain Line benefits us all. https://mountainline.com/zero-fare.

National Academies of Sciences, Engineering, and Medicine. (2012). TCRP Synthesis 101: Implementation and outcomes of fare-free transit systems. https://www.nap.edu/catalog/22753/implementation-and-outcomes-of-fare-free-transit-systems.

Nelson\Nygaard Consulting Associates, Inc. (2008). TriMet fareless square policy review. https://trimet.org/pdfs/news/farelessreport.pdf.

Nelson\Nygaard Consulting Associates, Inc. (2015). Chapel Hill Transit – Fare Implementation Analysis. https://www.townofchapelhill.org/home/showdocument?id=29776.

NTD Transit Agency Profiles. (2019). https://www.transit.dot.gov/ntd/transit-agency-profiles

Ramos, N. (2019). 'Just make it free': Lawrence paid all the fares for three bus routes, and ridership is up. *Boston Globe*. https://www.bostonglobe.com/2019/12/18/metro/just-make-it-free-lawrence-paid-all-fares-three-bus-routes-ridership-is-up/.

Ronseca, R. (2021). Most LA Metro riders could ride for free starting next year under new pilot plan. LAist. https://laist.com/news/los-angeles-metro-fareless-transit-pilot.

Rosenblum, J. (2019). How low-income transit riders in Boston respond to discounted fares: a randomized controlled evaluation. http://equitytransit.mit.edu/wp-content/uploads/2019/06/whitepaper_v8.pdf.

Saphores, J., Shah, D., & Khatun, F. (2020). A review of reduced and free transit fare programs in California. University of California Institute of Transportation Studies. http://dx.doi.org/10.7922/G2XP735Q.

Schmitt, A. (2018). The movement for more equitable transit fares. Streetsblog USA. https://usa.streetsblog.org/2018/10/26/the-movement-for-more-equitable-transit-fares/.

The Lab @ DC. (2021). Can discounted transit improve mobility and well-being for low-income residents? http://thelabprojects.dc.gov/fare-subsidy.

The Office of Governor Ned Lamont. (2021). Governor Lamont announces Weekend Wheels fare-free summer bus Service will also include all local public bus routes in Connecticut. https://portal.ct.gov/Office-of-the-Governor/News/Press-Releases/2021/05-2021/Governor-Lamont-Announces-Weekend-Wheels-Fare-Free-Summer-Bus-Service-Will-Also-Include-All-Local.

The Research Bureau. (2019). The Implications of a fare-free WRTA. https://www.wrrb.org/reports/2019/05/the-implications-of-a-fare-free-wrta/.

TriMet. (2021). Honored citizen fares. https://trimet.org/fares/honoredcitizen.htm

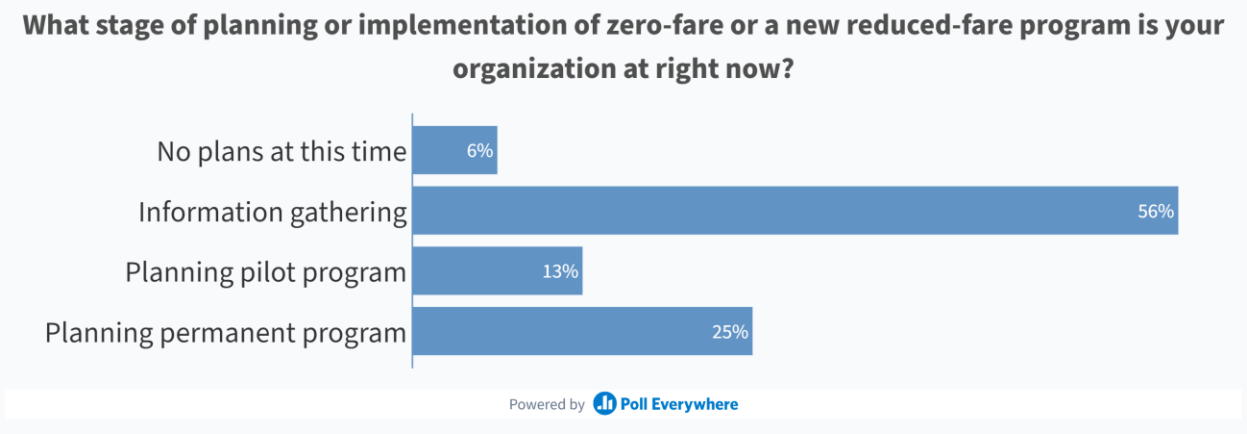
UTA. (2021). Free fare zone. https://www.rideuta.com/Fares-And-Passes/Free-Fare-Zone

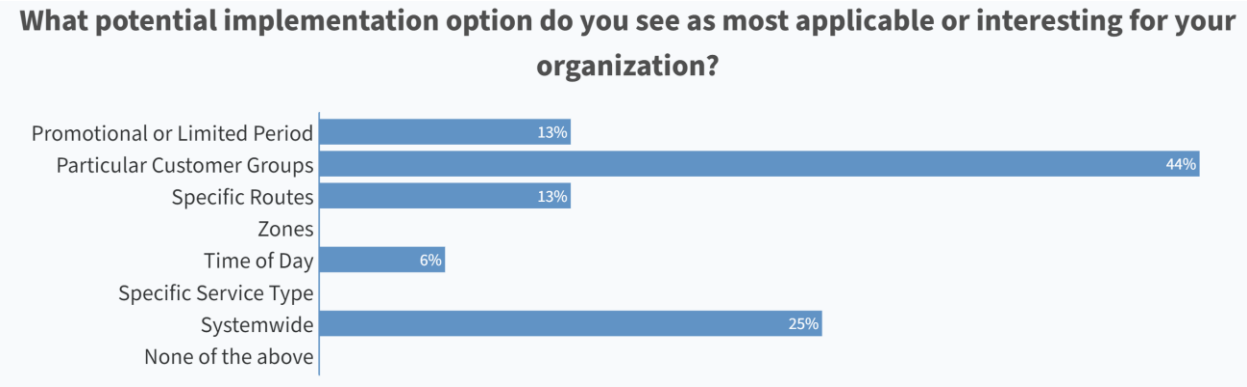
WMATA Finance and Capital Committee. (2019). DC low-income fare pilot. https://www.wmata.com/about/board/meetings/board-pdfs/upload/3C-DC-Low-Income-Fare-Pilot.pdf.

Yeung, P. (2021). How France is testing free public transport. *BBC*. https://www.bbc.com/worklife/article/20210519-how-france-is-testing-free-public-transport.

NVTC Workshop—June 8, 2021

NVTC facilitated a workshop with local jurisdictions and transit operators on options for zero-fare/reduced-fare transit in Northern Virginia. NVTC shared findings from its initial research on considerations and implementation options. Workshop attendees provided input for NVTC's white paper on the subject, including interest/motivations, lessons learned from zero-fare operations during the pandemic, and opportunities/challenges for consideration. The following charts summarize the results of polling questions asked during the workshop.





NVTC
NORTHERN VIRGINIA TRANSPORTATION COMMISSION

novatransit.org
2300 Wilson Boulevard, Suite 230
Arlington, VA 22201
(703) 524-3322
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