



CITY OF RICHMOND
CITY AUDITOR

DATE: December 3, 2019

TO: Ms. Julie Timm
CEO of GRTC

FROM: Louis Lassiter *LL*
City Auditor

SUBJECT: Greater Richmond Transit Company
Revenues

The City Auditor's Office has completed the GRTC Revenues audit and the final report is attached.

We would like to thank the staff of the GRTC for their cooperation and assistance during this audit.

Attachment

cc: The Richmond Audit Committee
The Richmond City Council
Lenora Reid, Interim Chief Administration Officer

Intentionally left blank

City of
RICHMOND
Office of the City Auditor

Audit Report# 2020-09
**Greater Richmond Transit Company (GRTC)
Revenues Audit**
December 3, 2019



Audit Report Staff

Louis Lassiter, City Auditor
Lily Hernandez, Deputy City Auditor
W. Bret Lewis, Lead Auditor
Jonolyn Brevard Wills, Senior Auditor

[Executive Summary](#) **i**
[Background, Objectives, Scope, Methodology](#) **1**
[Findings and Recommendations](#) **8**
[Management Responses](#) **Appendix A**

Highlights

Audit Report to the Audit Committee, City Council, and the Administration

Why We Did This Audit

The Office of the City Auditor conducted this audit as part of the FY20 audit plan approved by the Audit Committee. The objectives for this audit were to evaluate the finances of GRTC by reviewing the internal controls over revenue collections.

What We Recommend

GRTC Management

- Ensure the enforcement officers are qualified to issue civil summonses to fare evaders.
- Ensure the vendor issues summonses to fare evaders as required in the contract.
- Establish an oversight process to ensure the vendor's Enforcement Officers conduct proof of payment inspections as required.
- Work with the Farebox team to increase the purchase date font size on the Pulse tickets to enhance the Fare Enforcement Officers' ability to perform their duties.
- Conduct an independent fare evasion study which includes a statistical sample for the Pulse line.
- Implement adequate internal controls over the jam box collection process by requiring the presence of at least two individuals when collecting and counting funds from the jam boxes.
- Develop and implement standard operating procedures for reconciling the funds collected from the Pulse Ticket Vending Machines.



Greater Richmond Transit Company – Revenues Audit

Background - The Greater Richmond Transit Company (GRTC) Transit System was founded in 1860. On April 12, 1973, Chesterfield County and the City of Richmond purchased GRTC from private owners and incorporated it to provide public transportation to the Greater Richmond area. GRTC has 40 regular routes that span the areas of the City of Richmond, Henrico, Petersburg, and Chesterfield. On June 24, 2018, the Pulse line was launched. The Pulse is a 7.6 mile Bus Rapid Transit System (BRT) that runs nine buses during its peak times with a frequency of every 10 minutes.

Commendations

- GRTC has strong internal controls to safeguard cash counted in the Money Room.
- The process for the Farebox and the Ticket Vending Machine (TVM) collections have controls in place to safeguard the funds collected.
- GRTC has strong internal controls over the reconciliations for credit card payments and Farebox collections.

Needs Improvement

Finding #1 - Power to issue Summonses - The Fare Enforcement vendor is not in compliance with the summons contract requirement as the fare enforcement officers are not qualified to exercise this power.

Finding #2 – Enforcement Officer Inspections – The auditors rode the Pulse Rapid Transit for 58 rides, from August 16, 2019 through August 22, 2019. On 37 of 58 rides, Fare Enforcement Officers (FEO) were not present. On 21 of 58, the FEOs were present. However, in 20 out of 30 encounters with the FEOs, they did not fully perform the enforcement duties as required. GRTC paid approximately \$395,000 in FY19 for a service that is not functioning as intended.

Finding #3 - Fare Evasion Rate - GRTC currently estimates their fare evasion rate for the Pulse line between 12% and 14%. GRTC is aware that their current calculation method is not an accurate representation of the true evasion rate. Without an accurate fare evasion rate, GRTC may be unable to assess the severity of fare evasion and its financial impact.

Finding #4 – Jam Box Collections - A locked box called a “jam box” is on each bus to be used when the regular payment machine malfunctions or gets jammed. Tracking mechanisms and controls need improvement to account for all the funds deposited in the jam boxes. During FY19, the jam boxes and the deadline buses revenues totaled approximately \$20,000.

Finding #5– Ticket Vending Machines (TVM) Reconciliations - The GRTC Pulse Route has 26 TVMs for patrons to purchase tickets. When funds are collected from the TVMs, a breakdown of the total funds collected is printed and retrieved. We requested four days of TVM collections and supporting documentation. GRTC staff could only provide documentation for two. We noted the TVM collection printouts are sometimes shredded prior to the reconciliation. Without reconciliations, GRTC management does not get any assurance on the completeness of the funds deposited.

Other Observations – The auditors benchmarked other Rapid Transit lines to understand their Fare Enforcement activities and two agencies responded. The two respondents stated they issue citations. Currently, GRTC does not issue citations.

We researched available grants from the Federal Transportation Administration and noted 11 grants were applicable to GRTC in FY19. GRTC received funding for two automatic grants totaling \$12.75 Million. For the remaining nine, non operational/specialized grants a project need must exist before applying. According to GRTC management, the project needs did not exist at the time.

Management concurred with 7 of 7 recommendations. We appreciate the cooperation received from management, staff and the vendor while conducting this audit.

Richmond City Auditor's Report #2020-09

Greater Richmond Transit Company (GRTC)

Revenues Audit

December 3, 2019

BACKGROUND, OBJECTIVES, SCOPE, METHODOLOGY, MANAGEMENT RESPONSIBILITY and INTERNAL CONTROLS

This audit was conducted in accordance with the Generally Accepted Government Auditing Standards promulgated by the Comptroller General of the United States. Those Standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on the audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on the audit objectives.

BACKGROUND

Overview

The Greater Richmond Transit Company (GRTC) Transit System was founded in 1860. On April 12, 1973, Chesterfield County and the City of Richmond purchased GRTC from private owners and incorporated it to provide public transportation to the Greater Richmond area. GRTC has 40 regular routes that span the areas of the City of Richmond, Henrico County, City of Petersburg, and Chesterfield County.

On June 24, 2018, GRTC launched the Pulse line. The Pulse is a 7.6 mile Bus Rapid Transit System (BRT) that runs nine buses during its peak time with 14 stops from Willow Lawn to Rocketts Landing every 10 minutes.

Richmond City Auditor's Report #2020-09*Greater Richmond Transit Company (GRTC)**Revenues Audit**December 3, 2019*

The following table reflects the variations between the regular GRTC bus routes and the Pulse route.

	Regular Bus Route	PULSE Route
Entry to Bus	Only the front door.	Front or back door
Payment Options	Patrons must pay upon entering the bus at the farebox or have a prepaid ticket. Patrons paying on the bus must use exact change only. Prepaid passes can be purchased online, through an app, or at local stores that sell tickets.	Patrons must pay for their passes before boarding via cash or credit card. Passes can be purchased online, through an app, or at the Ticket Vending Machines located at each station.
Fare Enforcement	Enforced by the Bus Driver.	Enforced by a third party vendor.

Auditor Created

Revenues and Ridership

GRTC's revenues primarily come from operating revenues, capital grants and operating contributions as follows.

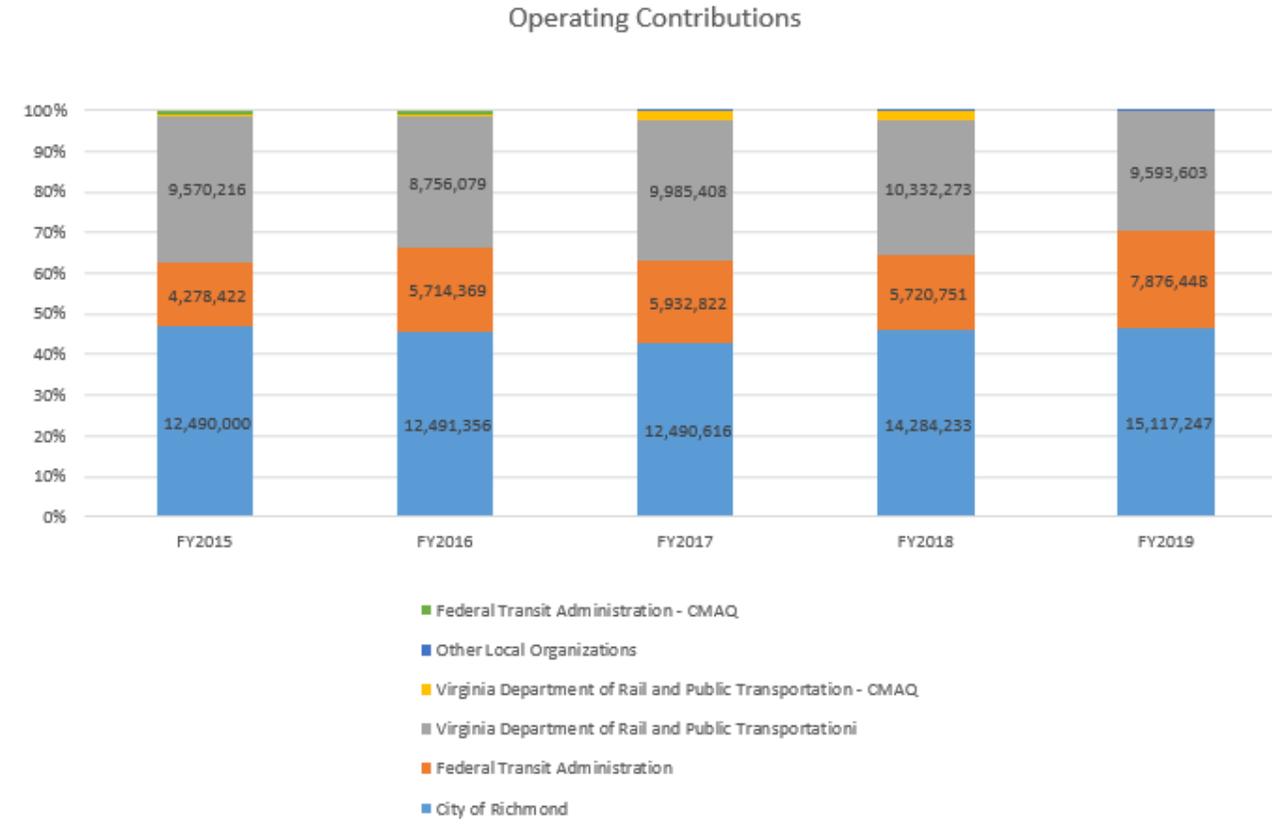
	FY15	FY16	FY17	FY18
Operating revenues	\$16,788,939	\$16,345,540	\$15,814,241	\$15,900,610
Operating contributions	\$26,721,329	\$27,426,772	\$29,169,799	\$31,049,707
Other non-operation revenues	\$72,227	\$8,771,283 ¹	\$590,342	\$269,589
Capital Grant Contributions	\$5,068,163	\$5,895,694	\$37,525,468	\$47,327,697

Auditor Created

¹ GRTC sold its former maintenance facility on Davis Avenue.

Richmond City Auditor's Report #2020-09
Greater Richmond Transit Company (GRTC)
Revenues Audit
December 3, 2019

GRTC received Operating Contributions as depicted in the following chart:



GRTC's five major sources of operating revenues are:

- Passenger Revenue - Go-Passes, CARE pass sales, swipe cards, and farebox recoveries.
- Government Purchased Service - Purchase-of-service agreements with local governments.
- Charter Revenue - charter services provided through local transportation companies.
- Special Service Revenue - contract business with local universities.
- Advertising Revenue - sales of various bus advertising displays and sponsorships.

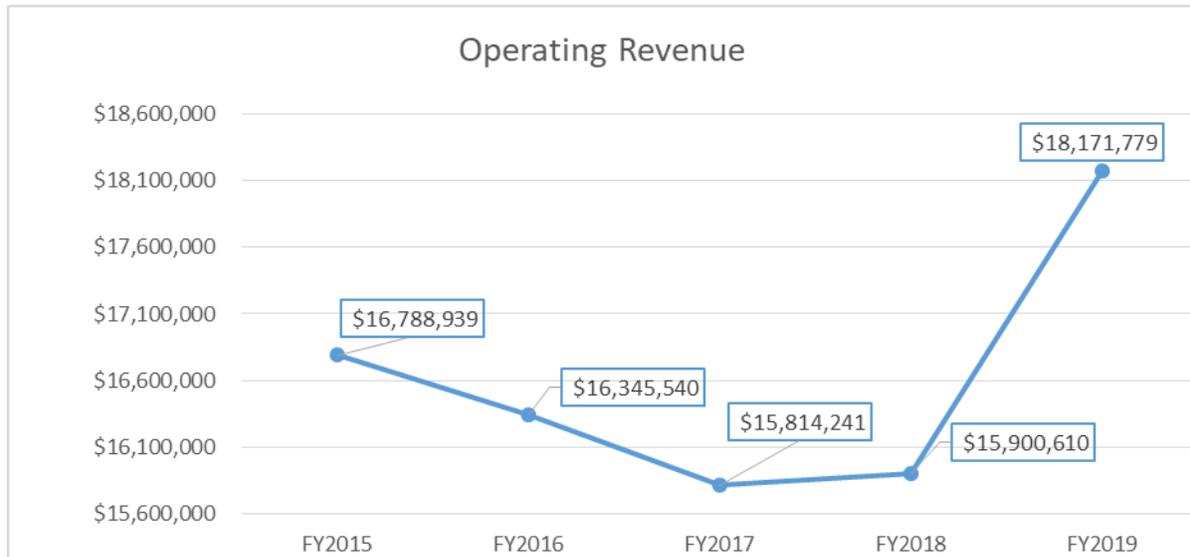
Richmond City Auditor's Report #2020-09

Greater Richmond Transit Company (GRTC)

Revenues Audit

December 3, 2019

The following chart depicts the Overall Operating Revenue from FY15 to FY19. (FY19 unaudited)



Auditor Created

The increase in operating revenues were mainly due to:

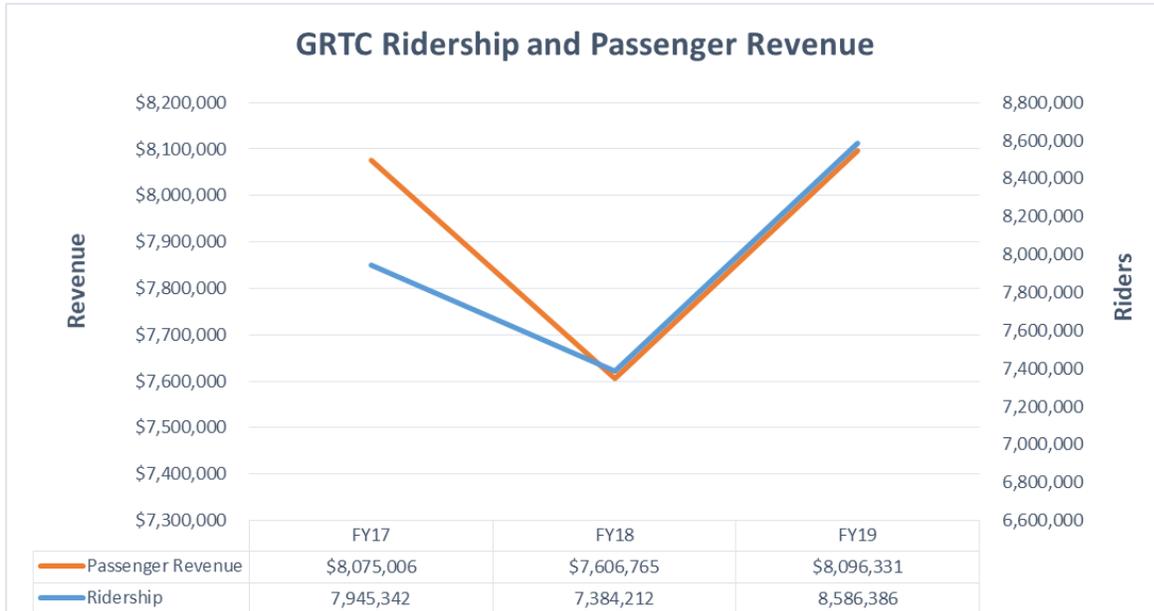
- Advertising increase of \$.5 million,
- Government purchased service increase of \$1.5 million, and
- Special service increase of \$1.2 million.

There are five different types of passes patrons can purchase as follows:

- One Ride - a single ride going one direction.
- One Ride Plus - one direction, requiring a connection between two buses.
- One Day Pass - unlimited rides for one transit day.
- 7 Day Pass - unlimited rides for seven consecutive transit days.
- 30 Day Pass - unlimited rides for 30 consecutive transit days

Richmond City Auditor's Report #2020-09
 Greater Richmond Transit Company (GRTC)
 Revenues Audit
 December 3, 2019

Ridership, as well as passenger revenue, has varied over the last three fiscal years.



**All three years of passenger revenue contain VCU payments, FY19 is the start of a new contract.*

In the first 53 weeks of the Pulse (June 24, 2018 through June 23, 2019), the Pulse made up 23% of the total ridership.

Total Bus Riders over 53 week period	8,769,718*
Average Riders per week	165,466
Total Pulse Riders in 53 weeks	1,999,178
Average Pulse Riders per week	37,720

**Includes Pulse Riders*

Auditor Created

Pulse Fare Enforcement

GRTC contracted a vendor to enforce fare payment on the Pulse line. During FY19, GRTC paid the vendor approximately \$395,000 for 22 Fare Enforcement Officers (FEO). Approximately four FEOs patrol throughout the day. To track the FEOs activities, the vendor uses:

- Radio - The FEOs call into GRTC Dispatch for radio checks and location checks.

Richmond City Auditor's Report #2020-09

Greater Richmond Transit Company (GRTC)

Revenues Audit

December 3, 2019

- Silvertrack Barcode - Every time an FEO gets on a Pulse bus, they scan a barcode and their phone is located and tracked through a program called "Silvertrack."
- Top Guard supervisors - They patrol the Pulse route to make sure the FEOs are in the right locations.

Money Room

All cash collected by GRTC is counted by the Money Room staff, which includes:

- Farebox collections – funds collected from fareboxes for the regular bus routes.
- Ticket Vending Machines (TVM) collections – Funds collected from Pulse station machines.
- Jam boxes collections – Funds collected from Jam boxes for the regular buses.
- Retail Ticket Sale Payments – Funds collected from tickets sold to various stores that sell bus tickets.

OBJECTIVE

The objective for this audit was to:

- Evaluate the finances of GRTC by reviewing the internal controls over revenue collections.

SCOPE

The scope of this audit covered GRTC controls over the bus operating revenue for FY19 and the current environment. We reviewed potential grant opportunities for capital and operating expenditures.

METHODOLOGY

The auditors performed the following procedures to complete this audit:

Richmond City Auditor's Report #2020-09

Greater Richmond Transit Company (GRTC)

Revenues Audit

December 3, 2019

- Interviewed the vendor's staff;
- Reviewed and evaluated relevant GRTC and City of Richmond policies and procedures for compliance;
- Rode buses to observe the system and its fare enforcement;
- Benchmarked against other BRT systems;
- Reviewed grants for potential funding opportunities;
- Performed visual observations of revenue intake, collection, and reconciliation; and
- Performed other tests, as deemed necessary.

MANAGEMENT RESPONSIBILITY

GRTC management is responsible for ensuring resources are managed properly and used in compliance with laws and regulations; programs are achieving their objectives; and services are being provided efficiently, effectively, and economically.

INTERNAL CONTROLS

According to the Government Auditing Standards, internal control, in the broadest sense, encompasses the agency's plan, policies, procedures, methods, and processes adopted by management to meet its mission, goals, and objectives. Internal control includes the processes for planning, organizing, directing, and controlling program operations. It also includes systems for measuring, reporting, and monitoring program performance. An effective control structure is one that provides reasonable assurance regarding:

- Efficiency and effectiveness of operations;
- Accurate financial reporting; and
- Compliance with laws and regulations.

Richmond City Auditor's Report #2020-09

Greater Richmond Transit Company (GRTC)

Revenues Audit

December 3, 2019

Based on the audit test work, the auditors concluded that GRTC had effective controls in place for securing the money collected, collecting TVM and farebox revenues, and reconciling credit card and farebox collections. However, the internal controls over the jam box collections and the Pulse Fare Enforcement activity need improvement as discussed throughout this report.

FINDINGS and RECOMMENDATIONS

What Works Well

Security of the Money Room

The money room has multiple controls in place to safeguard the cash collected.

1. Badge access limited to pertinent personnel.
2. 24-hour camera surveillance monitored during the day by management.
3. A locked vault to secure money if maintained overnight.

Collection of Funds

Farebox Collections

As buses return to the terminal at the end of the day, the Farebox puller uses a probe to download data from the farebox terminal. Once removed from the bus, the fareboxes are placed in a cash bin that removes all currency for storing overnight. This bin can only be accessed from inside the Money Room and the Farebox Puller does not have the ability to access the cash bin.

TVM Collections

The TVM is the on-site payment option at each Pulse station. Each TVM has multiple cameras pointed at it and records activities at all times. Any attempt to log in to the device or remove a piece of equipment triggers alerts to GRTC personnel. When a TVM's cash/coin vaults reach a

Richmond City Auditor's Report #2020-09

Greater Richmond Transit Company (GRTC)

Revenues Audit

December 3, 2019

designated level, the system automatically notifies the farebox² team that the alert threshold has been met. GRTC personnel collects the funds along with an armed security guard. The personnel collecting the funds is unaware of the amount in each vault until collected as they do not have access to the TVM system.

Reconciliations

Credit Card Payments

GRTC collects credit card payments from the TVMs, the mobile app, and online. Each collection forum has its own processing application and monthly reconciliation. The third party vendors deposit the funds directly to GRTC's bank account. The GRTC bank statement is compared to the reported sales for each and a corresponding journal entry is prepared and entered into the financial system. During FY19, GRTC collected \$562,576 in credit card revenues:

- Mobile App. \$277,307
- TVM \$200,794
- Online \$84,475

The auditors reviewed one monthly reconciliation from each collection forum and noted no discrepancies.

Farebox Collections

GRTC has proper segregation of duties to ensure funds collected are accounted. Their personnel reconcile the total funds collected and counted by the Money Room staff to the report printed from the probed machines. Money Room personnel are unaware of the total actually collected and the farebox personnel are never involved with the Money Room count.

² GRTC unit that maintains the fareboxes and TVMS.

Richmond City Auditor's Report #2020-09

Greater Richmond Transit Company (GRTC)

Revenues Audit

December 3, 2019

In addition, the farebox team randomly selects five fareboxes to be audited daily. These boxes are set aside for the Money Room team to count and track individually. Once the audited boxes are counted, the amounts are verified by the Farebox team against the probed data totals.

Improvements Needed

Finding #1 – Power to issue Summonses

GRTC contracted a vendor to provide fare enforcement services and issue summonses to patrons that cannot show proof of payment. Based on documentation provided by the Fare Enforcement vendor, 2,477 individuals were removed from the Pulse from January 1, 2019, to September 22, 2019 (*average of nine patrons per day*). Patrons were not asked to provide identification. Therefore, GRTC does not know if these are recurring offenders or if this tactic is working to curb fare evasion.

According to §29-189 of the City Code, transit company fare enforcement inspectors have the ability to issue a civil summons up to \$100.

According to the following sources, summonses were to be issued by the vendor's enforcement officers to non-paying patrons:

- Vendor Standard Operating Procedures (SOP) Manual for Pulse Inspectors:
"Person(s) on a BRT without a paid fare will be issued a Virginia Uniform summons."
- Vendor Agreement with GRTC states enforcement officers shall:
"Have authority to write Virginia Uniform Summonses for individuals who cannot provide proof of payment, but shall have no other law enforcement authority."

The auditors noted the vendor is not in compliance with the summons contract requirement as the fare enforcement officers are not qualified to exercise this power. The vendor's FEOs are

Richmond City Auditor's Report #2020-09

Greater Richmond Transit Company (GRTC)

Revenues Audit

December 3, 2019

trained by the Virginia Department of Criminal Justice Services as unarmed security. In order to issue a civil summons, they must be trained as armed security. GRTC may be losing revenues due to fare evaders as patrons may not be motivated to pay since there are no legal or financial penalties if caught without proof of payment. GRTC management is not holding the vendor accountable for this agreed-upon contract term. At an April 2019 City Council budget session, GRTC noted their plan was to start by only issuing verbal warnings as more of an educational process for the first few months. They indicated they planned to move forward with a more aggressive enforcement strategy in three to four months.

Recommendations:

- 1. We recommend GRTC Management ensure the enforcement officers are qualified to issue civil summonses to fare evaders.*
- 2. We recommend GRTC Management ensure the vendor issues summonses to fare evaders as required in the contract.*

Finding #2 – Enforcement Officer Inspections

According to GRTC Management and the Vendor's Pulse SOP, Enforcement Officers are to perform complete sweeps of the buses by checking fares of all riders already on the bus as well as all that board thereafter.

The auditors rode the Pulse Rapid Transit for 58 rides, from August 16, 2019 through August 22, 2019, averaging 14 minutes per ride. These rides varied in the length of time, the number of stops, and the number of instances the FEOs boarded the Pulse. Of these rides:

- 37 of 58 - FEOs were **not** present.

Richmond City Auditor's Report #2020-09

Greater Richmond Transit Company (GRTC)

Revenues Audit

December 3, 2019

- 21 of 58 - FEOs were present. However, out of 30³ encounters with the FEOs,
 - The auditors presented an invalid ticket once, which the FEO identified as invalid (3%). Once the invalid ticket was identified by the FEO, the auditor presented a valid ticket. The invalid ticket was not confiscated as noted in the vendor's SOP.
 - The auditors presented invalid tickets eleven times. These were not identified as invalid (37%).
 - The auditors was not requested to show proof of payment in eight instances (27%).
 - The auditors either presented an accurate pass or was not required to show proof of payment due to a previous inspector's check 10 times (33%).

The Auditors observed:

- The Officers did not physically go to the back of the bus to check tickets, thus allowing customers to just raise a ticket from their seats as proof of payment,
- The Officers did not look closely at the tickets, to determine if the dates and times were valid, and
- Officers lost track of who entered the bus due to busier times of the day.

The auditors also noted the purchased date printed on each ticket is a small font that is difficult to see clearly making it difficult to enforce. In addition to the potential lost revenue due to poor inspections, GRTC paid approximately \$395,000 in FY19 for a service that is not functioning as intended.

³ Some of the 21 rides had multiple officers aboard at different times.

Richmond City Auditor's Report #2020-09

Greater Richmond Transit Company (GRTC)

Revenues Audit

December 3, 2019

Recommendations:

- 3. We recommend GRTC management establish an oversight process to ensure the vendor's Enforcement Officers conduct proof of payment inspections as required.***

- 4. We recommend GRTC management work with the fare box team to increase the purchase date font size on the Pulse tickets to enhance the Fare Enforcement Officers' ability to perform their duties.***

Finding #3 – Fare Evasion Rate

Fare evasion rates are used to assist transit companies in assessing the significance of their fare evasion problem. It enables them to make decisions and gauge how their deterrents or attempted corrections are working. In June 2018, GRTC added the Pulse Route to service patrons from Willow Lawn to Rocketts Landing.

GRTC estimates their fare evasion rate ranges between 12% and 14%. These percentages are obtained by dividing the total number of buses in which patrons are removed from by the total number of buses in which Enforcement Officers board. GRTC is aware that this method is not an accurate representation of the true evasion rate.

Without an accurate fare evasion rate, GRTC may be unable to assess the severity of fare evasion and its financial impact. Enforcement related decisions could be made without accurate information; thus hindering GRTC's ability to address the underlying issue of fare evasion.

Recommendation:

- 5. We recommend GRTC management conduct an independent fare evasion study which includes a statistical sample for the Pulse line.***

Richmond City Auditor's Report #2020-09

Greater Richmond Transit Company (GRTC)

Revenues Audit

December 3, 2019

Finding #4 – Jam Box Collections

A locked box called a “jam box” is on each bus for patrons to deposit money for their fare when the regular payment machine malfunctions or gets jammed. A GRTC staff member collects the funds deposited in the jam boxes from the parked buses in the GRTC lot two to three times per week. The funds collected are taken to the money room and counted by the same employee. A tracking mechanism is not in place to account for all the funds deposited in the jam boxes. During FY19, the jam boxes and the deadline buses revenues totaled approximately \$20,000.

When collecting and counting money, strong internal controls are for at least two employees to be involved in the process. The GRTC process for collection of jam boxes lacks adequate internal controls exposing GRTC to the potential of theft and lost revenues.

Recommendation:

- 6. We recommend GRTC management implement adequate internal controls over the jam box collection process by requiring the presence of at least two individuals when collecting and counting funds from the jam boxes.***

Finding #5 – TVM Reconciliations

The GRTC Pulse Route has 26 Platforms from Willow Lawn to Rockets Landing. Each platform has a TVM for patrons to purchase tickets. When funds are collected from the TVMs, a breakdown of the total funds collected is printed and retrieved. The auditors requested four days of TVM collections and supporting documentation. GRTC staff could only provide two of the four TVM printouts.

Richmond City Auditor's Report #2020-09

Greater Richmond Transit Company (GRTC)

Revenues Audit

December 3, 2019

We noted the TVM collection printouts are sometimes shredded prior to the Staff Accountant reconciling the funds received. We also noted the Staff Accountant did not reconcile the funds received with the TVM printout prior to recording it in the financial system. Based on a conversation with the GRTC Controller, the printouts were supposed to be sent from the Money Room Staff to the Staff Accountant to reconcile them prior to entering in the financial system. The Controller noted the reconciliation process stopped when the Money Room Manager took extended leave.

On a weekly basis, thousands of dollars are collected from the TVMs. Without reconciliations, GRTC management does not get any assurance on the completeness of the funds deposited.

Recommendation:

- 7. We recommend GRTC management develop and implement standard operating procedures for reconciling the funds collected from the Pulse Ticket Vending Machines.***

Other Observations

Benchmarking

The GRTC Pulse line received a Bronze certification from the Institute for Transportation and Development Policy (ITDP) based on the BRT Standard (*a standard created to recognize high quality BRT systems around the world*). There are five essential features of a BRT.

1. Dedicated right of way (*bus only lanes*)
2. Bus way alignment (*center of the road/bus only loading areas*)
3. Off-board fare collection
4. Intersection treatments (*traffic does not turn across bus lanes*)
5. Platform level boarding

Richmond City Auditor's Report #2020-09

Greater Richmond Transit Company (GRTC)

Revenues Audit

December 3, 2019

Only nine systems in the United States (*other than GRTC*) were measured against the BRT standard of the ITDP. We developed a 21-question survey to understand these other agencies' use of fare enforcement officers and how they handle various enforcement related matters. We sent the survey to systems rated Silver or Bronze (*none were rated Gold in the U.S*) by the ITDP. We received responses from two transit systems.

The following table depicts their responses (*now referred to as Transit A and Transit B*):

	Transit A	Transit B	GRTC PULSE
Length In Miles	7	9.4	7.6
Stops (one way)	35	11	14
Annual Ridership (1,000s)	4,000	3,520	1,999
Fare Enforcement provider	Their own Agency	The Service Provider that operates the routes	Third Party Vendor
Warnings Given to fare evaders	Yes	Yes	Yes (no citations written)
Fare Evasion Rate	No Response	12%	12-14%
Signs on Buses notifying customers to have proof of payment	Yes	Yes	Yes
Goal to Inspect Passengers	Inspect almost 100%	10% of riders	No quota, (100% of passengers on buses boarded)
Citation Amount	\$50 (approximately)	\$75	N/A ⁴
Who keeps the Citation Revenue?	The Transit Agency, unless sent to court. Then the City/Courts split the revenue	The State	N/A

⁴ The only real variance between both responses and GRTC was that GRTC is not issuing citations. This recommendation was noted earlier in the report.

Richmond City Auditor's Report #2020-09

Greater Richmond Transit Company (GRTC)

Revenues Audit

December 3, 2019

Platforms are "paid only" zones	No	Yes	No
---------------------------------	----	-----	----

Auditor Created

Transit A responded that within the past few years they switched away from the traditional officer enforced proof of payment. Their new process is similar to verification on a regular bus route. Passengers can purchase tickets using the on-platform fare machines, online prior to arriving, or from the fare box at the front of the bus. The driver is the enforcement officer and patrons must swipe their cards to ride the bus.

Transit A noted:

- Additional running time is noticeable but tolerable during the "after-school rush" and insignificant at all other times. They did not add any buses to the route. (10 minute intervals)
- Fare revenue increased sharply however ridership as measured by automatic passenger counters decreased noticeably.
- Many passengers continue to use the on-platform fare machines and board with inspection-ready fare cards, and the swipe process is fairly quick.
- They are still getting benefits in terms of faster boarding because only a small portion of fare payment is happening on vehicles, and all doors are being opened at busy stations.

Transit B responded that they still use the traditional proof of payment system and are pleased with it as well as its cost effectiveness. They employ four enforcement officers to monitor their rapid transit system. Recently, in an attempt to reduce fare evasion, they performed sweep tactics and engaged in the assistance of local law enforcement agencies. Their officers wear uniforms and carry scanners to inspect tickets.

Richmond City Auditor's Report #2020-09
Greater Richmond Transit Company (GRTC)
Revenues Audit
December 3, 2019

The two respondents have established two different systems for fare enforcement. It could prove beneficial for GRTC to communicate with these transit systems to discuss fare enforcement matters as they arise.

Grants

The Auditors researched the Federal Transit Administration (FTA) website to determine whether transportation grants were available to GRTC. We identified nine, non operational/specialized grants that were applicable to GRTC in FY19 as depicted on the following table:

Grant Opportunities		Applied
1	Better Utilizing Investments to Leverage Development (BUILD) Transportation Grants Program (Formerly TIGER)	No
2	Capital Investment Grants - 5309	No
3	Flexible Funding Programs - Surface Transportation Block Grant Program - 23 USC 133	No
4	Human Resources & Training - 5314 (b)	No
5	Integrated Mobility Innovation	No
6	Metropolitan & Statewide Planning and NonMetropolitan Transportation Planning - 5303, 5304, 5305	No
7	Mobility on Demand (MOD) Sandbox Demonstration Program - 5312	No
8	Pilot Program for Expedited Project Delivery - 3005(b)	No
9	Safety Research and Demonstration Program	No

Auditor Created

Although these grants were available, a project need must exist before applying. According to management, the project needs did not exist at the time. Also, GRTC must compete with other states and localities as they are competitive and are awarded on a case by case basis.

The auditors also noted, GRTC receives an automatic allotment for two Federal Grants annually. These grants are awarded as long as GRTC complies with the applicable Federal requirements:

- *5339-Buses and Bus Facilities Grant* - provides funding to states and transit agencies through a statutory formula to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities. During FY19, GRTC received an award of \$1.38 Million.

Richmond City Auditor's Report #2020-09

Greater Richmond Transit Company (GRTC)

Revenues Audit

December 3, 2019

- *5307-Urbanized Area Formula Grant* - makes federal resources available to urbanized areas and to governors for transit capital and operating assistance in urbanized areas and for transportation-related planning. During FY19, GRTC received an award of \$11.37 million.

In the past three years (FY15-FY17), GRTC applied multiple times for three grants; however, according to management, they were unable to secure funding due to the competitive nature of capital grants.

APPENDIX A: MANAGEMENT RESPONSE FORM
2020-09 Greater Richmond Transit Company (GRTC) Revenues Audit

#	RECOMMENDATION	CONCUR Y/N	ACTION STEPS
1	We recommend GRTC Management ensure the enforcement officers are qualified to issue civil summonses to fare evaders.	Y	1) GRTC will work with the City of Richmond to establish the authority for contractor to issue summons for fare violation on Pulse platforms. 2) GRTC will work with the City of Richmond on correct procedures and authority for issuance of City summons for violation as well as alternatives to issuing summons. 3) GRTC is requiring a corrective action plan from vendor by December 17, 2019 that will outline and ensure adequate training is put in place to certify officers to issue summons.
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
	Director of Risk Management		3/31/2020
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
#	RECOMMENDATION	CONCUR Y/N	ACTION STEPS
2	We recommend GRTC Management ensure the vendor issues summonses to fare evaders as required in the contract.	Y	1) GRTC will work with the City of Richmond to establish the authority for contractor to issue summons for fare violation on Pulse platforms. 2) GRTC will work with the City of Richmond on correct procedures and authority for issuance of City summons for violation as well as alternatives to issuing summons. 3) GRTC is requiring a corrective action plan from vendor by December 17, 2019 that will outline and ensure adequate training is put in place to certify officers to issue summons.
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
	Director of Risk Management		3/31/2020
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
#	RECOMMENDATION	CONCUR Y/N	ACTION STEPS
3	We recommend GRTC management establish an oversight process to ensure the vendor's Enforcement Officers conduct proof of payment inspections as required.	Y	GRTC is requiring a corrective action plan from contractor by December 17, 2019 that will outline and ensure that the vendor develops an effective oversight plan. This plan consists of a quality management check system where vendor management performs random checks to ensure that officers are performing as required. GRTC will also implement a program of random checks using existing staff and reports from operators and supervisors.
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
	Director of Risk Management		1/2/2020
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION

APPENDIX A: MANAGEMENT RESPONSE FORM
2020-09 Greater Richmond Transit Company (GRTC) Revenues Audit

#	RECOMMENDATION	CONCUR Y/N	ACTION STEPS
4	We recommend GRTC management work with the fare box team to increase the purchase date font size on the Pulse tickets to enhance the Fare Enforcement Officers' ability to perform their duties.	Y	GRTC worked with Scheidt Bachman, the manufacturer of the Ticket Vending Machines, to enlarge the font size. GRTC will monitor effectiveness of the new font size.
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
	Transit Technology Manager		Done
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
			Completed on 11/4/2019
#	RECOMMENDATION	CONCUR Y/N	ACTION STEPS
5	We recommend GRTC management conduct an independent fare evasion study which includes a statistical sample for the Pulse line.	Y	GRTC will monitor the progress of the vendor Corrective Action Plan for fare enforcement and will work with the City on new fare enforcement authority policies and programs. Prior to implementation of new programs, GRTC will evaluate the costs and benefits of hiring a consultant to perform a fare enforcement study before and implementation of the new policies and procedures to report the effectiveness of the tactics to the Board of Directors.
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
	Chief Financial Officer		3/31/2020
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
#	RECOMMENDATION	CONCUR Y/N	ACTION STEPS
6	We recommend GRTC management implement adequate internal controls over the jam box collection process by requiring the presence of at least two individuals when collecting and counting funds from the jam boxes.	Y	GRTC's Finance Department has developed standard operating procedures to support adequate internal controls over the jam box collection process.
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
	Revenue Collection Manager		Done
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
			Completed on 9/23/2019
#	RECOMMENDATION	CONCUR Y/N	ACTION STEPS
7	We recommend GRTC management develop and implement standard operating procedures for reconciling the funds collected from the Pulse Ticket Vending Machines.	Y	GRTC's Finance Department has developed standard operating procedures for reconciling the funds collected from the Ticket Vending Machines. Please note, that the documentation for the content of the Canisters were provided by the TVM report system for each date requested.
	TITLE OF RESPONSIBLE PERSON		TARGET DATE
	Controller		Done
	IF IN PROGRESS, EXPLAIN ANY DELAYS		IF IMPLEMENTED, DETAILS OF IMPLEMENTATION
			Completed on 10/4/2019