

# MUNICIPAL AUDITING REPORT CITY OF ROANOKE



## RCPS Transportation Follow-Up

**October 11, 2019**

Report Number: 20-007

Audit Plan Number: 20-105

*Municipal Auditing Department*

*Chartered 1974*

[www.roanokeva.gov/auditing](http://www.roanokeva.gov/auditing)

Phone 540.853.5235

## TABLE OF CONTENTS

Audit Objectives & Scope .....	1
Background .....	3
Objective 1 – Ridership Reported to VDOE .....	8
Objective 2 – Bus Aides’ Salaries and Benefits .....	10
Objective 3 – Tracking and Reporting Mileage .....	11
Objective 4 – GPS Data Accuracy .....	14
Objective 5 – Written Procedures.....	15
Objective 6 – Bus Replacement Planning .....	16
Management Comments .....	17
Acknowledgments .....	18

## AUDIT OBJECTIVES & SCOPE

### Audit Objectives:

1. Was a process in place to ensure ridership was reported to the Virginia Department of Education (VDOE) in accordance with VDOE instructions?

**No** – While the Director of Transportation created hand written procedures describing the process for preparing the required transportation report, the average daily ridership for yellow buses for Fiscal Year 2018 was again not calculated in accordance with the guidance provided in the VDOE Pupil Transportation Data Submission Guide. Anomalies in the head count data were identified in the spreadsheets used for the 2018 daily ridership estimates. Pupil counts reported for public and private carriers were not calculated on a proportional basis using the actual number of days the students were scheduled for transportation during the school year.

2. Were salaries and benefits for bus aides working on exclusive routes reported as part of RCPS transportation costs in accordance with VDOE instructions?

**Yes with Exceptions** – Exclusive Bus Aides' Salaries and Benefits were again overstated in the Virginia Department of Education 2017-2018 Pupil Transportation Report Superintendent's Verification Report. The Director of Transportation included bus aides' salaries for some Pre-K routes not designated as "exclusive."

3. Was a process in place to collect and maintain the data needed to ensure mileage was captured, validated and accurately reported to the VDOE in accordance with VDOE instructions?

**No** – A well-designed and complete process for capturing and validating mileage by category has not been developed. The 2017 GPS data used for total miles, from which the deadhead, regular and exclusive miles were subtracted to arrive at special trip miles, was used again in the 2018 calculations. The data also excluded miles traveled to transport students via public and private carriers.

4. Was the transportation vendor providing accurate data from GPS devices on buses?

**Not Reviewed** – Given the change in providers that occurred just prior to our audit, and the inherent issues with the legacy GPS system, we decided further review of the data would serve no purpose. The new provider, Durham, has more robust on-board software that can

record trip mileage in greater detail than GPS, which should enable more accurate reporting to the VDOE.

5. Were written procedures prepared to help ensure employees could identify, process and properly report transportation data required by the VDOE?

**Yes** – The Director of Transportation created hand written procedures describing the sources of data and processes for preparing the VDOE transportation report. Revisions will be required to reflect changes in the service provider, systems, and internal clerical staffing.

6. Was a bus replacement plan required in the contract with the new transportation vendor?

**Yes** – The requirement for a bus replacement plan was specified in the request for proposals. Durham School Services proposed a fleet with an average age of 8 years at the start of the contract, with no single bus older than 15 years of age. Other factors, including mileage and the District’s needs relating to bus size and capacity, will be considered when replacing buses.

Audit Scope:

We evaluated transportation data reported to the VDOE for the fiscal year ending June 30, 2018, being the most recent reporting period completed.

We reviewed the Request for Proposals for Student Transportation Services dated December 17, 2018, as well as Durham School Services proposal and the final agreement dated March 27, 2019.

**End of Audit Objectives and Scope**

## BACKGROUND

Roanoke City Public Schools (RCPS) contracted with Mountain Valley Transportation for all student transportation services through June 30, 2019. Mountain Valley Transportation:

- Hired, trained, and managed all bus drivers
- Purchased and maintained all buses, vans, and service vehicles
- Purchased all required insurance coverages

Competitive offers were sought, and a new contract was awarded to Durham School Services, L.P. (Durham) for the 2019/2020 school year. The term of the contract is for an initial period of five (5) years, terminating on June 30, 2024. The contract can then be renewed for an additional five (5) year period.

Durham's responsibilities include:

- Operating expenses of all vehicles [including maintenance costs]
- Titling, registration and licensing of all vehicles
- Payment of all applicable taxes
- Maintaining a good public relations program
- Permitting only trained and competent drivers to operate buses
- Monitoring drivers' compliance with licensing regulations
- Administering a satisfactory safety program
- Providing written accident and breakdown reports
- Providing vehicles in service for no more than 15 years, with the average age of the fleet not to exceed eight (8) years
- Providing gasoline powered vehicles in service for no more than 10 years with the average age of the fleet not to exceed 5 years

Roanoke City Public Schools maintains responsibility for:

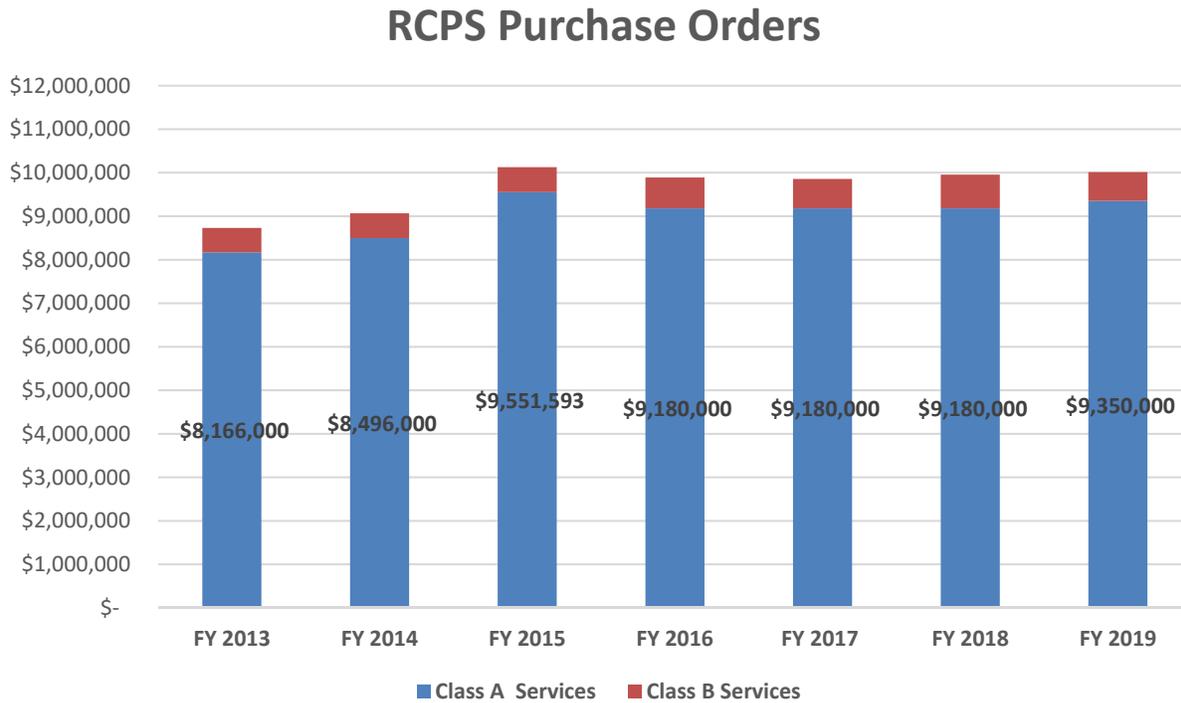
- Supplying diesel fuel/gasoline for buses
- Scheduling and revising bus routes
- Reporting to the VDOE

Services are provided within two basic classifications:

- Class A Services are regular, designated yellow bus routes that are run mornings, afternoons and evenings.

- Class B Services are requested transportation in connection with extracurricular activities, sports, field trips and other special events.

The following chart outlines purchase orders from Mountain Valley Transportation for Class A and Class B services for the past seven (7) fiscal years:



Durham’s base cost proposal for Class A Services submitted with the RFP for school year 2019/2020, excluding start-up costs, is ~ \$8,583,685.

**Other Expenditures**

RCPS pays for public and private carrier expenses, fuel for the buses, and costs for routing software. The Division also employs a Director of Transportation and an Assistant Director of Transportation who are responsible for:

- Determining service levels
- Designing and coordinating routes
- Approving and coordinating field trip requests
- Reviewing and approving contractor and fuel delivery invoices
- Preparing and submitting the Annual Transportation Report required by VDOE

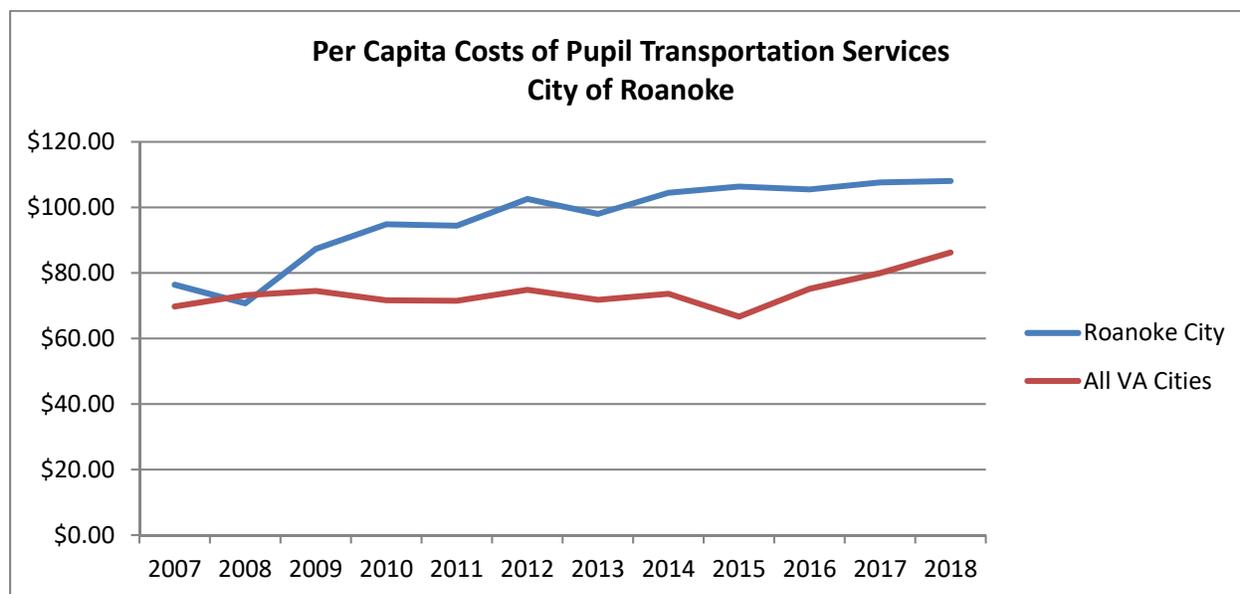
A part-time Clerical Assistant was hired in October 2019 to assist in collecting, organizing, and correcting transportation data required by the VDOE.

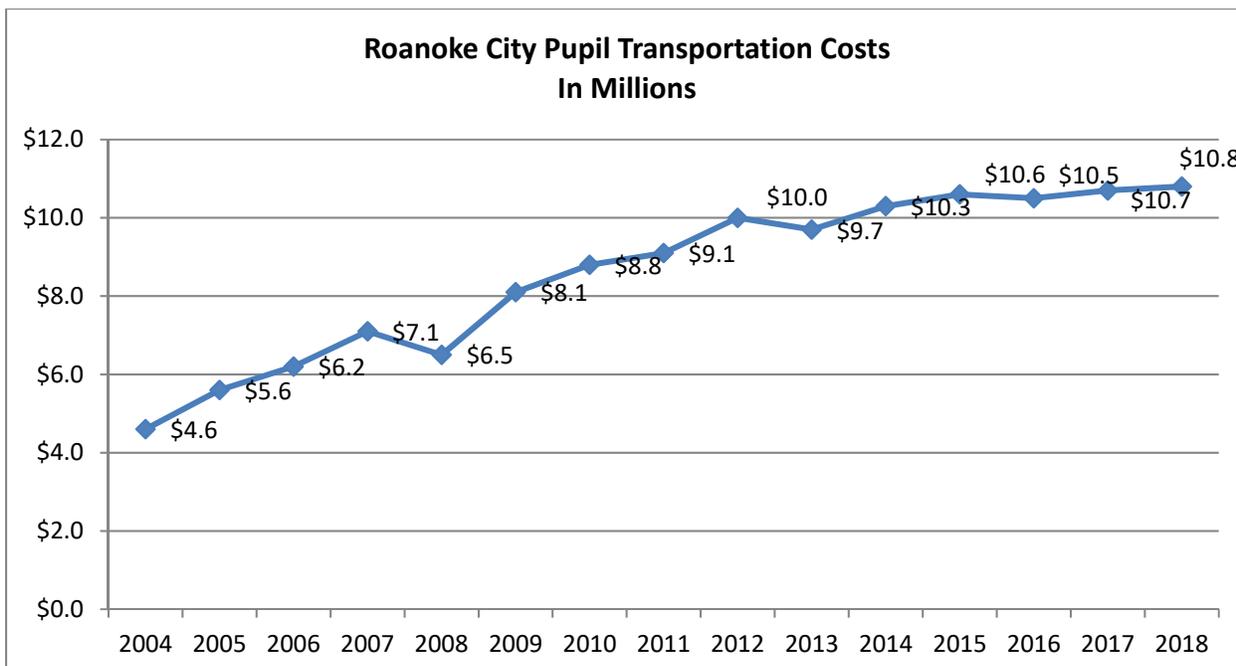
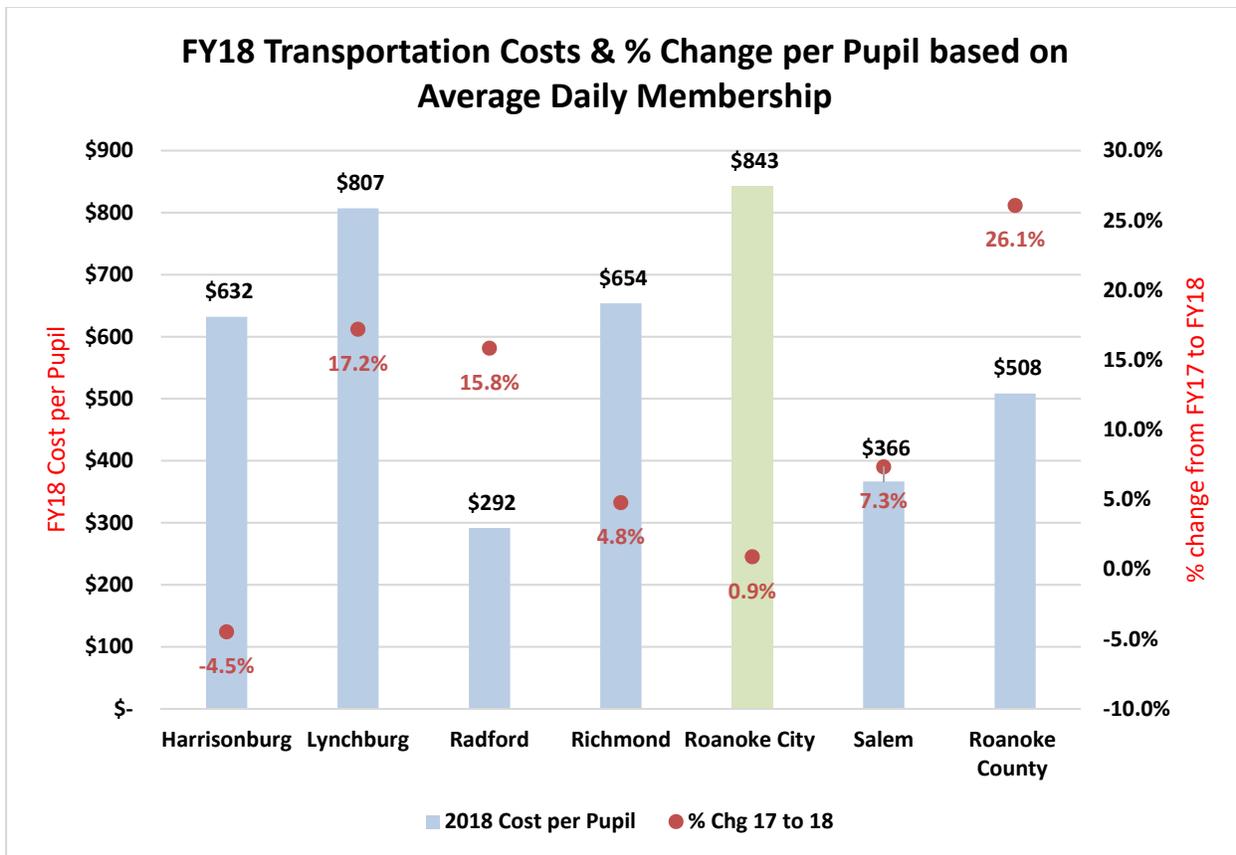
**VDOE Transportation Reporting**

RCPS must report pupil transportation costs annually, in accordance with the Virginia Department of Education Pupil Transportation Data Submission User Guide. The Finance Officer, Transportation Director, and Superintendent must certify to the VDOE that the data reported is accurate to the best of their knowledge.

**Comparative Data for Virginia School Divisions:**

The Virginia Auditor of Public Accounts (APA) publishes a comparative report each year showing school transportation expenditures by locality. The following graphs were based on the most recently available APA data (2017/2018):





Costs reported to the APA by other school divisions do not include expenditures for accounting, human resources, and similar indirect costs. The third party contractor is responsible for indirect costs which are recovered through the rates billed to RCPS; costs which are ultimately reflected in the APA data for RCPS.

Based on the limitations of the APA data, in 2017, Municipal Auditing performed an in depth analysis of the Division's transportation costs based on operational and financial data reported to the VDOE by RCPS and selected peers in the region. That analysis identified opportunities to improve the quality of the data being filed and indicated RCPS's cost per operating mile was higher than other school divisions. RCPS management and the vendor (Mountain Valley Transportation at that time) developed plans to improve planning, maintenance, and reporting.

Management submitted action plans to address each observation identified in the 2017 audit. We followed-up on those action plans in 2018, shifting our focus and recommendations towards more effective reporting of ridership, mileage and costs.

**End of Background**

### Objective 1: Ridership Reported to VDOE

In the prior audit, we identified significant errors with the data set used to calculate average daily ridership required by the Virginia Department of Education.

The Director of Transportation planned to develop written procedures to ensure head count data is accurately collected and reported per VDOE requirements. He committed to ensuring that the formulas used for computing average daily ridership would reflect the higher of the AM or PM ridership for each day as specified by VDOE.

#### Action Completed / Issues Resolved – No

---

#### Follow Up – September 2019:

The Director of Transportation created hand written procedures describing the process for preparing the required transportation report. The procedures identify the designated week for which data should be obtained, define the different types of riders, and outline sources of ridership data. The Director submits all data to the Data Management Coordinator in the Technology Department. The Coordinator compiles the data using Excel spreadsheets to calculate and summarize the data for submission to the VDOE.

Based on our review of the data submission and underlying records, we concluded that the average daily ridership reported for Fiscal Year 2018 was not in accordance with the guidance provided in the *VDOE Pupil Transportation Data Submission Guide*.

The spreadsheets prepared by the Information Technology department to calculate the average daily ridership again contained formulas using all head counts, morning and afternoon, for all days of the week. The VDOE guidelines specify using the higher of the morning or afternoon count for each day, not the average of the two. This formula error understates the average daily ridership for RCPS.

Additionally, we noticed anomalies in the head count data as we scanned the spreadsheet used for the 2018 daily ridership estimates. A rudimentary analysis of the data, without reviewing the original source documents, identified the following:

- 10 Morning or afternoon routes in the data show positive mileage but reported 0 riders for the entire week.

- Two routes included one day in which the ridership count was at least 16 higher than the other four days (25 vs 9 or lower), inflating the average by > 4 riders.
- Two routes included one day in which the ridership count was at least 37 higher than the other four days (40 vs 2 or 3 ), inflating the average by > 7 riders.
- Two routes included one day in which the ridership count was at least 20 lower than the other four days, deflating the average by > 3 riders.
- Two routes included one day in which the ridership count was almost 40 higher than the other four days (71 vs 30 or 31 ), inflating the average by > 9 riders.
- All pre-k riders were reported as regular (exclusive riders not separated out).

A comprehensive understanding of the routing process and characteristics of individual routes would be required to effectively identify all true data errors.

Pupil counts reported for public and private carriers were not calculated on a proportional basis using the actual number of days the students were scheduled for transportation during the school year. The number of associated miles was not entered into the VDOE report.

*Note: Transportation hired a part-time Clerical Assistant in October 2019 who will be responsible for collecting, organizing, and validating transportation data going forward.*

**End of Objective 1**

**Objective 2: Bus Aides’ Salaries and Benefits**

In the prior audit, we found that the Director of Transportation overstated Fiscal Year 2017 exclusive transportation costs reported to the VDOE by \$277,482, due to reporting all bus aides’ salaries and benefits as exclusive. As a result, exclusive transportation cost per mile was overstated by \$0.67 and per pupil cost of exclusive transportation was overstated by \$664.

Management planned to review the VDOE Transportation Report more closely in the future to ensure only bus aides’ salaries and benefits on exclusive routes are included in the report submission.

**Action Completed / Issues Resolved –Yes with Exceptions**

**Follow Up – September 2019:**

Exclusive Bus Aides’ Salaries and Benefits were again overstated in the Virginia Department of Education 2017-2018 Pupil Transportation Report Superintendent’s Verification Report. The Director of Transportation included bus aides’ salaries for some Pre-K routes not designated as “exclusive.”

Exclusive Bus Aide Costs Reported to VDOE	\$ 1,098,815
Actual Exclusive Bus Aide Costs	\$ 796,949
<b>Overstatement of Exclusive Bus Aide Costs</b>	<b>\$ 301,866</b>

**End of Objective 2**

### Objective 3: Tracking and Reporting Mileage

In the prior audit, we were unable to confirm that total miles were reported correctly to the Virginia Department of Education for Fiscal Year 2017 based on the data available. The Director of Transportation had not developed a sound, viable plan for capturing and validating mileage by category as specified by the VDOE, and errors were identified in the underlying data and calculations.

The Director of Transportation planned to work with the transportation vendor to collect and maintain data using GPS, routing software, and trip sheets to produce the documents needed to accurately capture, validate and report mileage data for each classification as required by the VDOE. The Administration planned to issue an RFP for Transportation Services that included specifications for the vendor to provide all data required by the VDOE, including supporting records.

#### Action Completed / Issues Resolved – No

---

#### Follow Up – September 2019:

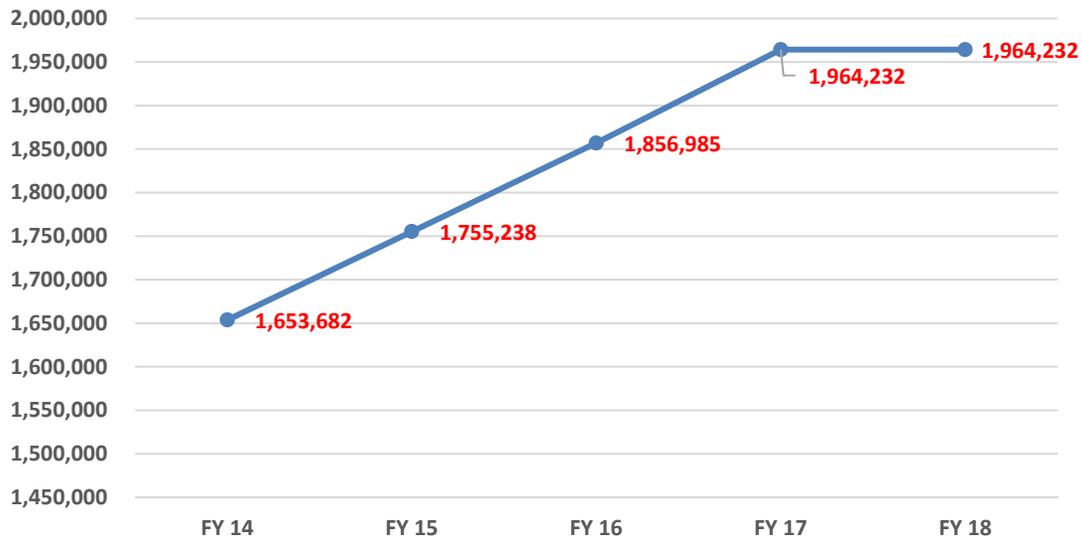
The RFP for Transportation Services included the requirements for the vendor to provide all transportation data required by the VDOE, including supporting records. During our initial meeting with management and the new vendor, we provided them with a spreadsheet template to help break out costs and mileages in accordance with VDOE requirements.

We reviewed the Virginia Department of Education 2017-2018 Pupil Transportation Report Superintendent's Verification along with the data used by the Transportation Department supporting the calculation of miles reported. Our recalculation of regular school year miles, after school miles, and summer school miles matched those reported for Fiscal Year 2018. We could not verify the calculation of summer after school miles reported for the same year due to the underlying data having been inadvertently erased from the VersaTrans system.

Our review noted that RCPS reported the same number of total miles (1,964,231.55) for FY 18 as were reported for FY 17. It appears that the prior year's (2017) GPS data used for total miles, from which the deadhead, regular and exclusive miles were subtracted to arrive at special trip miles, was used again in the calculations.

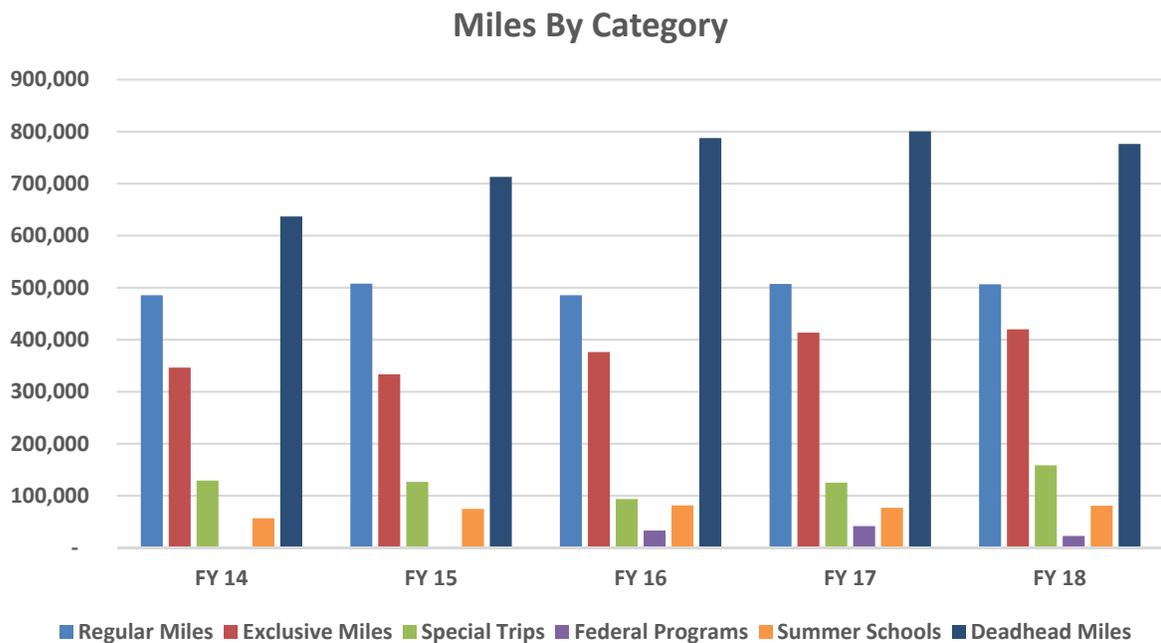
We also found that miles traveled to transport students via public carriers (taxi cab or city bus) and private carriers (RADAR, parents, guardians, etc.) are still not tracked or reported to the VDOE.

Total miles reported by RCPS have steadily increased each year since Fiscal Year 2014:



On average, total miles have increased approximately 6% each year since FY 14, except for FY 18, whereby the total miles reported were identical to the total miles reported the prior year.

The following chart illustrates miles, by category, RCPS reported to the VDOE over the past five (5) fiscal years:



Public and private carrier miles have not been reported to the VDOE since Fiscal Year 2014, and RCPS just began reporting Federal Program miles separately in Fiscal Year 2016.

Fluctuations in total miles reported by RCPS to the VDOE over the last five (5) years appear reasonable. However, due to data inconsistencies and errors noted in recent audits, we cannot confirm that miles were reported correctly.

**End of Objective 3**

#### **Objective 4: GPS Data Accuracy**

In the prior audit, we noted that the GPS system does not provide sufficiently reliable and accurate mileage data for reporting to the VDOE. By comparing mileage data from GPS records to inspection detail, we noted that GPS data underreported by 11,578 miles [7.63%] in our sample data. The majority of the difference was attributed to 4 buses, which accounted for 11,371 miles [98.21%] of the total difference in mileages.

Management planned to work with the transportation vendor on improving the accuracy of data from GPS devices on the school buses.

#### **Action Completed / Issues Resolved – Not Tested**

---

#### **Follow Up – September 2019:**

Due to the implementation of a new transportation vendor for the upcoming school year (FY 19-20), this action plan was NOT tested during the current year follow-up audit. The vendor uses software on the buses to read the odometer mileage daily, and we anticipate that this data will be the primary source for reporting mileage for the FY19-20 school year.

We noted during the entrance meeting that there will likely be many wrinkles that will need ironing out this first year with the new transportation vendor (FY19-20). Given this expectation, we stated that our suggestion to the audit committee would be to wait until after the FY21 school year is completed (2nd full year with new vendor) before performing any future audit work.

We did not test the accuracy of the GPS data submitted from the prior transportation vendor for the prior school year (FY 17-18), as there is no way to validate the accuracy of that data, per discussion with the RCPS Director of Transportation.

#### **End of Objective 4**

### **Objective 5: Written Procedures**

In the prior audit, we noted that RCPS had no written procedures outlining how the division captures and validates transportation data required by the VDOE. This increased the risk that management would incorrectly report required ridership, mileage and other data to the VDOE.

The Director of Transportation committed to creating the necessary procedures by December 1, 2018. Management also planned to specify in the RFP for Transportation Services that the vendor must provide any data and supporting documentation required by the VDOE.

#### **Action Completed / Issues Resolved – Yes**

---

#### **Follow Up – September 2019:**

The Director of Transportation created hand written procedures describing the process for preparing the required transportation report. Based on the data reporting tools of the new transportation provider (Durham), it is likely that the hand written procedures will require revision to reflect changes in the process. Management and Durham were discussing approaches to accurately capturing field trip mileage during our audit.

As planned, RFP 2977 for Student Transportation Services, dated December 17, 2018, specified that the transportation vendor would provide all transportation data required by the VDOE, including supporting records. During our initial meeting with management and the new vendor, we provided them with a spreadsheet template to help break out costs and mileages in accordance with VDOE requirements.

**End of Objective 5**

### **Objective 6: Bus Replacement Planning**

In the prior audit, we noted that the bus replacement plan was based on the age of each bus and did not incorporate other industry recommended factors, such as lifetime maintenance costs. Rates charged by the vendor were based on a maximum age of 13 years, which is two years less than the 15 year life commonly cited by industry, the VDOE, and other school divisions.

Management committed to addressing bus replacement planning requirements in the RFP for Transportation Services.

#### **Action Completed / Issues Resolved – Yes**

---

##### **Follow Up – September 2019:**

As planned, RFP 2977 for Student Transportation Services, dated December 17, 2018, asked vendors to describe their approach for ensuring fleet reliability and efficiency. Proposals were to address vehicle maintenance processes, buses held in reserve, and bus replacement planning.

Durham School Services proposed a fleet with an average age of 8 years at the start of the contract, with no single bus older than 15 years of age. Fleet replacements would be based on various factors, including age, mileage and the District's needs related to bus size and capacity.

**End of Objective 6**

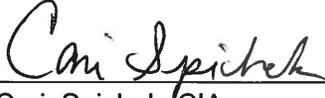
### **MANAGEMENT COMMENTS**

Transportation department concurs with the 2017-2018 RCPS Audit document. Moreover, transportation would like to add that the new provider, Durham School Services, has mechanisms in place that are capable of providing improved data accuracy based on their operational procedures that are electronically driven. Also, the hire of a part time clerical assistant to transportation staff, provides a resource to assist in future reporting to VDOE.

**End of Management Comments**

**ACKNOWLEDGMENTS**

We would like to thank Stan Crowgey for his cooperation and assistance throughout the audit. We would also like to thank Durham School Services personnel, specifically David Brabender, for his time and input.

  
\_\_\_\_\_  
Cari Spichek, CIA  
Senior Auditor

  
\_\_\_\_\_  
Drew Harmon, CPA, CIA  
Municipal Auditor