

**AUDIT SUPPORT & ASSISTANCE
CITY OF ROANOKE**



**Transportation Costs Analysis
April 10, 2017**

Report Number: 17011
Audit Plan Number: 17-105

*Municipal Auditing Department
Chartered 1974*

www.roanokeva.gov/auditing

Phone 540.853.5235

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OBJECTIVES & SCOPE

Objectives:

1. To determine if the Roanoke City Public Schools ridership, mileage, and transportation cost data are reported in accordance with the Virginia Department of Education’s [VDOE] regulations.

No – The Division’s transportation data was not reported in accordance with the applicable regulations, resulting in the following differences for the 2014/15 school year:

- Average daily ridership was overstated by 1,181 pupils (12.71%)
- Miles traveled were understated by 32,906 miles (1.87%)
- Transportation Expense was overstated by \$35,521 (0.30%)

2. To develop an analysis that enables Roanoke City Public Schools to compare transportation costs per mile and costs per pupil with other school divisions in the region.

The following costs comparisons reflect adjustments for indirect costs, capital costs, bus aide costs, and other reporting errors (including the exclusion of transportation expenses paid by student activity funds) for the school year ending June 30, 2015, to enable comparison with the listed divisions:

	Roanoke City	Harrisonburg City	Lynchburg City	Salem City	Roanoke County
Regular Transportation Operational Cost per Mile	\$ 4.73514	\$ 6.77138	\$ 2.95802	\$3.75682	\$ 2.91833
Exclusive Transportation Operational Cost per Mile	\$ 7.29652	\$ 7.65159	\$ 4.31443	\$4.74546	\$ 3.62121
Regular Transportation Per Pupil Cost	\$ 333	\$ 382	\$ 324	\$ 254	\$ 367
Exclusive Transportation Per Pupil Cost	\$ 5,891	\$ 3,019	\$ 3,119	\$ 6,520	\$ 5,597

Scope:

We analyzed transportation data reported to the VDOE for school year 2014/15 for the following school divisions:

- Roanoke City

- Harrisonburg City
- Lynchburg City
- Salem City
- Roanoke County

We used contractor invoices and payments reported in Roanoke City Public Schools AptaFund financial system to verify transportation costs. The contractor provided capital outlay costs for 2014, 2015, and 2016 for our analysis.

The Director of Transportation for Roanoke City Public Schools provided supporting documentation for pupil counts as well as mileage. Total mileage by type of transportation for planned routes was based on data taken from the VersaTrans routing software.

End of Objectives & Scope

BACKGROUND

Starting in school year 2009/10, Roanoke City Public Schools [RCPS] entered into a contract with Krapf, Jr. & Sons, Inc. for student transportation services. The contractor established a wholly-owned subsidiary, Mountain Valley Transportation, to provide services in Virginia. As Roanoke City Public Schools transportation services provider, Mountain Valley Transportation:

- Hires, trains, and manages all bus drivers
- Purchases and maintains all buses, vans, and service vehicles
- Purchases all required insurance coverages

Roanoke City Public Schools renegotiated the transportation services agreement with Krapf, Jr. & Sons, Inc., in 2013 and has the option of renewing the contract annually through June 30, 2019. Services are provided within two basic classifications:

- **Class A Services** include basic transportation of all Prekindergarten through 12th grade students, special education students, late runs and other transportation services not covered by any other class.
- **Class B Services** cover transporting students in connection with extracurricular activities, sporting, and other special events that are provided upon request.

The following table outlines the purchase orders entered for Class A and Class B services for fiscal years 2013 thru 2017 (as of October 20, 2016):

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017 (thru 10/20/16)
Class A	\$ 8,166,000.00	\$ 8,496,000.00	\$ 9,551,593.11	\$ 9,180,000.00	\$ 9,180,000.00
Class B	\$ 564,809.84	\$ 571,576.25	\$ 575,423.53	\$ 709,128.20	\$ 168,635.96
Total	\$ 8,730,809.84	\$ 9,067,576.25	\$ 10,127,016.64	\$ 9,889,128.20	\$ 9,348,635.96

Class A routes are billed at a flat daily rate. The rates in 2014/15 were as follows:

Regular School Year	Regular Ed (\$/day/route)	Special Ed (\$/day/route)
29 to 78 Passenger Bus	284.17	271.56
10 to 28 Passenger Bus	265.83	265.83
1 to 9 Passenger Vehicle	NA	231.46
Summer School		
29 to 78 Passenger Bus	234.90	221.15
Other		
Late Runs	74.48	74.48
Mid-Day Runs	74.48	74.48
Bus Assistants	17.19 / hour	17.19 / hour

Class B routes were billed based on the following rates in 2014/15:

Item	Hourly Rate (2 hour min)	\$/mile Add On
Field Trips / Athletics Trips (9:00 AM to 2:00 PM)	37.81	NA
All Other Trips	30.94	2.23

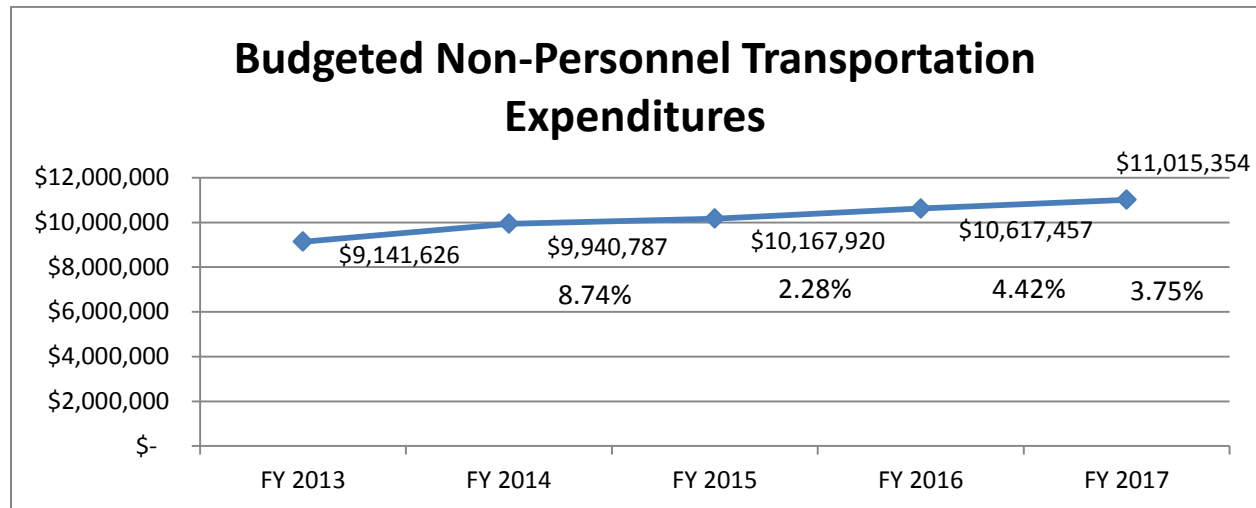
The 2013 agreement specifies that rates are to be adjusted annually based on the “Washington-Baltimore, DC-MD-VA-WV” Area Consumer Price Index for All Urban Consumers [CPI] as published by the US Department of Labor. Each annual increase shall be no less than two percent (2%) and no more than five percent (5%). Rates for services could increase even more if the cost for Mountain Valley to provide a service increases by more than 13%.

Current trip rates for the 2016-2017 school year, which went into effect on July 1, 2016, provided by the Director of Transportation are as follows:

- 9:00 am to 2:00 pm: \$39.34 per hour with a 2 hour minimum (Flat Rate)
- All other trips: \$32.19 per hour with a 2 hour minimum plus \$2.32 per mile round trip

BUDGETED EXPENDITURES:

The following chart illustrates that budgeted non-personnel transportation expenditures have steadily risen over the past five years. Non-personnel expenses are contractor services, fuel, supplies, and software costs:



Roanoke City Public Schools employ a Director of Transportation and an Assistant Director of Transportation. They are responsible for ensuring adequate service levels, coordinating routes, approving and coordinating field trip requests, reviewing and approving contractor and fuel delivery invoices, monitoring driver training sessions, and acting as a liaison between the school

district and Mountain Valley. These personnel expenditures comprise a little over two percent (2%) of total transportation budget for Roanoke City Public Schools.

VDOE TRANSPORTATION REPORTING:

The VDOE requires school districts to report pupil transportation costs annually, in accordance with the Virginia Department of Education Pupil Transportation Data Submission User Guide. The guide illustrates how to use the State's online system and provides instructions on how to properly classify riders, miles and expenses. The VDOE uses this information as a basis for providing 'Basic Aid' funding to divisions for transportation. The Finance Officer, Transportation Director, and Superintendent must certify [via their signature] that the data reported is accurate to the best of their knowledge. The signed report is sent to Pupil Transportation Services in Richmond, Virginia.

Roanoke City Public Schools uses the VersaTrans routing software to plan and maintain bus routes. The software calculates the mileage of each route, which is used in compiling the Annual Transportation Report. The Division uses Trip Tracker software for managing trip requests and billings. However, the miles for each trip are not entered into the system.

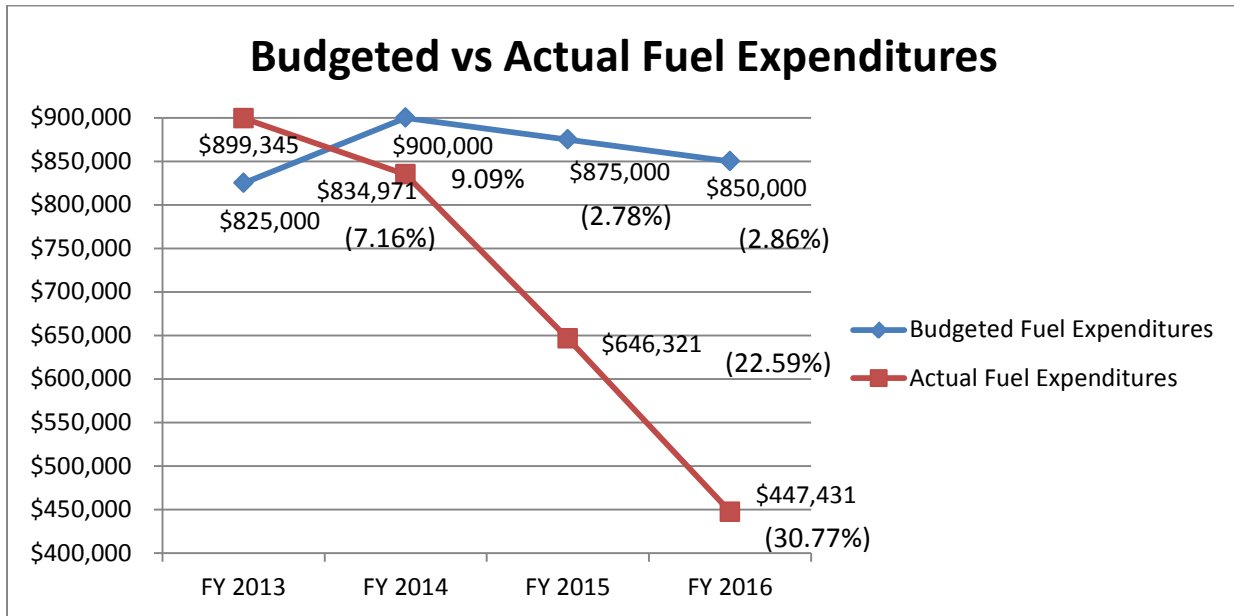
CAPITAL OUTLAYS FOR BUS REPLACEMENT:

Based on the information provided to the School Board at its September 10, 2013 meeting to consider the new transportation service agreement with Mountain Valley, the average age of the Division's bus fleet has improved as follows:

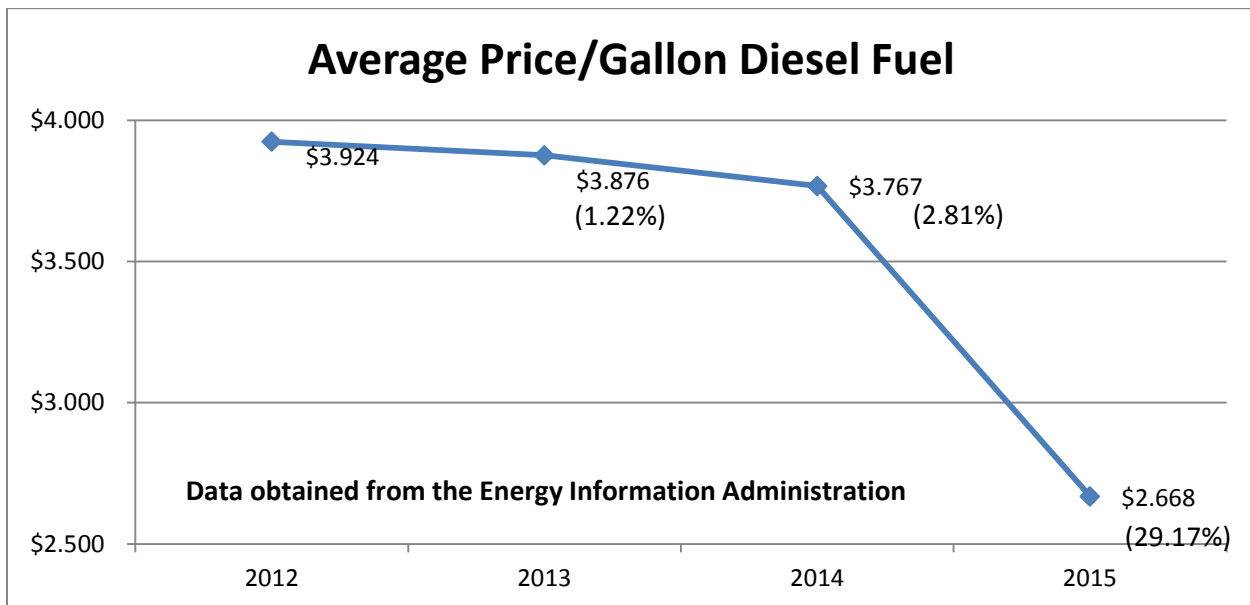
- 2008-09: 12.0 years
- 2011-12: 8.5 years
- 2012-13: 7.2 years
- 2013-14: 6.3 years

Under the 2013 agreement, the average age of the fleet is not to exceed seven (7) years, with no bus in service more than 13 years. Benefits of a newer fleet include improved fuel efficiency and lower maintenance costs. This investment in bus replacement should result in operating costs being lower than peer divisions with older buses.

FUEL COSTS:



The chart above shows that Roanoke City Public Schools' actual fuel expenditures have significantly decreased over the past four (4) fiscal years. The chart below illustrates the average price per gallon of diesel fuel over the past four [4] calendar years, for the Lower Atlantic Petroleum Administration for Defense District (PADD) 1C, which encompasses Virginia:

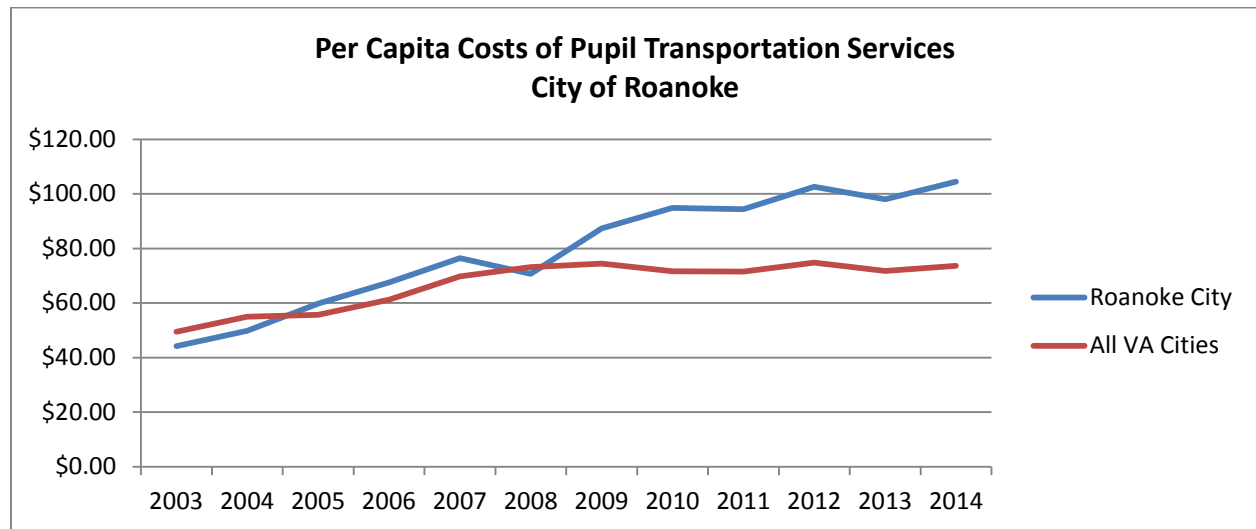


The charts show that the Division's fuel costs have declined significantly in recent years, consistent with the falling price of fuel.

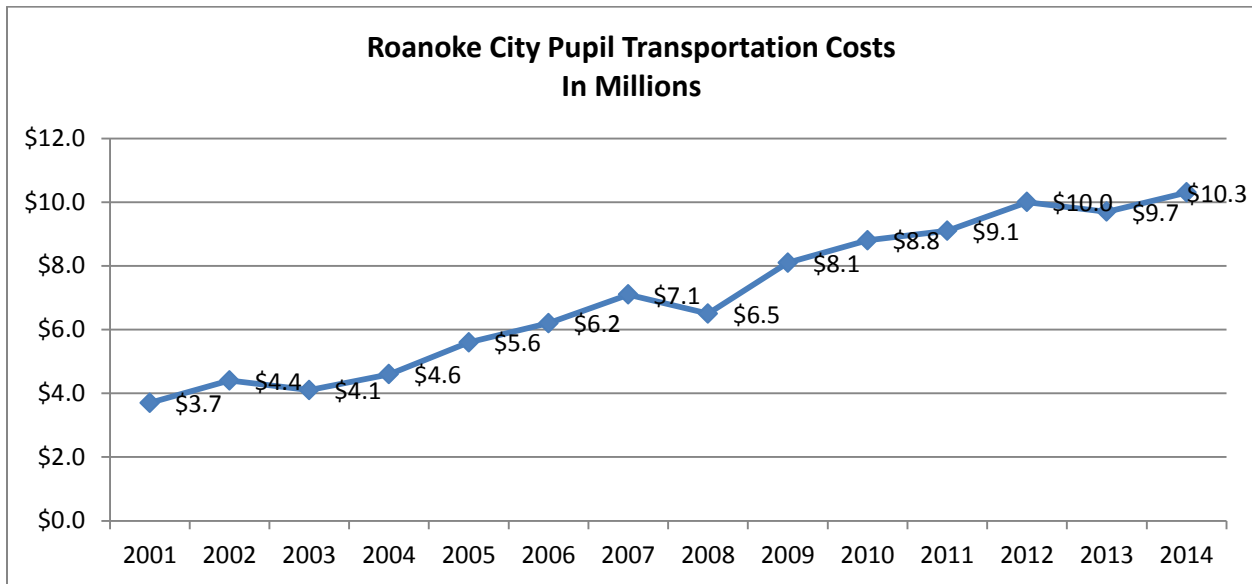
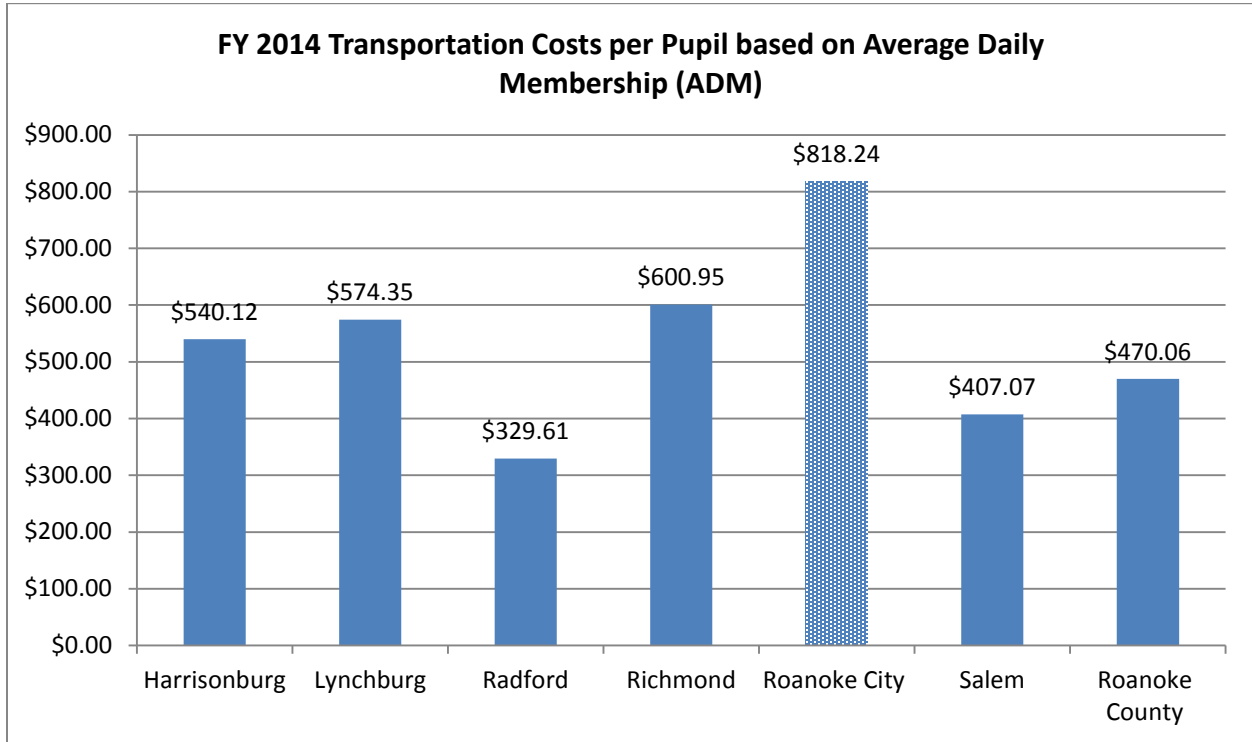
COMPARATIVE DATA FOR VIRGINIA SCHOOL DIVISIONS:

The Virginia Auditor of Public Accounts (APA) compiles financial data from all Virginia localities annually. Localities are required to complete an extensive workbook of financial data that is reviewed by the independent auditors who opine on the respective locality's financial statements. The data in the comparative report provides a means to compare each locality's investment in services such as public works, parks and recreation, police services, and education, on a per capita basis. The comparative data is general in nature and not suitable for understanding the underlying reasons for differences between localities.

As part of the original 2012 audit, we used the comparative report as a basis for comparing Roanoke City Public Schools transportation costs to other school divisions. In our analysis, we noted that the comparative data may be misleading due to Roanoke City Public Schools being the only division that had outsourced transportation. We suggested that the School Division use the comparison annually to gauge how its costs trended with other divisions over time. In 2016, while following up on action plans from 2012 in Transportation, we decided to look at the APA comparison data once again to see how Roanoke was trending compared to other Virginia localities. The following graphs were based on the most recently available APA data (2013/14).



(Continued on next page)



While the APA comparative data provides the best publicly available source of data for comparisons across the State, the per capita measure provides little insight into the possible cost drivers behind differences. The value of the comparative data to Roanoke City Public Schools is also degraded due to our outsourced model. Other school divisions do not include

indirect costs in the expenditure data reported to the state. Indirect costs are embedded in the rates billed by the City's transportation provider.

In order to better understand Roanoke City Public Schools transportation costs and to be able to more accurately benchmark costs with other Virginia school divisions, the school administration and the Audit Committee agreed that further analysis would be beneficial.

End of Background

Objective 1: RCPS Transportation Data

Audit Objective:

To determine if the Roanoke City Public Schools ridership, mileage, and transportation cost data are reported in accordance with the Virginia Department of Education's [VDOE] regulations.

Overview:

The VDOE requires that all Virginia school districts report their ridership and mileage data each November. Districts typically record their daily ridership during the third week in October as a basis for estimating total ridership for the school year. Ridership counts are required to be categorized into regular and exclusive riders.

Students with individualized education programs (IEPs) who ride in buses with specialized design, equipment and/or staffing, or other vehicles specifically assigned for their transport are designated as "exclusive riders." All other students riding on buses that are more generally routed within each school attendance zone are classified as "regular riders."

Ridership:

Upon reviewing the ridership computations for the 2014/15 school year, we identified two adjustments to the ridership counts for RCPS:

- Transportation used the highest ridership count during the week to estimate ridership for each route. The VDOE wants divisions to use the five (5) day average of the higher of the morning or afternoon counts to estimate the average daily ridership for all routes.
- Transportation did not include students transported to and from school by van in ridership counts.

The net effect of these adjustments was to lower the average daily ridership for RCPS by 1,181 students (14.5%) to 8,111. The ridership reported to the VDOE was 9,292.

Miles by Category ("A" Routes):

The VDOE also requires that every mile traveled by public school buses be categorized. Miles are counted for regular and exclusive routes, as well as these other categories defined by the State:

Special Trip Miles - Miles traveled for special activities such as field trips, etc.

Federal Program Miles - Miles traveled transporting students in programs funded with federal funds.

Summer School Miles - Miles traveled to transport students to and from summer school instructional programs.

Deadhead Miles - Miles traveled without students on board.

Public Carriers - Miles traveled to transport students to and from school in vehicles that are used by the public. This includes intra-city transit buses, taxicabs, and intercity/interstate passenger buses, airplanes, or trains.

Private Carriers - Miles traveled to transport exclusive students who need transportation by means other than exclusive designated transportation.

Transportation uses the VersaTrans routing software to plan its standard "A" routes that take children from home to school and from school to home. Based on the routing, the software classifies each mile as regular, exclusive, or deadhead miles. This enables the Director of Transportation to project total miles for each of these classifications. Similarly, the routing software is used to plan summer school routes and provides the necessary data to report summer school miles.

Based on our review of mileage data reported for "A" routes, we identified the following adjustments would be needed to be consistent with VDOE's reporting guidance:

- Total annual miles reported to the VDOE were based on 180 school days when there were only 171 actual school days.
 - Regular miles overstated by 25,382
 - Exclusive miles overstated by 16,670
 - Deadhead Miles overstated by 31,468
- Miles traveled by vans transporting students were not included in the totals reported to VDOE:
 - Regular miles understated by 30,578
 - Exclusive miles understated by 13,093
 - Deadhead miles understated by 37,867
 - Summer School Miles understated by 2,410
- 17,351 exclusive miles were mistakenly counted and reported as regular miles.
- The miles associated with transporting students via public transportation were not included in the total annual miles counted.

Based on the net effect of all identified adjustments, we concluded that RCPS understated its total miles by 32,906.

Mileage By Category ("B" Routes):

Mountain Valley provides transportation upon request for field trips, athletics trips, after school programs, etc. ("B" Routes). Schools submit requests through the Trip Tracker software and are billed in accordance with the rates specified in the contract. Special trips that are essentially completed during regular school hours are billed a flat rate. All other special trips are billed an hourly rate plus a cost per mile. Bus drivers record the miles traveled on paper forms. Mileage data is not entered into a system that can report total miles driven in relation to special trips.

The Director of Transportation uses a formula to estimate special miles that is based on actual special miles reported the year prior to outsourcing. Based on our review of the formula, we do not believe it effectively estimates the special miles now being driven. Additionally, the formula does not account for deadhead miles that would be associated with special trips.

Transportation Costs:

The RCPS Director of Accounting prepares the Annual School Report each year for the VDOE, which requires reporting total transportation expenditures incurred by the Division. RCPS codes most transportation related expenditures in function code series 63000 "Pupil Transportation," broken out as follows:

- 63100: Management and Direction
- 63200: Vehicle Operation Services
- 63300: Monitoring Services
- 63400: Vehicle Maintenance Services
- 63500: School Bus Regular Purchase
- 63600: School Bus Lease Purchase
- 63700: Other Vehicle and Equipment Purchases

The Director of Accounting also includes expenses related to the VersaTrans routing software used to plan regular routes, reported in function code 68500 "Technology – Pupil Transportation."

The total expenses from the above-mentioned function codes are reported to the VDOE as transportation expenditures through the Annual School Report. The numbers from the Annual School Report are then used by the VDOE to populate the Virginia Department of Education Pupil Transportation Report.

In accordance with VDOE guidance, RCPS excludes the transportation expenses reported in the principal discretionary, restricted athletic, and student activity funds when preparing the

Annual School Report. In school divisions that operate their own transportation departments, this policy appropriately excludes inter-fund payments that are reimbursements to the general fund, not actual expenditures.

RCPS contracts with Mountain Valley Transportation to provide virtually all transportation services. Individual schools and teams pay Mountain Valley Transportation directly for field trips and athletic trips. These are real expenditures that go directly to the vendor and are not reimbursements to the general fund. Excluding these expenditures understates RCPS's transportation costs and the per capita costs reported by the APA. It also causes the operating cost per mile tracked by the VDOE to be understated since miles traveled for field trips and athletics trips have been reported to the VDOE without including the associated expenses.

Using the raw data from the AptaFund system, we recalculated RCPS total transportation expenditures for FY2015. We identified the following issues:

- Payments to VML Insurance Programs for annual district-wide insurance on RCPS buildings totaling \$403,146 were erroneously included as transportation expenses.
- Payments to Yellow Cab Services of Roanoke, Inc. (\$19,624) and Valley Metro (\$507.50) were erroneously excluded from total transportation expenditures.
- \$4,875 in payments to Valley Metro were not properly classified as "Public Carrier" expenses.
- Expenses totaling \$347,493 from fund 315 (Principal's Discretionary), fund 342 (Athletics Restricted), and 400 (Student Activity) were erroneously excluded from total transportation expenditures.

End of Objective 1

Objective 2: Comparison of RCPS Transportation Data to Peer Schools

Audit Objective:

To develop an analysis that enables Roanoke City Public Schools to compare transportation costs per mile and costs per pupil with other school divisions in the region.

Overview:

We analyzed the differences in the types of costs which were included in total transportation expense reported to the Virginia Department of Education [VDOE] for peer school districts, as compared to the types of costs reported by RCPS. We selected the following peer school districts for review and comparison of FY 2015 transportation expenses:

- Harrisonburg City
- Lynchburg City
- Salem City
- Roanoke County

We obtained the pupil transportation section of the FY 2015 *Annual School Report* for these districts directly from the VDOE. By reviewing these reports, we were able to determine how costs are broken out and verify pupil transportation expenditures reported in the *VDOE Pupil Transportation Report Superintendent's Verification Report*.

We attempted to contact each division by email and phone, and visited Roanoke County's Transportation Department. Following a questionnaire we developed in advance, we attempted to gather more detailed information about data reporting, route planning, and bus replacement plans.

Purchased Services:

The most significant difference noted in the reports was **purchased services**. RCPS reported \$10,108,895 in costs for purchased services provided by Mountain Valley Transportation. Harrisonburg City Public Schools spent \$3,156,107 for purchased services provided by the City of Harrisonburg, who manages school transportation. The other three (3) school districts spent less than \$80,000 on purchased services (Lynchburg City \$57,513, Salem City \$79,640, and Roanoke County \$61,772).

Capital Expenditures:

Another significant difference was the treatment of **capital expenditures**. The Virginia Department of Education Pupil Transportation Report deducts capital outlay costs for bus leases, replacements and additions when computing the cost per operating mile for each division. RCPS does not report capital outlays for replacement buses since Mountain Valley Transportation purchases the buses and factors the costs into its contracted rates. According to Mountain Valley Transportation, **\$855,576** was invested in replacement buses in FY 2015. Listed below are the capital expenditures reported for FY 2015 for the school districts we reviewed:

- Roanoke County: \$0
- Salem City: \$34,670
- Harrisonburg City: \$43,227
- Lynchburg City: \$1,115,316

Each school district has structured their bus replacement program a little differently. Roanoke County replaces buses based on mileage, maintenance costs and funding availability. The other divisions targeted bus replacements based primarily on age and funding availability.

RCPS incorporated bus replacement provisions into the contract for bus services in lieu of having a formal bus replacement plan. The contract stipulates that the fleet will have an average age of seven [7] years with no school bus being in service for more than 13 years. Life cycle costs are not a factor considered in this approach. This forces Mountain Valley to replace a bus at 13 years of age regardless of how well it might be performing or how low its accumulated mileage might be. This risks premature retirement of a bus for which the division has in essence fully paid for and which has remaining useful life.

The National Association of State Directors of Pupil Transportation Services suggests that two conditions are important to consider when making bus replacement decisions:

1. When there is a significant improvement in the federal standards for the safety, fuel efficiency or exhaust emission requirements of school buses.
2. When the operating and maintenance expense on a school bus, or group of school buses, reaches a certain level, it appears that the better economic decision would be to purchase a new bus rather than continue to maintain the older school bus (i.e. cost/benefit analysis).

Every bus produced may not be of the same quality and every mile driven does not cause the same wear and tear. Replacement decisions should consider maintenance cost per mile of each bus along with age and mileage. The report states that the generally accepted age range of Type C and D school buses to be considered for retirement is 12 to 15 years of age.

*The full NASDPTS report can be found in **Exhibit 1***

Per Virginia Code Chapter 70, Section 490 regarding regulations governing pupil transportation, "The responsibility for purchasing school buses and school activity buses which meet state and federal requirements rests with division superintendents and local school boards. A schedule for the replacement of buses on a continuing basis shall be developed and implemented by each school division."

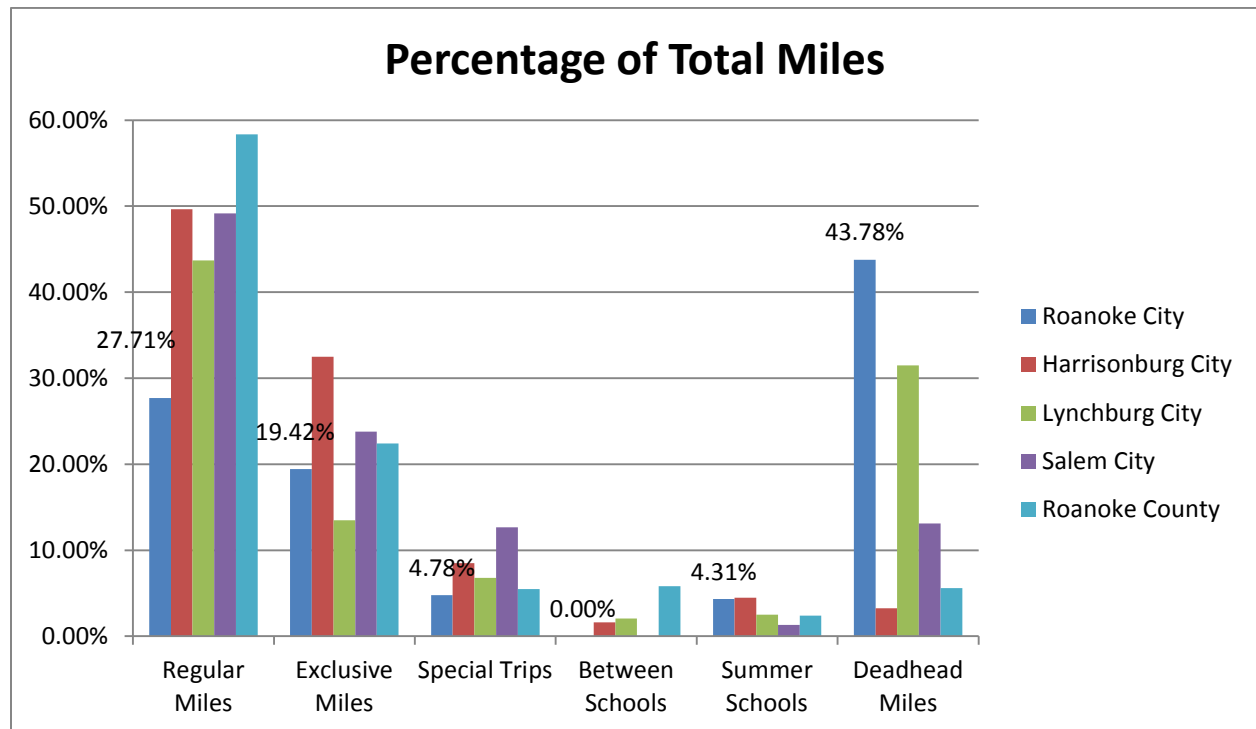
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Deadhead Miles:

We analyzed the number of pupils, miles, and total operational costs reported on the VDOE 2014-2015 Pupil Transportation Report Superintendent's Verification Report filed by each district. As the chart below illustrates, of the 1,755,238 miles traveled by RCPS in FY 2015, 712,950 miles (or 40.62%) were deadhead miles. This was the highest percentage of deadhead miles traveled among the peer school districts reviewed.

	Roanoke City	Harrisonburg	Lynchburg	Salem	Roanoke County
Regular Miles	28.92%	49.63%	43.67%	49.16%	58.34%
Exclusive Miles	18.99%	32.50%	13.49%	23.77%	22.41%
Special Trips	7.21%	8.51%	6.78%	12.65%	5.47%
Federal Programs	0.00%	0.00%	0.00%	0.00%	0.00%
Between Schools	0.00%	1.60%	2.06%	0.00%	5.80%
Summer Schools	4.26%	4.49%	2.50%	1.33%	2.38%
Deadhead Miles	40.62%	3.27%	31.49%	13.09%	5.59%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

The following bar chart compares the percentage of total miles for RCPS after corrections for reporting errors:



As the bar chart demonstrates, almost 44% of the miles traveled by RCPS buses occur without children on the bus.

We contacted Harrisonburg and asked how they managed so few deadhead miles. Their representative responded that the data reported by Harrisonburg was likely erroneous and that deadhead mileage was likely higher. Roanoke County believed their data was correct and stated that bus drivers provide regular input on making routes more efficient.

We considered if relocating the transportation center from nearer the center of the City to Peters Creek Road might have impacted deadhead mileage. We looked at mileage for the most recent 10 years as reported on the VDOE Pupil Transportation Report filed by RCPS. Over this time period, deadhead mileage as a percentage of overall miles driven averaged **39%**. (See **Exhibit 2** for the complete table)

In discussing why a county might have fewer deadhead miles as a percent of its overall miles than a city, the idea that population density contributes to the issue was raised. In the city, a bus may drive several empty miles to a stop at an apartment complex and be fully loaded after one or two stops. A short trip to the school may be less than the deadhead trip to the first stop. Whereas in the county, students are more dispersed and several miles may be driven with students on board as the bus is slowly filled to capacity. Attendance zones may be larger and involve a further distance to the school after loading. In any case, a more thorough analysis of deadhead miles occurring in each route would be prudent.

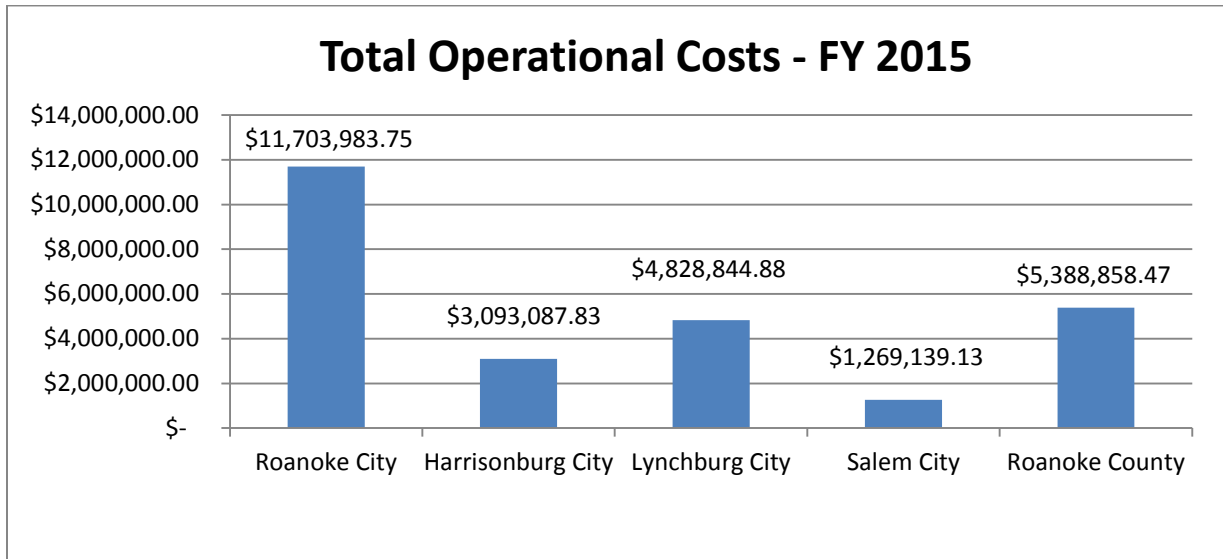
Bus Aides:

Roanoke City Public Schools does not report the salaries and benefits costs for bus aides in the online system in the way instructed by the VDOE. When properly entered, the online system allocates these costs to "Exclusive" transportation. The estimated amount of exclusive expense related to bus aides' salaries and benefits not properly entered in the online system in FY 2015 was **\$1,078,085**. (*This is not a reduction in overall costs; it just understated costs per exclusive mile and overstated costs per regular mile*). As a result, RCPS reported the same cost per mile (\$6.66803) for all categories of miles traveled (regular, exclusive, special, summer school, and deadhead) during FY 2015.

We contacted the VDOE to inquire about the impact on RCPS's funding due to not including exclusive bus aides salaries/benefits in the exclusive transportation costs. The VDOE Education Finance Manager stated that due to the complexity of the calculation, he could not quantify the missed reimbursement at this time. Since it is a linear-weighted prevailing average, it does not result in a direct reimbursement to RCPS.

Operational Costs:

RCPS reported the highest operational costs (\$11,703,984) of all comparable districts reviewed for fiscal year 2015 as depicted on the following chart:



RCPS reported the second highest overall operational cost per mile (behind Harrisonburg City Public Schools) among the school districts we reviewed:

- Harrisonburg City: \$7.05745
- **Roanoke City: \$6.66803**
- Salem City: \$3.99181
- Lynchburg City: \$3.14106
- Roanoke County: \$3.07583

Note: Harrisonburg City Public Schools pays the City of Harrisonburg to provide school transportation.

Adjusted Operational Costs Per Mile:

Based on our review of the various comparative data available, we believe operational cost per mile provides the best measure of efficient operations. It allows for comparison across divisions of all sizes and geographies, muting the impact of population density and ridership.

In order to compare RCPS's operating costs, we needed to adjust the operating costs reported to the VDOE as follows:

- Capital outlays for replacement buses paid by Mountain Valley Transportation in FY15 = \$855,576.

- Indirect costs related to functions such as hiring, payroll, accounting, accounts payable, and purchasing are included in Mountain Valley’s billable rates and therefore included in the transportation costs RCPS reports to the VDOE. Virginia school divisions that insource transportation services do not include indirect costs when reporting their transportation costs to the VDOE. The VDOE approved unrestricted indirect cost rate for RCPS for FY15 was 18.1 %. Applying this rate to MVT billings, RCPS transportation costs included as much as **\$1,828,828** in indirect costs
- Property taxes paid by Mountain Valley to the City = \$142,000
- Reporting errors totaling \$35,685

See **Exhibit 3**

These adjustments reduced RCPS’s operational costs by **\$2,862,089** from the costs reported to the VDOE. This resulted in a 29% lower operational cost per mile and a 19% lower regular transportation cost per pupil. The following table compares the adjusted operational cost per mile for RCPS with other the other districts in our sample:

	Roanoke City	Harrisonburg City	Lynchburg City	Salem City	Roanoke County
Regular Transportation Operational Cost per Mile	\$ 4.73514	\$ 6.77138	\$ 2.95802	\$ 3.75682	\$ 2.91833
Exclusive Transportation Operational Cost per Mile	\$ 7.29652	\$ 7.65159	\$ 4.31443	\$ 4.74546	\$ 3.62121
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As an outsourced function, Harrisonburg’s data includes indirect costs and capital outlay. If we exclude Harrisonburg’s data on this basis, the average operating cost per mile of the remaining three districts was \$3.21 for regular transportation and \$4.22 for exclusive transportation. Using these averages, RCPS paid a premium for transportation services:

- \$1.53 (48%) more than the average for regular transportation
- \$3.08 (73%) more than the average for exclusive transportation

Having already adjusted for bus purchases, indirect costs and property taxes, these numbers represent operational costs (labor, fuel, parts) and profit. For every \$0.10 per mile reduction, RCPS would have saved \$178,814 (\$0.10 x 1,788,144 miles) without reducing the level of service in terms of routes, trips and miles.

End of Objective 2

SUMMARY OF MANAGEMENT ACTION PLANS

Management Action Plan – Ridership Reported to VDOE	
<p>RCPS will follow the VDOE guidelines for completing the ridership report and as recommended by Municipal Audit, we will use an average of ridership numbers from the week specified by VDOE going forward. RCPS has not included van ridership in the past because VDOE guidelines specifically directly that only “yellow bus” ridership should be included. In accordance with the guidance Municipal Audit received from VDOE, we will include van ridership going forward.</p> <p>These changes have already been made with the 2015-16 data reported to VDOE in 2016-17.</p>	
Assigned To	Target Date
Stan Crowgey, Director of Transportation	Completed

Management Action Plan - Mileage Reported to VDOE	
<p>To more accurately record mileage beginning with the 2017-18 school year, we will begin to use GPS mileage data collected by Mountain Valley on a daily basis. We will work with Mountain Valley during the summer of 2017 to establish procedures for data collection and sharing to ensure RCPS has the level of detail necessary to report regular miles, exclusive miles, special trip miles, summer school miles and deadhead miles accurately.</p>	
Assigned To	Target Date
Stan Crowgey, Director of Transportation	Aug. 22, 2017

(Continued on the next page)

Management Action Plan – Public Carrier Expense

Roanoke City Public Schools has taken steps to correct the coding of public carrier expenses going forward. Purchase orders to Yellow Cab in 2016-17 have been entered that code expenditures to the transportation function code 63200 and the public carrier object code 43341. The Accounting Department explained the needed change to the staff who typically enter these purchase orders. Likewise, purchase orders entered to Valley Metro have also been corrected. Because multiple people from multiple departments may initiate purchases of these services from time to time, RCPS cannot guarantee that coding errors will not occasionally still occur, especially as people are adjusting to the change. The Purchasing Department has been alerted to the change and asked to look for coding errors on this type of purchase requisition. The Accounting Department will also review accounts as part of the year-end close procedures to ensure that no public carrier expenditures have erroneously been coded to functions other than transportation. If the Accounting Department finds such a coding error, they will correct it by journal entry prior to year-end reporting.

This correction has already been implemented.

Assigned To	Target Date
Donna Caldwell, Director of Accounting	Completed

Management Action Plan – Bus Aides’ Salaries and Benefits

Beginning with the report on 2015-16 pupil transportation, RCPS included bus aide salary and benefit information as recommended.

Assigned To	Target Date
Stan Crowgey, Director of Transportation	Completed

Management Action Plan – Deadhead Miles

The assessment that Roanoke’s deadhead miles are excessive is based on a comparison with Harrisonburg City, Lynchburg City, Salem City and Roanoke County. This assumes that these other divisions reported their deadhead miles accurately, which RCPS cannot confirm. RCPS also suspects, but cannot confirm, that these other divisions’ community structures differ from Roanoke’s in ways that affect deadhead mile accumulation.

Going forward, RCPS will use GPS data submitted by Mountain Valley Transportation to evaluate deadhead mile calculations. Management believes that the Versatrans Routing software data currently used is accurate, but this data will be compared with the GPS data for verification. A procedure for gathering the GPS data will be finalized by the start of the 2017-18 school year.

Assigned To	Target Date
Stan Crowgey, Director of Transportation	Aug. 22, 2017

Management Action Plan – Capital Expenditures

While the budgetary impact of the school bus fleet’s maintenance and replacement is an important component to decisions about the fleet age and replacement schedule, RCPS weights student safety higher than minimizing cost in this area. Currently, by contract, buses serving RCPS will be no older than 13 years. As a cost saving measure as part of the 2017-18 budget process, RCPS has decided to age the fleet by one year. Beginning in 2017-18, no bus older than 14 years will be in use. This is closer to the state recommendation cited by Municipal Audit that bus replacement cycles be 15 years, but still aligned with the high standard of operability to maximize student safety required by the Administration.

RCPS will work with Mountain Valley Transportation to develop guidelines to look at bus age, mileage, condition of the bus, lifetime repair history and cost, bus availability and the operational environment. If Mountain Valley finds a bus that is 14 years old but has fairly low mileage, almost no maintenance problems or other positive performance features, Mountain Valley could make a recommendation to RCPS to keep the vehicle in use longer than 14 years. RCPS would make the ultimate decision on a case by case basis.

Assigned To	Target Date
P. Steve Barnett, Deputy Superintendent	June 2018

Management Action Plan – Cost Per Mile

RCPS will develop written procedures that include the data sources used and any assumptions used to complete the Pupil Transportation Report to help ensure consistency year over year. To more accurately record mileage beginning with the 2017-18 school year, we will begin to use GPS mileage data collected by Mountain Valley on a daily basis. We will work with Mountain Valley during the summer of 2017 to establish procedures for data collection and sharing to ensure RCPS has the level of detail necessary to report regular miles, exclusive miles, special trip miles, summer school miles and deadhead miles accurately. Management believes that evaluating cost per mile using this different data collection method will help us establish a more accurate baseline, so RCPS will evaluate cost per mile once a full year of GPS mileage data is available (once 2017-18 is complete).

Procedures for the Pupil Transportation Report completion will be written as the 2016-17 report is completed (during the 2017-18 school year).

Assigned To	Target Date
Stan Crowgey, Director of Transportation	Dec. 2018

(Continued on the next page)

Management Action Plan – Job Description	
<p>The job description for the Director of Transportation will be revised to reflect the current outsourced model.</p>	
Assigned To	Target Date
P. Steve Barnett, Deputy Superintendent	Aug. 2017

Management Action Plan – Student Activity Funds	
<p>Management acknowledges Municipal Audit’s concern that miles driven for field trips paid out of School Activity Funds are possibly being reported on the Pupil Transportation Report while the costs associated with those miles, because they are paid out of School Activity Funds, are not being reported on the VDOE Annual School Report Financial Section (ASR). However, Management disagrees with Municipal Audit’s recommendation that all transportation expenses, including those paid out of School Activity Funds, be reported on the ASR. The ASR is for reporting school division revenues and expenditures only, not expenditures paid out of fiduciary funds. We are specifically instructed by VDOE not to include School Activity Funds in what is reported on the ASR. Management instead intends to exclude the mileage from field trips paid out of School Activity Funds from future Pupil Transportation Report mileage counts. This will ensure that only transportation expenditures paid by the school division are being reported, and only miles for trips paid by the school division are being reported for an even assessment of costs per mile.</p> <p>To more accurately record mileage beginning with the 2017-18 school year, we will begin to use GPS mileage data collected by Mountain Valley on a daily basis. We will work with Mountain Valley during the summer of 2017 to establish procedures for data collection and sharing to ensure RCPS has the level of detail necessary to report field trip mileage and exclude those miles paid out of fiduciary funds.</p>	
Assigned To	Target Date
Stan Crowgey, Director of Transportation	Dec. 2018

End of SUMMARY OF MANAGEMENT ACTION PLANS

MANAGEMENT COMMENTS

The Management of Roanoke City Public Schools (RCPS) is appreciative of Municipal Audit's review of transportation data and reporting practices, and has already implemented many changes to address issues with reporting consistency noted by the Municipal Auditor. Other changes are in the process of being implemented, as outlined in the Summary of Management Action Plans. However, given the data collection recommendations made to RCPS, and the inability on the part of both Management and Municipal Audit to verify that similar data collection issues do not also exist with the comparison school division data used, Management does not believe that a conclusion that accurately compares RCPS costs per mile and those of other school divisions can be made.

As noted by Municipal Audit, the methods available to RCPS for tracking mileage at the time of the audit did not produce complete information. RCPS has chiefly used route distance based on routes created in the Versatrans routing software. As a result, RCPS has been unable to accurately include the mileage for the following transportation areas:

Activity Buses

RCPS provides at least two activity buses daily at each high school, and at least one activity bus at each of the five middle schools, to transport students home who stay after school for athletic practices or academic tutoring. These activity buses begin running approximately three weeks before school starts to bring students both to school and home for athletic practices. These buses do not have routes established in Versatrans because their route changes on a daily basis depending on how many students stay on a given day and where in the area those students live. The number of buses needed and the distance traveled is particularly high for Jackson Middle School because that school serves as the Middle School English Language Learner (ELL) Center for the entire division. Students from all over the city, not just those living in the vicinity of Jackson, attend that school.

Public and Private Carrier Expenses

As noted by Municipal Audit, RCPS did not report public carrier expenses as a transportation expense in the past, coding it instead as a student service for homeless students. This has already been corrected, but with these costs now reported as part of transportation expense, RCPS will need to determine a process for tracking the mileage that is associated with those costs. Currently those miles are not reported, thereby inflating overall costs per mile. Similarly, when private charter buses are needed for extended distance travel to athletic competitions or field trips, those costs are included as part of overall transportation expense but the miles associated with those costs are not being tracked.

Extra Travel Needed After Route Completion

RCPS does not drop pre-kindergarten or kindergarten students off at their designated bus stop in the afternoon if a parent or guardian is not present to receive them. If this happens, the bus driver keeps the student on the bus and brings the student back to the school at the end of the route, where the principal or another building administrator will ensure the student gets home safely. These miles are unplanned and not part of the Versatrans planned trip mileage, so RCPS has not tracked these miles nor been able to report them.

As noted above, and through the Audit Observations, there were a variety of areas identified by Municipal Audit where recommendations were made for improved reporting of RCPS transportation costs, mileage, and numbers of pupils served. Given the various measurement methods available and the ambiguity of some reporting instructions, which are in part responsible for the errors identified by Municipal Audit, Management believes it is very unlikely that all other school divisions measure and report their data in a consistent manner, and in a manner that Municipal Audit would find to be appropriate. Our inability to verify the data reported by the school divisions against which we are being compared further fuels our belief that an accurate assessment of how RCPS costs compare to other divisions cannot be made. As evidence of this, Municipal Audit indicates on Page 18 that when questioning Harrisonburg about how they managed to keep their deadhead miles so low, "their representative responded that the data reported by Harrisonburg was likely erroneous and that deadhead mileage was likely higher."

Deadhead mileage, even if reported accurately by all school divisions being reviewed, differs dramatically depending on the geography of the locality and the makeup of the student population. RCPS, as an urban division, has some buses that fill up after only one or two stops at apartment complexes. In these cases, the trip from the bus garage to the first stop and from the school back to the bus garage (deadhead miles) are much longer than the trip to take the students from their stop to the school.

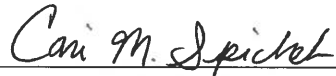
RCPS was the first school division in Virginia to privatize transportation. As such, contracting arrangements were new territory. It was agreed at that time by all parties, and continues to be the structure of the contractual agreement today, that RCPS will pay a flat per route rate for basic transportation services provided by Mountain Valley Transportation. Other trips, such as field trips, are charged separately. Through other contractual arrangements entered into since that time with other vendors, RCPS has been able to experience the benefits of arrangements that bill based on direct costs and an associated management or operating fee. At the end of the current contract with Mountain Valley Transportation, when RCPS again engages in a Request For Proposals (RFP) process, RCPS will request that proposals include this revised cost structure so that Management can consider alternative payment structures for future transportation services contracts. Amounts currently paid to Mountain Valley Transportation are in accordance with the current contractual obligation.

Going forward, RCPS intends to work with Mountain Valley Transportation to use GPS data that has recently become available to better track and report mileage. Management believes that this new method will greatly increase the accuracy of RCPS mileage reports beginning with data from the 2017-18 school year. It is Management's position, however, that comparing RCPS transportation expenditures with other school divisions will remain a challenge because of the significant differences in how we operate, the makeup of our student populations, our geographies, and the ways in which we gather and report data.

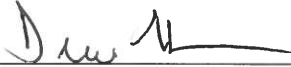
End of MANAGEMENT COMMENTS

ACKNOWLEDGEMENTS

We would like to thank Stan Crowgey for his assistance throughout this review. We would also like to thank Mountain Valley Transportation personnel, specifically Jim Folkes, Dan Jauch and Sue Kramer, for their time and input.



Cari Spichek, CIA
Senior Auditor



Drew Harmon, CPA, CIA
Municipal Auditor



NATIONAL ASSOCIATION OF
STATE DIRECTORS OF
PUPIL TRANSPORTATION SERVICES

Information Report

School Bus Replacement Considerations

Background:

School buses represent the largest bus operation in the country, and provide more trips to passengers than transit buses. There are nearly 450,000 school buses operating in the United States. These buses safely and efficiently transport nearly 25 million children to and from school and school-related activities. In an average school year, school buses provide approximately 10 billion student trips and have the best safety record of any vehicle on the road. School buses come in various designs and capacities. Some are constructed on van chassis and carry less than 20 passengers. Others are built on unique school bus chassis and can carry nearly 90 passengers. Additionally, school buses across the country have numerous differences in terms of their standard and optional equipment. The school bus fleet is composed of buses of various ages with different mileage accumulations. It is a remarkable fleet of vehicles.

Question:

Are there factors that should be considered when developing and implementing policies for determining how long a school bus should be used for school transportation purposes?

Discussion:

This Information Report is not intended to dictate precise school bus replacement policies, since there are multiple issues at state and local levels that are involved in such decisions. However, the National Association of State Directors for Pupil Transportation Services believes the timely replacement of school buses must be a planned process. The information contained in this report is intended to provide insight into the factors (safety, efficiency, environmental, maintenance, operational conditions, etc.) that are involved in making decisions concerning school bus replacement policies.

Available funding is likely the single most important consideration in determining when school buses are replaced. That being said, there appear to be at least two scenarios that should have an impact on decisions concerning school bus replacement.

First, whenever there is a significant improvement in the federal standards for the safety, fuel efficiency or exhaust emission requirements of school buses, it appears reasonable to establish a policy with respect to timely replacement of the older buses with newer school buses. A good example of this occurred in April 1977 when the

National Highway Traffic Safety Administration issued a set of stringent Federal Motor Vehicle Safety Standards for school buses. Since then, the federal government has maintained a policy that pre-1977 school buses should be replaced at the earliest possible time. Fortunately, most states and local school districts no longer operate pre-1977 school buses, and the few that remain typically are used as “reserve” or “back-up” school buses. Other examples include the diesel emission requirements implemented in 1988 and the substantial changes to the school bus emergency exit and exterior mirror requirements made in the early 1990s.

The determination of what constitutes a “significant” improvement is something that must be defined by those that choose to incorporate this concept into their logic for determining when to replace a school bus. For some improvements, it is likely that a consensus of what constitutes “significant” could be achieved easily. For other items, it may be impossible to get everyone to agree on the importance of the improvement.

It is reasonable to assume that there will be continued improvements in the Federal Motor Vehicle Safety Standards that apply to school buses. Some of those improvements will likely apply to passenger safety, while others may be directed at avoiding crashes, and still others to driver safety. At the same time, federal requirements and recommendations with respect to fuel efficiency and vehicle emissions will likely continue. Unless school bus replacement plans are developed and implemented, these improvements in safety, efficiency and cleaner air will not reach their desired goals in a timely manner.

Second, whenever the operating and maintenance expenses on a school bus, or group of school buses, reaches a certain level, it appears that the better economic decision would be to purchase a new bus rather than continue to maintain the older school bus. This is the classical cost/benefit analysis. Do the benefits of buying a new school bus offset the costs?

It is widely accepted that it is more costly to operate and maintain older school buses than newer school buses. However, the vehicle age at which the total operating costs of an older bus versus a newer bus becomes intolerable is not an exact science. In the mid-1980s, independent studies of annual school bus operating costs were conducted in California and Washington. Both studies reached the same conclusion – after 12 years of use, the annual operating costs of Type C and D school buses began to increase significantly and continued an annual increase each year thereafter.

A January 2000 study of life cycle costs for Type D school buses in South Carolina indicated that 15 years should be adopted as the cycle for school bus replacement. The study also noted that school buses that accumulate mileage more quickly, such as the special needs school buses in South Carolina, should have their life cycle cost analyses based on mileage accumulation not age.

No studies of life cycle costs for Type “A” and “B” school buses were found. Since these types of school buses are of a lighter duty design, it appears likely that they would have slightly shorter anticipated lifetimes than Type “C” and “D” school buses.

While those studies suggested a “rule-of-thumb” for large school buses in general, it is clear that maintenance and operating cost data on individual school buses may provide the information needed to better define when individual or groups of school buses should be replaced. For example, reviews of individual school bus maintenance costs may identify buses that can be operated longer or which should be replaced sooner.

It is commonly accepted that good preventive maintenance reduces the frequency and costs of breakdowns and the resulting corrective maintenance. Likewise, the terrain and road conditions over which school buses operate can have an impact on the frequency and cost of maintenance. Additionally, the climatic conditions in the area can impact maintenance costs. The environmental conditions of how and where school buses are stored can directly impact the useful life of various components; especially those made of plastic, rubber or vinyl.

School bus breakdowns result in several problems. First is the cost of towing and repairing the school bus. Second, breakdowns on the home-to-school trip result in loss of classroom time for students, a particularly important point for school administrators. Third, a breakdown could increase the risks to children while they wait in or near the broken down school bus for a replacement bus.

Like any cost/benefit analysis there may be discretion in terms of defining all of the items that fall under the “benefits” category. Clearly reduced maintenance and operating costs are benefits. But what other items are included and how are they calculated? For example, what is the value of having a school bus that has the latest safety or emission features? Does the cost of insurance on the school bus reflect that it complies with the latest federal and state safety requirements? How much does risk management figure into the calculations?

Conclusions

Unfortunately, there is no “silver bullet” answer to these and other questions. However, accurate and thorough records on the operating and maintenance costs (both preventive and corrective maintenance) of all school buses in a fleet will provide the data necessary to analyze and understand costs. Information from insurance companies and risk managers can be obtained that are specific to your state or school district. With solid data and information, it is easier to make informed recommendations and decisions.

Establishing school bus replacement policies is an important activity, since it directly impacts the timeliness of introducing the latest safety, efficiency and emissions improvements into the fleet. The elimination of school buses that do not meet the latest standards or requirements must be planned for within a realistic number of years. Policy makers must realize that school buses will not last forever, regardless of how they are equipped when purchased or maintained during their lives.

Improvements in state school bus specifications must be developed with the objective of improving safety and efficiency, reducing emissions and reducing the operating cost of the bus over the anticipated lifetime. The pupil transportation industry is responsible for the safe and efficient transportation of our children. Accordingly, the timely inclusion of new school bus safety features and new means of improving efficiency or reducing emissions are in the best interest of everyone.

With the previous discussion in mind, the following anticipated lifetimes under normal operating conditions for different types of school buses are suggested:

Type "C" and "D" school buses -- 12 to 15 years

Type "A" and "B" school buses -- 8 to 10 years

Mileage Considerations:

As previously discussed, the life cycle cost study in South Carolina noted that school buses that accumulate mileage more quickly should have replacement decisions based on mileage accumulation rather than age.

According to data published by the Federal Highway Administration, the average annual mileage for all school buses is approximately 8,000 miles. This average is consistent with the data published by the school bus industry – 450,000 school buses traveling 4 billion miles per year. However, based on discussions with individual state directors and local transportation directors it appears that many individual school buses accumulate much higher annual mileage. For example, school buses in South Carolina average more than 15,000 miles per year. This difference in average annual mileage is likely influenced by the inclusion of spare and substitute school buses in the national averages. Based on average mileage accumulations by school buses in South Carolina, the state believes school buses should be replaced on a 15-year or 250,000 mile cycle.

While higher annual mileage accumulation may be used as a criterion to shorten lifetimes of individual buses, lower than average annual mileage accumulation is not necessarily a criterion to use buses for an extended number of years.

Exhibit 2
Deadhead Mileage - 10 Year History

Source: Data reported on the VDOE Pupil Transportation Report Superintendent's Verification Report - Roanoke City Public Schools

	2014-2015	2013-2014	2012-2013	2011-2012	2010-2011	2009-2010	2008-2009	2007-2008	2006-2007	2005-2006
Regular Miles	507,600	485,460	483,120	518,245	515,565	505,254	441,576	541,980	596,980	828,780
Exclusive Miles	333,360	346,140	343,620	392,554	390,350	382,843	387,936	244,440	334,400	285,570
Special Trips	126,636	128,986	130,418	126,623	125,766	122,400	144,455	276,430	299,344	526,535
Federal Programs	-	-	-	-	-	-	-	-	-	-
Between Schools	-	-	-	-	-	-	-	-	-	-
Summer Schools	74,692	56,476	35,010	91,563	69,909	51,267	61,810	57,875	65,745	84,032
Deadhead Miles	712,950	636,620	641,160	641,618	708,610	692,382	751,712	765,540	928,720	941,630
Total Miles	1,755,238	1,653,682	1,633,328	1,770,603	1,810,200	1,754,146	1,787,489	1,886,265	2,225,189	2,666,547

Data as a Percentage of total Miles

	2014-2015	2013-2014	2012-2013	2011-2012	2010-2011	2009-2010	2008-2009	2007-2008	2006-2007	2005-2006
Regular Miles	28.92%	29.36%	29.58%	29.27%	28.48%	28.80%	24.70%	28.73%	26.83%	31.08%
Exclusive Miles	18.99%	20.93%	21.04%	22.17%	21.56%	21.83%	21.70%	12.96%	15.03%	10.71%
Special Trips	7.21%	7.80%	7.98%	7.15%	6.95%	6.98%	8.08%	14.65%	13.45%	19.75%
Federal Programs	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Between Schools	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Summer Schools	4.26%	3.42%	2.14%	5.17%	3.86%	2.92%	3.46%	3.07%	2.95%	3.15%
Deadhead Miles	40.62%	38.50%	39.25%	36.24%	39.15%	39.47%	42.05%	40.58%	41.74%	35.31%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Deadhead Avg 39.29%

Exhibit 3
Recalculation of Transportation Expense

2014-2015 RCPS Transportation Expense

Category	Amount
Salaries and Wages	\$ 144,784.49
Employee Benefits (includes Workers Comp)	\$ 101,082.53
Purchased Services	\$ 10,108,895.37
Internal Services (printing expense)	\$ 6.29
Communications	\$ 11,433.47
Insurance	\$ 403,146.00
Leases and Rentals	\$ 116,116.50
Travel	\$ 320.00
Miscellaneous (Academic Field Trips)	\$ 151,891.58
Materials and Supplies (Fuel)	\$ 646,321.32
Technology Materials and Supplies	\$ 4,859.96
Technology - Software/On-Line Content	\$ 15,126.24
Technology - Hardware Additions	\$ 163.75
Total Transportation Expense Reported	<u><u>\$ 11,704,147.50</u></u>

Correct 2014-2015 RCPS Transportation Expense

Category	Amount
Salaries and Wages	\$ 144,784.49
Employee Benefits (includes Workers Comp)	\$ 101,082.53
Purchased Services	\$ 10,104,020.37
Fund 315 (Principal's Discretionary)	\$ 22,078.11
Fund 342 (Athletics - Restricted)	\$ 1,017.66
Fund 400 (Student Activity Funds)	\$ 324,397.54
Public Carriers	\$ 25,006.50
Internal Services (printing expense)	\$ 6.29
Communications	\$ 11,433.47
Insurance	\$ -
Leases and Rentals	\$ 116,116.50
Travel	\$ 320.00
Miscellaneous (Academic Field Trips)	\$ 151,891.58
Materials and Supplies (Fuel)	\$ 646,321.32
Technology Materials and Supplies	\$ 4,859.96
Technology - Software/On-Line Content	\$ 15,126.24
Technology - Hardware Additions	\$ 163.75
Total Transportation Expense	<u><u>\$ 11,668,626.31</u></u>

Credits/Items to Consider

Mountain Valley Rent 1	\$ -
Utilities 1	\$ -
Bus Lease Payment 1	\$ -
GPS Fee 1	\$ -
Driver Fingerprinting 1	\$ -
Indirect Costs Adjustment 2	\$ (1,828,827.69)
Personal Property Taxes paid on buses in 2015 3	\$ (142,000.00)
MVT Fleet Purchases (Capital Expenditures) 4	\$ (855,576.00)
RCPS Capital Outlays (Transportation)	\$ (163.75)
Total Transportation Operational Expense	\$ 8,842,058.87

Footnotes

1 No adjustment is necessary since this is included in the transportation costs that RCPS pays and is netted out of MVT's invoice. These are accounted for as credits in the reconciliation process.

2 Adjustment made for indirect costs such as HR, Finance, Purchasing, Facilities, Security and Employee Health, which RCPS allocates to transportation expense since transportation services are outsourced, and these costs are built into Mountain Valley's billable rates. Other school divisions do not allocate these costs since transportation is handled by the school division. Auditor obtained the indirect cost rate for RCPS from the FY 2015 Local Education Agency (LEA) data on the VDOE website. This cost adjustment is the purchased services amount (\$10,104,020.37) multiplied by the indirect cost rate for RCPS of 18.1%.

3 Amount of personal property taxes paid by Mountain Valley Transportation in 2015 per Evelyn Powers, Roanoke City Treasurer on 8/25/16.

4 Amount of capital expenditures (to purchase buses) by MVT in FY 2015, per documentation received from Mike Ahern, CFO for Krapf.