

Performance Audit

FIRST VEHICLE SERVICES
Fleet Management and Maintenance

Report by the
Office of City Controller

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January 2010

January 14, 2010

To the Honorables: Mayor Luke Ravenstahl and
Members of Pittsburgh City Council:

The Office of City Controller is pleased to present this Performance Audit of First Vehicle Services Fleet Management and Maintenance, conducted pursuant to the Controller's powers under Section 404(c) of the Pittsburgh Home Rule Charter.

EXECUTIVE SUMMARY

In 2005, City fleet management services were outsourced to First Vehicle Services. The original contract, effective March 9 2005 through February 21, 2008 was extended for another 27 months, through May 20, 2010. This audit assesses compliance with contractual fleet maintenance standards and the economy, efficiency and effectiveness of contracted fleet maintenance.

Findings and Recommendations

Contract Increases

The first cost increase occurred before the first contract had expired and the second increase occurred when the initial contract was extended for an additional 27 months.

Finding: The first contract increase appears to have been made to correct funding for target services. Although the contract required the City to pay \$13,114,483.00 for target services, only \$11,716,546.00 was allocated in the initial Authorizing Resolution.

Finding: The Amending Resolution increased funding for target services but was still \$165,591.00 less than the amount required by contract. However, the auditors confirmed that payments to FVS for target services were in accordance with the amount required by contract.

Finding: The FVS contract was extended for an additional 27 months at a 20% average monthly allocated cost increase to the City. The average monthly Target Cost allocation increased 13%. The average monthly Non-Target Cost allocation increased 47%.

Target expenses are paid at a fixed monthly rate determined by the contract limit for these expenses. Non-target expenses are invoiced monthly and paid accordingly.

Finding: The ratio of Non-Target to Target repair funding also increased. In the original 3 year contract, target repair services represented 80.6% of the contract costs and “other associated costs” including non-target repairs represented 19.4%. In the extended contract, target repairs represented 76% of cost allocations and non-target services represent 24%.

Recommendation: The City has some control over non-target costs in areas such as abuse of equipment and operator error. Through the duration of the current contract, every attempt should be made to reduce the number of non-target repairs over which equipment operators have some control.

Fleet Composition and Contract Cost

Finding: When the contract was renewed, the number of vehicles under 5 years old had declined, but the number of vehicles over 10 years old had also declined. Whether the fleet composition at the time of contract renewal justified a 20% increase in contract cost is arguable.

Contract Monitoring and Repair Authorization

Finding: Vehicle priority determines how vehicles get processed and worked on. According to FVS, Public Safety fleet availability is most important and is given priority over other departments.

Finding: The Representative is not authorizing and signing off on all non-target repairs as required by the contract. As a time saving measure, a red signature authorization stamp is being used for non-target services under \$500. The City Representative personally authorizes and signs off on non-target repairs over \$500.

Recommendation: Where practice deviates from contract requirements, the contract should be amended to reflect actual practice or the practice should conform to the contract.

Work Order Data Reliability

Finding: The FVS database is a reliable and accurate representation of work and cost being performed on City vehicles.

Non-Target Repairs

Finding: The contract only gives examples of non-target repairs instead of a definitive list of repair categories. This can allow other types of repairs to be shifted into the non-target repair category during the contract term. The ‘natural causes’ category appears to have been added to include more repair reasons than ‘vehicles used beyond agreed life cycle’.

Finding: The auditors question the inclusion of ‘rust or corrosion of a vehicle’ as a non-target repair. Applying the contract standard of reasonably predictable versus generally un-predictable repairs, rust and corrosion are reasonably predictable for any vehicle driven in Western Pennsylvania winters. Street salt is a known corrosive that wreaks havoc on vehicle frames.

Recommendation: The contract should include a definitive list of NT repairs and not merely provide examples. This would prevent shifting more repairs into the NT category during the contract term.

Finding: Again, applying the contract predictability standard, the auditors question why installing snow chains in winter is not ‘reasonably predictable’.

Finding: In 2008, five departments had over \$100,000 in non-target repairs: the Department of Public Works (DPW), Public Works Environmental Services (PWES), Emergency Medical Services (EMS), Fire and Police (POL).

Finding: The categories with the most non-target repair costs, in descending order, were: natural causes, operational damage, abuse of equipment and accident reported. Natural causes are outside the control of the vehicle operator. The remaining three categories: operational damage, abuse of equipment and accident are areas over which the vehicle operator has more control.

Recommendation: The City should determine the most frequent types of operational damage and abuse of equipment and vigorously work with vehicle operators to reduce these types of repairs. Reducing non-target repairs will reduce the City’s costs.

Finding: Outside of Natural Causes, the Police, Environmental Services and Public Works had the highest NT repair costs because of Accidents, Abuse of Equipment and Operational Damage. These types of damages can often be prevented or mitigated by a more aware workforce.

Recommendation: The high percent of repairs due to Accidents, Abuse of Equipment and Operational Damage indicates a need for better training in equipment and vehicle operation and care.

Finding: Most of non-targets repairs for the Fire and Emergency Medical Services are for Capital Improvements.

Garage Utility Costs

The contract states that the Contractor will be responsible for paying heat, water and electricity billed to the City for the Maintenance Facilities and allows payment to be made by way of a credit to the City. The City pays for the utilities and FVS gives a credit off the City's non-target repair expenses.

Finding: FVS's utility expenses for 2006 and 2007 were not credited until October 2008. FVS credited the City for its 2008 utility expenses on August 25, 2009.

Recommendation: The City pays gas and electric utility charges monthly. The City should require FVS to credit its utility expense in a timelier manner. Receiving credit in June or July for expenses that occurred 2 years ago is not efficient or timely.

Finding: For 2007, utility costs calculated for FVS amounted to \$12,677.66 per month for both gas and electric usage at both garage facilities.

Finding: According to the City's Computer Information Systems (CIS), telephone service for FVS is billed to them directly by the telephone company. The City is not involved with providing telephone services to their facilities.

Finding: Because the garage facilities are owned by the City, they are exempt from PWSA charges. This exemption is being passed onto FVS. FVS is not paying for any water usage.

Recommendation: FVS is a for profit entity and as such should not be exempt from PWSA charges. A separate water meter should be installed in the building that is solely used by FVS and some type of reasonable charge should be assessed for the other building that is shared with the City. Instead of requiring the Contractor to reimburse for utilities "billed to the City" the contract should be amended to require FVS to pay for water used in garage operations.

Performance Standards Compliance

Finding: Vehicles being repaired for natural causes and directed work are also excluded from fleet availability and turnaround time calculations. These exclusions are not listed in the contract.

Recommendation: The contract should be amended to state that vehicles out of service because of non-target repairs are excluded from performance calculations. 'Non target

repairs' language would include any type of non target repair, especially since the list of non target repairs seems to be getting longer.

Finding: An attachment to the contract accepted on March 7, 2007 puts a cap on the amount of performance incentives/penalties that can be charged against or paid to FVS. "These performance incentive/penalty monetary calculations are the daily and monthly limits; The daily/monthly limit penalty/incentive will not exceed \$30,480/YEAR within the third year term of the Agreement".

Recommendation: Cash incentives and penalties can be good performance inducements. However, limiting the amount of daily/monthly penalty to \$30,480 a year is little more than a slap on the wrist for not meeting performance standards and not much incentive for exceeding the performance range. The City should consider eliminating this cap and increasing the monthly penalty amounts.

Turnaround Time Compliance

Finding: In 2008, on average, FVS did not meet the 48 hour turnaround time performance standard for any City department. On average, the 24 hour turnaround time standard was exceeded for only one City bureau, the Bureau of Refuse.

Finding: The garage is not meeting vehicle turnaround time performance standards when labor and parts costs are predictable and knowable. This indicates sub optimal performance in getting vehicles back into service.

Finding: FVS was assessed penalties of \$1,475 and \$3,310 for not meeting turnaround time standards.

Fleet Availability Compliance

Finding: In 2008, FVS, fleet availability, on average, was within the design range for 6 months. For 6 months, the fleet availability standard, on average, was not met. Average annual fleet availability for priority vehicles (EMS, Police and Fire) was within the performance range. Average availability for vehicles smaller than one ton exceeded the range.

Finding: At the City's request, FVS calculates fleet availability without any exclusion. When non-target repairs are included, fleet availability, on average, falls well below the acceptable range of 94-96% for the entire year for all vehicle categories.

Preventive Maintenance (PM) Compliance

Finding: FVS includes all PMs on its yearly report whether completed as scheduled or done when the vehicle is brought in for other reasons. In addition to vehicles not showing up as scheduled, FVS also includes vehicles in for repair work that refuse to stay for PM service as 'no shows'. This means of recording 'no shows' does not reflect department compliance with scheduled vehicle PM's.

Finding: Seventy-Five Percent (75%) of City Departments are cavalier about showing up for assigned PM scheduled. Twelve (12) of the 16 departments do not show up for their PM appointment 25% or more of the time. Biggest offenders with 50% or more no shows are bolded: Controller's Office, PWES, PWSA, Fire, and the Mayor's Office.

Finding: Vehicles that miss a scheduled PM and taken to the garage with a problem before the missed PM is completed are automatically treated as a non-target repair cost by FVS.

Recommendation: Missed PMs should be tracked by Department supervisors. Habitual offenders should be identified, informed of the importance of preventive maintenance service and threatened with discipline for continued non-compliance.

Recommendation: The City should require FVS to track vehicles that need repairs because of missed PMs and the cost of those repairs to the City. Such tracking may result in more aggressive scheduling compliance by departments.

Finding: By only including vehicles that show up for scheduled preventive maintenance in the performance calculation, FVS would be hard pressed not to meet the 94%-96% inspections completed on time standard.

Rework Orders

Quality of repairs can be judged by the number of times a job has to be redone.

Finding: Data provided by FVS show 3 rework orders for 2008. The auditors had no way to confirm this data. Three rework orders for an entire year indicates that FVS or its subcontractors are performing quality repair work on the City fleet.

State Inspection Compliance

Compliance with the Commonwealth's annual State Inspection requirement is not a performance standard under the current contract.

Finding: FVS schedules and records State Inspections in the same manner that preventive maintenance is scheduled and recorded. State Inspection data is mixed in with PM data and not kept separate.

Recommendation: FVS should be required by contract to compile separate State Inspection performance data. This would facilitate data analysis and also help guarantee that vehicles receive State Inspection when due.

Finding: FVS records indicate that several City department vehicles were not scheduled at all for state inspections in 2008.

Finding: PWES, PWSA, DGS and DPW missed 57.2% of scheduled state inspections. Police and Fire are not far behind with 43.9% and 41.7%, respectively, of missed state inspections.

Finding: In 2008, the City fleet was comprised of approximately 992 vehicles. According to FVS' data, only 432 vehicles, or only 44% of the fleet, were scheduled for SIs in 2008.

Finding: FVS states that some vehicles are not scheduled for State Inspection because the inspection is done early. This occurs when vehicles in for other repairs get inspected because the date is within the 3 month State Inspection window.

Recommendation: City Administration and/or the Equipment Leasing Authority should inform FVS of State Inspection due dates on all new vehicles.

Recommendation: FVS should investigate why so few vehicles are being scheduled for SI. If a vehicle is inspected early, it should be entered on that day's work schedule, not just on the work completed report. This would facilitate better tracking of non-scheduled State Inspections.

Recommendation: FVS and City department administrations should make State Inspections compliance a top priority. Having City vehicles without up to date inspections is unsafe as well as poor example to the public.

Finding: More State Inspections are being completed than are scheduled.

Combining Fleet Management Services with the County

Finding: The County Garage is a non-union facility and the City Garage is a union facility. This difference between union and non-union personnel appears to be a major deterrent to combining services.

Return to In-House Fleet Maintenance

Finding: Given the escalating costs of the fleet maintenance contract, it may be more cost effective to return to an in-house operation.

Recommendation: A comprehensive study should be done by an analyst experienced in fleet maintenance start up and operation costs to determine the cost-benefit, if any, of the City operating the garage.

We are pleased that First Vehicle Services agrees with many of our recommendations for improvement.

Sincerely,

Michael E. Lamb

INTRODUCTION

This performance audit of First Vehicle Services Fleet Management and Maintenance was requested by Pittsburgh City Council and conducted pursuant to section 404(c) of the Pittsburgh Home Rule Charter and the City's contract with First Vehicle Services, Incorporated. This is the Controller's second audit of First Vehicle Services, Inc. A joint performance and fiscal audit examining the cost effectiveness and efficiency of outsourcing fleet management was released in September 2006.

OVERVIEW

In January 2004, the Murphy Administration recommended that the City out source fleet management services to First Vehicle Services (FVS) for purported cost savings and increased operational efficiency. On May 17, 2005, the City entered into a three year Fleet Management and Maintenance contract with FVS with an option to extend for two more years. The contract was subsequently amended August 10, 2007 to "correct the sources of funding" and March 25, 2008 to extend the contract for two more years. The effective date of the current contract is February 21, 2008 to May 20, 2010.

FVS is responsible for maintaining all City owned and Pittsburgh Water and Sewer Authority vehicles and operating the City motor pool. Fleet size and composition is determined by City Administration, which purchases and replaces vehicles through the Equipment Leasing Authority.

Current Contract Terms

With a few modifications, current contract terms are essentially unchanged from the original contract. Additions include the City's right to terminate the Agreement following six months written notice to the Contractor and the Controller's mandate to perform an annual fiscal and performance audit measuring work quality and cost. Changes were made in the Section 6, Services to be Performed and Section 9, Performance Standards. Section 9 allows FVS to bill work performed outside normal business hours as non-target services.

Payments for target services for the 27 month contract term are not to exceed \$11,055,765.00 and payments for other costs including non-target services are not to exceed \$3,486,610.00. Target services are defined in the contract as "generally routine vehicle maintenance and repair activities that are reasonably predictable and, therefore, lend themselves to projection and estimation". State inspections and preventive maintenance are target vehicle services. Target or 'contract' costs also include salaries and wages, fringe benefits, parts and supplies, subcontractor services and capital expenditures. Target costs are billed at a fixed monthly rate.

Non-target or 'non-contract' costs are generally unpredictable vehicle repairs. Non-target services are not defined in the contract per se but examples of non-target services are listed. These include vehicles out of service as a result of accidents, acts of God, abnormal use, vandalism and theft. Costs to repair or replace major components in vehicles that are being used beyond the agreed upon life cycle are also billed as non-target costs.

Target and non-target services can be performed in-house (by FVS) or contracted to an outside vendor. The City is billed separately for non-targeted services, regardless of who completes the repairs.

Fleet Maintenance

An effective fleet maintenance program should maintain vehicles in a manner that extends useful vehicle life while controlling overall costs.

Previous Audit Findings

The Controller's previous audit had numerous findings and recommendations regarding turnaround time compliance, vehicle repair effectiveness, preventive maintenance and state inspection compliance and non-target repairs.

Turnaround Time Compliance

Using the 24 hour day standard as specified in the contract, the auditors found that the FVS was not meeting the 24 and 48 hours turnaround time standards consistently. The contractor's 24 and 48 hour turnaround time calculations were based on a 13 ½ hour work day. The auditors recommended the contract be amended accordingly if a 13 ½ hour work day was agreeable to City administrators. (The current contract was not amended to reflect a 13 ½ hour work day because FVS calculations are now based on a 24 hour day.)

Vehicle Repair Effectiveness

Repeat repairs were found on 15 vehicles or 26% of the testing sample. The most repeat problems (4 or more instances per vehicle) were for air leaks, brake repairs, bulbs, door repair, hydraulics, tires, radiators and coolants and power steering. Garage technicians were not consistently documenting the reasons for tire replacement. The auditors recommended that FVS investigate tire quality, reasons for recurring repairs and document reasons for tire replacement.

Preventive Maintenance and State Inspection Compliance

City vehicles were not receiving timely preventive maintenance (PM) service. “No shows” were a significant reason the Garage was not meeting its PM schedule. The audit recommended that FVS develop a system to identify which vehicles in for other service were also due or overdue for PM and perform all needed service at the same time. From February 2005 through January 2006, 31% of the vehicles in the testing sample had not received a required state inspection. A flagging system was recommended to ensure all City fleet vehicles receive annual state inspection when due.

Non-Target Repairs

Two Environmental Services (ES) vehicles were out of service over 90 days and three other ES vehicles were out of service over 120 days. These vehicles started in the target repair category but were moved into the non-target category when their mileage exceeded vehicle lifecycle limits. The auditors recommended that older, constantly out of service vehicles be evaluated for replacement to reduce the City’s non-target costs and increase fleet availability.

SCOPE

The scope of this performance audit is fleet maintenance services performed during 2008 and FVS' Fiscal Year (March 2008 to February 2009). This audit examines the cost effectiveness of the contract and compliance with contractual performance standards.

OBJECTIVES

1. To analyze target (contract) and non-target (non-contract) costs by City Department.
2. To assess the accuracy of Contractor's database.
3. To assess compliance with contractual turnaround time, fleet availability, preventive maintenance and rework standards.
4. To assess the economy, efficiency and effectiveness of contracted fleet maintenance.
5. To make recommendations for improvement.

METHODOLOGY

The City's current and previous Fleet Management and Maintenance Contracts with First Vehicle Services were reviewed. The current contract was signed March 24, 2008 and expires on May 20, 2010. The original agreement was entered into on May 17, 2005.

The auditors interviewed First Vehicle's General Manager, Operations Manager, Fleet Analyst, Fleet Contract Manager, Fleet Contract Administrator, Director and Assistant Director of Finance.

A walk-through and tour of First Vehicle's Strip District facilities was conducted on March 19, 2009 with the Operations Manager.

A Fire Department monthly user meeting was observed on April 14, 2009. A monthly review of the non-target costs was conducted. Explanations and details were given for large expenses. User meetings are held for Police, Fire, EMS, DPW and Environmental Services every month to keep track of unusual circumstances that may cause costs to increase and discuss ways to improve overall operations between First Vehicle and the City.

The auditors received a copy of monthly performance reports from First Vehicle for 2008. These reports are generated by work orders completed throughout the year and broken down by City Departments. Reports were reviewed and a random sample was selected of various weeks throughout the year to test the accuracy of the data. This was done by comparing actual work orders with data on reports. First Vehicle's Service Writer and Fleet Analyst answered questions regarding the process of data entry for work orders.

In June 2009 the auditors received CDs of all reports generated by FVS in 2008. This data was used to assess Preventive Maintenance no-show follow up, target vs. non-target costs and effectiveness in meeting or exceeding contractual performance standards.

A time analysis of January 2008 no-shows for scheduled Preventive Maintenance (PM's) appointments was conducted. Three months of no-shows were tracked for follow up service within two months after the missed appointment.

Using report F455 Detail Summary of Work Performed by Department, the auditors compiled monthly totals of all non-target expenses for each City Department. These included the number of occurrences per category, the amount that was sub-contracted out and the total cost of the repair. Totals were compared to other City Departments. The Auditors generated bar graphs of Departments with the highest non-target costs.

A comparison of the fleet's age was done for the first contract awarded in 2004 and the 2008's current contract.

A utility costs recap for gas and electric usage for the garage facilities for 2007 and 2008 was received from the City's Asset/Accounting Manager. A review of payments made for utilities was researched and verified.

Auditors reviewed copies of Departmental Invoices and back up documentation for monthly contract payments made by the City to FVS for 2008 that were obtained from the City Controller's Office.

Cost of living and rate of inflation information was obtained from Inflationdata.com.

FINDINGS AND RECOMMENDATIONS

Contract Increases

The Murphy Administration contracted out City fleet maintenance for purported operational efficiency and cost savings. Cost savings imply that contracting fleet maintenance to an outside provider would be cheaper than providing the service in-house.

There have been two contract cost increases: the first increase occurred before the first contract had expired and the second increase occurred when the initial contract was extended for an additional 27 months.

Finding: The first contract increase appears to have been made to correct funding for target services. Although the contract required the City to pay \$13,114,483.00 for target services, only \$11,716,546.00 was allocated in the initial Authorizing Resolution.

First Contract Authorization and Increase

Authorizing Resolution

The original contract, effective March 9 2005 though February 21, 2008 was executed May 17, 2005, with an option by the City to extend the term for an additional two (2) years. The Authorizing Resolution (No. 592 of 2004) Section 2 provided that funds for the three year agreement were “not to exceed \$11,716,546.00” plus “other associated costs”. Resolution Section 2 listed the account funds and amounts to be appropriated for target (contract) costs for each contract year.

Year One:	\$3,797,620.00 plus associated costs
Year Two:	\$3,893,168.00 plus associated costs
<u>Year Three:</u>	<u>\$4,025,758.00 plus associated costs</u>
TOTAL:	\$11,716,546.00 + associated costs

Section 3 of the Resolution listed the sub class accounts from which the “other associated costs” would be paid. These “other associated costs shall include, but not be limited to, transition-related charges, non-target costs and emergency expenditures”. No fund amounts or limits were given for “other associated costs” in the Resolution.

Amending Resolution

In June 2007, City Council passed a Resolution amending Fleet Management authorizing Resolution 592 of 2004. This Resolution (No. 320 of 2007) increased funding for target services by \$1,232,346.00 to \$12,948,892.00.

Finding: The Amending Resolution increased funding for target services but was still \$165,591.00 less than the amount required by contract. However, the auditors confirmed that payments to FVS for target services were in accordance with the amount required by contract.

Unlike the authorizing resolution, Resolution 320 listed the account funds and amounts to be appropriated for ‘other associated costs’. For the three year contract term, these other costs were not to exceed \$3,163,515.00.

The First Amendment to Fleet Management and Maintenance Agreement incorporates the cost increases in the above referenced Amending Resolution.

Extended Contract

On March 25, 2008 the FVS contract was extended for another twenty seven months, through May 20, 2010. Funds appropriated for target costs were not to exceed \$11,055,765.00 and funds for associated costs were not to exceed \$3,486,610.00.

The original FVS contract and extended contracts are for different terms, i.e., 36 months and 27 months respectively. For a more accurate cost comparison, each contract allocation was divided by the number of months covered by the contract. This resulted in an average monthly cost allocation for target and non-target services for each contract.

For the first contract cost allocations, the auditors used the \$13,114,483.00 Target Services Operating Budget amount listed in Attachment C of the contract and the \$3,163,515.00 allocated in the Amending Resolution for non-target services, i.e., “other associated costs”.

Average Monthly Cost Allocations

The following table compares the average monthly cost allocations for the original and extended Fleet Maintenance contracts:

**TABLE 1
AVERAGE MONTHLY COST ALLOCATION**

CONTRACT	TARGET COSTS	NON-TARGET COSTS	AVERAGE MONTHLY COST ALLOCATION
1 st FVS Contract	\$364,291.19	\$87,875.42	\$452,116.61
Extended Contract	\$409,472.77	\$129,133.70	\$538,606.47

Finding: The FVS contract was extended for an additional 27 months at a 20% average monthly allocated cost increase to the City. The average monthly Target Cost allocation increased 13%. The average monthly Non-Target Cost allocation increased 47%.

Finding: The ratio of Non-Target to Target repair funding also increased. In the original 3 year contract, target repair services represented 80.6% of the contract costs and “other associated costs” including non-target repairs represented 19.4%. In the extended contract, target repairs represented 76% of cost allocations and non-target services represent 24%.

RECOMMENDATION NO. 1:

The City has some control over non-target costs in areas such as abuse of equipment and operator error. Through the duration of the current contract, every attempt should be made to reduce the number of non-target repairs over which equipment operators have some control.

Contract Limits and Actual Spending

The “not to exceed” amounts for target and non-target expenses are paid differently. Target expenses are paid at a fixed monthly rate determined by the contract limit for these expenses. For example, in 2008, FVS was paid \$389,528.92 each month for target expenses. Non-target expenses are invoiced monthly and paid accordingly.

Fleet Composition and Contract Cost

In 2005 when FVS took over the repair of the City’s fleet there were 991 vehicles. When the contract was renewed in February of 2008 there were 992 vehicles. Table 2 shows the composition of the fleet by year of vehicle.

Finding: In 2008, the contract was renewed at a higher cost to the City. At the time, 38.04% of the fleet was less than 5 years of age and 75.08% of vehicles were less than 10 years of age. The fleet in 2005 had 45.01% of the vehicles less than 5 years of age and 67.51% of vehicle less than 10 years of age.

A fleet maintenance contract should be based on the fleet composition (age, vehicle type, mileage, etc.). An older fleet needing more servicing and maintenance would cost more to effectively maintain.

Finding: When the contract was renewed, the number of vehicles under 5 years old had declined, but the number of really old vehicles over 10 years old had also declined. Whether the fleet composition at the time of contract renewal justified a 20% increase in contract cost is arguable.

TABLE 2

FLEET COMPOSITION OCT 24, 2004 (First Contract)					FLEET COMPOSITION FEB 19, 2008 (Contract Renewal)			
YEAR	# VEHCLES	(%)	(c%)		YEAR	# VEHCLES	(%)	(c%)
2004	46	4.64%	4.64%		2008	30	3.02%	3.02%
2003	112	11.30%	15.94%		2007	78	7.86%	10.89%
2002	132	13.32%	29.26%		2006	134	13.51%	24.40%
2001	57	5.75%	35.02%		2005	90	9.07%	33.47%
2000	99	9.99%	45.01%	5 yrs old	2004	45	4.54%	38.00%
1999	107	10.80%	55.80%		2003	61	6.15%	44.15%
1998	33	3.33%	59.13%		2002	108	10.89%	55.04%
1997	69	6.96%	66.09%		2001	29	2.92%	57.96%
1996	5	0.50%	66.60%		2000	87	8.77%	66.73%
1995	9	0.91%	67.51%	10 yrs old	1999	82	8.27%	75.00%
1994	19	1.92%	69.42%		1998	36	3.63%	78.63%
1993	90	9.08%	78.51%		1997	50	5.04%	83.67%
1992	21	2.12%	80.63%		1996	6	0.60%	84.27%
1991	23	2.32%	82.95%		1995	2	0.20%	84.48%
1990	52	5.25%	88.19%		1994	20	2.02%	86.49%
1989	31	3.13%	91.32%		1993	36	3.63%	90.12%
1988	12	1.21%	92.53%		1992	6	0.60%	90.73%
1987	24	2.42%	94.95%		1991	14	1.41%	92.14%
1986	20	2.02%	96.97%		1990	18	1.81%	93.95%
1985	8	0.81%	97.78%		1989	11	1.11%	95.06%
1984	6	0.61%	98.39%		1988	8	0.81%	95.87%
1983	4	0.40%	98.79%		1987	17	1.71%	97.58%
1982	5	0.50%	99.29%		1986	14	1.41%	98.99%
1981	1	0.10%	99.39%		1985	3	0.30%	99.29%
1978	2	0.20%	99.60%		1984	2	0.20%	99.50%
1974	1	0.10%	99.70%		1983	1	0.10%	99.60%
1973	3	0.30%	100.00%		1982	3	0.30%	99.90%
					1973	1	0.10%	100.00%
TOTAL	991	100.00%			TOTAL	992	100.00%	

Contract Monitoring and Repair Authorization

The repair process begins when vehicles report to FVS's garage located in the strip district. Two different buildings handle fleet repairs and maintenance work. One building is for heavy, larger vehicles including refuse trucks, public works and PWSA vehicles. The other building is for fire, police, EMS and all other departments. A triplicate Vehicle Repair Request form is filled out by a Service Writer. The white top sheet stays with the work order and is filed by the vehicle vin number. The pink copy is the 'customer' copy. The yellow copy goes in the vehicle when repairs are completed.

The Service Writer assigns the repair work to the appropriate technician(s). The Service Writer creates a work order in the computer. A Production Control Board (located behind front counter in main office) which designates and tracks the work order progress for all vehicles is tagged with the technician's number, car key and the ending number of the work order. A Parts Request form is generated by each technician for needed parts to complete repairs. A Lead Technician signs off on the parts request form. There are two lead technicians that authorize the parts requested in the front building and three lead technicians in the back building. All are master certified. The Service Writer creates task lines that need completed in the computer. The Technician completes each task line and tracks the time per task. The vehicle's history and PM schedule will be checked and findings will be recorded on the work order. The computer automatically alerts whether a vehicle needs a PM or not.

Finding: Vehicle priority determines how vehicles get processed and worked on. According to FVS, Public Safety fleet availability is most important and is given priority over other departments.

City Representative

The Contract states that the City Representative or his designee "shall be the sole source of authorization for work contemplated under this Agreement". The City's two full time employees at the City garage, the Fleet Contract Manager and Fleet Contract Administrator, function as the City Representative. In addition to repair authorizations, the Fleet Contract Manager monitors FVS' monthly reports and departmental user meetings. The City employee stated purpose is to keep FVS costs to a minimum as they meet fleet availability standards. The Fleet Contract Administrator assists the Contract Manager in the above.

Required Vehicle Repair Authorization

According to the contract, repairs estimated to cost in excess of \$750 for light duty vehicles under 8000 pounds gross vehicle weight (GVW), in excess of \$1500 for heavy duty vehicles or for any vehicle when the repair is greater than 50% of the vehicle's fair market value must be specifically approved by the Fleet Contract Administrator. The contract requires that all "costs incurred in providing Non-Target Services must be authorized in advance by the City for reimbursement".

Finding: The Representative is not authorizing and signing off on all non-target repairs as required by the contract. As a time saving measure, a red signature authorization stamp is being used for non-target services under \$500. The City Representative personally authorizes and signs off on non-target repairs over \$500.

RECOMMENDATION NO. 2:

Where practice deviates from contract requirements, the contract should be amended to reflect actual practice or the practice should conform to the contract.

Work Order Data Reliability

FVS produces daily, weekly, monthly and some yearly reports. These are submitted to the Fleet Contract Manager for review. Work orders are the source of these reports. Work orders are automatically assigned a number when a vehicle comes in for repair or if scheduled for preventative maintenance or inspection. Some of the data is hand written and some typed into the computer as work is being completed. Hand written information is entered into the computer by the clerk when the work order is complete.

The auditors tested the accuracy of entries into the database against actual information on the work order. The source of all FVS reports is the data in the computer; therefore the integrity of the data is essential for the integrity of their reports.

FVS supervisor stated that approximately 13,000 work orders are processed through the two working garages. The auditors chose a 1% sample or 138 work orders to review. The sample was randomly chosen from one week of the year; July 6th through July 12th 2008. All work orders were randomly chosen to represent work completed in both garages.

Work Order Testing Results

Finding: The FVS database is a reliable and accurate representation of work and cost being performed on City vehicles.

Each work order has 14 information entries. This totals 1,932 database entries that were verified for accuracy by the auditors. Discrepancies between the work orders and FVS database were found in three categories: 18 in Vehicle Description, 23 in Mileage and 2 in Parts Cost. This totals 43 entries or 3% of the 1,932 entries examined. One hundred percent correct entries were the Unit Number, Open Date, Open Date Time, Closed Date, Closed Date Time, Status, Class, Labor Hours, Labor Cost, Sublet Costs and Total Costs entries.

This error percentage (3%) is low and upon further examining the type of errors made, the significance of each error is reduced.

Under Vehicle Descriptions, the errors were found in the vehicle call letters, not in the vehicle make and model number. FVS explained that vehicles that are no longer “good” for the original job bought for are handed down to other departments for continued use. For example a police car may have too many miles on it to continue in the police department but it is still operational and can be use by personnel in DPW.

Finding: As the vehicle gets moved around the fleet the call letters on the paperwork do not always keep up with the new assignment.

FVS explained mileage errors are common when engines are replaced and the new engine mileage is put in on the work order while the vehicles history on the database is not changed. The auditors were told that the database is updated at some point.

Errors for Parts Cost were for cents off rather than any whole dollar amount. FVS stated that this was due to ‘rounding’ of costs.

Target (Contract) and Non-Target (Non-Contract) Services

Non-Target Services

FVS submits non-target repair expenditure reports daily, weekly, and monthly to the Fleet Contract Manager. Each non-target repair is placed in one of the following categories: Accident Non-Reported, Accident Reported, Natural Causes, Abuse of Equipment, Directed Work, Operational Damage, Theft, Vandalism and Capital Improvement.

FVS describes these non-target repairs as follows:

- Accident, non-reported – driver does not inform FVS of any accident damage when the vehicle is brought to the garage and FVS finds it
- Accident, reported – driver informs FVS of any accident damage when the vehicle is brought to the garage
- Natural Causes – aging, rust or corrosion of a vehicle, life extension/life cycle repairs are considered natural causes
- Abuse of Equipment – improper operations of the vehicle resulting in damage

- Directed Work – work requested by City officials
- Operational Damage – damage that occurs by designed day to day operations
- Theft – damage caused by a vehicle being stolen
- Vandalism – damage caused to the vehicle by vandals
- Capital Improvement – city request of a special change/addition to the original design of a vehicle

Finding: The contract only gives examples of non-target repairs instead of a definitive list of repair categories. This can allow other types of repairs to be shifted into the non-target repair category during the contract term. The ‘natural causes’ category appears to have been added to include more repair reasons than ‘vehicles used beyond agreed life cycle’.

Finding: The auditors question the inclusion of ‘rust or corrosion of a vehicle’ as a non-target repair. Applying the contract standard of reasonably predictable versus generally un-predictable repairs, rust and corrosion are reasonably predictable for any vehicle driven in Western Pennsylvania winters. Street salt is a known corrosive that wreaks havoc on vehicle frames.

RECOMMENDATION NO. 3:

The contract should include a definitive list of NT repairs and not merely provide examples. This would prevent shifting more repairs into the NT category during the contract term.

Two Accident Categories

As noted above, accidents are divided into two categories; reported and non-reported. According to the FVS this is done at the request of the Administration because “There are accidents that occur that nobody ‘owns’ up to”. Further explanation is given: “Most common examples are the dings and bumps to the vehicles that go unnoticed until the vehicle is brought into the Garage for PM and/or some other associated repairs. Said dings and bumps (non-reported Accidents) are reviewed with the user departments monthly so that they may be further investigated and reclassified IF possible”.

Non-Target Repair Costs by City Department

Non-target repair information is reported monthly by type of completed repair for each department. The auditors compiled the 2008 monthly data into yearly non-target costs for each Department.

Table 3 shows that the City paid \$1,369,818.99 for non-target fleet repairs in 2008.

**TABLE 3
2008 NON-TARGET COSTS
BY DEPARTMENT**

DEPARTMENTS	2008 Non-Contract Costs
Computer Information Systems (CIS)	\$1,423.64
Controller's Office (CONT)	\$501.88
Finance (FIN)	\$4,333.29
Department of Public Works (DPW)	\$199,079.47
Public Works* (PW)	\$8,847.69
Public Works Environmental Services (PWES)	\$339,628.27
Environmental Services* (ES)	\$7,285.08
Equipment Leasing Authority (ELA)	\$26,032.45
Department of General Services (DGS)	\$23,441.90
General Services* (GS)	\$4,713.04
Emergency Management Agency (EMA) (Homeland Security)	\$55,834.28
Emergency Medical Services (EMS)	\$102,968.05
Emergency Medical Services* (EMSA)	\$134.00
FIRE	\$187,872.57
Mayor's Office (MO)	\$688.62
Office of Municipal Investigations (OMI)	\$310.54
Police (POL)	\$343,147.07
Police* (POLA)	\$2,455.64
Parks and Recreation (PR)	\$4,252.19
Public Safety (PS) (Animal Control)	\$2,771.04
PWSA	\$54,018.17
PWSA* (WD)	\$80.00
GRAND TOTAL	\$1,369,818.88

*No individual vehicle work order generated. Represents services or products requested by department for multiple vehicles, e.g. Snow chains on all EMS vehicles or oil and fluids for stocking at each DPW division.

Finding: Again, applying the contract predictability standard, the auditors question why installing snow chains in winter is not ‘reasonably predictable’.

Finding: In 2008, five departments had over \$100,000 in non-target repairs: the Department of Public Works (DPW), Public Works Environmental Services (PWES), Emergency Medical Services (EMS), Fire and Police (POL). These departments are bolded in Table 3.

Table 4 breaks down costs by non-target repair category for the 5 City departments with the highest NT costs.

**TABLE 4
2008 NON-TARGET REPAIR TYPES
BY THE DEPARTMENT WITH THE MOST NON-TARGET REPAIR COSTS**

TYPE OF REPAIRS	Public Works (DPW)	Public Works Environmental Services (PWES)	Emergency Medical Services (EMS)	Fire	Police (POL)	TOTAL BY TYPE OF REPAIRS
Accident non-reported	\$11,566.33	\$3,244.27	\$20,704.26	\$4,243.68	\$35,635.46	\$75,394.00
Accident reported	\$22,516.15	\$4,975.11	\$15,193.01	\$21,314.10	\$140,310.09	\$204,308.46
Natural Causes	\$70,898.59	\$144,038.72	\$7,475.92	\$27,517.15	\$7,761.93	\$257,692.31
Abuse of Equipment	\$50,434.24	\$79,674.34	\$17,192.94	\$24,398.99	\$37,264.96	\$208,965.47
Directed Work	\$5,647.07	\$18,966.40	\$11,609.72	\$43,074.60	\$24,345.57	\$103,643.36
Operational Damage	\$35,732.87	\$88,285.64	\$8,472.82	\$17,015.27	\$87,474.40	\$237,011.00
Theft	\$1,475.18	\$443.79	\$0.00	\$0.00	\$246.79	\$2,165.76
Vandalism	\$141.37	\$0.00	\$0.00	\$0.00	\$240.96	\$382.33
Capital Improvement	\$667.67	\$0.00	\$22,319.38	\$50,278.78	\$9,866.91	\$83,132.74
TOTALS:	\$199,079.47	\$339,628.27	\$102,968.05	\$187,872.57	\$343,147.07	\$1,172,695.43

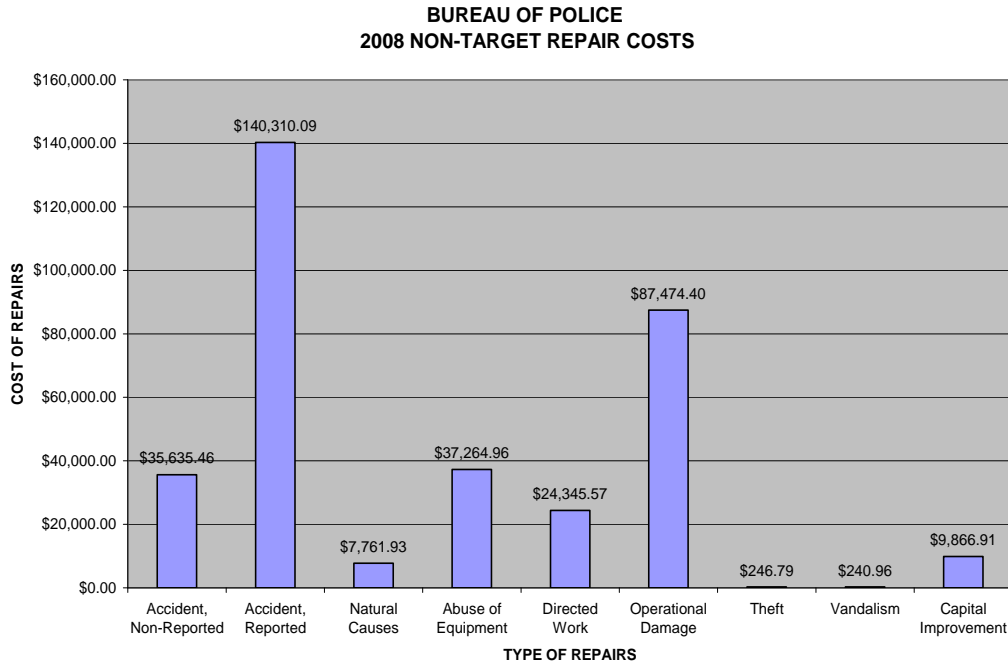
Finding: The categories with the most non-target repair costs, in descending order, were: natural causes, operational damage, abuse of equipment and accident reported. Natural causes are outside the control of the vehicle operator. The remaining three categories: operational damage, abuse of equipment and accident are areas over which the vehicle operator has more control.

RECOMMENDATION NO. 4:

The City should determine the most frequent types of operational damage and abuse of equipment and vigorously work with vehicle operators to reduce these types of repairs. Reducing non-target repairs will reduce the City’s costs.

Bureau of Police

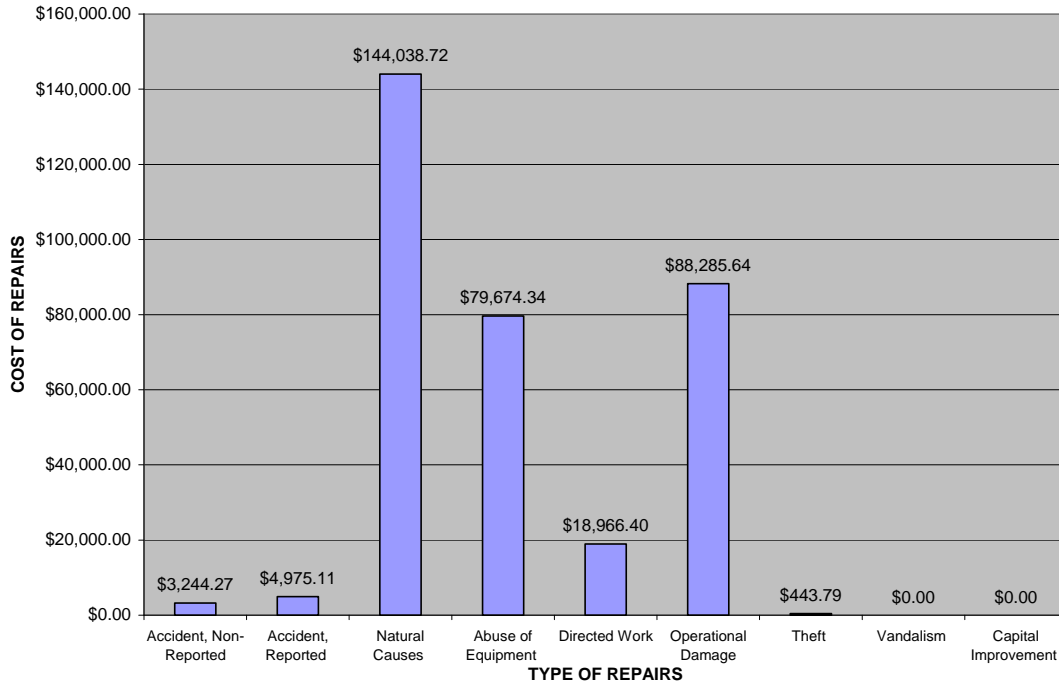
In 2008 Bureau of Police (POL) had the most non-target repair costs of all City departments totaling \$343,147.07. Of this amount, Accidents (Reported) represents the largest type of repair cost at \$140,310.09 or almost 41% of the total Police non-target costs for 2008. Next highest is Operational Damage with \$87,474.40 or 25% of non-target repair costs.



Public Works Environmental Services (PWES)

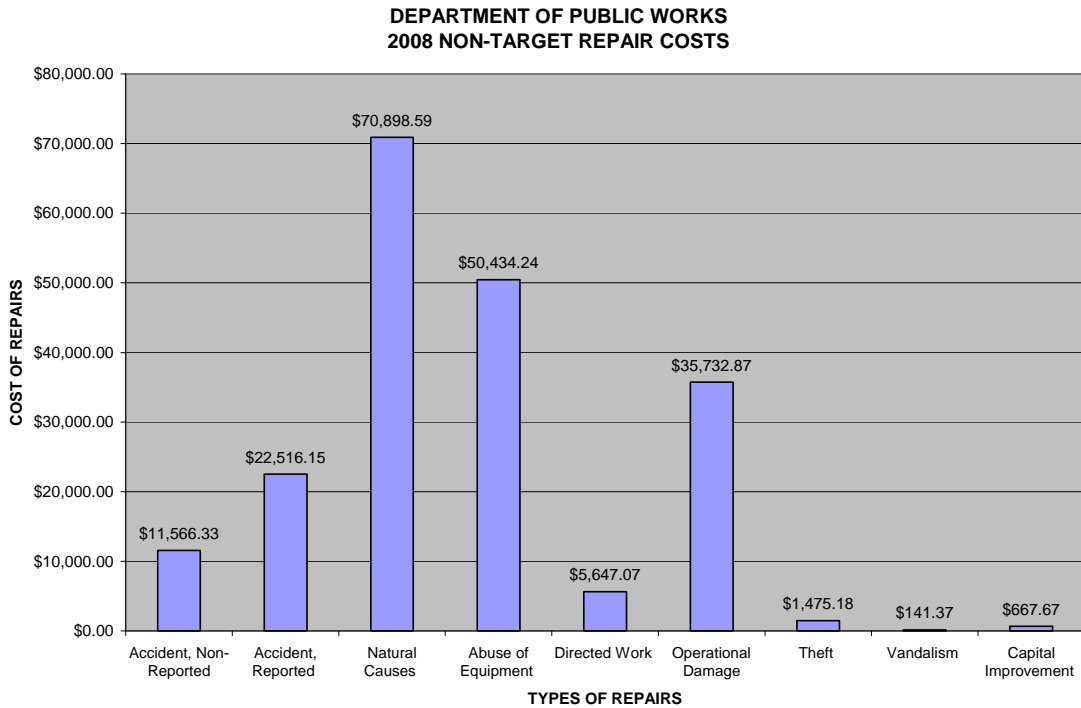
Public Works Environmental Services (PWES) has the second highest non-target repair costs at \$339,628.27. Natural Causes is the largest type of expense totaling \$144,038.72 or 42% of total NT costs for 2008. Operational Damage is the second highest category at \$88,285.64 or 26% of non-target costs.

**PUBLIC WORKS ENVIRONMENTAL SERVICES
2008 NON-TARGET REPAIR COSTS**



Department of Public Works (DPW)

Department of Public Works (DPW) has the third highest non-target repair costs totaling \$199,079.47. Natural Causes is the largest type of expense within DPW at \$70,898.59 or 36% of total NT 2008 repair expenses. Abuse of Equipment is the second largest type of expense totaling \$50,434.24 or 25% of DPW non-contract repair costs.



Finding: Outside of Natural Causes, the Police, DPWES and DPW had the highest NT repair costs because of Accidents, Abuse of Equipment and Operational Damage. These types of damages can often be prevented or mitigated by a more aware workforce.

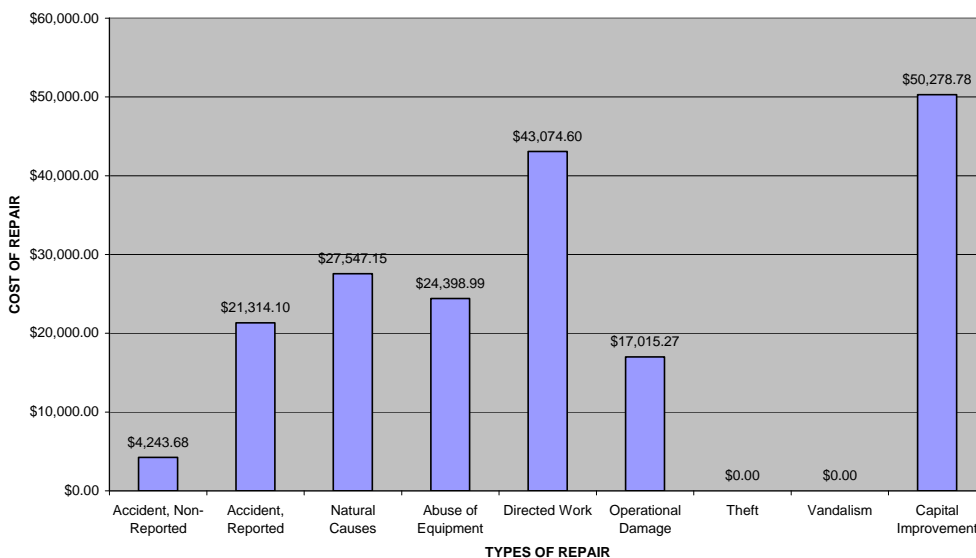
RECOMMENDATION NO. 5:

The high percent of repairs due to Accidents, Abuse of Equipment and Operational Damage indicates a need for better training in equipment and vehicle operation and care.

Bureau of Fire

The Fire Bureau has the fourth highest non-target repair costs totaling \$187,872.57. Capital Improvements is the largest type of expense at \$50,278.78 or 27% of total NT 2008 repair expenses. Directed Work is the second largest type of repair cost at \$43,074.60 or 23%.

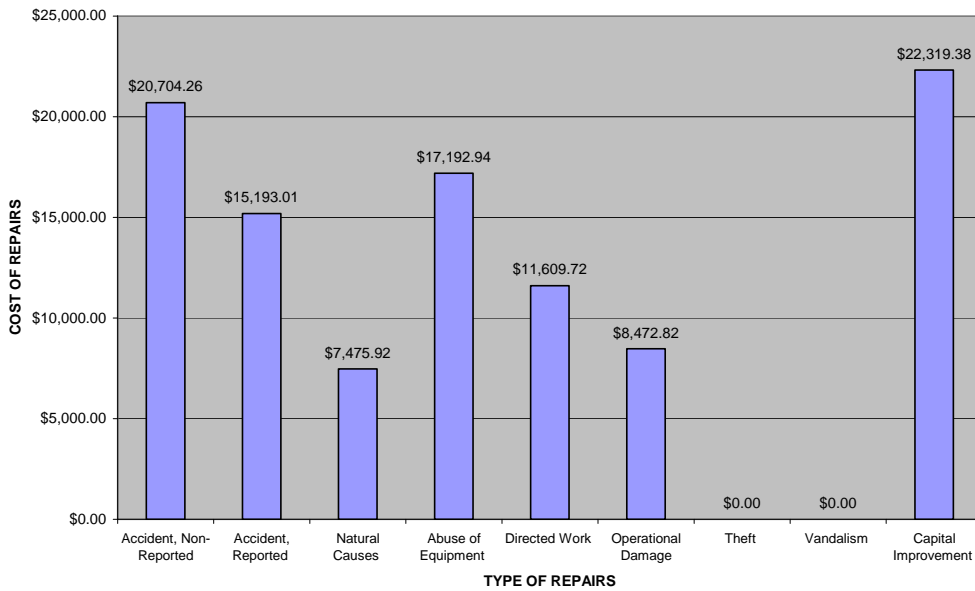
**BUREAU OF FIRE
2008 NON-TARGET REPAIR COSTS**



Emergency Medical Services (EMS)

EMS has the fifth highest non-target repairs totaling \$102,968.05. Capital Improvements is the largest type of expense within EMS with \$22,319.38 or 22% of total 2008 expenses. Accident (non-Reported) is the second largest type of expense totaling \$20,704.26 or 21% of non-contract expenses in EMS.

**EMERGENCY MEDICAL SERVICES
2008 NON-TARGET REPAIR COSTS**



Finding: Most of non-targets repairs for the Fire and EMS departments are for Capital Improvements.

Target Services and Target Costs

The City pays FVS for targeted (contract) services and costs in equal monthly installments. Invoices along with back up documentation is processed and paid by the City Controller’s Office.

All monthly payments and documentation were reviewed and tracked for 2008. Monthly contract amounts for January and February were \$376,356.34. An increase of \$13,172.58 occurred in March, per the new contract, to \$389,528.92, for the remainder months of the year. Total contract payments for 2008 were \$4,652,001.88.

The auditors requested a list of the target or contract services that the City pays for each month. A report was received breaking down monthly target expenses into the following categories: labor hours, labor costs, parts costs and sublet costs. Table 5 shows these expenses for FVS fiscal year March 2008 to February 2009.

TABLE 5
FVS—FISCAL YEAR EXPENSES
FOR TARGET or CONTRACT REPAIR WORK
March 2008 to February 2009

2008	LABOR HRS	LABOR COST	PARTS COST	SUBLET COSTS	TOTAL COST	MONTHLY PAYMENT
March	3,608.71	\$106,007.48	\$88,166.78	\$18,149.55	\$212,323.81	\$389,528.92
April	3,169.53	\$96,172.47	\$74,130.44	\$5,704.13	\$176,007.04	\$389,528.92
May	4,942.87	\$152,419.16	\$74,373.90	\$9,767.37	\$236,560.43	\$389,528.92
June	3,574.95	\$109,847.34	\$82,163.23	\$18,533.17	\$210,543.74	\$389,528.92
July	2,615.56	\$80,289.57	\$68,808.49	\$15,506.78	\$164,604.84	\$389,528.92
August	2,782.87	\$86,229.64	\$67,899.23	\$14,646.52	\$168,775.39	\$389,528.92
September	3,175.34	\$99,715.27	\$79,657.11	\$20,513.35	\$199,885.73	\$389,528.92
October	2,823.42	\$89,024.75	\$68,004.63	\$11,305.50	\$168,334.88	\$389,528.92
November	2,596.08	\$81,734.99	\$73,195.10	\$9,235.87	\$164,165.96	\$389,528.92
December	3,090.29	\$96,160.05	\$87,347.83	\$12,130.03	\$195,637.91	\$389,528.92
January '09	2,319.23	\$72,160.63	\$60,118.35	\$6,734.72	\$139,013.70	\$389,528.92
February	2,524.62	\$78,707.74	\$65,047.35	\$12,587.82	\$156,342.91	\$389,528.92
TOTALS	37,223.47	\$1,148,469.09	\$888,912.44	\$154,814.81	\$2,192,196.34	\$4,674,347.04

Data initially supplied by FVS, shows Target or Contract expenses for fiscal year 2008-2009 totaled \$2,192,196.34. During the same time period the City paid FVS \$4,674,347.04. The difference is \$2,482,150.70 or 54% of the total paid.

FVS corporate supplied a list of additional expenses for fiscal year 2008-2009: Management, Administration, Parts and other Salaries costs at \$522,473.42, Fringe Benefit costs at \$961,746, Indirect Shop Supplies at \$26,525, Overhead (gas, electric, phone, internet, uniforms, mail, postage, safety training etc.) costs of \$489,062 and Corporate Administration and Management Fees of \$482,344.28. According to FVS, Corporate Administration consists of Information Technology support, Human Resources and purchasing costs and Management Fees are the corporate profit.

Garage Utility Costs

FVS operates out of two City-owned garage facilities in the Strip District and the City Motor Pool facility on Second Avenue. The Strip District facilities were originally part of a larger City-owned compound site that still currently houses City Environmental Services, Animal Control, the Tow Pound and Gas Station. Consequently, gas, electric and water service lines are not broken down individually to each building, but supply the whole complex.

Utility costs are charged to FVS on a yearly basis. For 2007, the FVS utility usage for gas and electric was prorated per square footage at 47% and 75%, respectively. According to the City's Asset/Accounting Manager, the 2008 square footage for the garage facility II was recalculated to more accurately reflect the actual space usage. As a result, the gas calculations went from 47% per square footage in 2007 down to 28% for 2008. The electric calculation remained at 75% for both 2007 and 2008. Gas and electric utility charges for FVS in 2007 totaled \$128,043.04 and \$152,131.90 for 2008.

The contract states that the Contractor will be responsible for paying heat, water and electricity billed to the City for the Maintenance Facilities and allows payment to be made by way of a credit to the City. The City pays for the utilities and FVS gives a credit off the City's non-target repair expenses.

Finding: FVS's utility expenses for 2006 and 2007 were not credited until October 2008. FVS credited the City for its 2008 utility expenses on August 25, 2009.

RECOMMENDATION NO. 6:

The City pays gas and electric utility charges monthly. The City should require FVS to credit its utility expense in a timelier manner. Receiving credit in June or July for expenses that occurred 2 years ago is not efficient or timely.

Finding: For 2007, utility costs calculated for FVS amounted to \$12,677.66 per month for both gas and electric usage at both garage facilities.

Finding: According to the City's Computer Information Systems (CIS), telephone service for FVS is billed to them directly by the telephone company. The City is not involved with providing telephone services to their facilities.

Finding: Because the garage facilities are owned by the City, they are exempt from PWSA charges. This exemption is being passed onto FVS. FVS is not paying for any water usage.

RECOMMENDATION NO. 7:

FVS is a for profit entity and as such should not be exempt from PWSA charges. A separate water meter should be installed in the building that is solely used by FVS and some type of reasonable charge should be assessed for the other building that is shared with the City. Instead of requiring the Contractor to reimburse for utilities "billed to the City" the contract should be amended to require FVS to pay for water used in garage operations.

Performance Standards Compliance

The contract specifies performance measures for turnaround time, fleet availability and preventive maintenance. The performance measures are listed as acceptable ranges. Financial incentives are given for exceeding the performance range and penalties are assessed for not reaching the performance range. Incentive/penalties are assessed according to daily fleet availability. Incentives/penalties for turnaround time, preventive maintenance and repair quality (based on the percent of rework work orders) are assessed monthly.

The auditors were told by FVS personnel that vehicles in for non target repairs are excluded from fleet availability and turnaround time calculations. According to the contract, excluded from the fleet availability computation are vehicles and equipment that receive ‘quick fix’ service; those awaiting repair authorization from the City, or are out of service due to accidents, acts of God, abnormal use, vandalism, theft and manufacturer recalls. The same exclusions (with the exception of quick fix service) apply to turnaround time calculations.

Finding: Vehicles being repaired for natural causes and directed work are also excluded from fleet availability and turnaround time calculations. These exclusions are not listed in the contract.

RECOMMENDATION NO. 8:

The contract should be amended to state that vehicles out of service because of non-target repairs are excluded from performance calculations. ‘Non target repairs’ language would include any type of non target repair, especially since the list of non target repairs seems to be getting longer.

Finding: An attachment to the contract accepted on March 7, 2007 puts a cap on the amount of performance incentives/penalties that can be charged against or paid to FVS. “These performance incentive/penalty monetary calculations are the daily and monthly limits; The daily/monthly limit penalty/incentive will not exceed \$30,480/YEAR within the third year term of the Agreement”.

RECOMMENDATION NO. 9:

Cash incentives and penalties can be good performance inducements. However, limiting the amount of daily/monthly penalty to \$30,480 a year is little more than a slap on the wrist for not meeting performance standards and not much incentive for exceeding the performance range. The City should consider eliminating this cap and increasing the monthly penalty amounts.

Turnaround Time Compliance

Turnaround time is the amount of time it takes to repair a vehicle and get it back into service. The contract list 24 and 48 hour turnaround time standards for different vehicle classes with public safety vehicles held to a higher standard.

For example, each month, 84-86% of police, EMS and fire vehicle repairs should be completed within 24 hours and 94-96% of the repairs must be completed within 48 hours. In contrast, repairs for 74-76% of other vehicles larger than one ton should be completed within 24 hours and 89-91% percent within 48 hours. Turnaround time calculations start when FVS opens a repair work order and end when the work order is closed. Vehicles in for non-target repairs are not included in turnaround time calculations.

Finding: In 2008, on average, FVS did not meet the 48 hour turnaround time performance standard for any City department. On average, the 24 hour turnaround time standard was exceeded for only one City bureau, the Bureau of Refuse.

Finding: The garage is not meeting vehicle turnaround time performance standards when labor and parts costs are predictable and knowable. This indicates sub optimal performance in getting vehicles back into service.

**TABLE 6
24 HOUR TURNAROUND TIME
INCENTIVE AND PENALTY RESULTS**

MONTH	EMS		POLICE		FIRE		REFUSE		<ONE TON		>ONE TON		ALL OTHERS	
	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$
2/21/08-3/29/08	72.4	-25	68	-25	81.6	-25	82.8	+25	57.1	-25	54.9	-25	44.3	-25
3/30/08-4/26/08	72.9	-25	70	-25	79.2	-25	81.2	+25	36.8	-25	42.9	-25	51.3	-25
4/27/08-5/24/08	84.4	0	75.8	-25	81.4	-25	76.9	-25	72.2	-25	41.7	-25	56.1	-25
5/25/08-6/28/08	73.1	-25	70.2	-25	75.0	-25	82.9	+25	53.6	-25	39.4	-25	50.0	-25
6/29/08-7/26/08	87.8	+25	71.8	-25	74.6	-25	84.9	+25	69.2	-25	46.3	-25	55.0	-25
7/27/08-8/23/08	59.0	-25	69.0	-25	71.2	-25	79.8	0	52.6	-25	53.9	-25	56.2	-25
8/24/08-9/27/08	75.0	-25	74.3	-25	78.7	-25	85.1	+25	66.7	-25	45.0	-25	51.3	-25
9/28/08-10/25/08	77.8	-25	81.6	-25	75.0	-25	84.2	+25	74.2	-25	39.0	-25	58.6	-25
10/26/08-11/19/08	70.2	-25	82.3	-25	64.3	-25	81.0	+25	77.5	-25	63.8	-25	63.9	-25
11/20/08-12/27/08	81.0	-25	79.4	-25	80.8	-25	60.6	-25	73.5	-25	56.1	-25	64.1	-25
12/28/08-1/24/08	90.7	+25	85.3	0	88.7	+25	78.4	-25	72.7	-25	63.2	-25	61.4	-25
1/25/08-2/21/08	84.5	0	85.4	0	83.6	-25	77.2	-25	61.0	-25	59.2	-25	57.1	-25

**TABLE 7
2008--24 Hour
TURNAROUND RESULTS**

	AVERAGE %	INCENTIVE OR PENALTY In Dollars
EMS	77.4	-150
POLICE	76.1	-250
FIRE	77.8	-250
REFUSE	79.6	75
<ONE TON	63.9	-300
>ONE TON	50.5	-300
ALL OTHERS	55.8	-300
TOTALS		\$-1475

**TABLE 8
48 HOUR TURNAROUND TIME
INCENTIVE AND PENALTY RESULTS**

MONTH	EMS		POLICE		FIRE		REFUSE		<ONE TON		>ONE TON		ALL OTHERS	
	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$
2/21/08-3/29/08	89.7	-50	77.8	-50	90.8	-50	91.8	-40	66.7	-35	63.4	-35	64.4	-35
3/30/08-4/26/08	75.0	-50	82.1	-50	88.3	-50	85.6	-40	57.9	-35	52.4	-35	60.2	-35
4/27/08-5/24/08	93.3	-50	86.6	-50	88.1	-50	86.2	-40	80.6	-35	58.3	-35	63.6	-35
5/25/08-6/28/08	79.1	-50	83.8	-50	85.4	-50	89.3	-40	71.4	-35	47.9	-35	63.9	-35
6/29/08-7/26/08	92.7	-50	81.3	-50	79.4	-50	90.1	-40	76.9	-35	56.1	-35	64.0	-35
7/27/08-8/23/08	79.5	-50	80.8	-50	81.4	-50	91.0	-40	73.7	-35	59.0	-35	68.6	-35
8/24/08-9/27/08	84.7	-50	85.7	-50	85.1	-50	90.5	-40	81.5	-35	65.0	-35	65.3	-35
9/28/08-10/25/08	88.9	-50	90.6	-50	85.9	-50	89.5	-40	80.7	-35	59.8	-35	73.0	-35
10/26/08-11/19/08	80.9	-50	91.6	-50	73.8	-50	89.2	-40	-87.5	-35	72.5	-35	76.9	-35
11/20/08-12/27/08	87.9	-50	85.5	-50	89.7	-50	89.2	-40	79.4	-35	71.4	-35	77.9	-35
12/28/08-1/24/08	97.7	+50	91.5	-5	95.8	0	88.6	-40	90.9	0	72.4	-35	71.3	-35
1/25/08-2/21/08	91.6	-50	91.4	-50	87.7	-50	86.7	-40	68.3	-35	69.0	-35	65.1	-35

**TABLE 9
2008--48 Hour
TURNAROUND RESULTS**

	AVERAGE %	INCENTIVE OR PENALTY In Dollars
EMS	86.8	-500
POLICE	85.7	-555
FIRE	86.0	-550
REFUSE	89.0	-480
<ONE TON	61.7	-385
>ONE TON	62.3	-420
ALL OTHERS	67.9	-420
TOTAL		\$-3310

Finding: FVS was assessed \$1,475 and \$3,310 penalties for not meeting turnaround time standards.

Fleet Availability Compliance

The daily fleet availability range for all vehicles is 94%-96%. As mentioned previously, fleet availability calculations for contract compliance purposes only include vehicles in the garage for target (contract) repairs.

**TABLE 10
FLEET AVAILABILITY – TARGET**

	EMS	POLICE	FIRE	REFUSE	< ONE TON	> ONE TON	ALL OTHERS	AVERAGE
Jan-08	95.8	93.1	95.5	90.1	95.3	94.5	95.3	94.1
Feb-08	94.4	93.2	95.4	92.2	96.1	94.9	95.5	94.5
Mar-08	94.3	93.4	94.8	91.7	96.9	93.6	93.5	93.7
Apr-08	96.3	94.6	95.5	88.8	94.8	91.4	95.4	94.2
May-08	98.2	95.4	95.5	89.9	94.1	88.0	94.4	93.9
Jun-08	94.5	93.9	95.5	91.1	95.5	86.9	94.4	93.3
Jul-08	96.7	93.1	94.5	90.8	96.6	91.5	94.4	93.7
Aug-08	93.8	92.7	94.0	92.1	96.3	92.3	92.1	92.8
Sep-08	94.7	94.6	94.0	90.1	98.0	91.3	94.2	93.9
Oct-08	95.1	96.2	96.4	89.7	94.7	89.7	96.4	94.9
Nov-08	95.6	96.9	94.3	90.8	97.8	92.9	96.0	95.5
Dec-08	96.6	96.0	93.8	92.8	96.8	92.5	97.2	95.5
AVERAGE	95.5	94.4	94.9	90.8	96.1	91.6	94.9	94.2

Finding: In 2008, FVS, fleet availability, on average, was within the design range for 6 months. For 6 months, the fleet availability standard, on average, was not met. Average annual fleet availability for priority vehicles (EMS, Police and Fire) was within the performance range. Average availability for vehicles smaller than one ton exceeded the range.

Finding: At the City’s request, FVS calculates fleet availability without any exclusion. When non-target repairs are included, fleet availability, on average, falls well below the acceptable range of 94-96% for the entire year for all vehicle categories.

**TABLE 11
FLEET AVAILABILTY - TARGET & NON TARGET**

	EMS	POLICE	FIRE	REFUSE	< ONE TON	> ONE TON	ALL OTHERS	AVERAGE
Jan-08	88.9	88.2	84.8	82.4	94.2	87.9	93.0	89.2
Feb-08	86.3	88.4	87.3	84.1	93.5	89.7	93.5	89.7
Mar-08	87.6	87.4	83.7	85.3	91.9	84.3	91.5	88.0
Apr-08	92.5	89.7	84.6	83.6	92.8	84.5	93.0	89.5
May-08	88.7	90.2	88.0	82.9	93.6	82.8	91.9	89.1
Jun-08	85.8	89.1	85.1	82.7	94.9	81.7	92.6	88.5
Jul-08	89.4	88.7	86.7	81.4	96.5	89.3	92.6	89.5
Aug-08	90.7	89.7	85.5	83.3	95.8	87.7	89.5	88.8
Sep-08	91.4	86.5	89.1	79.3	92.7	86.0	91.5	88.2
Oct-08	91.6	90.0	90.5	77.9	92.6	84.6	93.8	89.7
Nov-08	93.2	92.6	90.0	85.0	93.8	85.7	92.5	91.1
Dec-08	94.0	91.5	89.4	85.0	96.1	88.5	94.4	91.6
AVERAGE	90.0	89.3	87.1	82.7	94.0	86.1	92.5	89.4

Preventive Maintenance (PM) Compliance

The purpose of a Preventive Maintenance program is to identify problems that can be corrected before the problems become major repair issues. A good PM program contributes to vehicle longevity and saves money.

First Vehicle performs three types of PM services. The APM is used for motorcycles. The BPM or Basic PM involves vehicle lubrication, oil and filter change and inspections of the vehicle interior, exterior, tires and wheel, battery and engine compartment. The third type is a CPM or Comprehensive PM. The comprehensive includes all BPM elements with the addition of more filter and fluid changes. A PM is performed every 2 to 6 months, depending on vehicle class.

FVS Preventive Maintenance Reports

Vehicles are scheduled for Preventive Maintenance (PM) based upon anticipated mileage and/or time criteria. A computer flags vehicles that are due for a PM and FVS places them on a PM schedule. Department personnel are notified to have the vehicle in the garage on the scheduled date. If a vehicle misses the PM, the Department supervisor is notified. It is up to the Department Supervisor to see that the vehicle gets PMed.

FVS submits monthly PM reports listing the number of scheduled, completed, no show and not completed vehicles. These reports are not a 'pure' interpretation of recording no shows.

On the report the number of scheduled vehicles is the actual number of scheduled vehicles. The other information is not as succinct.

On the report, completed means that either a vehicle scheduled for a PM actually had it completed or any vehicle not scheduled for a PM but in the garage for another problem and a PM is completed as part of the entire service. This usually occurs when the computer alerts the technician that a PM is due because vehicle mileage is high since the last PM service or that the PM was missed.

No show means that a vehicle scheduled for a PM did not show up, as well as a vehicle brought in for another problem is told that it needs a PM but refuses to stay for it. If the driver refuses to stay for the PM then it is reported to their supervisor. The vehicle may be commandeered for PM at a later time if it requires a road call or is in for another service.

Not-completed is a calculation of the number of vehicles scheduled, minus the number completed minus the number of no shows.

Finding: FVS includes all PMs on its yearly report whether completed as scheduled or done when the vehicle is brought in for other reasons. In addition to vehicles not showing up as scheduled, FVS also includes vehicles in for repair work that refuse to stay for PM service as 'no shows'. This means of recording 'no shows' does not reflect department compliance with scheduled vehicle PM's.

Scheduled PM Compliance

The auditors took the monthly reports and counted the actual number of no shows for each department for the entire year. Actual no shows are vehicles that did not show up for a scheduled PM. The results are found in Table 10.

Table 10 does not mean that vehicles are not being PMed. It only means that vehicles are missing their scheduled PM.

TABLE 10

2008 PREVENTIVE MAINTENANCE PERCENTAGE of NO SHOWS BY DEPARTMENT (Descending Order)				
DEPARTMENT	NUMBER of CARS as of 2/19/08	NUMBER of PMs SCHEDULED	NUMBER of NO SHOWS	PERCENT (%) of NO SHOWS
Controller	3	9	6	66.7%
PWES	99	211	138	65.4%
PWSA	111	286	167	58.4%
Fire AD	88	247	143	57.9%
Mayor	5	4	2	50.0%
DGS	35	98	46	46.9%
CIS	2	7	3	42.9%
BBI	4	8	3	37.5%
Police	274	898	317	35.3%
EMS	61	183	62	33.9%
DPW	269	603	193	32.0%
P&R	20	40	11	27.5%
EMA	12	24	4	16.7%
Public Safety	7	11	1	9.1%
Finance	1	4	0	0.0%
OMI	6	2	0	0.0%
TOTAL	992	2635	1096	41.6

Finding: Seventy-Five Percent (75%) of City Departments are cavalier about showing up for assigned PM scheduled. Twelve (12) of the 16 departments do not show up for their PM appointment 25% or more of the time. Biggest offenders with 50% or more no shows are bolded: Controller's Office, PWES, PWSA, Fire, and the Mayor's Office.

Finding: Vehicles that miss a scheduled PM and taken to the garage with a problem before the missed PM is completed are automatically treated as a non-target repair cost by FVS.

RECOMMENDATION NO. 10:

Missed PMs should be tracked by Department supervisors. Habitual offenders should be identified, informed of the importance of preventive maintenance service and threatened with discipline for continued non-compliance.

No-Show Rescheduling

FVS completes a PM schedule for the upcoming month and sends the schedule to City departments two weeks before the month begins. If a vehicle does not show up for its scheduled PM, FVS flags the unit in their system as being missed. Then if the vehicle shows up at the shop or is in need of a road call, the system alerts a missed PM. At that time the unit is commandeered (unless it is an emergency) and the PM is performed. This action was authorized by Department/Bureau Administrators and may cause friction occasionally but it works. The unit then continues to roll into the PM schedule accordingly. Missed PM's are also reviewed at the monthly user meetings. These user meetings are attended by representatives of the user department, FVS and City garage management.

The auditors tracked the vehicles' that did not show up for their scheduled PM in January, April, July and October of 2008 to find out when the vehicle actually did get PM service. Tables 11 through 14 show the number of City vehicles that missed a scheduled PM's and whether or not it was completed within one or two months following the initial scheduled appointment.

**TABLE 11
JANUARY 2008
PM NO SHOWS
TIME COMPLETION ANALYSIS**

	PM Number No Shows	PM Percentage (%)	PM Cumulative Percentage (C%)
Completed in February (within 1 month)	23	15.8%	15.8%
Completed in March (within 2 months)	63	43.2%	58.9%
Not Completed WITHIN TWO MONTHS	60	41.1%	100.0%
TOTALS	146	100.0%	

**TABLE 12
APRIL 2008--PM NO SHOWS
TIME COMPLETION ANALYSIS**

	PM Number No Shows	PM Percentage (%)	PM Cumulative Percentage (C%)
Completed in May (within 1 month)	29	29.3%	29.3%
Completed in June (within 2 months)	26	26.3%	55.6%
Not Completed WITHIN TWO MONTHS	44	44.4%	100.0%
TOTALS	99	100.0%	

**TABLE 13
JULY 2008--PM NO SHOWS
TIME COMPLETION ANALYSIS**

	PM Number No Shows	PM Percentage (%)	PM Cumulative Percentage (C%)
Completed in August (within 1 month)	21	30.4%	30.4%
Completed in September (within 2 months)	19	27.5%	58.0%
Not Completed WITHIN TWO MONTHS	29	42.0%	100.0%
TOTALS	69	100.0%	

**TABLE 14
OCTOBER 2008--PM NO SHOWS
TIME COMPLETION ANALYSIS**

	PM Number No Shows	PM Percentage (%)	PM Cumulative Percentage (C%)
Completed in November (within 1 month)	16	25.4%	25.4%
Completed in December (within 2 months)	16	25.4%	50.8%
Not Completed WITHIN TWO MONTHS	31	49.2%	100.0%
TOTALS	63	100.0%	

Finding: In the auditors testing sample, on average, 42.28% of cars that missed a scheduled PM did not have a make-up PM within two months after the missed appointment.

Missed PMs can result in increased Non-Target costs to the City. If a PM was missed and a problem occurs that the PM could have prevented, it is billed as a Non-Target expense. The exact amount of money that missed PMs cost the City was beyond the scope of this audit.

RECOMMENDATION NO. 11:

The City should require FVS to track vehicles that need repairs because of missed PMs and the cost of those repairs to the City. Such tracking may result in more aggressive scheduling compliance by departments.

Preventive Maintenance Penalties

The contract mandates penalties against FVS for not meeting the monthly standard of 94%-96% "PM inspections completed on time". "PMs that are not available as a result of the City missing its scheduled PM will be excluded from this calculation".

Finding: By only including vehicles that show up for scheduled preventive maintenance in the performance calculation, FVS would be hard pressed not to meet the 94%-96% inspections completed on time standard.

Rework Orders

Quality of repairs can be judged by the number of times a job has to be redone. According to the contract, if the number of repair orders requiring rework each month exceed the range of 0-2% of all repair orders, FVS is penalized.

Finding: Data provided by FVS show 3 rework orders for 2008. The auditors had no way to confirm this data. Three rework orders for an entire year indicates that FVS or its subcontractors are performing quality repair work on the City fleet.

State Inspection Compliance

Compliance with the Commonwealth's annual State Inspection requirement is not a performance standard under the current contract. The State of Pennsylvania has a mandatory vehicle inspections program. All vehicles registered in the Commonwealth must be inspected each year for safety and emissions. State inspection can be performed two months before the due month.

The Controller's previous audit found that 31% of the vehicles in the testing sample had not received a required state inspection from February 2005 through January 2006. The auditors wanted to determine the percent of vehicles that received State Inspection in 2008.

Finding: FVS schedules and records State Inspections in the same manner that preventive maintenance is scheduled and recorded. State Inspection data is mixed in with PM data and not kept separate.

The auditors separated State Inspection data from the contractor's 2008 preventive maintenance reports. Identified were State Inspection scheduling frequency, no shows and time interval to complete no shows inspections.

RECOMMENDATION NO. 12:

FVS should be required by contract to compile separate State Inspection performance data. This would facilitate data analysis and also help guarantee that vehicles receive State Inspection when due.

TABLE 15
2008
STATE INSPECTIONS
PERCENTAGE OF NO SHOWS
BY DEPARTMENT
(Descending Order)

DEPARTMENT	SCHEDULED	NO SHOWS	PERCENT (%) NO SHOWS
PWES	120	92	76.7%
PWSA	45	33	73.3%
DGS	13	7	53.8%
DPW	160	80	50.0%
Police	41	18	43.9%
Fire AD	24	10	41.7%
EMS	16	4	25.0%
P&R	12	2	16.7%
EMA	1	0	0.0%
BBI	0	0	*
Controller	0	0	*
CIS	0	0	*
Mayor	0	0	*
Public Safety	0	1	*
Finance	0	0	*
OMI	0	0	*
TOTALS	432	247	57.2%

*no inspections scheduled in 2008

Finding: FVS records indicate that several City department vehicles were not scheduled at all for state inspections in 2008.

Finding: PWES, PWSA, DGS and DPW missed 57.2% of scheduled state inspections. Police and Fire are not far behind with 43.9% and 41.7%, respectively, of missed state inspections.

Finding: In 2008, the City fleet was comprised of approximately 992 vehicles. According to FVS' data, only 432 vehicles, or only 44% of the fleet, were scheduled for SIs in 2008.

FVS administration stated that some missed inspections for Police are the result of FVS not being informed of the State Inspection due date when new police vehicles are purchased. While this may explain why the number of Police vehicle inspections is low, it does not explain why many departments are not being scheduled at all.

Finding: FVS states that some vehicles are not scheduled for State Inspection because the inspection is done early. This occurs when vehicles in for other repairs get inspected because the date is within the 3 month State Inspection window.

RECOMMENDATION NO. 13:

City Administration and/or the Equipment Leasing Authority should inform FVS of State Inspection due dates on all new vehicles.

RECOMMENDATION NO. 14:

FVS should investigate why so few vehicles are being scheduled for SI. If a vehicle is inspected early, it should be entered on that day's work schedule, not just on the work completed report. This would facilitate better tracking of non-scheduled State Inspections.

State Inspection Rescheduling

FVS schedules State Inspections (SI) in the same manner that it schedules PM's. Follow up and enforcement of SIs is also handled in the same manner.

The auditors tracked the vehicles' that did not show up for their scheduled State Inspection in January, April, July and October of 2008 to find out when the vehicle actually did receive a State Inspection. Tables 16 through 19 show the number of City vehicles that missed a scheduled State Inspection and whether or not it was completed within one or two months following the missed appointment.

TABLE 16
JANUARY 2008
STATE INSPECTIONS (SI) NO SHOWS
TIME COMPLETION ANALYSIS

	State Inspection Number No Shows	State Inspection Percentage (%)	SI Cumulative Percentage (C%)
Completed in February (within 1 month)	2	16.67%	16.67%
Completed in March (within 2 months)	3	25.00%	41.67%
Not Completed WITHIN TWO MONTHS	7	58.33%	100.00%
TOTALS	12	100.00%	

TABLE 17
APRIL 2008
STATE INSPECTIONS (SI) NO SHOWS
TIME COMPLETION ANALYSIS

	State Inspection Number No Shows	State Inspection Percentage (%)	SI Cumulative Percentage (C%)
Completed in May (within 1 month)	11	45.83%	45.83%
Completed in June (within 2 months)	5	20.83%	66.67%
Not Completed WITHIN TWO MONTHS	8	33.33%	100.00%
TOTALS	24	100.00%	

TABLE 18
JULY 2008
STATE INSPECTIONS (SI) NO SHOWS
TIME COMPLETION ANALYSIS

	State Inspection Number No Shows	State Inspection Percentage (%)	SI Cumulative Percentage (C%)
Completed in August (within 1 month)	12	85.71%	85.71%
Completed in September (within 2 months)	0	0.00%	85.71%
Not Completed WITHIN TWO MONTHS	2	14.29%	100.00%
TOTALS	14	100.00%	

TABLE 19
OCTOBER 2008
STATE INSPECTIONS (SI) NO SHOWS
TIME COMPLETION ANALYSIS

	State Inspection Number No Shows	State Inspection Percentage (%)	SI Cumulative Percentage (C%)
Completed in November (within 1 month)	10	47.62%	47.62%
Completed in December (within 2 months)	3	14.29%	61.90%
Not Completed WITHIN TWO MONTHS	8	38.10%	100.00%
TOTALS	21	100.00%	

Finding: On average, 36.02% of cars in the auditors testing sample that missed a scheduled State Inspection did not have a make-up state inspection two months later after the missed appointment.

RECOMMENDATION NO. 15

FVS and City department administrations should make State Inspections compliance a top priority. Having City vehicles without up to date inspections is unsafe as well as poor example to the public.

Completed Stated Inspections

Looking at only scheduled State Inspections it appears that some vehicles in the City’s fleet are not being State Inspected.

State Inspections are scheduled 2 weeks in advance of their due month. However, State Law allows the inspection to occur not only within the month due, but two months before it is due.

Finding: More State Inspections are being completed than are scheduled.

Finding: Table 20 shows that every month in 2008 had more SIs completed than were scheduled.

**TABLE 20
2008 SCHEDULED STATE INSPECTIONS
AND NUMBER COMPLETED
BY MONTH**

MONTH	INSPECTIONS SCHEDULED	INSPECTIONS COMPLETED	DIFFERENCE	PERCENT INCREASE
January	23	64	41	178.3%
February	41	73	32	78.0%
March	35	97	62	177.1%
April	43	107	64	148.8%
May	27	98	71	263.0%
June	51	102	51	100.0%
July	19	58	39	205.3%
August	29	93	64	220.7%
September	29	102	73	251.7%
October	46	83	37	80.4%
November	49	67	18	36.7%
December	40	77	37	92.5%
TOTAL	432	1021	589	136.3%

Combining Fleet Management Services with the County

The City and the County both have vehicle repair garages for their vehicles fleets. Both garages are outsourced and there is speculation about combining services to save money.

The auditors interviewed the head of the County fleet services. This individual was very satisfied and pleased with outsourcing of the County fleet maintenance services. He believed the greatest advantage with outsourcing was that it eliminated political favoritism and nepotism in garage hiring and increased productivity.

Finding: The County Garage is a non-union facility and the City Garage is a union facility. This difference between union and non-union personnel appears to be a major deterrent to combining services.

Having non-union and union workers doing the same job could create a stressful work environment. The City would face highly organized opposition if it attempted to change the Garage into a non-union shop. The County would be loathe to support a union shop because doing so would increase costs.

Return to In-House Fleet Maintenance

One of the issues the Controller was asked to address was whether it would be cheaper to return the City Garage to an in-house operation. The Controller's 2005 audit concluded that on a price based comparison the Union bid for garage operations was lower than the bid submitted by FVS. Five years have passed since that analysis was made.

Finding: Given the escalating costs of the fleet maintenance contract, it may be more cost effective to return to an in-house operation.

RECOMMENDATION NO. 16:

A comprehensive study should be done by an analyst experienced in fleet maintenance start up and operation costs to determine the cost-benefit, if any, of the City operating the garage.