



# **CITY OF KILLEEN**

## **FLEET SERVICES AUDIT**

Audit Report #22-01

### **A Report to the City of Killeen Audit Committee**

Committee Chair	Rick Williams
Committee Members	Jose Segarra
	Ken Wilkerson
	Jack Ralston
	Bob Blair

### **Prepared by**

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January 2022

## EXECUTIVE SUMMARY



### AUDIT REPORT HIGHLIGHTS

#### Why Was This Audit Conducted?

The City Auditor proposed this audit to the Audit Committee based on the City's significant investment in motor vehicles and other rolling stock.

The City Auditor appreciates the cooperation of Fleet Services and Finance staff in the completion of this audit.

Fleet Services Audit

Mayor and Council,

I am pleased to present this audit of Fleet Services.

#### Audit Objectives

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The objectives of the audit were to (1) review management's funding for vehicle replacement; (2) review Fleet Services' chargeback system for recovering the cost of its maintenance operation; (3) review fleet policy and practices concerning the adoption of alternative fuel vehicles; and (4) review fleet management's process for evaluating vehicle utilization to ensure that vehicles and other rolling stock are fully utilized.

#### Audit Results

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In FY 2018, management initiated a sustained period of increased funding for vehicle replacement. The increase in funding over the past four years has resulted in a commensurate decline in maintenance and repair costs as older, repair-prone vehicles have been replaced with newer models. Further the shift in priorities has put the once chronically underfunded vehicle replacement program on a path to solvency, where projected vehicle replacement needs are fully funded. While Fleet Services maintenance costs are declining, the chargeback system for conveying those costs has room for improvement. The current chargeback system is a bifurcated blend of real time actual costs for auto parts billed monthly to the departments and estimated labor and overhead determined annually through the budget process. Ideally, the chargeback system should provide real time cost data to departments for the full services rendered, both parts and labor. Finally, Fleet Services needs to move forward with a pilot project to include hybrid and electric vehicles in its fleet. The Fleet Services Director and Executive Director of Finance have held informal discussions and conducted preliminary research. While the State does not currently mandate the conversion of local government fleets, the trend among national, state, and local governments, as well as automakers themselves is clearly moving in the direction of alternative fuel vehicles.

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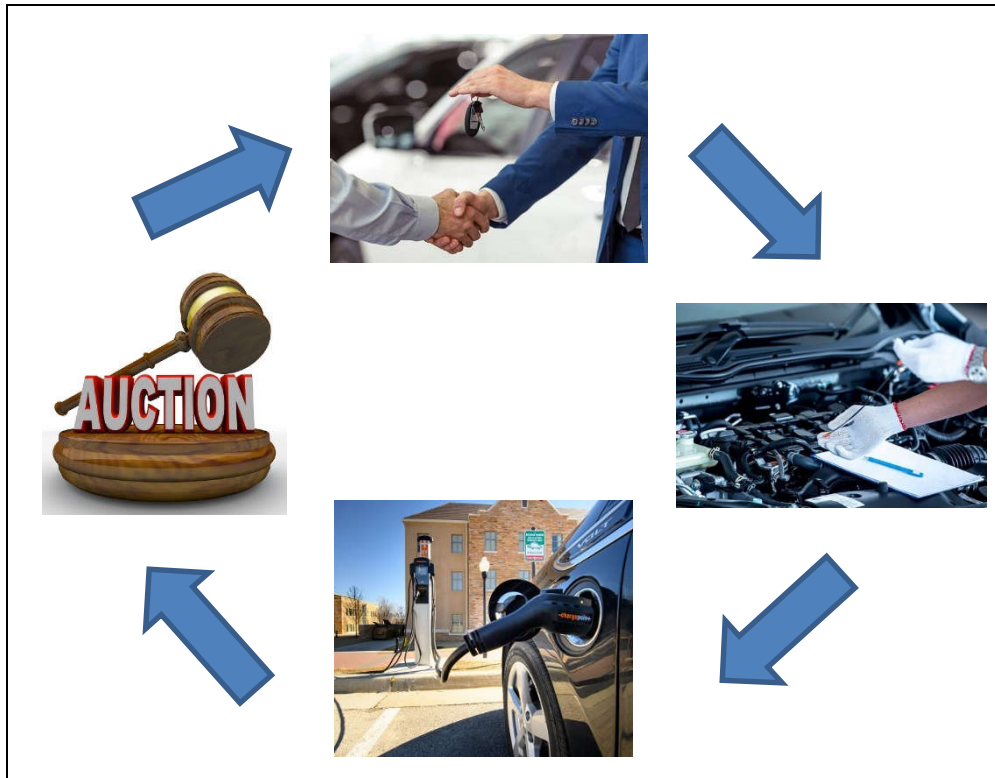
## INTRODUCTION

The City Auditor conducted this performance audit of Fleet Services pursuant to Article III, Chapter 40 of the City Charter, as Amended May 11, 2013, and in accordance with the City Auditor's Annual Audit Plan, approved by the Audit Committee on June 4, 2020.

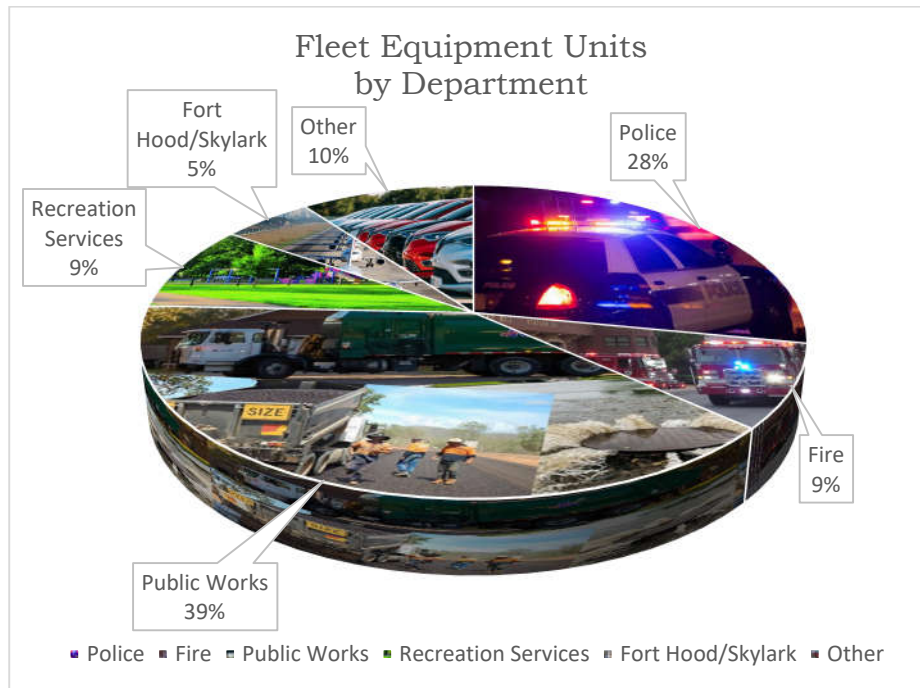
The objectives of the audit were to (1) review management's funding for vehicle replacement; (2) review Fleet Services' chargeback system for recovering the cost of its maintenance operation; (3) review fleet policy and practices concerning the adoption of alternative fuel vehicles; and (4) review fleet management's process for evaluating vehicle utilization to ensure that vehicles and other rolling stock are fully utilized. The scope of the audit focused on Fleet Services operations for FY 2017 through FY 2021, but also included a review of historical data related to fleet operations.

### Background

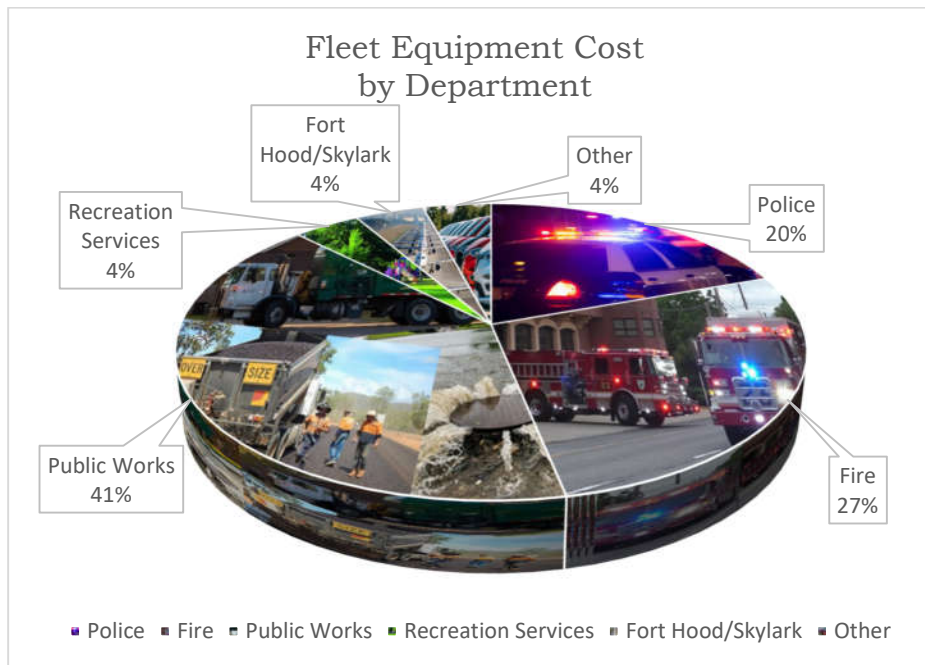
Housed in the Finance Department, the City's Fleet Services division is tasked with procuring, maintaining, fueling, and disposing of vehicles for City departments.



The Fleet Services manages just over 1,000 vehicles and other rolling stock, ranging from million-dollar fire trucks to single-axle trailers, with a combined replacement value of about \$80 million. The percentage breakdown by department of the City's fleet both by units and by cost is shown in the charts below.



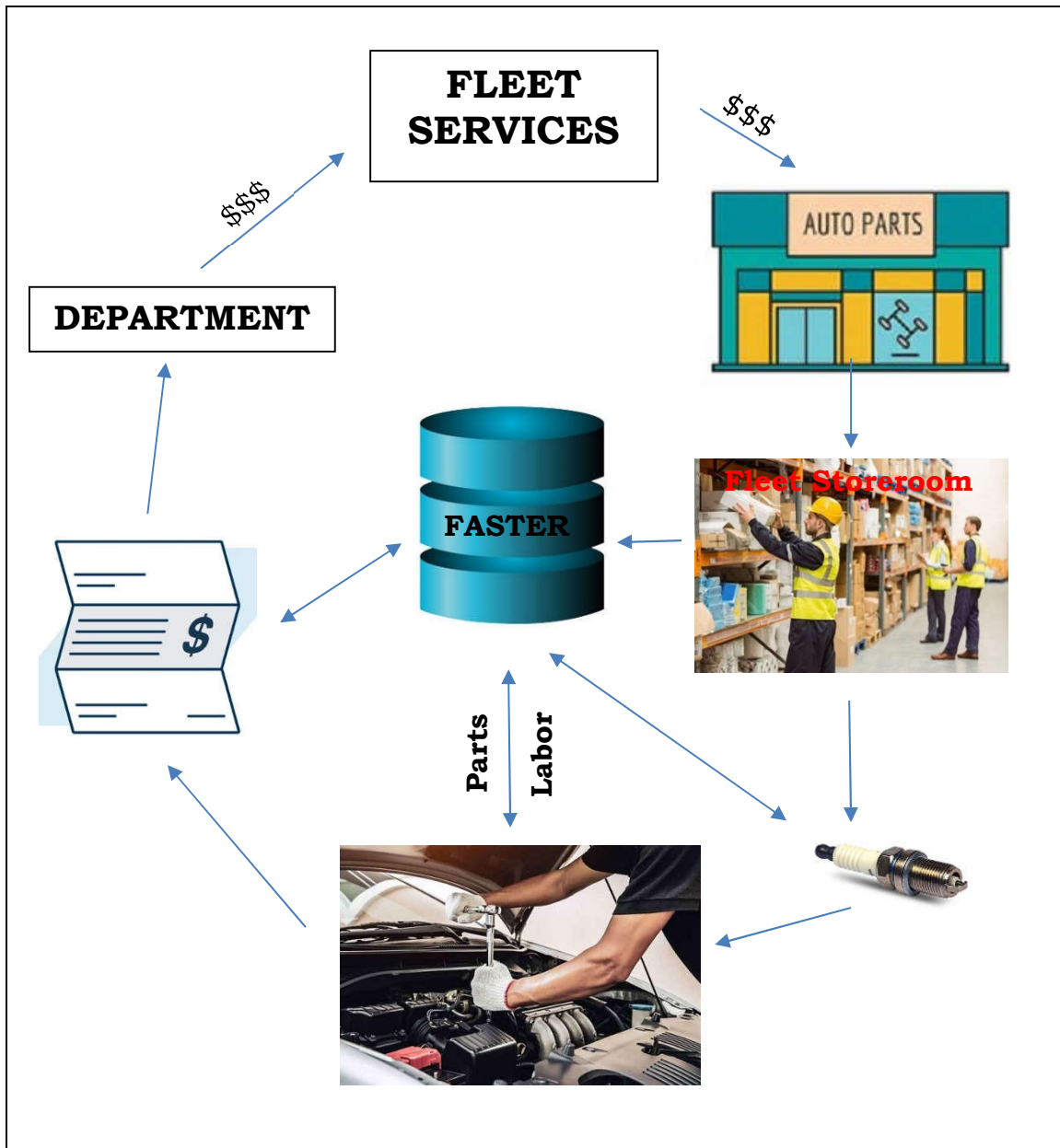
Source: Utilimarc Vehicle Replacement Schedule



Source: Utilimarc Vehicle Replacement Schedule

## Fleet Management System

Fleet Services uses FASTER, a commercial, off-the-shelf database product to manage its inventory and maintenance operations. Parts and supplies are physically secured in the Fleet storeroom and scanned into inventory in FASTER when they are received. They are then removed from inventory and charged against the vehicle unit being serviced at the time of service.





### *In-House Maintenance*

Most vehicle maintenance activity involves scheduled preventive maintenance and is conducted in-house by staff technicians. FASTER acts as a tickler system that Fleet staff use to notify the departments when certain units are due for their scheduled routine maintenance. Vehicle operators are expected to bring their vehicles in for scheduled maintenance within 30 days of notification.

### *Outside Vendors*

Fleet Services employs the use of local private sector auto repair professionals in some instances for “unscheduled” events, such as those arising from breakdowns or accidents. This includes, but is not limited to bodywork, transmission rebuilds, heavy truck engine rebuilds or overhauls, window tinting, and warranty work.

### *Utilimarc*

Fleet Services contracts with the Utilimarc Company for data analytics services, which are used to develop the City’s annual vehicle replacement list. The annual cost of services provided is \$12,500, which also includes a staffing analysis, as well as an industry benchmark analysis of key performance indicators used to assess Fleet Services’ overall performance. This includes average vehicle age, utilization (miles driven), timeliness of preventive maintenance, and dollars spent on outsourced repairs.

### *Best Practices*

There are several best practices relevant to the objectives of this audit. They are as follows.

#### Vehicle Replacement Policy

Federal, state, and local governments all embrace the best practice of establishing financial policies governing vehicle replacement. In general, these policies require the systematic set-aside of funds by user entities (departments) to ensure that funding is available to replace vehicles as they reach the end of their useful life. Timely replacement of vehicles is designed to minimize the costs and downtime associated with an aging fleet, while maximizing the off-setting proceeds from the sale of vehicles at auction.

### Chargeback System

A chargeback system refers to a means for an internal service organization to recover the costs generated in providing goods and services to its customer base, i.e., other city departments. In the case of Fleet Services, this would include parts, direct labor and overhead associated with their in-house maintenance and repairs operation, as well as costs incurred for the use of outside auto repair vendors. The principle underlying the use of a good chargeback system is that users will be incentivized to better manage their assets if they are required to budget and pay for the maintenance of those assets in a manner that is clear and understandable.

### Vehicle Utilization Review

The Fleet management community embraces periodic utilization “right-sizing” reviews to ensure that fleet vehicles are fully utilized. The federal government further recommends the use of a Vehicle Utilization Review Board to facilitate the decision-making process. Typically, the review board would be comprised of major department heads, the end goal being to provide a mechanism for reaching consensus in a timely manner on decisions requiring the elimination, retention, or transfer of underutilized vehicles. Utilization is typically evaluated using several factors, including miles driven, hours in use, and maintenance and repair costs. The impact of extraordinary events, e.g., Covid-19 and winter storm Uri may also be factored into an assessment.

### **Prior Audit Findings**

The former City Auditor conducted an audit of Fleet Services in 2012. The audit was requested by the Killeen Police Department (KPD) and was conducted in conjunction with a KPD investigation into employee theft of City property. The audit found irregularities and weak controls over inventory and fuel distribution. The audit and KPD investigation resulted in significant personnel changes at Fleet Services, including the resignation of the former director. In addition, several improvements to controls over inventory were implemented, including security cameras, fleet management system software, and spot inventories of auto parts and tools.



## **Statement of Compliance with Audit Standards**

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. Those standards also require that we, as internal auditors, meet the criteria for independence. We believe that we met those independence standards, and that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

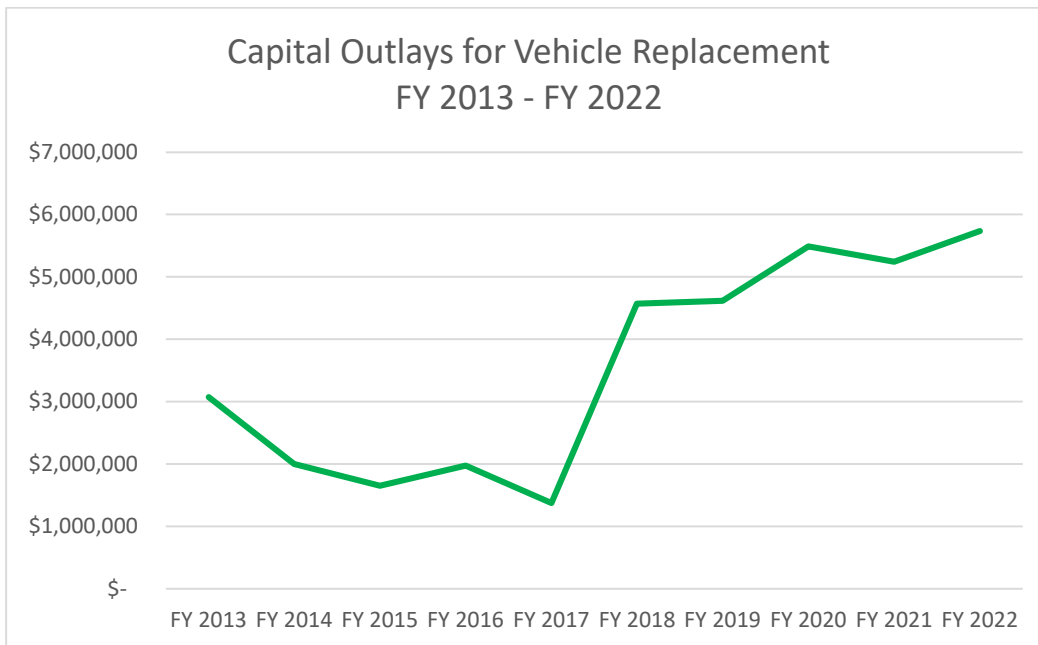
## FINDINGS AND RECOMMENDATIONS

**Management's prioritization of funding for Fleet Services has put the once chronically underfunded vehicle replacement program on the road to solvency. However, more action is needed in adopting hybrid and electric technology.**

In FY 2018, management began a sustained period of increased funding for vehicle replacement that came on the heels of a prolonged period of uneven and inadequate funding for vehicle replacement. The increase in funding over the past four years has resulted in a commensurate decline in outsourced maintenance costs as older, repair-prone vehicles have been replaced with newer models. Further, the gap in funds-needed versus funds-budgeted for annual vehicle replacement has narrowed from a high of about \$5 million in FY 2020 to \$1.3 million in FY 2022, putting the vehicle replacement program on a path towards solvency, where projected vehicle replacement needs are fully funded. While the cost of maintenance and repairs has declined, the chargeback system for recovering these costs has room for improvement. The current system is a blend of real-time costs for auto parts, which are billed at the vehicle unit level to departments and estimated labor and overhead costs, which are projected annually at the department level through the budget process. Ideally, both parts and labor should be assigned real-time at the vehicle unit level, at the time of service and billed to the appropriate department. In that way management can identify and flag vehicles incurring excessive maintenance costs in a timely manner. Finally, Fleet Services should move forward with a pilot project for Fleet Services' eventual transition to hybrid and electric vehicles. While Texas does not currently mandate the adoption of alternative fuel technology for local government fleets, the trend at the national, state, and local level, and among the major automakers themselves is clearly moving in that direction. Management has held informal discussions on the matter and conducted preliminary research but has not yet developed a formal pilot project.

## Vehicle Replacement Funding

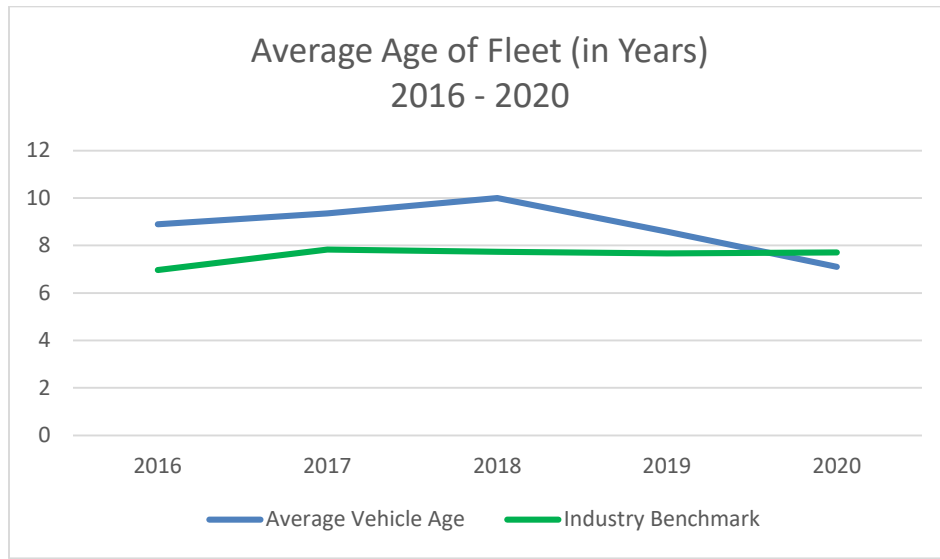
Industry best practices define vehicle replacement funding as the systematic set-aside of funds by user entities to ensure adequate funds are available to purchase new vehicles, in accordance with a pre-determined replacement cycle. Historically, the City has not engaged in this best practice for vehicle replacement, at least not on a sustained basis. Instead, funding has been uneven and has sometimes been accomplished through debt-issuance, either general obligation bond proceeds or certificates of obligation rather than through the systematic set-aside of funds. The City did attempt a long-term fix to this problem in FY 2016, when City Council authorized the creation of the Fleet Funding Program, with seed money provided by approximately six million in transfers from enterprise funds, as well as proceeds from prior certificates of obligation. However, the fund was eliminated later that year in response to a significant budget shortfall; its remaining funds were returned to the contributing departments to cover operations affected by the shortfall. FY 2017 represented a nadir in fleet replacement funding, following the elimination of the Fleet Funding Program, as shown in the chart below.



Source: Annual Budgets

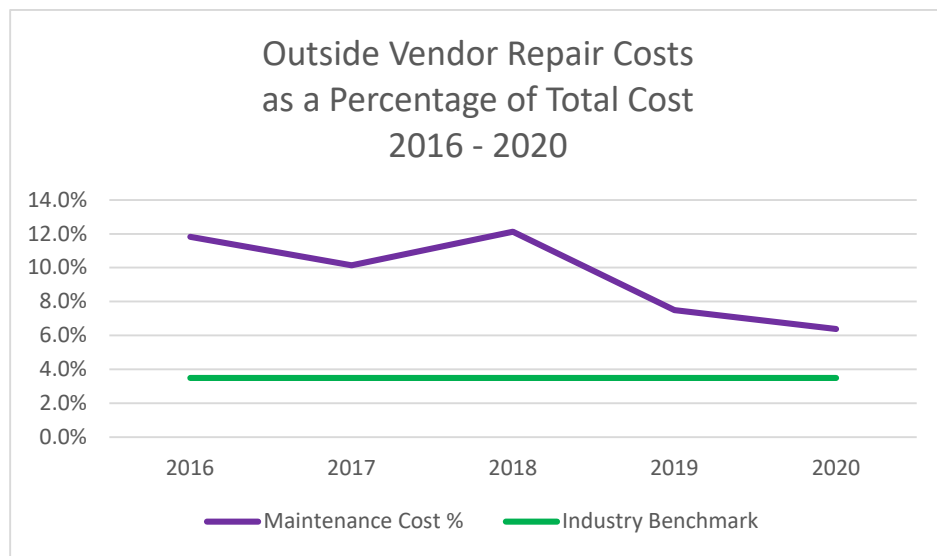
FY 2018 marked the beginning of a period of sustained increases in funding for vehicle replacement. The Finance Director acknowledged that the increases reflected a prioritization of funding for vehicle replacement by the former City Manager, which has continued under

the current City Manager. The increased funding for vehicle replacement has had a dual impact on the City's fleet. First, and not unexpectedly the average age of the fleet has declined, going from 8.9 years in 2016 to 7.1 years in 2020, where it was slightly lower than the industry benchmark of 7.7 years. The number of vehicles in the fleet aged 15 years or older dropped from a high of 136 in 2018 to 71 in 2020.



Source: Utilimarc Executive Summary Reports

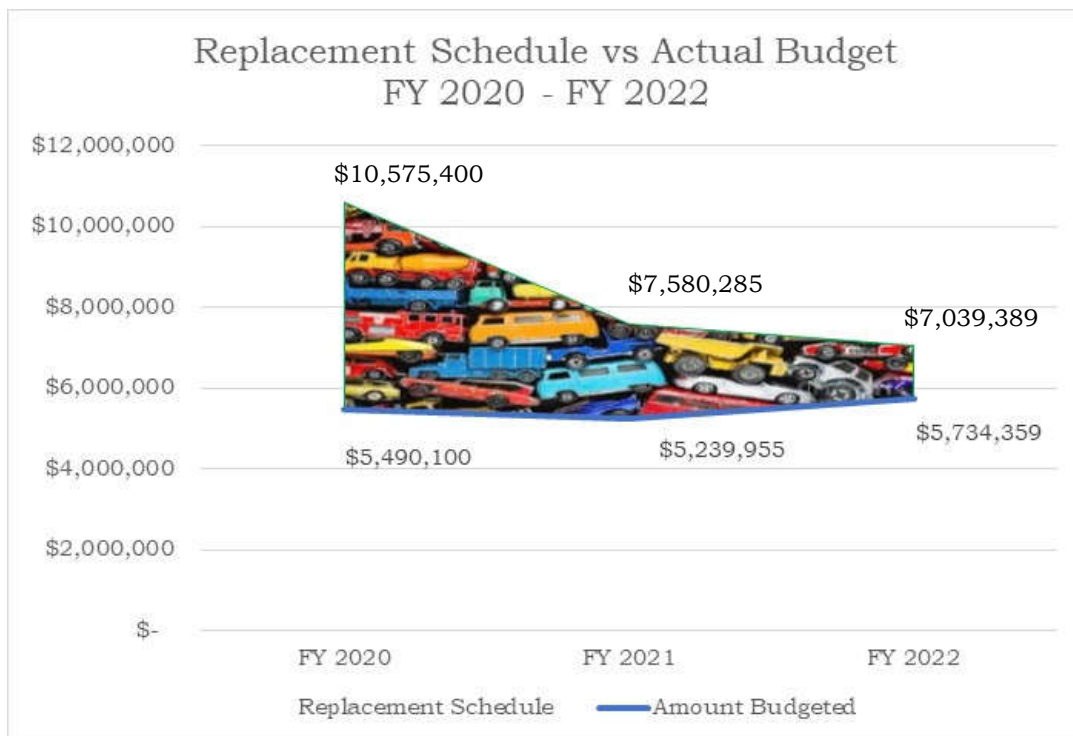
Second, as the overall age of the fleet has declined so too has the cost of outsourced repairs, going from a high of just over \$1 million in 2018 to about \$760,000 in 2020, and from 12 percent of total cost in 2016 to 6 percent in 2020, as shown in the chart below.



Source: FASTER and Utilimarc Executive Summary Reports

Typically, vehicles sent out for repairs can be offline for two to three weeks. Therefore, a reduction in outsourced repairs means in a reduction in downtime, as well. Several department directors observed anecdotally a significant increase in the efficiency of their operations due to reduced downtime from vehicle repairs.

Fleet’s recommended vehicle replacement schedule still exceeds that of the amount of funds budgeted. However, the gap has narrowed significantly, from a high of about \$5 million in FY 2020 to \$1.3 million in FY 2022, as shown in the chart below.



Source: Utilimarc and Annual Budget

The vehicle replacement schedule is somewhat fluid in that it can be affected by external events, e.g., vehicular accidents, unanticipated breakdowns, population growth, etc. For that reason, there may be future years in which the gap between replacement funds needed and funds budgeted widens. However, the general trend is one towards eventual solvency, where projected vehicle replacement needs are fully funded.

## **Chargeback System**

A chargeback system simply means a billing system for internal service organizations to recover costs for the goods and services provided. In terms of Fleet Services, a well-designed chargeback system would provide departments real-time maintenance and repair costs, which in turn would incentivize the departments to minimize costs both by maintaining their vehicles, as well as identifying in a timely manner repair-prone vehicles that are no longer cost effective to maintain.

Fleet Services currently uses a hybrid system for capturing and recovering costs from its user departments that is a combination of real-time invoicing and annual budgeting. Fleet Services assigns the cost of parts and supplies to the unit being serviced in the FASTER database at the time of service. Departments are then invoiced monthly for the cost of those parts and supplies.

Direct labor and overhead, on the other hand are calculated and allocated to the user departments through the annual budget process. Direct labor hours are used to allocate overhead to the departments based on their percentage share of total direct labor hours, i.e., on a pro rata basis. Unlike parts and supplies, which are charged to the specific vehicle unit being serviced, direct labor and overhead are assigned as a lump sum to each department. This may hinder management's ability to flag vehicles with escalating labor costs in a timely manner. Further, because the budget process takes place during the prior fiscal year, direct labor hours are estimated using actual labor direct labor hours from the prior year's budget. This may lead to some cross-subsidization of labor and overhead costs to the extent that a department's percentage of total direct labor hours fluctuates from year to year.

While the system in place is the best option available given the limitations of the current financial management system, it is nonetheless an imperfect system. Ideally, a chargeback system should be capable of billing for parts, labor, and overhead in real-time at the vehicle unit level. In that way, management can identify and respond to potential maintenance issues in a timely manner.

It should be noted that the Information Technology Department is in the process of acquiring a new government-wide enterprise resource

planning (ERP) system.<sup>1</sup> The Finance Department should coordinate with Fleet Services and IT to ensure that a fully functioning chargeback system is included in its needs assessment.

### **Vehicle Utilization Review**

Fleet Services does not conduct formal vehicle utilization reviews, but it does look at vehicle utilization as part of its annual vehicle replacement planning process. That process has routinely resulted in interagency transfers of underutilized assets, a 2012 Chevy Colorado from the Transportation Division to Recreation Services, a Crack Seal Machine from the Transportation Division to Fort Hood Regional Airport, a 2007 John Deere Tractor from Environmental Services to Recreation Services to name a few.

The issue of rightsizing can be challenging in any organization. In the case of Fleet Services, it can sometimes lead to a fleet director being viewed as a “utilization cop.” While this did not appear to be a problem, there still exists the potential for resistance with the regard to the transfer or elimination of assets. To mitigate this issue and facilitate the decision-making process on matters of vehicle utilization some federal agencies have adopted the best practice of a Vehicle Utilization Review Board. The Board, which would ideally be comprised of the major department heads, as well as the City Manager or Assistant City Manager would meet annually, or on an ad hoc basis to discuss and reach consensus on actions involving the elimination, retention, or transfer of vehicles identified as underutilized.

### **Fleet Diversification**

Currently, the City has neither hybrid nor electric vehicles in its fleet. Fleet Services and the Finance Department have held informal discussions concerning a pilot project and have conducted preliminary research on alternative fuel vehicles, but at this time no formal steps have taken place. The relative progress of other Texas municipalities in diversifying their respective fleets covers the spectrum.

On one end are those who have moved aggressively to adopt hybrid and electric vehicles, such as Austin, Houston, Dallas, and San Antonio. On the other end are those who have taken smaller steps,

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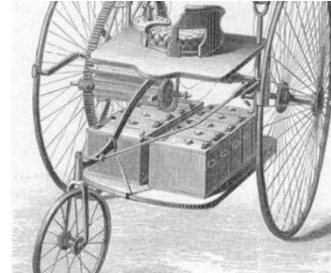
<sup>1</sup> Enterprise Resource Planning refers to software designed to manage and integrate core business functions. It is distinguished from standalone accounting software by its ability to integrate the financial system with other business functions, including human resources, inventory, permitting, etc.



dipping their proverbial toes in the water, the neighboring cities of Waco, Temple, Belton, and Copperas Cove among them.

### *Brief History of the Electric Vehicle*

The ongoing transition from the internal combustion engine to the electric vehicle could be thought of as the automobile industry coming full circle. The first automobiles were electric, predating the internal combustion engine by decades. The first battery-driven vehicle in the U.S. was created in the 1830s, clocking in at 4 miles per hour, with a range of 1.5 miles.



Source: Internet

By the turn of the 20th Century electric vehicles dominated the burgeoning U.S. automobile market, outselling all other vehicles, which included both gas-powered and steam-driven vehicles. However, Henry Ford's introduction of the much more affordable Model T in 1908, among other factors marked the beginning of the end for the electric vehicle, and by the mid-1930s, a century after the creation of the first battery-driven vehicle, the commercial market for electric vehicles had all but disappeared.



Source: Internet

In the latter half of the 20th Century, a convergence of events brought about renewed interest in the electric vehicle. These events included the birth of the modern environmental movement, the energy crisis of the 1970s, and Congress' passage of the Electric and Hybrid Vehicle Research, Development, and Demonstration Act of 1976. The last decade of the 20th Century saw a resurgence of electric vehicles, culminating in the first mass-produced hybrid vehicle, the Toyota Prius, and the first mass-produced all-electric vehicle, General Motors' short-lived EV1.



Source: Internet



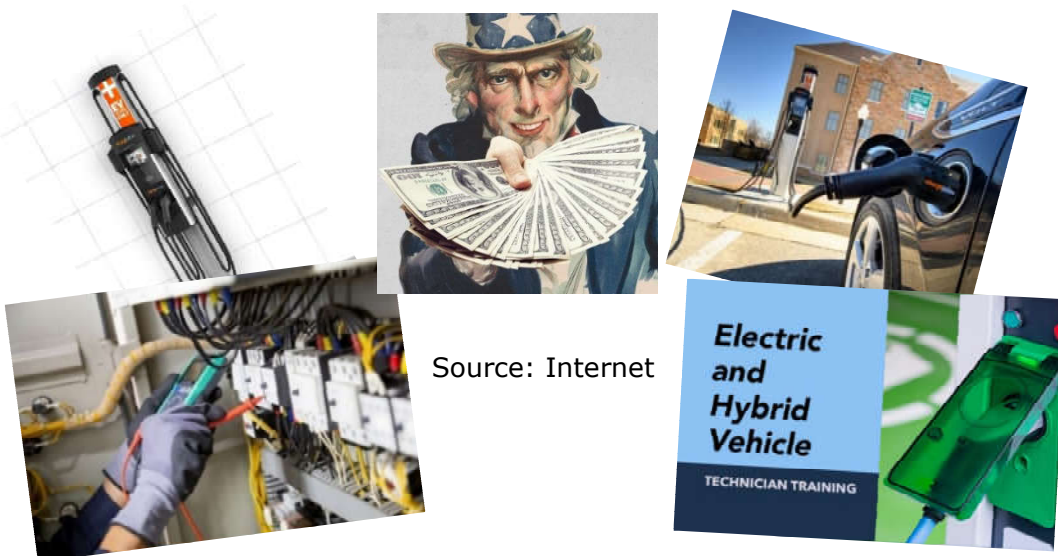
Source: Internet

While most major automakers now produce electric vehicles, their share of the U.S. auto market in 2020 was still only 2.5 percent, which

pales in comparison to their dominance at the turn of the last century. Unlike the dawn of the 20<sup>th</sup> Century, however, the momentum in the 21<sup>st</sup> Century is clearly on the side of alternative fuel vehicles, including all-electric, hybrid, and hydrogen fuel cell vehicles. Several states have enacted legislation requiring the transition to low-emission and zero-emission vehicles by the end of the decade. In addition to legislative action, some automakers, themselves have pledged to fully transition to alternative fuel vehicles, by the middle of the next decade, or sooner.

### *Moving Forward*

As previously mentioned, Fleet Services and Finance have already had informal discussions on developing a pilot project for diversifying the fleet. The City should now move forward in a more formal capacity and develop a project scope and timeline for its pilot project. Among the issues to consider are whether to take an organizational approach, focusing on a particular department, division, or unit, or a functional approach that cuts across organizational lines. The City of San Antonio, for example, took the latter approach when it began purchasing hybrid sedans about 10 years ago for administrative use for its various departments. Other issues to consider include determining: (1) the type of charging stations needed, wall mounted, bollard, or both; (2) installation costs, (3) cost of electrical upgrades, if needed; (3) eligibility for state or federal grants; and (4) training/certification requirements for staff technicians.



Source: Internet

**Recommendations:**

The City Auditor Recommends that the Executive Director of Finance:

1. Direct the Fleet Services Director to develop a pilot project for the inclusion of alternative fuel vehicles in the City's fleet.
2. Coordinate with the Fleet Services Director and IT to ensure that the capability for a fully functioning chargeback system is included in the Department's needs assessment for the new enterprise resource planning system.
3. Consider the need for a Vehicle Utilization Review Board in conjunction with Fleet Services' annual vehicle replacement review.

## **VIEWS OF RESPONSIBLE OFFICIALS**

Copies of the draft report were provided to the Director of Fleet Services and the Executive Director of Finance for review and comment. They agreed with the findings and recommendations, and their input is reflected throughout this report.

## **OBJECTIVES, SCOPE AND METHODOLOGY**

### **Objectives**

The objectives of the audit were to (1) review management's funding for vehicle replacement; (2) review Fleet Services' chargeback system for recovering the cost of its maintenance operation; (3) review fleet policy and practices concerning the adoption of alternative fuel vehicles; and (4) review fleet management's process for evaluating vehicle utilization to ensure that vehicles and other rolling stock are fully utilized. The scope of the audit focused on Fleet Services operations for FY 2017 through FY 2021, but also included a review of historical data related to fleet operations.

### **Scope and Methodology**

The scope of the audit focused on Fleet Services operations for FY 2018 through FY 2021, but also included a review of historical data related to fleet operations, as well as budget projections for FY 2022.

To address the audit objectives, the City Auditor:

- ▶ Interviewed key personnel, including the Fleet Services Director; Fleet Services Accounting Specialist; Finance Budget Director; Assistant Director of Fleet Services, City of San Antonio; and Customer Success Manager, Utilimarc, Inc.
- ▶ Conducted research on fleet services best practices.
- ▶ Obtained and analyzed budget data related to vehicle replacement and vehicle maintenance and repairs.
- ▶ Obtained and analyzed annual executive summary reports from Utilimarc, Inc., as well as recommended vehicle replacement schedules
- ▶ Conducted research on alternative fuel vehicles, including electric, hybrid, and hydrogen fuel cell.

## **Statement of Compliance with Audit Standards**

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. Those standards also require that we, as internal auditors, meet the criteria for independence. We believe that we met those independence standards, and that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.