CITY AUDITOR'S OFFICE

Fleet Maintenance

April 14, 2026 AUDIT NO. 2603

CITY COUNCIL
Mayor Lisa Borowsky
Barry Graham
Jan Dubauskas
Vice Mayor Adam Kwasman
Kathy Littlefield
Maryann McAllen
Solange Whitehead

April 14, 2026

Honorable Mayor and Members of the City Council:

Enclosed is the audit report of *Fleet Maintenance,* which was included on the Council-approved FY 2025/26 Audit Plan. This audit was conducted to evaluate the effectiveness and efficiency of fleet maintenance practices.

The audit found that the average wait time for initial bay and mechanic assignment has increased about 44% over the past three fiscal years and vehicles are spending more time in the shop as a result. Staffing, bay availability, and parts management challenges have contributed to delays in service. The audit made recommendations to assess shop capacity, adopt a strategic approach to training and development, and further automate certain parts management processes. Additionally, policies for developing preventive maintenance intervals are needed to ensure consistent application and alignment with recommended practices. We also made recommendations to strengthen controls over fuel keys and cards and develop a pricing methodology for the evaluation of internal service rates.

We thank the Fleet staff for the time spent and cooperation provided during this audit.

If you need additional information or have any questions, please contact me at (480) 312-7851.

Sincerely,

Lai Cluff

Lai Cluff, CIA
Acting City Auditor

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Elizabeth Brandt, CIA, CGAP, CPM – Sr. Auditor, Lead
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CITY OF SCOTTSDALE

AUDIT HIGHLIGHTS
April 2026

Fleet Maintenance

Audit No. 2603

WHY WE DID THIS AUDIT

This audit evaluates the effectiveness and efficiency of fleet maintenance practices, including review of policies, procedures, and performance over the past three fiscal years as well as a limited review of the parts supply and fuel programs as they related to maintenance.

BACKGROUND

Fleet Management maintains all vehicles and major equipment used by City departments. In FY 2024/25, it maintained over 1,400 assets. To support this function, the department two service facilities and manages six fueling sites.

Fleet Management operates as an internal service, fully funded through internal service charges to the City departments it serves.

WHAT WE FOUND

Staffing, bay availability and parts management challenges have contributed to delays in services.

The average wait time for initial bay and mechanic assignment increased about 44% and the overall time a vehicle spends in the shop has increased 33%. These outcomes are impacted by a limited number of bays per mechanic, delays in obtaining parts, and ongoing mechanic vacancies and turnover.

A strategic approach to workforce development and monitoring of productivity and performance would enhance operational efficiency.

- A strategic approach to assessing existing skillsets against operational goals is needed, followed by the development of targeted training plans.
- Existing performance measures need to be further refined to effectively measure performance.

Policies for assigning preventive maintenance frequency are needed to ensure consistent application and alignment to recommended practices.

Most vehicles are maintained on a fuel consumption-based cycle, but lack of defined policies or methodology for assigning these cycles or aligning them with recommended practices could result in inappropriate maintenance intervals that could lead to inefficiencies or larger repairs.

Improvements needed on fuel program controls and the M&R cost allocation methodology.

- Controls over the use of fuel keys and cards, such as written policies and procedures, periodic review of active keys/cards, client department verification of usage details, are needed.
- Further, though internal service rates are determined based on city-level objectives, defining a pricing methodology and analyzing cost recovery would support internal service rate proposals.

WHAT WE RECOMMEND

- Expand service capacity through an evaluation of service bays needed, focus on recruitment efforts, and enhance parts inventory management.
- Adopt a strategic approach to staff development as well as better define performance measures, validate calculation accuracy, and adopt targets.
- Adopt standardized preventive maintenance policies aligned with industry guidance, then realign existing asset maintenance cycles to the updated policies.
- Implement robust fuel program policies, provide fuel usage data to client departments to enhance monitoring activities, and incorporate cost-based pricing in the development of internal service rates.

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OBJECTIVE & SCOPE

An audit of *Fleet Maintenance* was conducted pursuant to the City Council-approved fiscal year (FY) 2025/26 Audit Plan. The audit objective was to evaluate the effectiveness and efficiency of fleet maintenance practices.

The audit reviewed the Fleet Management department's maintenance program, focusing on current policies, procedures, and practices for efficiency and operational effectiveness. It included a limited review of the parts supply and fuel programs as they relate to maintenance operations, but the audit did not assess the fleet acquisitions program. Additionally, the department transitioned to a web version of the current Fleet Management system in late November 2025; due to the timing, that transition and the system controls were not reviewed in this audit.

BACKGROUND

Fleet Management's purpose is to keep the city's vehicles safe, reliable, and ready to support City services. To do that, the department is organized into five programs as follows:

- **Operations**: Maintains and repairs the City's fleet of vehicles and equipment with the goal of keeping them safe, efficient, and cost-effective. This work ranges from routine service to major repairs. The department also coordinates accident damage repairs as well as maintenance and repairs performed by contractors.
- **Parts Supply:** Manages the stock inventory and purchasing of parts and materials needed to keep vehicles in working condition.
- **Fuel**: Oversees six fuel sites across the city and provides three types of fuel including compressed natural gas (CNG), diesel, and unleaded gasoline.
- **Vehicle Acquisitions**: Coordinates the purchasing, equipping, and sale of fleet vehicles.
- **Administration**: Performs financial planning, management support, IT services, and data analysis for fleet functions.

Fleet Assets

Fleet Management maintains all vehicles and major equipment used by city departments. The City's fleet consists of a wide range of makes and models, with 1,311 active vehicles and pieces of equipment as of November 2025, as shown in Table 1.

Table 1. Fleet composition and age by type, as of November 2025.

Type	Units	% of Fleet	Average Age (in years)
Vehicles	1,009	77%	7.1
Equipment	182	14%	14.9
Solid Waste Trucks	55	4%	5.7
Fire Apparatus	42	3%	11.3
Transit Buses	19	1%	9.8
Ambulances	4	0%	3.0

SOURCE: Auditor analysis of FASTER inventory data as of November 2025, with age adjusted to 2026.

Fleet Management System – The department uses FASTER, a fleet management system, to manage fleet assets, maintenance work, and parts inventory. In November 2025, the department transitioned to a web-based version of the system.

Fleet and Fuel Facilities

Fleet operates 23 maintenance bays across two service facilities: the South Corporation Yard and the North Corporation Yard, as outlined in Figure 1. The North Corp Yard facility maintains 14 heavy duty bays and space for up to 3 small bays (mainly used for vehicle upfitting and utility cart repairs). One heavy duty bay is dedicated to tire services performed by a contractor, another is used for welding and fabrication. The North Corp Yard operates both a day shift and a night shift. The South Corp Yard location maintains 6 bays and only runs during the day.

Figure 1. Fleet service facilities and fueling stations.

Service Locations	Service Bays	Details

North Corp Yard
Mon – Fri, open 5 AM to 1:30 AM
	17 bays	• 14 heavy duty bays, with 2 dedicated:
		  • 1 welding/fabrication bay
		  • 1 contractor-operated tire-service bay
		• 3 light/upfitting bays

South Corp Yard **(McKellips Service Center)** Mon – Fri 6 AM – 4:30 PM	6 bays	• 3 light duty bays • 3 heavy duty bays
Fueling Stations		**Types pf Available Fuel**
North Corp Yard 9191 E. San Salvador Drive		Diesel, Unleaded, CNG
McKellips Service Center 7601 E. McKellips Road		Diesel, Unleaded
Fire Station 609 (Airport – Limited Access) 14970 N. 78th Way		Diesel
WestWorld 16601 N. Pima Road		Diesel, Unleaded
McCormick Railroad Park (Limited Access) 7301 E. Indian Bend Road		Diesel, Unleaded
Transfer Station 8417 E. Union Hills		Diesel, Unleaded, CNG

SOURCE: Auditor summary of personal interviews and department website information.

Fleet Management operates 6 fueling sites, as shown in Figure 1, providing compressed natural gas (CNG), diesel, and unleaded gasoline. Most city vehicles are equipped with fueling system equipment that authorize fueling at these city fuel sites and track fuel usage.

Maintenance and Repair Program

Fleet Management created approximately 10,000 work orders each year, the total number decreasing slightly from FY 2022/23 to FY 2024/25 by about 4%, as shown in Table 2 on page 3.

During that same period, the number of units served increased by about 7.8%. Maintenance and repairs work orders represented the majority of all work orders and are the focus of this audit.

Table 2. Service work orders by type and fiscal year.

Type of Work Order	2022/23	2023/24	2024/25	% change
Maintenance and Repair	10,369	9,967	9,892	-5%
Acquisition and Disposal[1]	135	197	181	34%
PD Lease[1]	41	31	33	-20%
Total	**10,545**	**10,195**	**10,106**	-4%

[1] Note: Acquisition and Disposal includes upfitting and equipping new vehicles and preparing vehicles for auction/disposition. Vehicles leased by the Police Department receive only minor maintenance.

SOURCE: Auditor analysis of FASTER work orders initiated during FY 2022/23 to FY 2024/25.

The following service-critical vehicles generate the highest volume of work orders:

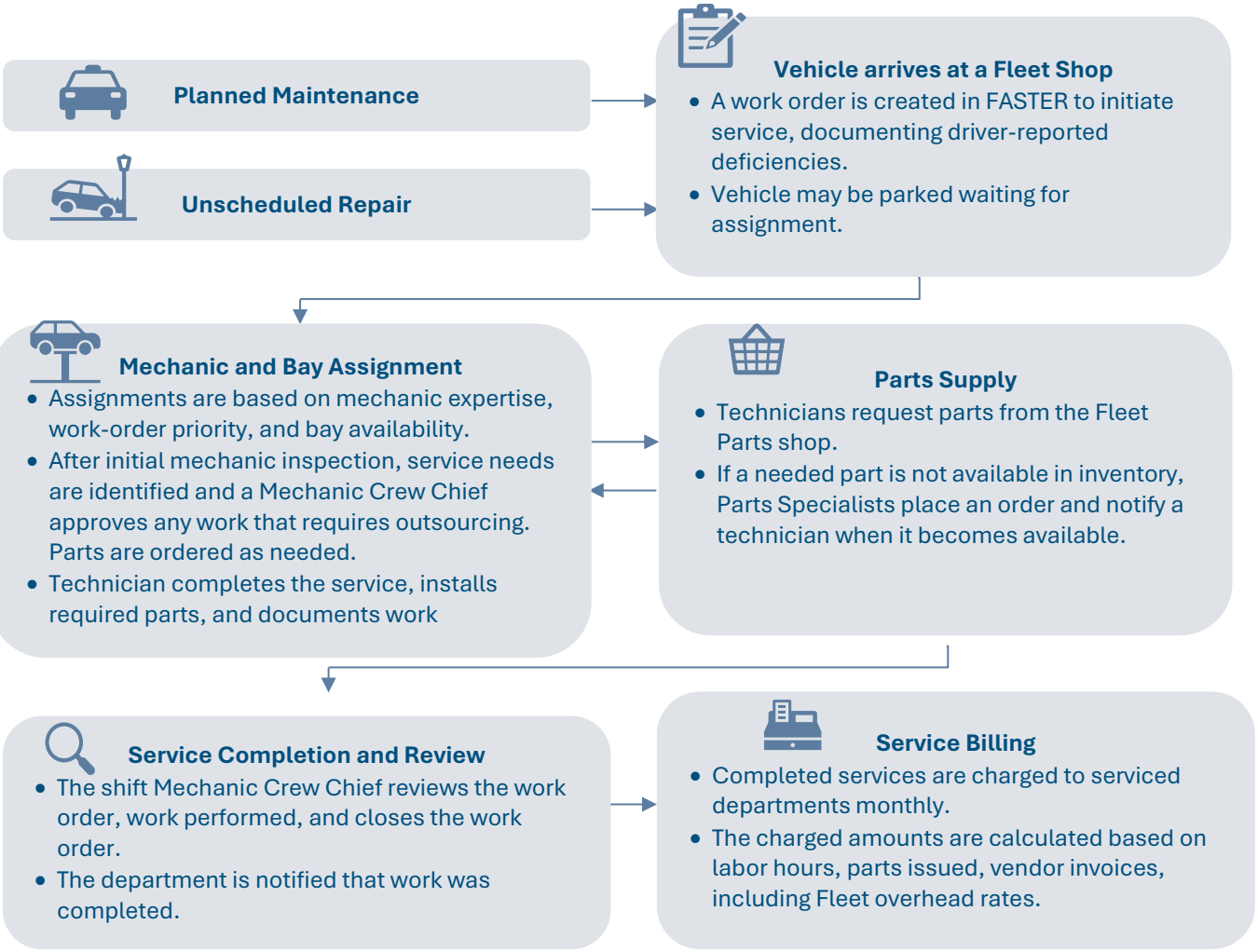
- Solid Waste trucks generate the highest number of work orders per vehicle, averaging 71.2 work orders per truck in FY 2024/25. To minimize service disruptions, Fleet prioritizes their maintenance during the North Corp Yard (NCY) night shift, which is staffed by 11 mechanics.
- Transit buses generate the second highest number of work orders per vehicle, averaging 52.5 work orders per bus in FY 2024/25. Fleet services buses during the NCY night shift as needed.
- Fire apparatuses (fire trucks) generate the third highest number of work orders per vehicle, averaging 9.5 work orders per fire truck in FY 2024/25. Fleet may service fire apparatuses during the NCY night shift if needed.

Maintenance and repair work can be classified in two general categories:

- **Scheduled preventative maintenance** includes inspections and routine service. Maintenance intervals are determined by one or more factors including gallons of fuel consumed, time between services, mileage, or equipment usage hours. Weekly, Fleet sends out an email to all client departments with the upcoming preventative maintenance due dates and past due maintenance. Departments are responsible for scheduling or bringing their vehicles to the assigned service facility for maintenance.
- **Unscheduled work orders** occur when an issue is identified and the vehicle is brought to the service facility for repairs. While in the shop for repairs, Fleet may also perform any preventative maintenance work that is due.

Figure 2 on page 4, illustrates the service process from the time a vehicle is brought to a Fleet service shop through completion of the work and subsequent service charges. While most services are performed by in-house mechanics, the department also contracts with outside vendors as needed to supplement internal capacity or expertise.

Figure 2. Fleet maintenance intake and service process.



SOURCE: Auditor summary of walk-throughs and FASTER system.

Fleet Funding and Staffing

Fleet Management operates as an internal service fund, meaning its operations are fully funded by the City departments it serves. Fully burdened labor rates and overhead mark-ups are charged to recover the full cost of fleet services, including indirect expenses such as administrative support, parts management, and fuel site maintenance. Maintenance and repair charges to City departments included:

	FY 2024/25	FY 2025/26	Proposed FY 2026/27
Labor: A flat rate charged per mechanic hour	$80.46	$109.97	$97.96
Parts: A mark up on parts costs	20%	17%	17%
Sublet: A mark-up on vendor invoices	15%	15%	15%
Fuel: A per-gallon mark-up on fuel cost	$0.34	$0.75	$0.16

SOURCE: Auditor summary of management-provided information. FY 2026/27 rates as proposed as of March 2026.

As shown in Table 3, Fleet's revenues exceeded expenses in two of the past three fiscal years, with surpluses of approximately $1.0 million and $1.5 million; however, funds may be applied towards capital projects, as shown by the transfers to CIP projects. From FY 2022/23 to FY 2024/25, total revenues remained relatively stable, decreasing by about 1% overall. Within the department's revenue sources, Maintenance and Repairs charges increased by 7%, while revenues from fuel fees declined by 19% due to fluctuation in fuel prices during that time period. Fleet revenues also include insurance recoveries, natural gas tax rebates, and other one-time revenues.

In contrast, operating costs increased by 6% over the same 3-year period, primarily due to an increase of 40% in contractual services. These include outsourced services to support the City's fleet of vehicles and equipment as well as maintenance of its facilities. Commodities expenses, mainly fuel and parts, declined by 5%, likely due to lower fuel prices in FY 2024/25, which helped offset higher parts costs.

Table 3. Fleet Management Operational Revenues, Expenditures, and Transfers.

	FY 2022/23	FY 2023/24	FY 2024/25	3-Year Change
Revenues				
Maintenance and Repair charges	10,317,305	11,086,138	11,033,248	7%
Fuel Fees	4,594,333	4,253,365	3,727,457	-19%
Fuel (CNG) Rebate		1,127,797	108,893	
Recoveries and Other Revenues [1]	1,642,632	1,417,781	1,506,205	-8%
Total Revenues	**$16,554,270**	**$17,885,081**	**$16,375,803**	**-1%**
Expenses				
Personnel Services	4,794,199	5,047,317	5,269,200	10%
Contractual Services	2,099,919	2,715,965	2,944,416	40%
Commodities	8,645,431	8,661,312	8,213,951	-5%
Total Expenses	**$15,539,549**	**$16,424,594**	**$16,427,567**	**6%**
Rev – Exp Difference	**$1,014,721**	**$1,460,487**	**($51,764)**	**-105%**
Transfers In/Out for CIP Projects [2]				
Transfers In	$1,900,000			
Transfers Out	$2,098,492	$602,237	$567,909	

[1] Recoveries and Other Revenues include insurance recoveries, other recovery of expenses, sale of assets, and State aid.
[2] Transfers to CIP projects during this period contributed to construction at the NCY Garage, Redundant CNG Compressor and Technology projects. In FY 2022/23, $1.9 M was returned to the Fleet fund for a portion of the NCY Garage construction.

SOURCE: Auditor analysis of for FY 2022/23 to FY 2024/25 Budget to Actual and general ledger reports.

As of FY 2025/26, revenues and expenditures related to purchasing new vehicles are maintained in a separate Fleet fund and financed through internal rental charges and proceeds from sale of assets.

Authorized Staffing - Fleet Management is led by a department Director and reports to a Deputy City Manager. In FY 2025/26, the department's authorized FTE included 4 management support staff, 39 mechanics and 2 service writers overseen by an Operations Manager, and 7 Parts specialists overseen by a Parts Supervisor.

FINDINGS AND ANALYSIS

1. Staffing, bay availability and parts management challenges have contributed to delays in services.

The overall time that a vehicle is at a Fleet shop for maintenance or repairs has increased by 33%, on average, from FY 2022/23 to FY 2024/25. Additionally, vehicles spend about 59% of their in-shop time waiting to be serviced. The rising wait times directly contribute to extended vehicle downtime, reducing their availability for service delivery. Addressing the limited number of service bays, mechanic availability, and delays in obtaining parts could improve Fleet's service delivery times.

A. The hours a vehicle waits for initial assignment to a mechanic or bay have increased significantly.

After a vehicle is dropped off at a shop for a service, a work order is opened and the vehicle is placed in a "waiting for a bay" status. From FY2022/23 to FY 2024/25, the hours a vehicle waits for initial assignment to a bay or a mechanic has increased from 5.49 hours to 7.92 hours, an increase of about 44%, as shown in Table 4. Staffing and bay issues are also reflected in the time it takes for mechanics to pick up parts from the Parts shop.

Table 4. Average time vehicles wait for services has increased over the last three fiscal years.

Wait Times (Average Work Hours)		2022/23	2023/24	2024/25
Waiting for Bay	Other Vehicles	11.97	14.94	17.20
	Fire Apparatus	4.27	13.67	12.29
	SW Truck	0.60	0.64	0.60
	Transit Bus	0.13	0.52	0.84
	Ambulance	n/a	n/a	12.03
	Overall Average Hours (3-Yr Change = 44%)	**5.49**	**7.19**	**7.92**
Waiting for parts	Fire Apparatus	20.11	57.74	54.20
	Other Vehicles	5.67	6.99	7.23
	SW Truck	0.24	0.80	0.65
	Transit Bus	0.85	0.43	0.48
	Ambulance	n/a	n/a	0.0
	Overall Average Hours (3-Yr Change = 54%)	**3.51**	**5.58**	**5.40**
Parts available, waiting on Technician	Fire Apparatus	7.92	9.06	15.65
	Other Vehicles	1.84	1.68	2.75
	Transit Bus	0.10	0.02	1.35
	SW Truck	0.12	0.13	0.45
	Ambulance	n/a	n/a	0.10
	Overall Average Hours (3-Yr Change = 71%)	**1.21**	**1.12**	**2.07**

Avg No. of Workdays		2022/23	2023/24	2024/25
Total time in Shop	Fire Apparatus	6.1	9.1	9.9
	Other Vehicles	2.7	3.0	3.3
	Transit Bus	0.2	0.2	0.3
	SW Truck	0.4	0.4	0.4
	Ambulance	n/a	n/a	1.4
	Overall Average Days (3-Yr Change = 33%)	**1.5**	**1.8**	**2.0**
	Percentage of total time in-shop spent waiting for service	**47%**	**53%**	**59%**

SOURCE: Auditor analysis of FASTER inventory, work order and downtime reports for FY 2022/23 to FY 2024/25.

1. **Limited number of bays per mechanic can create service bottlenecks.**
   Bay limitations reduce a mechanic's ability to work on multiple vehicles while waiting for parts, limiting productivity as shop capacity can constrain operations and create bottlenecks. According to industry publications, physical design of repair facilities affects service efficiency and recommend planning for about 1.5 to 2 bays per mechanic to prevent workflow bottlenecks when part delays occur. In comparison, based on staffing levels at the time of this audit, the mechanic-to-bay ratios at the two City's fleet shops were as follows:
   - **North Corp Yard day shift** consists of 14 mechanics and operates at a ratio of 1 mechanic per 1.1 bays.
   - **North Corp Yard night shift** consists of 11 mechanics and operates at a ratio of 1 mechanic per 1.2 bays.
   - **South Corp Yard day shift** consists of 6 mechanics and operates at a ratio of 1 mechanic per 1 bay.

   Management agrees with an industry standard of about 2 bays per mechanic and noted that actions can be taken to increase bay capacity, including adding a night shift to the South Corp Yard.

2. **Delays in initial assignment are affected by ongoing mechanic vacancies and turnover.**
   Over the last three fiscal years, the department has consistently carried six to seven vacant mechanic positions. During this period, the number of filled positions has ranged from 28.8 to 30.1 as shown in Table 5 on page 8. To keep up with separations, the department hired 12 mechanics and technicians over the same three-year period; however, recruitment efforts have not always been successful. According to both Management and a Human Resources representative, attracting qualified candidates has been challenging due to competition from local shops and private dealerships, as well as the salary range of these positions. Management reported that as of March 2026, two vacant technician positions will be reclassified as mechanic positions, which offer a higher salary range, and the remaining two technician positions will be eliminated in FY 2026/27.

As the department works to fill its vacancies, the mechanic-to-bay ratio will be further impacted unless additional bay capacity can be identified.

Table 5. Mechanic positions, filled and authorized FTE.

	2022/23 Filled FTE	2023/24 Filled FTE	2024/25 Filled FTE	2025/26 Approved/ Budget	Vacant as of Feb 2026
Senior Mechanic	16.0	14.2	15.9	18.0	1.0
Mechanic	8.9	9.9	9.2	11.0	1.0
Technician	3.9	6.0	3.2	7.0	4.0
Total - FTE Positions	**28.8**	**30.1**	**28.3**	**36**	**6.0**

SOURCE: Auditor analysis of timesheet data for FY 2022/23 to FY 2024/25, FY 2025/26 Adopted Budget, Position Control report as of Feb 2026, and information provided by the Fleet Director on February 2026. Filled positions were calculated based on 2,080 hours per FTE.

Outsourced work – In FY 2024/25 the cost of outsourced maintenance and repairs increased by about 95% from the prior two years, totaling $1.66 million in FY 2024/25. The department explained that several factors led to increased reliance on contractors, including large and complex repairs such as engines and transmissions, staffing shortages earlier in the year, and a backlog of vehicles awaiting upfitting due to shipment delays. However, according to Fleet, in some instances poor quality outsourced work also resulted in the need for rework. While specialized work may still need to be outsourced, Fleet believes that many outsourced repairs could be completed more efficiently internally.

B. Parts management challenges have led to longer waits for needed parts, slowing down vehicle repairs.

From FY 2022/23 to FY 2024/25, the average time vehicles waited for needed parts increased from 3.51 hours to 5.40 hours, an increase of 54% as shown on Table 4 on page 6. Supply chain disruptions following the pandemic contributed to extended wait times observed in FY 2022/23 and 2023/24. According to management, Fleet continues to experience long wait times. Further automation of parts ordering and regular monitoring could help reduce wait times.

1. **Implementing a more automated parts-ordering process would help reduce errors and omissions in daily orders.** While the FASTER system already identifies parts that fall below set minimum stocking levels, Fleet does not currently leverage this information to generate a report that identifies stocking needs. Additionally, when ordering, staff must check each vendor within the system for availability. According to Management, reliance on manual processes increases the risk of Parts staff missing necessary items when placing orders and not checking alternate suppliers for out-stock items. Auto-generating a listing of available parts suppliers for the required parts would help staff find parts more quickly and identify alternate suppliers.

2. **Regular review and evaluation of minimum and maximum stocking levels can help prevent shortages.** Conducting periodic evaluation of actual parts usage compared to the minimum and maximum stocking thresholds within FASTER can help prevent parts shortages and reduce unnecessary ad hoc orders. Management noted that these inventory parameters, within the system, have not been reviewed. Minimums that are set too low may result in delays from having to re-order commonly needed parts, and maximums that are too high may result in unnecessary inventory.

3. **A periodic analysis of stocked parts can help reduce special orders and eliminate obsolete inventory.** The department has not periodically reviewed its inventory turnover and reassessed the appropriateness of the parts maintained in inventory. For example, identifying and stocking critical components and commonly needed items with significant lead times would reduce wait times. Without regular analysis of special-order activity and on-hand inventory, obsolete parts may remain in stock while frequently needed or critical parts are not available.

Recommendations:

The Fleet Management Director should:

1.1 Assess bay capacity needs and evaluate strategies to increase shop capacity, including adding shifts or reconfiguring existing shop space.

1.2 Collaborate with Human Resources to promote recruitment of vacant positions.

1.3 Develop automated inventory reports to help streamline the parts ordering process. Periodically evaluate parts purchases and inventory to ensure minimum and maximum stock levels reflect actual usage. The review should also identify potentially obsolete parts and frequently used parts that are not regularly stocked.

2. A strategic approach to workforce development and monitoring of productivity and performance measures would enhance operational efficiency.

Fleet maintains over 300 different models of vehicles and equipment, requiring mechanics to have a wide range of skills and technical expertise. Staff turnover in recent years increased the need for training and development, but persistent vacancies have limited the department's ability to meet that need. To ensure that the workforce has the necessary skills to provide quality service, the department needs to assess its existing skillsets against operational goals and develop training plans for its staff. Additionally, productivity and performance measures could be further refined and monitored.

A. A strategic approach to training and workforce development is needed to ensure technical capabilities to support the complexity of the City's fleet of vehicles and equipment.

The department training policy, dated 2004, highlights the importance of assessing organizational and employee performance, and creating individual training plans. The

policy requires employees obtain a minimum of 40 hours of job-related training annually. However, management noted that due to vacancies and turnover, in recent years they have emphasized service delivery and have not ensured employees receive the 40 hours of training. The department has taken steps to address specific needs; for example, management reported that in FY 2024/25 night-shift mechanics received hydraulics training to support in-house repairs of solid waste vehicles. However, a more comprehensive training strategy is still needed to ensure staff have the optimal mix of skills to meet service objectives:

- **Assess existing skillsets against department operational goals and develop training plans.**

  To maximize its limited resources and enhance performance, the department should adopt a more strategic approach to training by identifying gaps in the skills needed to maintain its desired service levels, and work with staff to develop individual training and development plans.

  Exploring opportunities for cost-efficient training could also help Fleet stretch its training budget. For example, management reported that an informal train-the-trainer approach currently exists, where senior staff mentor and train other mechanics on key responsibilities such as the operation of diagnostic equipment. This approach could be further expanded to develop senior staff to cross-train others and increase the department's overall capabilities.

- **Encourage staff development and certification**. As of February 2026, 13 of 30 (43%) mechanics held ASE certifications, as shown in Table 6 on page 11. Additionally, one mechanic is experienced in maintaining fire apparatuses, but does not currently hold active Emergency Vehicle Technician (EVT) certifications, which is recommended by the National Fire Protection Association (NFPA). Certification is not required to perform work, but the related training courses expand staff knowledge and could enable Fleet to perform more services in-house.

  Automotive Service Excellence certificates (ASE)
  Nationally recognized, ASE certification requires a combination of training and knowledge. Certificates are issued for a variety of vehicle classes and specialties, such as engine repair, heating and air conditioning and brakes.
  SOURCE: www.ase.com

  Although Fleet reimburses the cost of obtaining certificates, management noted that few staff were pursuing certification. Starting January 2025, it rolled out a financial incentive program for certifications. Employees can receive from $300 to $1,000 per certificate, with a maximum combined pay of $5,000 per year. This incentive program, combined with a strategic approach to identifying the desired skillsets and creating training and develop plans would move the department towards meeting its service objectives.

(continued on next page)

Table 6. Limited number of staff mechanics holds active certifications for three relevant ASE series.

	Active Employees	A – Automotive and light duty car repairs	T- Medium/heavy truck repair	H – Transit bus repair
Senior Mechanic	17	3	6	1
Mechanic	10	2	1	
Technician	3	2	1	
Total	**30**	**7**	**8**	**1**

SOURCE: Auditor analysis of Fleet department staff certificate information provided by Fleet Director in January 2026 and position reports as of February 2026.

B. Productivity and performance measures need to be further refined and monitored.

Fleet reports on certain key performance indicators (KPIs) as shown in Table 7, on page 12. However, these KPI's need further refinement to ensure they are effectively measuring performance.

Specifically, we noted areas where KPI's could be further refined:

1. *In-house Preventive Maintenance (PM) Compliance rates only measure timeliness of fuel consumption-based intervals (on or before due dates)*. The timeliness of other PM maintenance, such as mileage-based maintenance or periodic performance testing, are not measured by the existing report.
2. *Work order completion time calculation combines scheduled and unscheduled work orders*. By not distinguishing between routine preventive maintenance and unscheduled repairs, the usefulness of the KPI is limited. Expectations for time to complete scheduled maintenance is typically 24 hours, while Fleet's goal is 5 days when combining all work order types.
3. *Vehicle availability* is currently tracked for solid waste trucks and fire apparatuses, but not other vehicle types.
4. *Vehicle utilization* (mileage driven) calculations are only provided as requested.

Staff productivity objectives have not been established and calculations need to be updated. The department captures staff productivity in an internal report and, estimating for holidays, leave time, training, breaks, and shop clean-up time, the report notes that mechanics should typically be available to work directly on service and repairs about 73% of their time. However, Fleet has not established productivity targets or monitored the results. Further, Fleet's calculation method does not account for employees that worked less than full-time hours.

Our analysis of timesheet and work order labor records from FY 2022/23 to FY 2024/25 show that average productivity, or direct labor hours as a percentage of total hours, ranged from 65% to 71% as follows:

Mechanic Productivity:	2022/23	2023/24	2024/25
Average of direct labor time as percentage of timesheet hours	65%	71%	67%

SOURCE: Auditor analysis of timesheet data for FY 2022/23 to FY 2024/25 and FASTER report on Technician Labor, and staffing information provided by Fleet.

Calculation accuracy of existing measures needs to be reviewed. Our review of "*Work orders taking five days or more for in-house repairs*" identified an error in the calculation. As shown in Table 7 below, based on our recalculation using system work order data, the KPI did not meet the "less than 6%" goal for the last three consecutive fiscal years. For example, one work order that took four working days to complete was incorrectly calculated as completed in a single day. Such calculation errors can lead to inaccurate conclusions about departmental performance and hinder informed decision-making related to staffing levels, inventory needs, bay capacity, and other operational requirements.

Table 7. Fleet Management reported Performance Measures by Fiscal Year.

Performance Measure	Goal	2022/23	2023/24	2024/25
Preventive Maintenance Compliance (based on gallons)	90.0%	74.0%	70.0%	67.0%
Solid Waste Residential Services Equipment Availability	*Not Identified*	89.1%	91.2%	91.5%
Fire Engines and Equipment Availability	80.0%	83.7%	76.0%	72.3%
Work orders taking 5 days or more for in-house repairs	< 6%	3.0%	2.7%	3.4%
Auditor Re-Calculated:				
Work orders taking five days or more for in-housework performed - including weekends	< 6%	12.4%	15.6%	17.1%
Work orders taking five days or more for in-housework performed - excluding weekends	< 6%	8.8%	11.3%	12.7%

SOURCE: Auditor analysis of FASTER work order data and City Budget Books from FY 2022/23 to FY 2024/25.

Recommendations:

The Fleet Management Director should:

2.1 Adopt a strategic approach to staff development and training by identifying desired skillsets, assessing the strengths and knowledge of mechanics, and developing individual training plans that will support staff development and achieve operational objectives.

2.2 Evaluate the department's performance measurement framework by: 1) adopting KPIs that capture performance across all key operational areas including separating KPIs that currently combine performance of more than one service such as preventive maintenance and repair timeliness, to enable more meaningful performance analysis, 2) verifying the accuracy of all KPI calculations to ensure reliable reporting, and 3) establish appropriate performance targets.

3. Policies for assigning preventive maintenance frequency are needed to ensure consistent application and alignment to recommended practices.

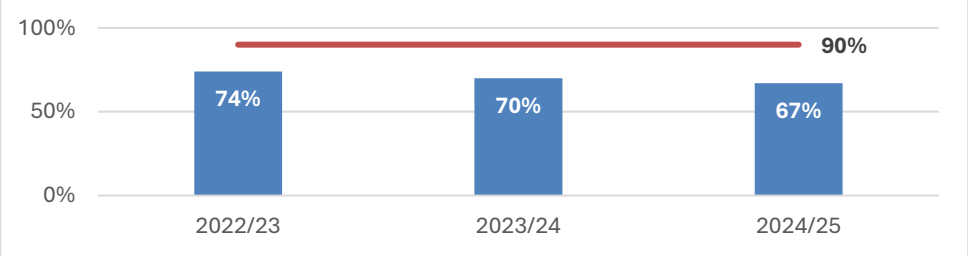
The department's performance metrics for timely preventative maintenance have declined in recent years and are below its target of 90%, as shown in Figure 3, below. These outcomes are likely impacted by staff turnover, vacancies, and the increasing number of assets maintained by the department, as described in the preceding findings.

However, the variability in the established maintenance cycles and the lack of policy guidelines increase the risk of inconsistencies and data entry errors, leading to inefficiencies in preventive maintenance. Incorrect maintenance cycles set in the FASTER system could result in too few or too many scheduled maintenance services.

Fuel Consumption-based Preventive Maintenance schedules

Most vehicles are scheduled for preventive maintenance (PMA) based on fuel-consumption thresholds, with at least one yearly service. According to management, this was intended to address the high idling times that municipal maintenance and public safety vehicles incur in their day-to-day operations.

Figure 3. The goal of providing 90% of preventive maintenance services on or before their due dates has not been met.



SOURCE: Auditor summary of Fleet-reported performance measures for FY 2022/23 to FY 2024/25. Results are un-audited as auditors could not verify the underlying data for this report.

1. **Policy guidelines and methodology for assigning maintenance schedules need to be established and aligned with industry or recommended practices.** Administrative Regulation 123 – *Operation of City Owned & Leased Motor Vehicles*, requires that Fleet "establish PM schedules in accordance with manufacturer's recommendations with some adaptation to accommodate types of use". The department's use of fuel consumption–based maintenance cycles is reasonable given how City vehicles are operated.

However, the department has not established policies or a methodology for assigning these fuel-based cycles or for aligning them with manufacturer recommendations, which are typically mileage-based. According to staff, the schedules were decided at some point in the past. Further, when replacement units are placed into service, the maintenance service cycle is not typically modified because it is assumed that the usage level of that vehicle is addressed in the maintenance interval. As illustrated in Table 8 below, vehicles within similar classes may have a range of basic maintenance intervals.

Primary Types of Preventive Maintenance

PM A - Basic Inspection and Maintenance
PM B - Comprehensive Scheduled Maintenance
PM E - Emissions
PM L & P - Fire Equipment Inspection/Testing
PM R - Fire Suppression Inspection

SOURCE: Personnel interviews and FASTER system data.

2. **Creating preventive service templates around well-defined vehicle classes could facilitate standardization.** Fleet management systems use vehicle classes to group similar vehicles and equipment to support consistent monitoring of performance and the standardization of some practices. In the current system, about 200 different vehicle class codes can be assigned to a vehicle, a volume that may make it difficult to develop and apply preventive maintenance templates.

Table 8. Fuel consumption-based basic preventative maintenance schedules vary across similar class assets.

General Asset Category[1]	Assets with Fuel Cycles	Assets with Non-Fuel Cycles (Time, mileage)	Fuel Consumption Cycles		
			<500 gal	500 - 600 gal	>600 gal
Light Duty Truck/SUV/Van	443	3	5%	94%	1%
Medium Duty Truck/Specialty	149	2	0%	59%	41%
Light-Med Duty Truck/Van	107	0	6%	63%	32%
Light Duty Auto	66	0	70%	27%	3%
Solid Waste Truck	55	1	0%	0%	100%
Heavy Duty Specialty	34	1	3%	6%	91%
Fire Apparatus	33	8	0%	0%	100%
Motorized Heavy Equipment	39	42	77%	0%	23%
Transit Bus	17	0	0%	0%	100%
Ambulance	4	0	0%	100%	0%
Utility Carts	0	106	0%	0%	0%
Motorcycles	0	23	0%	0%	0%
Equipment[2]	0	237	0%	0%	0%
Total	**947**	**423**	**11%**	**63%**	**26%**

[1] Auditor summarized asset categories using Fleet classification codes and definitions.
[2] Counts do not include equipment or leased vehicles missing maintenance schedules in FASTER.

SOURCE: Auditor analysis of FASTER maintenance schedules and asset classification codes for assets active as of November 2025.

Establishing preventive-service templates that align with policy guidelines would help ensure that variations in maintenance schedules are appropriate and consistently applied. These templates should account for factors such as engine type, vehicle usage and fuel efficiency gains. Based on a limited review of fuel-consumption based schedules, we identified examples of missing or inconsistent service schedules. Each of these cases would require a detailed vehicle review to determine whether the current schedule is appropriate.

- **Fire apparatus with missing schedules.** Seven fire apparatuses did not have a fuel-based PMA cycle, only the minimum 365-day schedule. As such, these vehicles were only scheduled for one PMA a year. Other similar fire apparatuses had a PMA cycle of every 1,500 gallons, which often resulted in multiple PMAs per year because of their high fuel consumption.
- **Light-duty trucks with inconsistent schedules.** Two of 13 Chevrolet 1500 pickup trucks, model year 2018, had 400-gallon maintenance cycles, while the rest had 550 gallon cycles. These 2 trucks were used by the same department as some of the others.
- **Changes to scheduling policy were not documented.** For active light duty SUV's used by Public Safety, about 65% had 600-gallon maintenance cycles and with one exception, the remainder had 550-gallon cycles. According to the coordinator that enters the PM cycles, 550-gallons has been the applied schedule to vehicles acquired during last two years. Adjustments to the cycles may have been made by the former Fleet coordinator to address observed maintenance needs, but those reasons were not communicated to the current staff.

Recommendations:

The Fleet Management Director should:

3.1 Develop policies and standard methodology for assigning preventive maintenance intervals that are consistent with industry and/or manufacturer recommendations, including aligning policies with asset classifications.

3.2 Review preventive maintenance cycles for existing assets and align to the updated policies.

4. Improvements needed on fuel program controls and the M&R cost allocation methodology.

Strengthening internal controls within the fuel program and changes to cost-recovery rate procedures can help ensure accountability and provide more comprehensive information for management decisions.

A. Stronger controls over the use of fuel station keys and Voyager cards are needed to ensure appropriate use and accurate fuel data for preventive maintenance.

Fleet issues fuel station keys to departments that need fuel for equipment or leased vehicles but do not have fuel system equipment installed. Additionally, for fueling at non-city fuel

stations, a Voyager card may be issued. These are primarily issued to police and fire users. Both keys and fuel cards offer flexibility for fueling assets, but additional controls are needed to ensure appropriate use.

1. **Policies and procedures for the use of fuel keys and fuel cards need to be established.**

   The Voyager Card User Agreement requires the user to certify that the card will not be used for personal vehicles and refers the user to "city policies regarding the appropriate use of the fleet card". While these policies may have existed in the past, they were not available when requested during our audit. Similarly, no policies and procedures exist relating to issuance or appropriate usage of fuel keys.

2. **Periodic review of active fuel keys and cards by client departments is needed to reduce risk of inappropriate usage. The location or employee assigned to active fuel keys have not been sufficiently monitored.**

   In response to our audit request for a listing of active fuel keys, management reported conducting an ad hoc review of assigned keys and deactivated approximately 30 keys that were no longer needed. However, we noted that the listing still contained 8 keys assigned to terminated employees. We contacted the departments to confirm the existence of the key and the current employee assigned. For some of these, the keys could not be located, for others, the supervisor had the keys and returned them to Fleet upon our inquiry or requested that they be reassigned to new users. In 2025, Fleet began requesting that client departments verify active Voyager cards were still needed. A similar practice for fuel keys should be implemented to ensure that keys are assigned to the correct employee and are still needed.

3. **Sharing monitoring responsibility and usage data with client departments would allow for more effective management of the fuel program.**

   When employees use a fuel key or Voyager card, they are prompted to enter the asset number and odometer reading before fueling. According to Fleet, sometimes the wrong card is used or vehicle numbers are entered incorrectly, requiring staff time to follow-up. The follow-up process can be time-consuming, and incorrect data could potentially impact PM schedules that rely on fuel consumption.

   Further, monthly Voyager invoices are reviewed and approved by the Fleet Director but the client departments that can evaluate the appropriateness of purchases have not been required to verify them.

   Providing fuel key and Voyager card usage details, such as employee name, vehicle, fueling location, and time, to the client departments for review would allow them to identify any unusual activity, non-compliance with departmental policies, and potential errors in the vehicle numbers entered. Additionally, existing general ledger reports contain monthly totals but require departments to further extract and combine data to perform analysis. Sharing detailed fuel usage reports with departments for management purposes can help them better understand their fuel consumption and manage costs.

B. Actual cost recovery rates should be evaluated when setting maintenance and repair (M&R) charges.

According to Administrative Regulation 123 – *Operation of City Owned & Leased Motor Vehicles*, Fleet should establish maintenance and repair (M&R) rates based on the actual repair cost for each asset over the recent 12 months prior to submittal of the next fiscal year's rates to the Budget Office.

According to Fleet, approved M&R rates are often based on city-level budget and management objectives. To provide better information for making these decisions, the department should also assess its M&R rates based on actual prior year costs and evaluate its effective cost recovery (how much of actual costs were recovered through the established rates).

Guidance from the *Government Finance Officers Association (GFOA)* regarding establishing an internal service pricing system recommends that the organization:

1. Identify goals of internal service pricing
2. Develop an allocation strategy
3. Define level of costing detail
4. Determine cost of service
5. Decide basis of allocation
6. Consider potential drawbacks

When designing the pricing system, the department should weigh the complexity of the system against the benefits of lower or higher level of detail.

Recommendations:

The Fleet Management Director should:

4.1 Develop and implement comprehensive policy and procedures for issuing, tracking, and monitoring usage of fuel keys and cards. Procedures should periodically confirm with client departments that active fuel keys and cards are still needed.

4.2 Provide detailed fuel usage and cost reports, including odometer readings and equipment numbers, fuel site locations, and times to client departments for review and verification. Missing usage data should be requested to ensure accurate preventive maintenance timelines.

4.3 Consider developing a pricing methodology based on actual costs of service to better inform decision-making when proposing internal service rates. An analysis of prior year cost recovery would also provide more data for evaluating future rates.

METHODOLOGY

We performed the following steps to complete the audit objective:

- Conducted interviews and walk-throughs with Fleet Management staff to gain an understanding of maintenance processes, the Fleet management system data, and operational challenges. Auditors met with the Fleet Director, Fleet Equipment Parts Supervisor, Contracts Coordinator, Sr Finance Analyst, Systems Analyst, and Operations Manager.
- Reviewed relevant laws, regulations, policies/procedures, agreements, manufacturer's recommendations, and best practices, including:
    1. Administrative Regulation 123 – Operation of City Owned & Leased Vehicles
    2. Fleet Management internal policies and procedures
    3. Publications by fleet management organizations and other government fleet agencies.
- Reviewed maintenance and repairs processes to assess effectiveness and efficiency of fleet operations. This work included:
    1. **Analyzing fleet management system data** from FY 2022/23 through FY 2024/25 to evaluate frequency, timeliness and efficiency of service delivery.
    2. **Evaluating controls** over management of preventive maintenance.
    3. **Assessing the department performance measures,** comparing them to recommended practices and verifying the accuracy of calculations.
- Reviewed program financial information, including revenues, expenditures, and assumptions used to develop internal service rates.
- Reviewed management practices, such as the employee training program, staffing, and performance management.
- Evaluated controls over fuel card and fuel key usage.

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. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Audit work took place from October 2025 to March 2026.

MANAGEMENT ACTION PLAN

1. Staffing, bay availability and parts management challenges have contributed to delays in services.

The Fleet Management Director should:

Recommendation

1.1 Assess bay capacity needs and evaluate strategies to increase shop capacity, including adding shifts or reconfiguring existing shop space.

Priority	Management Response and Proposed Resolution
Med-High	Agree Proposed resolution: Evaluate options to increase capacity of work (maintenance and repair) output by possibly adding a night shift, reducing the number of vehicles in the fleet, and/or shortening the vehicle life cycle on certain vehicles to replace vehicles prior to the more expensive and lengthy repairs. Shorter vehicle life means less maintenance, repairs, and parts. This would lead to a reduction in maintenance staff.

Responsible Party:	Est. Completion Date:
Bill Kohn, Director of Fleet Management	November 2026

Recommendation

1.2 Collaborate with Human Resources to promote recruitment of vacant positions.

Priority	Management Response and Proposed Resolution
Medium	Agree Proposed resolution: Continue to work with HR to attract and retain quality vehicle and equipment mechanics.

Responsible Party:	Est. Completion Date:
Bill Kohn, Director of Fleet Management	August 2026

Recommendation

1.3 Develop automated inventory reports to help streamline the parts ordering process. Periodically evaluate parts purchases and inventory to ensure minimum and maximum stock levels reflect actual usage. The review should also identify potentially obsolete parts and frequently used parts that are not regularly stocked

Priority	Management Response and Proposed Resolution
Med-High	Agree Proposed resolution: The new web version of the fleet management software system, implemented November 2025 has many canned reports available related directly to parts/inventory management that can assist with the implementation of this recommendation. Minimum and maximum stock levels are regularly assessed as necessary, but a formal review will be conducted to re-evaluate reorder points and identify any parts that may be obsolete.

Responsible Party:	Est. Completion Date:
Akbar Piredina, Fleet Equipment Parts Supervisor	December 2026

2. A strategic approach to workforce development and monitoring of productivity and performance would enhance operational efficiency.

The Fleet Management Director should:

Recommendation

2.1 Adopt a strategic approach to staff development and training by identifying desired skillsets, assessing the strengths and knowledge of mechanics, and developing individual training plans that will support staff development and achieve operational objectives.

Priority	Management Response and Proposed Resolution
Medium	Agree Proposed resolution: Fleet Operations Manager will work with the Crew Chiefs (shop supervisors) to identify training needs and develop training plans as needed.

Responsible Party:	Est. Completion Date:
Tim Waters, Fleet Operations Manager	December 2026

Recommendation

2.2 Evaluate the department's performance measurement framework by: 1) adopting KPIs that capture performance across all key operational areas including separating KPIs that currently combine performance of more than one service such as preventive maintenance and repair timeliness, to enable more meaningful performance analysis, 2) verifying the accuracy of all KPI calculations to ensure reliable reporting, and 3) establish appropriate performance targets.

Priority	Management Response and Proposed Resolution
Medium	Agree

	Proposed resolution: Using the newly implemented web version of our fleet management software system, Faster, and it's hundred plus canned reports to continue to monitor performance analysis in all areas of this fleet operation. Utilize these available reports and data to establish appropriate performance targets.
Responsible Party: Bill Kohn, Director of Fleet Management	Est. Completion Date: July 2026

3. Policies for assigning preventive maintenance frequency are needed to ensure consistent application and alignment to recommended practices.

The Fleet Management Director should:

Recommendation

3.1 Develop policies and standard methodology for assigning preventive maintenance intervals that are consistent with industry and/or manufacturer recommendations, including aligning policies with asset classifications.

Priority	Management Response and Proposed Resolution
Medium	Agree Proposed resolution: Develop and implement a written standard operating procedure (SOP) that defines the methodology for assigning preventive maintenance intervals that ensure alignment with type of vehicle use (severe duty vs normal duty), manufacturers recommendations.
Responsible Party: Keith Marquis, Contracts Coordinator, and Tim Waters, Fleet Operations Manager	Est. Completion Date: December 2026

Recommendation

3.2 Review preventive maintenance cycles for existing assets and align them with the updated policies.

Priority	Management Response and Proposed Resolution
High	Agree Proposed resolution: Continue to evaluate the preventive maintenance intervals across the fleet of vehicles and equipment to ensure intervals align with updated SOP.

Responsible Party:	Est. Completion Date:
Tim Waters, Fleet Operations Manager	March 2027

4. Policies for assigning preventive maintenance frequency are needed to ensure consistent application and alignment to recommended practices.

The Fleet Management Director should:

Recommendation

4.1 Develop and implement comprehensive policy and procedures for issuing, tracking, and monitoring usage of fuel keys and cards. Procedures should periodically confirm with client departments that active fuel keys and cards are still needed.

Priority	Management Response and Proposed Resolution
Medium	Agree Proposed resolution: Continue to work with Police and Fire for responsible management of the fuel card issuance, timely responses to fuel transactions errors, and review of fuel transactions. Develop an SOP for the appropriate client department-management of the key users, to include the current Employee Fuel Key Agreement document, procedures for issuing, tracking and managing cards and keys.

Responsible Party:	Est. Completion Date:
Bill Kohn, Director of Fleet Management	December 2026

Recommendation

4.2 Provide detailed fuel usage and cost reports, including odometer readings and equipment numbers, fuel site locations, and times to client departments for review and verification. Missing usage data should be requested to ensure accurate preventive maintenance timelines.

Priority	Management Response and Proposed Resolution
Medium	Agree Proposed resolution: Current software system limits the ability to automate such a report at this time. However, Fleet staff will work with IT or vendor to improve fueling transaction details currently found in the general ledger (GL). Note, all fueling transaction information is and has been available in the GL or related data has been available upon request by specific vehicle number or City of Scottsdale employee ID number.

Responsible Party:	Est. Completion Date:
Bill Kohn, Director of Fleet Management	March 2027

Recommendation

4.3 Consider developing a pricing methodology based on actual costs of service to better inform decision-making when proposing internal service rates. An analysis of prior year cost recovery would also provide more data for evaluating future rates.

Priority	Management Response and Proposed Resolution
Low	Agree Proposed resolution: Fleet is exploring additional opportunities to enhance how Maintenance and Repair budget rates are developed. While current rates include actual costs from the previous 12 months in the development process, the next rate-setting cycle will also incorporate deeper analysis of the prior fiscal year's completed data to further strengthen accuracy and transparency.

Responsible Party:	Est. Completion Date:
Bill Kohn, Director of Fleet Management	November 2026

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Our Mission

The City Auditor's Office conducts audits to promote operational efficiency, effectiveness, accountability and integrity in City Operations.

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CITY OF SCOTTSDALE