



CITY AUDITOR'S OFFICE

# Fleet Parts Operation

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April 26, 2019

AUDIT REPORT NO. 1912

**CITY COUNCIL**

Mayor W.J. "Jim" Lane

Suzanne Klapp

Virginia Korte

Kathy Littlefield

Vice Mayor Linda Milhaven

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Solange Whitehead





April 26, 2019

Honorable Mayor and Members of the City Council:

Enclosed is the audit report for *Fleet Parts Operation*, which was included on the Council-approved FY 2018/19 Audit Plan. This audit was conducted to assess management controls over and cost-effectiveness of Fleet's parts inventory operations. Annually, parts spending ranged from \$2.8 million to \$3.5 million and the year-end inventory balance increased from \$599,000 to about \$728,000 from July 1, 2016 through June 30, 2018.

Our audit found that inventory controls are not effective, and operational efficiencies can be improved. Specifically, auditors found discrepancies in each of three inventory samples, and Fleet's inventory reports also show significant variances in their ongoing inventory counts and monthly reporting. As well, storeroom physical security and inventory system access controls should be strengthened. Further, the Parts inventory contains obsolete and excess parts, and staff can be more efficiently scheduled to balance workload and supervision.

If you need additional information or have any questions, please contact me at (480) 312-7867.

Sincerely,

A handwritten signature in blue ink that reads "Sharron Walker".

Sharron E. Walker, CPA, CFE, CLEA  
City Auditor

Audit Team:

Kyla Anderson, CIA, CLEA – Senior Auditor  
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# AUDIT HIGHLIGHTS

## Fleet Parts Operation

April 26, 2019

Audit Report No. 1912

### WHY WE DID THIS AUDIT

An audit of Fleet Parts Operation was included on the City Council-approved fiscal year 2018/19 Audit Plan. The audit objective was to assess management controls over and cost-effectiveness of Fleet's parts inventory operations.

### BACKGROUND

Fleet Management Operations (Fleet) operates service bays and parts rooms at the North Corp Yard and the McKellips Service Center. The service bays and parts rooms operate Monday through Friday about 20 hours per day, providing maintenance and service for more than 1,200 City vehicles and similar equipment used by various departments including Police, Fire, Solid Waste, Transit and Parks & Recreation. Fleet uses the FASTER Fleet Management System to track parts inventory purchases and issuances. Over the past five fiscal years, parts inventory purchases increased from \$2.8 million to \$3.5 million. Parts issued nearly 44,000 individual parts in FY 2017/18.

### City Auditor's Office

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### WHAT WE FOUND

#### **Inventory controls are not effective to safeguard the fleet parts inventory.**

Departmental policies designed to provide strong inventory controls are not effective.

- Auditors found discrepancies when checking random inventory samples.
- Inventory discrepancies are routinely adjusted by the Parts technicians and generally not investigated by the supervisor.
- Inventory variances reported in FY2017/18 totaled more than \$77,000, or 18% of total inventory items.
- Current physical security measures do not effectively limit access to the Parts rooms, and FASTER system access controls can be improved.

#### **Operational efficiency can be improved.**

Fleet's operational goal of returning 70% of vehicles to service within one day may result in a larger parts inventory and more Parts staff.

- Parts has an inventory turnover ratio of 4.5 to 5.0 over the past four years, and the majority of items have between 90 days and one year of inventory in stock. These inventory levels create higher holding costs for the City.
- Parts technicians are not scheduled efficiently, and some shifts receive little or no supervision.

### WHAT WE RECOMMEND

We recommend that the Fleet Management Director:

- Ensure the Equipment Parts Supervisor reviews all equipment parts discrepancies before adjustments are made, install electronic keypads and security cameras in the parts rooms, and improve FASTER system security.
- Categorize vehicles as essential or non-essential and identify high priority items to keep in stock. Further, adjust scheduling based on issuance demand and ensure supervision of all shifts.

### MANAGEMENT RESPONSE

The department agreed with the recommendations and expects to implement its action plans by June 30, 2020.



## BACKGROUND

Fleet Management Operations (Fleet) is responsible for ensuring the 1,268 city-owned vehicles and similar equipment used by departments including Police, Fire, Solid Waste, Transit, Parks & Recreation and others are maintained and repaired to remain operational and safe. To service these vehicles, Fleet operates service bays and parts rooms at the North Corp Yard and the McKellips Service Center about 20 hours per day, Monday through Friday. The Parts Supply unit comprised of the Equipment Parts Supervisor and seven Equipment Parts Technicians manages the parts inventory and related materials supply.

Over the past five fiscal years, total program expenses, which includes salaries, ranged from \$3.3 million to \$4.0 million.

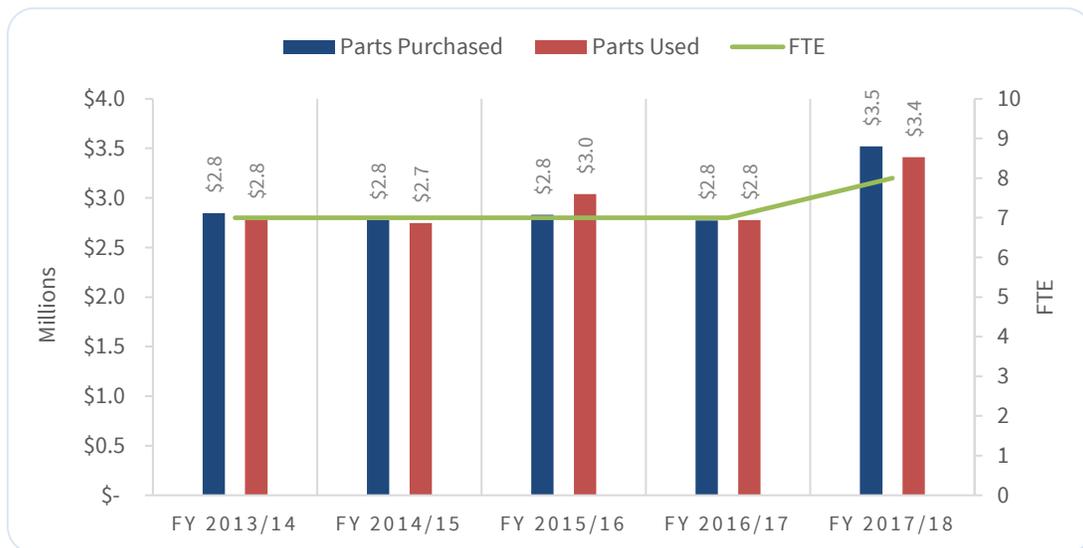
The Fleet department maintains and repairs more than 1,200 City vehicles and similar equipment.

Equipment Parts Technicians purchase, stock, and expense parts to the individual departments as vehicles and similar equipment are serviced.

Fiscal Year	2013/14	2014/15	2015/16	2016/17	2017/18
Program Expense	\$3.4 M	\$3.3 M	\$3.7 M	\$3.4 M	\$4.0 M

As shown in Figure 1, the Parts rooms purchase and issue between \$2.8 million and \$3.5 million in parts each year.

**Figure 1. Parts Inventory Purchased and Used with FTE for FY 2013/14 through FY 2017/18**



**SOURCE:** Auditor analysis of SmartStream general ledger and budget book full-time equivalent data.

The Equipment Parts Supervisor explained that parts inventory purchases increased in FY 2017/18 when Fleet began maintaining the City's trolleys. Because the City did not have a maintenance and repair history for those vehicles and wanted to be prepared for operating issues, Fleet purchased more than \$36,000 of inventory parts and spent nearly \$83,000 to replace trolley tires.<sup>1</sup>

Fleet Management uses the FASTER Fleet Management System (FASTER) to track vehicle-related activities, including equipment records, fuel usage, and service activities along with managing the parts inventory. Parts staff update FASTER as parts are received from vendors and when they are issued from the Parts rooms. However, some basic parts, such as screws and bolts, are categorized as shop supplies and not individually tracked in FASTER.

According to the Equipment Parts Supervisor, the Parts Supply unit stocks items that require long lead times, including specialty parts that are not readily available, as well as other parts that are issued more than three times per year. In FY 2017/18, Parts Supply issued nearly 44,000 individual parts.

Parts Supply enters into 5-year contracts with parts vendors, and most vendors will deliver parts twice a day. Parts Supply also contracts with two courier companies that provide pick-up and delivery services 24-hours a day.

For a sample of 16 parts regularly stocked in the Parts rooms and 5 tire sizes, auditors compared the City's purchase price to auto supply companies' online retail prices for the same items. On average, the City paid 28% less than the comparable retail price. With Fleet overhead charges included, the average prices were still 11% less than retail. Additionally, some supplier contracts provide free shipping, which may or may not be available for retail purchases.

As required in Administrative Regulation (AR) 226 – *Capital Assets: Acquisition, Inventory and Disposal*, Parts Supply performs cyclical inventory counts throughout the year and submits monthly parts inventory reports to the City Treasurer's Office. So that each part is counted twice per year, the Parts technicians count 1/26 of the inventory each week. When discrepancies are found between the physical count and the system inventory, the Parts technicians adjust the recorded quantities.

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<sup>1</sup> Previously, the City's contracted trolley operator was responsible for trolley maintenance.

## OBJECTIVES, SCOPE, AND METHODOLOGY

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An audit of *Fleet Parts Operation* was included on the City Council-approved fiscal year (FY) 2018/19 Audit Plan. The audit objective was to assess management controls over and cost-effectiveness of Fleet's parts inventory operations.

The audit focused primarily on fleet parts operations and inventory for fiscal year 2016/17 and 2017/18, including analysis of the current and prior fiscal years where relevant to illustrate trends.

To gain familiarity with Fleet Parts Supply operations, we reviewed two previous reports issued by this office: Audit 9705, *Evaluation of the Internal Controls in the Fleet Parts Room Inventory* and Audit 0407C, *Fleet Assets Management*. We also reviewed fleet management and inventory audits recently performed by other government auditors.

To gain an understanding about their processes, auditors interviewed the Fleet Parts Supervisor and visited the North Corp Yard and the McKellips Service Center Parts storerooms.

To evaluate whether Parts Supply operates efficiently, we:

- Analyzed the workload by technician and location. To accomplish this, we stratified each location's parts issuances by month and weekday for comparison to the scheduled staffing.
- Selected a sample of parts and compared the City's price paid to retail prices for the same items, with and without the added Fleet overhead charge.

To evaluate the department's control processes to protect parts inventory assets, we:

- Reviewed user access controls for the FASTER system as part of evaluating data reliability and inventory accountability.
- Selected a random sample from the recorded parts inventory and compared the recorded item counts to the actual counts in the Parts storerooms.
- Observed physical security measures of the Parts storerooms and interviewed Facilities Management staff regarding lock and key access.

To identify excess, slow-moving or obsolete inventory, we:

- Used FASTER reports to calculate and analyze inventory ratios, such as days-on-hand and inventory turn.
- Randomly selected a sample from the Parts Obsolescence report to determine if the items were on-hand in the parts room.

Our audit found that inventory controls are not effective, and operational efficiencies can be improved.

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 November 2018 to March 2019.



## FINDINGS AND ANALYSIS

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### 1. Inventory controls are not effective to safeguard the fleet parts inventory.

The department has established certain policies aimed at having strong inventory controls, including double staffing, locking doors and counting each inventory item two times per year. However, those efforts are negated by day-to-day operating practices, including software system controls that do not limit access to correspond with job duties.

A. As described in the Background, Parts Supply uses the FASTER fleet management system to track inventory transactions and amounts on hand. As part of the weekly inventory counts, Parts technicians adjust the FASTER inventory records to match the physical counts. The inventory counts reflected discrepancies of about 18% during FY 2017/18, which were generally not investigated by the supervisor. Further, inactive or obsolete parts remain in inventory, and low unit-cost items are tracked rather than expensed as supplies.

1. Auditors found discrepancies when checking three random samples of 15 parts items each. Each sample identified one or more discrepancies. As summarized in Table 1, actual quantities on the shelf did not match the quantity recorded in the FASTER system for six of the 45 items sampled.

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**Table 1. Discrepancies in Sampled Inventory Items**

Sample Exception	Recorded Quantity	Actual Quantity	Unit Cost
1	6	4	\$5.43
2	78	84	\$0.33
3	12	11	\$0.57
4	390	200	\$0.11
5	23	43	\$1.04
6	7	11	\$13.60

**SOURCE:** Auditor analysis of FASTER inventory records.

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In each of the random samples, the discrepancies occurred with low-cost items, such as vehicle decals, while higher-cost item counts matched.

2. Parts Supply staff count 1/26 of the parts inventory each week so that each item is counted twice per year. However, discrepancies are not fully evaluated, and documentation is not retained.
  - When variances are found between the FASTER system counts and the actual count, the parts technicians adjust the FASTER system to equal the items on hand. Although the Parts Supply Supervisor receives a monthly report of these variances, he stated discrepancies are not investigated unless the part is a unique item that can be traced to a specific vehicle repair. To ensure accountability, any system count adjustments

should be first approved by a supervisor after reviewing the inventory count sheets and researching discrepancies. Further, all weekly inventory count sheets should be retained rather than only those with noted discrepancies.

- Monthly, Fleet reports to the City Treasurer’s Office an inventory reconciliation summarizing parts issued, received, returns to stock or to vendors, and the calculated ending balance compared to the FASTER balance. Any differences are reported as inventory increases or shrinkage.

According to the U. S. Government Accountability Office (GAO), experts recommend that inventory record accuracy performance goals should be set at 95% or higher.<sup>2</sup> Further, according to the National Retail Federation, the average 2017 retail inventory loss was 1.44% (which equates to more than 98.5% inventory accuracy) and more than a third of the losses were caused by shoplifters.<sup>3</sup> As the Parts storerooms are not open to the general public, their risks should be lower, and the 82% inventory accuracy rate shown in Figure 2 for FY 2017/18 does not meet these reported standards.

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**Figure 2. Inventory Record Accuracy Rate for FY 2017/18**

$$\frac{6,205}{7,567} \times 100\% = 82\% \text{ (Record Accuracy Rate)}$$

(Number of accurate items)  
(Number of items counted)

**SOURCE:** Auditor analysis of FASTER inventory records and GAO guidance for Best Practices in Inventory Counts.

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Additionally, this GAO report noted that other methods of measuring inventory accuracy include total quantity adjustments and the total dollar value of adjustments reported in both gross (sum of the absolute value of adjustments) and net (mathematical sum of the adjustments).

While a net calculation is typically used for accounting purposes, the absolute value of variances is significant from an operational standpoint since parts generally cannot substitute for each other.

As shown in Table 2 on page 9, the reported dollar value of inventory variances netted to an inventory loss of approximately \$22,000 for FY 2017/18, or about 3% of the FASTER inventory balance. However, the absolute value of these inventory discrepancies totaled more than \$77,000, or almost 11% for FY 2017/18, and more than \$25,000, or about 3%, for the first 9 months of FY 2018/19.

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<sup>2</sup> Executive Guide: *Best Practices in Achieving Consistent, Accurate Physical Counts of Inventory and Related Property*, GAO, March 2002, (GAO-02-447G).

<sup>3</sup> Industry Research: *2017 National Retail Security Survey*, National Retail Federation.

**Table 2. Monthly Parts Inventory Variances for FY 2017/18 and FY 2018/19**

	FASTER Inventory Balance	FASTER Balance less Calculated Inventory Balance	
		Inventory Variance (\$)	Inventory Variance (%)
July 2017	\$606,956	\$(7,841)	-1.3%
August 2017	\$672,723	\$5,921	0.9%
September 2017	\$748,092	\$2,284	0.3%
October 2017	\$719,129	\$(2,243)	-0.3%
November 2017	\$732,910	\$1,561	0.2%
December 2017	\$741,138	\$1,173	0.2%
January 2018	\$740,329	\$16,375	2.2%
February 2018	\$718,188	\$(9,877)	-1.4%
March 2018	\$787,571	\$(3,976)	-0.5%
April 2018	\$762,032	\$(1,492)	-0.2%
May 2018	\$729,242	\$(13,166)	-1.8%
June 2018	\$727,583	\$(11,162)	-1.5%
<b>Sum (Net Loss)</b>		<b>\$(22,443)</b>	<b>-3.1%</b>
<b>Absolute Variances</b>		<b>\$77,071</b>	<b>10.8%</b>
July 2018	\$759,269	\$(2,682)	-0.4%
August 2018	\$745,924	\$(4,032)	-0.5%
September 2018	\$747,284	\$3,205	0.4%
October 2018	\$781,011	\$1,635	0.2%
November 2018	\$792,355	\$3,992	0.5%
December 2018	\$819,512	\$3,515	0.4%
January 2019	\$841,281	\$1,090	0.1%
February 2019	\$851,552	\$(1,091)	-0.1%
March 2019	\$851,748	\$3,917	0.5%
<b>Sum (Net Increase)</b>		<b>\$9,549</b>	<b>3.5%</b>
<b>Absolute Variances</b>		<b>\$25,159</b>	<b>3.1%</b>

SOURCE: Auditor analysis of monthly Parts Inventory reports.

3. Inactive parts are kept in stock, and an obsolescence report shows many parts have not been issued since at least FY 2016/17.
  - The February 2019 obsolescence report showed 91 inactive parts with 341 units on hand, valued at more than \$15,600.

To retain past data in the system, FASTER allows discontinued parts to be labeled as Closed “C” or Deleted “D” while Active parts are labeled “A”. Of these 91 inactive parts,

88 were labeled as Closed and 3 as Deleted. Management reported that they have not had time to surplus these 341 obsolete parts.

Due to a higher risk of loss, auditors selected a sample of 15 “C” items and all three “D” items to verify that the items were still on hand. Seven of the 18 items tested, or 39%, were not found. Besides incurring inventory holding costs, items identified as no longer in use for an extended period are at higher risk of being lost or misappropriated.

- A Parts Obsolescence report shows 379 distinct parts in stock, valued at \$53,700, that have not been issued during the past 18 months or longer. Further, as shown in Table 3, 27 parts (with 81 items in stock) have not had a recorded issuance for at least 10 years.

**Table 3. Inventory Aging Report**

Fiscal Year Last Issued	# of Years	# of Parts	Quantity in Stock	Value
FY 2008/09 or earlier	10 or more	27	81	\$1,575
FYs 2009/10 - 2010/11	8 - 9	15	276	\$1,177
FYs 2011/12 - 2012/13	6 - 7	25	70	\$2,314
FYs 2013/14 - 2014/15	4 - 5	80	944	\$9,674
FYs 2015/16 - 2016/17	2 - 3	232	2,558	\$38,960
<b>Total</b>		<b>379</b>	<b>3,929</b>	<b>\$53,700</b>

**SOURCE:** Auditor analysis of FASTER Parts Obsolescence Report data.

4. A significant portion of Parts inventory items could be expensed as shop supplies. As summarized in Table 4, about 20% of parts purchased during FY 2017/18 had a unit price of less than \$5 each, and they comprised 6% of total value. Parts with unit prices of less than \$10 constituted about 36% of inventory purchases and 9.4% of total value.

**Table 4. Value Stratification of FY 2017/18 Parts Purchases**

Unit Price	Number of Items	Percent of Total Items	Total Purchased Value	Percent of Purchased Value
Less than \$1	635	3.6%	\$ 13,325	0.4%
\$1 to less than \$5	2,888	16.5%	\$ 196,109	5.6%
\$5 to less than \$10	2,706	15.4%	\$ 119,106	3.4%
\$10 to less than \$1,000	10,367	59.1%	\$ 2,704,699	77.8%
\$1,000 to \$20,000	270	1.5%	\$ 597,726	17.2%

An additional 679 items, or 3.9% of FY 2017/18 purchases, are listed with a negative \$155,750 value, indicating that the items were returned to vendors.

**SOURCE:** Auditor analysis of FASTER data.

Rather than using staff time to record, count and track low-value parts individually, it would be more cost-efficient to treat these items as shop supplies and allocate their costs through overhead. Fleet already accounts for some items, such as screws and bolts, as shop supplies, and these parts range in price from \$0.04 to as much as \$58 per unit.

- B. Current physical security does not effectively limit access to the Parts rooms, and security measures are not enforced.

Although the Parts supervisor told us that Parts room access is limited to Parts technicians and others must be accompanied when entering the Parts rooms, the described security is not in place. During this audit, we observed Fire and Fleet Service staff entering the Parts rooms unattended. The Parts supervisor indicated the Fire Department stores equipment in the North Corp Yard Parts room, and Fleet Service technicians store drinks and snacks in a cooler inside the McKellips Parts room. We also observed that a Parts room back door was unlocked.

At our request, Facilities Management provided its list of Parts room keys. Of the 32 keys that have been cut, 8 are assigned to Parts Supply staff, 12 are assigned to Fleet Service staff, 5 are assigned to Fleet Management administrative staff and 5 are lost. Information Technology and Facilities staff also have master keys that unlock the Parts rooms.

Installing electronic keypads on the three doors would allow room access to be more readily added or canceled and provide a record of who enters the Parts rooms. As well, installing cameras in the Parts rooms could further improve security without increasing staff.

- C. FASTER system access controls can be improved. Also, FASTER access changes are not documented and these records retained.

- Fleet staff believed that they were inactivating former employees in the FASTER system. However, upon testing we found that the method being used was not effective. Six former employees still had access to make changes to the Parts module, while another 36 had access to make other changes in the system. Even though the City network access required to use FASTER is separately controlled through Active Directory, access to the FASTER program should also be removed. A former employee's network access could be restored for another purpose, such as being hired for another position or becoming a volunteer. When there are access changes, they should be documented to create an audit trail. Further, FASTER access rights should be periodically reviewed, at least annually, to identify necessary changes.
- A generic administrator account with full system access is not assigned to a specific user. Neither Fleet staff nor the vendor were familiar with the account; they could not explain when or why it was created.
- Two Fleet technicians were granted access to make changes to the FASTER Parts inventory records while they worked on light duty in the Parts area. Although they are no longer on light duty, these staff still have read/write access to the Parts inventory records. User account access should be based on the least privilege principle, which means providing the least amount of system access needed to carry out assigned duties or functions.

Controls over system access rights are important for the reliability of FASTER data.

## Recommendations:

The Fleet Management Director should:

- A. Ensure the Equipment Parts Supervisor reviews all inventory discrepancies before adjustments are made and Parts staff retain all inventory count records. In addition, require Parts staff to properly dispose of obsolete parts and re-evaluate which parts need to be tracked in inventory considering their unit value.
- B. Install electronic keypads on the three Parts room doors and install security cameras in each storage room. Further, limit Parts room access to the Parts staff and necessary management.
- C. Improve FASTER system access by removing unnecessary system administrator accounts and tracking user access changes. Further, FASTER system access should be regularly reviewed to ensure former employees are deactivated and access is based on the least privilege principle.

## 2. Operational efficiency can be improved.

The Fleet department operates with a goal of maintaining or repairing vehicles within one day at least 70% of the time. Trying to meet this goal could potentially result in overstocking parts inventory. Additionally, the parts rooms are staffed inefficiently based on parts issuances and may be able to operate with fewer staff.

- A. The Fleet Department established an operational goal to achieve a one-day vehicle turnaround for 70% of repairs and maintenance. While some vehicles may be unique and critical, the City also has a large number of pickup trucks and passenger cars. Further, a limited number of back-ups are available for some critical vehicles, such as fire trucks, police cars and garbage trucks. Categorizing vehicles as essential versus non-essential and evaluating back-up options would help Fleet and the departments establish required maintenance and repair turnaround times, which then drive the parts needed.
- B. The Parts inventory has a low turnover ratio and individual product turn. The inventory turnover ratio shows how many times inventory is used and replaced during a given period. This ratio is one tool to help management make better inventory decisions; a low inventory turnover ratio indicates inventory is overstocked, resulting in higher holding costs.<sup>4</sup>

Over the last 4 years, Fleet's inventory turnover ratio ranged between 4.5 and 5.0 as shown in Table 5 on page 13. These ratios mean that Fleet has between 73 and 81 days of parts in inventory at any given time. Because Fleet receives many parts on the same day they are ordered or within a few days, holding almost 3 months of inventory unnecessarily increases the City's risk of loss or obsolescence and inventory holding costs.

*(continued on next page)*

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<sup>4</sup> Holding costs are the costs for the City to stock inventory items. Holding costs include the cost of items that become obsolete, inventory shrinkage, and other direct and indirect costs, such as staffing and storage space.

**Table 5. Inventory Turnover and Days of Inventory on Hand**

	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19 Est.*
Cost of parts used	\$2,842,401	\$2,752,415	\$3,346,828	\$3,639,411
Average inventory	\$622,013	\$607,809	\$671,932	\$774,434
<b>Inventory Turnover Ratio</b>	<b>4.6</b>	<b>4.5</b>	<b>5.0</b>	<b>4.7</b>
<b>Days of Inventory on Hand</b>	<b>79.9</b>	<b>80.6</b>	<b>73.3</b>	<b>77.7</b>

\*Estimated based on actual usage and inventory through February 2019.

SOURCE: Auditor analysis of FASTER inventory data.

Additionally, as of January 18, 2019, only about 0.1% of distinct parts have less than 30 days of inventory in stock. The majority, 89.6%, have between 3 months and 1 year of inventory in stock. Further, there are 51 distinct parts that have between 2 years and 13 years of stock on hand.

Days of Inventory	Parts	% of Total
< 30 Days	4	0.1%
30 to < 90 Days	72	1.9%
90 Days to < 1 Year	3,388	89.6%
1 to < 2 Years	265	7.0%
2 to 13 Years	51	1.4%
<b>Total</b>	<b>3,780</b>	<b>100.0%</b>

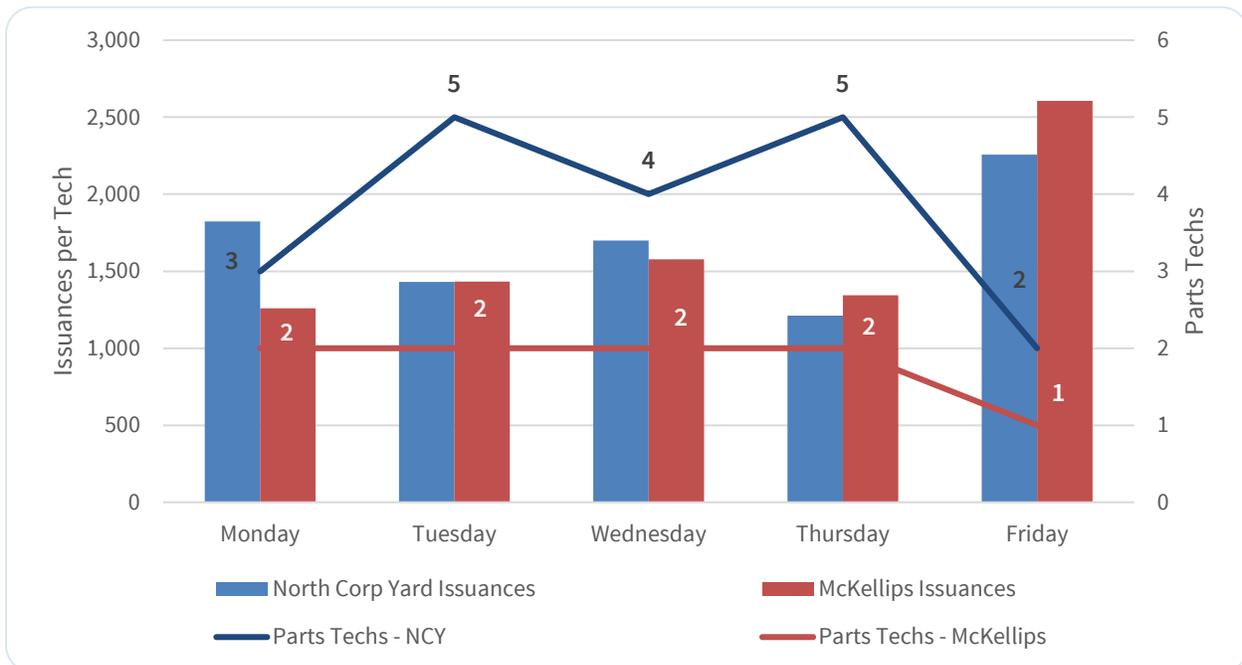
C. Parts staff are not scheduled efficiently and fewer staff may be operationally feasible.

The Parts rooms are open Monday through Friday 20 hours a day, and the Parts technicians work four 10-hour shifts each week.

- The Equipment Parts Supervisor stated he prefers two staff working together for internal controls and to perform cyclical inventory counts. However, while the North Corp Yard Parts room operates with one to three Parts technicians per shift, the McKellips Parts room has one Parts technician per shift. Further, McKellips is not staffed with a Parts technician on Friday afternoon, instead the Service crew chief and technicians get their own parts and leave a list of the parts that are used.
- The number of technicians on duty does not align with the volume of parts issued.

As shown in Figure 2 on page 14, the number of parts issued per Parts technician varies depending on the day of the week. The highest total parts issued at the North Corp Yard Parts room occurs on Tuesday, Wednesday, and Thursday, and 4 to 5 staff are scheduled on those days. In contrast, only 2 to 3 staff work on Mondays and Fridays and their per-person workload is notably higher.

**Figure 3. Parts Staffing vs. Issuances Per Technician by Day of Week, FY 2017-18**



Parts Issued FY 2017/18	Monday	Tuesday	Wednesday	Thursday	Friday
<b>North Corp Yard Issuances</b>	<b>5,470</b>	<b>7,157</b>	<b>6,800</b>	<b>6,062</b>	<b>4,513</b>
Number of Parts Technicians	3	5	4	5	2
Average Issuances per Parts Technician	1,823	1,431	1,700	1,212	2,257
<b>McKellips Issuances</b>	<b>2,518</b>	<b>2,864</b>	<b>3,156</b>	<b>2,690</b>	<b>2,606</b>
Number of Parts Technicians	2	2	2	2	1
Average Issuances per Parts Technician	1,259	1,432	1,578	1,345	2,606
<b>Total Parts Issued</b>	<b>7,988</b>	<b>10,021</b>	<b>9,956</b>	<b>8,752</b>	<b>7,119</b>

**SOURCE:** Auditor analysis of FASTER parts issuance data and staff schedules.

- Some shifts receive little or no supervision. Like the rest of the Parts staff, the supervisor works four 10-hour days. As a result, supervisory support is not available one day a week. Further, the supervisor works an early shift and overlaps for only 30 minutes with the evening shift on those four days a week. Different scheduling would provide more balanced supervisory support and direction for all Parts room shifts.

With more cost-efficient inventory management and improved controls, staffing could be adjusted without negatively impacting asset control.

*(continued on next page)*

## Recommendations:

The Fleet Management Director should:

- A. Re-evaluate the current performance measure considering the context of inventory carrying costs. Specifically, work with departments to categorize vehicles as either essential or non-essential and determine backup availability to establish service turnaround requirements.
- B. Re-evaluate the Parts inventory according to the need-driven vehicle turnaround priorities, item turnover rates and parts delivery lead-times. Identify high-priority items that require long lead-times or are for essential vehicles to determine which items are kept in stock.
- C. Adjust the Parts room schedule to align with the volume of parts issued and provide for balanced supervisory time for the staff on each shift.



## MANAGEMENT ACTION PLAN

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### 1. Inventory controls are not effective to safeguard the fleet parts inventory.

#### Recommendations:

The Fleet Management Director should:

- A. Ensure the Equipment Parts Supervisor reviews all inventory discrepancies before adjustments are made and Parts staff retain all inventory count records. In addition, require Parts staff to properly dispose of obsolete parts and re-evaluate which parts need to be tracked in inventory, considering their unit value.
- B. Install electronic keypads on the three Parts room doors and install security cameras in each storage room. Further, limit Parts room access to the Parts staff and necessary management.
- C. Improve FASTER system access by removing unnecessary system administrator accounts and tracking user access changes. Further, FASTER system access should be regularly reviewed to ensure former employees are deactivated, and access is based on the least privilege principle

**MANAGEMENT RESPONSE:** Agree

#### PROPOSED RESOLUTION:

- A. The Equipment Parts Supervisor will review and validate discrepancies resulting from cycle counts. Parts personnel conducting the count and Parts Supervisor will each sign cycle count sheets and retain sheets as a scanned document in computer folder. Obsolete parts will be verified and removed from inventory starting with the oldest stagnant parts.
- B. Fleet Director will request Facilities Management to install keypads on all parts room access doors. Fleet Director will evaluate the effectiveness of cameras in conjunction with IT, Facilities and the Police Department. If feasibility and effectiveness can be established, Fleet Director will work with involved parties to install cameras and develop management procedures for their use.
- C. Fleet Director will ensure unnecessary administrator accounts for FASTER are removed. Fleet Director will establish procedures to track FASTER user changes and implement appropriate access reviews.

**RESPONSIBLE PARTY:** Fleet Director

**COMPLETED BY:** 6/30/2020

### 2. Operational efficiency can be improved.

#### Recommendations:

The Fleet Management Director should:

- A. Re-evaluate the current performance measure considering the context of inventory carrying costs. Specifically, work with departments to categorize vehicles as either essential or non-essential and determine backup availability to establish service turnaround requirements.

- B. Re-evaluate the Parts inventory according to the need-driven vehicle turnaround priorities, item turnover rates and parts delivery lead-times. Identify high-priority items that require long lead-times or are for essential vehicles to determine which items are kept in stock.
- C. Adjust the Parts room schedule to align with the volume of parts issued and provide for balanced supervisory time for the staff on each shift.

**MANAGEMENT RESPONSE:** Agree

**PROPOSED RESOLUTION:**

- A. Fleet Director will investigate and quantify the impact of the 70% one-day turnaround goal on parts stockage. Fleet Director will then use these parts stockage impacts as one of the criteria in reevaluating and possibly adjusting the 70% one-day turnaround goal.
- B. Fleet Director will reevaluate the parts inventory taking into consideration inventory turns and lead times, and where practical work towards achieving a near just-in-time (JIT) inventory approach. Fleet Director will develop and deploy preventative maintenance inventory requirement reports to facilitate JIT parts ordering.
- C. Fleet Director will reevaluate staffing levels for each shift and each location and balance the work force appropriately in order to most efficiently handle parts issuing responsibilities as well as other responsibilities of parts personnel. Staffing will also ensure, to the extent possible, appropriate supervision and separation of duties in accordance with accepted standards.

**RESPONSIBLE PARTY:** Fleet Director

**COMPLETED BY:** 6/30/2020



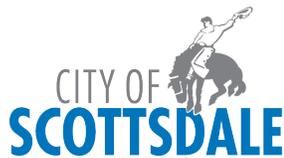
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