The Corporation of the City of Windsor
Inventory Control and Lifecycle Management

Internal Audit Report

31 August 2017

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Summary of Internal Audit Results

Background Information

The Corporation of the City of Windsor ("the City") manages a wide variety, in terms of characteristics, of inventory throughout its different operations. The spectrum of inventory ranges from de-icing salt to large and heavy equipment required for intensive projects conducted by the City.

The major operational areas of the City that handle inventory are Public Works, Traffic Operations, Parks, Recreation & Culture and Facilities.

The purchase of inventory is done both on a centralized and decentralized basis depending on the nature of the inventory and the operational area requiring it. A centralized purchase would involve the Purchasing Department placing orders for inventory for a number of areas while a decentralized purchase would involve the site Supervisor or individual employees purchasing the inventory for their area. The inventory purchases are charged to each department's budget on the PeopleSoft system.

Each operational area has its own informal tailored procedures and controls around inventory in terms of handling, storage, assignment, and usage. Each area has considered physical security around inventory storage in the form of physical locks, swipe card access, and security cameras.

The inventory is monitored individually by each site Supervisor. The process includes tracking through a spreadsheet, monitoring of use and assignment through work orders from Facilities360 system or manual work sheets prepared by employees, and periodic spot checks.

While decommissioning, the inventory is segregated and held until it is scrapped or, if possible, sold by an auction through a centralized channel.

The three operational areas subject to review are: Traffic Engineering, Parks, and Facilities. In considering which operational areas to focus, the criteria included, but not limited to the following:

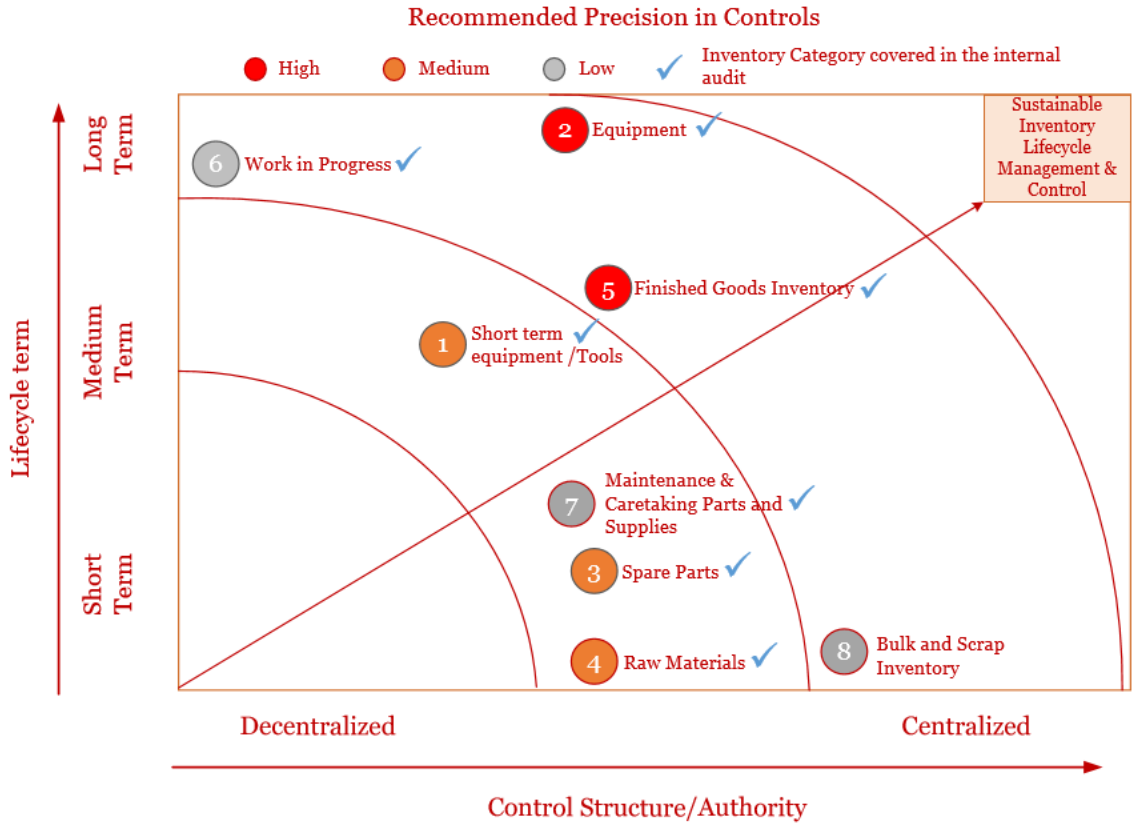
- Quantity and nature of inventory held;
- Locations that have not been previously reviewed by management;
- Recent Inventory related issues (if applicable); and
- Locations where Inventory is accessible to a high number of employees.

The major categories of inventory we considered throughout this internal audit were: Equipment, Short Term Equipment/Tools, Caretaking & Maintenance Parts and Supplies, Raw Materials, Purchased Devices, Finished Goods, and Work in Progress Inventory. Additional details for the characteristics of these categories are provided in Appendix C.

As part of assessing the design of the City's inventory lifecycle and management control processes, internal audit obtained an understanding of the three operational areas which handle inventory and assessed the current state of control design against specified control objectives.

To assist the City in aligning its inventory control practices to the in-scope control objectives, the following Inventory Controls Framework is provided which considers the nature of inventory in terms of a particular inventory category's i) life cycle term, ii) control authority/structure. Understanding that controls can be applied at varying levels of precision to detect or correct anomalies, Internal Audit has provided a view on the potential precision needed for controls across eight inventory categories common to many operational areas.

The following Inventory Control Framework is only a guide to understanding the inventory control characteristics or criteria for designing adequate controls that consider cost/benefit to the City:



A legend describing the elements of the Inventory Controls Framework is provided in Appendix C. Appendix C provides further details as to some example controls which the City may consider to implement in the eight categories depicted on the diagram above.

This internal audit resulted in five (5) findings in the five (5) objectives that we assessed throughout fieldwork which are noted in the "Report Classification" below.

Scope and Internal Audit Objectives

In conducting this internal audit, we considered the process and control mechanisms management has in effect to achieve the following control objectives:

Policies and Procedures (All stages of inventory lifecycle - Acquiring, Processing, and Output)

- Documented procedures and policies surrounding inventory control exist.
- Policies and Procedures are adhered to across all operational areas.

Physical Security over Inventory (Processing)

- Inventory is stored in a manner to reduce risk of loss, theft, abuse or damage.

Inventory Movement and Tracking (Processing and Output)

- Inventory quantities are complete, accurate, valid, and recorded in the proper period.
- Purchases are accurate, authorized, and appropriate.

Inventory Reconciliations and Monitoring (Processing and Output)

- Reconciliations are performed to minimize risk of misappropriation of inventory.

Segregation of Duties over Inventory Handling (Acquiring)

- Adequate segregation of duties does exist between personnel with inventory custodial responsibilities.

We considered the controls in effect for management of inventory reported between January 2016 and December 2016.

Scope Exclusions

The following areas were not included within the scope of this internal audit:

- Parts and supplies that are purchased for immediate use and which do not enter the inventory management process/system (i.e. gasoline);
- Shop supplies (e.g. paint, or minor parts (nuts/bolts));
- IT environment and IT general controls (i.e. Fleet Focus);
- Valuation/measurement of inventory for accounting purposes (i.e. write-offs for obsolete); and
- System interfaces (i.e. between PeopleSoft and Fleet Focus)

Linkage to the Internal Audit Plan

The review of Inventory Control and Lifecycle Management for three operational areas is part of the risk based 2016-2017 City of Windsor Internal Audit Risk Assessment and Plan approved by the Executive Committee of Council on May 30, 2016. As part of the Internal Audit Plan development, the process areas and controls are associated with mitigating and managing the following corporate risks: Substandard Service Delivery, Service Failure, Compliance, Vandalism, Accounting & Reporting, and Fraud & Corruption.

Report Classification

Upon comparing with other comparative organizations, it was noted that it was not uncommon for there to be no overarching publically available policy implemented specifically for inventory lifecycle management and control. Hence, even though there were no issues found, the recommendations in this report are to improve controls and reduce the possibilities of issues such as fraud or unauthorized uses of inventory.

Though the City has not implemented an overarching policy, there are a suite of other policies that give guidance to employees regarding handling and the appropriate use of inventory. (Purchasing Manual, Accounts Payable Approvals, Code of Ethics, and Fraud Policy).

This internal audit was requested by Administration in order to highlight the importance of internal controls and recommendations for implementing more standardized processes around inventory.

For the scope period, between January 1, 2016 and December 31, 2016, management has designed and implemented controls in areas of inventory of management.

Control Environment

Roles and Responsibilities, Minimum Standards, Monitoring and Approval Procedures, Handling Procedures, and Reference to other Applicable Procedures are not captured in any overarching policies or procedures at departmental levels. Internal Audit noted that there is no defined owner for the development of inventory policies and procedures.

Area owners and site Supervisors, in particular, are responsible for inventory control at their respective sites. The Supervisors implement various procedures to be followed by employees handling inventory.

As of January 1, 2017, the Parks and Facilities areas were consolidated under one department with Recreation & Culture, thus requiring common systems to be put in place for managing inventory across this new consolidated area which holds a significant amount of the inventory for the City.

Risk Assessment

The City performed a Fraud Risk Assessment exercise in December 2015 which considered the following inventory related risks:

- City owned equipment, tools, supplies, or any kind of inventory are used for personal purposes; and
- Assets with revenue generating potential are sold for personal gains.

The outcomes of our review indicated that these risks faced by the City through its operations, were not addressed fully. In areas where implementing activities/controls are not possible, the risks related to loss of inventory have not been quantified to a potential level and accepted by the City.

Control Activities

With the absence of a formal set of policies and procedures, each area has implemented various informal controls in place over the management of inventory.

There were inconsistencies in the practices surrounding storing and sharing information regarding inventory held across the sampled areas. Only, some areas store and maintain accurate data relating to inventory which is available to all appropriate levels of management while other areas seemed to be lacking in this regard.

There were inconsistent practices regarding segregation of duties over the Inventory Lifecycle phases across the sampled areas.

Decentralized purchases of inventory by employees were reviewed periodically by the respective site Supervisor for reasonableness of the purchase, while more centralized purchasing activities were segregated

between purchaser and user of the inventory. While storage and handling activities are not segregated owing to operational factors, the Supervisors are responsible for assigning inventory to be used and monitors return of inventory to storage.

Two of the three operational areas had limited or infrequent controls over documentation and tracking of inventory during acquisition and processing stage which results in loss of oversight over the amount of inventory held. There were some areas where tracking was not feasible, in which case, management had implemented compensating controls which they believe mitigate the risks to acceptable levels, such controls include: adequate levels of physical security to safeguard the inventory with the exception of one site visited at one area, organized storage of inventory to minimize misplacements, and Supervisor oversight over daily movement of inventory.

Information and Communication

In terms of formal flow of information regarding practices to be adopted, the Supervisors are responsible for communicated expectations and responsibilities to inventory handling employees on a site by site basis.

Considering that an acceptable level of risk owing to inventory loss has not been set in addition to no central governance by the City, the Operational Areas have no formal communication channels to provide information or escalate issues to the City pertaining to events of inventory loss.

Monitoring

Site Supervisors are in charge of maintaining the inventory held at their sites under the different operational areas. They are responsible for monitoring stock levels, reviewing the daily assignment and use of inventory, and repurchasing of inventory when stock is deemed to be low.

Owing to the nature of its inventory, one area performs documented inventory counts against the financial records maintained within the City's centralized accounting system, PeopleSoft, while some areas rely on daily monitoring and physical security to keep account of the inventory.

However, there were areas and categories of inventory in which monitoring controls were not implemented consistently or the control precision levels had not been defined.

Based on the controls identified and assessed for design as part of the internal audit of the City's inventory handling processes, we have determined that there is reasonable evidence to indicate that:

	No or limited scope improvement	No major concerns noted	Cause for concern	Cause for considerable concern
For the objectives related to **Policy Development and Implementation**				
Controls over the process are designed in such a manner that there are:			✓	
For the objectives related to **Policy Compliance and Awareness**				
Controls over the process are designed in such a manner that there are:			✓	
For the objectives related to **Physical Security over Inventory**				
Controls over the process are designed in such a manner that there are:	✓			

For the objectives related to **Inventory Movement and Tracking**				
Controls over the process are designed in such a manner that there are:		✓		
For the objectives related to **Inventory Reconciliations and Monitoring**				
Controls over the process are designed in such a manner that there are:		✓		
For the objectives related to **Segregation of Duties over Inventory Handling**				
Controls over the process are designed in such a manner that there are:		✓		

The City might incur additional costs and require resources in order to implement, monitor and maintain the controls recommended in this report.

Management has provided comprehensive action plans, which we believe will address the deficiencies noted.

Summary of Positive Themes

Physical Security over Inventory

- Each of the selected areas maintained adequate physical security around inventory storage locations in the form of restricted access by swipe cards, physical locks, and security cameras to monitor the premises.

Inventory Movement and Tracking

- Operational areas which were part of our sample had an organized storage of inventory by category. This makes it easier to keep track of stock level and avoid misplacements of inventory.

Inventory Reconciliations and Monitoring

- Each operational area had put into place either formal or informal methods of tracking individual categories of inventory. Formal processes include tracking sheets which document daily use of inventory, while informal methods would include spot checks to monitor stock levels.

Segregation of Duties over Inventory Handling

- Certain decommissioned inventory items are sold off by auction through a centralized channel.

Summary of Findings

Finding #	Topic	Rating[1]			Management Action Plan
		Significant	Moderate	Low	
1a)Policy Development 1b)Policy Compliance and Awareness					
1	**Define overarching Policies for Inventory Control** (Design Effectiveness)	X			Administration will begin consolidating departmental information on existing inventory procedures and activities, as well as researching best practices of other municipalities in 2017, and would expect to have a draft policy developed in 2018.
2)Physical Security over Inventory					
2	**Define Physical Security Requirements around Inventory Storage Locations** (Design Effectiveness)			X	Administration will consider a review of which areas and inventory categories require formal security in addition to other physical and logical controls, and submit requests for security cameras under the 2018 Capital Budget.
3)Inventory Movement and Tracking					
3	**Define Consistent Tracking Protocols for Inventory across Operational Areas** (Design Effectiveness)		X		Administration will consider an applicable inventory control procedure in order to track assets including addition/deletion and location; and continue to track inventory from delivery to when it is put into use and removed from inventory.
4)Inventory Reconciliations and Monitoring					
4	**Implement Inventory Monitoring Program across Operational Areas** (Design Effectiveness)		X		Administration will consider an inventory tracking program on a periodic basis for inventory used on a general basis.
5)Segregation of Duties over Inventory Handling					
5	**Segregate Incompatible Activities in Inventory Lifecycle phases** (Design Effectiveness)		X		Current practices will be reviewed and new protocols and procedures will be developed and implemented surrounding the segregation of functions and requisite pre-approvals/approvals for the purchase, use, and safeguarding of equipment, tools and supplies.
Total Audit Findings		**1**	**3**	**1**	

1 See Appendix A for Basis of Finding Rating and Report Classification

Summary of Significant Findings

Policies and Procedures

- There are no policies and procedures in place that govern the handling of inventory at the City and its operations. This results in a risk that controls and processes are not efficient, effective or consistently applied across operational areas. Specific guidance should be developed and shared with each area on handling different categories of inventory and on controls for safeguarding of the inventory.

Management Comments

Management agrees with the findings within this report and more specifically with the requirement for a single corporate policy to be put in place that governs the handling of inventory across the City and its operations. Notwithstanding these findings the audit has noted several positive themes including adequate physical security around inventory storage, an organized storage of inventory by category, formal and informal methods of tracking individual categories of inventory, and a segregation of duties over inventory handling. Management concurs that a corporate wide inventory policy will guide departmental inventory procedures and strengthen the City's internal control environment. Detailed Management Action Plans and timelines to address the various matters identified within the report are presented below.

Name: Joseph Mancina

Title: CFO & City Treasurer

Date: August 30, 2017

Detailed Observations

1. Define Overarching Policies for Inventory Control *(Design Effectiveness)*			**Overall Rating:** Significant
Impact:	High	**Likelihood:**	Likely

Observation:
The City does not have an overarching inventory policy which documents the following:

- The specific criteria to be used to define "inventory";
- Defined categories of inventory along with their unique characteristics for classification;
- Assessing minimum desired common controls to be implemented across operational areas for different inventory categories;
- Criteria for assessing common controls and levels of risk associated with each inventory category; and
- Assigning ownership of controls implementation and monitoring, either central or departmental.

Implication:

- Lack of guidance and mandate for operational areas to develop procedures for inventory control.
- No formal accountability is assigned in the event of inventory loss due to fraud, theft, or misuse.

Possible root cause:
Common procedures, with minimum standards of adherence, have not been defined to be applied across operational areas over different inventory categories.

Recommendation:
Develop and implement a City-wide formal set of policies to address:

- Major phases of an inventory lifecycle for items that meet set criteria, i.e., high risk inventory:
  a) *Acquisition* of inventory through purchasing, acquiring, or through creating a replacement*;*
  b) *Processing* activities such as safeguarding inventory and monitoring use; and
  c) *Output* of inventory as they are relieved from storage and subsequently replenished.
- Degree of precision required for controls around different categories of inventory; and
- Guidance requirement for individual operational areas to develop and implement their own procedures to address the risks associated with the nature of their operations and categories of inventory. The procedures should include planning and monitoring activities while assigning responsibilities to these activities.

Once formal procedures have been developed, a designee, either on a departmental or a central level, should perform frequent spot checks to assess the formal controls are in place over the categories of inventory as specified. Please refer to Appendix C: Example Inventory Control Framework for guidance on different controls that can be considered for each inventory category.

Management Action Plan

Action Plan: Management agrees with the findings and recommendations. Administration agrees that creating a broad overarching inventory policy which will guide departmental inventory procedures would benefit the City's internal control environment. Administration will begin consolidating departmental information on existing inventory procedures and activities, as well as researching best practices of other municipalities in 2017, and would expect to have a draft policy developed in 2018.	**Responsible Party:**	Deputy Treasurer – Financial Accounting
	Due Date:	Q4 2018

The following findings were noted from testing and observing controls around inventory at the sampled operational areas and are linked to finding #1 in that the root cause of the following findings can be addressed by developing formal inventory control policies:

2. Define Physical Security Requirements around Inventory Storage Locations - Parks and Facilities *(Design Effectiveness)*			**Overall Rating:** Low
Impact:	Low	**Likelihood:**	Likely
Observation: Physical security measures considered by the management over inventory comprise of physical locks / swipe cards resulting in restricted access, and security cameras. Minimum standards for how inventory should be secured have not been defined which has resulted in inconsistencies in our observations across the three sampled areas. Following is a brief observation for each area: ● All security measures stated above were in place at one sampled area (Traffic). ● For one sampled area (Parks); two out of three sites visited did not have security cameras overlooking the inventory storage locations. However, the storage area had physical locks, and we were informed that only the Supervisor had keys to the locks. ● For the last sampled area (Facilities), the one site visited did not have any security measures in place in the area where inventory was stored. We were informed that the storage room led to an emergency exit and thus was not locked.			
Implication: Lack of deterrent to misappropriation of inventory.			
Possible root cause: Common procedures for inventory control have not been defined to be applied consistently.			
Recommendation: ● The City should evaluate which areas and inventory categories require formal security in addition to other physical and logical security controls. *(Please refer to Finding #1)* ● The City should perform a cost-benefit analysis of adding a security camera, and document the considerations leading to a decision.			
Management Action Plan			
Action Plan: Management agrees with the findings and recommendations. Concurrent with the development of a policy for inventory control, Administration will consider a review of which areas and inventory categories require formal security in addition to other physical and logical controls. Parks Department & Facilities will submit requests for the provision for and installation of security cameras in appropriate worksites for Council consideration under the 2018 Capital Budget Process.		**Responsible Party:** **Due Date:**	Manager of Parks Operations and Senior Manager of Facilities Q4 2018

3. Define Consistent Tracking Protocols for Inventory *(Design Effectiveness)*			**Overall Rating:** Moderate
Impact:	Medium	**Likelihood:**	Likely

Observation:
Site Supervisors monitor quantities and track movement of inventory through documented processes and physical observation. One out of three sampled areas (Parks) had documentation or mitigating controls around the quantity, movement, and use for the different categories of inventory held. This area uses an inventory tracking sheet to record major items that lists specific information such as serial numbers, date of purchase, and a department specific tracking number. In instances where formal tracking is not feasible (due to nature and quantity of inventory), this site has implemented processes where the Supervisor manually assigns inventory for day-to-day activities.

One of the other two areas (Traffic) have a tracking spreadsheet for one (Finished Goods - Traffic Signals) inventory category which is updated periodically by reconciling daily work sheets that document the quantity of inventory used. It also documents the movements for one (Finished Goods - Parking Meters) other inventory categories through daily work sheets that are filled out by work crews. Despite this, the quantities of these inventory items on hand are not tracked nor known. In addition, in one other category (Raw Materials), the use of Inventory, is not tracked nor is the quantity on hand known.

The other sampled area (Facilities) had no documentation around the quantity nor movement of inventory for the different inventory categories, which results in no oversight as to the quantity nor the use of the inventory held.

Implication:
Misuse and misappropriation of inventory might go unnoticed for an extended period of time.

Possible root cause:
Common procedures for inventory control have not been defined to be applied consistently.

Recommendation:
Once policies regarding inventory control are designed and implemented, the City should assess the different categories of inventory which are feasible to track. Subsequently, the City should implement consistent tracking procedures for similar categories of inventory across or within operational areas, while assigning owners of this process at a site level and on a more centralized level.

Management Action Plan

Action Plan: Management agrees with the findings and recommendations. Facilities will consider an applicable inventory control procedure in order to track assets including addition/deletion and location. Traffic Signals tracks all inventory from delivery to when it is put into use and removed from inventory. A recruitment for the Sign Writer position will be completed by late 2017. The duty of tracking raw materials, finished products, etc. is included as part of the duties of this position. Formal documentation will be put in place and updated monthly at minimum. Traffic Markings – Paint – inventory spreadsheet to check quantities will be implemented and tracked weekly; Parking – Meters – tracking of the revolving meter maintenance stock will be done through a spreadsheet and monthly counts.	**Responsible Party:**	Senior Manager, Facilities Senior Manager, Traffic Operations & Transportation Planning
	Due Date:	Q3 2018

4. Implement Inventory Monitoring Program across Operational Areas - Public Works - Traffic, Parks, and Facilities *(Design Effectiveness)*			**Overall Rating:** Moderate
Impact:	Likely	**Likelihood:**	Medium
Observation: Inventory counts and reconciliations allow management to attain comfort over the levels of inventory periodically. It also helps in identification of trends in shrinkages and shortages, and to take measures to correct identified issues. Based on our observations, we have noted the following in the sampled areas: One out of three sampled areas (Parking/Traffic) had implemented a documented process of periodic inventory counts against the financial records and the inventory tracking sheet for one (Finished Goods - Traffic Signals) category of its inventory. It was noted that this process was not applied to other inventory categories (Raw Materials and Finished Good - Parking Meters) held within this area. The other two sampled areas (Parks and Facilities) did not have any documented procedures to perform physical counts of inventory on a periodic basis.			
Implication: Inventory shrinkage will not be identified and acted upon on a timely manner.			
Possible root cause: Consistent monitoring procedures have not been designed for inventory categories within operational areas.			
Recommendation: Once formal policies for inventory control which outline minimum standards have been developed, management should assess different categories of inventory across the operational areas which are feasible to physically count. Subsequently, management should implement consistent monitoring procedures over the different inventory categories, based on the assessment, with documented results. An owner of this procedure at each site should also be assigned. *(Please refer to Appendix C for a guideline on possible controls to be implemented).*			
Management Action Plan			
Action Plan: Management agrees with the findings and recommendations. a) Parks Operations will consider an inventory tracking program on a periodic basis (pre-summer and post-summer and monthly) for inventory of hand tools and other assets used on a general basis. In-out items such as seed, fertilizers and bagged salts which are normally ordered for a specific job or project will not be covered under this program; b) Facilities will consider an inventory tracking program for a semi-annual inventory of assets, e.g., tools, used on a general basis. Items ordered for specific buildings or jobs such as caretaking equipment and supplies will not be part of this program. c) The Traffic area will complete a monthly physical count for meters, signs and paint.		**Responsible Party:** **Due Date:**	a) Manager of Parks Operations b) Senior Manager, Facilities c) Senior Manager, Traffic Operations & Transportation Planning Q3 2018

5. Segregate Incompatible Activities in Inventory Lifecycle phases - Public Works - Traffic, Parks, and Facilities *(Design Effectiveness)*			**Overall Rating: Moderate**
Impact:	Moderate	**Likelihood:**	Likely
Observation: Segregation of duties is an important consideration across inventory acquisition, storage, use, and subsequent disposals to minimize the risk of loss. Examples of segregation of duties concepts being applied to two out of the three sampled areas (Traffic and Parks) are as follows: • The purchasing for one category in each area (Finished Goods and Equipment) is done by a single site Supervisor, who receive requests from other employees within the department. • The custodial responsibilities and usage are segregated through Supervisors solely having access to the Inventory and their monitoring through worksheets and daily assignments of Inventory. • Decommissioned Inventory is sold off through an auction through the Purchasing department or is sold as scrap to a third party, which is initiated and monitored by the site Supervisor. One area (Facilities) did not properly segregate incompatible functions or implement compensating controls for Inventory categories as required. Two areas (Facilities and Parks) allow employees to purchase and use Inventory (Short term Equipment/Tools, and Maintenance & Caretaking Parts and Supplies), with subsequent reviews over purchases done by site Supervisors.			
Implication: Increased risks of misappropriation and unauthorized use of inventory.			
Possible root cause: Consistent inventory control procedures are not implemented across all sites.			
Recommendation: • The City should assess the different activities that relate to different categories of inventory to identify incompatible activities and levels of risk. • Where feasible, the City should segregate functions over approval of purchases, receipt, and handling of inventory. • Where not feasible to segregate activities, management should document the considerations leading to the decision and implement compensating controls over activities in the different phases of inventory lifecycle to gain comfort over the assessed level of risks.			
Management Action Plan			
Action Plan: Management agrees with the findings and recommendations. The current practices will be reviewed and new protocols and procedures will be developed and implemented to ensure the segregation of functions and requisite pre-approvals/approvals for the purchase, use, and safeguarding of equipment, tools and supplies.		**Responsible Party:**	Manager of Parks Operations Senior Manager of Facilities/Manager of Parks & Facilities Assets & Projects
		Due Date:	Q4 2018

Considerations for Improvement

The following are other considerations which are not high in priority but can enhance the controls such as they are currently designed.

1. Keep track of warranties for eligible categories of inventory - Facilities
Observation: Manufacturer's warranty for purchased equipment inventory is not tracked. This might result in a lost opportunity to replace/repair an item free of cost in the event it malfunctions.
Recommendation: Keep track of warranties for all eligible categories of inventory to provide cost benefits to the City while replacing/repairing such inventory. This could be implemented within the inventory tracking sheet which would also track the warranty status of different inventory items.

2. Other Long term Considerations - Public Works-Traffic, Parks, and Facilities
Observation: Scope for added cost savings are available in terms of a more centralized and automated Inventory controls.
Recommendations: The City should perform a cost benefit analysis with a view of long term effects of implementing centralized and automated control mechanisms in regards to Inventory. All costs around inventory handling, including materials handling should be considered in this analysis to get more accurate results for decision making. While less costly control mechanisms would suffice to mitigate risk to an acceptable level, there are greater efficiencies that can be attained by the following: For automated controls, the City can consider implementing a new Inventory System or incorporating inventory items not tracked currently into its existing systems such as Facilities360 or FleetFocus to enable Inventory tracking through a work order system. Centralized controls would allow the City to gain cost efficiencies in terms of purchasing common Inventory that is held across different areas. Where feasible, the City can implement centralized purchasing and storage. This will allow cost savings both while purchasing and storing these Inventory.

Appendix A: Basis of Findings Rating and Report Classification

Findings Rating Matrix

Audit Findings Rating		Impact		
		Low	Medium	High
Likelihood	Highly Likely	Moderate	Significant	Significant
	Likely	Low	Moderate	Significant
	Unlikely	Low	Low	Moderate

Likelihood Consideration

Rating	Description
Highly Likely	· History of regular occurrence of the event. · The event is expected to occur in most circumstances.
Likely	· History of occasional occurrence of the event. · The event could occur at some time.
Unlikely	· History of no or seldom occurrence of the event. · The event may occur only in exceptional circumstances.

Impact Consideration

Rating	Basis	Description
HIGH	Dollar Value[2]	Financial impact likely to exceed $250,000 in terms of direct loss or opportunity cost.
	Judgmental Assessment	**Internal Control** Significant control weaknesses, which would lead to financial or fraud loss. **An issue that requires a significant amount of senior management/board effort to manage such as:** · Failure to meet key strategic objectives/major impact on strategy and objectives. · Loss of ability to sustain ongoing operations: - Loss of key competitive advantage/opportunity - Loss of supply of key process inputs · A major reputational sensitivity e.g., market share, earnings per share, credibility with stakeholders, and brand name/reputation building. **Legal/Regulatory** Large scale action, major breach of legislation with very significant financial or reputational consequences.
MEDIUM	Dollar Value	Financial impact likely to be between $75,000 to $250,000 in terms of direct loss or opportunity cost.
	Judgmental Assessment	**Internal Control** Control weaknesses, which could result in potential loss resulting from inefficiencies, wastage, and cumbersome workflow procedures. **An issue that requires some amount of senior management/board effort to manage such as**: · No material or moderate impact on strategy and objectives. · Disruption to normal operation with a limited effect on achievement of corporate strategy and objectives. · Moderate reputational sensitivity. **Legal/Regulatory** Regulatory breach with material financial consequences including fines.
LOW	Dollar Value	Financial impact likely to be less than $75,000 in terms of direct loss or opportunity cost.
	Judgmental Assessment	**Internal Control** Control weaknesses, which could result in potential insignificant loss resulting from workflow and operational inefficiencies. **An issue that requires no or minimal amount of senior management/board effort to manage such as:** · Minimal impact on strategy. · Disruption to normal operations with no effect on achievement of corporate strategy and objectives. · Minimal reputational sensitivity. **Legal/Regulatory** Regulatory breach with minimal consequences.

[2] Dollar value amounts are agreed with the client prior to execution of fieldwork.

Audit Report Classification

Report Classification	The Internal Audit identified one or more of the following:
Cause for considerable concern	• Significant control design improvements identified to ensure that risk of material loss is minimized and functional objectives are met. • An unacceptable number of controls (including a selection of both significant and minor) identified as not operating for which sufficient mitigating back-up controls could not be identified. • Material losses have occurred as a result of control environment deficiencies. • Instances of fraud or significant contravention of corporate policy detected. • No action taken on previous significant audit findings to resolve the item on a timely basis.
Cause for concern	• Control design improvements identified to ensure that risk of material loss is minimized and functional objectives are met. • A number of significant controls identified as not operating for which sufficient mitigating back-up controls could not be identified. • Losses have occurred as a result of control environment deficiencies. • Little action taken on previous significant audit findings to resolve the item on a timely basis.
No major concerns noted	• Control design improvements identified, however, the risk of loss is immaterial. • Isolated or "one-off" significant controls identified as not operating for which sufficient mitigating back-up controls could not be identified. • Numerous instances of minor controls not operating for which sufficient mitigating back-up controls could not be identified. • Some previous significant audit action items have not been resolved on a timely basis.
No or limited scope for improvement	• No control design improvements identified. • Only minor instances of controls identified as not operating which have mitigating back-up controls, or the risk of loss is immaterial. • All previous significant audit action items have been closed.

Appendix B: Limitations and Responsibilities

Limitations inherent to the Internal Auditor's work

We have undertaken the review of Inventory Control and Lifecycle Management of three operational areas, subject to the limitations outlined below.

Internal control

Internal control systems, no matter how well designed and operated, are affected by inherent limitations. These include the possibility of poor judgment in decision-making, human error, control processes being deliberately circumvented by employees and others, management overriding controls, and the occurrence of unforeseeable circumstances.

Future periods

Our assessment of controls is for the period specified only. Historic evaluation of effectiveness is not relevant to future periods due to the risk that:

- the design of controls may become inadequate because of changes in operating environment, law, regulation or other; or
- the degree of compliance with policies and procedures may deteriorate.

Responsibilities of Management and Internal Auditors

It is management's responsibility to develop and maintain sound systems of risk management, internal control and governance and for the prevention and detection of irregularities and fraud. Internal audit work should not be seen as a substitute for management's responsibilities for the design and operation of these systems.

We endeavour to plan our work so that we have a reasonable expectation of detecting significant control weaknesses and, if detected, we shall carry out additional work directed towards identification of consequent fraud or other irregularities. However, internal audit procedures alone, even when carried out with due professional care, do not guarantee that fraud will be detected.

Accordingly, our examinations as Internal Auditors should not be relied upon solely to disclose fraud, defalcations or other irregularities which may exist.

Appendix C: Example Inventory Control Framework

This section provides additional details to the Inventory Controls Framework Diagram from the Summary of Internal Audit Results. The table, for example, Inventory Controls below is aimed to assist the City in developing Inventory Control systems and processes.

The eight inventory categories mapped to the Framework include:

(A) **Sr. No**	(B) **Broad Category of Inventory**	(C) ***Example of Inventory Types***
1	Short term equipment/Tools	Spades, shovels, hammers, rakes, screwdrivers, hammers, screws, wrenches
2	Equipment	Chainsaws, hedge trimmers, lawn mowers, weed whackers, tractors, trailers, paint sprayers, floor scrubbers, air compressors
3	Spare Parts	Air filters, timing belts, spark plugs, diodes, logic chips, motherboards, relays, controller cabinet shells, LED signal housing, signal poles, internal components of equipment and automated tools, replacement parts for equipment
4	Raw Materials	Plywood, aluminum sheets, vinyl, washers
5	Finished Goods Inventory	Autoscope cameras, LED signals, controller cabinets, traffic signal poles, parking meters, pay and display machines, and signs
6	Work in progress (internally generated inventory)	Trees, partially completed signs
7	Maintenance & Caretaking Parts and Supplies	Paper towels, window cleaners, all-purpose cleaners, air filters, bulbs, replacement belts, chains
8	Bulk and Scrap Inventory	Paint, salt, fertilizer, seeds, nuts, bolts, washers, decommissioned signs and other equipment

Following is a brief description of the three criteria and their levels used for mapping inventory types:

Criteria	Level	Description
Precision	High	Controls are implemented to achieve a high level of precision in inventory records having a significantly low tolerance level for exceptions or anomalies. Higher control precision can also be attained by tightening controls (i.e. perform more frequent or more detailed reviews).
	Medium	Controls are implemented to achieve a moderate level of precision in inventory records having a moderate tolerance level for exceptions or anomalies.
	Low	Controls are implemented to have a reasonable level of precision in inventory records where tolerance level for exceptions or anomalies is high.
Control Structure / Authority	Centralized	Based on the inventory type it is determined that most major process activities can be owned by one supervisor or one function.
	Moderately Centralized	Based on the inventory type it is determined that most major process activities might be owned by a mix of supervisors/functions.
	Decentralized	Based on the inventory type it is determined that most major process activities might be owned by multiple supervisors/functions.
Term	Long	Lifespan of the inventory type is expected to be more than 3 years.
	Medium	Lifespan of the inventory type is expected to be between 1 to 3 years.
	Short	Lifespan of the inventory type is expected to be less than 1 year.

The table below is the Inventory Control Framework in detail:

1. Broad category of inventory (Column B) are drilled down in terms of relevant Inventory Types (Column C).
2. Column G suggests controls by lifecycle phases from acquisition through processing to output.
3. Column D, E, and F detail the recommended Precision, estimated Lifecycle Term and suggested Control Structure/Authority, respectively (these correlate with the Diagram above).
4. Column F gives a reference to the relevant detailed findings stated after the table.

(A) Sr. No	(B) Category	(D) Control Precision	(E) Life/ term	(F) Control Structure / Authority	(G) Example Controls by Lifecycle Phase	(H) Reference to Finding
1	Short term equipment /Tools	Medium	Medium	Moderately Centralized	1. Acquiring Pre-approval from site Supervisor before purchase of inventory if purchased by employees using P-Cards, or documented periodic reviews of employee purchases of inventory to analyze trends in purchases by item and employee. 2. Processing - Periodic counts of physical inventory with inventory list/spot checks performed by site Supervisors. - Physically secure inventory. 3. Outputs - Keep records of tools inventory lost/damaged and needs replacements.	Findings - 2, 3, 4, and 5
2	Equipment	High	Long	Moderately Centralized	1. Acquiring Maintain list of equipment in inventory. Can consider listing inventory by site instead of type of equipment. Include details such as cost, year of purchase, and warranty information. 2. Processing Tracking use/assignment of equipment and periodic counts. 3. Outputs - Salvage off parts to fix other inventory - Sell off decommissioned equipment through a centralized channel. 4. Segregation of duties Purchasing approvals, receiving and recording or counting of inventory should be segregated (where possible or other compensating controls are not feasible).	Findings - 2, 3, 4, and 5 CFI - 1

(A) Sr. No	(B) Category	(D) Control Precision	(E) Life/ term	(F) Control Structure / Authority	(G) Example Controls by Lifecycle Phase	(H) Reference to Finding
3	Spare Parts	Medium	Low	Moderately Centralized	1. Acquiring Maintain separate shelving/location for different types of spare parts when acquired to keep track of inputs into inventory. 2. Processing Periodic documented inventory counts to reconcile physical inventory with tracking sheet, where feasible, to see if shrinkage has occurred. 3. Outputs -Maintain documentation of inventory usage for Inventory items which are feasible to track. -Monitor usage of Inventory and compare with past trends. 4. Segregation of duties Purchasing approvals, receiving and recording or counting of inventory should be segregated (where possible or other compensating controls are not feasible).	CFI -1
4	Raw Materials	Medium	Low	Moderately Centralized	1. Acquiring Document acquisitions/inputs into inventory from invoices and purchase orders and maintain physical security over where inventory is stored. 2. Processing Periodic spot checks on levels of inventory for reasonableness in quantity on hand. 3. Outputs - Document and keep track of raw materials as they are used up. Can be daily or project by project basis.	Findings - 3 and 4
5	Finished Goods Inventory	High	Medium	Moderately Centralized	1. Acquiring Document number of inventory manufactured to a useable state in a day. 2. Processing - Periodic counts of physical inventory and reconciliation with inventory listing spreadsheet - Maintain physical security around inventory 3. Outputs - Maintain documentation to track how many finished goods are relieved from storage in a day - If eligible, sell off decommissioned inventory through a centralized channel	Findings - 3, 4 and 5

(A) Sr. No	(B) Category	(D) Control Precision	(E) Life/ term	(F) Control Structure / Authority	(G) Example Controls by Lifecycle Phase	(H) Reference to Finding
6	Work in progress (internally generated inventory)	Low	Long	Centralized or Decentralized	1. Acquiring Document inputs to keep track of number of inventory which are currently work in progress along with raw material requirements. 2. Processing Maintain physical security where inventory is stored/located - locks, security cameras. 3. Outputs Maintain records as inventory is ready for use, and update inventory listing sheet.	No specific findings noted.
7	Maintenance and Caretaking Parts and Supplies	Low	Low	Centralized or Decentralized	1. Acquiring: - Pre-approval from site Supervisor before purchase of inventory if purchased by employees using P-Cards above a specific threshold for identifying purchases outside of normal quantities and replenishment cycle. -Documented periodic reviews of employee purchases of inventory to analyze trends in purchases by item and employee. -Frequent monitoring of purchases at a Supervisor level against annual budget. 2. Processing Spot checks performed by site Supervisors - Physically secure inventory. 3. Outputs Monitor usage of Inventory and compare with past trends.	Findings - 2, 3, 4, and 5 CFI- 2
8	Bulk and Scrap Inventory (Seasonal and Year Round)	Low	Low	Centralized	1. Acquiring Pre-approval from site Supervisor before purchase of inventory if purchased by employees using P-Cards, or documented periodic reviews of employee purchases of inventory to analyze trends in purchases by item and by employee. 2. Processing - Spot checks performed by site Supervisors - Physically secure inventory. 3. Outputs - Monitor usage of Inventory and compare with past trends. - Keep documentation regarding sale of scrap inventory.	Category not in scope