



## **INTERNAL AUDIT**

# **Vendor Master File Audit**

**Prepared by**

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**September 12, 2017  
Report 201702**

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## Authorization

The City Auditor has conducted a Vendor Master File (VMF) audit. This audit was conducted under the authority of Ordinance #2017-112 and in accordance with the FY17 Audit Plan approved by the Denton City Council.

## Objective

The objective of this audit according to the FY17 Audit Plan was to determine if controls are designed properly and operating effectively.

The sub-objectives were as follows:

- 1) Determine if there is compliance with the Policies and Procedures
- 2) Run analytics on the VMF
- 3) Verify the reliability and integrity of computer-generated data
- 4) Determine if segregation of duties for the VMF exists and Access Rights to the VMF are appropriate

## Scope and Methodology

The City Auditor conducted this audit in accordance with Generally Accepted Government Auditing Standards except this audit function has not had an external peer review. Those standards require planning and performing the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for the findings and conclusions based on the audit objectives. The City Auditor believes that the evidence obtained provides a reasonable basis for the findings and conclusions based on the audit objectives.

The audit scope covered all types of entries into the VMF, a module of the JD Edwards Financial Software of the City. The time period looked at was April 2017. The top three vendor types are reflected below. They make up 91% of the total.

### Exhibit A – Vendor Types

Vendor Type	No. of Records
Refunds Inactive (RI)	39,696
Refunds (R)	22,820
Vendors (V)	21,595
Miscellaneous	8,473
<b>Total No. of Records</b>	<b>92,584</b>

*Source: Vendor Master File from JD Edwards*

The sampling methodology is discussed in Exhibit B and the reliability and integrity of information is discussed in Exhibit C.

To adequately address the audit objectives and to describe the scope of work on internal controls, the City Auditor has:

- Reviewed other VMF Audits from other municipalities.
- Verified employee access rights to the VMF to determine if segregation of duties is present.
- Performed a gap analysis to determine if there were significant gaps in numbering.
- Determined if there were any policies and procedures in place.
- Checked for duplicate payments.
- Ran data analysis checks for duplicate vendors and addresses.
- Traced from the W-9 source document to the VMF to check the completeness assertion. Vouched from the VMF to the W-9 source document to check the validity assertion. These procedures also tested the reliability and integrity of computer generated data. (See Exhibit B)
- Reviewed Accounts Payable Best Practices<sup>(1)</sup>.
- Randomly sampled 50 active vendors to ensure vendor information data entry was complete and accurate (See Exhibit A).
- Inquired with Purchasing personnel and reviewed the VMF to ensure that regular cleanup was performed.
- Reviewed naming conventions observed in the VMF for consistent application.

The deficiencies in internal control that are significant within the context of the audit objective and based upon the audit work performed are stated in the Opportunities for Improvement section starting on page 6.

For two of the recommendations, management received input from Grant Thornton who is the City's contact for any JD Edwards financial software questions. Their input is just below management's own response.

<sup>(1)</sup> Schaeffer, Mary S. (2004) Accounts Payable Best Practices.

## **Background**

The VMF is one of the most overlooked aspects of the Accounts Payable process. Ignoring it can lead to duplicate payments or fraudulent activity. The VMF contains vital information about the City's payees. A vendor/employee/citizen has to be set up in the VMF before payment can be issued.

The City of Denton's Accounts Payable process is a decentralized process, departments provide a new vendor with a Substitute W-9 in order to obtain the information required for the Vendor Setup in the Finance System. The vendor or the department then sends the Substitute W-9 to the Purchasing Department for entry into the Finance System.

Even though this file is called a VMF, it does include different vendor types (e.g., employees (for reimbursements), citizens (for claims), inactives, refunds (see below) and vendors). To avoid confusion the term account will be used in place of vendor.

Refunds primarily come from Customer Service and Courts.

Refunds derived from the Court System originate with bond refunds. It varies on a weekly basis. It could be anywhere from 3 to 20 refunds issued on a weekly basis.

The largest area for refunds are in Customer Service for Utility Services. These could be created from:

- Overpayment
- Deposit Refund after the account has closed
- Billing Adjustments
- Settle-up credit of \$25 or more

These refunds average about 3500 items each year.

Some best practices in maintaining the VMF are as follows <sup>(1)</sup>:

- Limit Vendor Set-up and Maintenance to very few individuals.
- Ensure appropriate segregation of duties exist between Vendor Set-up and Maintenance and A/P Invoice entry.
- Apply consistent naming conventions (Ex: Global, Inc. vs. Global Incorporated or Smith, John vs. John Smith).
- Prevent duplicate vendors.
- VMF Cleanup should be performed on a consistent and regular basis.
- Management should review reports regarding additions/changes/deletions to the VMF on a regular basis.

<sup>(1)</sup> Schaeffer, Mary S. (2004) Accounts Payable Best Practices.

## Overall Conclusion

Internal controls need improvement to ensure the VMF is reliable and payments are made only to authorized vendors.

## Opportunities for Improvement

During this audit we identified certain areas for improvement. This audit was not designed or intended to be a detailed study of every relevant system, procedure, and transaction. Accordingly, the Opportunities for Improvement section presented in this report may not be all-inclusive of areas where improvement might be needed.

Management is in a unique position to best understand their operations and may be able to identify more efficient and effective approaches to the following recommendations:

### Opportunity for Improvement #1 – Policies and Procedures

#### Condition (The way it is)

There are no policies and procedures in place to guide the handling of the VMF.

#### Criteria (The way it should be)

Best practices dictate that policies and procedures should be in place to cover this important file. Items to consider are as follows:

- What required information should be placed in the VMF?
- When should a file be made inactive?
- Describe the standardized set of rules when naming accounts.
- Indicate the procedure for management review of adds/changes/deletions to the VMF.
- Indicate how often the VMF should be cleaned-up and purged.
- Specify if there are any limits on who can make changes to the file.
- Specify what user defined codes should be used and when

Policies and procedures standardize the completion of tasks which leads to Lean processes.

#### Effect (So what?)

Every employee could perform their tasks differently. Tasks that need to get done may not get done. Accountability can be lacking.

#### Cause (Difference between condition & criteria)

This file does not get the respect that it deserves. Many people are unfamiliar with it.

A heightened awareness of this file is lacking.

Accountability over this file is missing. Various departments use the VMF to create payments. A few of these departments are: Purchasing, Courts, Customer Service and HR. When the Finance Department was over the Purchasing Department, the

Finance Department had always designated Purchasing as the responsible party. Purchasing is no longer under the Finance Department. Subsequently, accountability no longer existed.

Since the majority of transactions as noted in Exhibit A are refunds, Purchasing believes that Customer Service should also have a part over the administration of the VMF.

However, had the file been cleaned on a periodic basis and purged inactives older than two years old, refunds would not have been as high as they currently are.

Best practices indicates limits on the amount of individuals having access to set-up and modify the VMF.

#### **Recommendation**

- 1) Management needs to specify what department and who in the department is responsible for the Vendor Master File.
- 2) Management needs to create VMF Policies and Procedures and update as necessary.

#### **Management Response**

The Vendor Master File (VMF) is defined as any JDE Address Book code in which payments have been processed. Multiple departments have a stake in the Address Book and VMF as indicated in Attachment 1 (page 21). Management agrees that each stakeholder should develop policies and procedures to insure that information supplied to the Address Book is accurate and valid. The policies should include roles and security levels to limit access to unnecessary parties.

#### **Action Plan**

Draft a Policy and Procedures Manual that addresses each stakeholder's requirements.

#### **Implementation Date**

December 2017

## Opportunity for Improvement #2 – Gaps in Address Book Numbers

### Condition (The way it is)

The Address Book in JD Edwards Financial Accounting System assigns Address Book Identification Numbers to each vendor/citizen/employee in each of the seven modules of JD Edwards. Because of this no one module will have Address Book Numbers one-up sequentially. Added to this, the system generates self-checking digits which will also cause gaps in the numbering system. Looking at the first 40,000 address book numbers only 2 were numbered one-up sequentially.

### Criteria (The way it should be)

The VMF should assign new accounts in a one-up sequential manner.

### Effect (So what?)

One may not be able to determine if an account was added and subsequently deleted, thereby, hiding a potential fraudulent transaction. Accountability over the VMF may be compromised.

### Cause (Difference between condition & criteria)

Currently, the configuration of the JD Edwards Financial Accounting System does not allow for one-up sequential numbering.

### Recommendation

Management should consider if the JD Edwards Financial Accounting System can be reconfigured to accommodate a one-up sequential numbering system.

### Management Response

The JDE Address Book could be modified to create one-up numbering. This modification would require custom code and business rule changes. Management is assessing the current financial software system to ensure it meets the current and future business needs of the City.

### Grant Thornton (GT) Response:

- The 'next numbering' approach is typical for many ERP (and other) solutions.
- There is no base JDE feature that would accommodate the COD Auditor's concerns. The COD could reserve specific Address Book number ranges for Employees, Vendors, Customers, Companies, Business Units, etc. where the Address Book governance group (owner) would then ensure the proper next number in the appropriate range is used to set up the next record. This would be a manual control and subject to the discretion of the person setting up the new Address Book record (not very efficient and manual intensive however we have had clients do this).
- GT could look at setting up a new Next Number parameter in the Next Numbers table but the problem would be that we would then have to find and look at each JD Edwards base Business Function that includes the 'fetch next number' call to determine what Next Number to use for the type of address book record (Vendor, Employee, Customer, Company, Business Unit, etc.)

being created. (This process would cascade to further tasks to investigate all business functions)

**Recommendation:**

- COD not address this opportunity as in GT's opinion this is not a standard practice and a customization would add cost and complexity to the instance
- Utilize UPK (User Productive Kit) to create standard operating procedures for address book functionality and navigation

**Action Plan**

Develop reports and security controls to mitigate and monitor potential risks while the staff evaluate the current software functionality.

**Implementation Date**

December 2017

### Opportunity for Improvement #3 – Naming Conventions

#### Condition (The way it is)

It does not appear naming conventions are being used. Examples of naming convention issues are as follows:

- United States Postal Service – Denton vs. US Postal Service
- Vaughn Construction vs. JT Vaughn Construction LLC
- 1100 n. church st. vs 1100 N. CHURCH ST.
- Tom Loftus, Inc. vs. Austin Turf & Tractor (DBA)
- Anderson Paving vs. Anderson Asphalt & Concrete
- Lloyd D Nabors Demolition vs. Lloyd Nabors Demolition
- Zters Waste Value vs. Zters
- KCK Utility Construction, Inc. vs. KCK Utility Const.

If the system does not recognize the name and address of an already set-up vendor in the system it automatically creates another vendor.

The system does not always do an accurate search. For example, if Smith\_F\* or Smith\_&\* is placed in the Search Box it comes back with no matches found.

#### Criteria (The way it should be)

Naming conventions should be used so that duplicate accounts are not created. Each account should have one, and only one, master vendor file.

A flexible search function allows for a prompt extraction of information.

#### Effect (So what?)

The VMF is excessively large and inefficient. Numerous times it was noted that account names were notated in different ways thereby creating duplicate accounts.

An inflexible search function wastes time and could result in possible duplicate entries.

#### Cause (Difference between condition & criteria)

Not giving this file the attention it deserves. A lack of management review to identify the problem and no cleaning or purging of the file.

The root cause of the search function issue is unknown.

#### Recommendation

- 1) Management should consider creating naming conventions for the VMF and add them to the policies and procedures. Using the U.S. Postal Service Rules of Addressing may be used.
- 2) Responsible parties should collaborate with the IT department to find a solution to the Search Function difficulties.

#### Management Response

Management agrees

Grant Thornton Response:

- This is an issue with each and every one of our clients. How do users ensure they are not setting up a new Address Book record for a Vendor that is already

established? Also, how do users search for and find 'like' address book records? Typically, we would train users to search on the least specific parameters for such records (instead of 1100 N CHURCH ST we would suggest searching on \*CHURCH ST\*). Training and data governance are the key focus activities in this regard. Data governance (and Master Data Management) can be supplemented with software tools as well (e.g. Oracle DRM ( Data Relationship Management), FDM (Financial Data Quality Management)) but COD may not want to buy more software. Hence, COD would need to address the processes with business process owners and utilize tools like UPK to govern and educate.

- COD can turn on duplicate address checking in the AB (Address Book), which would give a warning when an AB record is entered with the same address as one already setup, which may help prevent the issue of suspected duplicates in the future. For existing records, they would need to export to Excel and identify where duplicates exist, clean up those records, then put in place strong MDM (Master Data Management) practices that cover the specifics of how data is entered going forward (e.g., when to capitalize, when to abbreviate, as well as a process for searching for existing records before setting a new one up). Limiting the number of users who have access to add or modify AB data can also help to ensure that data is entered in a consistent manner that conforms to COD standards.

COD could force the DD (Data Dictionary) values for the address to be ALL CAPS to eliminate case sensitive exceptions. As well, there is a City, State and Zip Code file that if populated can be used as a quality check to ensure accuracy with the City/State/Zip Code combinations entered for addresses.

Recommendation:

- COD not address this opportunity as customization would only add cost and complexity to the instance.
- Utilize UPK to create standard operating procedures for address book functionality and navigation
- Provide training to impacted business process owners on how to effectively navigate and understand the address book numbering schema.

#### **Action Plan**

- Standardize the naming convention in the Policy and Procedures Manual as identified in Opportunity for Improvement #1 above.
- There is no technical solution within JDE to improve the search function. Users will be trained on the proper use of the search function to avoid duplicate entries.

#### **Implementation Date**

December 2017

<b>Opportunity for Improvement #4 – Cleaning the File</b>	
<b>Condition (The way it is)</b>	
<p>This Master File has not been cleaned on a periodic basis. Numerous accounts can be archived and others can be inactivated (unavailable for use). Out of 92,584 entries, 13,440 showed to be parts of repeated accounts. With an average of 3 repeats for each account the total repeated accounts would be approximately 4,480 accounts. Some of these vendors have different addresses such as one for the P.O. and another address for the remittance address.</p> <p>Included in the VMF are ex-employees. The VMF count of ex-employees is 3,613. A random sample of 24 of these 3,613 accounts showed 17 to be terminated more than two years.</p> <p>In another study of this file, it was found that of the 92,584 total accounts since the beginning of the JD Edwards Financial System, 13,009 have been paid since 10/1/14. That leaves 79,575 that have not been paid in 2 ½ years.</p>	
<b>Criteria (The way it should be)</b>	
The VMF should have no repeated accounts. Frequent maintenance ensures the reliability and integrity of the VMF.	
<b>Effect (So what?)</b>	
It does not allow for a clean and efficient file to work with. A clean file is a lean file. Additionally, repeated accounts can allow duplicate payments.	
<b>Cause (Difference between condition &amp; criteria)</b>	
A periodic cleaning has not been performed on this file.	
<b>Recommendation</b>	
<ol style="list-style-type: none"> <li>1) Once or twice a year certain vendors need to be inactivated.</li> <li>2) After being inactivated for two years, vendors should be purged from the VMF and placed in an archived file.</li> </ol>	
<b>Management Response</b>	
Technology Services has the capability to run a report of vendors without payment activity and deactivate numerous vendors at one time. Management does not recommend purging and archiving vendors. In order to archive information in JDE, the information would have to be stored in different programs which would not be easily accessible. This would make it difficult for Accounts Payable and other departments to research.	
<b>Action Plan</b>	
<ul style="list-style-type: none"> <li>• Develop criteria and a schedule of when to inactivate vendors in the Policy and Procedures Manual as described in Opportunity for Improvement #1 above.</li> <li>• Disable the ability to make payments to any inactive address book code or codes in which payments should not be processed. Attachment 1 identifies the codes in green that will allow payments going forward.</li> </ul>	
<b>Implementation Date</b>	
<ul style="list-style-type: none"> <li>• Disable address book codes as described above– August 2017</li> <li>• Policy and Procedures Manual –December 2017</li> </ul>	

<b>Opportunity for Improvement #5 – Access Rights</b>
<b>Condition (The way it is)</b>
<p>On the Purchasing side, the contract administrator and the procurement assistants are the only employees that have access to the new vendor address screens in JD Edwards. All new vendors must be approved first by the Purchasing Manager or Contract Administrator. However, no evidence of this was found.</p> <p>On the Accounts Payable side, the access list received from IT indicated that Accounts Payable can update the VMF. Their primary function in updating is with change of addresses. This was confirmed in an e-mail from IT. Accounts Payable should not have access to the file.</p>
<b>Criteria (The way it should be)</b>
<p>The entry and approval for input of a new vendor needs to have the proper controls in place. The entry and approval into the system should be done by two different individuals. If that is not feasible, compensating controls should be put in place. An example of that would be to have a member of management review all add, changes and deletions to the VMF on a monthly basis.</p> <p>The setup and maintenance of the file should be separate from anyone having the ability to pay an invoice.</p>
<b>Effect (So what?)</b>
<p>Without the proper checks and balances in place a fictitious vendor could be set up. Additionally, having A/P with access can allow an update in a vendor file to be fictitious.</p>
<b>Cause (Difference between condition &amp; criteria)</b>
<p>A lack of policies and procedures specifying exactly how the VMF will operate. A lack of management review over access rights.</p>
<b>Recommendation</b>
<p>1) Create access rights policies and procedures to memorialize the checks and balances needed to strengthen the access rights over this file.</p> <p>2) Management should review access reports yearly.</p>
<b>Management Response</b>
<p>Management agrees</p>
<b>Action Plan</b>
<ul style="list-style-type: none"> <li>• Work with Technology Services to implement security rights as needed.</li> <li>• Implementation of a Laserfiche New Vendor Request form that documents all backup and approvals through an electronic workflow process.</li> <li>• Develop criteria of roles and security by job descriptions in the Policy and Procedures Manual as described in Opportunity for Improvement #1 above.</li> </ul>
<b>Implementation Date</b>
<p>Security rights – August 2017  Laserfiche Implementation – December 2017  Policy and Procedures Manual –December 2017</p>

## **Opportunity for Improvement #6 – Reliability and Integrity of Computer-Generated Data**

### **Condition (The way it is)**

When the auditor performed the validity test (From VMF to Substitute W-9) for 26 items it was found that 9 entries had incorrect vendor types. All were coded V for Vendor, although they were R for Refund or Reimbursements

When the auditor performed the completeness test (From Substitute W-9 to VMF) for 26 entries 1 entry was not found. The name in the VMF was not the DBA but rather the individual's name.

The VMF was not always complete. The incomplete profiles did not always show Taxpayer Id Nos. or Phone numbers.

### **Criteria (The way it should be)**

Good Business practices dictate that entries made to a journal, ledger or spreadsheet should be using the correct vendor types, be filled in completely and use a consistent naming convention.

### **Effect (So what?)**

Reliability and Integrity is established through completeness and consistency of data. Inaccurate or incomplete records can result in greater risks of duplicate payments or even non-compliance with regulations.

### **Cause (Difference between condition & criteria)**

A lack of management review over the VMF.

### **Recommendation**

1) Institute a proper review of adds/changes/deletions made to the VMF. To ensure completeness and accuracy, this review should be performed by management or staff independent of those involved in vendor setup.

2) VMF should be reviewed on a regular basis for:

- Inactive accounts
- Duplicate vendors
- Vendors with incomplete records
- Accuracy Issues
- Inconsistent naming conventions

### **Management Response**

Management Agrees

The JDE Address Book is utilized by various departments and each search type may require different information. For example, Address Book numbers that are coded V, but are for citizen refunds and rebates, do not require Tax ID #'s or phone numbers.

<b>Action Plan</b>
<ul style="list-style-type: none"><li>• Develop specific requirements and review schedule for the addition/change/deletion of the “V” search type in address book in the Policy and Procedures Manual as described in Opportunity for Improvement #1 above.</li><li>• Re-categorize refunds and rebates to citizens from Parks, Library and EMS to differentiate them from vendor numbers. This would ensure completeness by address book type.</li></ul>
<b>Implementation Date</b>
December 2017

<p align="center"><b>Opportunity for Improvement #7 – Taxpayer Identification Number(TIN) Matching and Debarment</b></p>
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<p><b>Condition (The way it is)</b></p>
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<p>Taxpayer Identification Numbers received from vendors via a Substitute W-9 form are matched with the IRS database. This function is currently performed on the back-end by the Accounts Payable Section utilizing a 3<sup>rd</sup> Party Database.</p>
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<p><b>Criteria (The way it should be)</b></p>
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<p>TIN matching and debarment checks should be done on the front-end before entering them into the vendor master file. That is at the Purchasing function.</p>
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<p><b>Effect (So what?)</b></p>
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<p>If there should be a problem with TIN matching and the debarment review the city needs to know up-front so that corrective action can be taken. There may be a situation where because of the results of those tests the city may not want to deal with that particular vendor.</p>
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<p><b>Cause (Difference between condition &amp; criteria)</b></p>
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<p>Management in the past decided to do the TIN matching and debarment checks on the back-end.</p>
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<p><b>Recommendation</b></p>
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<p>Management should consider reversing the order for the TIN matching and debarment reviews. The accountable department should be Purchasing.</p>
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<p><b>Management Response</b></p>
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<p>Management agrees</p>
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<p><b>Action Plan</b></p>
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<p>Purchasing staff can be trained to perform TIN checks and debarred vendor checks. This can be added to the Purchasing training manual. Accounts Payable will continue to complete a TIN match at year-end to ensure 1099s are correctly sent to the IRS. Penalties for incorrectly filed 1099s are \$530 per TIN.</p>
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<p><b>Implementation Date</b></p>
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<p>December 2017</p>
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## Opportunity for Improvement #8 – User Defined Codes in J.D. Edwards

### Condition (The way it is)

User Defined Codes (UDC's) are used to define the business purpose of the transaction in the VMF (e.g., E=Employees, R=Refunds, V=Vendors, X=Ex-Employees). UDC's help to categorize data and make sure that users provide consistent input.

There are 40 different user defined codes utilized throughout the J.D. Edwards System. For this audit, which dealt with only the Vendor Master File 16 different user defined codes were used.

Additionally, it was discovered during this audit that the V user defined code which means Vendor also includes refunds. Refunds already have an R User Defined Code.

### Criteria (The way it should be)

In a VMF audit in Garland only 3 User Defined Codes were used. In a VMF audit in San Antonio only 4 User Defined Codes were used. More User Defined Codes adds to the complexity of the file.

### Effect (So what?)

By not having well defined User Codes appropriately used the file may inappropriately retain a Refund account when it could be inactivated or purged to an archive file.

### Cause (Difference between condition & criteria)

This file has not been cleaned up and purged therefore the user defined codes have not been seen as an issue.

### Recommendation

Determine the feasibility of narrowing the amount of user defined codes for the VMF and ensure all codes are used appropriately.

### Management Response

Management agrees

### Action Plan

- Staff has identified the following address book codes that would be able to make payments:
  - V – Vendor
  - E – Employee
  - R – Refund
  - X – Ex-Employees – pending further review

All other codes available in the address book will be modified so that no payments can be processed. The Accounts Payable staff will only be able to pay against the above codes and not have access to turn on the payable feature to any address book codes.

- Develop specific requirements for each Address Book Code or User Defined Code in the Policy and Procedures Manual as described in Opportunity for Improvement #1 above.

**Implementation Date**

- Disable address book codes as described above– August 2017
- Policy and Procedures Manual –December 2017

## **EXHIBIT B**

### **Sampling Methodology**

#### *Complete and accurate vendor information*

From the VMF, 26 entries were randomly selected to determine if the backup documentation was sufficient and relevant.

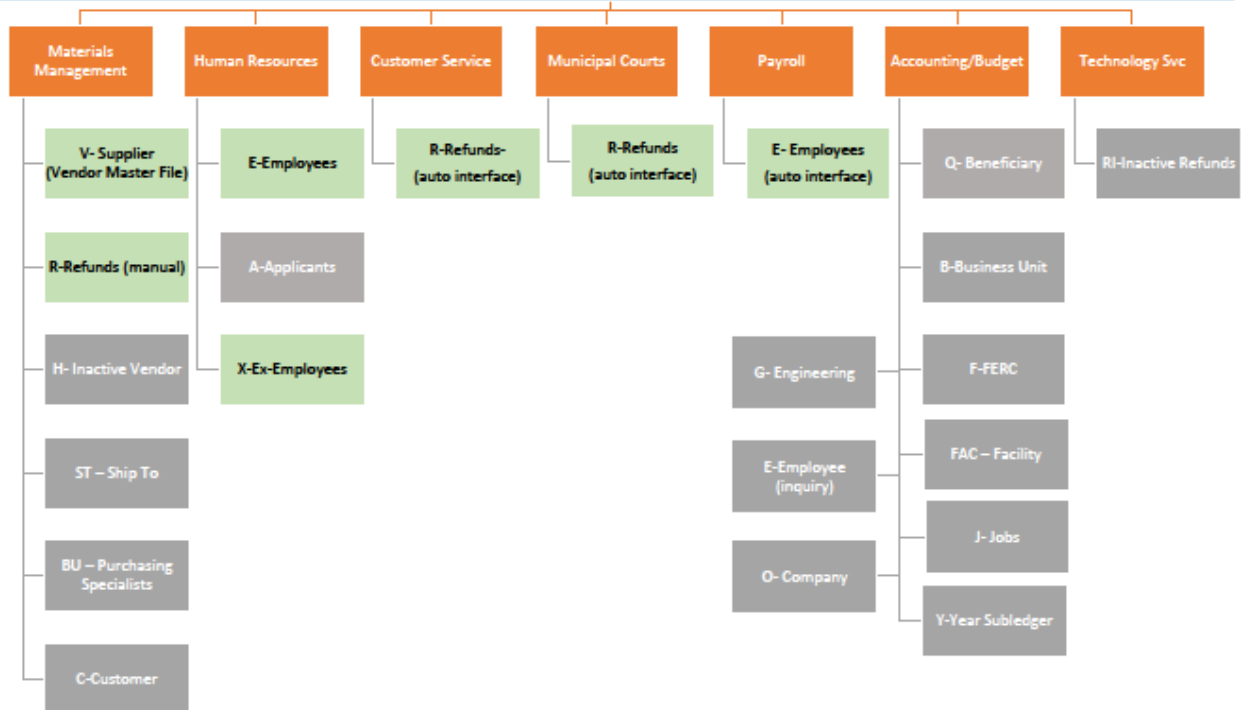
From the backup documentation file, 26 entries were randomly selected (one for each letter of the alphabet) to determine if the backup documentation represented an entry in the VMF. The backup documentation file is housed in Laserfiche.

## **EXHIBIT C**

### **Reliability and Integrity of Information**

For this audit, the reliability and integrity of information is discussed in the Opportunities for Improvement #6 found on page 12.

# JDE Address Book



**Note:**

- Auto interface areas do not have access to modify the Address Book, but use the Address Book in coordination with their software programs
- Green Address Book codes will only allow payments going forward