



GENERAL SERVICES ADMINISTRATION
Washington, DC 20405

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GSA BULLETIN FMR B-44
Federal Warehousing and Storage of Assets

TO: Heads of Federal Agencies

SUBJECT: Effective Federal Warehousing

1. What is the purpose of this Bulletin? This Bulletin provides guidance for Federal agencies to use in developing effective warehousing programs.
2. When does the Bulletin expire? This Bulletin remains in effect until cancelled.
3. What is the background for this Bulletin? Federal agencies are continually challenged to be more effective at fulfilling their mission while simultaneously experiencing resource limitations. More effective management of stored personal property assets, as well as enhanced management of the warehouse facilities themselves, may assist in reducing warehousing requirements and, consequently, increase efficiency and reduce costs. The General Accountability Office (GAO) Report 15-41, *Federal Real Property; Strategic Focus Needed to Help Manage Vast and Diverse Warehouse Portfolio*, November 2014, recommended that the General Services Administration (GSA) provide guidance and best practices to make collective Federal warehousing activities more efficient. GSA and other Federal agencies participated in the development of two ASTM (previously known as the American Society for Testing and Materials) standards, addressing warehousing assets in order to gain widespread input and visibility and to provide the best guidance possible. This Bulletin summarizes the industry-leading perspectives obtained through the development of these international standards.
4. What should I do as a result of this Bulletin? Consider the strategic and tactical guidance in this Bulletin prior to acquiring or disposing warehousing assets and on a scheduled basis when the warehouse is in operation. Agencies should also

Identify key metrics supporting effective warehousing and monitor this activity to identify improvements, as well as further opportunities to gain efficiencies. See Appendix A for this warehousing guidance.

Additionally, agencies should actively participate with the collaborative forums hosted by GSA's Office of Government-wide Policy, the Federal Real Property Council, and the Interagency Committee on Property Management in order to develop a knowledge base of best practices, lessons learned, and success stories.

5. Whom may I contact for further information? Further information regarding this Bulletin may be obtained by sending an email to Bob Holcombe at robert.holcombe@gsa.gov. For further information on Real Property policy, please contact Aluanda Drain at aluanda.drain@gsa.gov.

By delegation of the Administrator of General Services,



Acting Associate Administrator
Office of Government-wide Policy

Federal Warehousing Assets and Activities

Section A – Background

The General Accountability Office (GAO) Report 15-41, *Federal Real Property; Strategic Focus Needed to Help Manage Vast and Diverse Warehouse Portfolio*, November 2014, contained the following recommendation for GSA:

In its government-wide policy role, which is performed by Office of Government-wide Policy, GSA should develop a strategy for its role in promoting effective and efficient practices in warehouse management across the federal government, including, but not limited to: warehouse management guidance that GSA could develop, lessons learned that GSA could promote, and the type of leadership that GSA could provide to agencies as they assess their warehouse portfolios.

OMB Circular A-119, *Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities*, published January 27, 2016, requires Federal executive agencies develop and follow Voluntary Consensus Standards (VCSs) or other standards in coordination with non-Federal entities, rather than follow Government-unique standards. Accordingly, two ASTM standards have been developed that address the warehouse facility itself (ASTM E3056-16, Standard Guide for Strategic Warehousing) and the contents of the warehouse (ASTM E2715-09, Standard Practice for Moveable Property Storage). Note that the contents of these two standards are copyrighted; this Bulletin provides an overview of these topics. Please consult the standards for more specific guidance.

Section B – Overview

Appendix A

1. This Bulletin addresses both the physical warehouse facility (also called Real Property) and the contents of the warehouse (also called Personal Property, such as moveable assets, products, or similar terms which differentiate the contents of the warehouse from the physical structure of the warehouse itself). Considerations of both these aspects of the warehousing functions must be coordinated so as to lead to effective warehousing activities.

2. The Real Property and Personal Property assets, collectively, are called "Federal warehousing assets."

3. Strategic management of these Federal warehousing assets goes beyond simply providing needed assets in an effective manner and at minimum cost; it also entails a strategic perspective that asks "Do these assets need to be warehoused?" or "Do these assets need to be warehoused in this facility?" Savings and efficiency gains may be realized when the location of the warehouse is optimized and the size of the warehouse facility is reduced to the smallest size feasible.

4. This Bulletin also provides the operational practices that an entity should consider in order to make its warehousing activities effective and contribute to the entity's mission, as well as suggesting metrics to gauge the efficiency of a warehouse or warehousing program.

Section C – Real Property Considerations

Consult ASTM Standard E3056-16, Standard Guide for Strategic Warehousing, for more detailed guidance.

1. What needs to be stored

Central to the business plan for warehousing is the consideration of what assets need to be stored.

Consider alternatives to warehousing assets, such as utilizing 'just in time' delivery, or combining warehousing functions with other agencies or components.

Appendix A

2. Location of warehouse

The warehouse location may play a large factor in the cost of the warehouse.

Consider the costs of construction, maintenance, utilities, and transportation related to the warehouse location when planning your warehousing needs.

3. Type of construction

The type of construction influences the cost of the facility, as well as the life-cycle costs of operating the warehouse.

Consider the options of construction materials and architectural plans as influencing costs and how well these serve your warehousing needs.

4. Special storage considerations

The types of personal property being stored may impact the facility considerations; for example, assets requiring a temperature-controlled environment will require different storage than stocks of raw material.

Consider the needs related to asset and personnel security, temperature, humidity controls, and hazardous material storage.

5. Layout of warehouse

A warehouse's layout must be planned so as to optimize the storage capabilities and efficiencies of moving people, material, and material handling equipment.

Consider various arrangements for the storage of personal property and the efficiency of operations, both on the horizontal dimension (e.g., rack placement) and the vertical dimension (e.g., rack height).

6. Labor saving devices

Most large warehousing activities require some type of material handling equipment. More recent labor saving devices such as robotic pickers may be most efficient in some applications.

Appendix A

Consider the need for labor saving devices based on scale of operation and a cost vs. benefit analysis.

7. Health and Safety Concerns

An obviously important, but often overlooked attribute, is the health and safety of employees, contractors, visitors, and first responders at your warehouse. For example; are entry and exit points clearly identifiable, are there sufficient fire extinguishers, eye-wash stations, and first aid kits available, and are hazardous materials safely stored and appropriately marked.

Each federal warehouse facility is required to meet all applicable Federal, state, and local laws and regulations. Consider having a regularly-scheduled review of the facility by your agency health and safety officer. Larger facilities may consider having the local firefighters perform a walk-through of the space for their familiarity with the layout and contents of the warehouse.

Section D – Personal Property Considerations

Consult ASTM Standard E2715-09, Standard Practice for Moveable Property Storage, for more detailed guidance.

1. What needs to be warehoused

Critically question the need to store personal property assets and investigate alternative options for warehousing.

Consider warehousing only the assets needed to meet the known and expected requirements using inventory level algorithms.

2. Alternatives to warehouse storage

Creative analysis may show that assets do not need to be brought into a warehouse facility in the first place, or the assets can be moved in and out of the

Appendix A

facility quickly, thus reducing the need for a larger facility to store the assets for extended periods.

Consider, for example, enhanced order and delivery methods to reduce storage needs, and improved business processes which could increase warehouse throughput and reduce the need to store assets.

3. Inventory control

Effective management of warehoused assets can reduce the number of assets stored. There is a tendency to stock more than absolutely necessary if agencies do not know what they have or where it is located. Processes should be put in place so that loss of inventory due to damage, theft, spoilage, and obsolescence are minimized.

Consider an automated inventory control system that will enable accurate and effective management of the assets, such as quantity on hand, quantity on order, inventory levels at which assets should be re-ordered, and inventory location(s). Such a system can also pinpoint specific assets that need special management attention.

4. Technological assistance

Technological solutions can enhance inventory control efforts and warrant special consideration. Assets that use barcodes or product labels are commonplace and universally accepted as management enablers in our society and economy. Technological applications more specific to warehousing may integrate the asset information with aids to picking and withdrawing the assets for storage, continual inventory processes, and automatic and instantaneous restock ordering. The movement and storage of assets may be managed using radio frequency identification (RFID) and for large outside storage areas, location may be aided by global positioning system (GPS) sensors.

Consider appropriate technological solutions that enhance your warehousing efficiencies.

Section E – Warehouse Metrics

Consult ASTM Standard E3056-16, Standard Guide for Strategic Warehousing, for examples of specific metrics addressing warehousing operations.

Many metrics are used throughout the nation by commercial interests, as well as by government agencies. These are readily available through industry literature and even on the internet. Your agency should focus on managing with a small number of warehousing metrics that work to improve efficiencies and lower warehousing costs.

Common categories of metrics include:

1. Warehousing storage area

Metrics to identify the area available for personal property storage, such as metrics that measure square feet (floor space), cubic feet (floor space x height of storage), and the ratio of storage space to non-storage space (such as offices).

2. Warehousing costs

Metrics to identify the costs of warehousing activities, such as the basic cost to rent/lease, the costs of utilities or other services, and the cost of warehousing compared to the value of inventory at a point in time or the value of the throughput over a defined period.

3. Inventory usage

Metrics associated with the inventory include: the quantity or value of inventory in the warehouse, the receipt or issue of certain assets over a defined period, the “velocity” or rate at which assets come into the warehouse and go out again, expected number of days until an asset runs out, and the “stock turn” of the inventory.

Appendix A

4. Customer-facing metrics

Metrics that focus on customer satisfaction include: survey results of satisfaction, order fill errors, out-of-stock occasions, and the time to fill customer orders.

Section F – Training

Agencies should appropriately train personnel working in the warehouse environment. Personnel should be proficient in their assigned functions and also be aware of, and suggest, improvements that can be made to the warehouse activity. It may be appropriate to provide formal warehouse management, facilities management, or personal property asset management training. All personnel should be aware of the safety and security features of the warehouse facility and be trained to operate any materials handling equipment they may use in the performance of their jobs.