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SPECIAL REPORT

# How to Plan & Create an Efficient Industrial Shelving System

*By Tom Jameson, President*
ShelfPlus, Inc.

Expert tips & layout examples

to help you plan & create

more efficient storage facilities

SHELFPLUS SPECIAL REPORT

*Publisher's Note:*

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*Published by* **ShelfPlus, Incorporated** | **2285 Executive Drive** | **Lexington, Kentucky 40505**
**Toll-Free Telephone: 1-800-838-0473**

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# How to Plan & Create an Efficient Industrial Shelving System

*By Tom Jameson, President*

ShelfPlus, Inc.

Here at ShelfPlus, we're often asked to evaluate and correct shelving layouts for companies hampered by inefficient storage areas.

In almost all cases, these problems are caused by insufficient planning on the part of management prior to purchasing and installing the shelving.

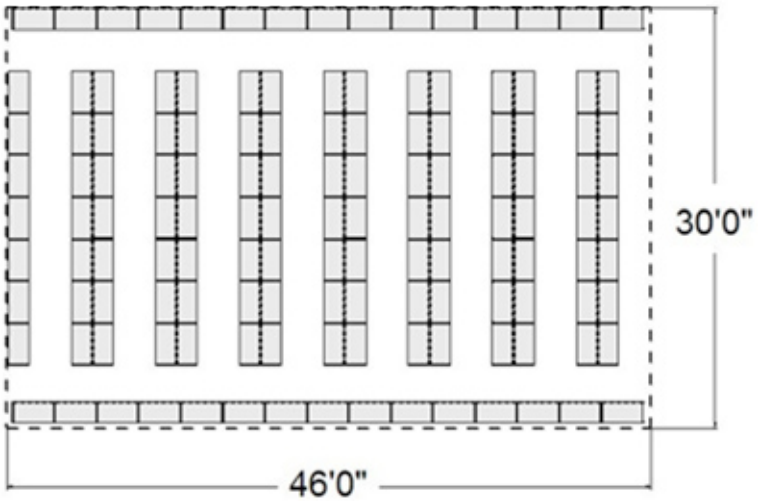
The purpose of this Special Report is to share basic guidelines and insights that'll help you plan & install an efficient shelving system in your warehouse.

For simplicity and clarity, we'll base shelving examples on the most common standard unit load size: A 36" x 18" shelving unit. Our space model for this report is an area 30 feet wide by 46 feet long (1,656 square feet).

## Want to save space? Avoid this layout!

Let's start by analyzing a shelving pattern we often see that is clean and deceptively simple. It also is about the **least efficient layout** you could implement, accommodating **only 135 sections** of shelving in our model shelving section.

*Figure 1*




Study **Figure 1** at left, then read on to see how this plan **violates 4 key principles of efficient shelving layout**.

The layout displayed in **Figure 1**, logical as it may appear at first glance, is a bad one because it breaks all four of these shelving efficiency rules:

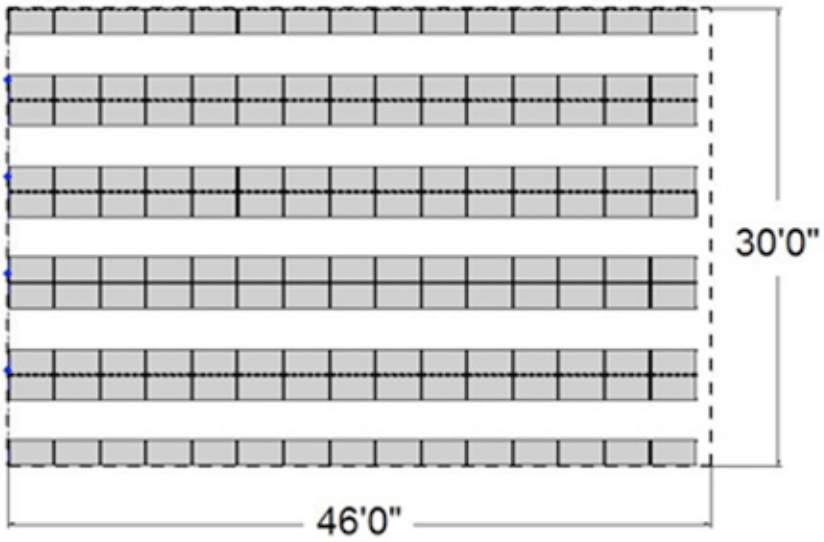
1) **NEVER lay out shelving across the short dimension of your space.** This creates wasted space equaling approximately 5% of your floor space.

2) **NEVER create a perimeter aisle with single-deep shelving single deep around the walls.** This error will cost you another 5% of your storage space (and limit other options, as well).

3) **NEVER position shelving in the same area oriented in two different directions,** i.e. part of the shelving going north/south, the remainder oriented east/west. Again, this error imposes another penalty of at least 5% penalty in utilization of your available floor space.

4) **NEVER create an aisle at a wall.** Every aisle should give access to shelves on both sides. It takes the same width aisle to serve two sides as one side, so if you use only one side, you'll waste space unnecessarily.

*Figure 2*




### Follow the rules, save 12% floor space

A more efficient layout, illustrated in **Figure 2** at left, accommodates **150 sections** of shelving compared to only **135 sections** in the Figure 1 layout. That's 12% more storage in the same 1,656 square feet of floor space.

Now, I know from real world experience, it may not always be possible to create the perfect shelving layout. But keep in mind, to the extent you bend any of the four key rules, you are costing yourself part of your available floor space (up to 25% if you're careless enough to break all four rules).

## More shelving types provide options

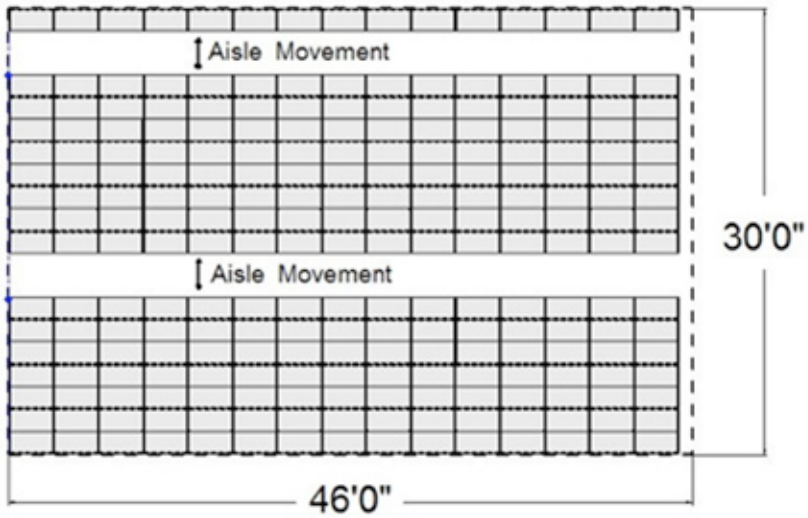
Besides standard shelving, there are various kinds of shelving that can help you store more in the same space.

Let's look at some of the options and how they might impact your use of floor space.

Using versatile moveable shelving on our model floor (**Figure 3**), let's us use dead aisle space for storage and increase storage capacity to **240 shelving sections**. . . a substantial **56% increase** over standard shelving layout.

Moveable shelving systems operate on mobile carriages that eliminate unused aisle space. There are virtually no limits to the size, bulk, weight or shape of items they can store.

*Figure 3 — Mobile Shelving*




Flexible and adaptable, moveable systems work within many building support or ceiling restrictions and can be reconfigured easily if needs change. They're particularly good for the 80% of your inventory that's slow- moving or seasonal.

***"Vertical lifts convert unused overhead areas into productive storage space."***

*Figure 4 — Two Shuttle XP Vertical Lift Modules (25' tall)*

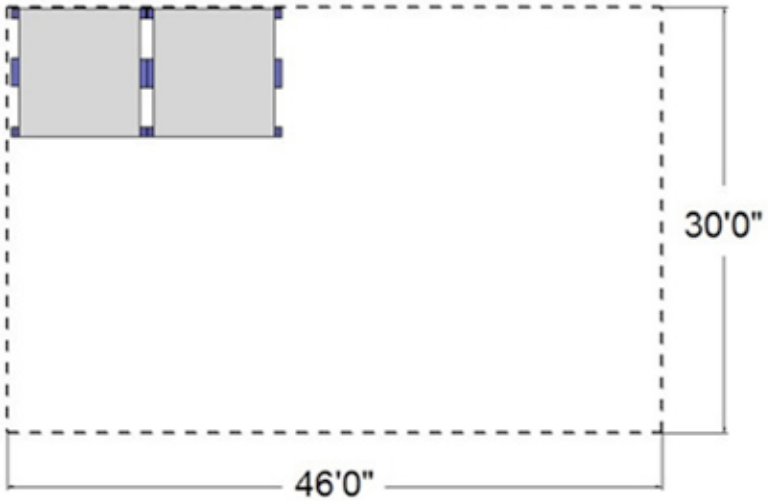



**Figure 4** illustrates how two Shuttle XP Vertical Lifts let you use dead air space as storage space. Vertical Lifts or Vertical Carousels up to 40-feet high can convert unused overhead space into productive storage space.

In our example, two 25-foot vertical lift units store the equivalent of **150 sections** of shelving in a fraction of the space required by standard shelving. Vertical lifts also provide a safe ergonomic picking process.

*Figure 5 — Drawer Cabinets*

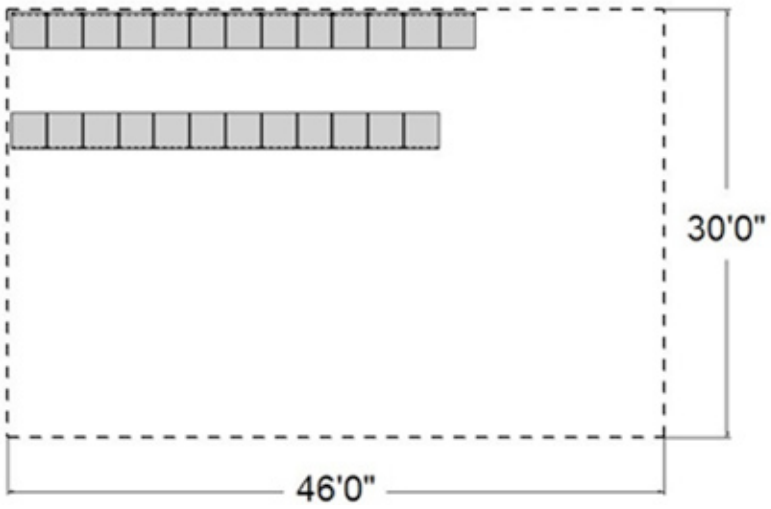



**Figure 5** illustrates the use of modular drawers and cabinets to provide the same capacity as 150 sections of shelving. Replacing shelving with modular drawers or drawers in shelving provides easy, secure access and can achieve up 50% -75% in floor space savings.

## Valuable tip for drawing your layout

Here's another rule I've found invaluable for quickly and efficiently designing shelving layouts.

> *Draw your initial shelving layout (using space-saving rules above) as if there are no columns or obstructions present in your building.*

After you've designed the most efficient layout for your space, THEN draw in the columns and obstructions and adjust your initial, highly efficient layout as little as possible to accommodate obstructions.

Of course, there are ALWAYS floor space obstructions. Columns may be positioned in awkward places…heaters, lights, drain pipes, and other hardware may clutter your headroom… and your safety engineer may have requirements that further complicate your layout task.

That's why creating an efficient shelving layout system always involves flexibility and compromise.

## More ideas, no-cost professional help

Remember these ideas when planning your shelving layout project:

1) Keep all shelving rows going in one direction, in the direction of product flow

2) Manage the obstructions to good layout.  Don't let them manage you.

3) Allow enough clearance for smooth traffic flow under varying conditions.

4) Design your system with your NEXT storage expansion in mind.

Finally, with all the traps and pitfalls involved in setting up an efficient shelving system, it often makes sense to get professional advice on the best, most cost-effective layout for your operation. That's why my company, ShelfPlus Inc., offers space surveys and product recommendations. If you'd like the benefit of our expert input – **free and with no obligation whatsoever** – call us **Toll-FREE** at **1-800-838-0473** for a free space survey and product recommendations.