

Central Supply

 **Herman Miller** for Healthcare

Graphic Standards
Programming and Schematic Design

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Function

This department, also known as sterile processing and distribution or central sterile services, is responsible for the receiving of all used and/or contaminated instruments and equipment from other hospital departments and the cleaning and additional processing necessary for these instruments and equipment to be reused.

This department may also include distribution of supplies to patient units and other departments. In some facilities, the distribution function is performed by the materials management department not central supply (sterile processing).

This function will include

- Sorting of contaminated instruments, utensils, and equipment for appropriate cleaning.
- Cleaning of instruments, utensils, and equipment by hand, ultrasonic cleaner, washer/decontaminator, or cart wash.
- Inspecting, assembling, wrapping, and labeling of procedure packs, trays, and instrument sets.
- Sterilization of procedure packs, trays, and/or instruments sets.
- Storage of sterilized supplies.
- Delivery of clean and/or sterilized supplies and equipment to the appropriate user department.
- Inventory and charge control of supplies and equipment delivered.

The procedures carried out by the central supply department are monitored by regulatory organizations, such as the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and the Occupational Safety and Health Administration (OSHA).

Layout

Because the surgery department is the primary user of sterile supplies, the central supply department should be planned either adjacent to or in a straight line directly above or below surgery.

If central supply is adjacent to surgery, there should be accessibility from the sterile storage area into the sterile core of the operating suite.

If central supply is directly above or below surgery, there should be two separate delivery systems:

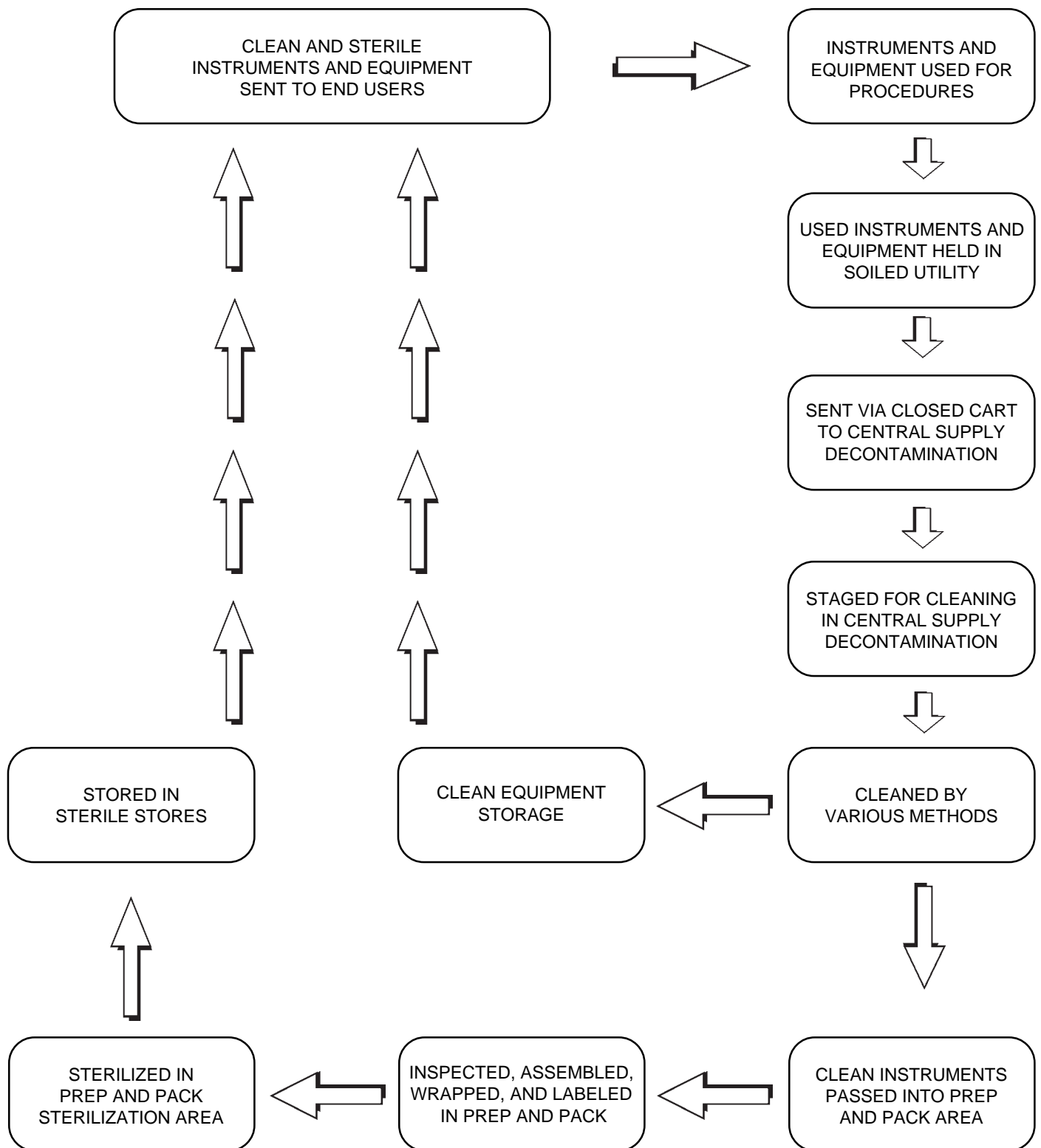
- One from the soiled holding area in the operating room to decontamination in central supply.
- One from sterile storage in central supply to the sterile core in the operating room.

An elevator system is preferred over a cart lift to accommodate a wider variety of sizes of equipment.

The planning and design of the central supply department should assure that the decontamination area is totally separated from the remainder of the department, including separate locker rooms for the staff of each. To prevent the spread of organisms, the flow of both the staff and the equipment must allow no cross-over of soiled and clean materials.

It is recommended that all sterile supplies be stored in enclosed shelves, drawers, or carts. This storage must be eight to ten inches off the floor and 18 inches below the ceiling sprinkler heads.

Flow of Instruments
and Equipment



Staff

Administrative Staff

Director of Central Supply

This position may be held by a registered nurse (RN) or a person with a business degree, often with additional education and/or training, and is responsible for the management of the department. The position usually will report to the director of materials management, the vice president of nursing, or the director of surgical services.

Central Supply Supervisor

This supervisor position may be a registered nurse (RN) or a licensed practical nurse (LPN) and is responsible for the operation of the department, reporting to the director.

Technicians

Central Supply Technician

The central supply technicians are responsible for the cleaning and reprocessing of instruments and equipment, as well as the inventory and restocking of exchange and/or par level supplies.

Case Cart Technician

The case cart technician is knowledgeable about the instruments and procedures used in the operating room and is responsible for assembly of the instruments, packs, and supplies for surgical case carts.

Support Staff

Unit Clerk

The unit clerk has the responsibility for the paperwork, charges, inventory, and supply ordering for the department.

Transport Staff

This staff is responsible for the transportation and delivery of procedure carts, exchange carts, case carts, equipment, and any emergency supplies needed in user departments.

Advantages of Movable Modular Casework

Central supply departments may differ somewhat in square footage, method of operation, and staffing based on the size of the hospital, type of hospital, and scope of services, but each hospital central supply department has certain functional areas in common. The following pages describe the advantages of movable modular casework, give a brief description of the functional areas of central supply, and provide typical plan views of movable modular casework applications.

Movable Modular Casework

Movable modular casework offers the following major advantages and differences when compared with fixed casework or millwork:

- Movable modular casework components have been specifically designed to meet the functional requirements of central supply departments.
- Central supply is a task-oriented department with functions that change from shift to shift.
- *All* movable modular casework components can be rearranged easily to accommodate these ongoing changes.
- Components are sanitizable, and every configuration can be disassembled to easily clean parts.
- Specialized supplies can be transported easily on demand from a central location. Each component can become mobile by combining it with a wheeled component, making the change from storage to mobile quickly and easily.
- The system provides work surfaces and efficiently arranged workstations wherever needed.
- Additional components can be added at any time.

Materials Handling Components

Movable modular materials handling components can be especially useful in the central supply department for supporting effective and efficient delivery, storage, use, and removal of instruments and supplies. The movable components are designed for use as case carts, exchange supply carts, or par level replenishment carts.

Specific components appropriate for use in central supply include

- L carts.
- Crash carts.
- Procedure/supply carts.
- Lockers.
- Bulk supply carts.
- Case carts.
- Process tables.
- Cantilevered work surfaces.
- Extra-deep modular shelving units.

Modular Furniture Systems

- Panel systems for administrative areas offer the use of less space, the flexibility to make changes easily, and increased worker productivity.
- The system provides cantilevered work surfaces and efficiently arranged workstations.

Financial Advantages

The initial cost of movable modular casework is competitive with fixed casework or millwork. However, the life cycle cost of movable modular casework is far *less* than fixed casework because of

- Longer product life.
- Minimal maintenance cost.
- Continual reuse of the components for new or different functions.
- Ability to install and reconfigure with little downtime.
- Accelerated depreciation rate, especially important to “for-profit” organizations.

For preliminary budget purposes, movable modular casework for a central supply department has an average price in the range of \$229 to \$343 per linear foot.

This range will be affected by the density of overhead and undercounter storage components and the type of support structure used (wall-mounted versus panels).

Functional Areas

Decontamination

Soiled items such as carts, instruments, procedure trays, and equipment are brought from patient care units to decontamination to be cleaned. Items are staged here for cleaning and then passed through to other areas.

Delicate or special items to be sterilized are passed to the preparation and packaging area through a window. Instrument sets and utensils are sent to preparation and packaging through a tunnel dish washer or washer/decontaminator.

This area generally is a very wet area with several large stainless steel sinks, counters, and an automated or manual cart wash system.

Decontamination is considered a restricted area with increased potential for contamination from blood or body fluid pathogens on the soiled utensils, carts, and materials.

A separate adjacent locker room should be provided for the staff of decontamination as well as a storage area within the department for additional personal protective equipment (PPE) such as gowns, aprons, goggles, masks, gloves, head coverings, and shoe covers.

Plan View of a Decontamination Area

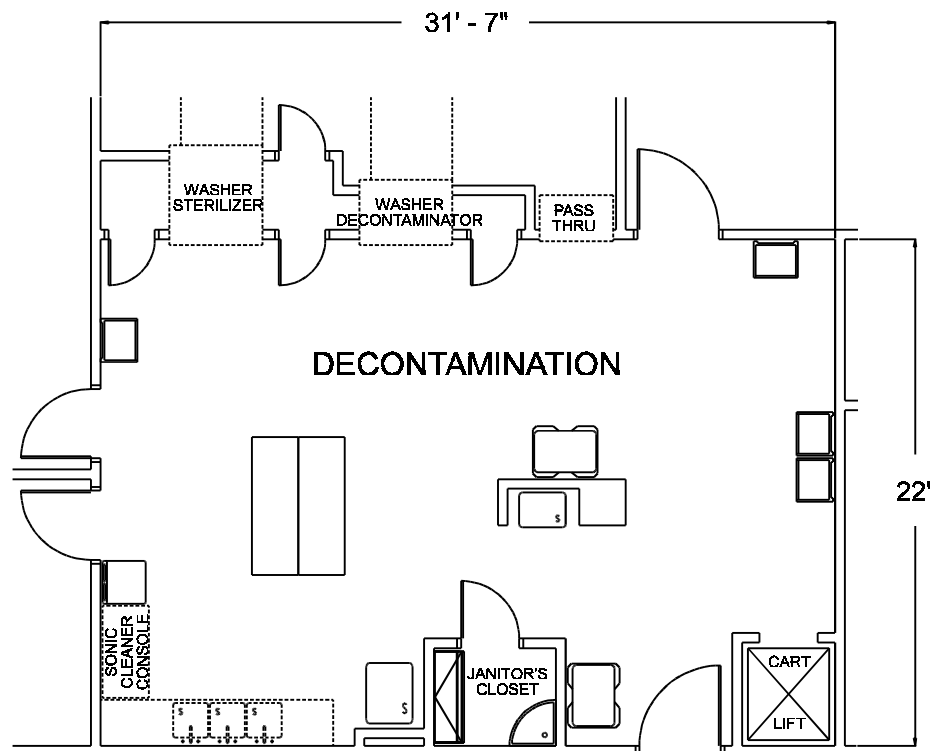
A decontamination area will range in size from 300 to 800 square feet.

- 24 linear feet work surface
- 8 linear feet storage
- 1 locker for PPE

Movable Modular Casework Applications

Movable modular casework components for the decontamination area may include

- Extra-deep shelves on wall strips or rail-hung lockers for storage of cleaning supplies.
- Process table to hold items waiting to be processed.
- Process table used as a mobile workstation.
- Lockers in decontamination area for personal protective equipment (PPE).
- Lockers in locker room for scrub suits.
- Supply carts.



- 3 lockers for supplies
- 1 L cart
- 2 bulk supply carts
- 693 square feet

Preparation and Packaging

Generally called “prep and pack,” this is a clean area where items processed in decontamination are received, inspected, reassembled, wrapped, and sterilized.

Since employees generally wear scrub attire, a second locker room should be provided for the prep and pack staff.

Sterilization equipment is part of this area; storage also is required for supplies used in assembling instrument sets and other sterilized items. Strict quality control policies and procedures must be followed in sterilization processes.

Tasks change from shift to shift which may necessitate rearrangement of workstations.

Movable Modular Casework Applications

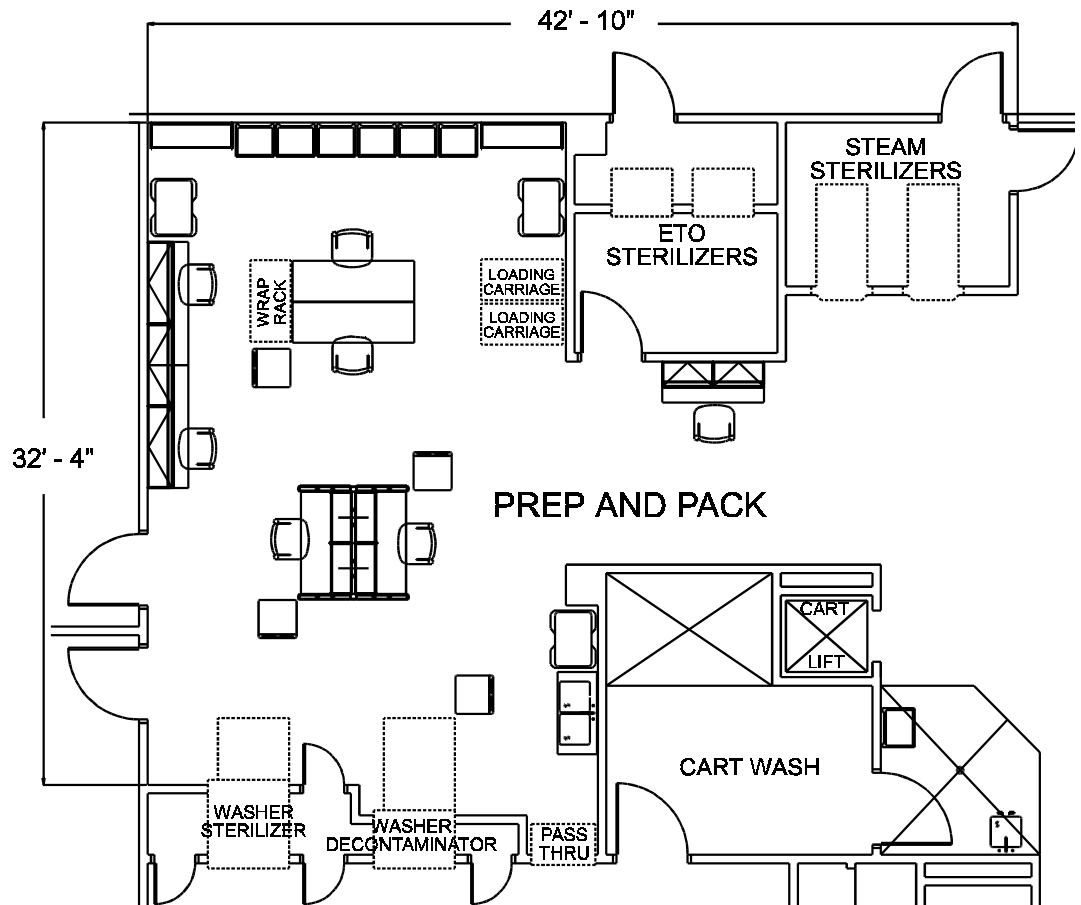
Movable modular casework components can be used to plan the prep and pack area and may include

- Lockers (on rail, open-frame panels, and/or TR3 carts) and bulk supply carts used in a staging area to place items received from decontamination.
- Extra-deep shelves, lockers with drawers and shelves, dispensing rail with subcontainers for storage of supplies and instruments.
- Large process tables used for wrapping packs to be sterilized.
- Modular administrative workstation for quality control documentation and policy and procedure manuals.

Plan View of a Preparation and Packaging Area

A preparation and packaging area will range in size from 800 to 1500 square feet.

- 44 linear feet work surface
- 76 linear feet overhead storage
- 6 lockers
- 4 L carts
- 3 bulk supply carts
- 980 square feet



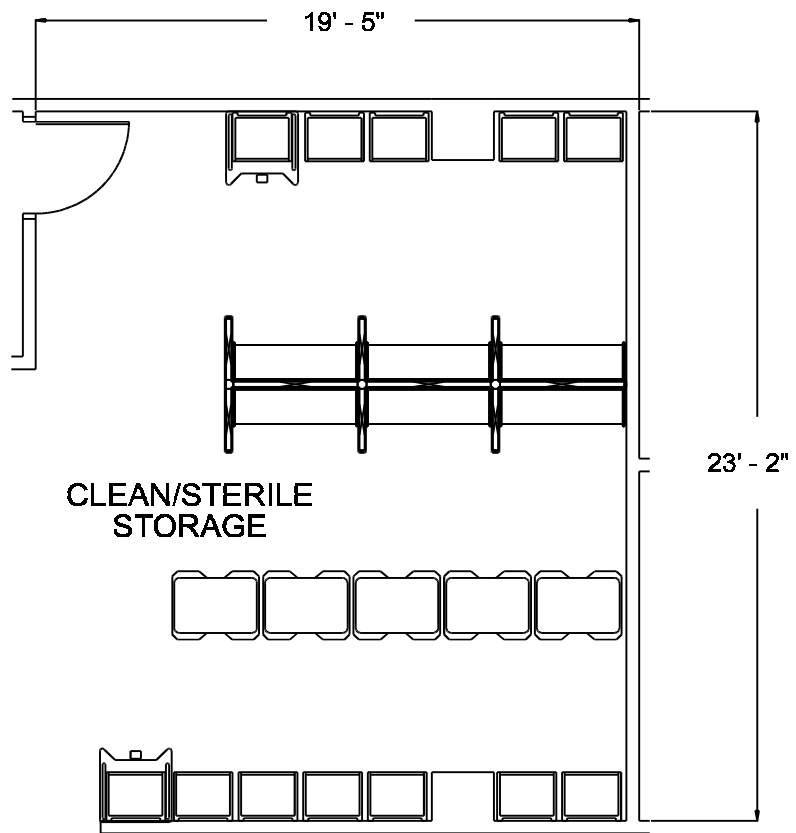
Clean/Sterile Storage

Clean, disposable supplies from general stores and sterilized, reprocessed items from the preparation and packaging area are stored here.

If central supply is providing a case cart system to the surgery department, the carts will be filled from this storage area. If items such as sterilized procedure trays are on an exchange system with patient units, they also will be filled from this storage area.

Movable Modular Casework Applications

Movable modular components for clean/sterile storage may include enclosed extra-deep shelving, bulk supply carts, and/or lockers for storing supplies.



Plan View of a Clean/Sterile Storage Area

A clean/sterile storage area will range in size from 400 to 800 square feet.

- 96 linear feet storage
- 12 lockers
- 5 bulk supply carts
- 575 square feet

Equipment Storage

A great deal of patient care equipment, such as suction machines and infusion pumps, is often stored in central supply and requisitioned by the patient units as needed. This equipment is cleaned in decontamination, checked, reassembled, and stored in the equipment room.

Much of the equipment must be accessible to electrical outlets to maintain battery charges.

Emergency carts and special procedure carts also may be stored here. Overhead shelving may be used so carts can be placed underneath for maximum use of space.

Movable Modular Casework Applications

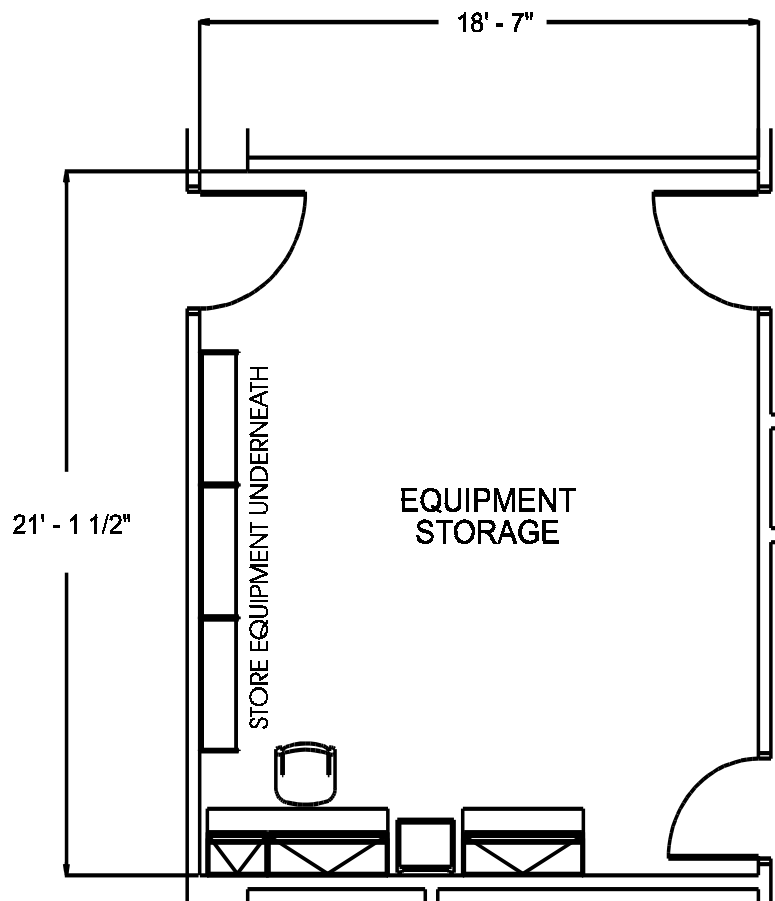
Movable modular components are used for work areas and storage of small equipment and accessories and may include

- Extra-deep shelves on wall strips or panels to hold small items.
- Process tables to receive and reassemble small equipment.
- Procedure carts.
- L carts.
- Crash carts.
- Bulk supply carts.

Plan View of an Equipment Storage Room

An equipment storage room will range in size from 300 to 1000 square feet.

- 10 linear feet work surface
- 52 linear feet storage
- 1 locker
- 795 square feet



Case Cart Holding/Dispatch

If case carts or exchange carts are utilized in the facility, a large area will be provided in central supply for assembly and holding prior to distribution.

A workstation should be provided for centralization of all requests from user departments. Dispatching is responsible for retrieving, recording, and transporting the requested items.

Movable Modular Casework Applications

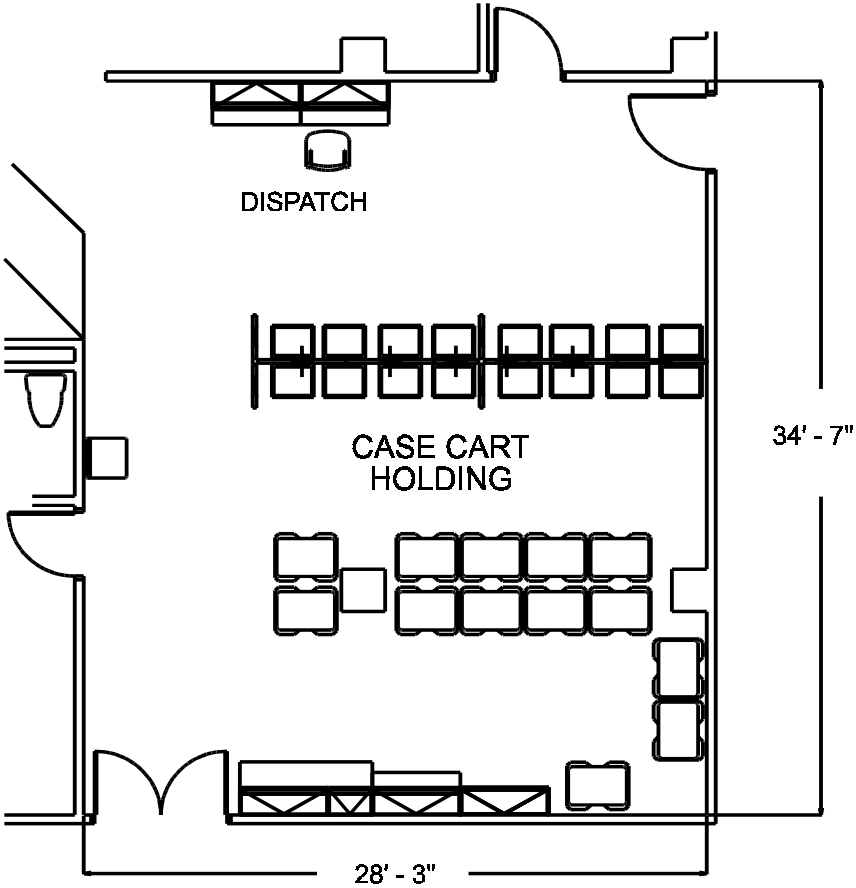
Movable modular components can be used for work areas and storage and may include

- Lockers used as exchange carts.
- Cantilevered work surfaces.
- Bulk supply carts.

Plan View of a Case Cart Holding/Dispatch Area

A case cart holding/dispatch area will range in size from 800 to 1200 square feet.

- 18 linear feet work surface
- 52 linear feet overhead storage lockers as required
- 1 L cart
- bulk supply carts as required
- 975 square feet



Linen Workroom

A linen workroom adjacent to the preparation and packaging area may be provided for inspecting, folding, and wrapping linen to be sterilized. The room usually will have an illuminated table to inspect linen for defects.

Movable Modular Casework Applications

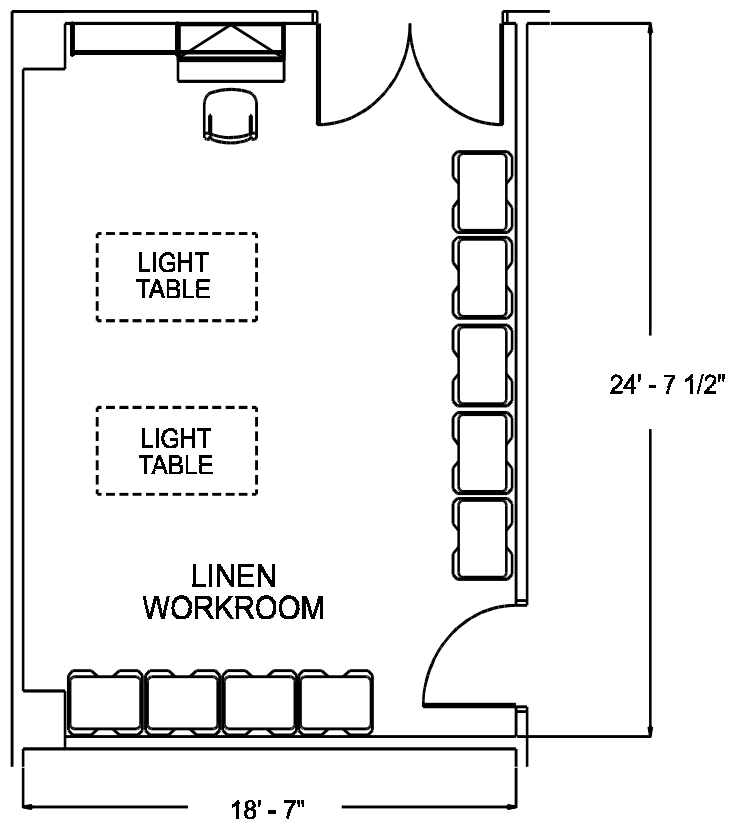
Movable modular casework components can be used in the linen workroom and may include

- Lockers and bulk supply carts for temporary holding of linen.
- Cantilevered work surfaces.

Plan View of a Linen Workroom

A linen workroom will range in size from 400 to 1000 square feet.

- 4 linear feet work surface
- 24 linear feet overhead storage
 bulk supply carts as required
- 795 square feet

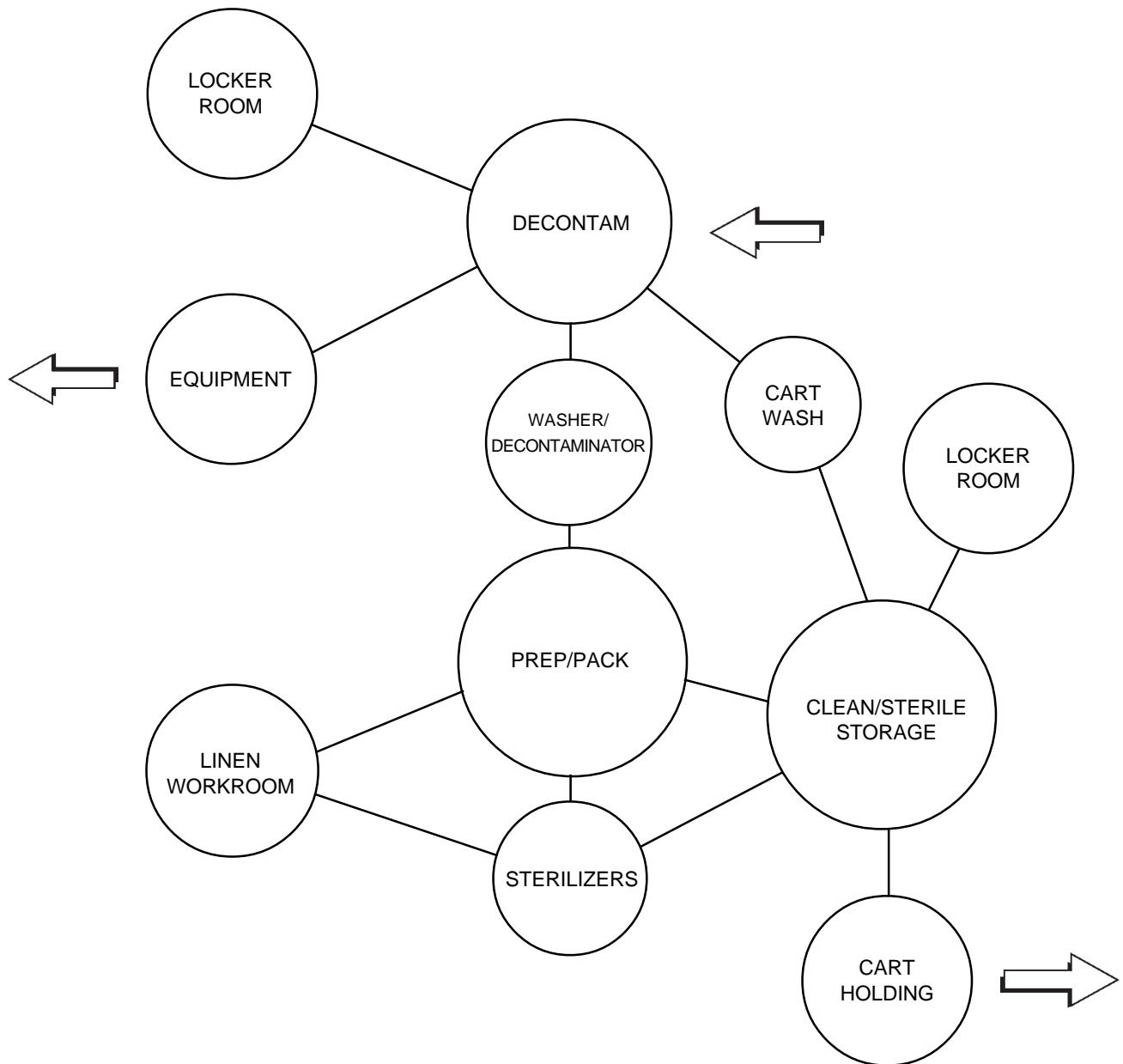


Functional Program

<i>Number</i>	<i>Department Area</i>	<i>Square Feet</i>
Movable Modular Casework		
_____	Decontamination Area	_____
_____	Preparation and Packaging Area	_____
_____	Clean/Sterile Storage Area	_____
_____	Equipment Storage Room	_____
_____	Case Cart Holding/Dispatch Area	_____
_____	Linen Workroom	_____
_____	Staff Toilets and Locker Rooms @ _____ sq. ft.	_____
_____	Janitor's Closet	_____
	<i>Subtotal</i>	_____
Modular Furniture Systems		
_____	Administrative Areas @ _____ sq. ft.	_____
	<i>Subtotal</i>	_____
	TOTAL NET SQUARE FEET	_____
	Net-to-Gross Conversion Factor X	_____
	TOTAL GROSS SQUARE FEET	_____

Bubble Diagram

The bubble diagram of the central supply department demonstrates typical departmental relationships and interaction between areas. Necessary adjacencies within the department become clear.



Block Diagram

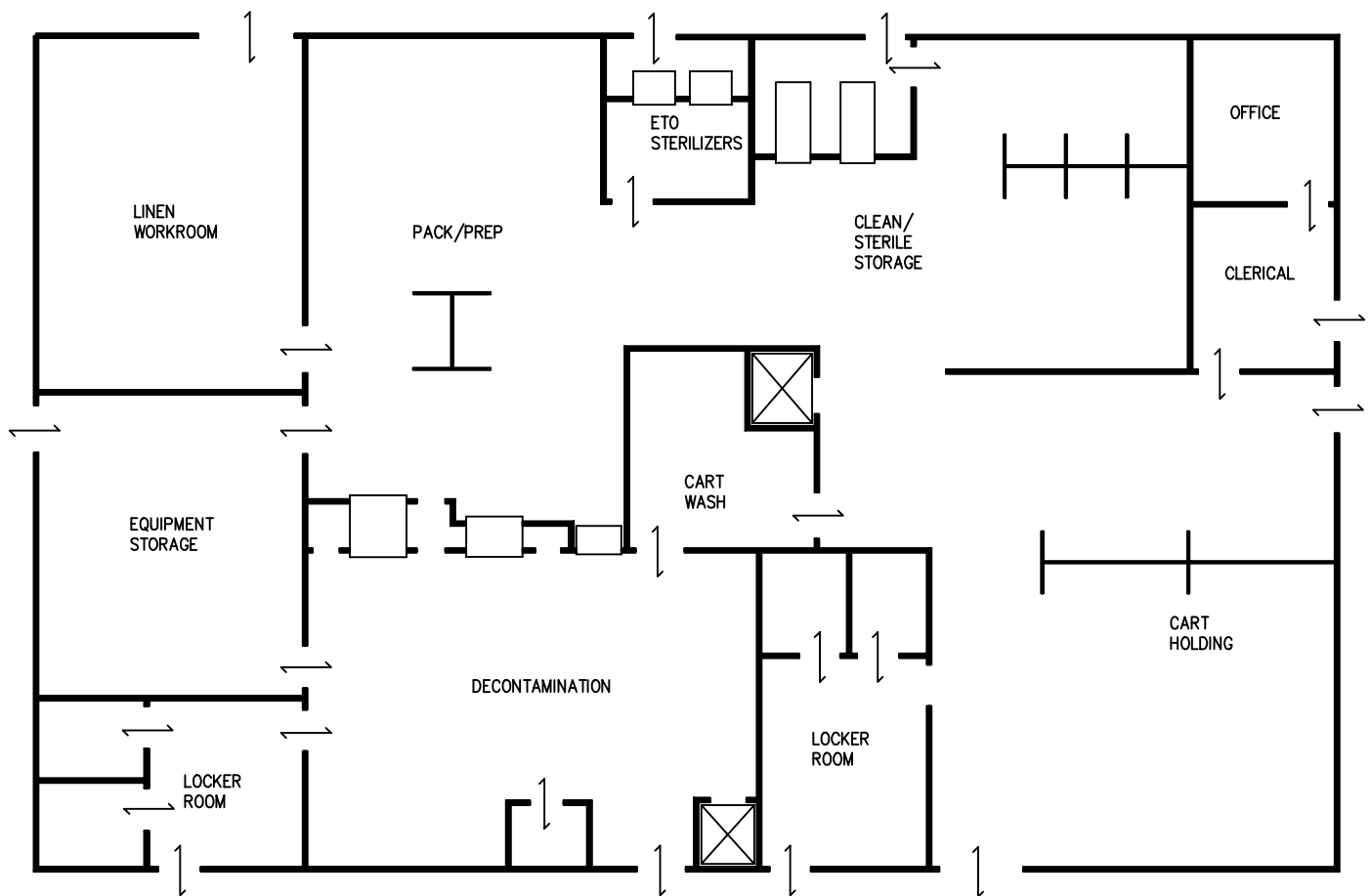
The block diagram demonstrates the adjacencies and relative sizes for the areas within a typical central supply department. Evaluation of the work flow and materials flow from the bubble diagram has determined this initial general layout.

The size of each area is determined by combining the typical movable modular casework plans for each identified function. Traffic patterns are developed, and an overview of the general work process can be evaluated.



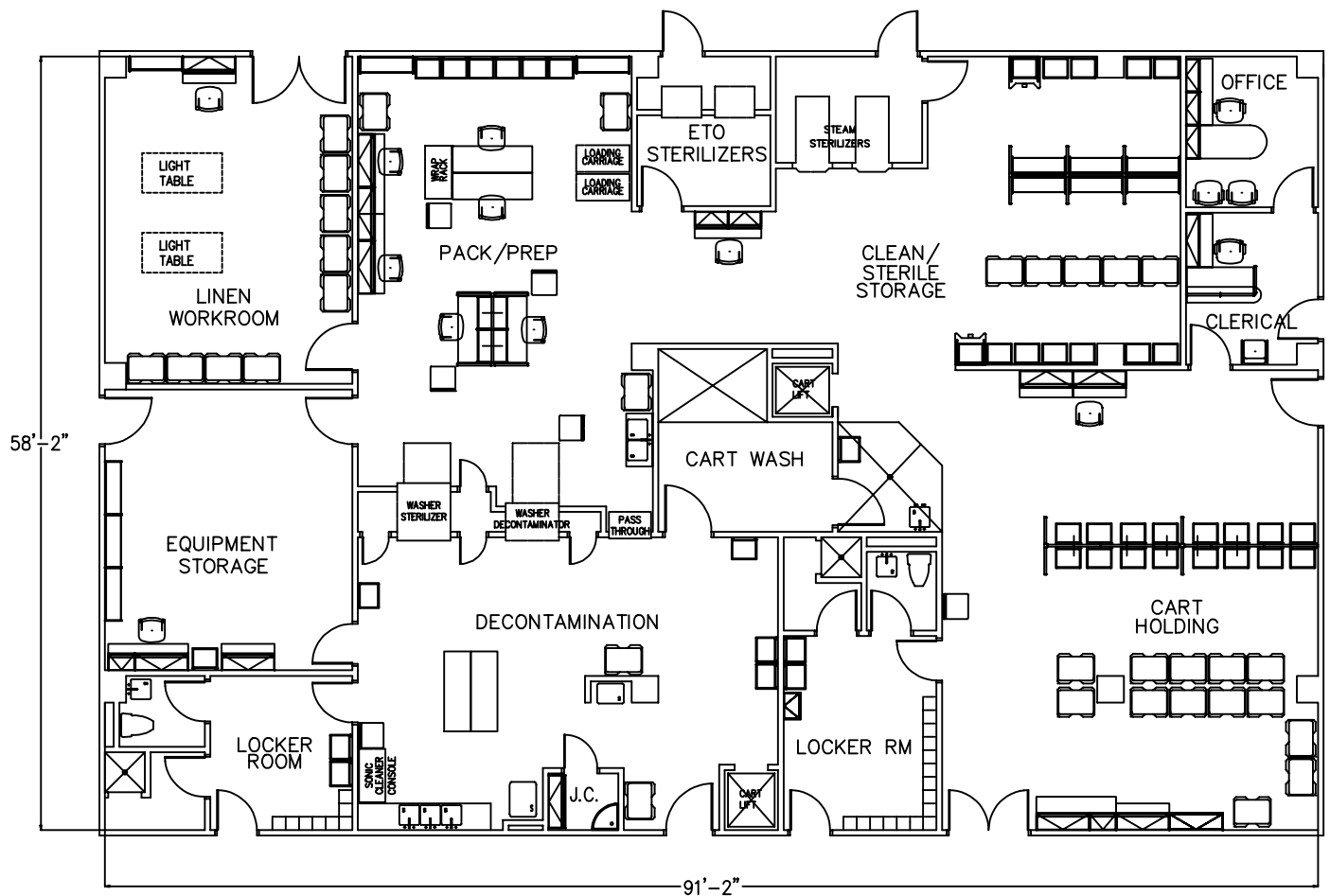
Preliminary Plan

The preliminary plan clarifies the central supply department space requirements by showing the location of all the fixed walls and open areas and identifies entrances, exits, and exact traffic patterns.



Schematic Plan

The schematic plan shows all of the specific movable modular casework, modular furniture systems components, and materials handling components appropriate for a typical central supply department.



Future Trends

Off-site Warehousing

Some Central Supply departments that are performing the distribution function are utilizing off-site warehousing:

- In many facilities, off-site warehousing is being used to free in-house space for additional patient care services.
- Some manufacturers of medical supplies are offering warehousing as a service with the purchase of their products in an effort to capture more product sales. This reduces the hospital space required for bulk storage.

Computerization and Bar Coding

The advent of computers will continue to improve dramatically the ability of central supply to track inventories, predict supply usage, and monitor patient charges.

Hand-held computers make inventorying much easier, quicker, and more accurate than manually counting supplies. Some hand-held computers are used to scan bar codes on individual items, while others are programmed to automatically prompt the user to punch in the quantity of a specific item.

Computers are being used to compare pricing, forecast usage, generate “picking” or “fill” lists, and generally control information involved with the use of materials.

Low-Temperature Sterilization

Many facilities are changing from ethylene oxide gas sterilization to alternate methods that require less space and monitoring. These methods do not need to be located in an enclosed room, only need electrical outlets, and may be safer.

For the location of the sales facility or dealer near you, visit www.hermanmiller.com/healthcare or call (800) 628 0058.

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