5 Delivery Unit Workroom Floor Planning: City, Rural, and Highway Contract Route Delivery

51 General

Chapter 5 contains criteria and instructions for allocation of appropriate workroom floor space to accommodate all city, rural, and highway contract route (HCR) casing equipment when planning for a new or upgraded facility. The basic formula used to determine space requirements for delivery functions (see section 52) has been standardized. The standardized formula takes into consideration modern-day casing equipment and ancillary equipment normally used and found on the carrier workroom floor in a delivery unit environment, i.e., carrier casing equipment, throwback case, clerical letter and flat distribution cases for missorts, registry cage, carrier key cage, parcel post distribution, aisle space, supervisor's standup desk or workstation, etc.

52 Basic Formula

The basic formula to be used in planning for space requirements for a new or upgraded facility is 180 square feet (sq ft) for each city, rural, or highway contract route up to and including the 25th route. For each additional route in excess of 25, a total of 130 square feet should be provided in the planning. This formula is to be applied only to city, rural, and highway contract route delivery workroom floor areas; for all other functions (retail, mail processing, administrative and maintenance, etc.), refer to the appropriate headings in this handbook. Exhibit 52a lists the workstation units (WSUs) currently used for delivery unit space requirements. Exhibit 52b illustrates carrier space planning for the 180 square foot areas; Exhibit 52c illustrates carrier space planning for the 130 square foot areas. Exhibit 52d illustrates the carrier loading vestibule layout.

Example: Space requirements are being prepared for a new building to house an existing delivery unit that has 33 carrier routes; the total square footage required for placement of these routes would be calculated as follows:

25 routes x 180 sq ft =	4,500 sq ft
8 routes x 130 sq ft =	+1,040 sq ft
Total =	5,540 sq ft

Therefore, a total of 5,540 square feet should be planned for the delivery workroom floor area in a new or upgraded building with this number of routes.

This method also provides space for ancillary equipment related to the carrier operation (for example, throwback case, carrier key cage, registry cage, carrier supervisor desks, and parcel post distribution area).

Exhibit 52a
WSUs Used for Carrier Unit Space Requirements

WSU Number	Postal CAD Drawing Name	Square Feet Required	Description
520001	520001.DWG	180	Carrier Space Planning: 180 Sq Ft for First 25 Carrier Routes
520002	520002.DWG	130	Carrier Space Planning: 130 Sq Ft for Each Additional Carrier Route
520009	520009.DWG	400	Carrier Loading Vestibule

Exhibit 52b

520001, Carrier Space Planning: 180 Sq Ft for First 25 Carrier Routes

Date: Dec. 1994
Carrier Space Planning Basic Formula
Scale: No Scale
Area: 180 Sq Ft

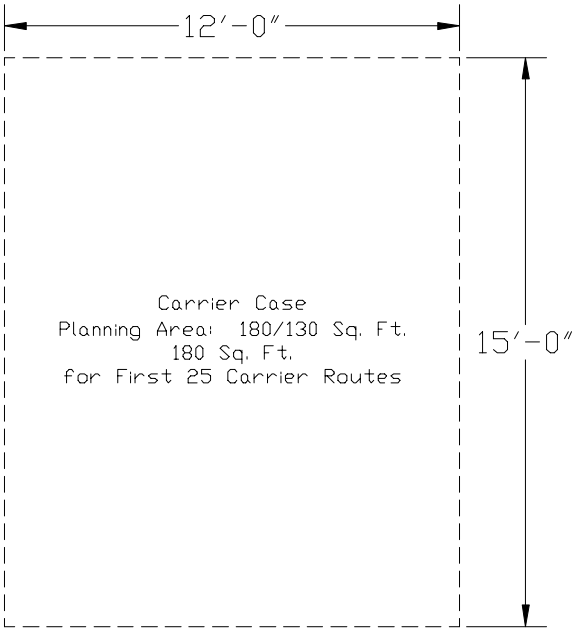


Exhibit 52c

520002, Carrier Space Planning: 130 Sq Ft for Each Additional Carrier Route

Date: Dec. 1994
Carrier Space Planning Basic Formula
Scale: No Scale
Area: 130 Sq Ft

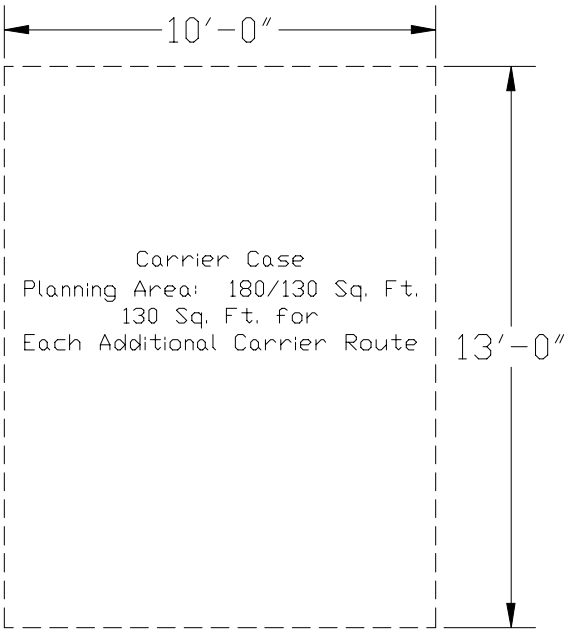
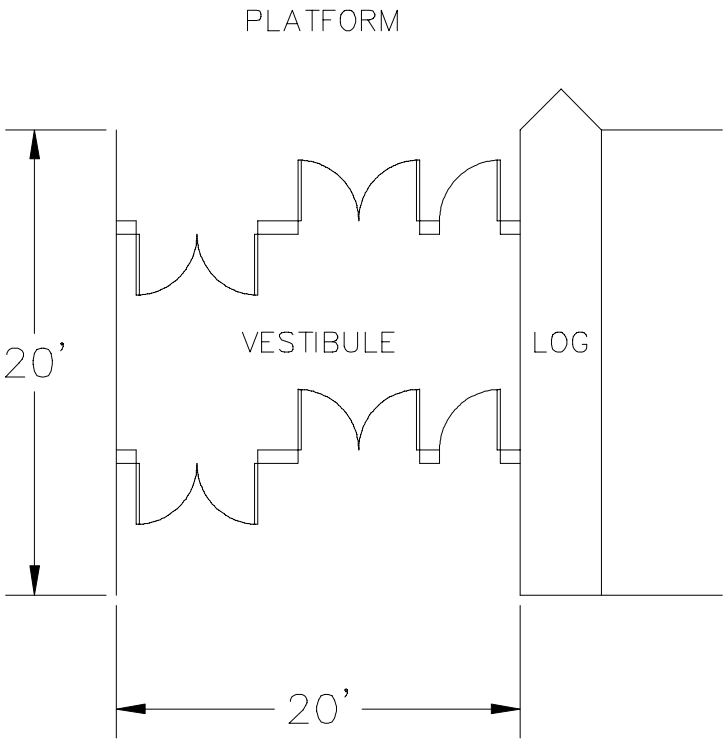


Exhibit 52d
520009, Carrier Loading Vestibule

Date: May 1997
Carrier Loading Vestibule
Scale: No Scale
Area: 400 Sq Ft



53 Carrier Case Configurations: City, Rural, and HCR

531 General

The recommended basic carrier case configurations for a vertical flats environment can be found in this section. To assist in planning for the placement, or arrangement, of equipment on the delivery workroom floor area of the new or upgraded facility, section 532 lists the normally used equipment (inclusive of its square footage displacement).

532 Carrier Case Configurations for Vertical Flats

Local managers are afforded a reasonable degree of flexibility in determining their equipment configurations as long as (a) utilization of space is efficient, (b) their equipment configuration variance is justified by volume or circumstances, and (c) their variances from the recommended equipment configuration are acceptable and approved by their district manager. Examples of variances would be (a) the use of the discontinued rural carrier

case (Items 125 and 126) in lieu of the 124-C/143-C/144-C combination, or (b) use of a 134-A, B, C, or D (flat distribution case) in lieu of or in addition to recommended equipment, etc. In instances where casing equipment different from that recommended above is to be used, local managers should be aware that reasonable equipment variations have been given consideration during the development of the formula allocating 180/130 square feet of space per route. **Therefore, adjustments to the basic formula are not necessary.** Exhibit 532a lists the two WSUs that are the versions of carrier case configurations. Exhibits 532b and 532c illustrate these WSUs for visual reference in planning facility space requirements.

Exhibit 532a
WSUs Used for Carrier Case Configurations

WSU Number	PostalCAD Drawing Name	Square Feet Required	Description
530001	530001.DWG	68	Carrier Case Configurations for Vertical Flats (Option A)
530002	530002.DWG	74	Carrier Case Configurations for Vertical Flats (Option B)

Exhibit 532b
530001, Carrier Case Configurations for Vertical Flats (Option A) (for Layout Purposes Only)

Date: Dec. 1994
Carrier Case Configuration
Scale: No Scale
Area: 68 Sq Ft

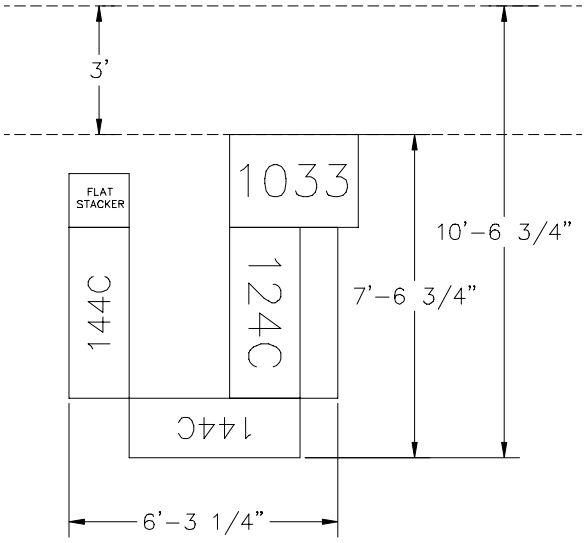
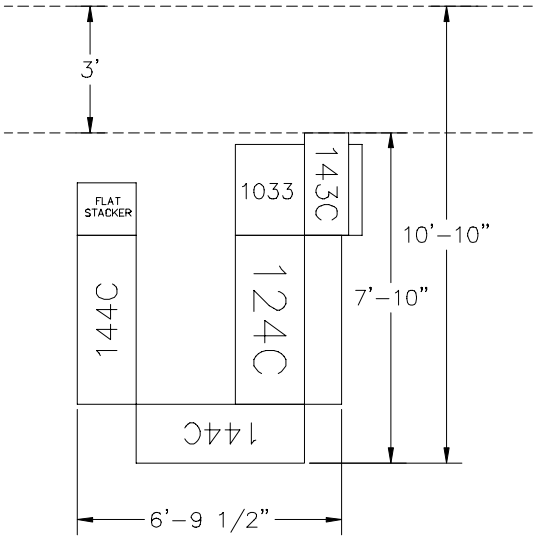


Exhibit 532c

530002, Carrier Case Configurations for Vertical Flats (Option B) (for Layout Purposes Only)

Date: Dec. 1994
Carrier Case Configuration
Scale: No Scale
Area: 74 Sq Ft



533 Casing Equipment and Other Workroom Floor Equipment Square Footage Displacements

The square footage displacements for some of the various pieces of equipment normally found on the delivery workroom floor are listed in Exhibit 533; it should be noted that the figures provided *do not* include any working or aisle space. Due to the diverse casing equipment configurations found in different offices, it was concluded to be nearly impossible to determine an accurate working or aisle space measurement for the equipment individually when it may be placed at right angles to other pieces of equipment utilizing the same working or aisle space. Local managers should pay close attention to this detail when formulating plans for a new or upgraded facility.

Exhibit 533
Item Numbers Included in the Delivery Workroom

Item Number	Description	Square Foot Displacement
21-A	Flat Distribution Case w/Table, 28-Cell	8.67
21-B	Flat Distribution Case w/Table, 42-Cell	12.75
21-C	Flat Distribution Case w/Table, 56-Cell	16.84
21-L	Flat Distribution Case Wing, 28-Cell	3.86
38	Supervisor's Standup Desk	9.34
77/78	Letter Wing Case	1.73
79/80	Letter Case and Table	5.72
109-A*	Flat Distribution Case w/Table, 24-Cell	14.27
109-B	Flat Distribution Case w/Table, 30-Cell	17.65
109-C*	Flat Distribution Case w/Table, 36-Cell	21.03
109-D	Flat Distribution Case w/Table, 42-Cell	18.48
124-C	Carrier Case w/Table, Letters	10.084
129	Throwback Case	3.62
134-A*	Flat Distribution Case, 24-Cell	4.89
134-B*	Flat Distribution Case, 30-Cell	6.05
134-C*	Flat Distribution Case, 36-Cell	7.21
134-D*	Flat Distribution Case, 42-Cell	8.36
136-A*	Flat Distribution Case, 24-Cell	8.33
136-B	Flat Distribution Case, 30-Cell	10.31
136-C*	Flat Distribution Case, 36-Cell	12.28
136-D	Flat Distribution Case, 42-Cell	14.25
143-C	Carrier Case Wing, Swinging	2.550
144-C	Carrier Case Wing	5.590
1033	Canvas Basket (Hamper)	6.50
1046	Canvas Basket (Hamper)	9.78
1075	Basket-Type Utility Cart (U-Cart)	5.32
1226-C	Seven-Shelf Tray Cart	13.10
1226-D	Mail Tray Cart (A-Frame)	5.53
3908	Letter Tray Transporter	7.86
3909	General-Purpose Mail Container	8.46

** Obsolete equipment*

54 Automation

541 Delivery Barcode Sorter Sites

For those locations that will be installing delivery barcode sorter (DBCS) equipment, they must consider appropriate space in the planning stages for a new or upgraded facility to ensure its safe and efficient operation. It will be necessary to determine the specific manufacturer and model number of the equipment to be installed before space can be planned accurately. After receiving and confirming the manufacturer's name and the model number of the equipment, refer to section 432 of this handbook for information on the footprint of the machine as well as the square footage required for supporting equipment.

542 Carrier Sequence Barcode Sorter Sites

For those locations that will be installing carrier sequence barcode sorter (CSBCS) equipment, they must consider appropriate space in the planning stages for a new or upgraded facility to ensure its safe and efficient operation. Due to the fact that there are different models of this equipment, it will be necessary to determine the number of machines, and the number of stackers on each machine, before space can be planned accurately. After receiving and confirming this information, refer to Exhibit 542a below and the drawings in Exhibits 542b through 542g for information on the footprint of the machine. The footprint of the WSUs provides for movement of mail and personnel within the work center, exclusive of dedicated aisles, and an allowance for column interference and other unusable space.

Exhibit 542a
WSUs Used for CSBCS Machines

WSU Number	PostalCAD Drawing Name	No. of Stackers	No. of Machines	Length	Width	Square Feet Required*
542001	542001.DWG	13 stackers	1	24′6″	13′0″	318.5
542002	542002.DWG	13 stackers	2	24′6″	23′0″	563.5
542003	542003.DWG	13 stackers	3	24′6″	33′0″	808.5
542004	542004.DWG	17 stackers	1	28′8″	13′0″	373
542005	542005.DWG	17 stackers	2	28′8″	23′0″	660
542006	542006.DWG	17 stackers	3	28′8″	33′0″	946

Planners should note that the dimensions and square footage figures provided in Exhibit 542a include **only placement of the CSBCS, a minimum of a 3-foot maintenance space around the perimeter of the machine for access to panels, and space for locating minimal support equipment at one end of each machine. It does not include space for maintenance spare parts cabinets immediately adjacent to the machines, space for additional supporting equipment, or access aisle space for equipment movement. Refer to 542.1 for maintenance spare parts storage and 542.2 for bullpen space.*

Note: For layout purposes, allow for a 36″ aisle as shown in WSUs 542001 through 542006.

Exhibit 542b
542001, One 13 Stacker CSBCS

Date: Dec. 1994
CSBCS Configuration
Scale: No Scale
Area: 318.5 Sq Ft

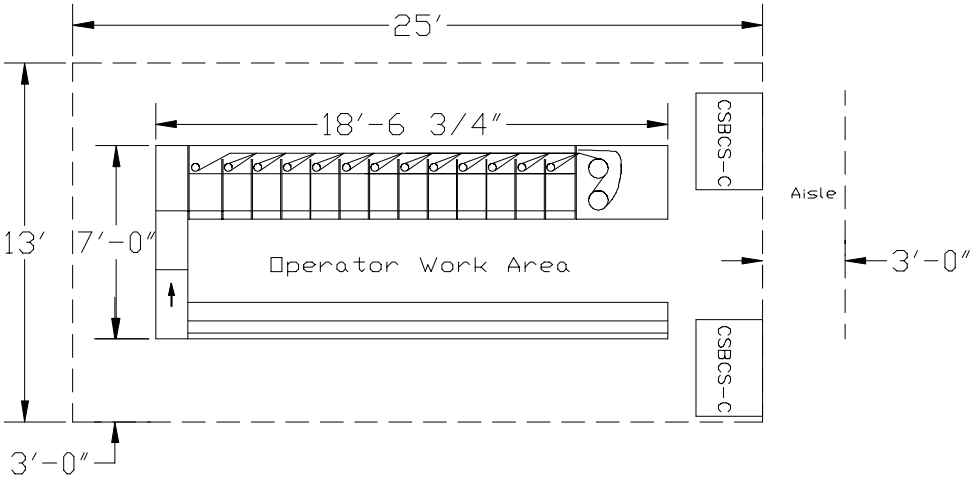


Exhibit 542c
542002, Two 13 Stacker CSBCSs

Date: Dec. 1994
CSBCS Configuration
Scale: No Scale
Area: 563.5 Sq Ft

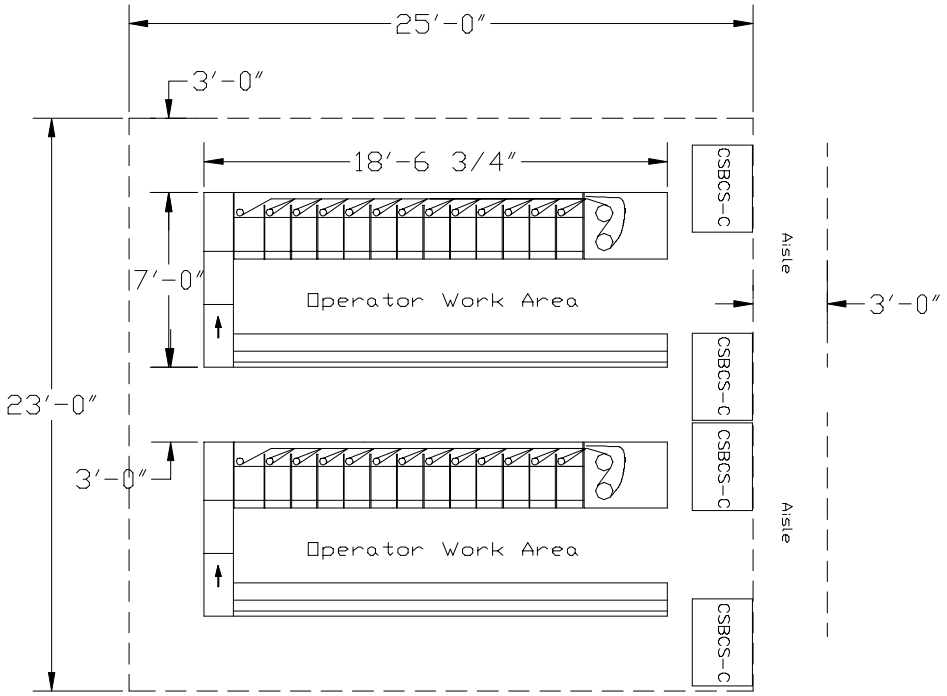


Exhibit 542d

542003, Three 13 Stacker CSBCSs

Date: Dec. 1994
CSBCS Configuration
Scale: No Scale
Area: 808.5 Sq Ft

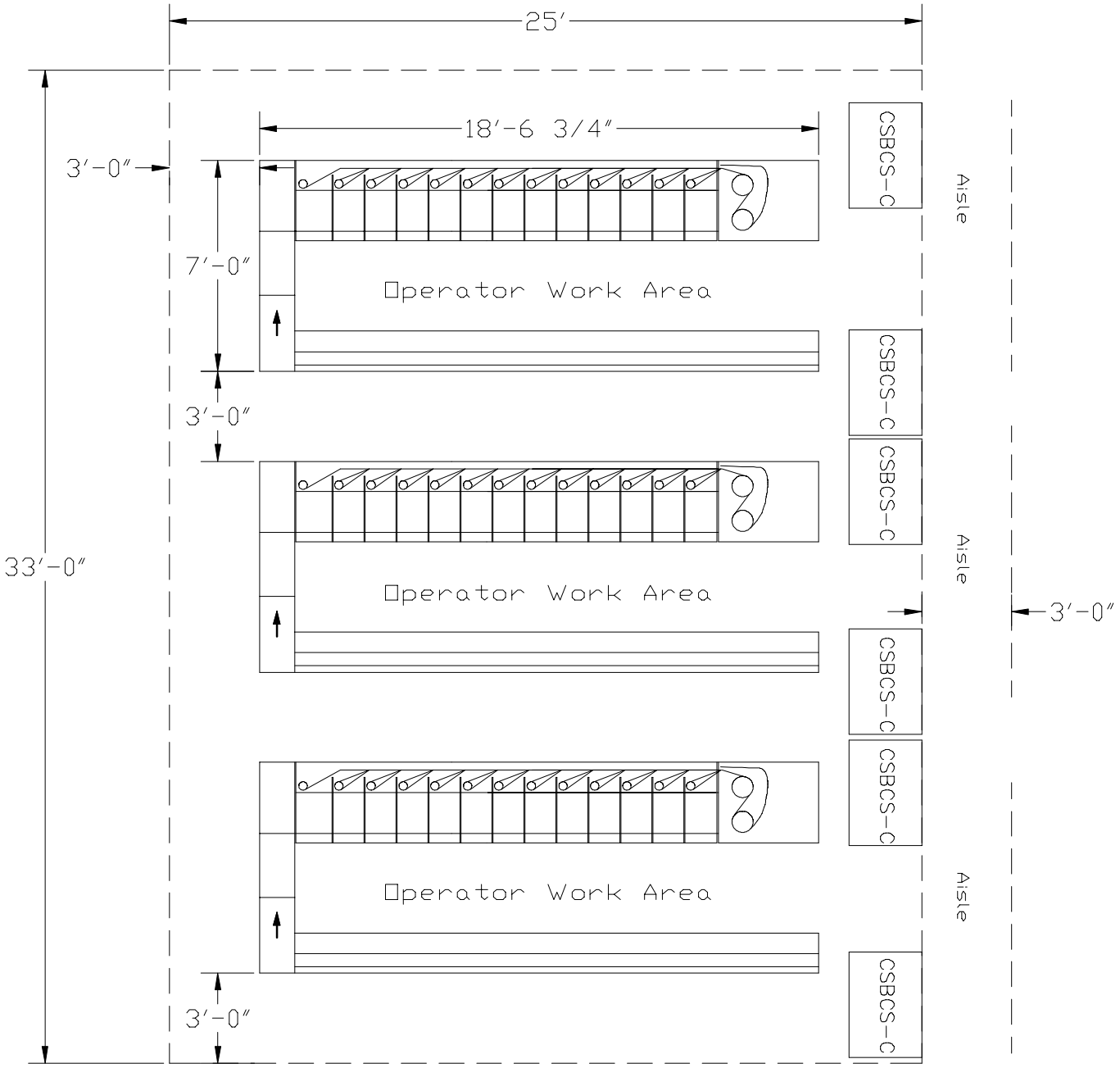


Exhibit 542e

542004, One 17 Stacker CSBCSs

Date: Dec. 1994
CSBCS Configuration
Scale: No Scale
Area: 373 Sq Ft

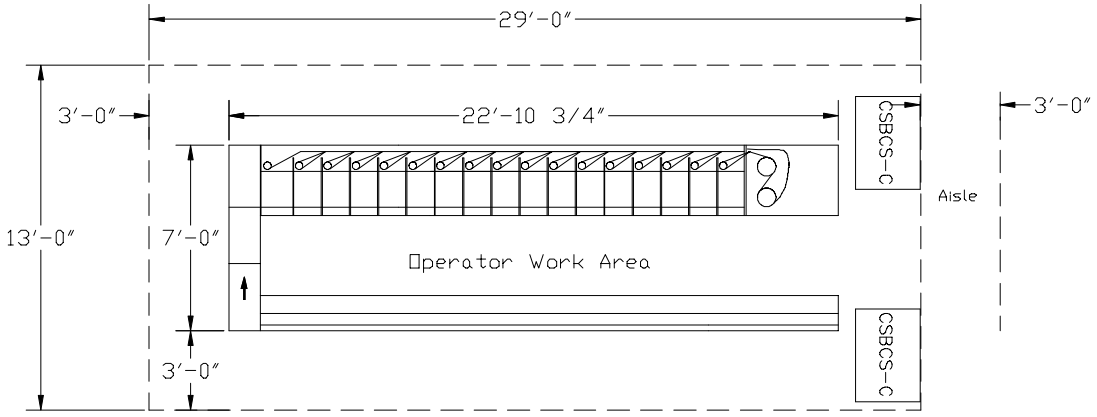


Exhibit 542f

542005, Two 17 Stacker CSBCSs

Date: Dec. 1994
CSBCS Configuration
Scale: No Scale
Area: 660 Sq Ft

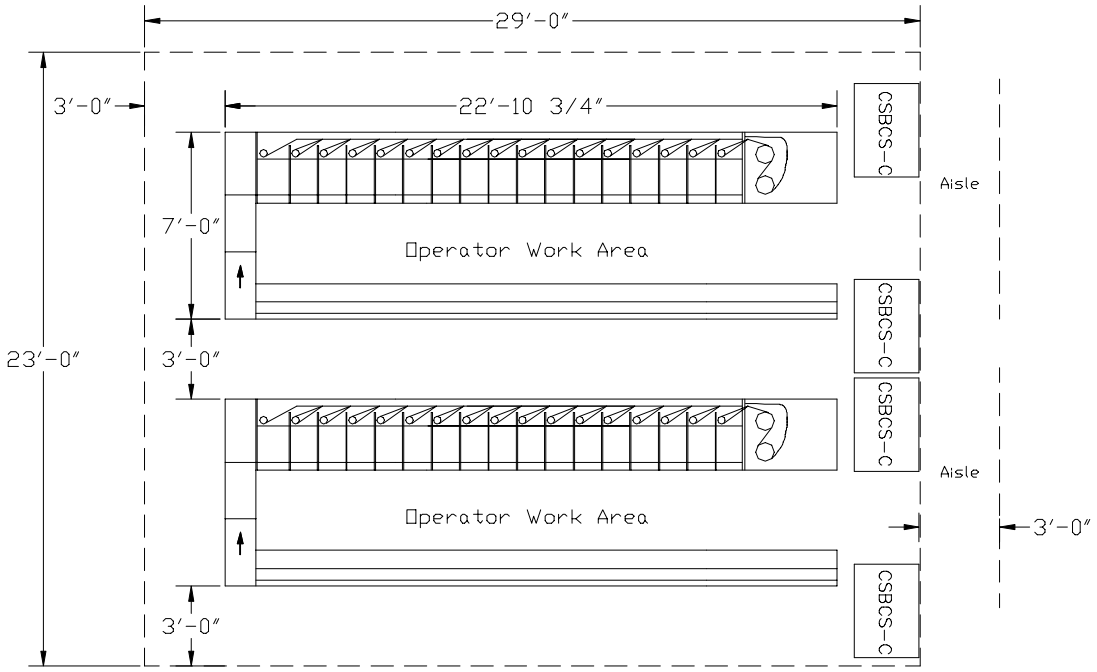
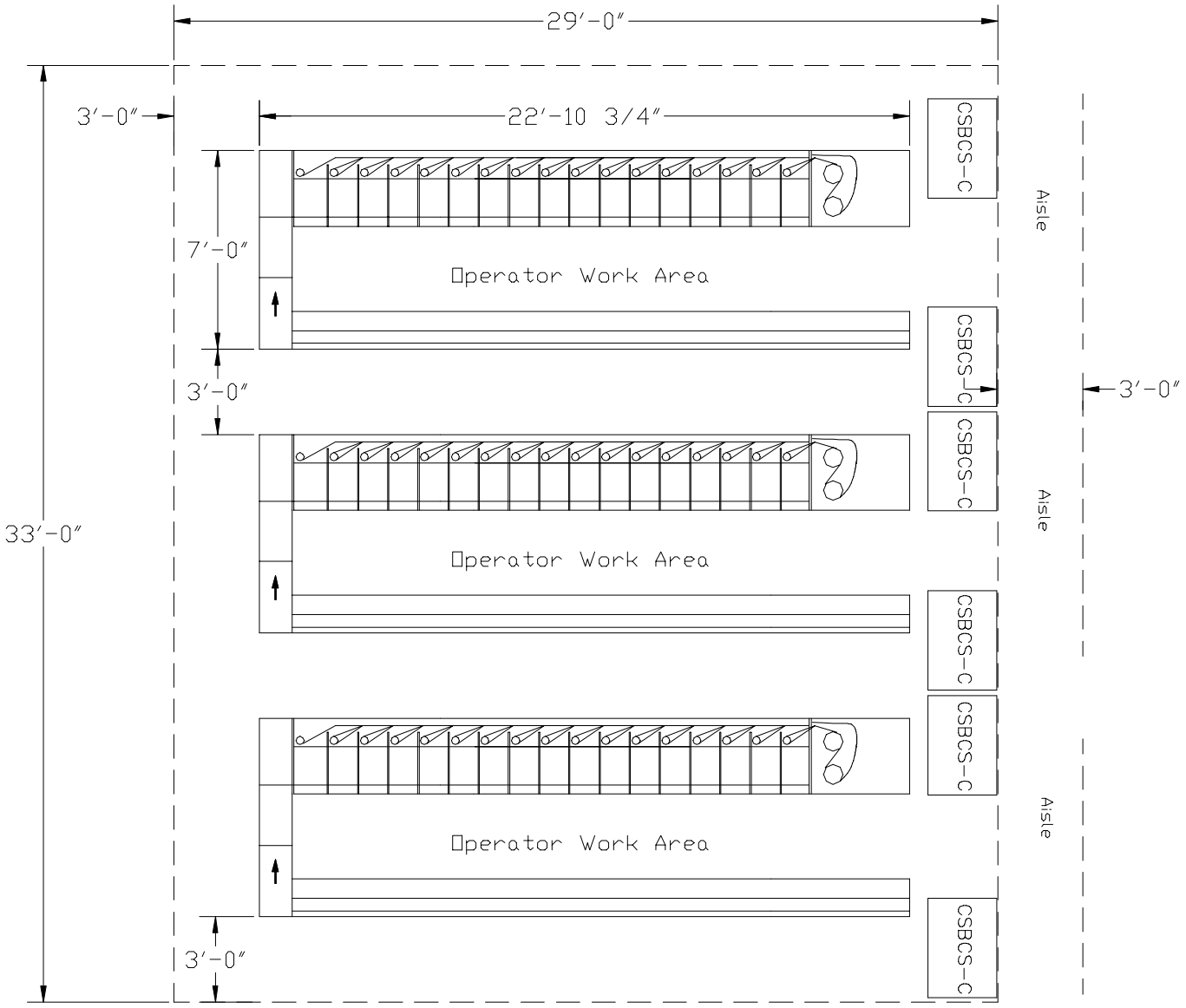


Exhibit 542g

542006, Three 17 Stacker CSBCSs

Date: Dec. 1994
CSBCS Configuration
Scale: No Scale
Area: 946 Sq Ft



542.1 Maintenance Spare Parts Storage for CSBCS

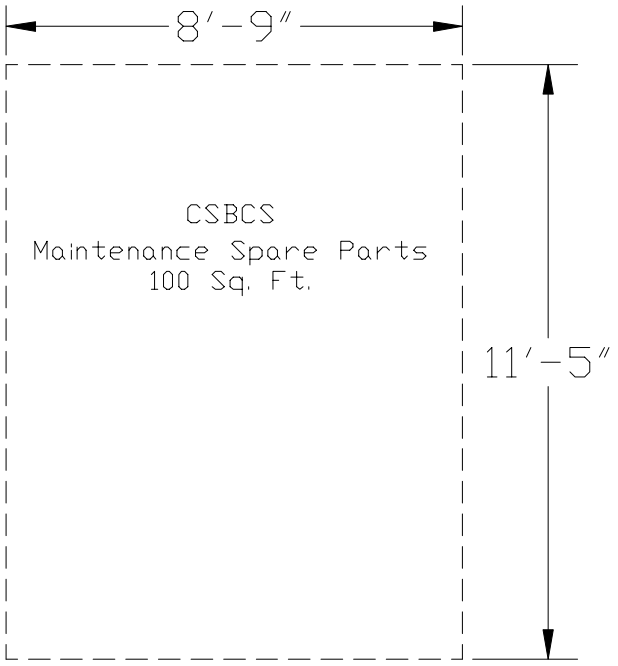
Regardless of the number of machines, 100 sq ft are required for spare parts. Under normal circumstances, it is recommended that this space be provided immediately adjacent to the equipment to expedite access to spare parts as needed. However, due to space configurations and/or as demand for additional workroom floor space in a growing operational environment increases, some locations may elect to identify available space off the workroom floor for storage of this material, perhaps in a side room. This is acceptable as long as the space is adequate and in close proximity to the CSBCS equipment. Exhibit 542.1a shows the WSU used in planning the maintenance spare parts storage for the CSBCS machines. Exhibit 542.1b illustrates the WSU for visual reference in planning facility space requirements.

Exhibit 542.1a
WSU Used for Maintenance Spare Parts Storage for CSBCS

WSU Number	PostalCAD Drawing Name	Square Feet Required	Description
542101	542101.DWG	100	Maintenance Spare Parts Storage for CSBCS

Exhibit 542.1b
542101, Maintenance Spare Parts Storage for CSBCS

Date: Dec. 1994
CSBCS Maintenance Spare Parts Configuration
Scale: No Scale
Area: 100 Sq Ft



542.2 Bullpen Space for CSBCS

Exhibit 542.2a lists the WSUs used for bullpen spaces for CSBCSs. In reviewing Exhibits 542.2b through 542.2g, note that space is included for two eastern region mail containers (ERMCs) (or general-purpose mail containers (GPMCs) or all-purpose containers (APCs)) at one end of each CSBCS. Additional bullpen space should be planned on the open end of each CSBCS. Authorization for any additional space is subject to approval by the district manager. The footprint for each bullpen space makes the following assumptions:

a. 18 routes per CSBCS.

b. Two ERMCs for each CSBCS used for bullpen area.

c. No more than three trays per route, up to a total of 48 trays per CSBCS.

d. Working aisle can be shared with existing aisle space, if necessary.

Exhibit 542.2a
WSUs Used for Bullpen Space for CSBCS Machines

WSU Number	PostalCAD Drawing Number	Number of CSBCSs	Working Aisles Req'd	Length (Ft)	Width (Ft)	Square Feet Required
542202	542202.DWG	2	no	12	9	108
542203	542203.DWG	3	yes	12	13	156
542204	542204.DWG	4	yes	12	16.5	198
542205	542205.DWG	5	yes	19	15	285
542206	542206.DWG	6	no	19	15.5	294.5
542207	542207.DWG	7	no	19	19	361

Exhibit 542.2b

542202, Bullpen Space for Two CSBCSs

Date: Dec. 1994
CSBCS Bullpen Configuration
Scale: No Scale
Area: 108 Sq Ft

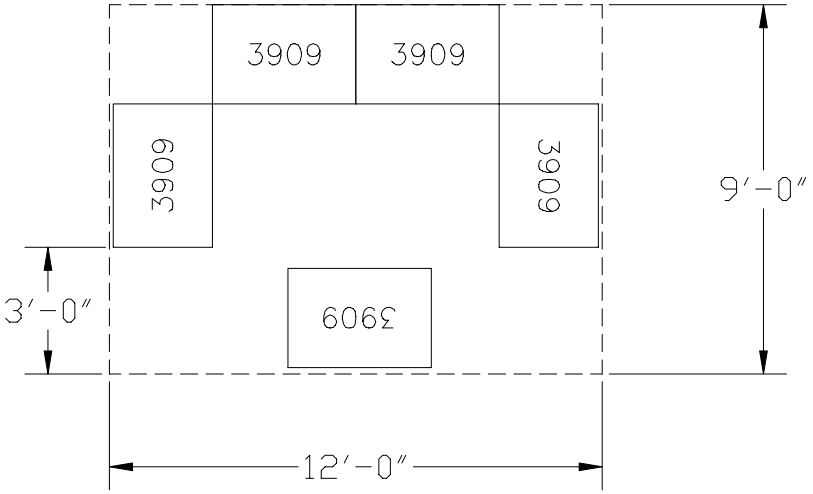


Exhibit 542.2c

542203, Bullpen Space for Three CSBCSs

Date: Dec. 1994
CSBCS Bullpen Configuration
Scale: No Scale
Area: 156 Sq Ft

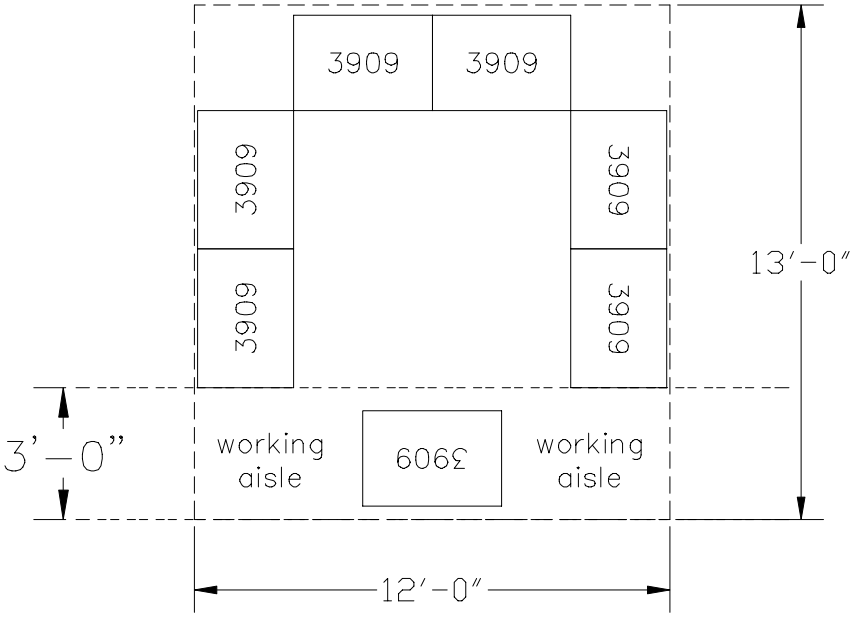


Exhibit 542.2d
542204, Bullpen Space for Four CSBCSs

Date: Dec. 1994
CSBCS Bullpen Configuration
Scale: No Scale
Area: 198 Sq Ft

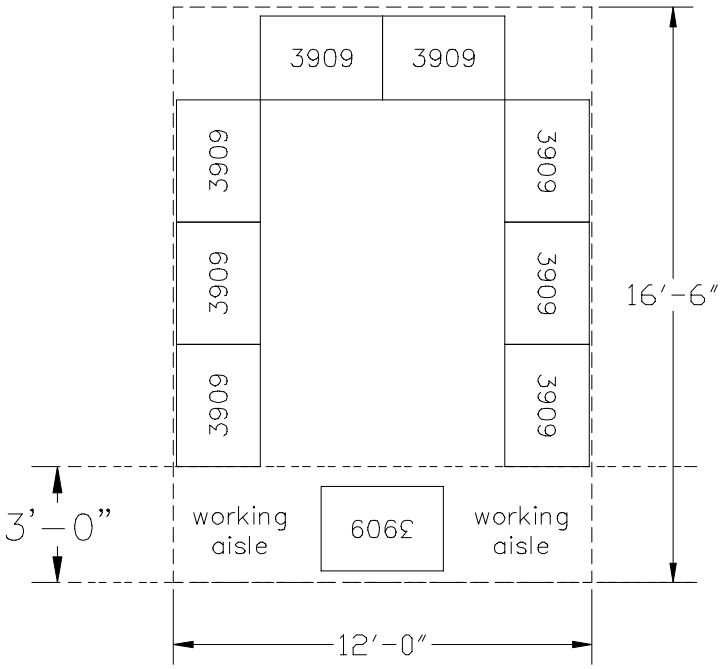


Exhibit 542.2e
542205, Bullpen Space for Five CSBCSs

Date: Dec. 1994
CSBCS Bullpen Configuration
Scale: No Scale
Area: 285 Sq Ft

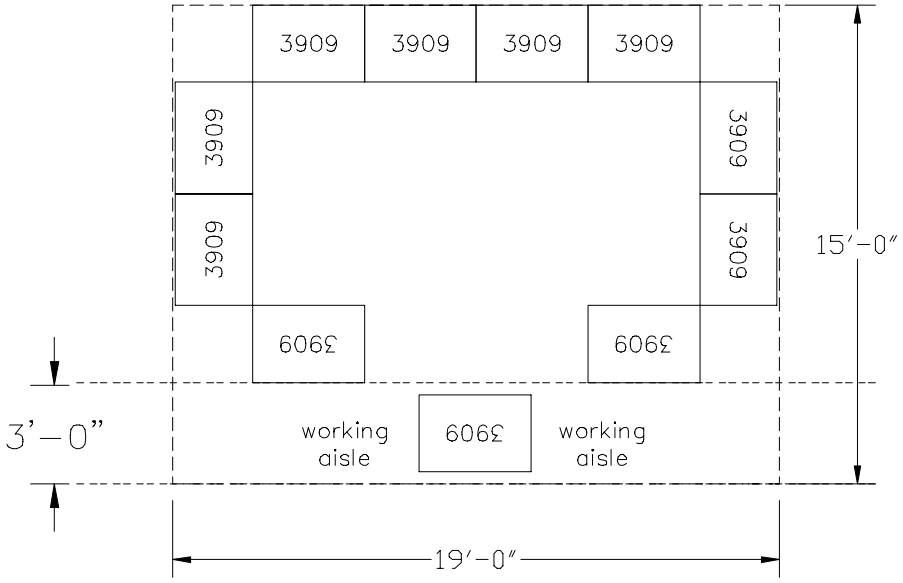


Exhibit 542.2f

542206, Bullpen Space for Six CSBCSs

Date: Dec. 1994

CSBCS Bullpen Configuration

Scale: No Scale

Area: 294.5 Sq Ft

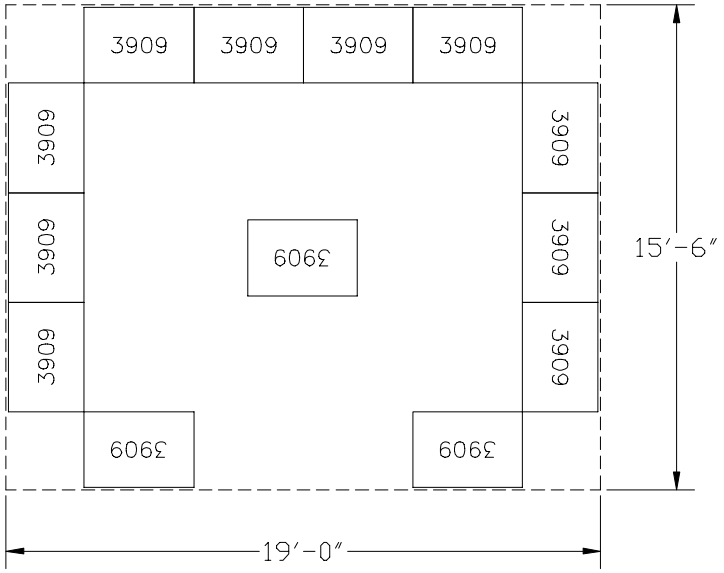


Exhibit 542.2g

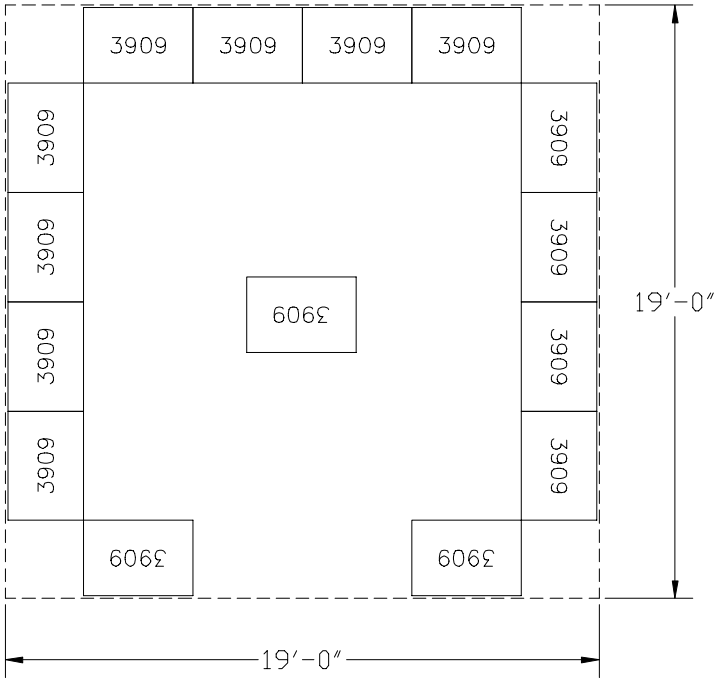
542207, Bullpen Space for Seven CSBCSs

Date: Dec. 1994

CSBCS Bullpen Configuration

Scale: No Scale

Area: 361 Sq Ft



542.3 Access Aisle Space for Equipment Movement

Due to the possibility that CSBCS equipment may be installed on a natural aisle or on an existing aisle used for other purposes, no aisle space consideration was included in the drawings. Aisle space is included as part of the workroom adjustment factor, sections 236.2 (for medium size facilities) and 332.9 (for major size facilities). If powered industrial and/or hand vehicles will be used to transport equipment within the facility, allow for an aisle 3 feet wider than the widest vehicle for one-way traffic, and 3 feet wider than twice the widest vehicle for two-way traffic.

55 Approval of Equipment Configuration Variations

Local managers and planners are reminded that, although they are afforded a reasonable degree of flexibility in determining their casing equipment configurations, *they **must** obtain approval from their district manager for all variations from the basic recommended configuration* (see section 53*)*.

56 Analysis Results and Completion of Required Forms

The data developed as the result of instructions in this chapter should now be transferred to the appropriate forms discussed in Chapters 1, 2, or 3, as required, of this handbook. To expedite space requests, follow the instructions as closely as possible and ensure that sufficiently appropriate documentation is attached to justify the request.