

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

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SHOP EQUIPMENT, SMALL EQUIPMENT REPAIR SHOP  
(NSN 4940-00-209-6232) INSTALLATION IN  
ONE 280 MAINTENANCE SHELTER (NSN 4940-00-919-8409)  
AND  
ONE ISO-2-1 MAINTENANCE SHELTER (NSN 5411-01-124-1377)

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HEADQUARTERS, DEPARTMENT OF THE ARMY

September 1984

**WARNING**

All electrically powered tools and equipment must be grounded prior to use.

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HEADQUARTERS  
 DEPARTMENT OF THE ARMY  
 WASHINGTON, DC, 5 September 1984

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 AND  
 ONE ISO-2-1 MAINTENANCE SHELTER (NSN 5411-01-124-1377)**

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\*This bulletin supersedes TB 9-4940-316-30, dated 29 January 1968.

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## Section I. INTRODUCTION

## 1. General

a. Instructions in this bulletin are in three sections. Section I contains general instructions, warnings and cautions, and location of equipment. Section II is a guide for installation of small equipment repair shop equipment (NSN 4940-00-209-6232) in one 280 maintenance shelter, unit 1 (NSN 4940-00-919-8409) (fig. 1). Section III is a guide for installation of small equipment repair shop equipment (NSN 4940-00-209-6232) in one ISO maintenance shelter, unit 2 (NSN 5411-01-124-1377) (fig. 13).

b. Slight variations to installation instructions may be made at the discretion of the officer in charge.

c. Complete lists of items contained in this shop are found in SC 4940-95-CL-A57.

d. Items not mentioned in this bulletin, that may be components of this shop, may be stowed in storage cabinets and drawers or secured in such a manner as to avoid damage in transit.

e. All dimensions, fasteners, and hardware sizes are in inches.

f. When entering either shelter, curbside is at the right and roadside is at the left.

## 2. Warnings and Cautions

**WARNING**

**All electrically powered tools and equipment must be grounded prior to use.**

**CAUTION**

**Special care should be exercised during installation to avoid damage to electrical connectors, wiring, or electrical equipment.**

**CAUTION**

**To preserve its waterproof characteristics, precautions should be taken not to puncture the outer skin when drilling holes into walls and floors of the shelters.**

**The ISO shelter must be level prior to expanding the side. The expanded portion of ISO shelter must be level to allow wall, roof, and floor locks to engage. No equipment shall be moved onto expanded floor until ISO shelter is level.**

## 3. Location of Equipment

a. Location of equipment installed or stowed in 280 shelter, unit 1, is shown in figures 1 thru 12.

(1) Refer to table 1 for hardware required for installation.

(2) Refer to table 3 for components to be mounted.

(3) Refer to table 5 for a list of items to be fabricated.

b. Location of equipment installed or stowed in ISO shelter, unit 2, is shown in figures 13 thru 22.

(1) Refer to table 2 for hardware required for installation.

(2) Refer to table 4 for components to be mounted.

(3) Refer to table 6 for a list of items to be fabricated.

c. Refer to table 7 for standard conversion chart.

## 3. Location of Equipment--Continued

Table 1. Mounting Hardware for 280 Shelter

MS/part no.	Size and description	Qty	Application
AN970-5	5/16-in. Flat Washer	8	Rack assemblies
AN970-8	1/2-in. Flat Washer	3	Vise
MS16992-520	5/16-in. Hex Head Lag Bolt x 1.00 L	2	Bench top, brace angle
MS16992-580	1/2-in. Hex Head Lag Bolt x 1-3/4 L	3	Vise
MS27130-A23	#10-24 UNC-3B Blind Rivet Nut	6	Fire extinguisher, first aid kit
MS27130-A45	5/16-18 UNC-3B Blind Rivet Nut	20	Rack assemblies, bench, angle supports
MS35190-271	#10-24 UNC-2A Countersunk Head Machine Screw x 1/2 L	6	Fire extinguisher, first aid kit
MS35190-308	5/16-18 UNC-2A Countersunk Head Machine Screw x 1-1/2 L	8	Bench top, bench support, brace angle
MS35206-295	5/16-18 UNC-2A Pan Head Machine Screw x 5/8 L	88	Rack assemblies
MS35206-297	5/16-18 UNC-2A Pan Head Machine Screw x 7/8 L	12	10-drawer cabinet, 20-drawer cabinet, shelf, brace angles, bench support, shelf support
MS35338-45	5/16-in. Lockwasher	124	Rack assemblies, 10-drawer cabinet, bench top, shelf, brace angles, bench support, shelf support
MS35338-48	1/2-in. Lockwasher	3	Vise
MS51937-2	5/16-18 UNC-2A Shoulder Eyebolt x 2-31/32 L	6	Stools, tool kit

Table 1. Mounting Hardware for 280 Shelter--Continued

MS/part no.	Size and description	Qty	Application
MS51967-5	5/16-18 UNC-2B Hex Nut	108	Rack assemblies, 10-drawer cabinet, 20-drawer cabinet, bench top, stools, tool kit, shelf, bench support, shelf support, brace angle
MS90725-34	5/16-18 UNC-2A Hex Head Capscrew-x 1.00 L	14	Rack assemblies, 10-drawer cabinet, 20-drawer cabinet, bench support
7550588-1	72.00-in. Retaining Strap	1	Basket
7550588-2	60.00-in. Retaining Strap	1	Tool kit
7550588-3	48.00-in. Retaining Strap	1	Wash pan
7550588-7	92.00-in. Retaining Strap	1	Tool kit
7550588-10	110.00-in. Retaining Strap	1	Stools

Table 2. Mounting Hardware for ISO Shelter

MS/part no.	Size and description	Qty	Application
AN970-3	#10 Flat Washer	4	Strap loops
AN970-8	1/2-in. Flat Washer	3	Vise
MS27183-18	17/32-in. Flat Washer	3	Vise
MS35190-271	#10-24 UNC-2A Countersunk Head Machine Screw x 1/2 L	8	Strap loop for stools, fire extinguisher, first aid kit
MS35190-276	#10-24 UNC-2A /countersunk Head Machine Screw x 1-1/4 L	4	Strap loops
MS35338-43	#10 Lockwasher	4	Strap loops

## 3. Location of Equipment--Continued

Table 2. Mounting Hardware for ISO Shelter--Continued

MS/part no.	Size and description	Qty	Application
MS35338-45	5/16-in. Lockwasher	14	Shelf, work table, eyebolts, bench top, support angles
MS35338-46	3/8-in. Lockwasher	14	Cabinets, support angles
MS35338-48	1/2-in. Lockwasher	3	Vise
MS35495-124	#14 Round Head Wood Screw x 3/4 L	4	Bench top
MS35649-202	#10-24 UNC-2B Hex Nut	4	Strap loops
MS51937-2	5/16-18 UNC-2A Shoulder Eyebolt x 2-31/32 L	2	Tool kit
MS51939-3	Strap Loop	3	Stools to wall, basket
MS51967-5	5/16-18 UNC-2B Hex Nut	10	Support angles, shelf, eyebolts
MS51967-14	1/2-13 UNC-2B Hex Nut	3	Vise
MS90725-32	5/16-18 UNC-2A Hex Head Capscrew x 3/4 L	4	Shelf
MS90725-33	5/16-18 UNC-2A Hex Head Capscrew x 7/8 L	4	Work table
MS90725-39	5/16-18 UNC-2A Hex Head Capscrew x 1-3/4 L	4	Support angles
MS90725-59	3/8-16 UNC-2A Hex Head Capscrew x 7/8 L	4	Cabinets
MS90725-60	3/8-16 UNC-2A Hex Head Capscrew x 1.00 L	6	Support angles
MS90725-61	3/8-16 UNC-2A Hex Head Capscrew x 1-1/8 L	4	Cabinets
MS90725-117	1/2-13 UNC-2A Hex Head Capscrew x 2-1/2 L	3	Vise



Table 2. Mounting Hardware for ISO Shelter--Continued

MS/part no.	Size and description	Qty	Application
7550588-1	72.00-in. Retaining Strap	2	Cable assemblies, hose assemblies
7550588-2	60.00-in. Retaining Strap	1	Stools
7550588-10	110.00-in. Retaining Strap	2	Basket, tool kit
11021235-1	5/16-18 UNC-3B Blind Rivet Nut	6	Work tables
11021235-2	3/8-16 UNC-3B Blind Rivet Nut	10	Cabinets, support angles
11021235-3	5/16-18 UNC-3B Blind Rivet Nut	2	Work tables
11021235-4	3/8-16 UNC-3B Blind Rivet Nut	4	Cabinets
11021235-5	#10-24 UNC-3B Blind Rivet Nut	8	Fire extinguisher, first aid kit, strap loop

Table 3. Components to be Mounted in 280 Shelter

NSN	Qty	Description	Figure no.
7290-00-754-0843	1	BASKET, WOVEN WIRE, HAND CARRYING	4
7125-00-999-1122	1	CABINET, SMALL PARTS, STORAGE: 10 drawers	2-4-5
7125-00-999-1123	1	CABINET, SMALL PARTS, STORAGE: 20 drawers	2-4-5
7125-00-991-2857	1	CABINET, STORAGE: one compartment	2-4-5
4210-00-555-8837	1	EXTINGUISHER, FIRE, MONOBROMOTRI- FLUOROMETHANE	2-9
6545-00-922-1200	1	FIRST AID KIT, GENERAL PURPOSE	2-9

## 3. Location of Equipment--Continued

Table 3. Components to be Mounted in 280 Shelter--Continued

NSN	Qty	Description	Figure no.
5340-00-682-1508	1	PADLOCK	4
4940-00-795-3595	1	PAN, WASH	4
7110-00-634-8596	2	STOOL, REVOLVING	2-4
5180-00-699-5273	1	TOOL KIT, GENERAL MECHANIC	2
3460-00-277-3504	1	WISE, MACHINE TABLE	2-4

Table 4. Components to be Mounted in ISO Shelter

NSN	Qty	Description	Figure no.
7290-00-754-0843	1	BASKET, WOVEN WIRE, HAND CARRYING	14
7125-00-999-1123	1	CABINET, SMALL PARTS, STORAGE: 20 drawers	14-15-15
7125-00-991-2857	1	CABINET, STORAGE: one compartment	14-15-16
3439-00-682-3460	1	CABLE ASSEMBLY, POWER, ELECTRICAL 3 no. 12 AWG, 50 ft	18
4940-00-479-2976	1	CABLE ASSEMBLY, POWER, ELECTRICAL 4 no. 4 AWG, 50 ft	18
4210-00-555-8837	1	EXTINGUISHER, FIRE, MONOBROMOTRI- FLUOROMETHANE	14-15
6545-00-922-1200	1	FIRST AID KIT, GENERAL PURPOSE	14-16
4720-00-356-8557	2	HOSE ASSEMBLY, NONMETALLIC	18
5340-00-682-1508	1	PADLOCK	16
7110-00-634-8596	2	STOOL, REVOLVING	14-16
4910-00-543-7772	1	TABLE, WORK, AUTOMOTIVE MAINTENANCE	14-15-18-19

Table 4. Components to be Mounted in ISO Shelter--Continued

NSN	Qty	Description	Figure no.
5180-00-699-5273	1	TOOL KIT, GENERAL MECHANIC	14-18-19
3460-00-277-3504	1	WISE, MACHINE TABLE	14

Table 5. Components to be Fabricated for 280 Shelter

Size	Qty	Description	Figure no.
0.12 x 18.00 x 40.00 L	1	BENCH SUPPORT, LEFT-HAND, ALUMINUM	3-4-5-7
0.12 x 18.00 x 40.00 L	2	BENCH SUPPORT, RIGHT-HAND, ALUMINUM	3-4-5-7
0.75 x 20.00 x 136.75 L	1	BENCH TOP, BENELEX	2-4-5-8
2.00 x 2.00 x 0.25 x 27.50 L	1	FRONT BRACE ANGLE, ALUMINUM	2-5-6
1.50 x 2.50 x 14 GA x 23.00 L	20	RACK ANGLE CROSS MEMBERS, SLOTTED STEEL ANGLE	2-9-10-11
1.50 x 2.50 x 14 GA x 54.00 L	12	RACK ANGLE FRONT MEMBERS, SLOTTED STEEL ANGLE	2-9-10-11
1.50 x 2.50 x 14 GA x 54.00 L	12	RACK ANGLE REAR MEMBERS, SLOTTED STEEL ANGLE	2-9-10-11
1.50 x 2.50 x 14 GA x 74.00 L	8	RACK ANGLE UP-RIGHT MEMBERS, SLOTTED STEEL ANGLE	2-9-10-11
0.75 x 22.50 x 53.50 L	8	RACK SHELVES, PLYWOOD	2-9-12
2.00 x 2.00 x 0.25 x 22.00 L	1	REAR BRACE ANGLE, ALUMINUM	2-5-6
14 GA x 18.00 x 30.00 L	1	SHELF, SHEET STEEL	2-4-5-7
0.25 x 1.00 x 22.00 L	1	SHELF SUPPORT, ALUMINUM	4-5-7

3. Location of Equipment--Continued

Table 6. Components to be Fabricated for ISO Shelter

Size	Qty	Description	Figure no.
0.75 x 20.00 x 88.00 L	1	BENCH TOP-11021209, BENELEX	14-16-21
14 GA x 18.00 x 40.00 L	1	SHELF-11021210, SHEET STEEL	16-22
2.00 x 2.00 x 0.25 x 21.50 L	2	SUPPORT ANGLE-11021208, ALUMINUM	14-16-17-20

**Section II. INSTALLATION IN 280 SHELTER**

4. Installation

**NOTE**

**Hand blind riveter (5120-00-679-6523) is used to install blind rivet nuts in floor and walls. Install blind rivet nuts in accordance with the technical manual supplied with the hand blind riveter.**

**Positioned floor mounted equipment as shown in figures 2, 3, 4, 5, and 9. Use the equipment mounting holes as a template for location of blind rivet nuts in accordance with figures 3, 4, and 5. Position wall mounted first aid kit and fire extinguisher as shown in figure 9, using the equipment mounting holes as a template for location of blind rivet nuts.**

a. Follow steps 1 and 2 for installing blind rivet nuts.

(1) Mark and drill six 0.25-in.

diameter holes in left wall in accordance with figure 9. Install six #10 blind rivet nuts (MS27130-A23).

(2) Mark and drill twenty 0.42-in. diameter holes in floor and walls in accordance with figures 3 and 4. Install twenty 5/16-in. blind rivet nuts (MS27130-A45).

b. Follow steps 1 thru 21 below for equipment installation in the 2 shelter, unit 1.

(1) Fabricate eight angle up-right members,, twenty angle cross members, twenty angle rear members, and twelve angle front members in accordance with figure 11. Fabricate eight rack shelves in accordance with figure 12. Assemble two rack assemblies without rack shelves on left side in accordance with figures 2, 9, and 10, using eighty-eight 5/16- x 5/8-in. pan head machine screws (MS35206-295), eighty-eight 5/16-in. lockwashers (MS35338-45), and eighty-eight 5/16 in. hex nuts (MS51967-5).

(2) Mark and drill eight 0.33-in. diameter clearance holes (four for each rack assembly) in angle front and rear members in accordance with

figure 2 Position over installed blind rivet nuts in accordance with figure 3. Secure rack assemblies to floor using eight 5/16x 1-in. hex head capscrews (MS90725-34), eight 5/16-in. flat washers (AN970-5), and eight 5/16-in lockwashers (MS35338-45). Install eight rack shelves in racks, starting with rack angles 15 inches above the floor in accordance with figure 9.

(3) Position mounting bracket of fire extinguisher (4210-00-555-8837) on left wall in accordance with figure 9. Mark and drill three 0.22-in. diameter holes in mounting bracket. Position over installed blind rivet nuts and secure mounting bracket to wall using three #10 x 1/2-in. countersunk head machine screws (MS35190-271). Install fire extinguisher in mounting bracket (See also fig. 2.)

(4) Before installing first aid kit (6545-00-922-1200), remove contents and drill three 0.22-in. diameter holes in back of case. Position case in location shown in figure 9, over installed blind rivet nuts. Secure case to wall using three #10 x 1/2-in countersunk head machine screws (MS35190271). Install contents of first aid kit. (See also fig. 2.)

(5) Fabricate a front brace angle and a rear brace angle in accordance with figure 6. Fabricate two right hand bench supports, a left-hand bench support, a shelf, and a shelf support in accordance with figure 7

(6) Position one-compartment cabinet (7125-00-991-2857) and 20-drawer cabinet (7125-00-999-1123) on front right side of shelter in accordance with figures 2, 4, and 5

**CAUTION**

**Make sure cabinet drawers adjacent to hole locations are removed before drilling.**

(7) Using right-hand bench support as template, mark and drill two 0.33-in. diameter holes in side of 20drawer cabinet in accordance with figure 5

(8) Secure a right-hand bench support to 20-drawer cabinet (fig. 5) using two 5/16x 7/8-in. pan head machine screws (MS35206-297), two 5/16in. lockwashers (MS35338-45), and two 5/16-in. hex nuts (MS51967-5). Secure right-hand bench support over the installed blind rivet nuts on floor, using two 5/16x 1-in. hex head capscrews (MS90725-34) and two 5/16-in lockwashers (MS35338-45)

(9) Position 10-drawer cabinet (7125-00-999-1122) on right side of shelter in accordance with figures 2 and 4. Repeat steps 7 and 8 with 10-drawer cabinet using left-hand bench support, two 5/16x 7/8-in. pan head machine screws (MS35206-297), four 5/16-in. lockwashers (MIS35338-45), two 5/16-in. hex nuts (MS51967-5), and two 5/16x 1-in. hex head capscrews (MS90725-34)

(10) Position right-hand bench support on right side of 10-drawer cabinet (fig. 5) over installed blind rivet nuts in floor. Secure right-hand bench support to floor, using two 5/16x 1-in. hex head capscrews (HS90725-34) and two 5/16-in. lockwashers (MS3533845)

**CAUTION**

**Make sure cabinet drawers adjacent to hole locations are removed before drilling.**

(11) Using right-hand bench support as template, mark and drill two 0.33-in. diameter holes in side of 10drawer cabinet

(12) Position shelf between rear wall and 10-drawer cabinet over installed blind rivet nuts in accordance with figures 2 and 4. Secure shelf to wall using shelf support (fig. 5), two 5/16- x 7/8-in. pan head

#### 4. Installation--Continued

machine screws (MS35206-297), and two 5/16-in. lockwashers (MS35338-45). Secure shelf to bench support and 10-drawer cabinet wall using two 5/16x 7/8-in. pan head machine screws (MS35206-297), two 5/16-in. lockwashers (MS35338-45), and two 5/16-in. hex nuts (MS51967-5).

(13) Fabricate a bench top in accordance with figure 8. Position bench top on the top of the installed cabinets and bench supports in accordance with figures 2, 4, and 5. Using the bench supports as templates, mark and drill six 0.33-in. diameter holes through the bench top. Counterbore 90° by 0.33-in. deep on the top surface of the bench top. Secure bench top to bench supports, using six 5/16x 1-1/2-in. countersunk head machine screws (MS35190-308), six 5/16-in. lockwashers (MS35338-45), and six 5/16-in. hex nuts (MS51967-5)

(14) Position front brace angle on top of bench top and against the front right end wall in accordance with figure 5 and over installed blind rivet nuts in accordance with figure 4. Secure to wall using two 5/16x 7/8in. pan head machine screws (MS35206-297) and two 5/16-in. lockwashers (MS35338-45). Using the installed front brace angle as a template, mark and drill two 0.25-in. diameter pilot holes into the bench top. Secure bench top to front brace angle using two 5/16x 1-in. hex head lag bolts (MS16992-520) and two 5/16-in. lockwashers (MS35338-45)

(15) Position rear brace angle on top of bench top and against the rear right end wall in accordance with figure 5 and over installed blind rivet nuts in accordance with figure 4. Secure to wall using two 5/16x 7/8in. pan head machine screws (MS35206 297) and two 5/16-in. lockwashers (MS35338-45). Using the installed rear brace angle as a template, mark and

drill two 0.33-in. diameter holes through the bench top. Secure bench top to rear brace angle, using two 5/16x 1-1/2-in. countersunk head machine screws (MS35190-308), two 5/16in. lockwashers (MS35338-45), and two 5/16-in. hex nuts (MS51967-5)

(16) Position vise (3460-00-2773504) on bench top in accordance with figures 2 and 4. Using base of vise as template, mark and drill three 0.39-in diameter pilot holes through bench top. Secure vise to bench top, using three 1/2x 1-3/4-in. hex head lag bolts (MS16992-580), three 1/2-in. flat washers (AN970-8), and three 1/2-in. lockwashers (MS35338-48)

(17) Secure two 5/16x 2-31/32in. shoulder eyebolts (MS51937-2) and two 5/16-in. hex nuts (MS51967-5) to existing blind rivet nuts in floor. Position two stools (7110-00-634-8596) in accordance with figures 2 and 4 and secure to floor, using 110-in. retaining strap (7550588-10)

(18) Secure basket (7290-00-7540843) to shelf, using 72-in. retaining strap (7550588-1) in accordance with figure 4

(19) Secure wash pan (4940-00795-3595) to shelf using 48-in. retaining strap (7550588-3) in accordance with figure 4

(20) Secure four 5/16x 2-31/32in. shoulder eyebolts (MS51937-2) and four 5/16-in. hex nuts (MS51967-5) to existing blind rivet nuts in rear of floor. Secure tool kit (5180-00-6995273) to floor, using 60-in. retaining strap (7550588-2) and 92-in. retaining strap (7550588-7) in accordance with figure 2

(21) Secure padlock (5340-00-6821508) to hasp on 20-drawer cabinet in accordance with figure 4.

## Section III. INSTALLATION IN ISO-2-1 SHELTER

## 5. Installation

**NOTE**

**Hand blind riveter (5120-00679-6523) is used to install blind rivet nuts in floors and walls. Install blind rivet nuts in accordance with MIL-N-47187. Position floor mounted equipment and support angles as shown in figures 14, 16, 18, and 19. Use the equipment mounting holes as templates for location of blind rivet nuts in accordance with figures 15, 17, and 19. Position wall mounted first aid kit and fire extinguisher as shown in figures 14 and 16, using the equipment mounting holes as templates for location of blind rivet nuts in accordance with figure 16**

- a. Follow steps 1 thru 3 for installing blind rivet nuts.

**CAUTION**

**After installing blind rivet nuts, potting compound (8040-01-102-2098) must have a curing time of 24 to 48 hours before using any threaded fasteners**

(1) Mark and drill eight 0.25-in diameter holes in right side wall, in accordance with figures 16 and 17, to depth of 1.00-in. maximum. Inject potting compound as required and install eight #10 blind rivet nuts 11021235-5)

(2) Mark and drill eight 0.42-in diameter holes in fixed floor and deployed floor, four holes in each section, in accordance with figures 15 and 19, to a depth of 1.50-in. maximum. Inject potting compound as required and install six 5/16-in. blind rivet

nuts (11021235-1) in accordance with figures 15 and 19. Install two 5/16-in. blind rivet nuts (11021235-3) in accordance with figure 15

(3) Mark and drill fourteen 0.50 in. diameter holes in floor and right wall, in accordance with figures 15 and 17, to a depth of 1.38-in. maximum. Inject potting compound as required and install ten 3/8-in. blind rivet nuts (11021235-2) in accordance with figures 15 and 17. Install four 3/8-in. blind rivet nuts (11021235-4) in accordance with figure 15

b. Secure one strap loop (MS519393) for stools to right side wall in accordance with figures 14, 16, and 17, using two #10 x 1/2-in. countersunk head machine screws,(MS35190-271)

**NOTE**

**Eighteen 5/16-in. blind rivet nuts are supplied in the floor, of which two are used for component installation (marked "E" in figure 15)**

c. Fabricate two support angles (11021208) in accordance with figure 20. Fabricate one bench top (11021209) in accordance with figure 21. Fabricate one shelf (11021210) in accordance with figure 22

d. Follow steps 1 thru 17 below for equipment installation in ISO shelter, unit 2.

(1) Mark and drill four 0.41-in. diameter holes in bottom plate of 20 drawer cabinet (7125-00-999-1123). Locate at the four corners allowing for minimum required clearance for 0.38-in hex head capscrews.

## 5. Installation--Continued

(2) Position 20-drawer cabinet against right side wall in accordance with figures 14 and 16 and over installed blind rivet nuts in accordance with figure 15. Secure 20-drawer cabinet to floor, using four 3/8-in lockwashers (MS35338-46), two 3/8x 7/8-in. hex head capscrews (MS9072559), and two 3/8x 1-1/8-in. hex head capscrews (MS90725-61).

(3) Repeat step 1 for one-compartment cabinet (7125-00-991-2857). Repeat step 2 using four 3/8-in. lockwashers (MS35338-46), two 3/8x 7/8-in. hex head capscrews (MS90725-59), and two 3/8x 1-1/8-in. hex head capscrews (MS90725-61).

(4) Position bench top (11021209) on top surface of the two cabinets in accordance with figure 14. Mark and drill four 0.12-in. diameter pilot holes through bench top and tops of cabinets. Enlarge the holes in the cabinet tops to 0.25-in. diameter, two holes per cabinet. Refer to figure 21. Reposition and secure bench top to cabinets, using four #14 x 3/4-in. round head wood screws (MS35495-124) placed under the bench top and going through the 0.25-in. diameter holes in the cabinets

(5) Position two support angles (11021208) in location shown in figure 14, so that the two 0.34-in. diameter holes are on the bench top, and over installed blind rivet nuts in accordance with figure 17. Secure, using six 3/8x 1-in. hex head capscrews (MS90725-60) and six 3/8-in. lockwashers (MS35338-46)

(6) Using the two installed support angles as templates, mark and drill four 0.34-in. diameter holes through bench top and cabinet tops. Secure support angles to bench top and cabinets using four 5/16x 1-3/4-in. hex head capscrews (MS90725-39), four 5/16-in. lockwashers (MS35338-45), and four 5/16-in. hex nuts (MS51967-5). Place hex head of capscrew

under cabinet tops and bench top

### CAUTION

**Make sure cabinet drawers adjacent to hole locations are removed before drilling**

(7) Using shelf (11021210) as template, position between cabinets in accordance with figure 16. Mark and drill four 0.34-in. diameter holes in cabinet walls. Secure shelf to cabinets using four 5/16x 3/4-in. hex head capscrews (MS90725-32), four 5/16-in. lockwashers (MS35338-45), and four 5/16-in. hex nuts (MS51967-5)

(8) Position two strap loops (MS51939-3) over the predrilled 0.22 in. diameter holes in bench top (11021209 (fig. 21)). Secure to bench top using four #10 x 1-1/4-in. countersunk head machine screws (MS35190-276), four #10 flat washers (AN970-3), four #10 lockwashers (MS35338-43), and four #10 hex nuts (MS35649-202). Position basket (7290-00-754-0843) between the strap loops and on the bench top in accordance with figure 14. Secure basket to bench top using 110-in. retaining strap (7550588-10)

(9) Position vise (3460-00-2773504) on bench top in accordance with figure 14. Using the base as template, mark and drill three 0.56-in. diameter holes in bench top in accordance with figure 21. Secure vise using three 1/2x 2-1/2-in. hex head capscrews (MS90725-117), three 1/2-in. flat washers (AN970-8), three 17/32-in. flat washers (MS27183-18), three 1/2-in. lockwashers (MS35338-48), and three 1/2-in. hex nuts (MS51967-14)

(10) Position two stools (7110-00-634-8596) against front right side wall in accordance with figures 14 and 16. Secure stools to strap loop on wall using 60-in. retaining strap (7550588-2)



## 5. Installation--Continued

(11) Position mounting bracket of fire extinguisher (4210-00-555-8837) on right side wall in accordance with figures 14 and 16. Mark and drill three 0.22-in. diameter holes in mounting bracket. Position over installed blind rivet nuts in accordance with figure 16. Secure mounting bracket to wall using three #10 x 1/2in. countersunk machine screws (MS35190-271). Install fire extinguisher in mounting bracket

(12) Remove contents of first aid kit (6545-00-922-1200). Mark and drill three 0.22-in. diameter holes in the back of first aid kit. Position in location in accordance with figures 14 and 16 and over installed blind rivet nuts in accordance with figure 16. Secure to wall, using three #10 x 1/2in. countersunk head machine screws (MS35190-271). Install contents of first aid kit

(13) Secure one padlock (5340-00-682-1508) in hasp of 20-drawer cabinet in accordance with figure 16.

(14) Mark and drill four 0.34-in. diameter holes in legs of work table (4910-00-543-7772). Position table on the left front floor in accordance with figures 14 and 18 and over installed blind rivet nuts in accordance with figure 15. Secure work table to floor using four 5/16x 7/8-in. hex head capscrews (MS90725-33) and four 5/16in. lockwashers (MS35338-45).

(15) Secure two cable assemblies (4940-00-479-2976 and 3439-00-682-3460) to work table using one 72-in. retaining strap (7550588-1) in accordance with figure 18

(16) Secure two hose assemblies (4720-00-356-8557) to work table using one 72-in. retaining strap (7550588-1) in accordance with figure 18

(17) Install two 5/16x 2-31/32in. shoulder eyebolts (MS51937-2), two 3/8-in. lockwashers (MS35338-45), and two 5/16-in. hex nuts (tMS51967-5) into two blind rivet nuts marked "E" in figure 15. Position tool kit (5180-00699-5273) in left rear corner in accordance with figures 14 and 18. Secure tool kit to floor, using one 110-in. retaining strap (7550588-10) in accordance with figure 18

e. Follow steps 1 and 2 below for location of equipment when ISO shelter is deployed.

(1) Position work table against wall in accordance with figure 19. Secure to the floor using the same four screws and four lockwashers used to secure the table to the fixed floor

(2) Position tool kit in accordance with figure 19.

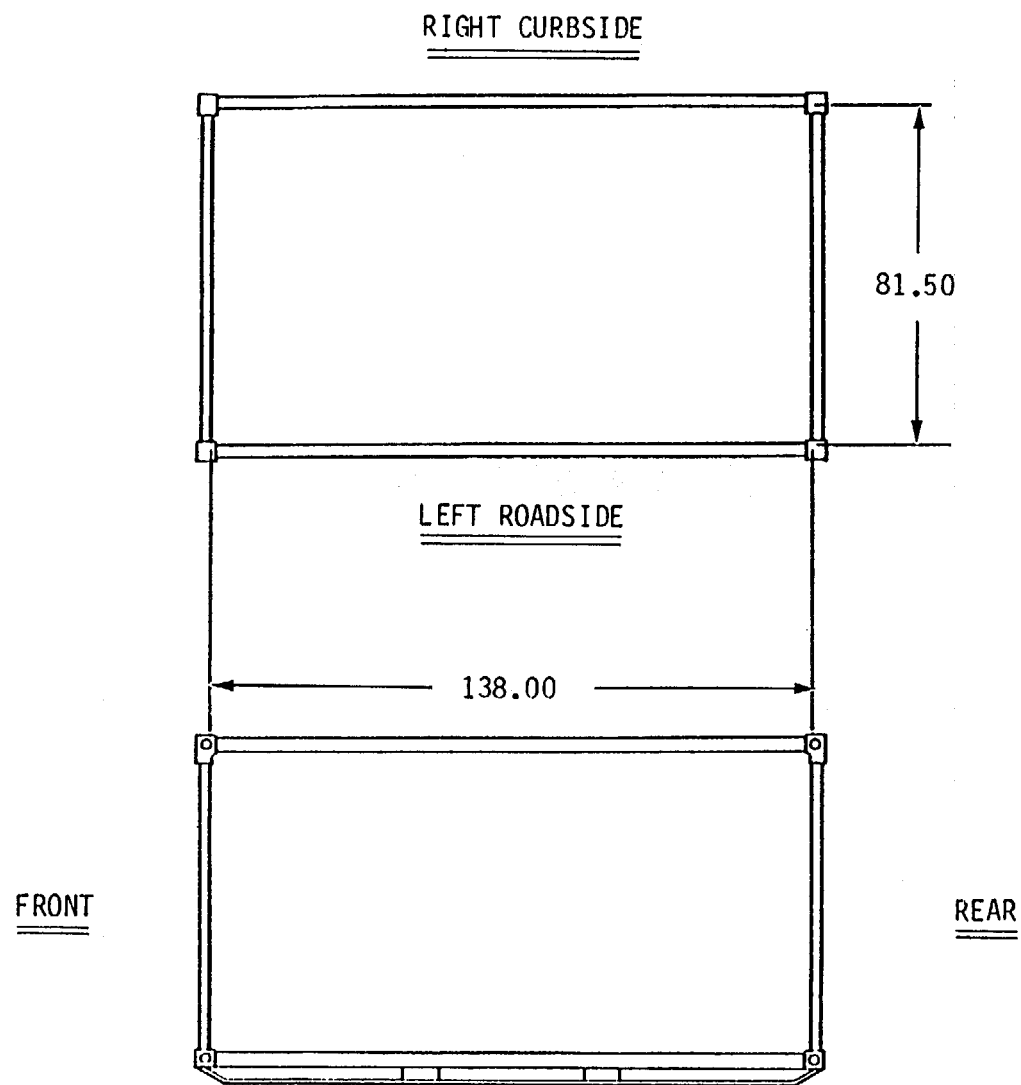


Figure 1. 280 Shelter, Unit 1.

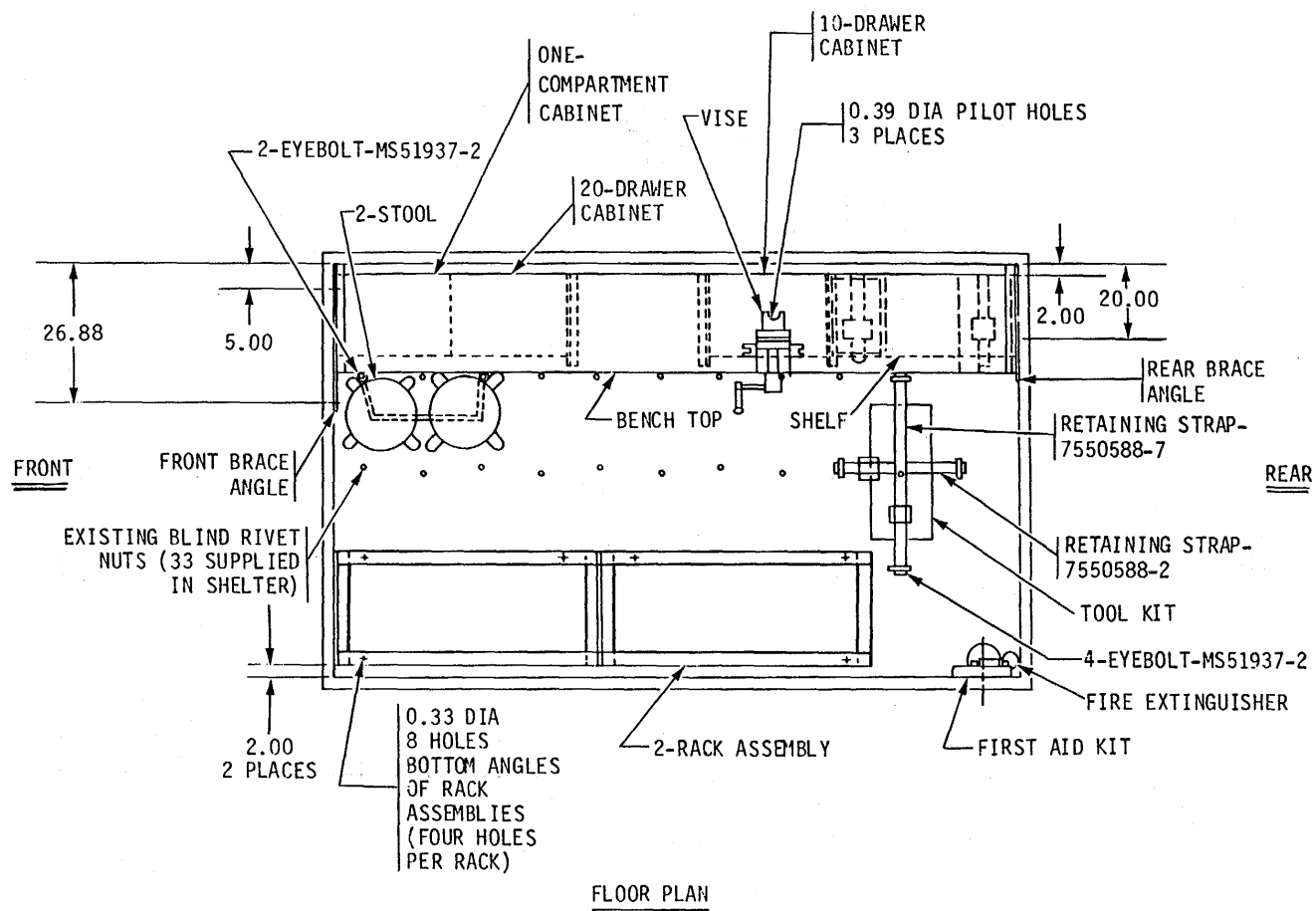


Figure 2. Components to be Mounted, Floor Plan, Unit 1, 280.

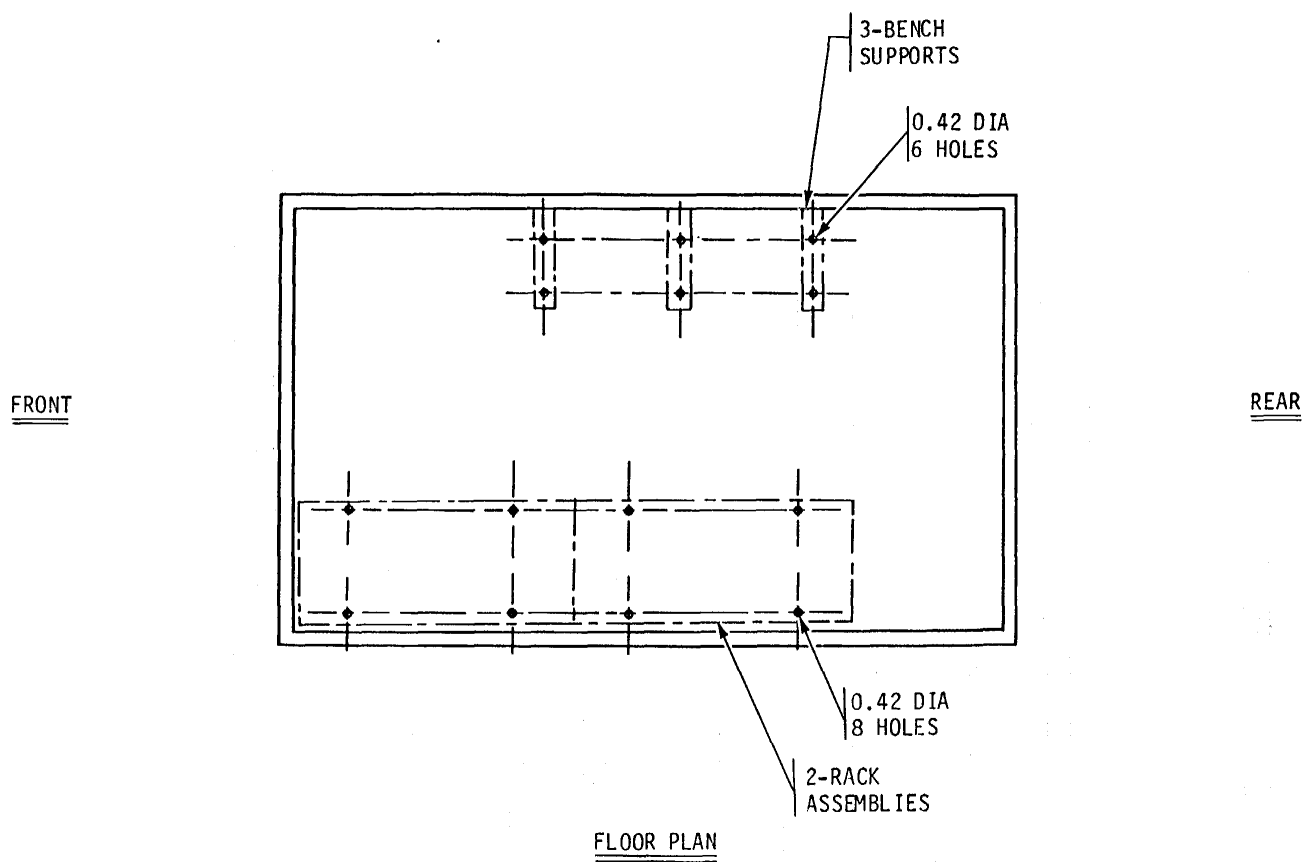


Figure 3. Dimensions for Blind Rivet Nut Holes, Floor Plan, Unit 1, 280.

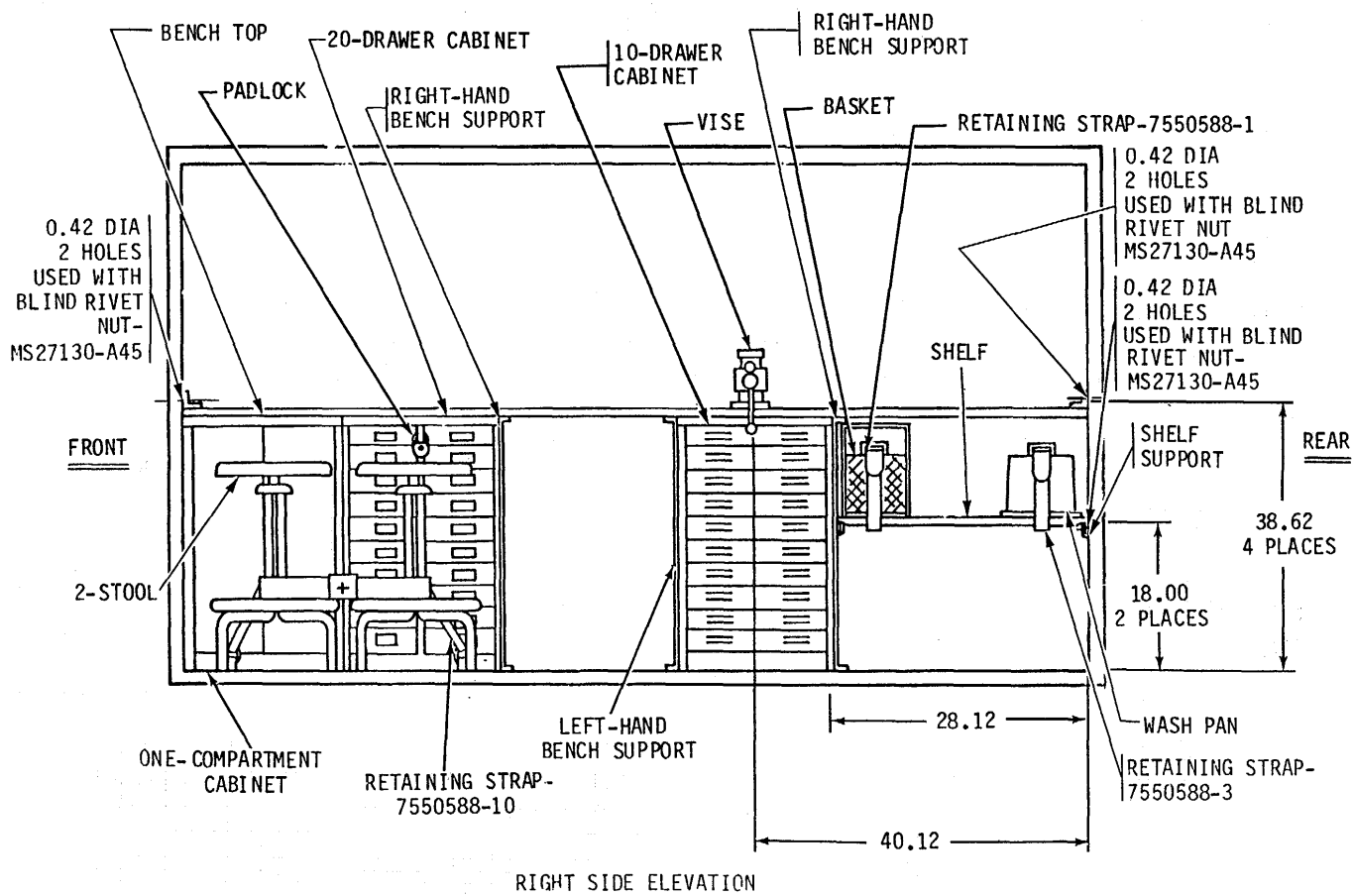


Figure 4. Components to be Mounted, Unit 1, 280, Right Side Elevation.

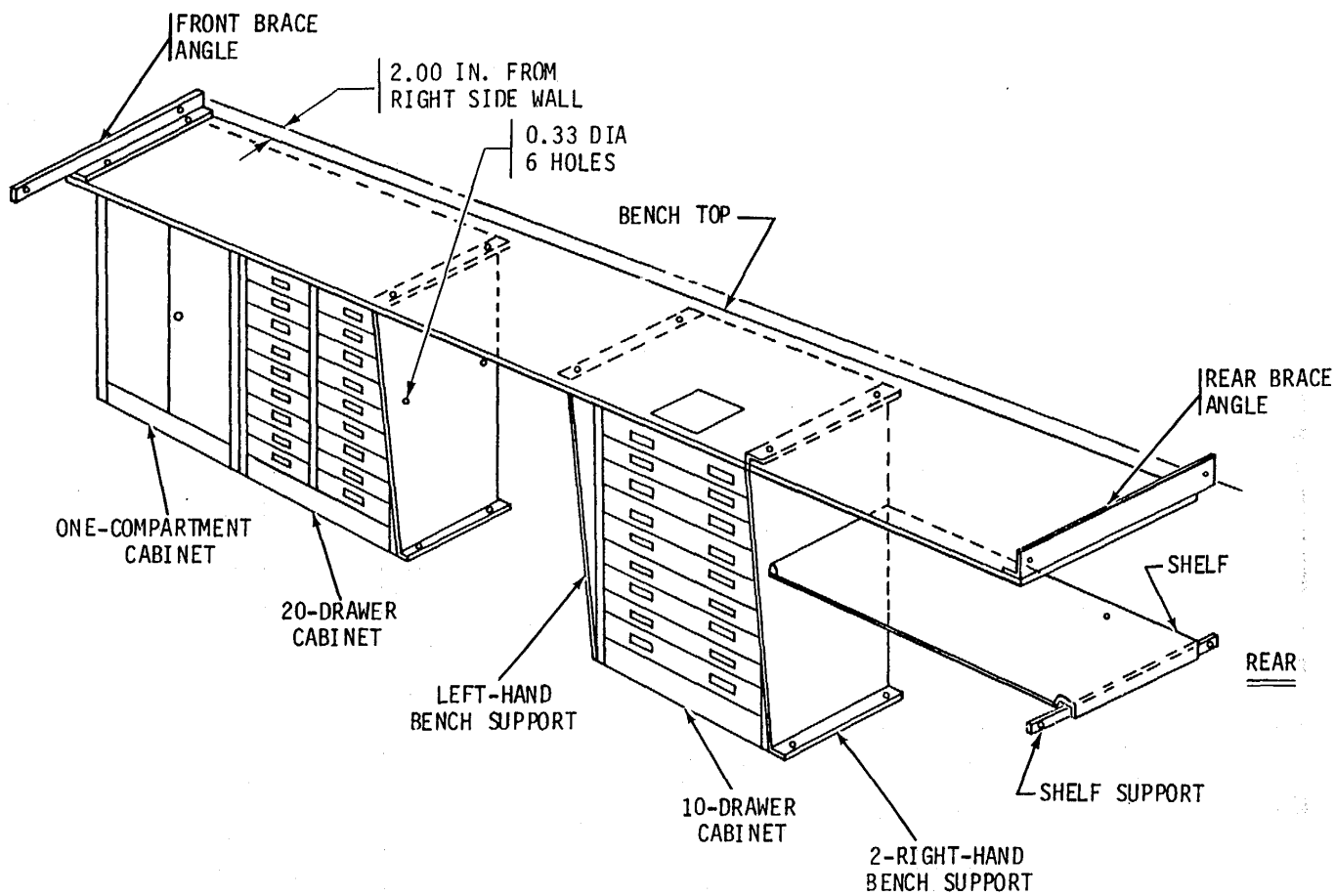
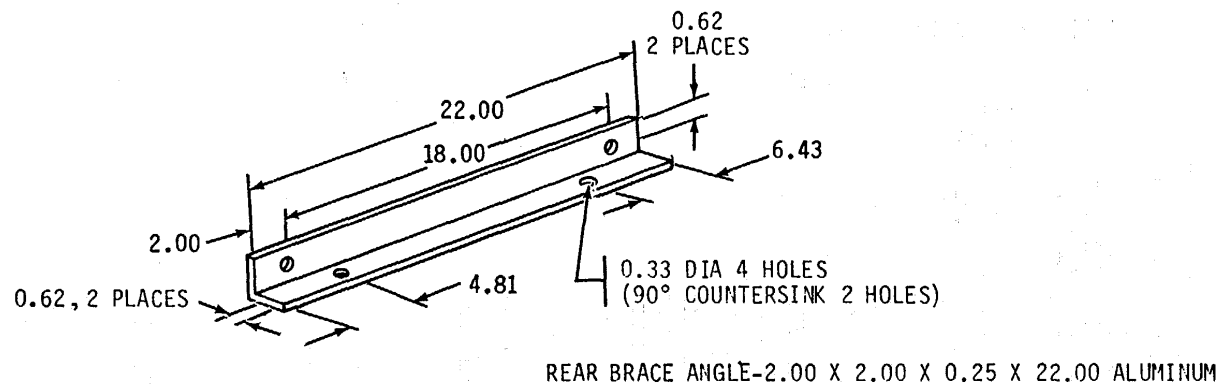
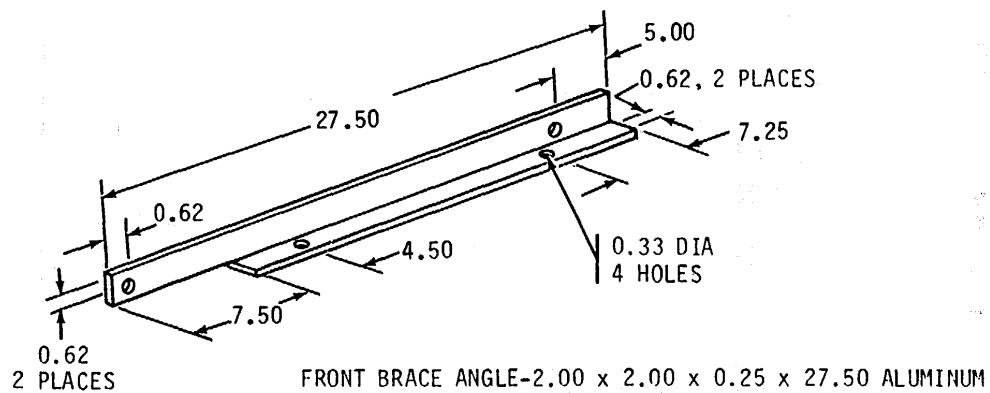


Figure 5. Installation of Cabinets and Components to be Mounted on Right Side, Unit 1, 280.



Rear Brace Angles, Unit 1, 280.

Figure 6. Dimensions for Front and

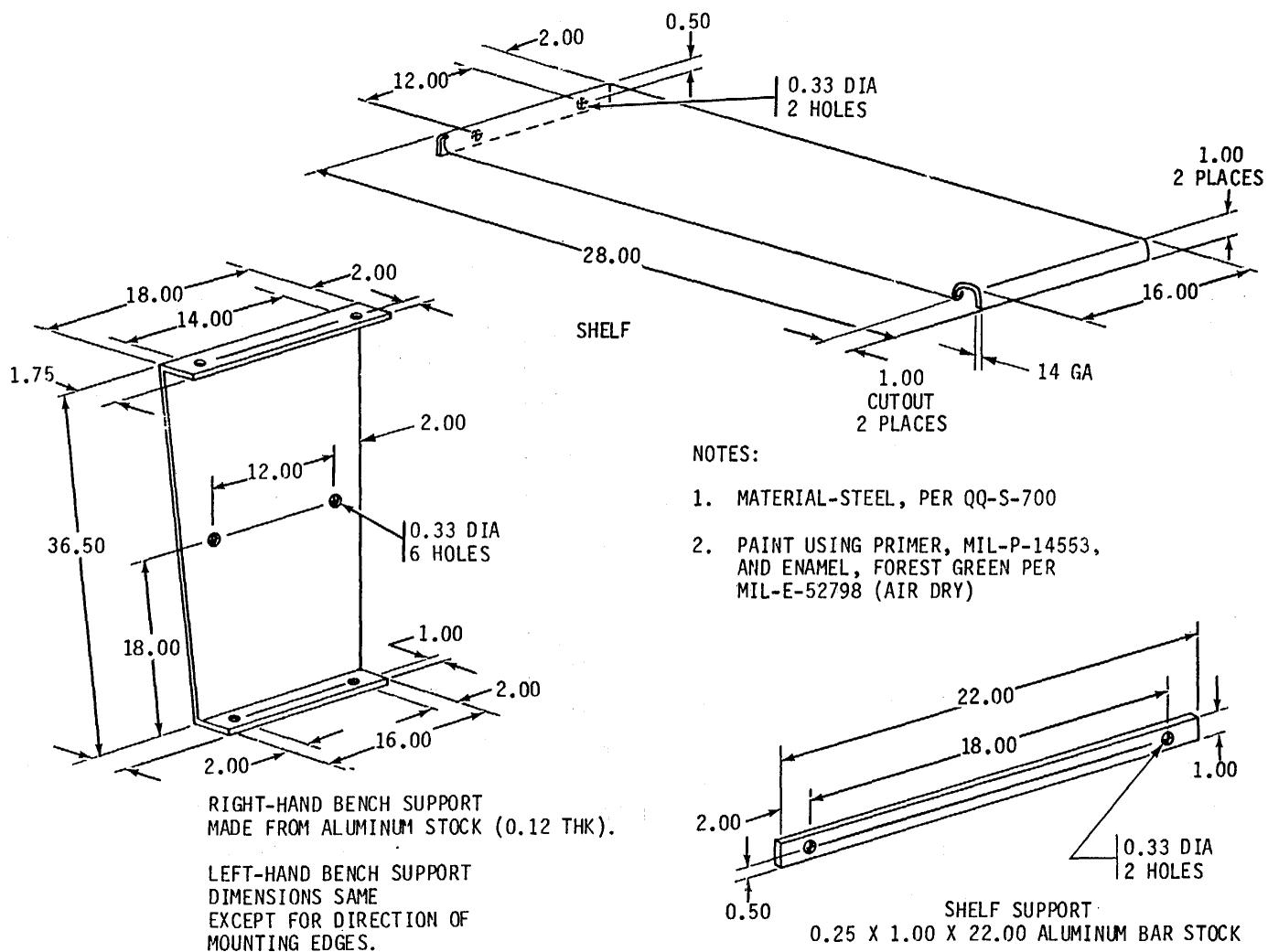


Figure 7. Dimensions for Bench Top, Shelf, and Shelf Support, Unit 1, 280.



NOTES:

1. MATERIAL-BENELEX, MASONITE CORP
2. BREAK ALL SHARP EDGES
3. DEBURR ALL HOLES

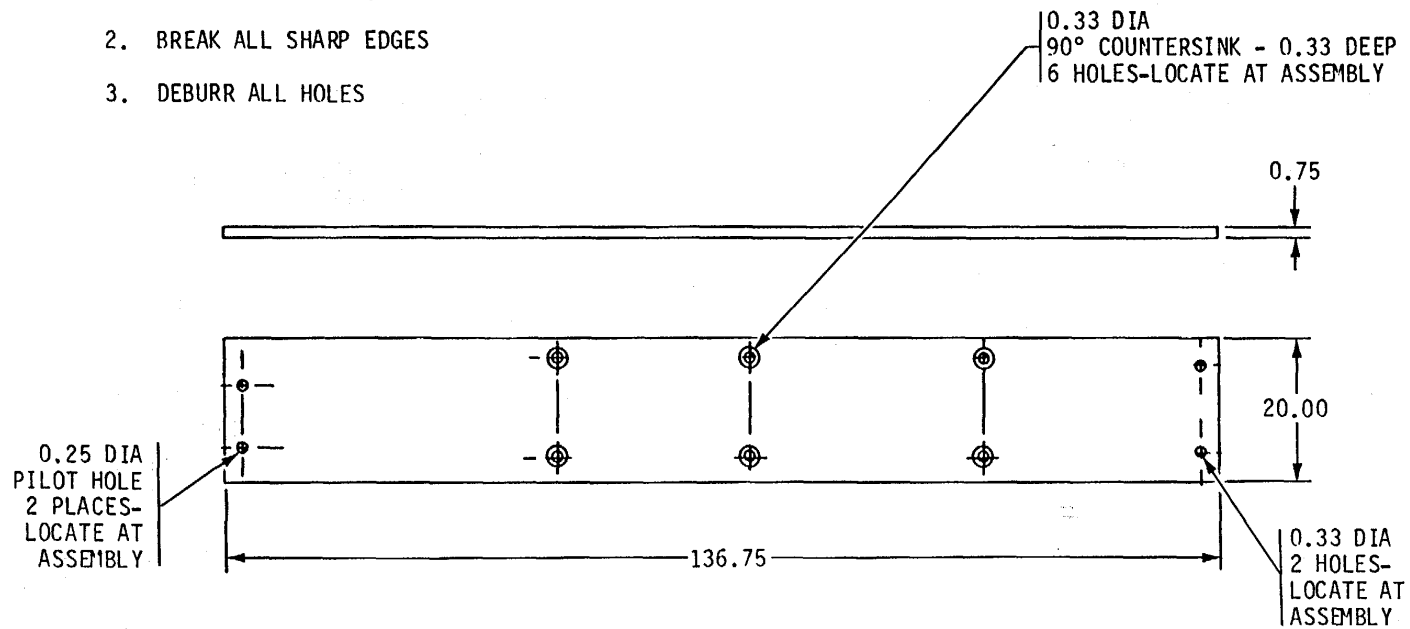


Figure 8. Dimensions for Bench Top, Unit 1, 280.

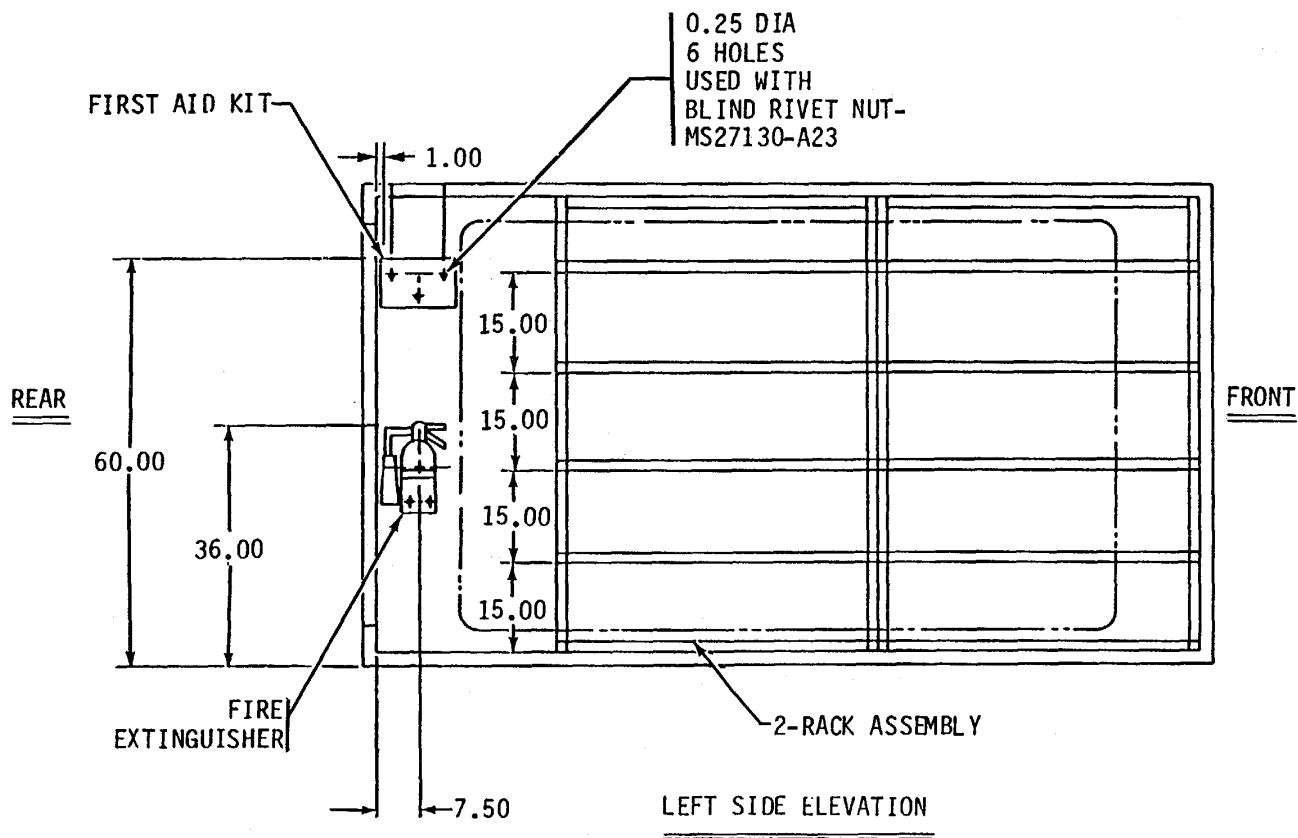


Figure 9. Components to be Mounted, Unit 1, 280, Left Side Elevation.

## NOTE:

USE EXISTING HOLES IN SLOTTED STEEL ANGLE MEMBERS TO BOLT TOGETHER RACK ASSEMBLY COMPONENTS; IF HOLES DO NOT LINE UP, MARK AND DRILL 0.33 DIA HOLE WHERE NEEDED

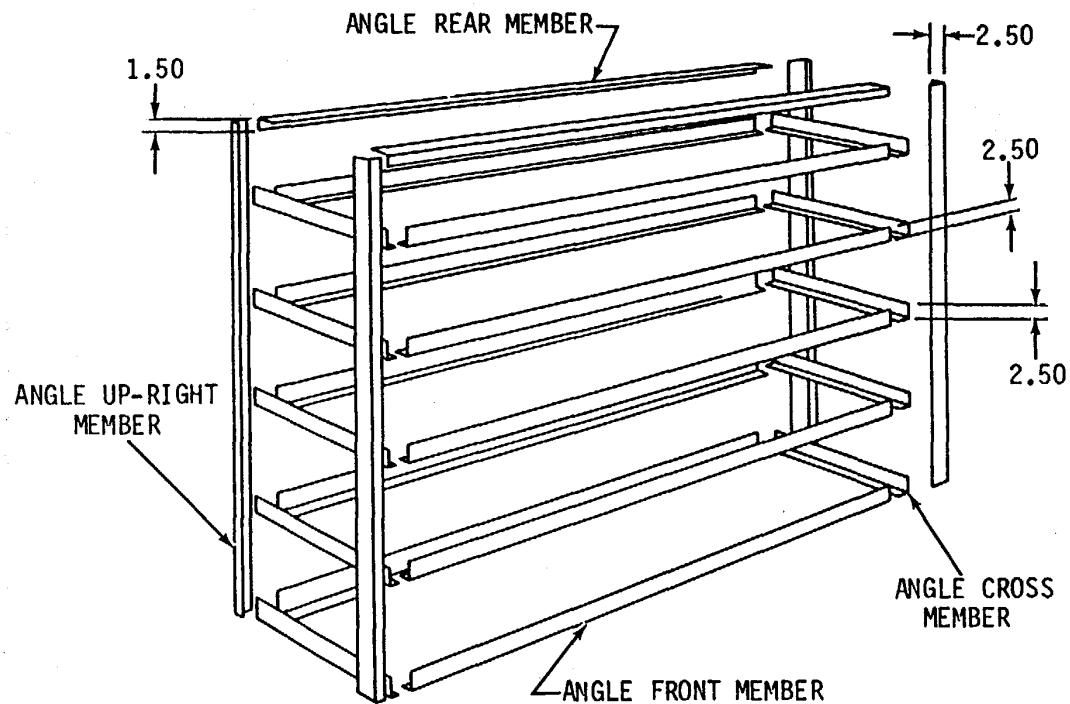


Figure 10. Components for Rack Assemblies, Unit 1, 280.

NOTE:

MATERIAL-SLOTTED STEEL ANGLE

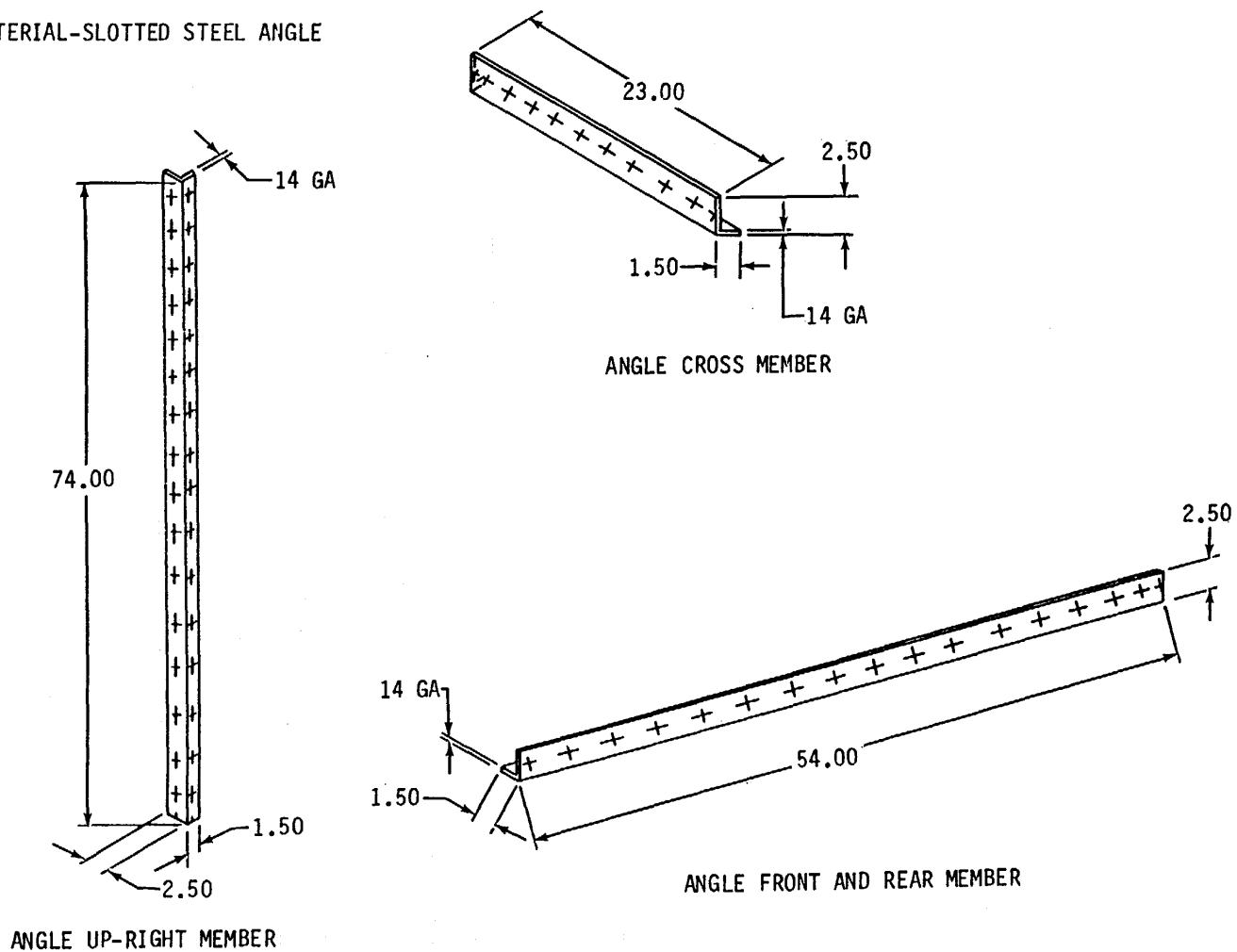
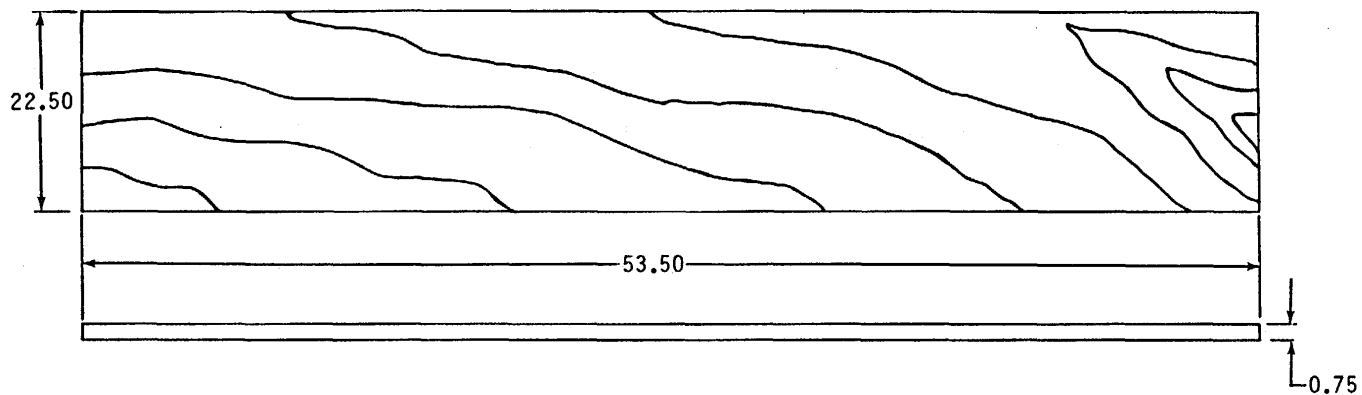


Figure 11. Dimensions for Rack Assembly Angle Members, Unit 1, 280.



**NOTES:**

1. MATERIAL-PLYWOOD, 5 PLY, GRADE A-C, EXTERIOR TYPE, DOUGLAS FIR PER NN-P-530
2. BEARK ALL SHARP EDGES

*Figure 12. Dimensions for Rack Shelves, Unit 1, 280.*

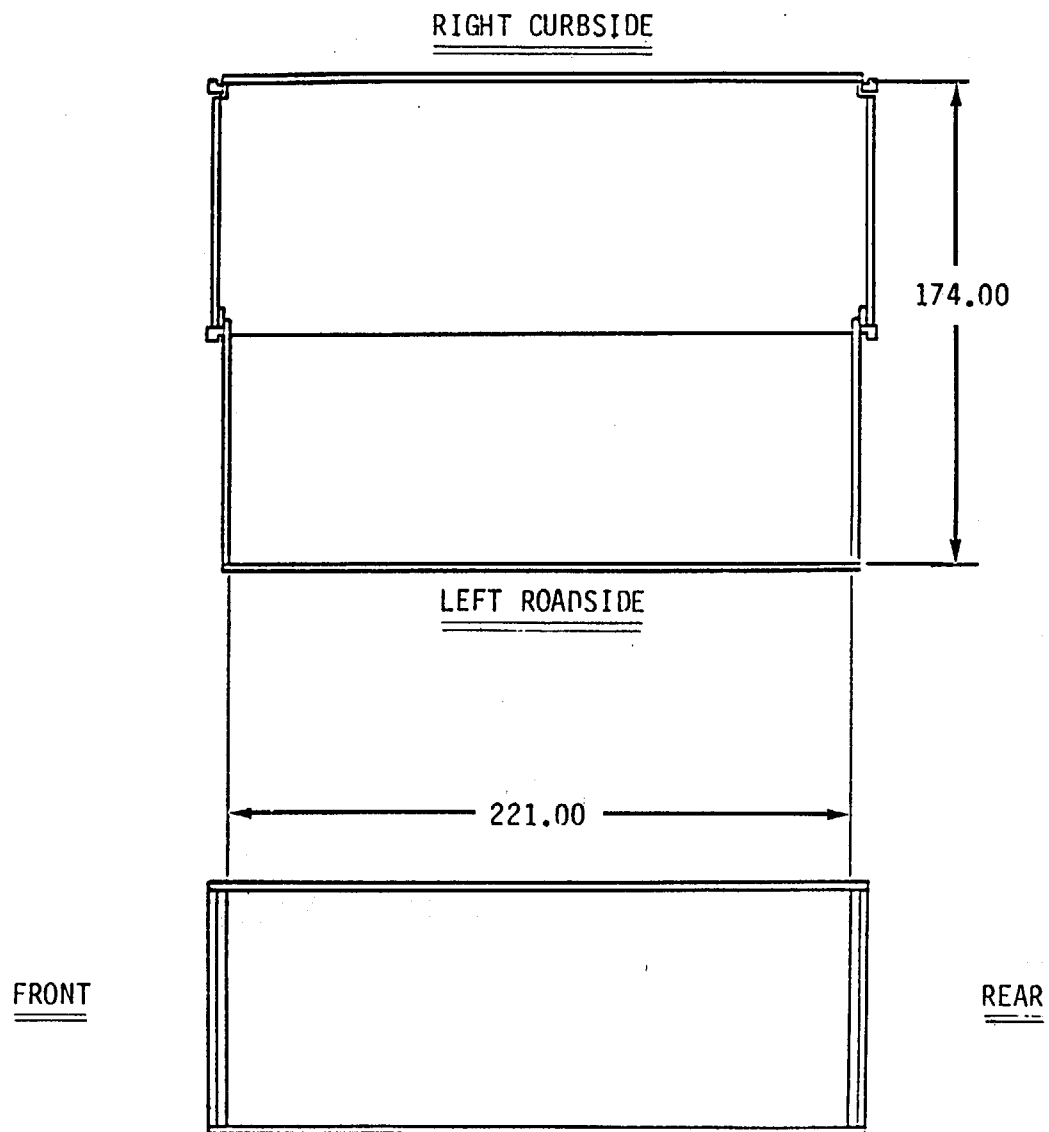
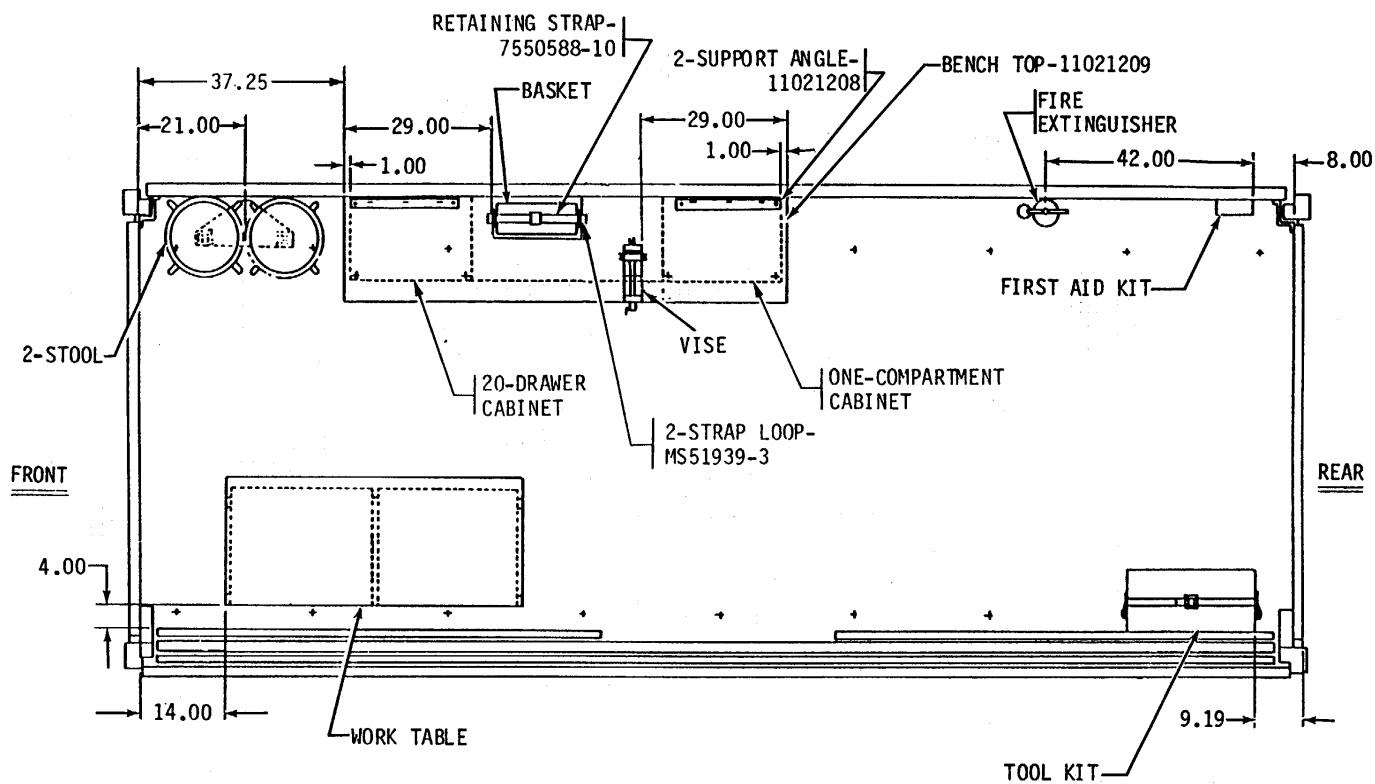
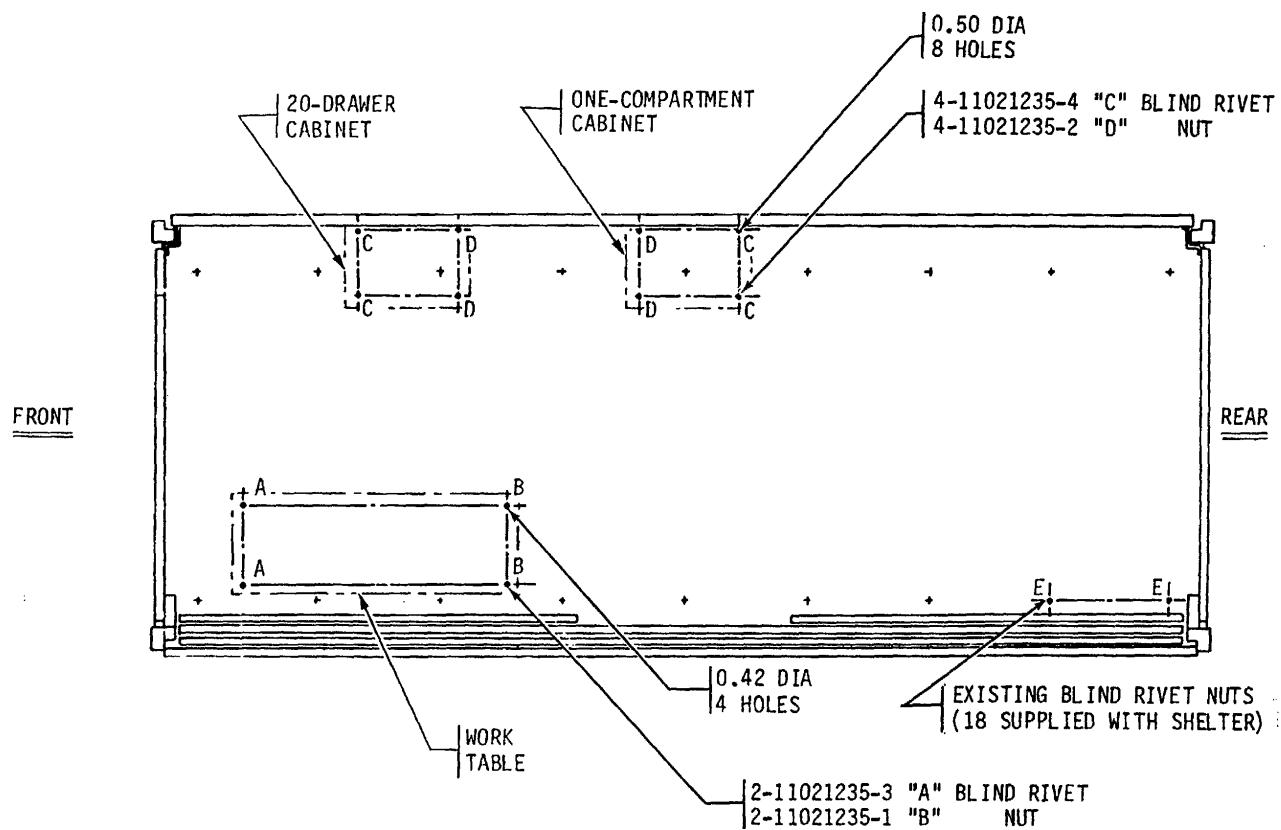


Figure 13. ISO-2-1 Shelter, Unit 2.



**FLOOR PLAN - TRANSPORTATION MODE**

Figure 14. Components to be Mounted, Floor Plan, Unit 2, ISO.



**FLOOR PLAN-FIXED FLOOR**

Figure 15. Dimensions for Blind Rivet Nuts in fixed Floor Plan, Unit 2, ISO



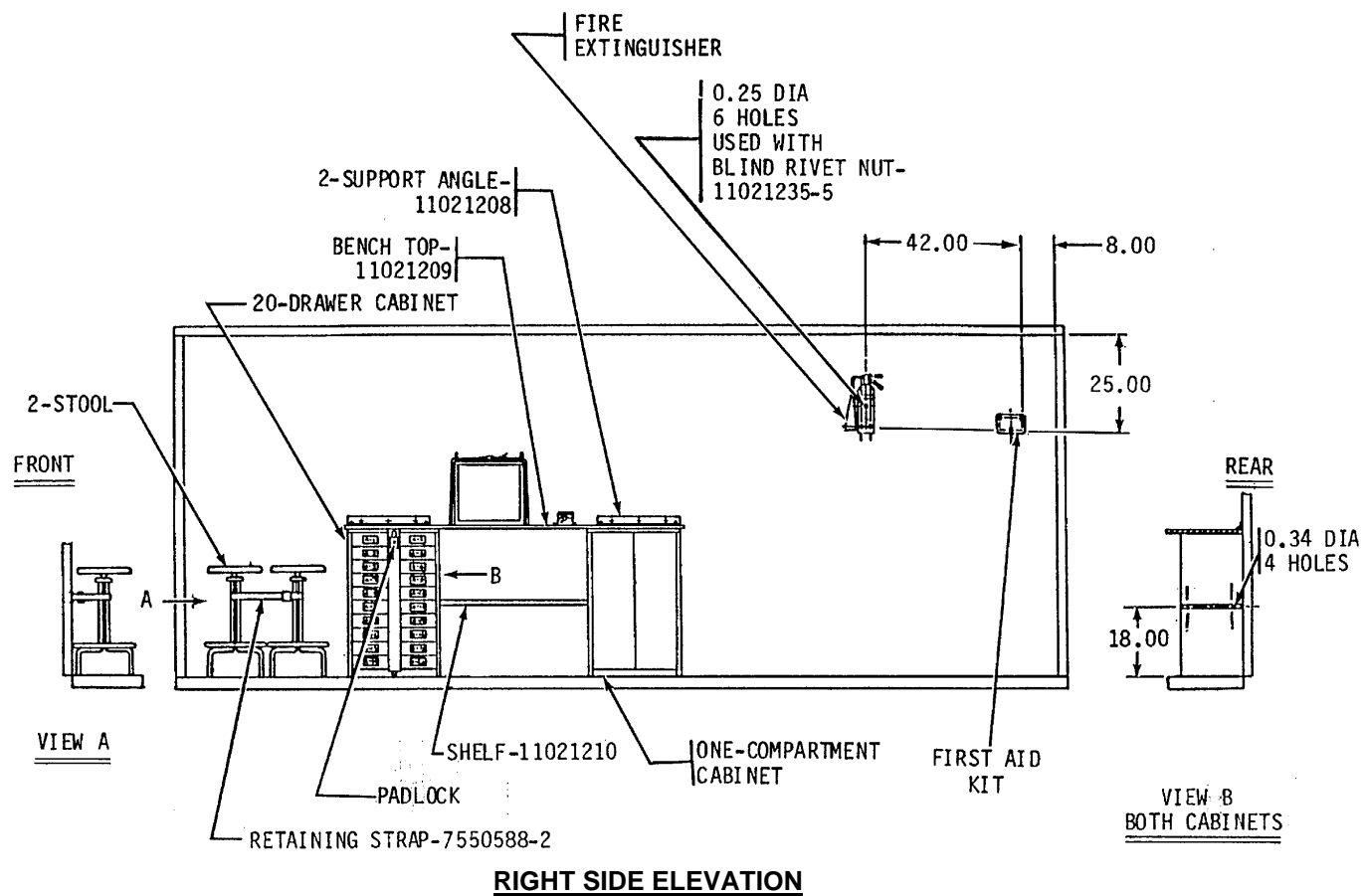


Figure 16. Components to be Mounted, Unit 2, ISO, Right Side Elevation.

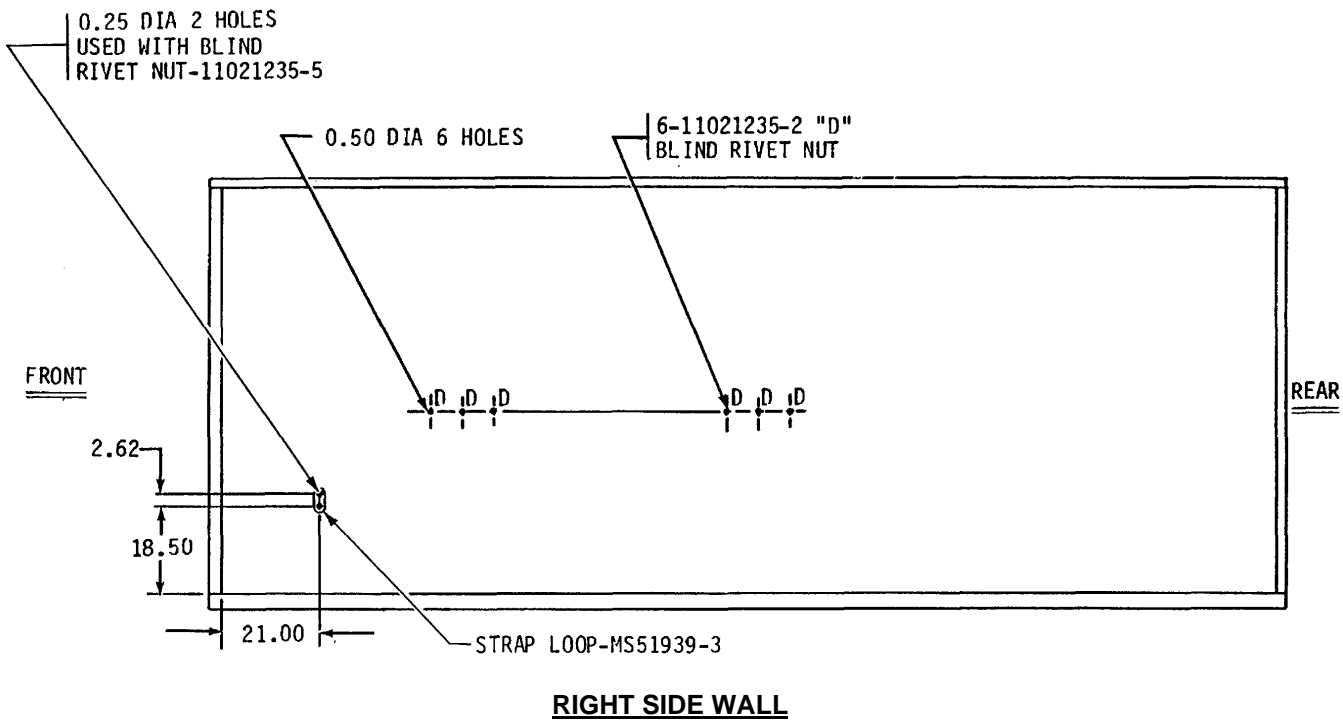
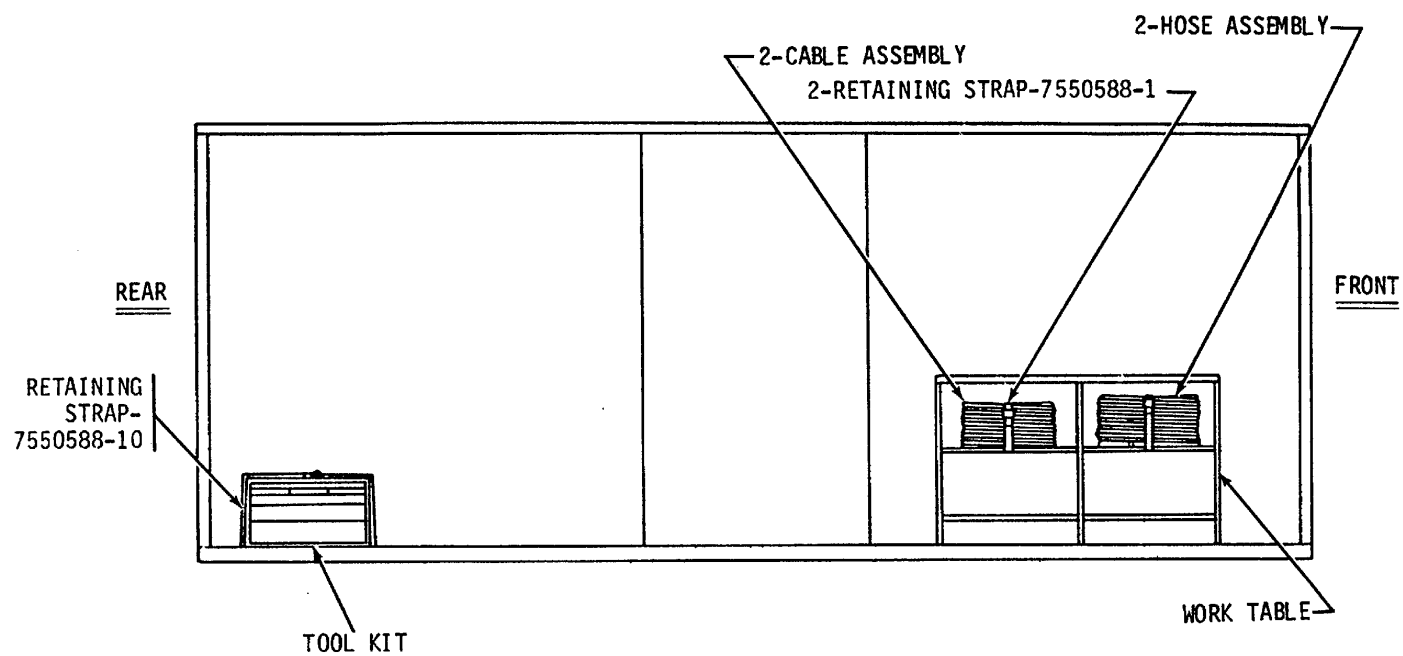
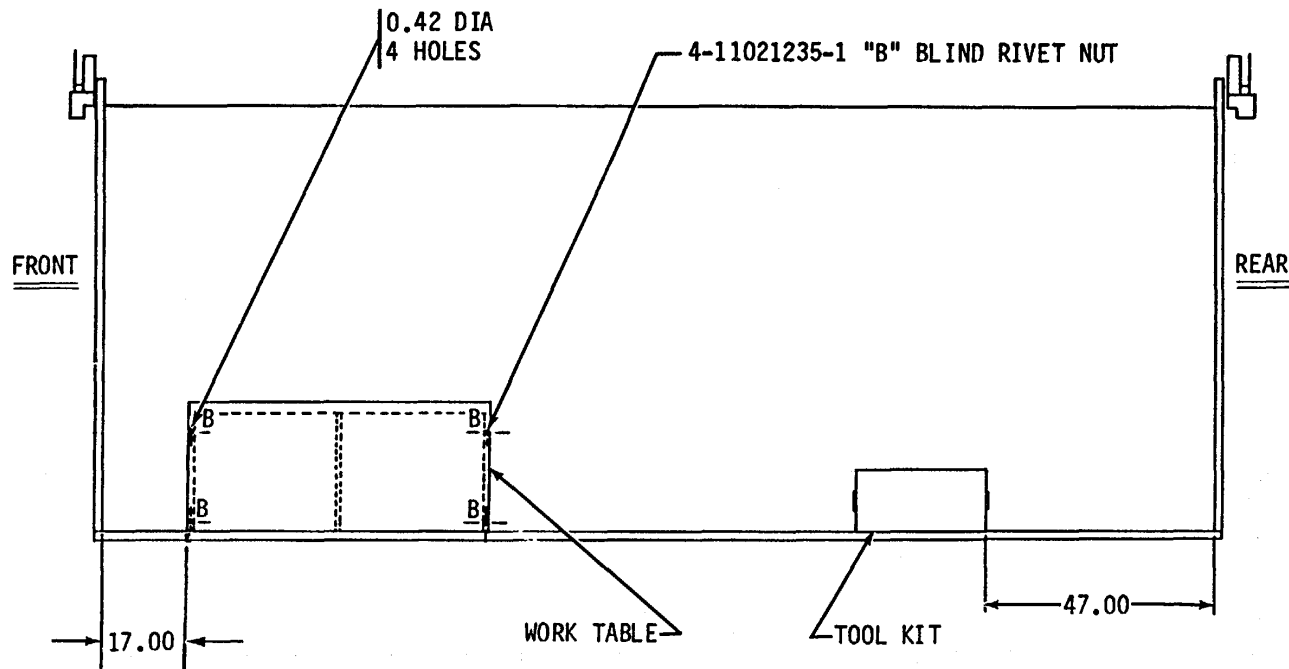


Figure 17. Hole Dimensions for Blind Rivet Nuts, Unit 2, ISO, Right Side Wall.



**LEFT SIDE ELEVATION**

*Figure 18. Components to be Mounted, Unit 2, ISO, Left Side Elevation.*



**FLOOR PLAN - DEPLOYED MODE**

*Figure 19. Components to be Mounted, Unit 2, ISO, Deployed Mode.*

NOTES:

1. ALUMINIM ANGLE. PER 11-A-225/8
2. DEBURR HOLES AND BREAK ALL SHARP EDGES.

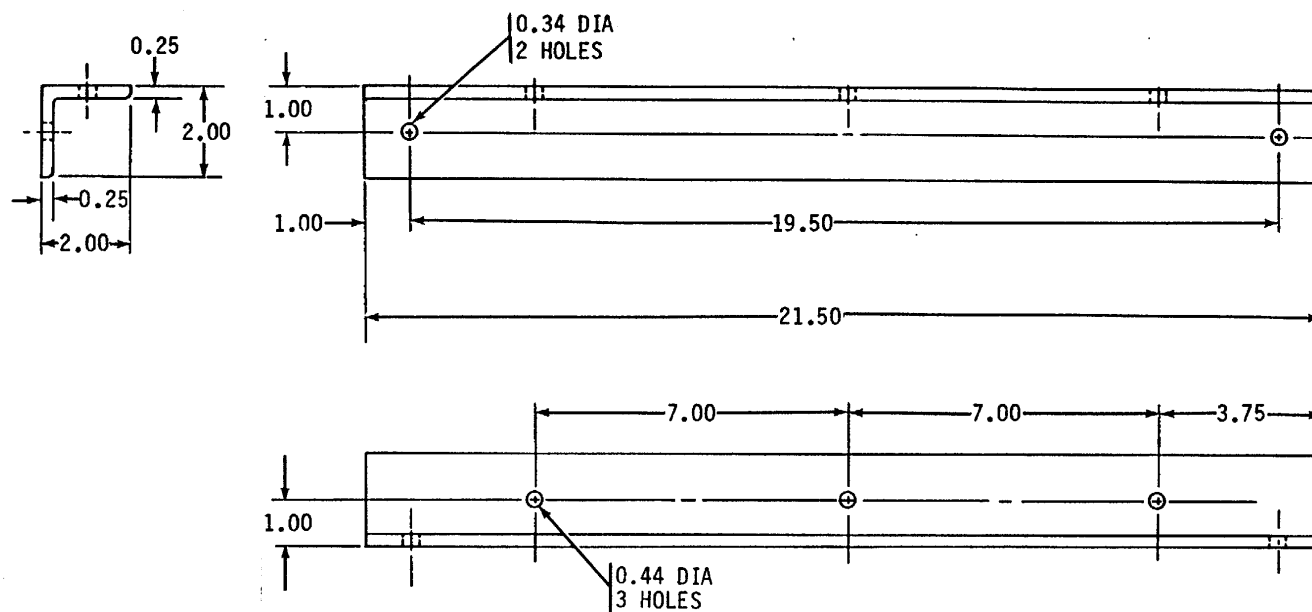
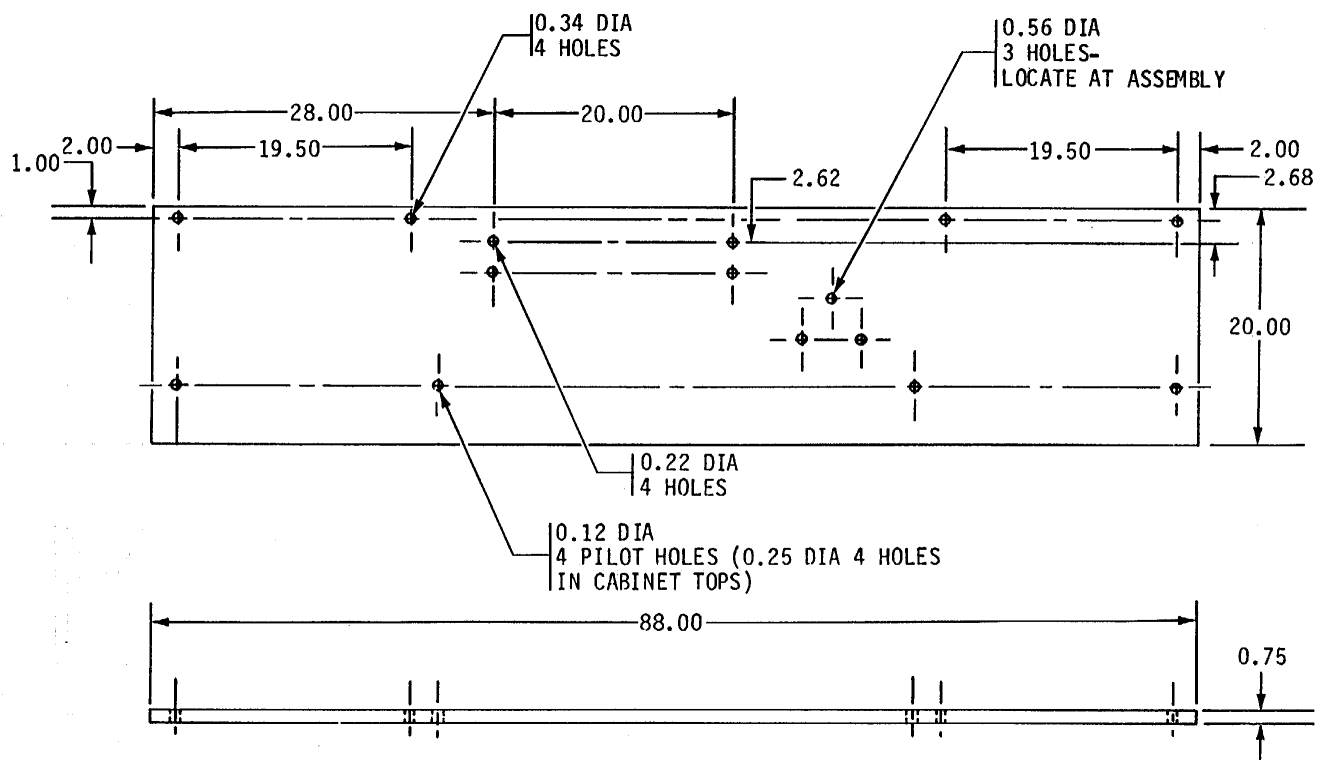


Figure 20. Dimensions for Support Angle-11021208, Unit 2, ISO.



**NOTES:**

1. MATERIAL-BENELEX, MASONITE CORP
2. DEBURR HOLES AND BREAK ALL SHARP EDGES

Figure 21. Dimensions for Bench Top-11021209, Unit 2, ISO.

NOTES:

1. MATERIAL-STEEL, CRCQ PER QQ-S-700
2. PAINT USING PRIMER, MIL-P-14553, AND ENAMEL, FOREST GREEN PER MIL-3-52798 (AIR DRY)
3. DEBURR HOLES AND BREAK ALL SHARP EDGES

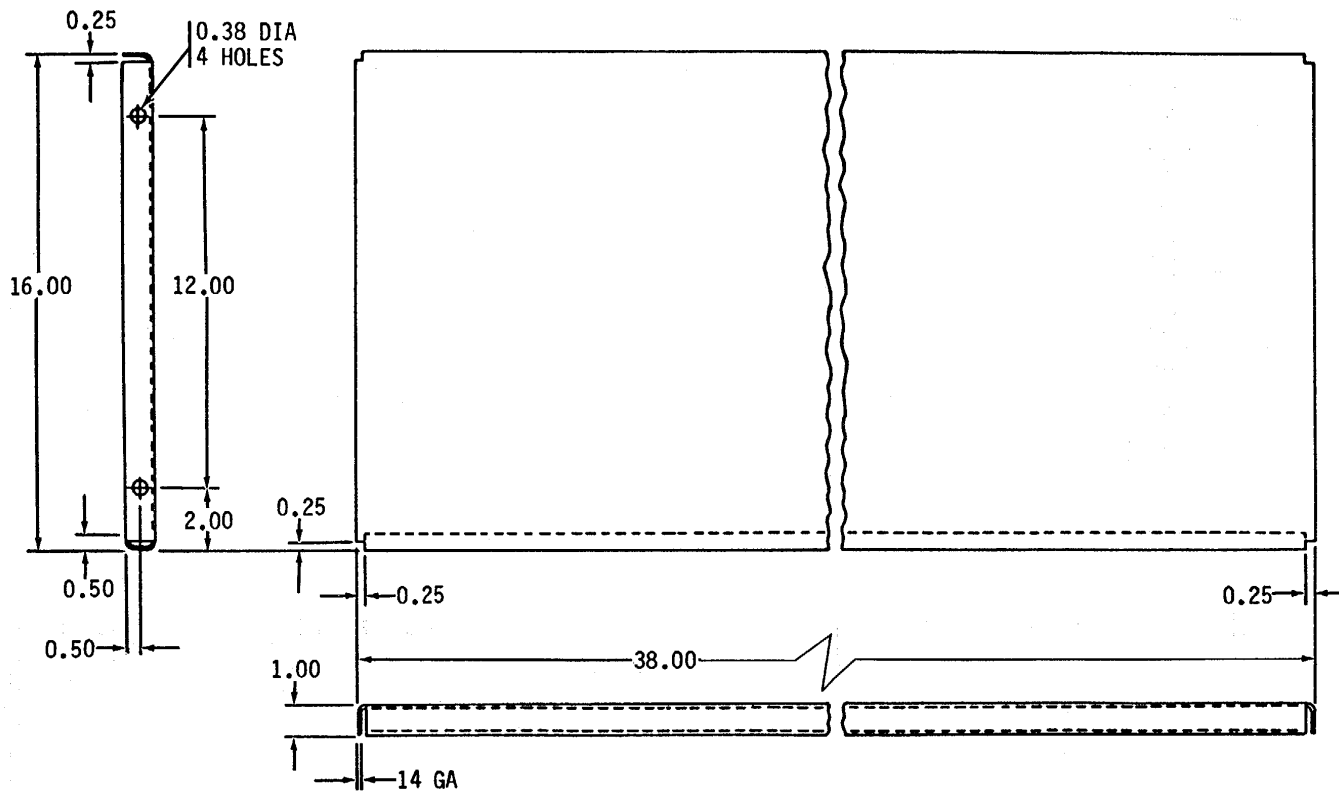


Figure 22. Dimensions for Shelf-11021210, Unit 2, ISO.

Table 7. Standard Conversion Chart

Nominal size	Decimal size	Nominal size	Decimal size
Inch		Inch	
1/16	0.06	35/64	0.55
5/64	0.08	9/16	0.56
3/32	0.09	37/64	0.58
7/64	0.11	19/32	0.59
1/8	0.12	39/64	0.61
9/64	0.14	5/8	0.62
5/32	0.16	41/64	0.64
11/64	0.17	21/32	0.66
3/16	0.19	43/64	0.67
13/64	0.20	11/16	0.69
7/32	0.22	45/64	0.70
15/64	0.23	23/32	0.72
1/4	0.25	47/64	0.73
17/64	0.27	3/4	0.75
9/32	0.28	49/64	0.77
19/64	0.30	25/32	0.78
5/16	0.31	51/64	0.80
21/64	0.33	13/16	0.81
11/32	0.34	53/64	0.83
23/64	0.36	27/32	0.84
3/8	0.38	55/64	0.86
25/64	0.39	7/8	0.88
13/32	0.41	57/64	0.89
27/64	0.42	29/32	0.91
7/16	0.44	59/64	0.92
29/64	0.45	15/16	0.94
15/32	0.47	61/64	0.95
31/64	0.48	31/32	0.97
1/2	0.50	63/64	0.98
33/64	0.52	1	1.00
17/32	0.53		



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