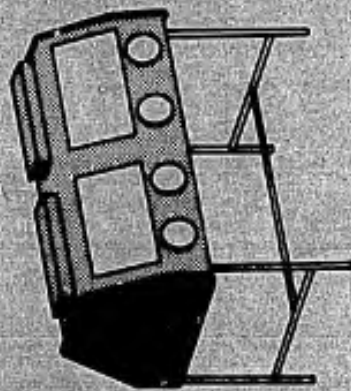


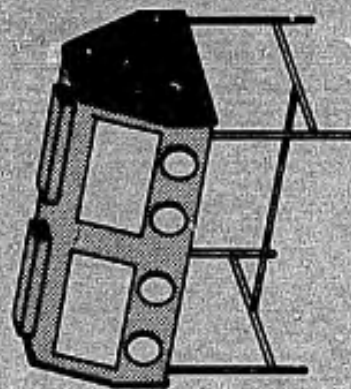
BIOLOGICAL

AD 725519

SAFETY CABINETS



VOLUME I



FABRICATION DRAWINGS

DISTRIBUTION STATEMENT

Approved for public release;
distribution unlimited.

U.S. ARMY

D D C
RECEIVED
JUN 18 1971
RECEIVED

Reproduced by
NATIONAL TECHNICAL
INFORMATION SERVICE
Springfield, Va. 22161

BIOLOGICAL SAFETY CABINETS FOR

<input type="checkbox"/>	BMP-30-S-0	COVER SHEET AND DRAWING LIST
<input type="checkbox"/>	BMP-30-S-1	TYPE I-S, ASSEMBLY
<input type="checkbox"/>	BMP-30-S-2	TYPE I-S, SHELL DETAIL
<input type="checkbox"/>	BMP-30-S-3	TYPE I-D, ASSEMBLY
<input type="checkbox"/>	BMP-30-S-4	TYPE I-D, SHELL DETAIL
<input type="checkbox"/>	BMP-30-S-5	TYPE II-S, ASSEMBLY
<input type="checkbox"/>	BMP-30-S-6	TYPE II-S, SHELL DETAIL
<input type="checkbox"/>	BMP-30-S-7	TYPE II-D, ASSEMBLY
<input type="checkbox"/>	BMP-30-S-8	TYPE II-D, SHELL DETAIL
<input type="checkbox"/>	BMP-30-S-9	TYPE III-S, ASSEMBLY
<input type="checkbox"/>	BMP-30-S-10	TYPE III-S, SHELL DETAIL
<input type="checkbox"/>	BMP-30-S-11	TYPE III-D, ASSEMBLY
<input type="checkbox"/>	BMP-30-S-12	TYPE III-D, SHELL DETAIL
<input type="checkbox"/>	BMP-30-S-13	TYPE IV, ASSEMBLY
<input type="checkbox"/>	BMP-30-S-14	TYPE IV, SHELL DETAIL
<input type="checkbox"/>	BMP-30-S-15	TYPE V, ASSEMBLY
<input type="checkbox"/>	BMP-30-S-16	TYPE V, SHELL DETAIL
<input type="checkbox"/>	BMP-30-S-17	TYPE VI-S, ASSEMBLY
<input type="checkbox"/>	BMP-30-S-18	TYPE VI-S, SHELL DETAIL
<input type="checkbox"/>	BMP-30-S-19	TYPE VII-D, ASSEMBLY
<input type="checkbox"/>	BMP-30-S-20	TYPE VII-D, SHELL DETAIL
<input type="checkbox"/>	BMP-30-S-21	TYPE VIII-S, ASSEMBLY
<input type="checkbox"/>	BMP-30-S-22	TYPE VIII-S, SHELL DETAIL
<input type="checkbox"/>	BMP-30-S-23	TYPE IX-D, ASSEMBLY
<input type="checkbox"/>	BMP-30-S-24	TYPE IX-D, SHELL DETAIL

<input type="checkbox"/>	BMP-30-S-25	TYPE VIII-S, ASSEMBLY
<input type="checkbox"/>	BMP-30-S-26	TYPE VIII-S, SHELL DETAIL
<input type="checkbox"/>	BMP-30-S-27	TYPE IX-D ASSEMBLY
<input type="checkbox"/>	BMP-30-S-28	TYPE IX-D SHELL DETAIL
<input type="checkbox"/>	BMP-30-S-29	TYPE IX-S ASSEMBLY
<input type="checkbox"/>	BMP-30-S-30	TYPE IX-S SHELL DETAIL
<input type="checkbox"/>	BMP-30-S-31	TYPE IX-D ASSEMBLY
<input type="checkbox"/>	BMP-30-S-32	TYPE IX-D SHELL DETAIL
<input type="checkbox"/>	BMP-30-S-33	ELECTRICAL, ASSEMBLY, WIRING DIAGRAM, & DETAILS
<input type="checkbox"/>	BMP-30-S-34	ELECTRICAL, FLUORESCENT LIGHT HOUSING DETAILS, & ASSEMBLY
<input type="checkbox"/>	BMP-30-S-35	PLATES, END CLOSURE & FILLER
<input type="checkbox"/>	BMP-30-S-36	PLATES, FILLER
<input type="checkbox"/>	BMP-30-S-37	INTERIOR PIPING
<input type="checkbox"/>	BMP-30-S-38	STANDS, ASSEMBLY & DETAILS
<input type="checkbox"/>	BMP-30-S-39	OPENING FRAME, DETAILS
<input type="checkbox"/>	BMP-30-S-40	DETAILS, VENTILATION
<input type="checkbox"/>	BMP-30-S-41	DETAILS, MISCELLANEOUS
<input type="checkbox"/>	BMP-30-S-42	DETAILS, MISCELLANEOUS
<input type="checkbox"/>	BMP-30-S-43	DETAILS, MISCELLANEOUS
<input type="checkbox"/>	BMP-30-S-44	BOTTOM & REAR OPENING DETAILS & LEG SOCKET ARRANGEMENTS
<input type="checkbox"/>	BMP-30-S-45	PANELS & CLOSURE PLATES, MISCELLANEOUS
<input type="checkbox"/>	BMP-30-S-46	CABINET SCHEDULE

NOTE
1. THE PROJECT OR CONTRACT NUMBER SHALL BE INSERTED AS A PART OF THE MAIN HEADING.
2. THOSE DRAWINGS APPLICABLE TO THE PROJECT ARE INDICATED BY [X].

BIOLOGICAL PLANTS & PROCESSES BRANCH FORT DETRICK, FREDERICK, MARYLAND		US ARMY MEDICAL & BIOLOGICAL RESEARCH DEPARTMENT	
DRAWN BY	DATE	SAFETY CABINET BIOLOGICAL COVER SHEET AND DRAWING LIST	
SCALE	DATE	PROJECT NO.	
PROJ. IDENT. NO.		BMP 30-S-0	

Security Classification

FORM 1473 (REV. 6-64)

DOCUMENT CONTROL DATA - R & D		
TW (Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)		
1. ORIGINATING ACTIVITY (Corporate author) US Army Biological Defense Research Center Fort Detrick Frederick, Maryland 21701		2a. REPORT SECURITY CLASSIFICATION Unclassified
		2b. GROUP
3. REPORT TITLE Biological Safety Cabinets Volume I. Fabrication Drawings		
4. DESCRIPTIVE NOTES (Type of report and inclusive dates)		
5. AUTHOR(S) (First name, middle initial, last name)		
6. REPORT DATE May 1965	7a. TOTAL NO. OF PAGES 46	7b. NO. OF REFS
8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S)	
b. PROJECT NO.		
c.	9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)	
d.		
10. DISTRIBUTION STATEMENT Approved for public release; distribution unlimited.		
11. SUPPLEMENTARY NOTES Process Engineering Division		12. SPONSORING MILITARY ACTIVITY US Army Biological Defense Research Center Fort Detrick Frederick, Maryland
13. ABSTRACT This volume presents 46 fabrication drawings covering nine types of Class III biological safety cabinets. The drawings present both the individual cabinet types and fabrication details common to all cabinet types, such as electrical wiring, lighting, piping, ventilation, etc. 17K		

DD FORM 1473
1 NOV 64REPLACES DD FORM 1473, 1 JAN 64, WHICH IS
OBSOLETE FOR ARMY USE.

UNCLASSIFIED

Security Classification

Security Classification

14.	KEY WORDS - ATAC JOURNAL IN	LINK A		LINK B		LINK C	
		ROLE	WT	ROLE	WT	ROLE	WT

PREPARED BY

PLANTS DESIGN BRANCH
PROCESS ENGINEERING DIVISION

US ARMY BIOLOGICAL DEFENSE RESEARCH CENTER
FORT DETRICK, FREDERICK, MARYLAND 21701

MAY 1965

DISTRIBUTION STATEMENT

Approved for public release;
distribution unlimited.

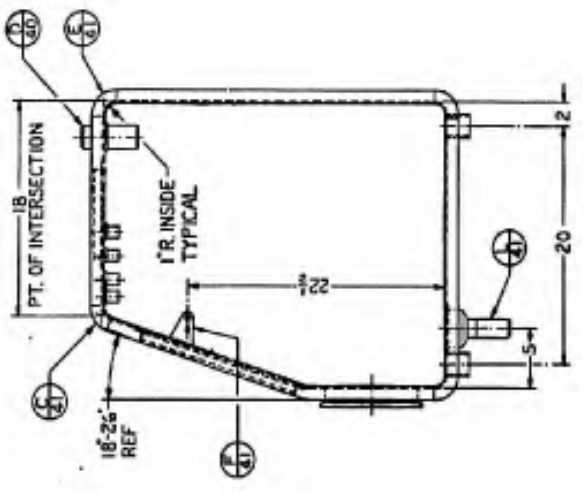
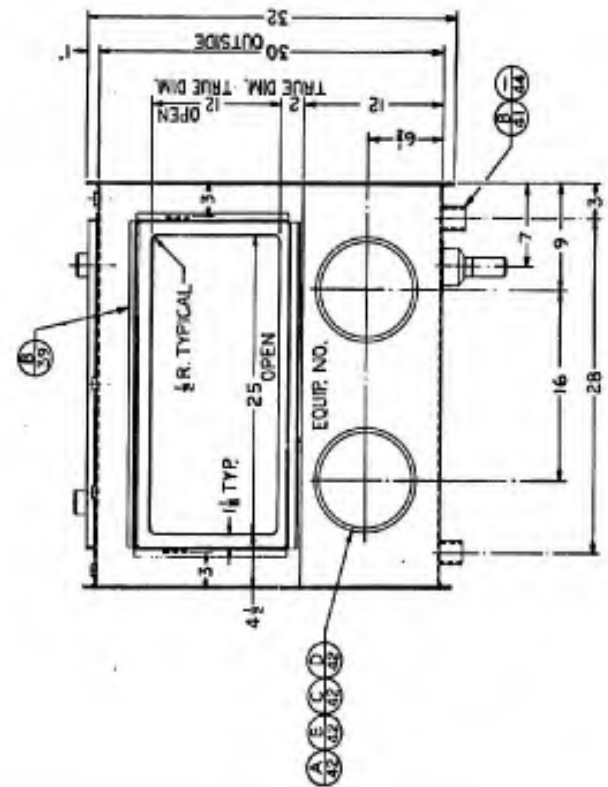
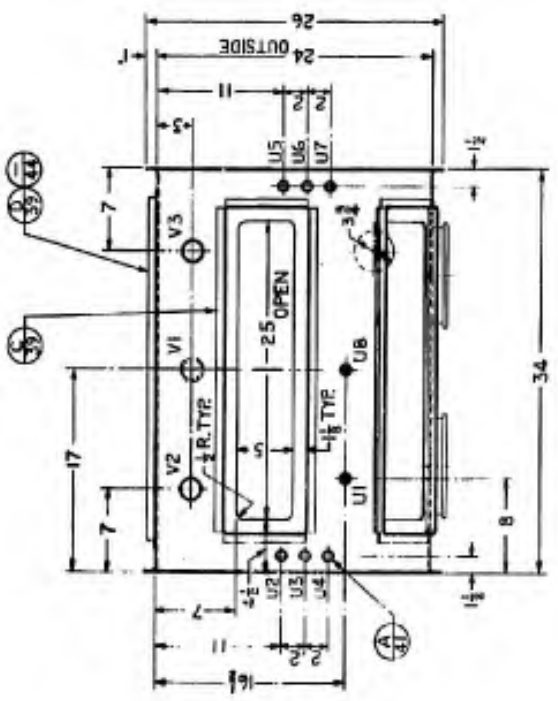
ABSTRACT

→ 117
This volume presents 46 fabrication drawings covering nine types of Class III biological safety cabinets. The drawings present both the individual cabinet types and fabrication details common to all cabinet types, such as electrical wiring, lighting, piping, ventilation, etc.

NOTES:
 1. MATERIAL - 14 GA. (.078) SST, TYPE 304, 2B FINISH.
 2. EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE DWG. BWP-30-5-46. THE NUMBER SHALL BE PLACED BETWEEN THE GLOVE PORTS.

REFERENCE DRAWINGS:
 BWP-30-5-1 TYPE I-S ASSEMBLY
 BWP-30-5-39 FRAME DETAILS
 BWP-30-5-40 DETAILS
 BWP-30-5-41 DETAILS
 BWP-30-5-42 DETAILS
 BWP-30-5-44 OPENING & LEG SOCKET ARRANGEMENTS
 BWP-30-5-46 CABINET SCHEDULE

SYMBOL	DESCRIPTION	DATE	BY
BIOLOGICAL PLANTS & PROCESSES BRANCH PORT DETROCK, PIERCEVILLE, MARYLAND U.S. ARMY EDWARDS & KELLEY EDWARDSVILLE, MARYLAND			
PROJECT NO.	DATE	SCALE	BY
35/46	1-24-52	1/8" = 1'-0"	JK
SAFETY CABINET, BIOLOGICAL TYPE I-S SHELL DETAIL			
PROJ. IDENT. NO.	BWP-30-5-2		

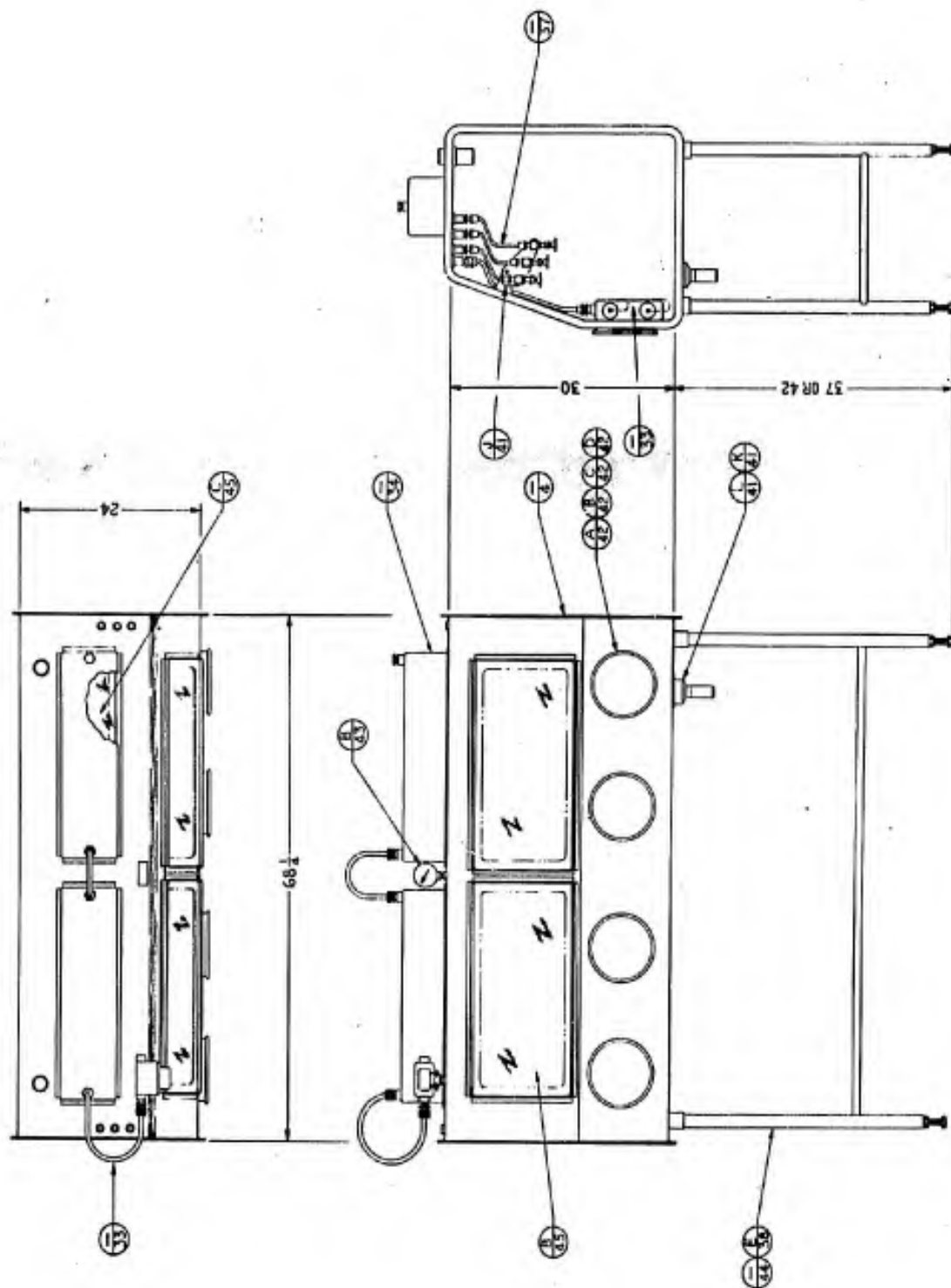


NOTES:

1. SEE 'CABINET SYSTEM ASSEMBLY PROCEDURE' FOR INSTALLATION OF CABINET COMPONENTS REQUIRING SEALING COMPOUND.
2. THIS DRAWING SHOWS BASIC CONFIGURATION FOR THE TYPE I-D CABINET. FOR TYPE I-D-R ARRANGEMENT SEE DWGS NO. BWP-30-S-4 AND BWP-30-S-4A.

REFERENCE DRAWINGS:

- BWP-30-S-4 TYPE I-D SHELL DETAIL
- BWP-30-S-33 ELECTRICAL
- BWP-30-S-34 ELECTRICAL
- BWP-30-S-37 INTERIOR PIPING
- BWP-30-S-38 STANDS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-43 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-45 PANELS
- BWP-30-S-46 CABINET SCHEDULE



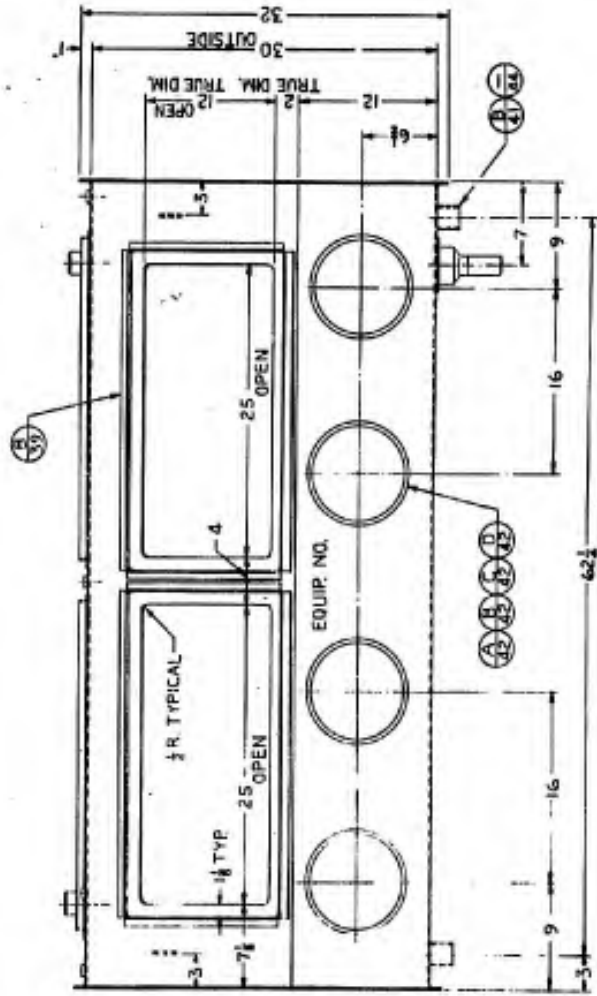
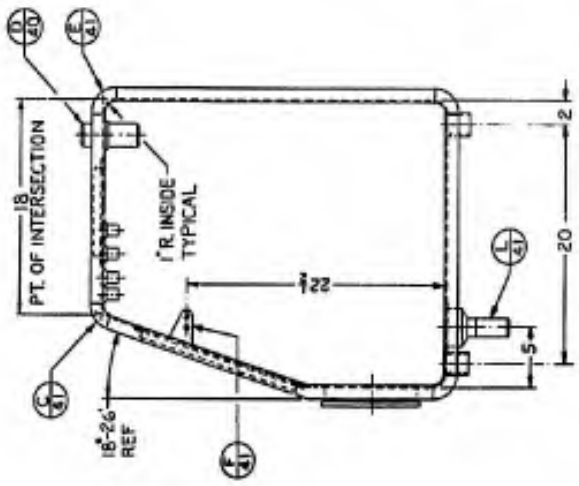
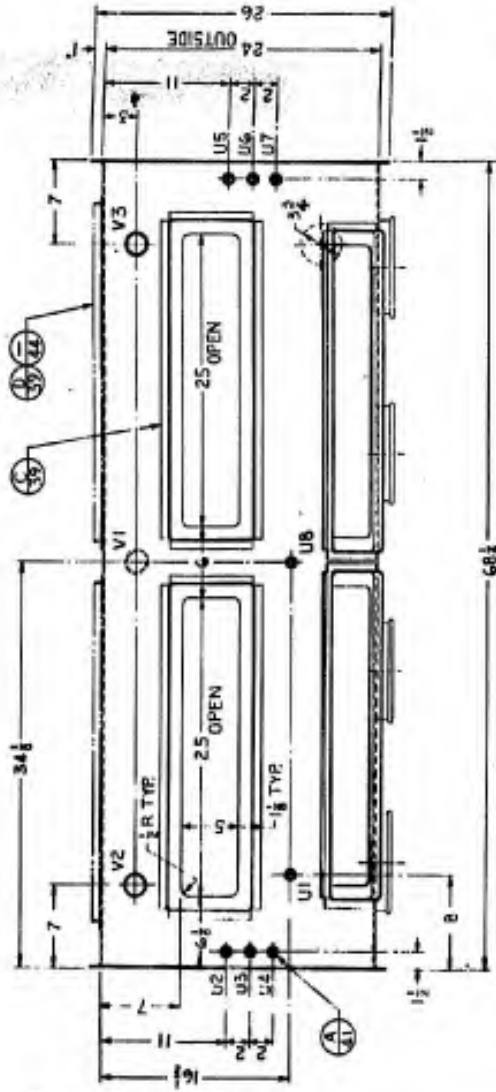
TYPE	DESCRIPTION	DATE
BIOLOGICAL PLANTS & PROCESSES BRANCH FORT DETRICK, FREDERICK, MARYLAND		
US ARMY MEDICAL & BIOLOGICAL DEFENSE AGENCY		
SAFETY CABINET, BIOLOGICAL TYPE I-D ASSEMBLY		
DESIGNED BY	DATE	
2/28	3-1-67	
PROJECT NO.	REV.	
68-11-100-100	1/1	
PROJ. IDENT. NO.		
		BWP-30-S-3

NOTES:

1. MATERIAL - 14 GA. (.078) SST, TYPE 304, 2B FINISH.
2. EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE DWG. BWP-30-S-46. THE NUMBER SHALL BE PLACED BETWEEN THE MIDDLE GLOVE PORTS.

REFERENCE DRAWINGS:

- BWP-30-S-3 TYPE I-D ASSEMBLY
- BWP-30-S-39 FRAME DETAILS
- BWP-30-S-40 DETAILS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-46 CABINET SCHEDULE



<p>US ARMY ARMY MEDICAL DEPARTMENT BIOMEDICAL RESEARCH DIVISION</p>	
<p>LOGICAL PLANTS & PROCESSES BRANCH PORT DETROIT, FREDERICK, MARYLAND</p>	
<p>DESIGNED BY <i>[Signature]</i></p>	<p>DATE 3-1-65</p>
<p>SAFETY CABINET, BIOLOGICAL TYPE I-D SHELL DETAIL</p>	
<p>PROJ. IDENT. NO. <i>11567</i></p>	
<p>SCALE <i>1/8"</i></p>	
<p>BWP-30-S-4</p>	

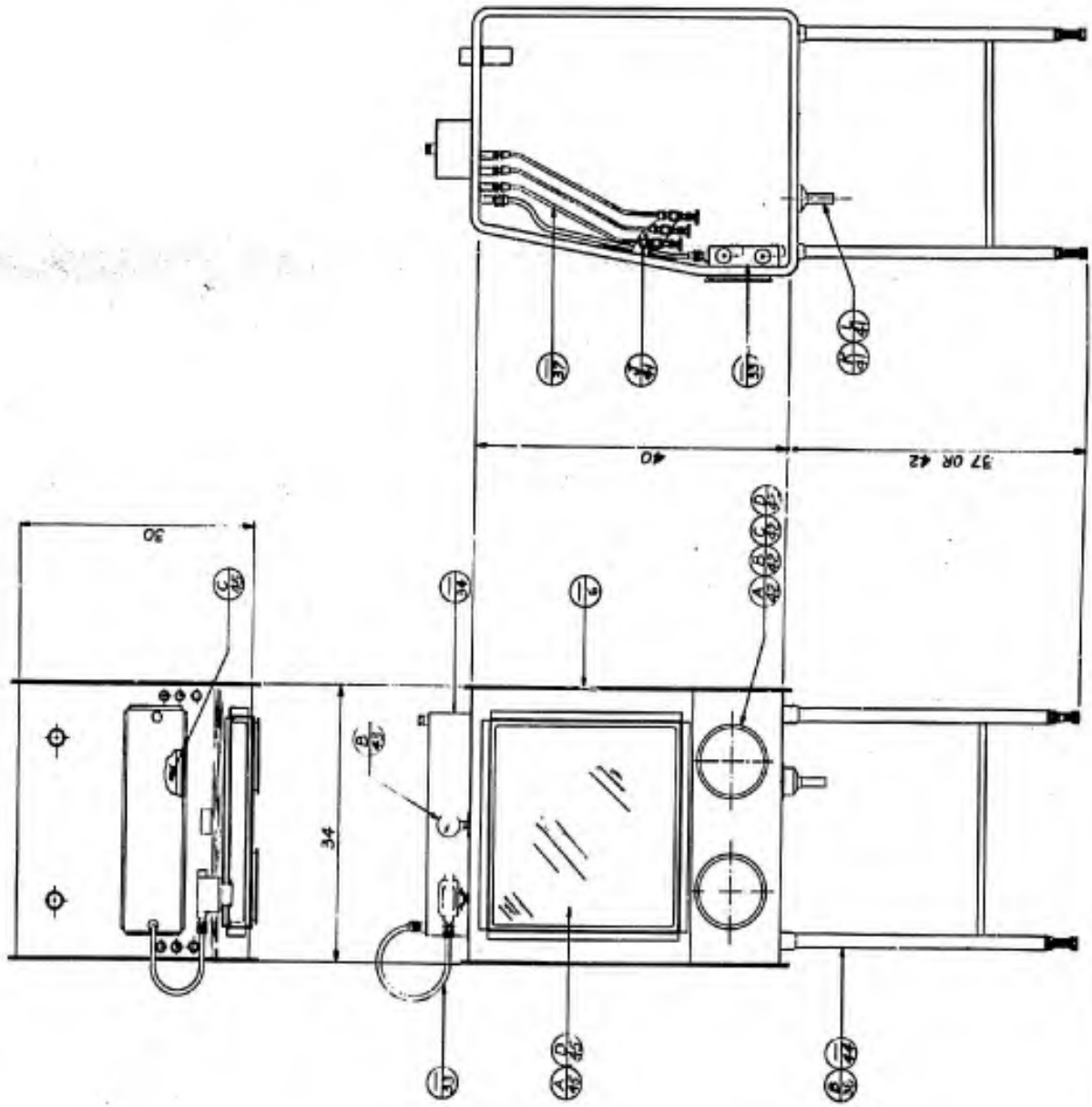
NOTES:

1. SEE "CABINET SYSTEM ASSEMBLY PROCEDURE" FOR INSTALLATION OF CABINET COMPONENTS REQUIRING SEALING COMPOUND.

2. THIS DRAWING SHOWS BASIC CONFIGURATION FOR THE TYPE IES CABINET. FOR TYPE IES-B AND/OR TYPE IES-R ARRANGEMENTS, SEE DRAWINGS BWP-30-S-6 AND BWP-30-S-44

REFERENCE DRAWINGS:

- BWP-30-S-6 TYPE IES SHELL DETAIL
- BWP-30-S-53 ELECTRICAL
- BWP-30-S-34 ELECTRICAL
- BWP-30-S-37 INTERIOR PIPING
- BWP-30-S-38 STANDS
- BWP-30-S-41 MISC. DETAILS
- BWP-30-S-42 MISC. DETAILS
- BWP-30-S-43 MISC. DETAILS
- BWP-30-S-44 OPENING DETAILS & LEG SOCKET ARRGT.
- BWP-30-S-45 PANEL DETAILS
- BWP-30-S-46 CABINET SCHEDULE



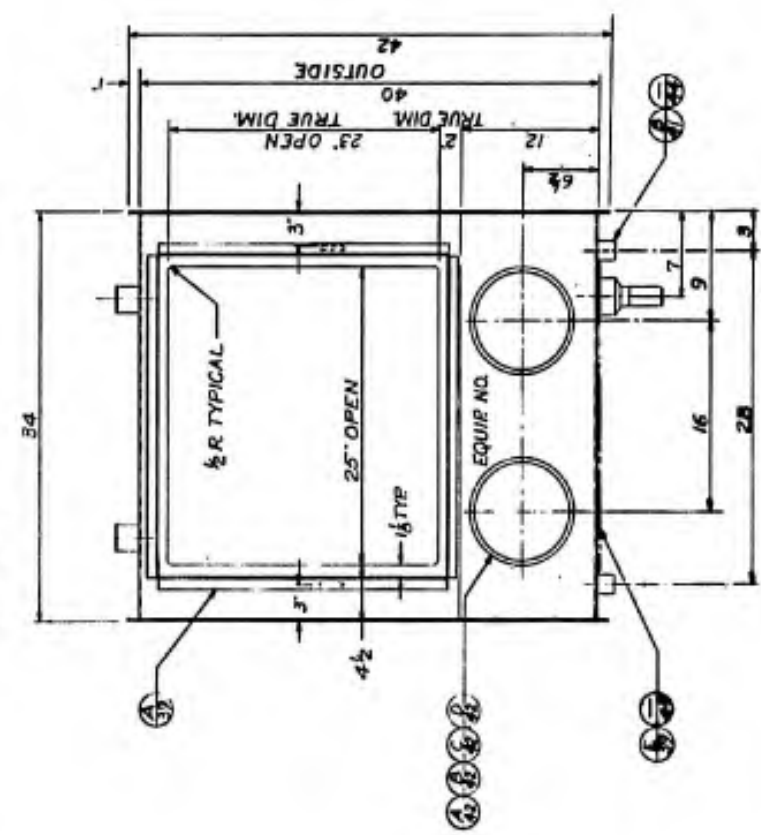
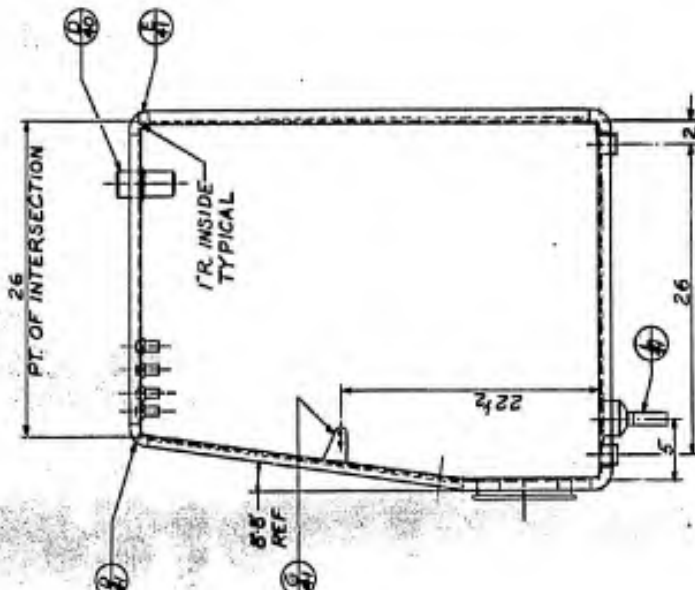
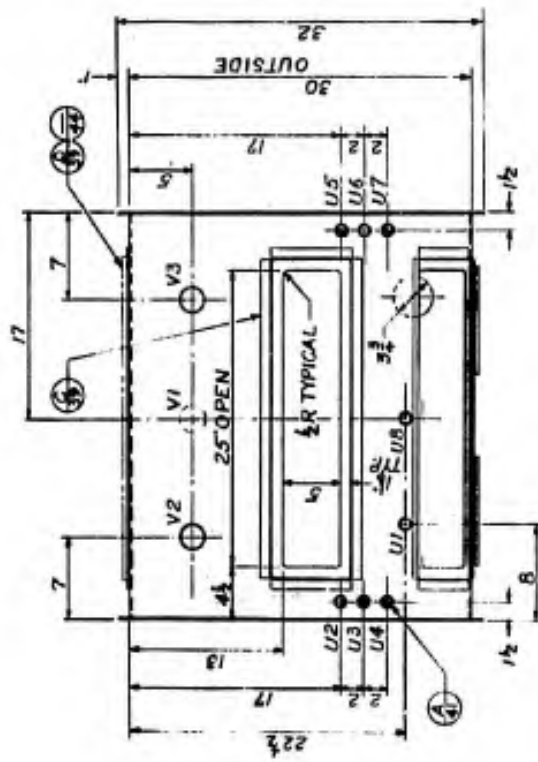
BIOLOGICAL PLANTS & PROCESSES BRANCH FORT DETMOLD, FREDERICK, MARYLAND		US ARMY DA FORM 200-100 REPRODUCTION MATERIAL, MARYLAND	
SCALE	DATE	SAFETY CABINET, BIOLOGICAL TYPE IES ASSEMBLY	
DESIGNED BY	CHKD BY	PROJECT NO. 64081	
APPROVED BY	DATE	CLASSIFICATION	
PROJECT IDENT. NO.		BWP-30-S-5	

NOTES:

1. MATERIAL - MGA (078) SST, TYPE 304, 20 FINISH
2. EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE, DWG. BMP-30-S-44. THE NUMBER SHALL BE PLACED BETWEEN THE GLOVE PORTS

REFERENCE DRAWINGS:

- BMP 30-S-5 TYPE II'S ASSEMBLY
- BMP 30-S-39 FRAME DETAILS
- BMP 30-S-40 VENTILATION DETAILS
- BMP 30-S-41 MISC. DETAILS
- BMP 30-S-42 MISC. DETAILS
- BMP 30-S-44 OPENING DETAILS & LEG SOCKET ARROT
- BMP 30-S-46 CABINET SCHEDULE



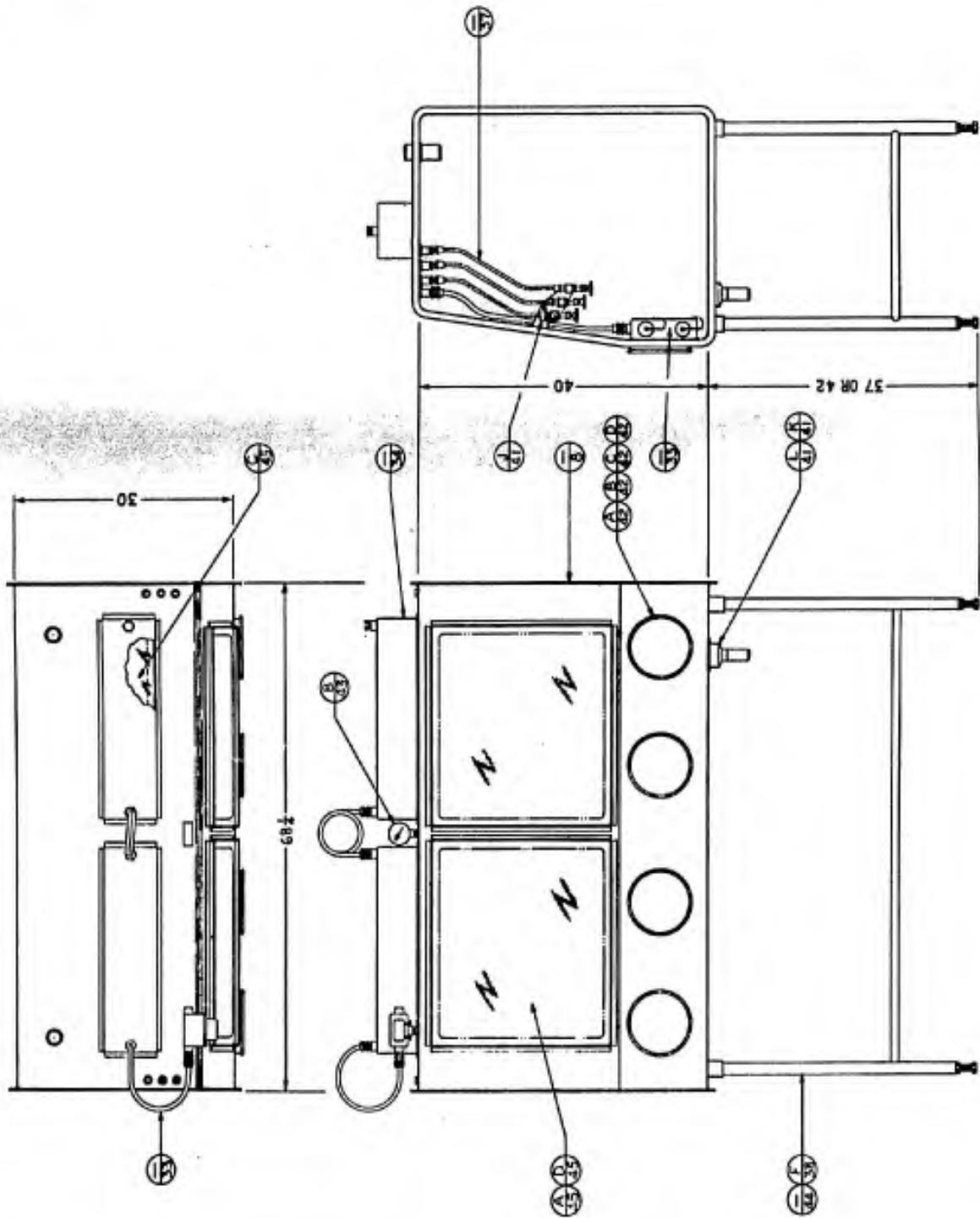
US ARMY	
BIOLOGICAL PLANTS & PROCEEDS BRANCH	
PORT, DETRICAL, FORT MONMOUTH, NEW JERSEY	
DATE	BY
APPROVED	DATE
SAFETY CABINET, BIOLOGICAL TYPE II'S SHELL DETAIL	
PROJ. IDENT. NO.	BMP-30-S-6

NOTES:

1. SEE "CABINET SYSTEM ASSEMBLY PROCEDURE" FOR INSTALLATION OF CABINET COMPONENTS REQUIRING SEALING COMPOUND.
2. THIS DRAWING SHOWS BASIC CONFIGURATION FOR THE TYPE II-D CABINET. FOR TYPE II-D-B AND/OR TYPE II-D-R ARRANGEMENTS SEE DWGS NO. BWP-30-S-8 AND BWP-30-S-44.

REFERENCE DRAWINGS:

- BWP-30-S-8 TYPE II-D SHELL DETAIL
- BWP-30-S-33 ELECTRICAL
- BWP-30-S-34 ELECTRICAL
- BWP-30-S-37 INTERIOR PIPING
- BWP-30-S-38 STANDS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-43 DETAILS
- BWP-30-S-44 OPENING AND LEG SOCKET ARRANGEMENTS
- BWP-30-S-45 PANELS
- BWP-30-S-46 CABINET SCHEDULE



BIOLOGICAL PLANTS & PROCESSES BRANCH FORT DETRICK, FREDERICK, MARYLAND		US ARMY DTIC/DAAG 15 800 0003 EDENWOOD JUNCTION, MARYLAND	
DRAWING NO. BWP-30-S-7 REVISED BY <i>[Signature]</i> DATE <i>[Date]</i>		PROJECT TITLE SAFETY CABINET, BIOLOGICAL TYPE II-D ASSEMBLY	
PROJ. IDENT. NO. BWP-30-S-7		SHEET NO. 178	

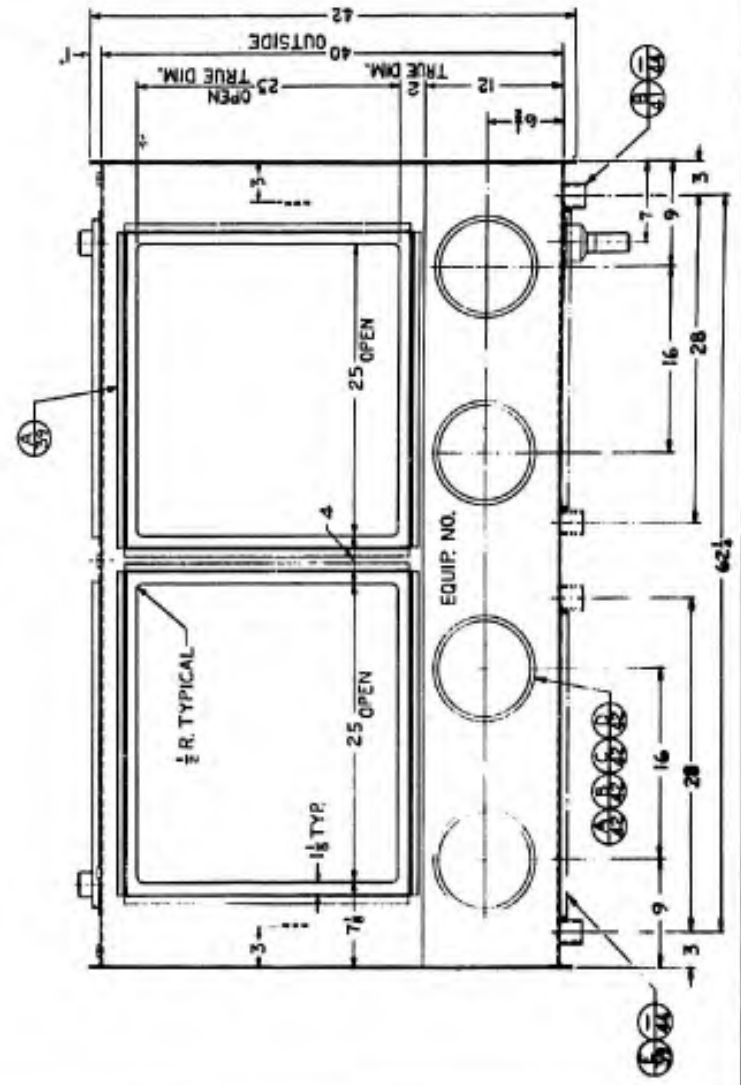
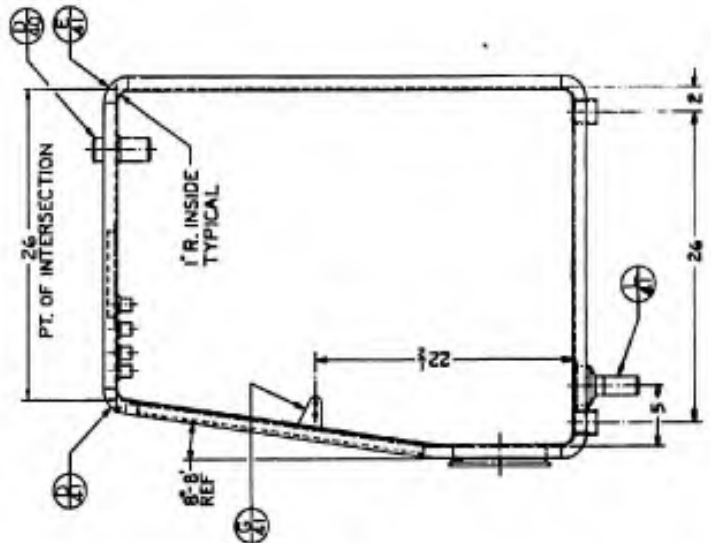
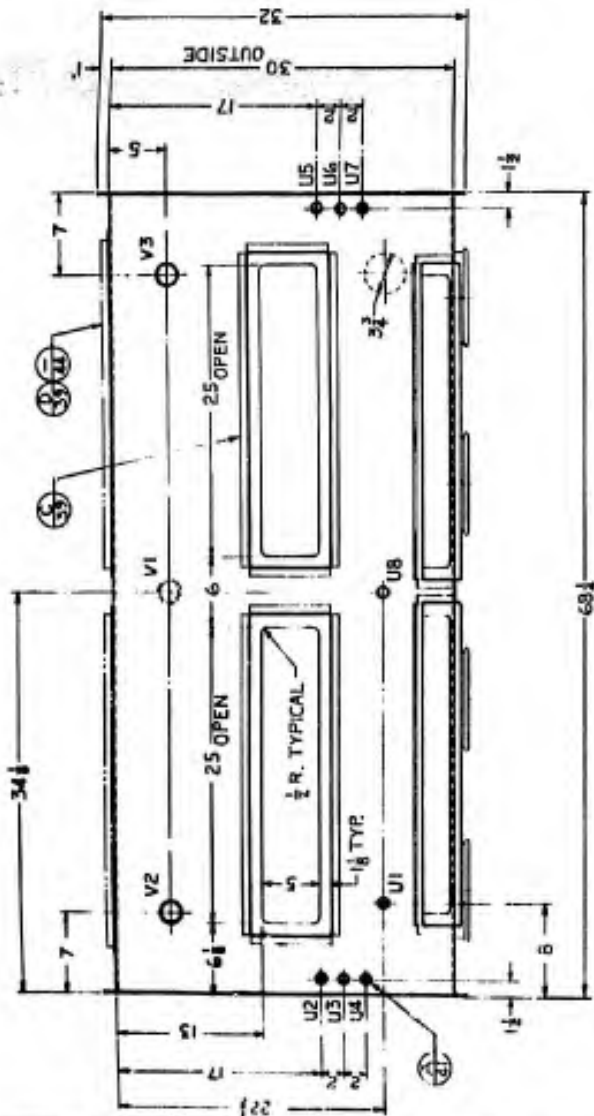
NOTES:

1. MATERIAL - 14 GA. (078) SST, TYPE 304, 2B FINISH.
2. EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE DWG. BWP-30-S-46. THIS NUMBER SHALL BE PLACED BETWEEN THE MIDDLE GLOVE PORTS.

REFERENCE DRAWINGS:

- BWP-30-S-7 TYPE II-D ASSEMBLY
- BWP-30-S-39 FRAME DETAILS
- BWP-30-S-40 DETAILS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-46 CABINET SCHEDULE

US ARMY MEDICAL PLANTS & PROCESSING BRANCH PORT DETACHMENT, FREDERICK, MARYLAND DRAWN BY: <i>[Signature]</i> CHECKED BY: <i>[Signature]</i> DATE: 3/1/55		SCALE: 1/8" = 1"
SAFETY CABINET, BIOLOGICAL TYPE II-D SHELL DETAIL		
PROJ. IDENT. NO.	DRAWING NO.	BWP-30-S-8

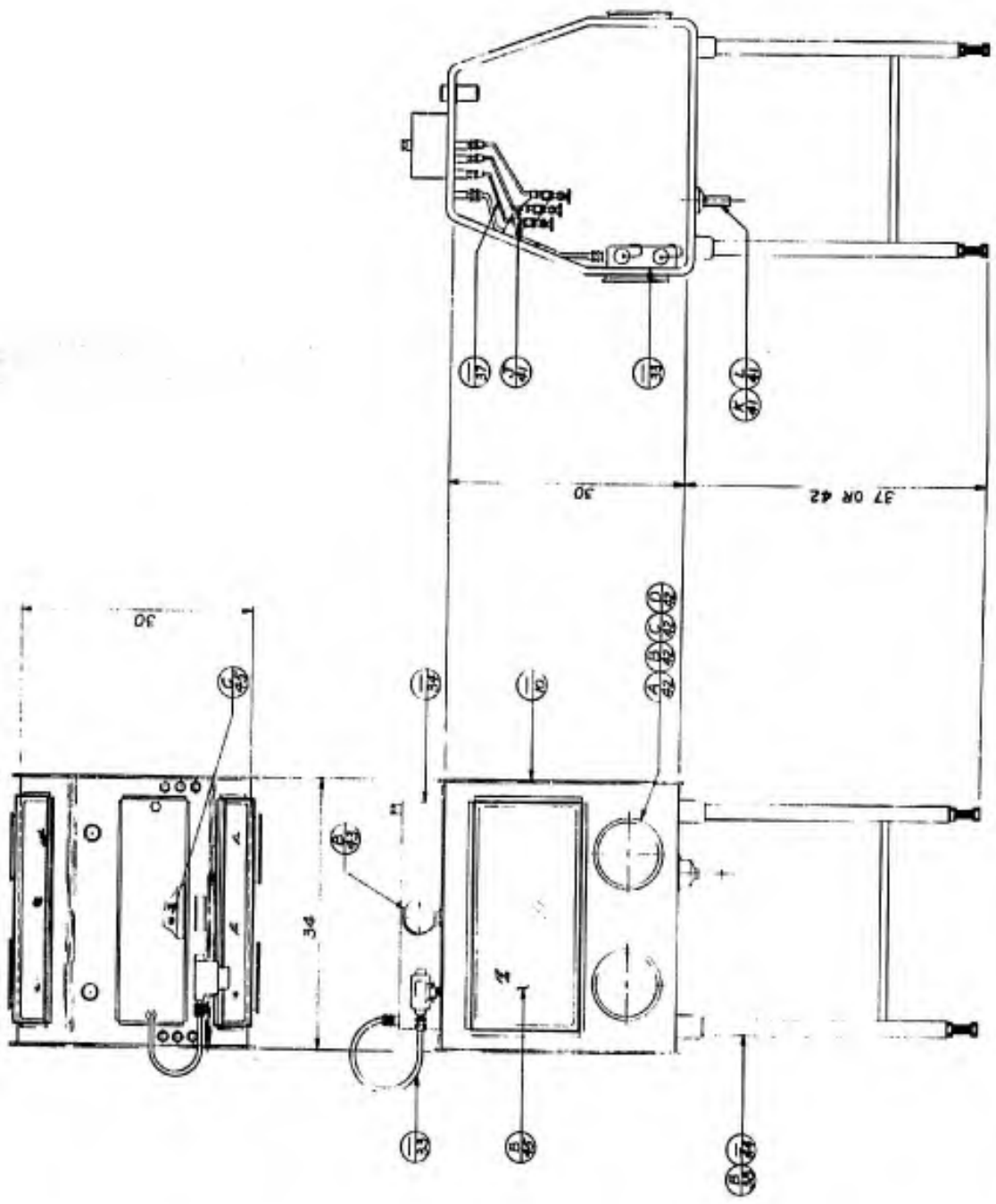


NOTES:

1. SEE "CABINET SYSTEM ASSEMBLY PROCEDURE" FOR INSTALLATION OF CABINET COMPONENTS REQUIRING SEALING COMPOUND.
2. THIS DRAWING SHOWS BASIC CONFIGURATION FOR THE TYPE III-S CABINET. FOR TYPE III-S-B ARRANGEMENT, SEE DWGS. BWP-30-S-10 AND BWP-30-S-44.

REFERENCE DRAWINGS:

- BWP-30-S-10 TYPE III-S SHELL DETAIL
- BWP-30-S-33 ELECTRICAL
- BWP-30-S-34 ELECTRICAL
- BWP-30-S-37 INTERIOR PIPING
- BWP-30-S-38 STANDS
- BWP-30-S-41 MISC. DETAILS
- BWP-30-S-42 MISC. DETAILS
- BWP-30-S-43 MISC. DETAILS
- BWP-30-S-44 OPENING DETAILS & LEG SOCKET ARRANG.
- BWP-30-S-45 PANEL DETAILS
- BWP-30-S-46 CABINET SCHEDULE



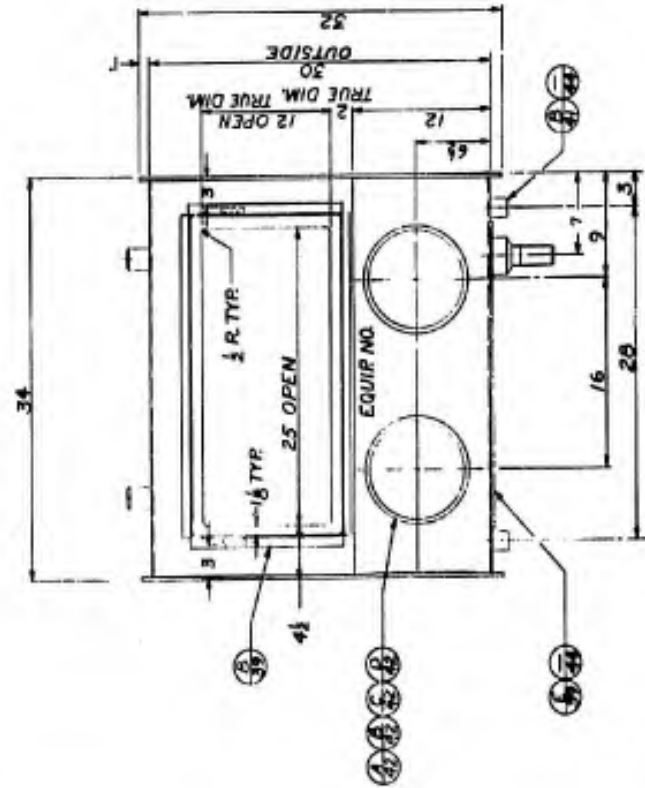
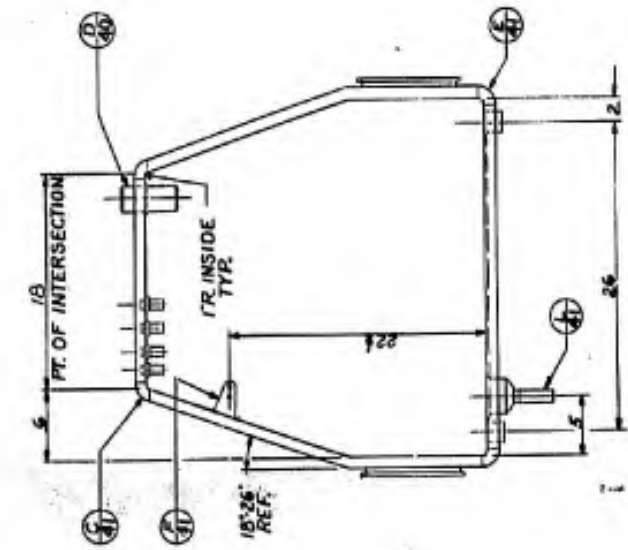
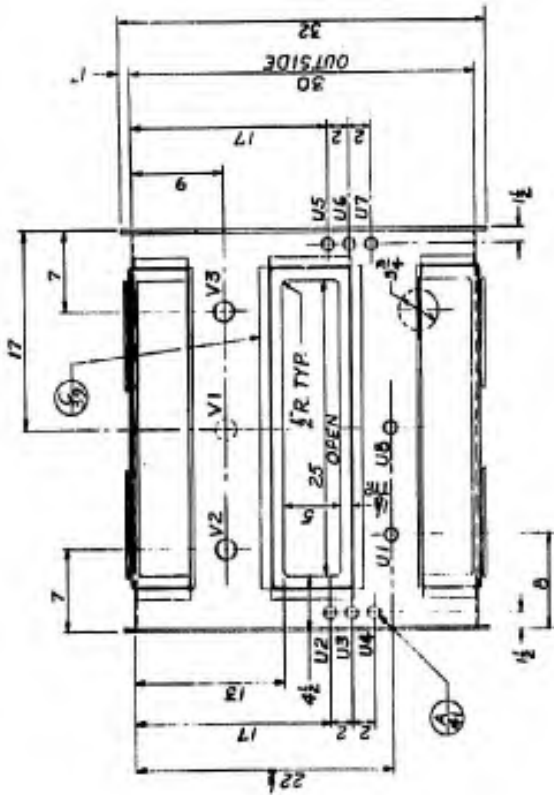
REV.	DESCRIPTION	DATE
US ARMY MEDICAL PLANTS & PROCESS BRANCH FORT DETRICK, FREDERICK, MARYLAND		
SAFETY CABINET, BIOLOGICAL TYPE III-S ASSEMBLY		
DESIGNED BY	DATE	
DRAWN BY	DATE	
CHECKED BY	DATE	
REC'D PROJECT IDENT. NO.		
BWP-30-S-9		

NOTES:

1. MATERIAL - 14 GA. CO480 SST, TYPE 304, 2B FINISH.
2. EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE DRAWING BWP-30-S-46. THE NUMBER SHALL BE PLACED BETWEEN THE GLOVE PORTS

REFERENCE DRAWINGS:

- BWP-30-S-9 TYPE I-S ASSEMBLY
- BWP-30-S-39 FRAME DETAILS
- BWP-30-S-40 DETAILS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-46 CABINET SCHEDULE



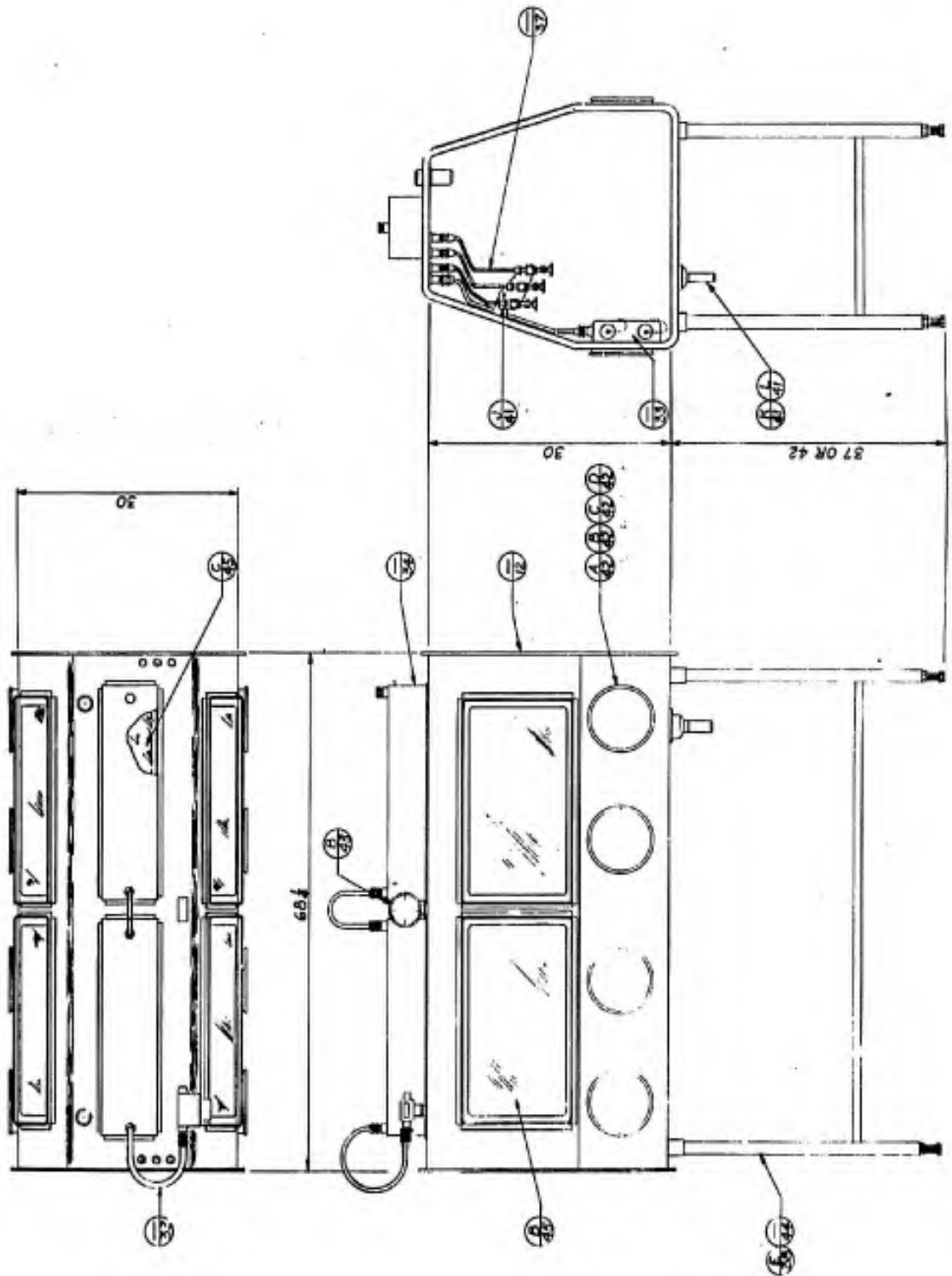
BIOLOGICAL PLANTS & PROCESSES BRANCH FORT DETRICK, FREDERICK, MARYLAND		U.S. ARMY MEDICAL DEPARTMENT	
DATE	BY	DATE	BY
15-26-46	J. J. [unclear]	15-26-46	J. J. [unclear]
SAFETY CABINET, BIOLOGICAL TYPE III-S SHELL DETAIL			
PROJ. IDENT. NO.		BWP-30-S-10	

NOTES:

1. SEE 'CABINET SYSTEM ASSEMBLY PROCEDURE' FOR INSTALLATION OF CABINET COMPONENTS REQUIRING SEALING COMPOUND.
2. THIS DRAWING SHOWS BASIC CONFIGURATION FOR THE TYPE III-D CABINET. FOR TYPE III-D-B ARRANGEMENT SEE DWGS. NO. BWP-30-S-42 AND BWP-30-S-44.

REFERENCE DRAWINGS:

- BWP-30-S-12 TYPE III-D SHELL DETAIL
- BWP-30-S-33 ELECTRICAL
- BWP-30-S-34 ELECTRICAL
- BWP-30-S-37 INTERIOR PIPING
- BWP-30-S-38 STANDS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-43 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-45 PANELS
- BWP-30-S-46 CABINET SCHEDULE



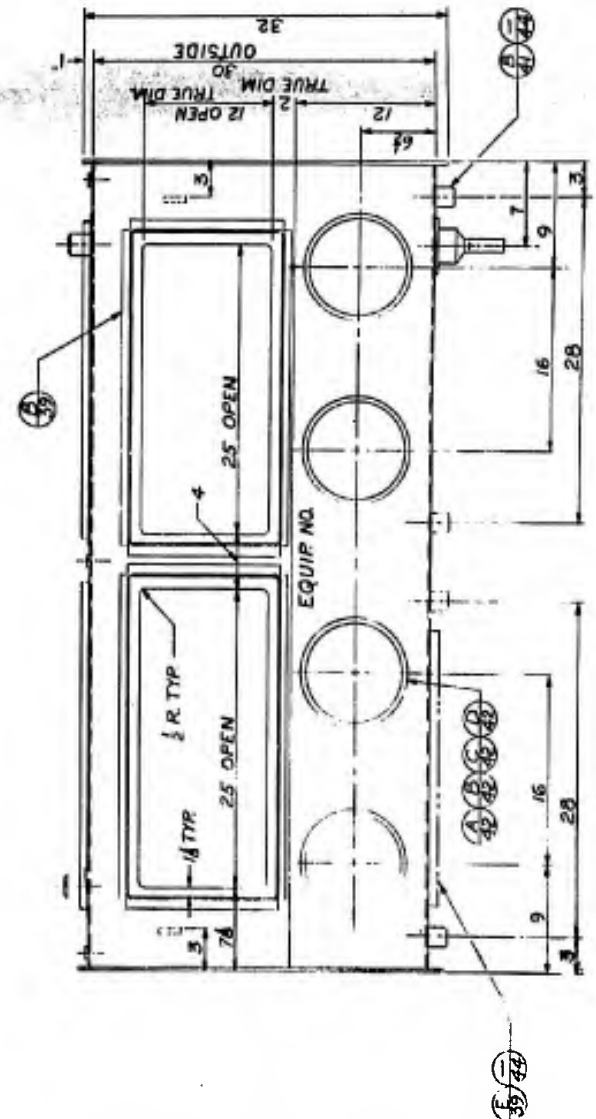
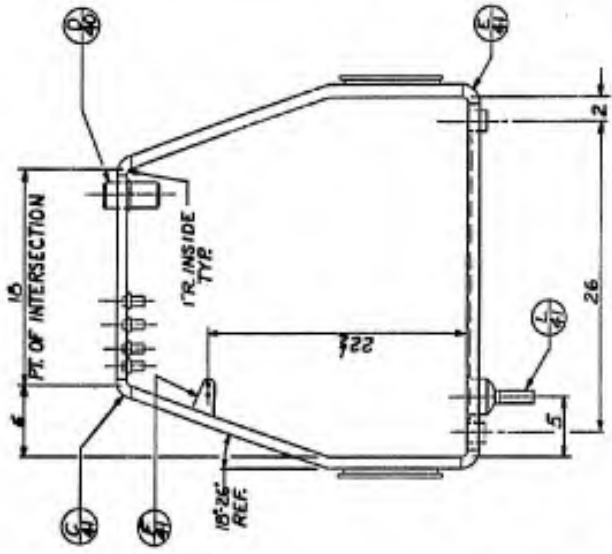
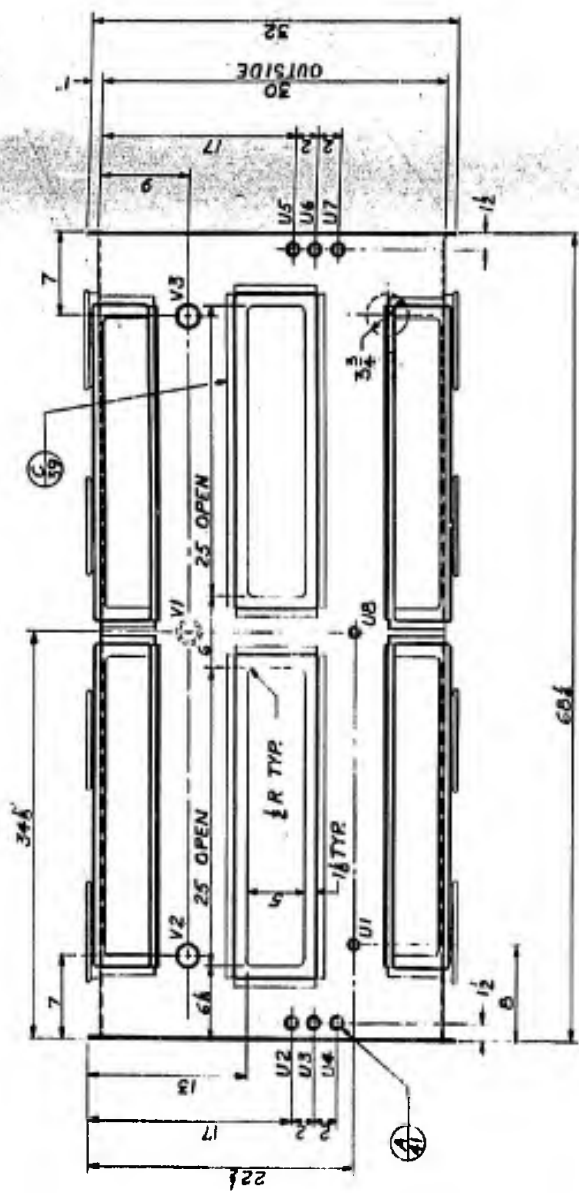
REV.	DATE	BY	CHKD.
BIOLOGICAL PLANTS & PROCESSES BRANCH PORT DETROIT, FREDERICK, MARYLAND			
US ARMY MEDICAL & VETERINARY SERVICES COMBINED FEDERAL, MARYLAND			
SAFETY CABINET, BIOLOGICAL TYPE III-D ASSEMBLY			
PROD. IDENT. NO.			BWP-30-S-11

NOTES:

1. MATERIAL - 14 GA. (078) SST, TYPE 304, 2B FINISH.
2. EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE, DWG. BWP-30-S-46. THE NUMBER SHALL BE PLACED BETWEEN THE MIDDLE GLOVE PORTS.

REFERENCE DRAWINGS:

- BWP-30-S-11 TYPE III-D ASSEMBLY
- BWP-30-S-39 FRAME DETAILS
- BWP-30-S-40 DETAILS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-46 CABINET SCHEDULE



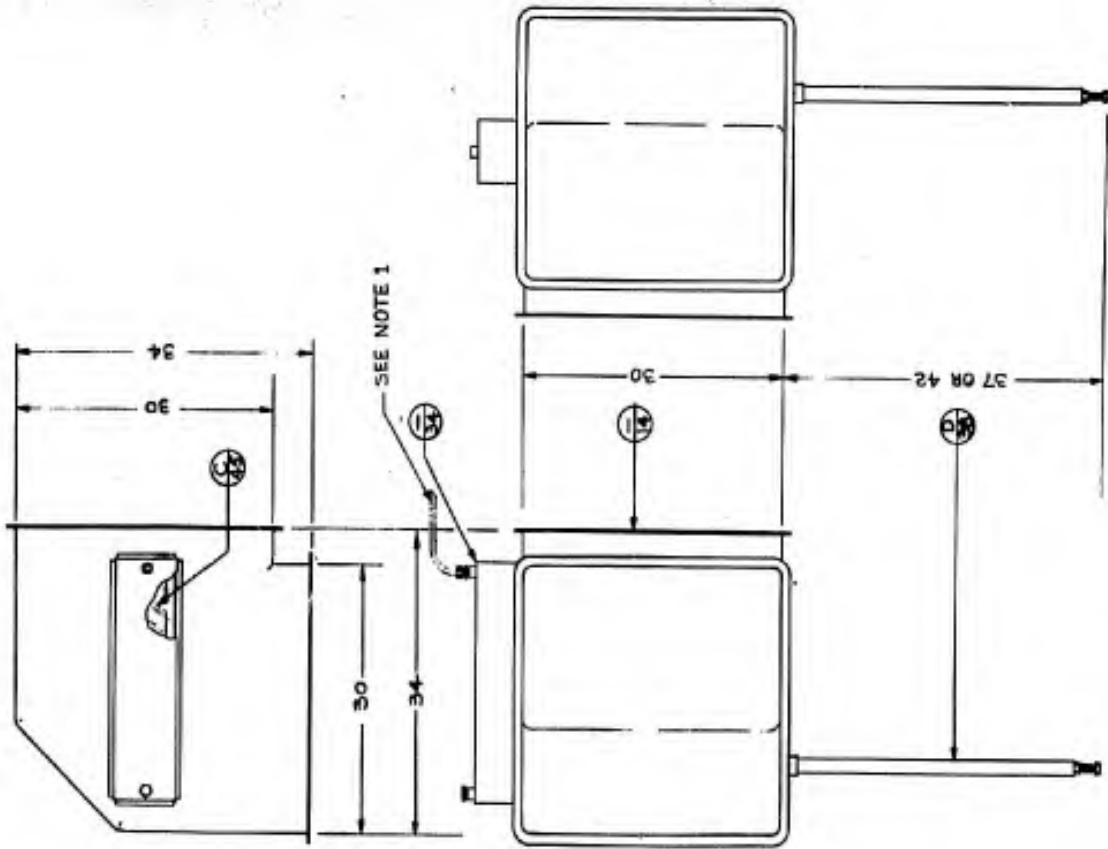
BWP-30-S-12		BWP-30-S-12	
BIOLOGICAL PLANTS & PROCESSES BRANCH FORT DETRICK, FREDERICK, MARYLAND		US ARMY MATERIAL CENTER BIOLOGICAL PLANTS & PROCESSES BRANCH	
DESIGNED BY	DATE	SAFETY CABINET, BIOLOGICAL TYPE III-D SHELL DETAIL	
APPROVED BY	DATE		
PROJ. IDENT. NO.			

NOTES:

1. INSTALLING CONTRACTOR SHALL MAKE THE CONNECTION TO A LIGHT HOUSING OR SWITCH ON AN ADJACENT CABINET.
2. SEE "CABINET SYSTEM ASSEMBLY PROCEDURE" FOR INSTALLATION OF CABINET COMPONENTS REQUIRING SEALING COMPOUND.

REFERENCE DRAWINGS:

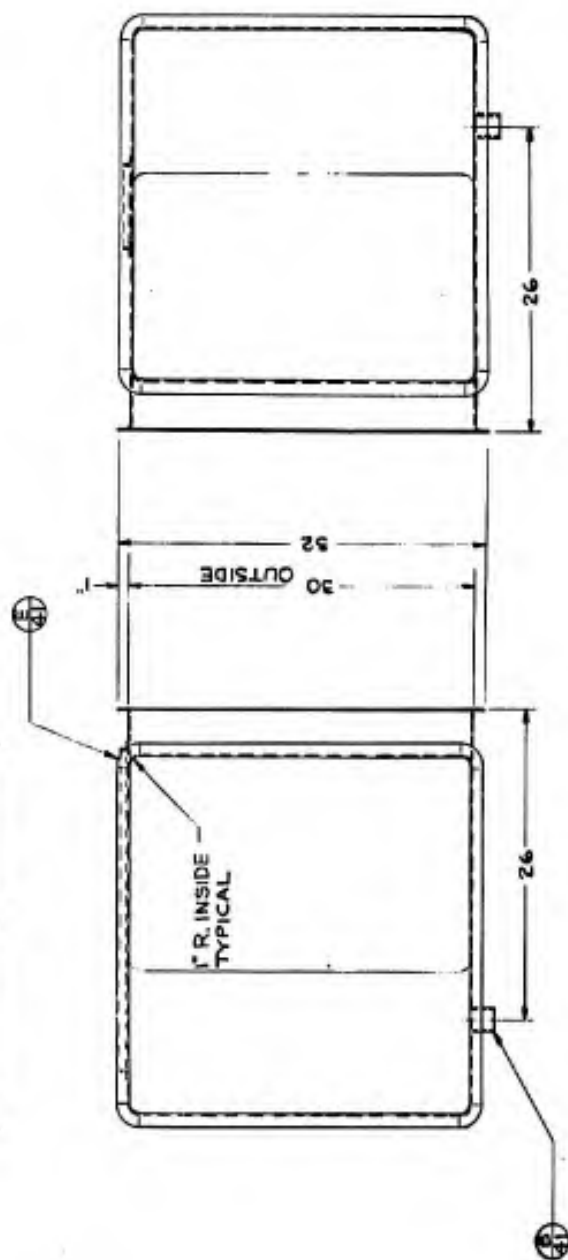
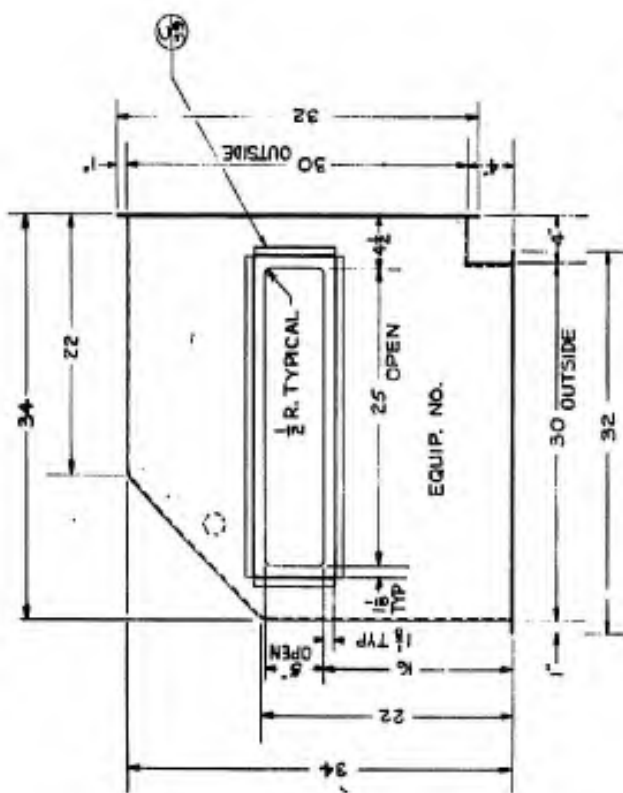
- BWP-30-S-14 TYPE IX SHELL DETAIL
- BWP-30-S-34 ELECTRICAL
- BWP-30-S-38 STANDS
- BWP-30-S-45 PANELS
- BWP-30-S-46 CABINET SCHEDULE



BIOLOGICAL PLANTS & PROCESSES BRANCH FORT DETRICK, PERRYVILLE, MARYLAND		U.S. ARMY MEDICAL DEPARTMENT	
DESIGNED BY: [Signature]		SAFETY CABINET, BIOLOGICAL TYPE IX ASSEMBLY	
CHECKED BY: [Signature]		PROJECT IDENT. NO. [Blank]	
DATE: 3/1/68		BWP-30-S-13	

NOTES:
 1 MATERIAL - 14 GA (.078) SST, TYPE 304, 2B FINISH.
 2 EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE, BWP-30-S-46. THE NUMBER SHALL BE PLACED WHERE INDICATED.

REFERENCE DRAWINGS:
 BWP-30-S-13 TYPE IV ASSEMBLY
 BWP-30-S-39 DETAILS
 BWP-30-S-41 DETAILS
 BWP-30-S-46 CABINET SCHEDULE



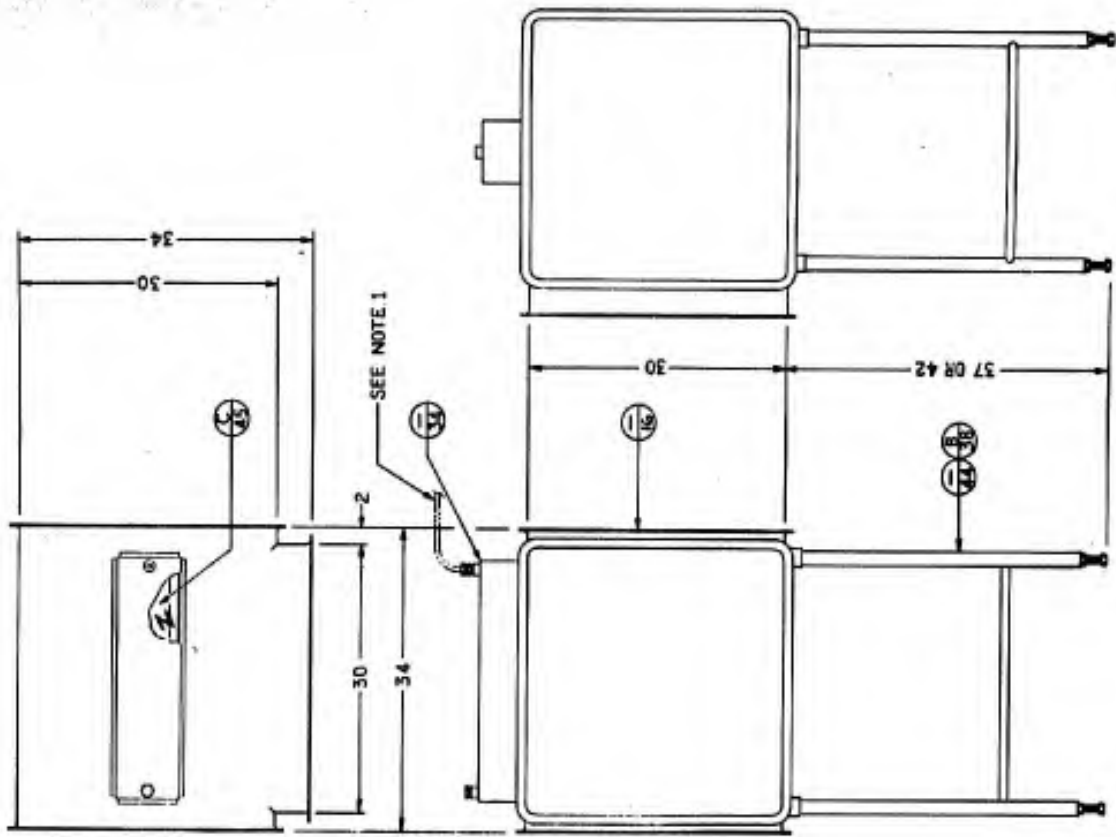
U.S. ARMY BIOLOGICAL PLANTS & PROCEEDS BRANCH PORT DETRICAL, FREEDOM, WASHINGTON	
DRAWN BY <i>[Signature]</i>	CHECKED BY <i>[Signature]</i>
SAFETY CABINET, BIOLOGICAL TYPE IV SHELL DETAIL	
PROJECT IDENT. NO. <i>[Blank]</i>	
BWP-30-S-14	

NOTES:

1. INSTALLING CONTRACTOR SHALL MAKE THE CONNECTION TO A LIGHT HOUSING OR SWITCH ON AN ADJACENT CABINET.
2. SEE 'CABINET SYSTEM ASSEMBLY PROCEDURE' FOR INSTALLATION OF CABINET COMPONENTS REQUIRING SEALING COMPOUND.
3. THIS DRAWING SHOWS BASIC CONFIGURATION FOR THE TYPE X CABINET. FOR TYPE Y-B AND/OR TYPE X-R ARRANGEMENTS SEE DWGS NO. BWP-30-S-16 AND BWP-30-S-44.

REFERENCE DRAWINGS:

- BWP-30-S-16 TYPE Y SHELL DETAIL
- BWP-30-S-34 ELECTRICAL
- BWP-30-S-58 STANDS
- BWP-30-S-44 OPENING AND LEG SOCKET ARRANGEMENTS
- BWP-30-S-45 PANELS
- BWP-30-S-46 CABINET SCHEDULE



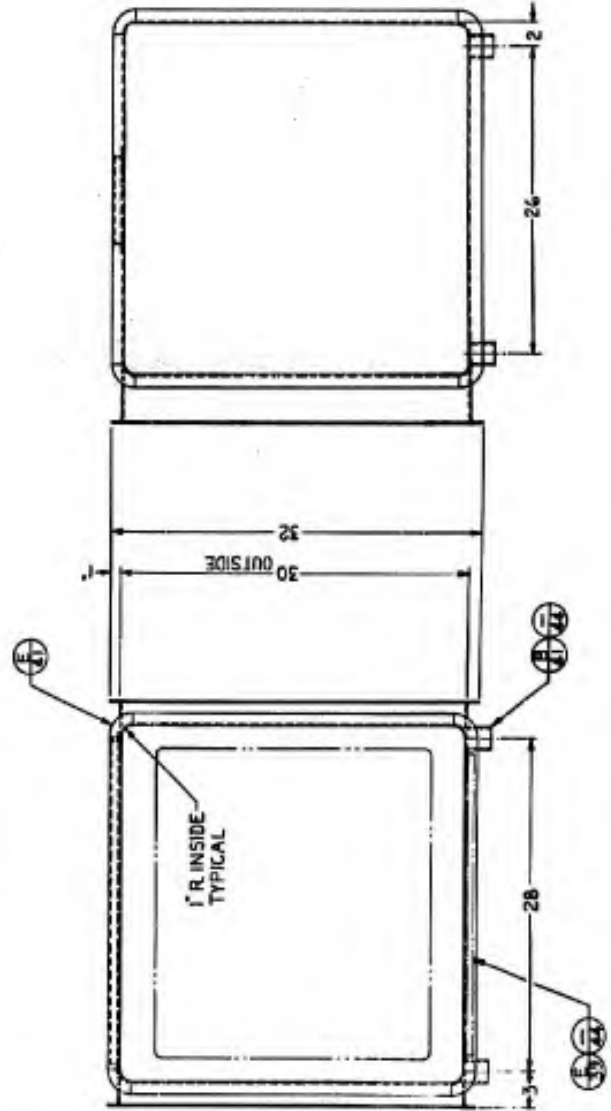
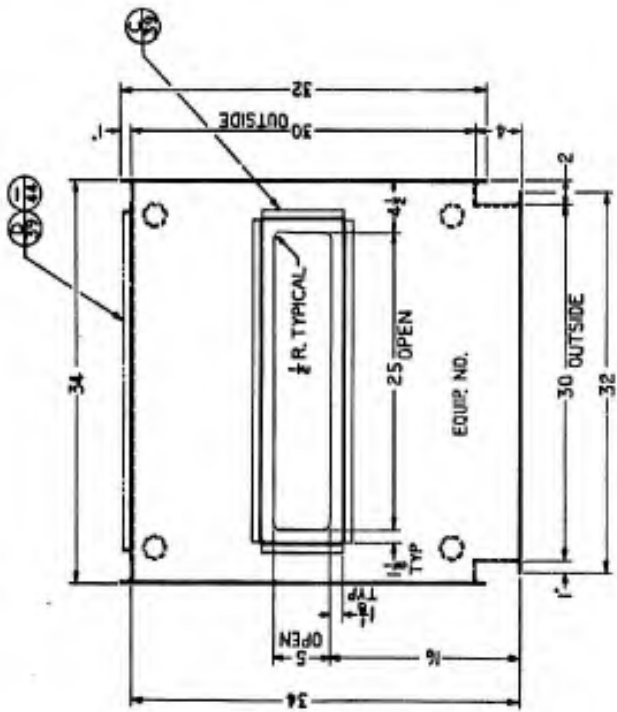
NO.	DESCRIPTION	DATE
BIOLOGICAL HAZARD & PROCESS HAZARD UNIT/CLASS 2 AND 3 PORT: METEOR, PIEDMONT, MARYLAND DESIGNED BY: [Signature]		
DRAWN BY: [Signature]		
CHECKED BY: [Signature]		
DATE: 1/18/88		
SCALE: 1/8"		
PROJECT NO. [Signature]		
PROJ. IDENT. NO. [Signature]		
BWP-30-S-15		

NOTES:

1. MATERIAL - 14 GA. (078) SST, TYPE 304, ZB FINISH.
2. EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE DWG. BWP-30-S-46. THE NUMBER SHALL BE PLACED WHERE INDICATED.

REFERENCE DRAWINGS:

- BWP-30-S-15 TYPE V ASSEMBLY
- BWP-30-S-39 FRAME DETAILS
- BWP-30-S-41 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-46 CABINET SCHEDULE



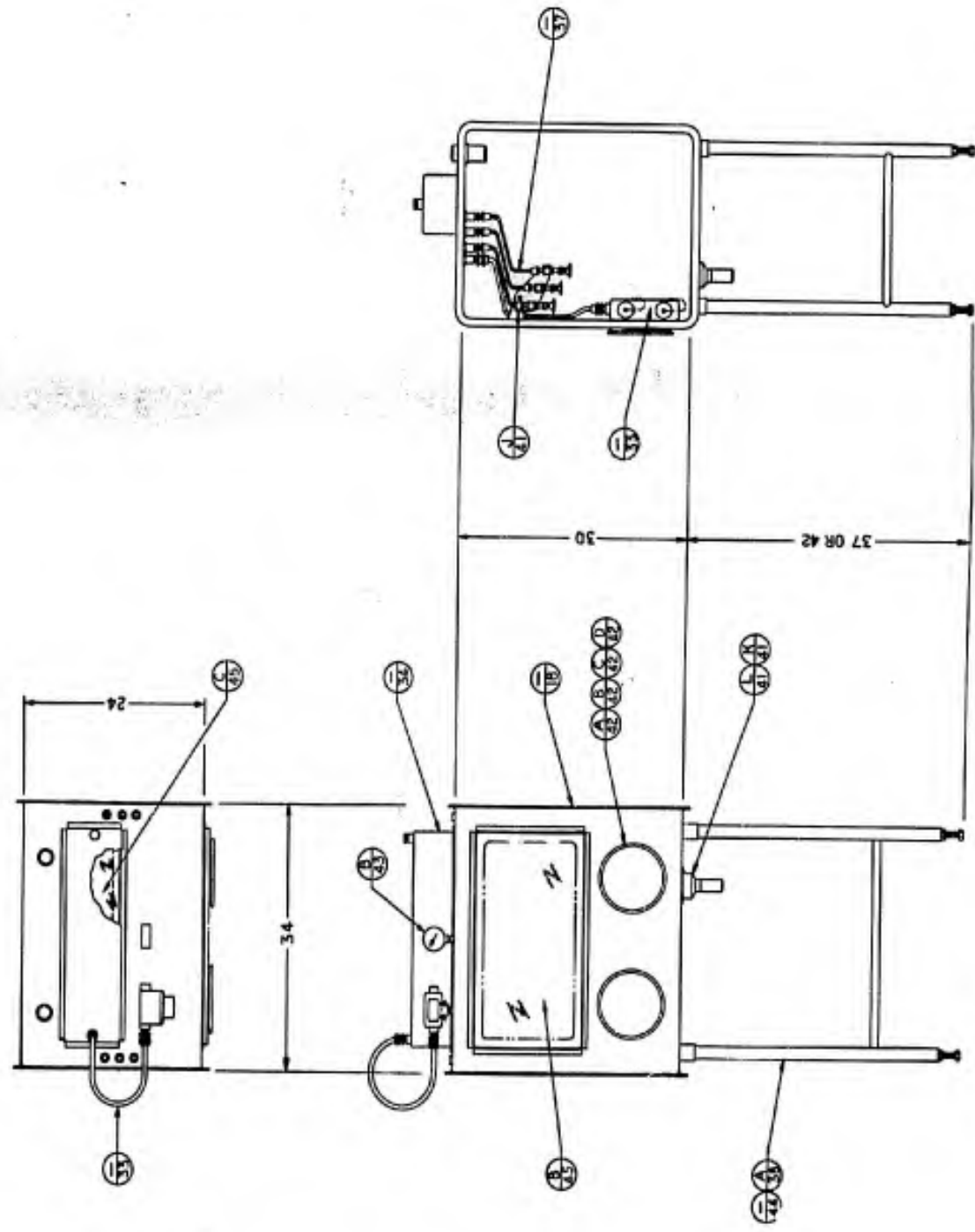
US ARMY BIOLOGICAL PLANTS & PROCESSES BRANCH PORT DETROIT, FREDERICK, MARYLAND	
ORDER BY DATE	DRAWN BY DATE
SAFETY CABINET, BIOLOGICAL TYPE V SHELL DETAIL	
PROJECT IDENT. NO.	
BWP-30-S-K	

NOTES:

1. SEE 'CABINET SYSTEM ASSEMBLY PROCEDURE' FOR INSTALLATION OF CABINET COMPONENTS REQUIRING SEALING COMPOUND.
2. THIS DRAWING SHOWS BASIC CONFIGURATION FOR THE TYPE VI-S CABINET. FOR TYPE VI-S-R ARRANGEMENT SEE DWGS NO. BWP-30-S-18 AND BWP-30-S-44.

REFERENCE DRAWINGS:

- BWP-30-S-18 TYPE VI-S SHELL DETAIL
- BWP-30-S-33 ELECTRICAL
- BWP-30-S-34 ELECTRICAL
- BWP-30-S-37 INTERIOR PIPING
- BWP-30-S-38 STANDS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-43 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-45 PANELS
- BWP-30-S-46 CABINET SCHEDULE

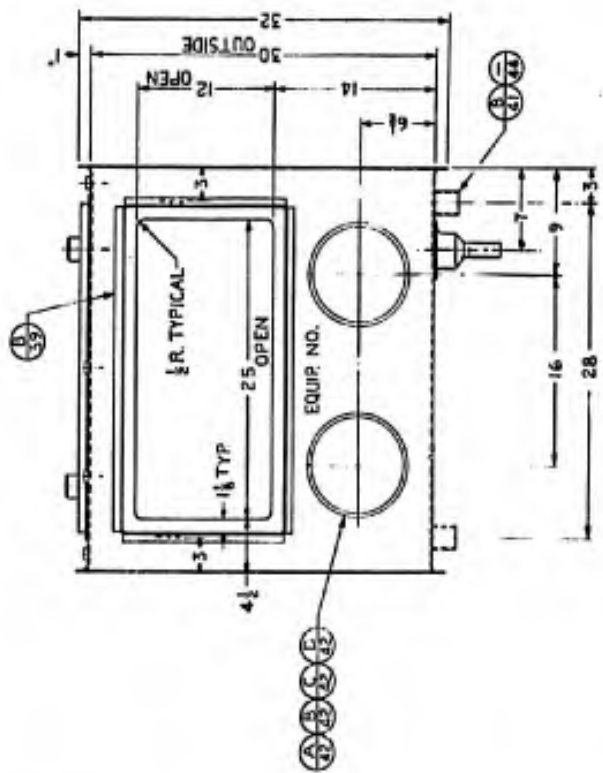
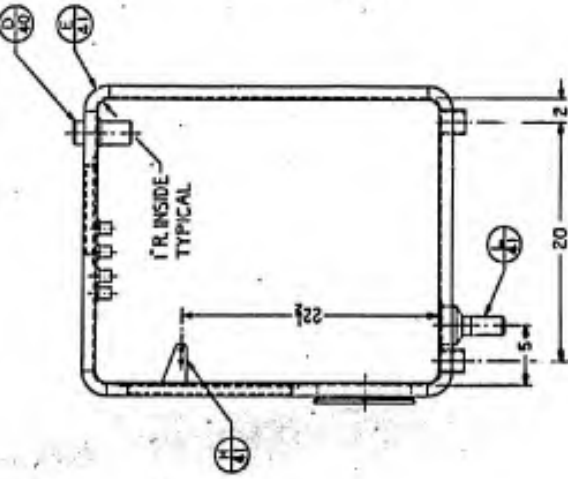
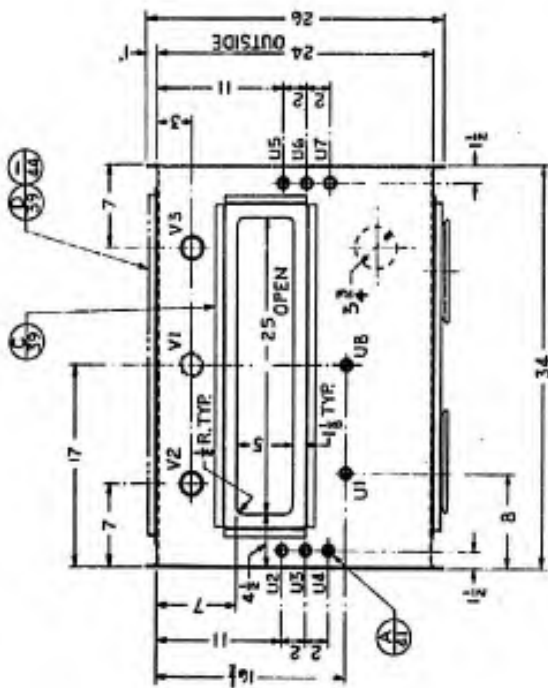


BIOLOGICAL PLANTS & PROCESSES BRANCH FORT DETRICK, FREDERICK, MARYLAND		U.S. ARMY MEDICAL RESEARCH & DEVELOPMENT BIOLOGICAL BRANCH, WASHINGTON	
Drawn by J.P. [unclear]	Checked by J.P. [unclear]	SAFETY CABINET, BIOLOGICAL TYPE VI-S ASSEMBLY	
Date 12-18-57		Scale 1/8" = 1'-0"	
Author J.P. [unclear]		Project No. BWP-30-S-17	

NOTES:

1. MATERIAL-14 GA. (078) SST, TYPE 304. SEE P. 10-104
2. EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE DWG. BWP-30-S-44. THE NUMBER SHALL BE PLACED BETWEEN THE GLOVE PORTS.

REFERENCE DRAWINGS:
 BWP-30-S-17 TYPE XI-S ASSEMBLY
 BWP-30-S-39 FRAME DETAILS
 BWP-30-S-40 DETAILS
 BWP-30-S-41 DETAILS
 BWP-30-S-42 DETAILS
 BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
 BWP-30-S-46 CABINET SCHEDULE



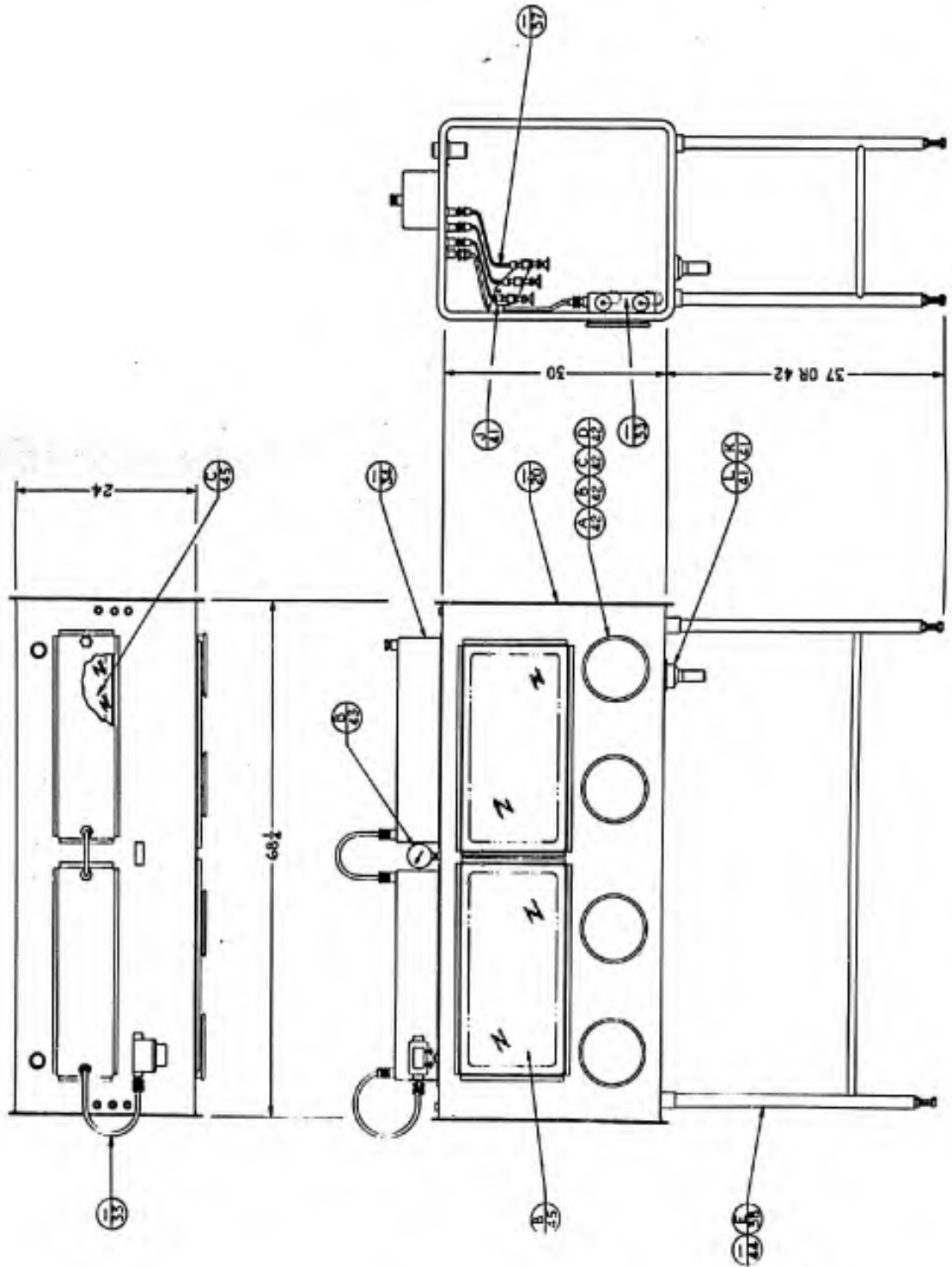
U.S. ARMY MEDICAL PLANTS & PROCESSING BRANCH PORT DETROIT, PEARSON, MICHIGAN	
DESIGNED BY J. J. ...	DATE 3-7-47
SAFETY CABINET, BIOLOGICAL TYPE XI-S SHELL DETAIL	
PROJ. IDENT. NO. BWP-30-S-16	SCALE 1/8" = 1"

NOTES:

1. SEE "CABINET SYSTEM ASSEMBLY PROCEDURE" FOR INSTALLATION OF CABINET COMPONENTS REQUIRING SEALING COMPOUND.
2. THIS DRAWING SHOWS BASIC CONFIGURATION FOR THE TYPE VI-D CABINET. FOR TYPE VI-D-R ARRANGEMENT SEE DWGS NO. BWP-30-S-20 AND BWP-30-S-44.

REFERENCE DRAWINGS:

- BWP-30-S-20 TYPE VI-D SHELL DETAIL
- BWP-30-S-53 ELECTRICAL
- BWP-30-S-34 ELECTRICAL
- BWP-30-S-37 INTERIOR PIPING
- BWP-30-S-38 STANDS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-43 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-45 PANELS
- BWP-30-S-46 CABINET SCHEDULE



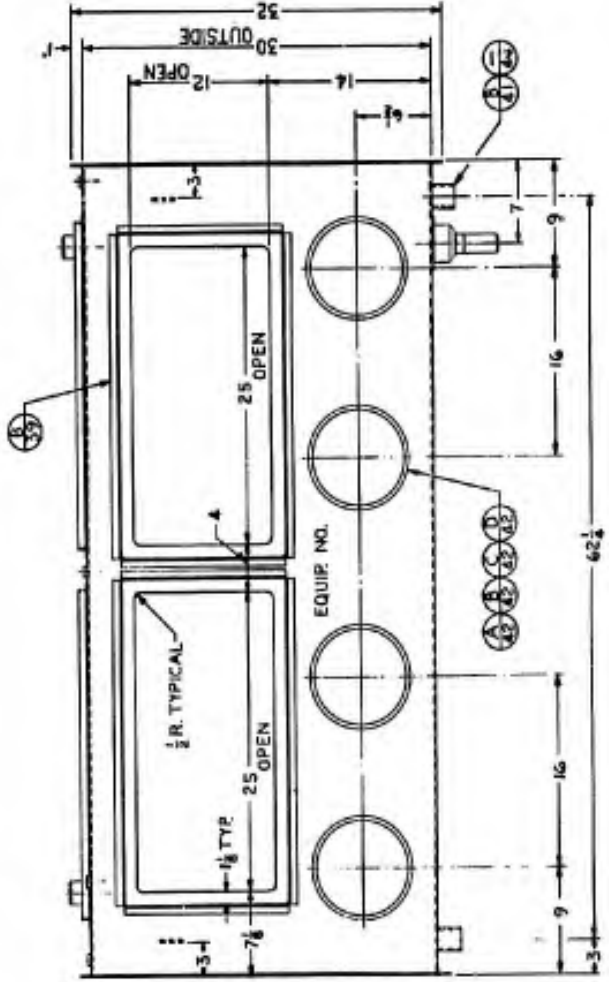
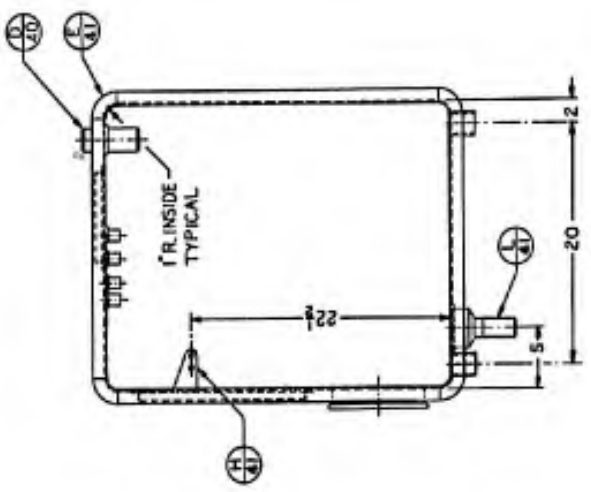
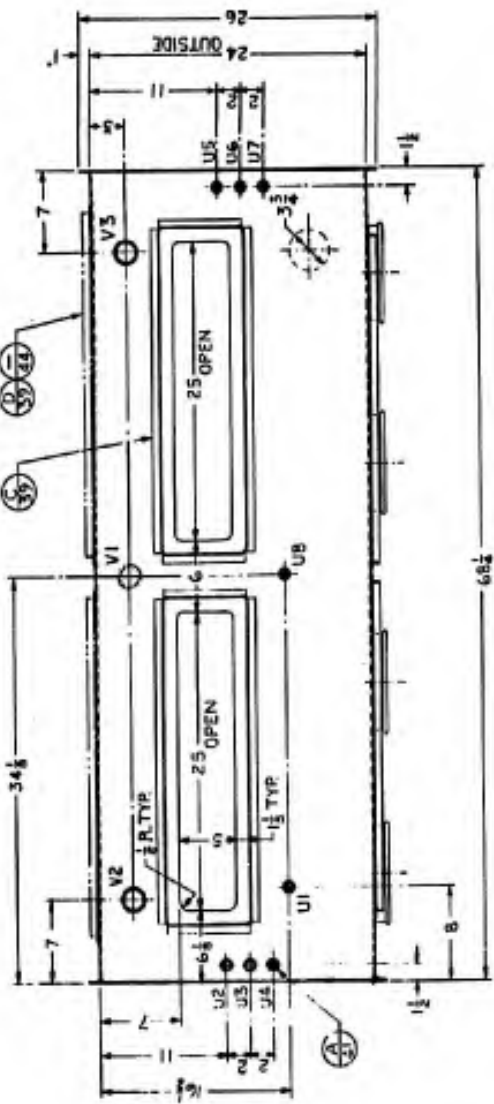
U.S. ARMY BIOLOGICAL PLANTS & PROCESSES BRANCH FORT DETMERS, FREDERICK, MARYLAND	
DESIGNED BY J. J. [Signature]	DATE 12/18/57
SAFETY CABINET, BIOLOGICAL TYPE VI-D ASSEMBLY	
PROJ. IDENT. NO.	BWP-30-S-19

NOTES:

1. MATERIAL - 14 GA. (078) SST, TYPE 304, 2B FINISH.
2. EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE DWG. BWP-30-S-46. THE NUMBER SHALL BE PLACED BETWEEN THE MIDDLE GLOVE PORTS.

REFERENCE DRAWINGS:

- BWP-30-S-19 TYPE VI-D ASSEMBLY
- BWP-30-S-39 FRAME DETAILS
- BWP-30-S-40 DETAILS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-46 CABINET SCHEDULE



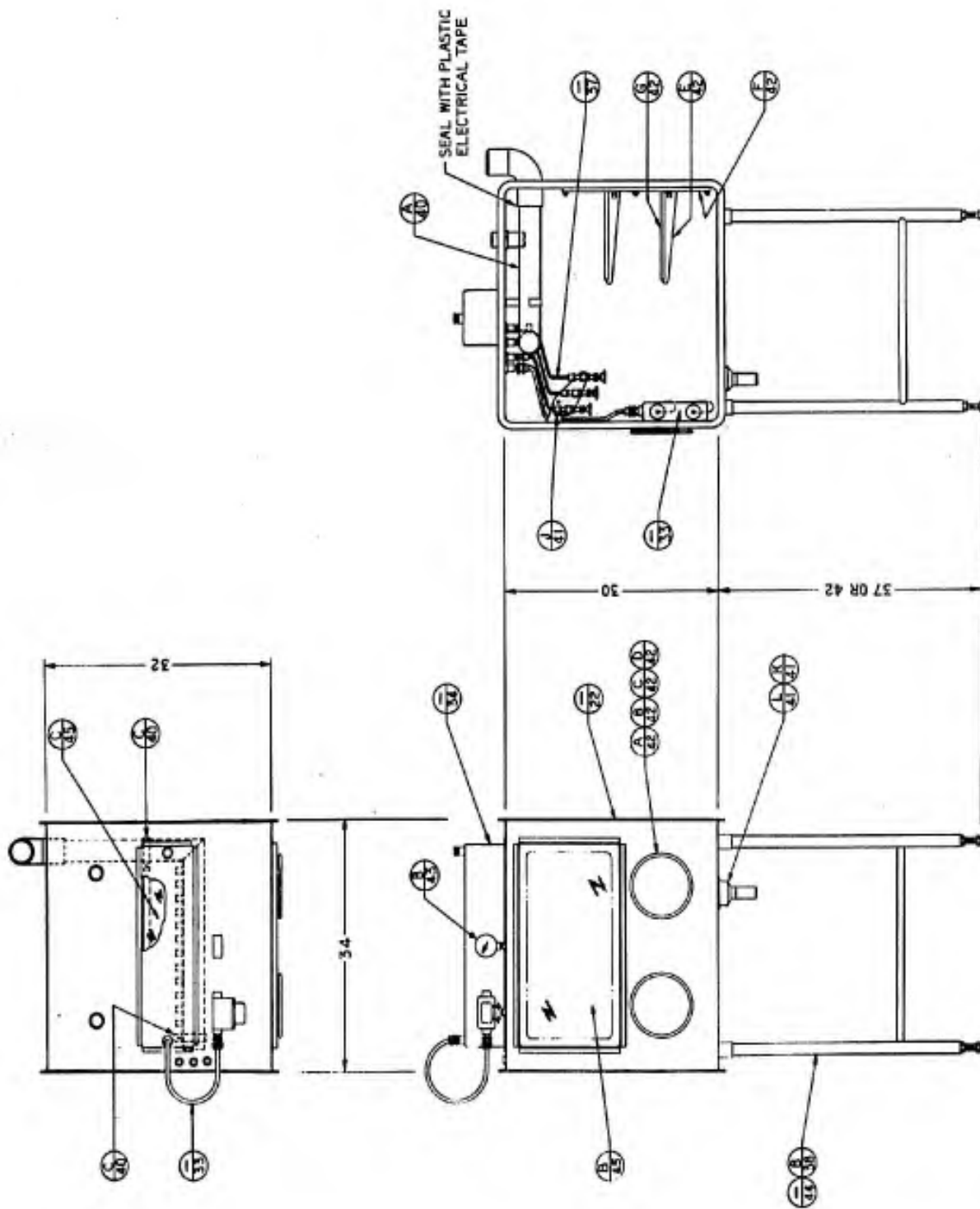
US ARMY MEDICAL PLANTS & PROCESSING BRANCH PORT DETROIT, FREDERICK, MARYLAND	
DESIGNED BY DATE	DRAWN BY DATE
PROJECT IDENT. NO.	
SCALE 1/8" = 1"	
SAFETY CABINET, BIOLOGICAL TYPE VI-D SHELL DETAIL	
PROJECT IDENT. NO.	
BWP-30-S-20	

NOTES:

1. SEE 'CABINET SYSTEM ASSEMBLY PROCEDURE' FOR INSTALLATION OF CABINET COMPONENTS REQUIRING SEALING COMPOUND.
2. THIS DRAWING SHOWS BASIC CONFIGURATION FOR THE TYPE VII-S CABINET. FOR TYPE VII-S-B ARRANGEMENT SEE DWGS NO. BWP-30-S-22 AND BWP-30-S-44.

REFERENCE DRAWINGS:

- BWP-30-S-22 TYPE VII-S SHELL DETAIL
- BWP-30-S-33 ELECTRICAL
- BWP-30-S-34 ELECTRICAL
- BWP-30-S-37 INTERIOR PIPING
- BWP-30-S-38 STANDS
- BWP-30-S-40 DETAILS, VENTILATION
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-43 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-45 PANELS
- BWP-30-S-46 CABINET SCHEDULE



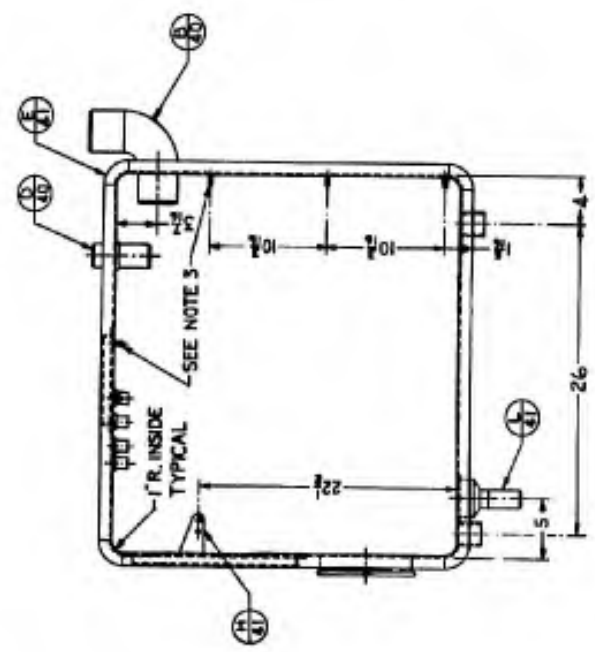
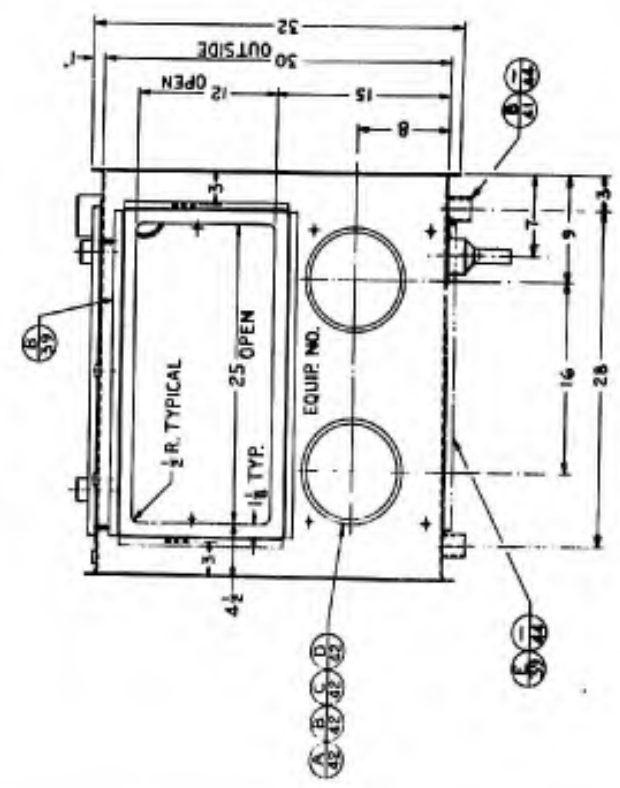
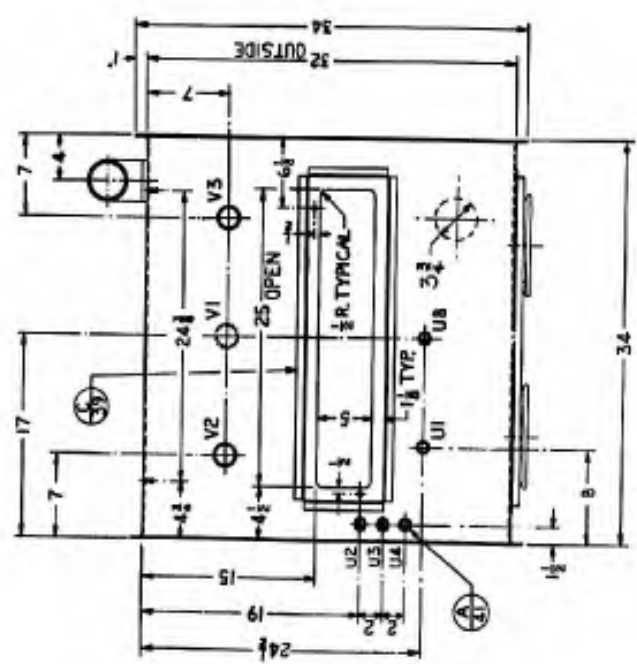
DATE	DESCRIPTION	SCALE	PROJECT
US ARMY BIOLOGICAL PLANTS & PROCESSES BRANCH FORT DETRICK, FREDERICK, MARYLAND BARBERS POINT, HAWAII			
SAFETY CABINET, BIOLOGICAL TYPE VII-S ASSEMBLY			
DESIGNED BY	DATE	APPROVED BY	DATE
Checked by	DATE		
PROJECT NO.			
PROJ. IDENT. NO.			
			BWP-30-S-21

NOTES:

1. MATERIAL - 14 GA. (078) SST, TYPE 304, 2B FINISH.
2. EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE DWG. BWP-30-S-46. THE NUMBER SHALL BE PLACED BETWEEN THE GLOVE PORTS.
3. THE EIGHT STUDS FOR ATTACHING PART NOS. 5, AND 25 SHALL BE $\frac{1}{2}$ -20UNC SST WELDING STUDS, $\frac{1}{2}$ LONG, WITH SST HEX NUTS.

REFERENCE DRAWINGS:

- BWP-30-S-21 TYPE VII-S ASSEMBLY
- BWP-30-S-39 FRAME DETAILS
- BWP-30-S-40 DETAILS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-46 CABINET SCHEDULE



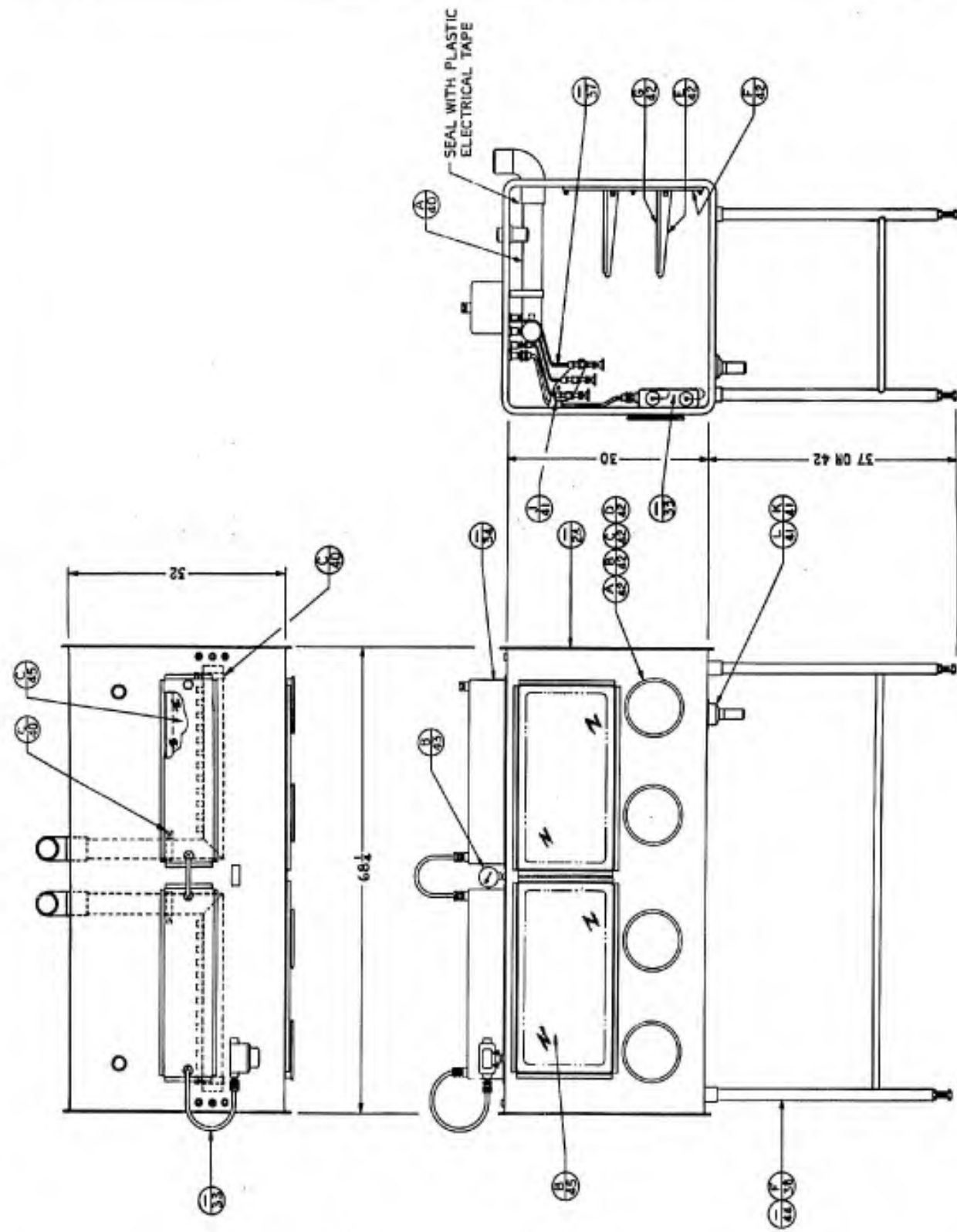
DATE	REV	BY	CHKD
BIOLOGICAL PLANTS & PROCESSES BRANCH FORT DETRICK, FREDERICK, MARYLAND			
U.S. ARMY MEDICAL & BIOLOGICAL DEVELOPMENT RESEARCH CENTER			
SAFETY CABINET, BIOLOGICAL TYPE VII-S SHELL DETAIL			
DESIGNED BY	DATE	PROJECT NO.	SCALE
W. E. C. C.	9/65	BWP-30-S-22	1/8"
PROJ. IDENT. NO.			

NOTES:

1. SEE 'CABINET SYSTEM ASSEMBLY PROCEDURE' FOR INSTALLATION OF CABINET COMPONENTS REQUIRING SEALING COMPOUND.
2. THIS DRAWING SHOWS BASIC CONFIGURATION FOR THE TYPE VII-D CABINET. FOR TYPE VII-D-B ARRANGEMENT SEE DWG NO. BWP-30-S-24 AND BWP-30-S-44.

REFERENCE DRAWINGS:

- BWP-30-S-24 TYPE VII-D SHELL DETAIL
- BWP-30-S-33 ELECTRICAL
- BWP-30-S-34 ELECTRICAL
- BWP-30-S-37 INTERIOR PIPING
- BWP-30-S-38 STANDS
- BWP-30-S-40 DETAILS, VENTILATION
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-43 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-45 PANELS
- BWP-30-S-46 CABINET SCHEDULE



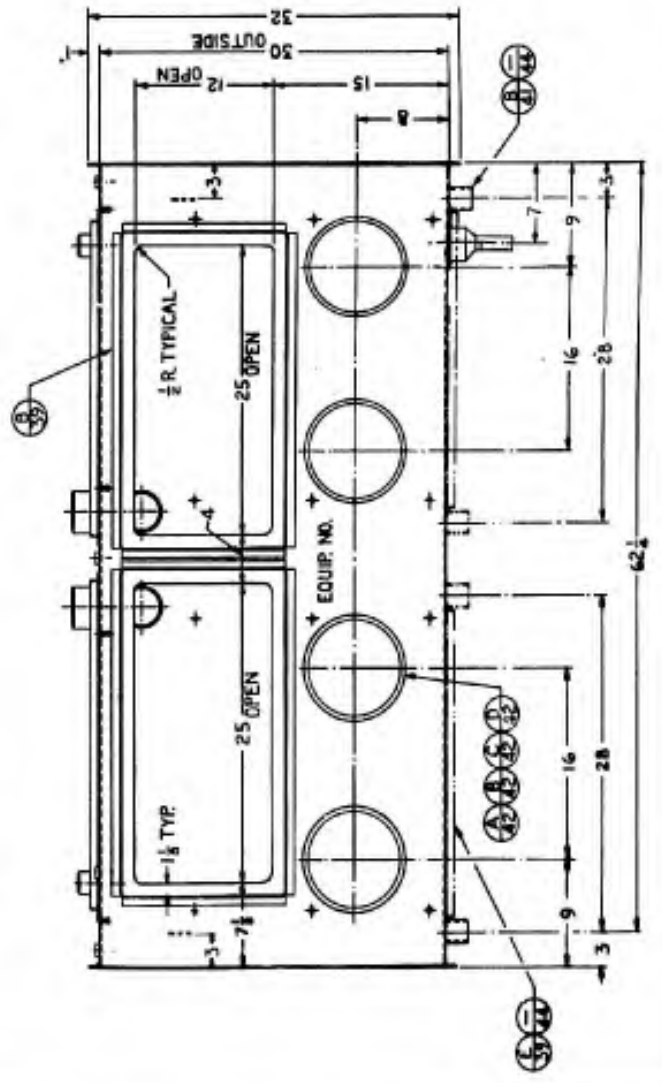
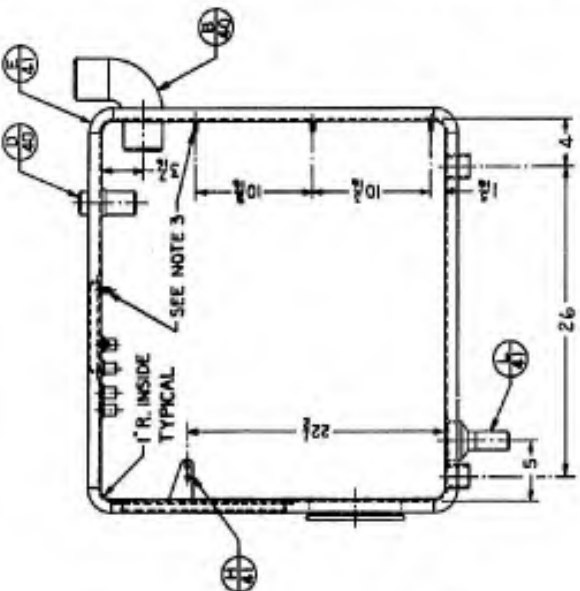
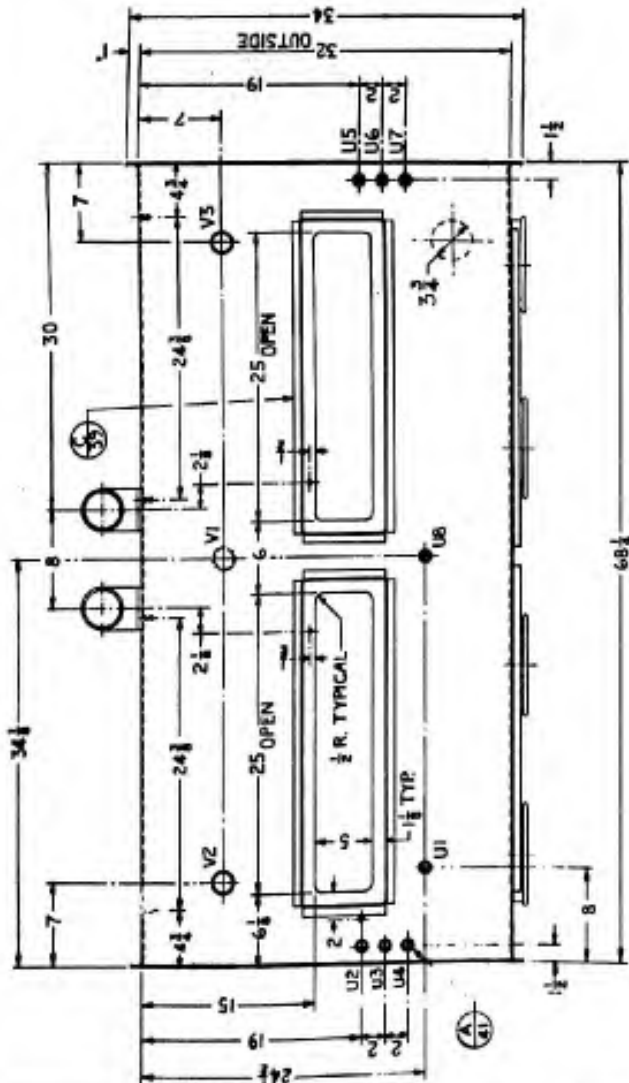
DATE	REV
BIOLOGICAL PLANTS & PROCEEDS BRANCH FORT DETRICK, FREDERICK, MARYLAND	
U.S. ARMY MEDICAL SERVICE EDMOND ARMY, MARYLAND	
SAFETY CABINET, BIOLOGICAL TYPE VII-D ASSEMBLY	
DESIGNED BY	DATE
DRAWN BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE
FORMAL IDENT. NO. BWP-30-S-23	

NOTES:

1. MATERIAL - 14 GA. (078) SST, TYPE 304, 2B FINISH.
2. EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE DWG. BWP-30-S-46. THE NUMBER SHALL BE PLACED BETWEEN THE MIDDLE GLOVE PORTS.
3. THE SIXTEEN STUDS FOR ATTACHING PART NOS. 5 AND 22 SHALL BE 1/2-20UNC SST WELDING STUDS, 1/2 LONG, WITH SST HEX NUTS.

REFERENCE DRAWINGS:

- BWP-30-S-23 TYPE VII-D ASSEMBLY
- BWP-30-S-39 FRAME DETAILS
- DWP-30-S-40 DETAILS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-46 CABINET SCHEDULE



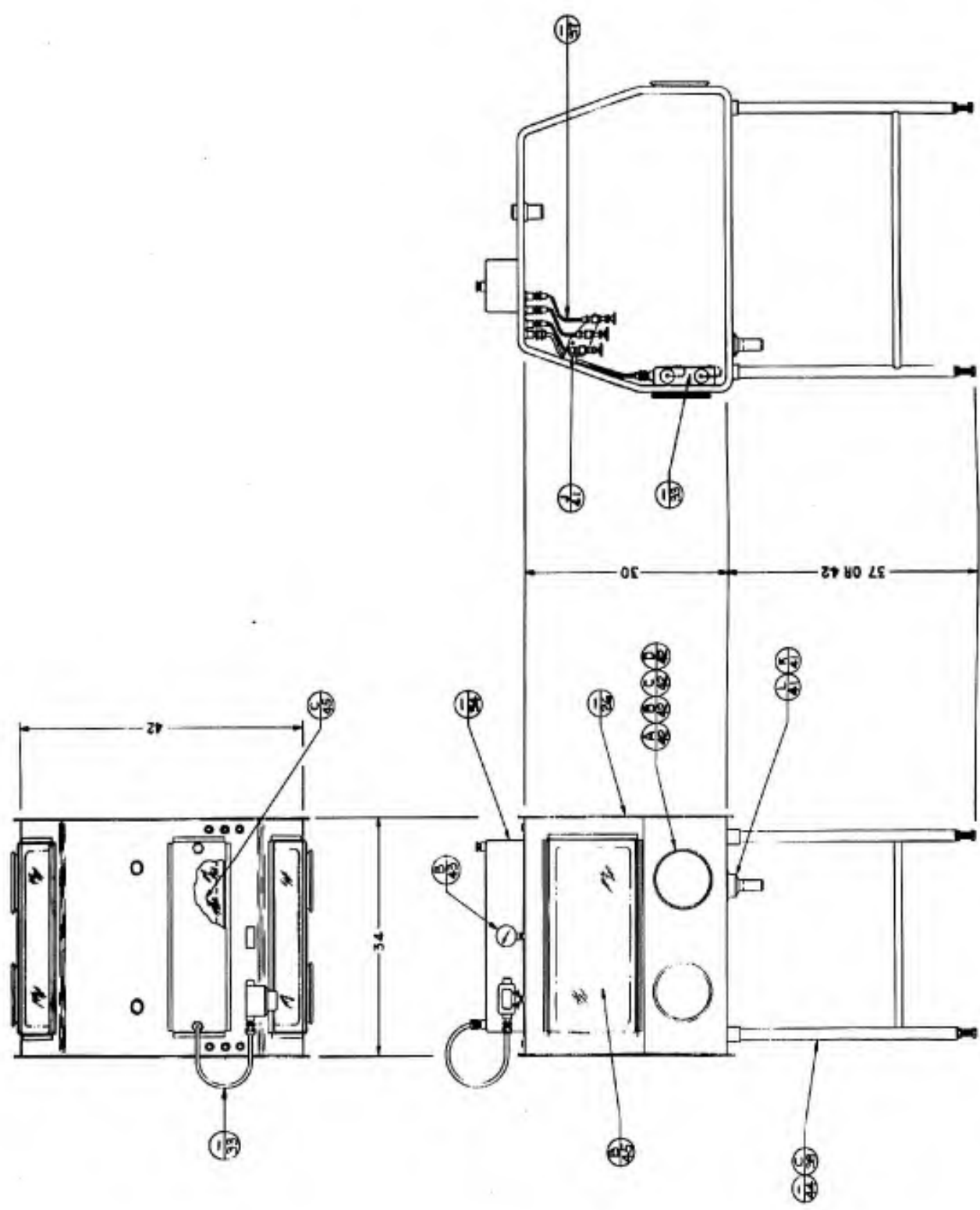
BIOLOGICAL PLANTS & PROCESSES BRANCH FORT DETRICK, FREDERICK, MARYLAND		US ARMY MEDICAL RESEARCH DEVELOPMENT COMMAND	
DESIGNED BY A. J. [Signature]	DATE 7/1/55	PROJECT NO. BWP-30-S-24	
SAFETY CABINET, BIOLOGICAL TYPE VII-D SHELL DETAIL		SCALE 1/4"	
DRAWN BY [Signature]		CHECKED BY [Signature]	

NOTES:

1. SEE 'CABINET SYSTEM ASSEMBLY PROCEDURE' FOR INSTALLATION OF CABINET COMPONENTS REQUIRING SEALING COMPOUND.
2. THIS DRAWING SHOWS BASIC CONFIGURATION FOR THE TYPE XIII-S CABINET. FOR TYPE XIII-S-B ARRANGEMENT SEE DWGS. NO. BWP-30-S-26 AND BWP-30-S-44.

REFERENCE DRAWINGS:

- BWP-30-S-26 TYPE XIII-S SHELL DETAIL
- BWP-30-S-33 ELECTRICAL
- BWP-30-S-34 ELECTRICAL
- BWP-30-S-37 INTERIOR PIPING
- BWP-30-S-38 STANDS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-43 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-45 PANELS
- BWP-30-S-46 CABINET SCHEDULE



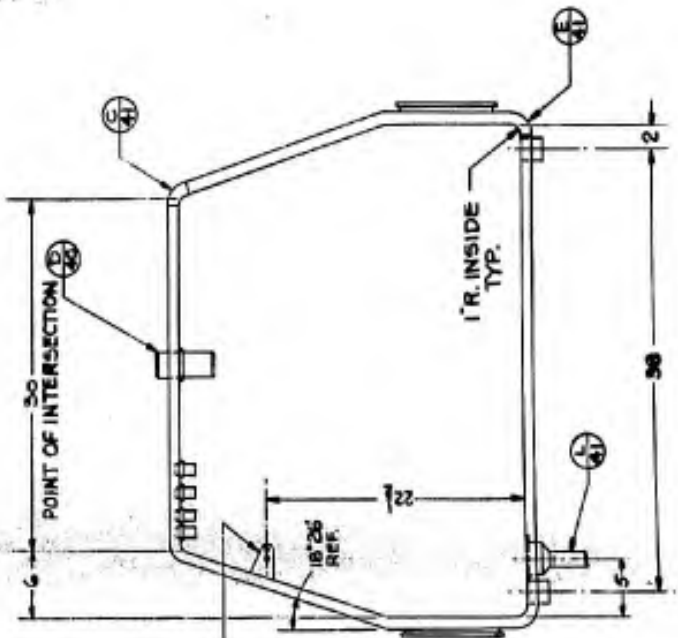
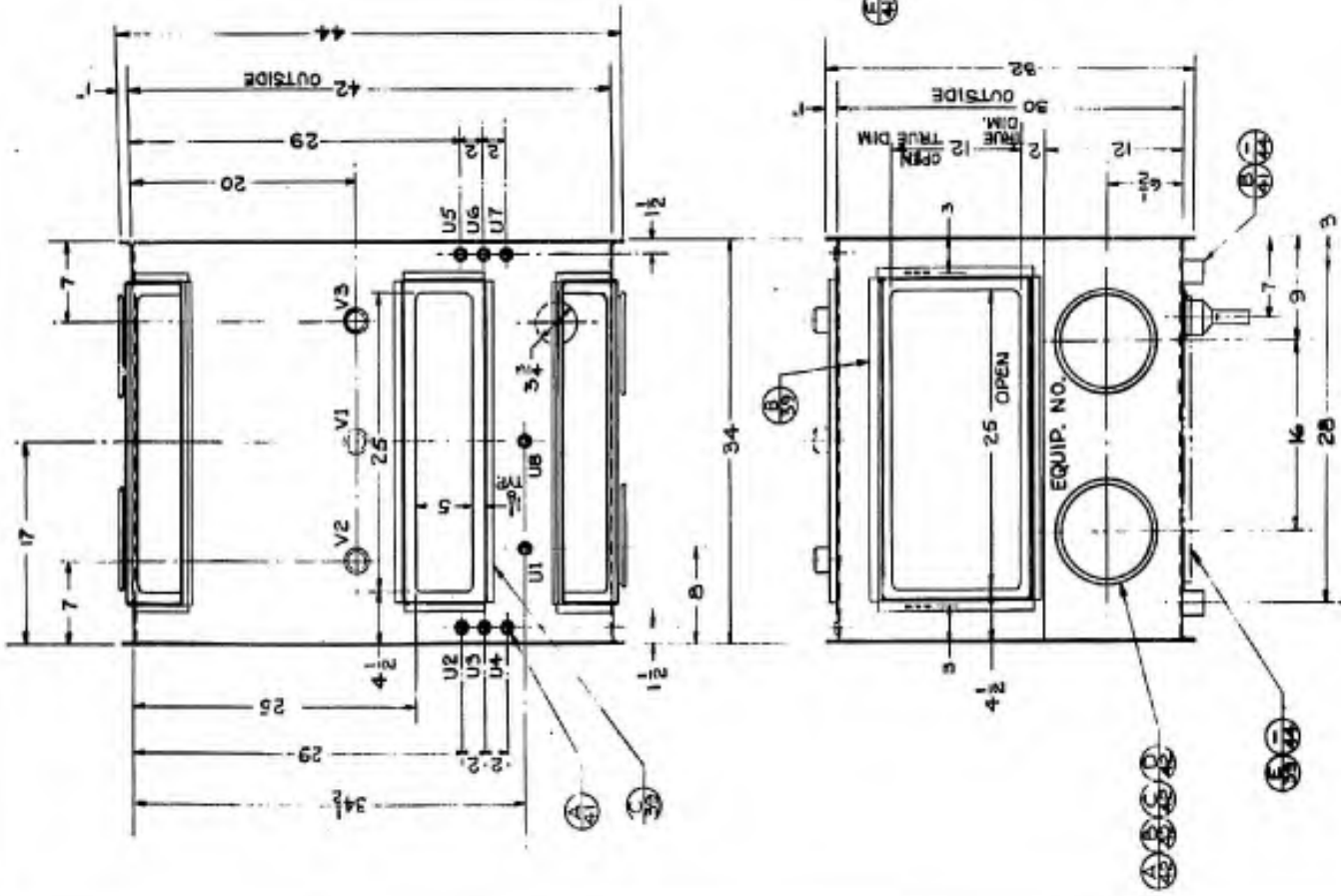
U.S. ARMY MEDICAL CENTER FORT DETRICK, FREEDSBURG, MARYLAND	
PROJECT NO. BWP-30-S-25	DATE 1/8
SAFETY CABINET, BIOLOGICAL TYPE XIII-S ASSEMBLY	
DRAWN BY J. E. C.	CHECKED BY J. E. C.
PROJ. IDENT. NO.	

NOTES:

1. MATERIAL - 14 GA. (018) SGT, TYPE 304, 2B FINISH.
2. EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE, DWG. BWP-30-S-46. THE NUMBER SHALL BE PLACED BETWEEN THE GLOVE PORTS.

REFERENCE DRAWINGS:

- BWP-30-S-25 TYPE VIII-S ASSEMBLY
- BWP-30-S-39 FRAME DETAILS
- BWP-30-S-40 DETAILS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS.
- BWP-30-S-46 CABINET SCHEDULE



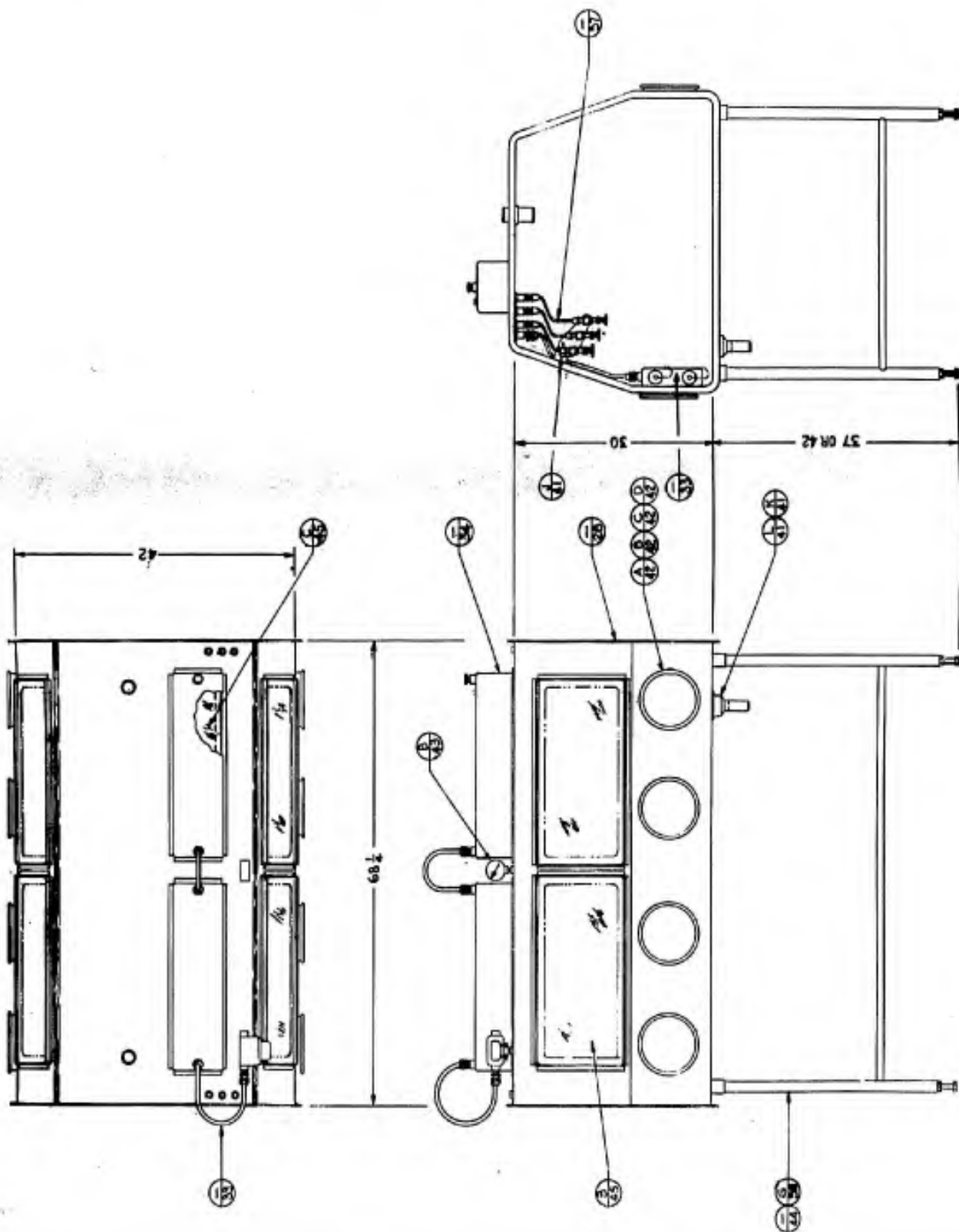
DESIGNATION		DATE	
US ARMY			
BIOLOGICAL PLANTS & PROCESSES BRANCH			
PORT DETROIT, PEARSONS, MARYLAND			
PROJECT NO.	DATE	BY	CHKD.
SAFETY CABINET, BIOLOGICAL TYPE VIII - S SHELL DETAIL			
PROJECT NO.	DATE	BY	CHKD.
PROJ. IDENT. NO.		SCALE	
		1/8"	
		BWP-30-S-26	

NOTES:

1. SEE CABINET SYSTEM ASSEMBLY PROCEDURE FOR THE INSTALLATION OF CABINET COMPONENTS REQUIRING SEALING COMPOUND.
2. THIS DRAWING SHOWS BASIC CONFIGURATION FOR THE TYPE XIII-D CABINET. FOR TYPE VII-D-B ARRANGEMENTS SEE DWGS NO. BWP-30-S-28 AND BWP-30-S-44.

REFERENCE DRAWINGS:

- BWP-30-S-28 TYPE XIII-D SHELL DETAIL
- BWP-30-S-33 ELECTRICAL
- BWP-30-S-34 ELECTRICAL
- BWP-30-S-37 INTERIOR PIPING
- BWP-30-S-38 STANDS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-43 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-45 PANELS
- BWP-30-S-46 CABINET SCHEDULE



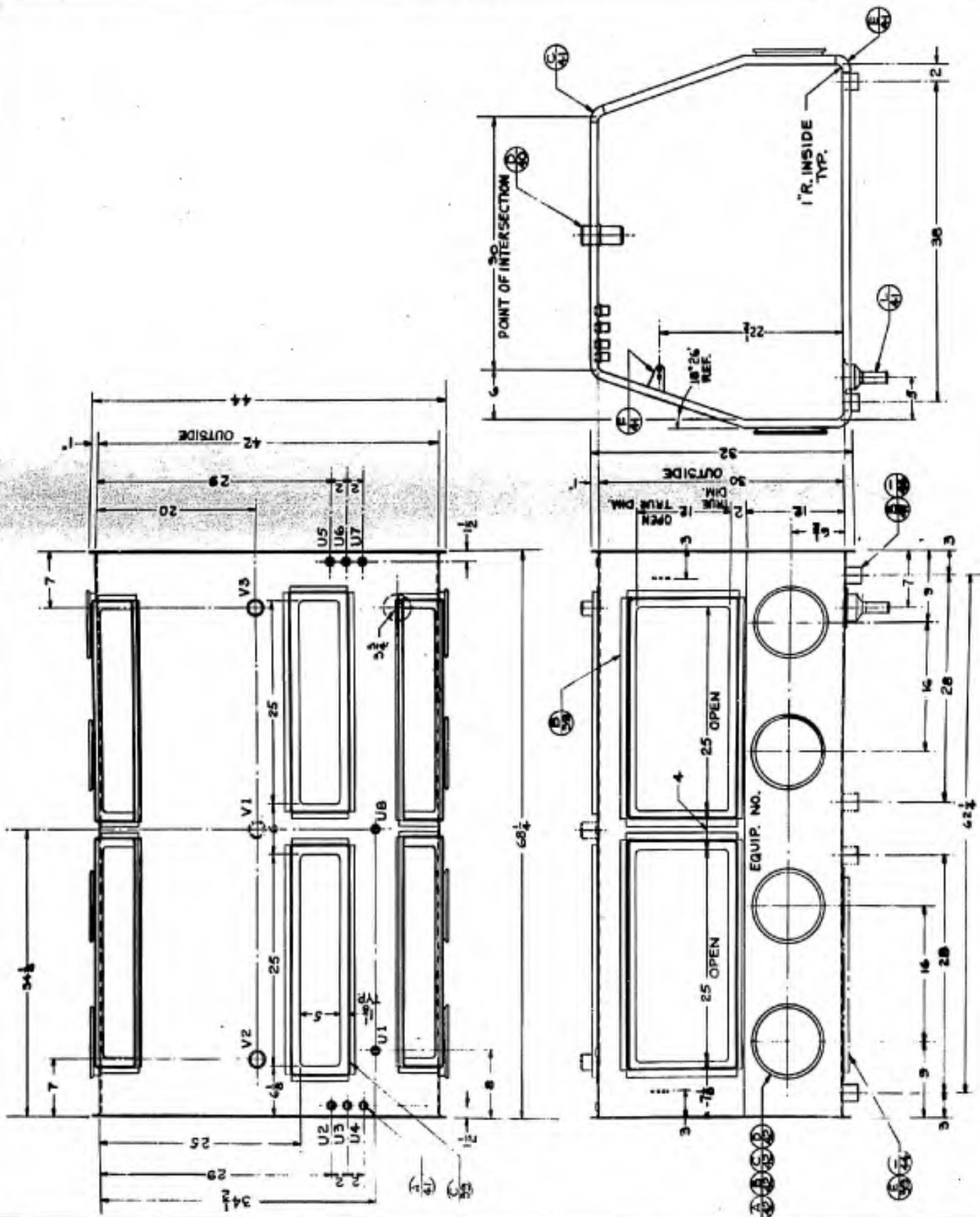
US ARMY MEDICAL PLANTS & PRODUCTS BRANCH FORT DETRICK, FREDERICK, MARYLAND	
SAFETY CABINET, BIOLOGICAL TYPE XIII-D ASSEMBLY	C. E. Green DATE: 11/15/52 PROJ. IDENT. NO.: BWP-30-S-27

NOTES:

1. MATERIAL - 14 GA. (078) SST, TYPE 304, 2B FINISH.
2. EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE, DWG. BWP-30-5-46. THE NUMBER SHALL BE PLACED BETWEEN THE TWO MIDDLE GLOVE PORTS.

REFERENCE DRAWINGS:

- BWP-30-5-27 TYPE VIII-D ASSEMBLY
- BWP-30-5-39 FRAME DETAILS
- BWP-30-5-40 DETAILS
- BWP-30-5-41 DETAILS
- BWP-30-5-42 DETAILS
- BWP-30-5-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-5-46 CABINET SCHEDULE



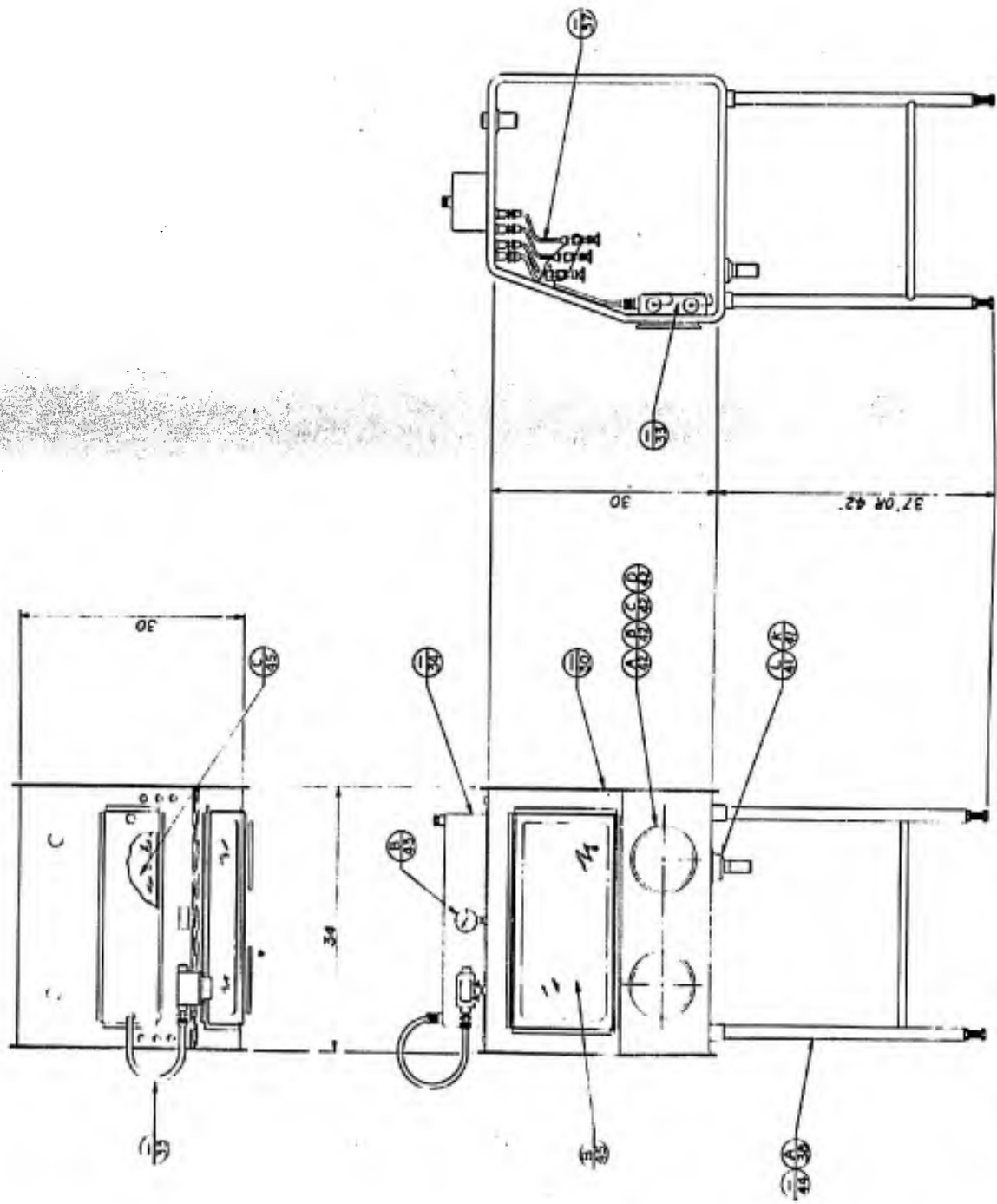
U.S. ARMY	
BIOLOGICAL PLANTS & PROCESSES BRANCH	
PORT DETROIT, DETROIT, MICHIGAN	
DATE	12-26-57
BY	W. J. G.
CHKD BY	W. J. G.
APP'D BY	W. J. G.
PROJ. IDENT. NO.	BWP-30-5-28

NOTES:

1. SEE CABINET SYSTEM ASSEMBLY PROCEDURE FOR INSTALLATION OF CABINET COMPONENTS REQUIRING SEALING COMPOUND.
2. THIS DRAWING SHOWS BASIC CONFIGURATION FOR THE TYPE IIS CABINET. FOR TYPES B AND/OR THE TYPE IIS-R ARRANGEMENTS SEE DWGS NO. BWP-30-5-30 AND BWP-30-5-44

REFERENCE DRAWINGS:

- BWP-30-5-2 TYPE IIS SHELL DETAIL
- BWP-30-5-33 ELECTRICAL
- BWP-30-5-34 ELECTRICAL
- BWP-30-5-37 INTERIOR PIPING
- BWP-30-5-38 STANDS
- BWP-30-5-41 DETAILS
- BWP-30-5-42 DETAILS
- BWP-30-5-43 DETAILS
- BWP-30-5-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-5-45 PANELS
- BWP-30-5-46 CABINET SCHEDULE



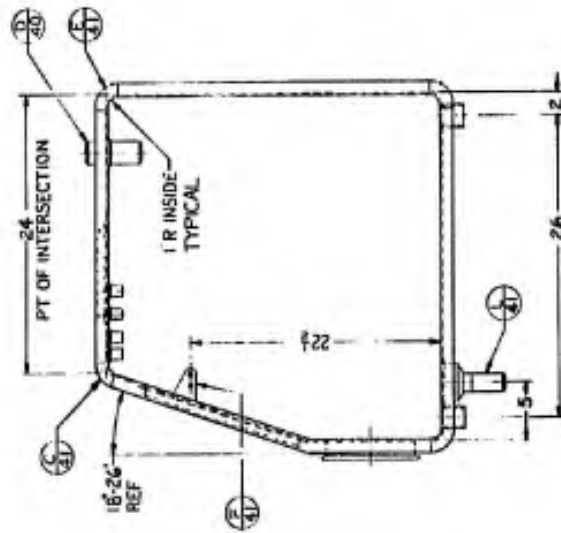
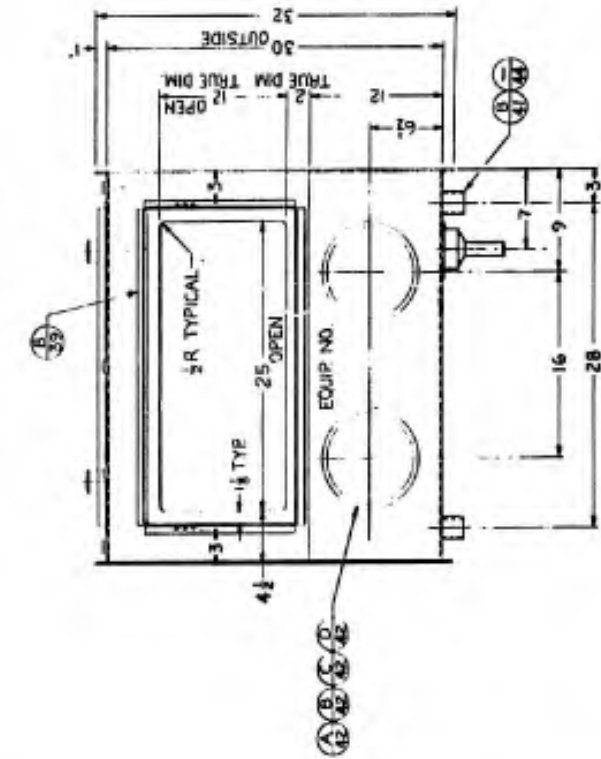
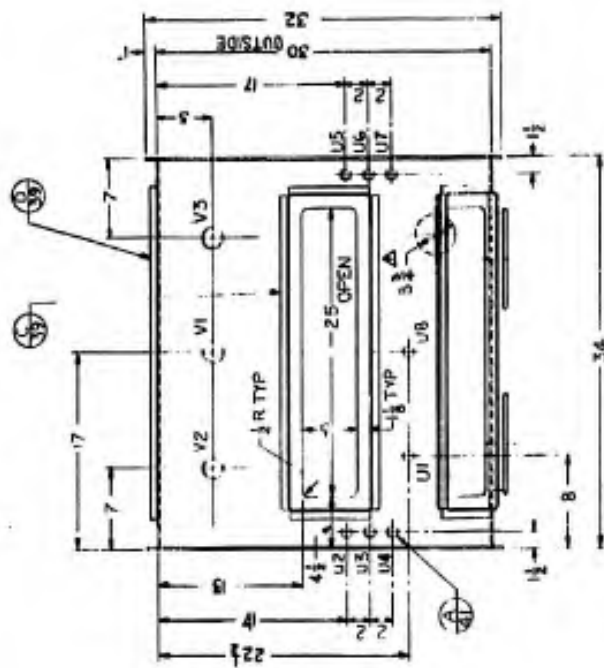
BIOLOGICAL PLANTS & PROCESSES BRANCH PORT DETROIT, PONTIAC, MICHIGAN		U.S. ARMY MEDICAL SERVICE BETHLEHEM, PENNSYLVANIA
SAFETY CABINET, BIOLOGICAL TYPE IIS ASSEMBLY		
PROJ. IDENT. NO.	DATE	BWP-30-5-29

NOTES:

1. MATERIAL - 14 GA. (076) SST, TYPE 304, 2B FINISH.
2. EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE DWG. BWP-30-S-46. THE NUMBER SHALL BE PLACED BETWEEN THE GLOVE PORTS

REFERENCE DRAWINGS:

- BWP-30-S-29 TYPE IX-S ASSEMBLY
- BWP-30-S-39 FRAME DETAILS
- BWP-30-S-40 DETAILS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-46 CABINET SCHEDULE



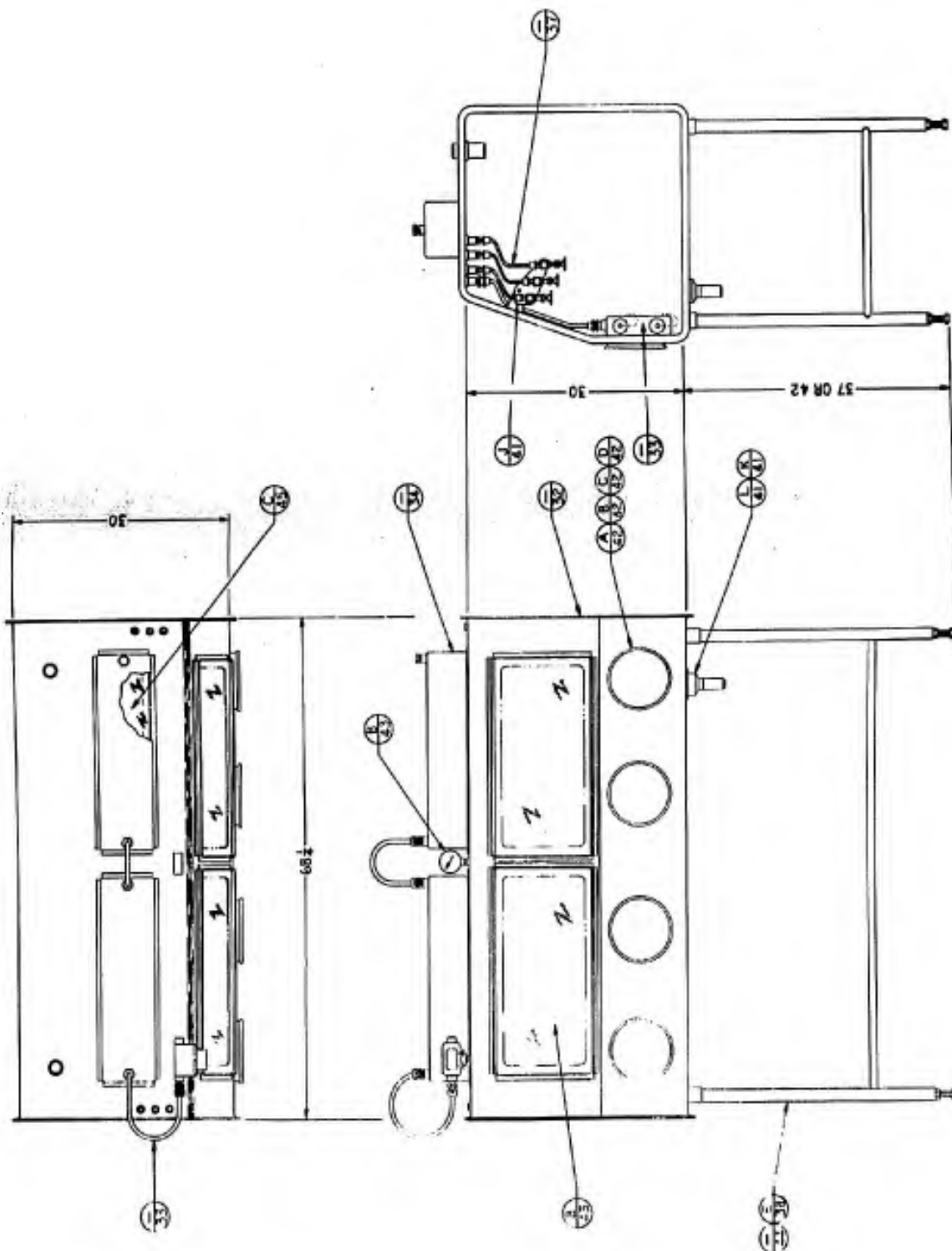
DIMENSIONS - SHEET 3		P. 31.48	
BIOLOGICAL HAZARD & PROTECTIVE EQUIPMENT POINT SOURCE, FERRISBURGH, NEW YORK			
U.S. ARMY MEDICAL RESEARCH & DEVELOPMENT COMMAND FORT BRAGG, NORTH CAROLINA			
SAFETY CABINET, BIOLOGICAL TYPE IX-S SHELL DETAIL			
PROJ. IDENT. NO. BWP-30-S-46		PROJ. IDENT. NO. BWP-30-S-30	

NOTES:

1. SEE 'CABINET SYSTEM ASSEMBLY PROCEDURE' FOR INSTALLATION OF CABINET COMPONENTS REQUIRING SEALING COMPOUND.
2. THIS DRAWING SHOWS BASIC CONFIGURATION FOR THE TYPE IX-D CABINET. FOR TYPE IX-D-B AND/OR TYPE IX-D-R ARRANGEMENTS SEE DWGS NO. BWP-30-S-32 AND BWP-30-S-44.

REFERENCE DRAWINGS:

- BWP-30-S-32 TYPE IX-D SHELL DETAIL
- BWP-30-S-33 ELECTRICAL
- BWP-30-S-34 ELECTRICAL
- BWP-30-S-37 INTERIOR PIPING
- BWP-30-S-38 STANDS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-43 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-45 PANELS
- BWP-30-S-46 CABINET SCHEDULE



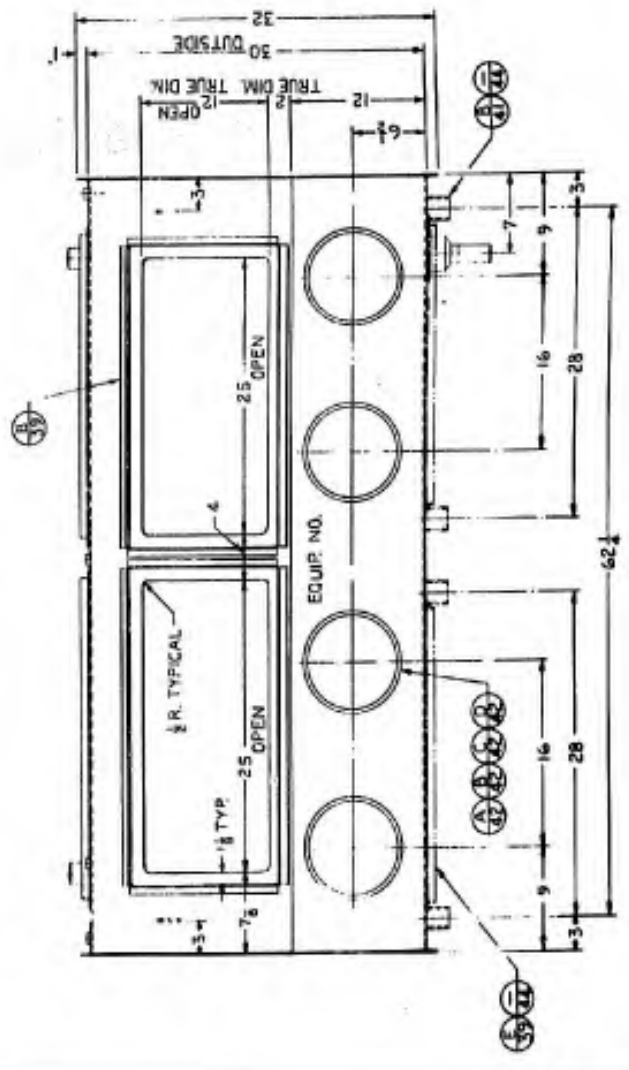
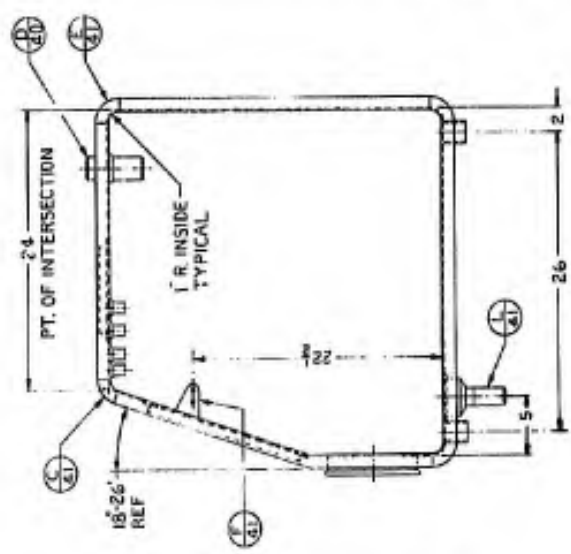
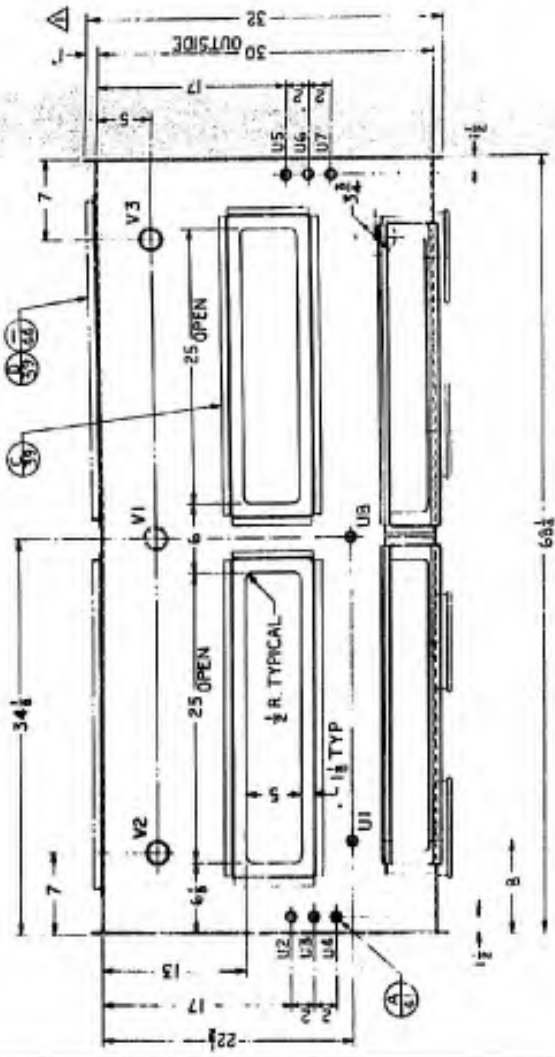
NO.	REVISION	DATE
U.S. ARMY MEDICAL PLANTS & PACKAGING BRANCH PHILADELPHIA, PENNSYLVANIA		
SAFETY CABINET, BIOLOGICAL TYPE IX-D ASSEMBLY		
DESIGNED BY	C. E. CANN	
CHECKED BY		
APPROVED BY		
FIG. IDENT. NO.	BWP-30-S-31	

NOTES:

1. MATERIAL - 14 GA. (078) SST, TYPE 304, 2B FINISH.
2. EACH CABINET SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE DWG. BWP-30-S-46. THE NUMBER SHALL BE PLACED BETWEEN THE MIDDLE GLOVE PORTS.

REFERENCE DRAWINGS:

- BWP-30-S-31 TYPE IX-D ASSEMBLY
- BWP-30-S-39 FRAME DETAILS
- BWP-30-S-40 DETAILS
- BWP-30-S-41 DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-44 OPENING & LEG SOCKET ARRANGEMENTS
- BWP-30-S-46 CABINET SCHEDULE



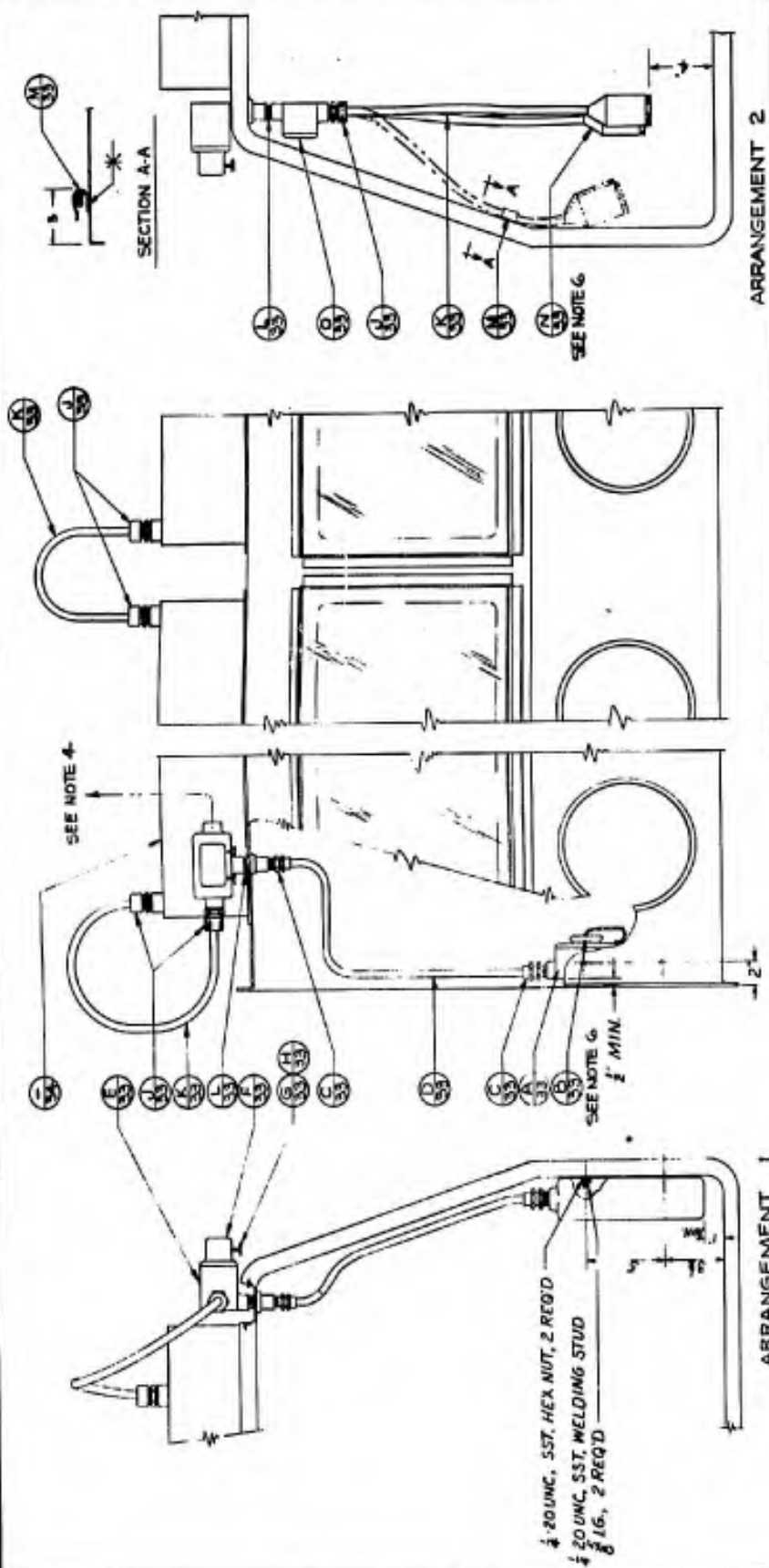
DATE	DESCRIPTION	DESIGNED BY	CHECKED BY
1/22/57	REVISED		
U.S. ARMY BIOLOGICAL PLANTS & PROCESSES BRANCH FORT DETRICK, FREDERICK, MARYLAND			
SAFETY CABINET, BIOLOGICAL TYPE IX-D SHELL DETAIL			
PROJECT NO.	DATE	SCALE	
PROJ. IDENT. NO.	DATE	SCALE	
DRAWN BY: <i>[Signature]</i> CHECKED BY: <i>[Signature]</i>		DATE: 1/22/57	SCALE: 1/4" = 1"
PROJECT NO.: BWP-30-S-32		SHEET NO.: 1/1	

NOTES:

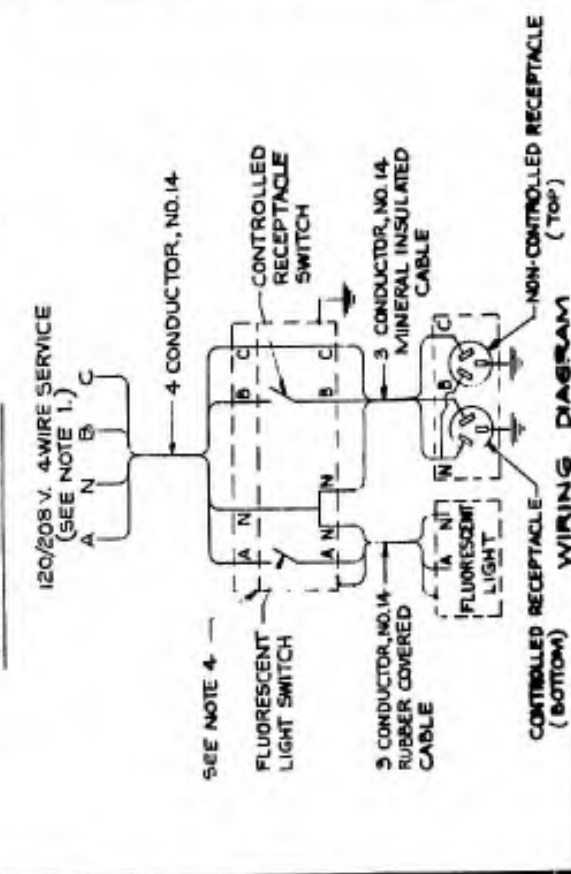
1. 120/240 V. 3 WIRE SERVICE REQUIRES MODIFICATION BY PUTTING BME CONDUCTORS WITH AN APPROPRIATE SILICONE COMPOUND IN THE HUB OF PART NO. 1.
2. SEAL ALL CABLES PENETRATING THE CABINET SHELL BY PUTTING BME CONDUCTORS WITH AN APPROPRIATE SILICONE COMPOUND IN THE HUB OF PART NO. 1.
3. ASTERISKS SHOWN ON PARTS LIST SHOW THE NUMBER OF PARTS REQ'D FOR ARRANGEMENT 2.
4. THE CABINET FABRICATOR SHALL FURNISH ALL ELECTRICAL COMPONENTS FROM THE RECEPTACLES AND LIGHTS THRU THE SWITCH BOX, PART E AND LIGHT HOUSINGS MAY BE REMOVED FOR SHIPPING.
5. THIS DRAWING SHOWS THE ELECTRICAL ARRANGEMENTS FOR THE TYPE I-D, III-D, VIII-D AND IX-D CABINETS. THE LENGTH OF CONDUCTOR REQ'D (PARTS D AND K) WILL VARY WITH OTHER CABINET TYPES AND LENGTHS.
6. RECEPTACLES SHALL MATCH PLUGS IN USE AT THE INSTALLATION SITE. SPECIFY BY CATALOG NUMBER IN "GENERAL NOTES" DWG. BWP-30-S-4-6.
7. WHERE IT IS DESIRED THAT ALL LIGHTS IN A CABINET SYSTEM BE OPERATED FROM ONE SWITCH, IT IS RECOMMENDED THAT A CIRCUIT BREAKER OR WALL SWITCH BE USED AND THE FLUOR. LIGHT SWITCH LIMITED ANY DEVIATION FROM THE CIRCUIT AS SHOWN IN "WIRING DIAGRAM" SHALL BE SPECIFIED IN "GENERAL NOTES" ON DWG. BWP-30-S-4-6 CAB. SCHEDULE.

REFERENCE DRAWINGS:

- BWP-30-S-1 TYPE I ASSEMBLY THRU
- BWP-30-S-31 TYPE II ASSEMBLY, ODD NUMBERED DRAWINGS ONLY.
- BWP-30-S-34 ELECTRIC
- BWP-30-S-46 CABINET SCHEDULE



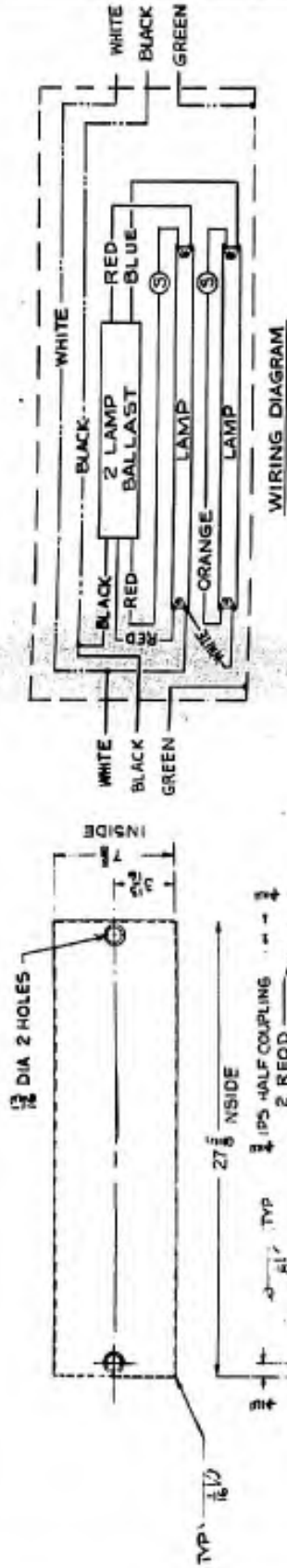
PART NO.	NO. REQ'D	DESCRIPTION
A	1	1 TWO-GANG TANDEM SHALLOW TYPE RECEPTACLE HOUSING FOR RIGID CONDUIT, THREADED. GALVANIZED CAST IRON.
B	2	2 WIRE, 3 POLE POLARIZED RECEPTACLE WITH COVER AND PLASTIC CAP, VAPORTIGHT AND WEATHERPROOF, FOR SHALLOW TYPE HOUSINGS.
C	2	2 STANDARD TERMINATION FOR 3 CONDUCTOR NO. 14 MINERAL INSULATED CABLE, WITH THREAD GLAND AND END SEAL COMPONENTS.
D	1	3 CONDUCTOR NO. 14 MINERAL INSULATED CABLE, COPPER SHEATHED AS REQ'D. SEE NOTE 5.
E	1	1 1/2 x 1/2 SINGLE GANG DEEP TYPE RECEPTACLE HOUSING FOR RIGID CONDUIT, THREADED. GALVANIZED CAST IRON.
F	1	1 VAPORTIGHT AND WEATHERPROOF SINGLE RECEPTACLE COVER, STANDARD OPERATION 'ON' OR 'OFF' FOR 2 SWITCHES. GALVANIZED STEEL.
G	2	2 TOGGLE SWITCH, INTERCHANGEABLE TYPE, SINGLE POLE, 125 V. "T" RATED.
H	1	1 MOUNTING STRAP FOR PART NO. 7
J	2-4*	2 WATER TIGHT CABLE CONNECTOR, STRAIGHT MALE THREAD WITH TAPERED RUBBER BUSHING AND GLAND NUT.
K	1	3 CONDUCTOR NO. 14 HEAVY DUTY MOLDED NEOPRENE COVERED CORD BODY, AS REQ'D. SEE NOTE 5. (EQUIPMENT GROUND WIRE COLORED GREEN)
L	1-2*	1 CLOSE NIPPLE, CONDUIT, GALVANIZED.
M	1	1 CORD CLIP, 1/2 x 3/8 x 1/4 GALV. SST. TYPE 304 (SHAPE TO SUIT)
N	2	5 WIRE, 3 POLE, 15A, 125V CONNECTOR BODY WITH MOISTURE PROOF RUBBER COVER AND SEALING CAP. SEE NOTE 6.
O	1	1 SINGLE GANG SHALLOW RECEPTACLE HOUSING WITH 1/2 HUB ON ONE SIDE AND 2-1/2 HUBS ON OPPOSITE SIDE AND WITH GASKETED COVER.



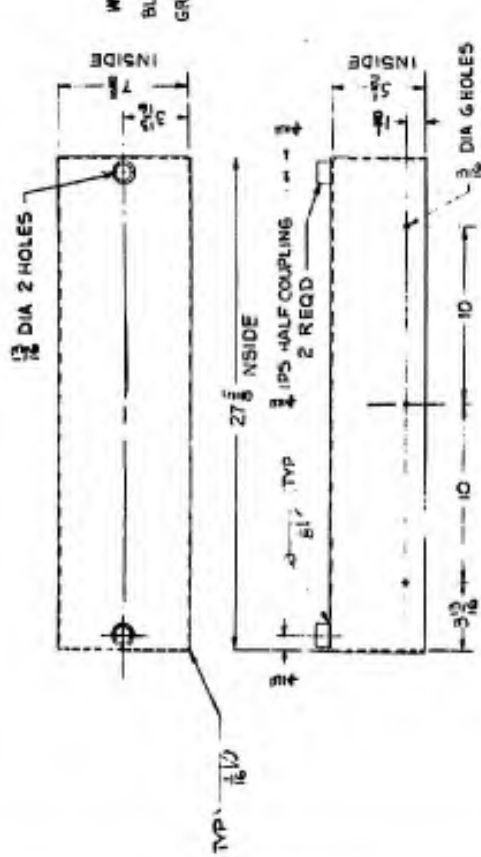
DATE	1/18/64
GENERAL REVISION	
DESIGNED BY	W. J. B. / 1-18-64
CHECKED BY	W. J. B. / 1-18-64
APPROVED BY	W. J. B. / 1-18-64
PROJ. IDENT. NO.	W. J. B. / 1-18-64
BIOLOGICAL PLANTS & PROCESSES BRANCH PORT DETROIT, FREEDOME, MARYLAND US ARMY 507-7000-1000 COMBAT ENGINEER BATTALION, 100TH AVIATION BRIGADE, 101ST AIRBORNE DIVISION	
SAFETY CABINET, BIOLOGICAL ELECTRICAL ASSEMBLY, WIRING DIAGRAM AND DETAILS	
BWP-30-S-33	

NOTES:

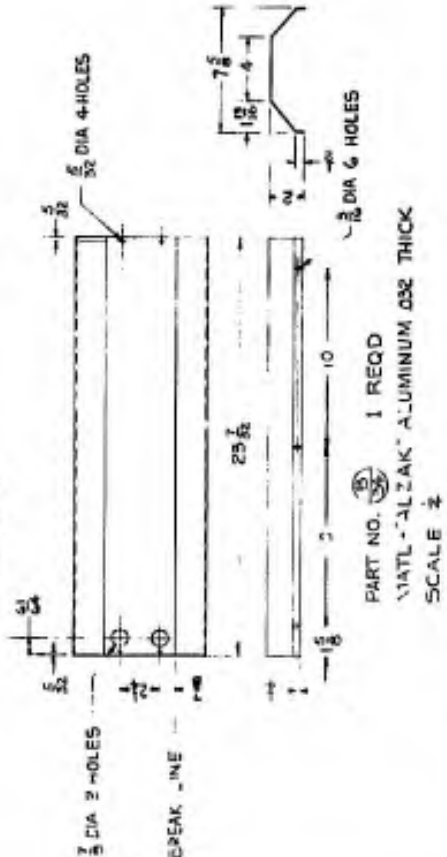
1. SEAL UNUSED HUB WITH A PIPE PLUG, AS REQD.
2. BALLAST MOUNTING HOLES SHALL BE LOCATED AT ASSEMBLY ON PART NO. 5.



PART NO.	NO. REQD.	DESCRIPTION
C	1	BALLAST, FLUORESCENT LAMP, 20W., 110-125V, 2 LAMP FED SPEC W-8-30.
D	2	LAMPHOLDER, FLUORESCENT, MIL-L-19037, TYPE VI.
E	2	LAMP, FLUORESCENT, 20W., 24 INCH, DAYLIGHT OR COOL WHITE, FED SPEC W-L-116A, BULB T-12.
F	2	STARTER, FLUORESCENT LAMP, 20W., 2 TERMINAL FED SPEC W-5-755, TYPE III.
G	6	MACHINE SCREW, TRUSS HEAD, NO.8-32UNC-2 x 1/2 LONG W/NUT. MATL-55T TYPE 303.
H	2	MACHINE SCREW, TRUSS HEAD, NO.8-32UNC-2 x 1/2 LONG W/NUT AND LOCK WASHER. MATL-55T TYPE 303.
J	1	PLUG, PIPE, 1/2 IPS, HEX HEAD, MATL-55T TYPE 303 OR 304 MIL-P-1144A. (SEE NOTE 1)



PART NO. **(32)** 1 REQD
 MATL-18 GA.(30)SST TYPE 304, 2B FINISH
 SCALE 1/2"



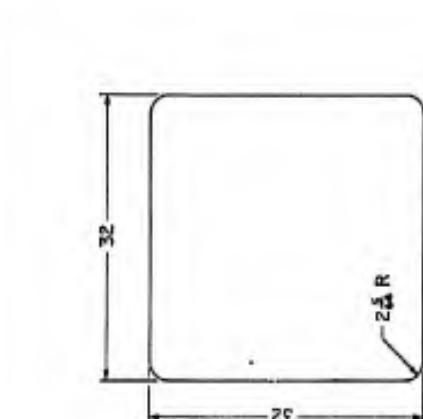
PART NO. **(33)** 1 REQD
 MATL-ALZAK ALUMINUM .032 THICK
 SCALE 1/2"

DESIGNATION	DATE
BIOLOGICAL PLANTS & PROCESSES BRANCH PORT DETROIT, FREDERICK, MARYLAND	
PROJECT NO.	DATE NOTED
PROJECT IDENT. NO.	
US ARMY BIOLOGICAL PLANTS & PROCESSES BRANCH PORT DETROIT, FREDERICK, MARYLAND SAFETY CABINET, BIOLOGICAL ELECTRICAL FLUORESCENT LIGHT HOUSING DETAILS AND ASSEMBLY	
BWP-30-5-34	

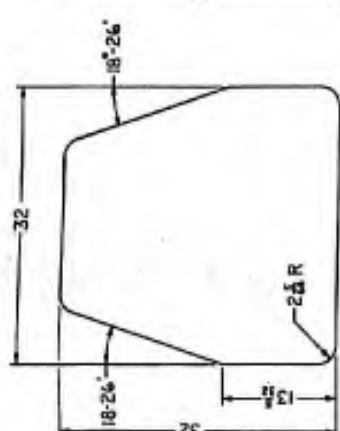
NOTES:

1. MATERIAL - 14 GA. (078) SST, TYPE 304, 2B FINISH.
2. EACH PLATE SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE DWG. BWP-30-S-46. THE NUMBER SHALL BE PLACED SO THAT IT MAY BE READ AFTER ASSEMBLY WITH CABINET SHELL.

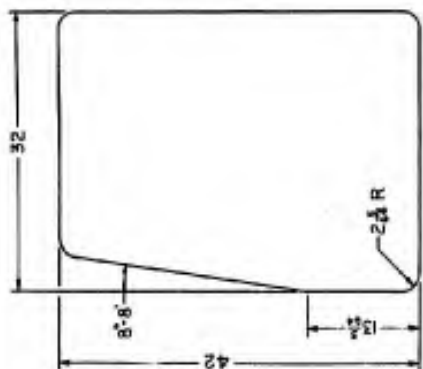
REFERENCE DRAWINGS:
 BWP-30-S-36 - PLATES, FILLER
 BWP-30-S-46 - CABINET SCHEDULE



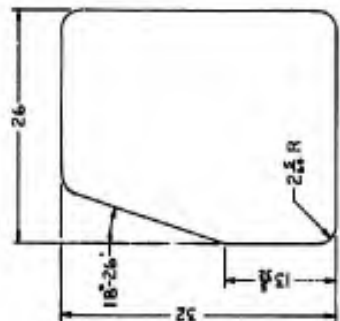
PART NO. 34



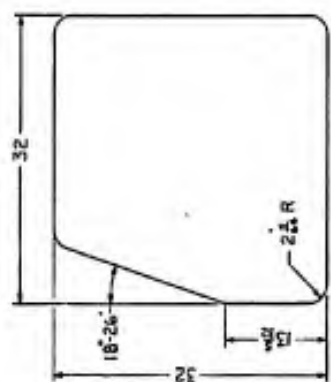
PART NO. 35



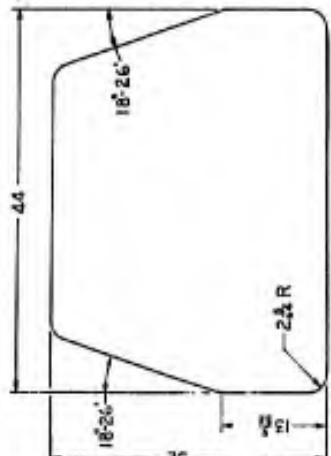
PART NO. 36



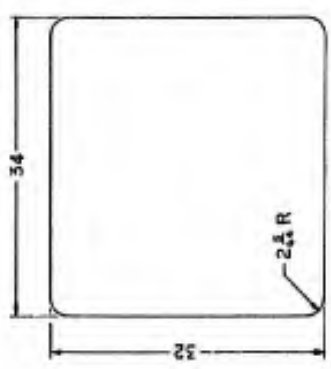
PART NO. 37



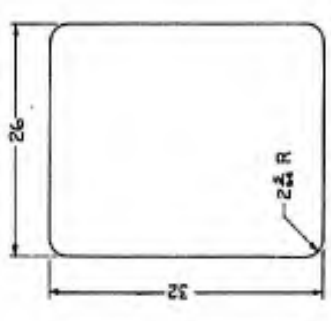
PART NO. 38



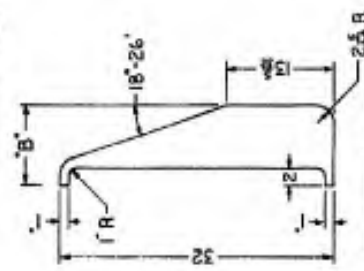
PART NO. 39



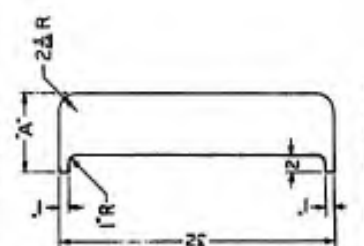
PART NO. 40



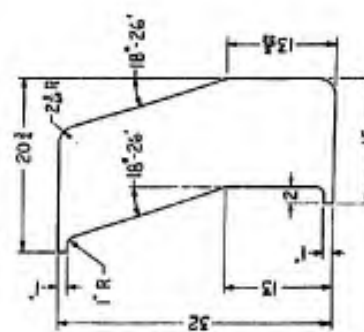
PART NO. 41



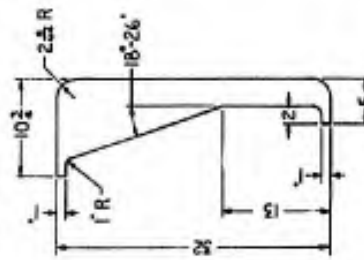
PART NO.	DIM. 'A'	DIM. 'B'
Q	9	
R	13	
S	15	
T	21	



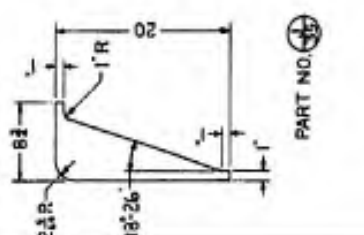
PART NO.	DIM. 'A'	DIM. 'B'
M	5	
N	9	
P	11	



PART NO. 44



PART NO. 45



PART NO. 46

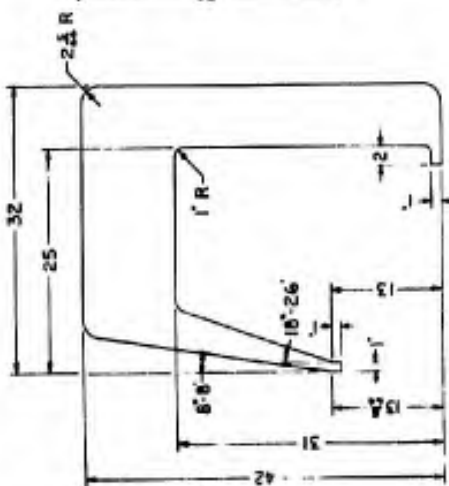
U.S. ARMY
 BIOLOGICAL PLANTS & PROCESSES BRANCH
 100 THOMAS & MARY STS.
 FORT DETRICK, FREDERICK, MARYLAND
 28100
 DATE: 1-1-54
 DESIGNED BY: [Signature]
 CHECKED BY: [Signature]
 PROJECT IDENT. NO. [Blank]
 SAFETY CABINET, BIOLOGICAL
 PLATES
 END CLOSURE & FILLER
 BWP-30-S-35

NOTES:

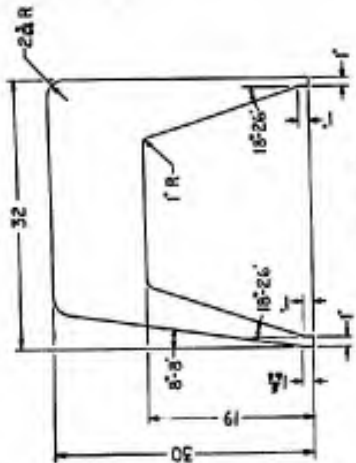
1. MATERIAL - 14 GA. (.078) SST, TYPE 304, 2B FINISH.
2. THE PLATE SELECTION TABLE SHOWS THE PLATES NECESSARY TO CLOSE A JOINT BETWEEN TWO DISSIMILAR CABINETS. LIKE CABINETS NEED NO JOINING PLATE. DETAILS A THRU H ON DWG BWP-30-S-35 ARE THE END CLOSURE PLATES.
3. EACH PLATE SHALL BE MARKED WITH AN EQUIPMENT NUMBER AS SHOWN ON THE CABINET SCHEDULE DWG. BWP-30-S-46. THE NUMBER SHALL BE PLACED SO THAT IT MAY BE READ AFTER ASSEMBLY WITH CABINET SHELL.

REFERENCE DRAWINGS:

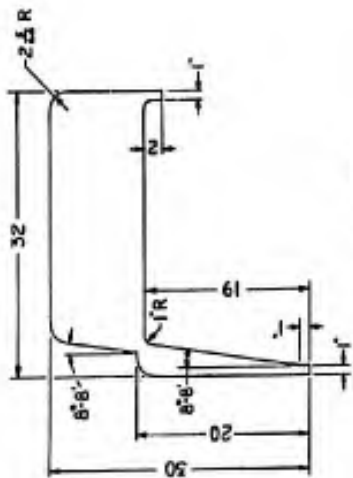
- BWP-30-S-35 - PLATES, END CLOSURE & FILLER
 BWP-30-S-46 - CABINET SCHEDULE



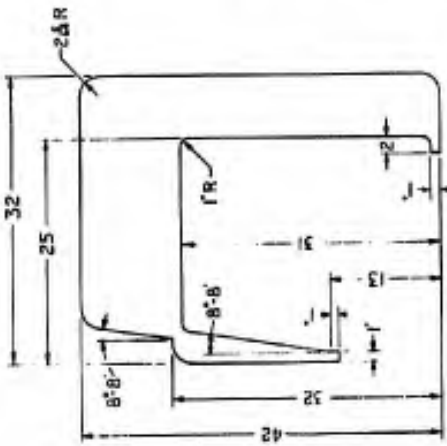
PART NO. 35



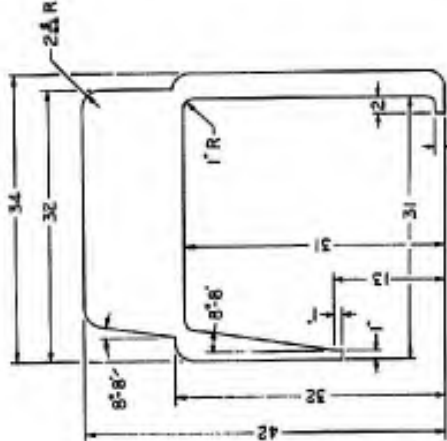
PART NO. 36



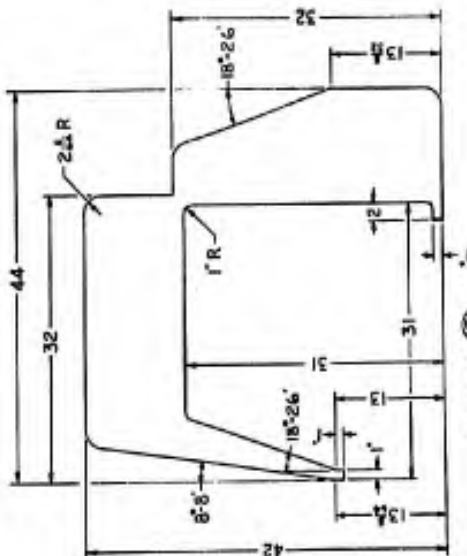
PART NO. 37



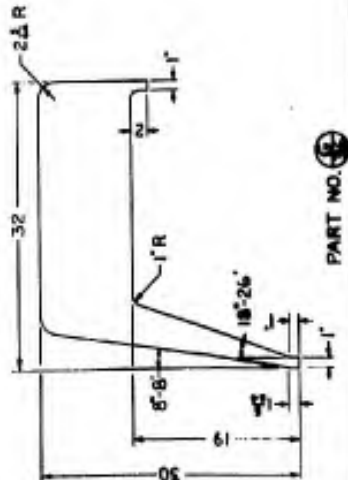
PART NO. 38



PART NO. 39



PART NO. 40



PART NO. 41

PLATE SELECTION TABLE

TYPE	I	II	III	IV OR V	VI	VII	VIII	IX
I	(35)			(35)	(35)	(35)	(35)	(35)
II	(36)	(36)		(36)	(36)	(36)	(36)	(36)
III		(37)	(37)	(37)	(37)	(37)	(37)	(37)
IV OR V			(38)	(38)	(38)	(38)	(38)	(38)
VI				(39)	(39)	(39)	(39)	(39)
VII					(40)	(40)	(40)	(40)
VIII						(41)	(41)	(41)
IX							(42)	(42)

DATE	ISSUE	BY	FOR
US ARMY BIOLOGICAL PLANTS & PROCESSES BRANCH FORT DETRICK, FREDERICK, MARYLAND FOOD PROCESSING DIVISION SAFETY CABINET, BIOLOGICAL PLATES FILLER			
PROJECT NO.	DESIGNER	DATE	
PROJ. IDENT. NO.	BWP-30-S-36		

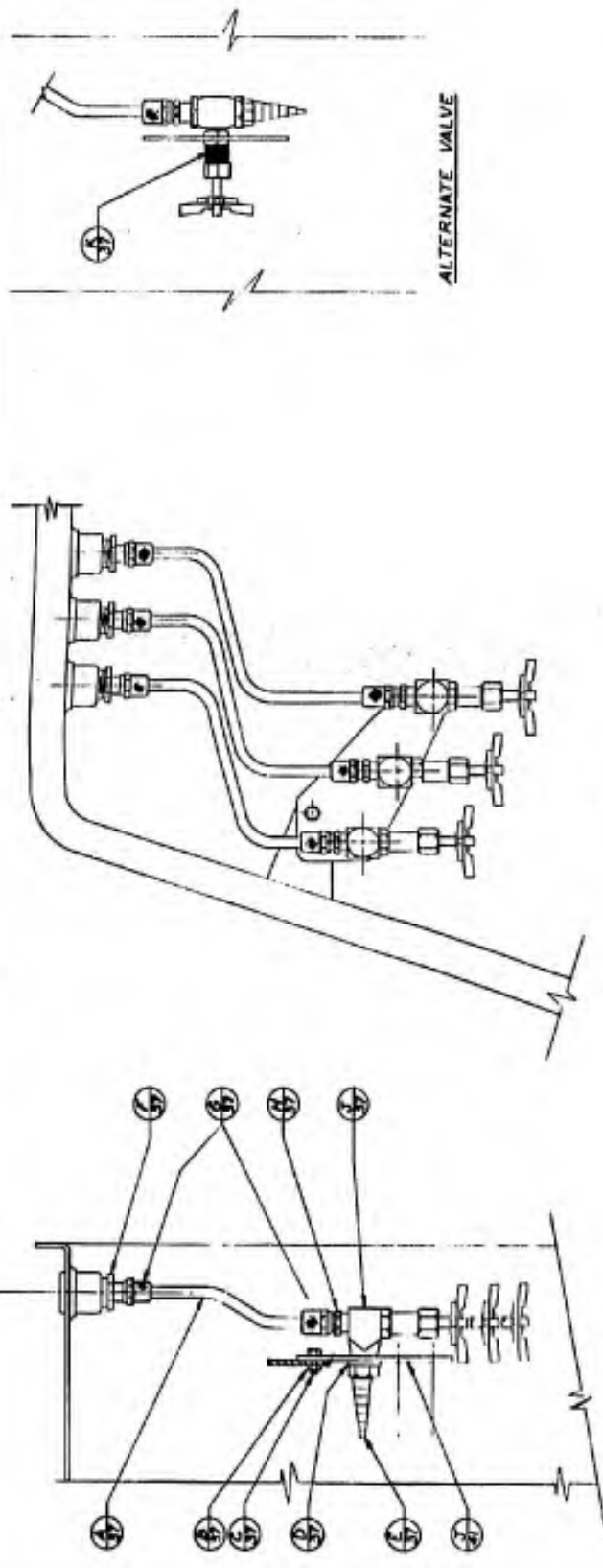
NOTES:

- THIS DRAWING SHOWS THE PIPING ARRANGEMENT IN THE TYPE I, II, III, AND IV CABINET SHAPES. PIPING IN ALL OTHER CABINETS SHALL CONFORM TO THIS ARRANGEMENT
- VALVE HANDLES SHALL BE COLOR CODED AS FOLLOWS:

HOT WATER	WHITE
COLD WATER	LIGHT BLUE
VACUUM	DARK GRAY
AIR	LIGHT GRAY
STEAM	YELLOW
DECON (CHEMICAL)	GREEN
- PAINT SHALL BE ACID AND ALKALI RESISTANT EACH LINE SHALL BE TAGGED JUST ABOVE THE VALVE WITH A SMALL ALUMINUM OR PLASTIC TAG APPROPRIATELY STAMPED.
- ANY VALVE ARRANGEMENT OTHER THAN SHOWN ON THIS DRAWING SHALL BE CONSIDERED AS A SPECIAL PIPING ARRANGEMENT AND SHALL BE INSTALLED IN THE FIELD.
- TUBING IS AVAILABLE IN A WIDE RANGE OF MATERIALS (METALS AND PLASTICS). A SPECIAL TUBING INSERT IS REQUIRED FOR USE WITH TYGON OR OTHER SIMILAR PLASTICS. ANY MATERIAL REQUIRED OTHER THAN STAINLESS STEEL SHALL BE NOTED IN THE REMARKS COLUMN DWG. BWP-30-S-46

REFERENCE DRAWINGS:

- BWP-30-S-41 MISC DETAILS
- BWP-30-S-46 CABINET SCHEDULE

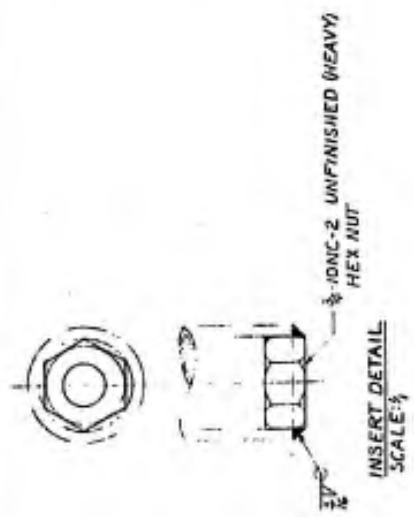


- 1) TUBING, 1/2 O.D. x .032 WALL THICKNESS, SST. (NOTE 5)
- 2) NUT, HEX 1/2-20NC-2, SST, 2 REQ'D
- 3) SCREW, CAP, HEX HD, 1/2-20NC-2 x 1/2 LG, SST, 2 REQ'D
- 4) WASHER, FLAT, 1/2 ID, 1" O.D., 1/8 THICK, SST.
- 5) CONNECTOR, HOSE, FOR 1/2 ID HOSE, 1/2 MALE PIPE TND, SST.
- 6) CONNECTOR, MALE, SWAGelok, 1/2 TUBE TO 1/2 NPT, SST.
- 7) NUT, ANKURED, SWAGelok, 1/2 TUBE, SST.
- 8) CONNECTOR, MALE, SWAGelok, 1/2 TUBE TO 1/2 NPT, SST.
- 9) VALVE, NEEDLE, 90° ANGLE PATTERN, BAR STOCK TYPE, 1/2 NPT, FEMALE, SST.
- 10) VALVE, NEEDLE, STRAIGHT PATTERN, BAR STOCK TYPE, 1/2 NPT, FEMALE, SST, PANEL MOUNTING

BIOLOGICAL PLANTS & PROCESSES BRANCH PORT DETRICK, PIERRE, HANFORD DATE: _____		U.S. ARMY DA FORM 1 (REV. 1-54) ENGINEERING DRAWING BOARD	
TITLE: SAFETY CABINET, BIOLOGICAL INTERIOR PIPING		DRAWING NO.: CE 001	
PROJ. IDENT. NO.: _____		BWP-30-S-37	

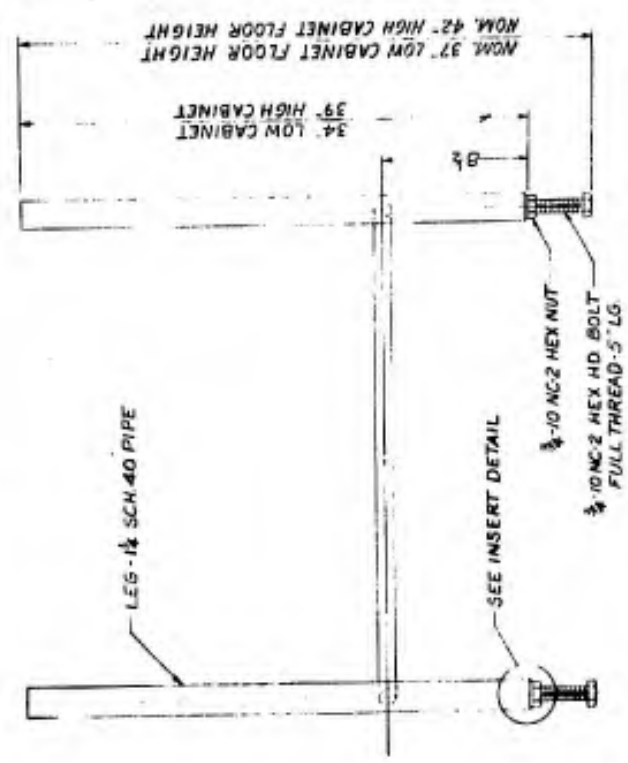
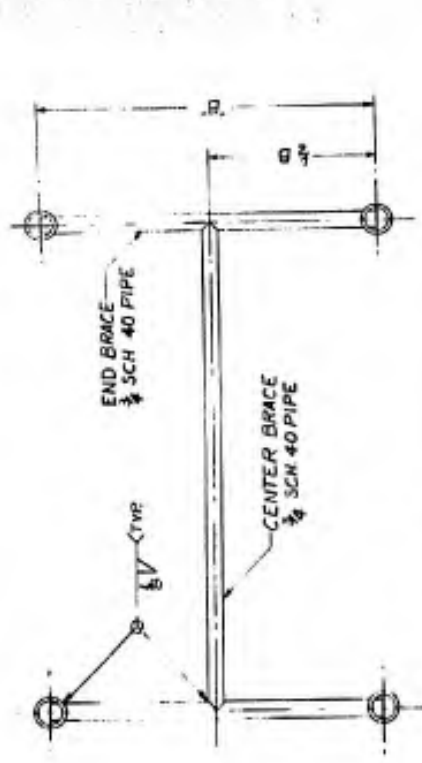
NOTES:

1. STAND HEIGHT SHALL BE AS SPECIFIED IN NOTE 2, DWG BWP-30-S-46
 2. APPLY 2 COATS OF WHITE ACID AND ALKALI RESISTANT ENAMEL. CLEAN METAL AND APPLY PRIME ACCORDING TO THE PRIME MANUFACTURERS INSTRUCTIONS.



LEG DIMENSIONS
 SAME AS SHOWN
 ON FRONT VIEW

DETAIL NO.	A' DIM	B' DIM	USE ON CABINET (TYPE)
A	2B	2D	I & II
B	2B	2E	III, IV, VII & IX
C	2B	3B	VIII
D	SINGLE LEG		VI
E	62 1/2	20	FD & VI-D
F	62 1/2	26	VII, VIII, IX & FD
G	62 1/2	3B	VIII-C



MAT'L: STEEL
 SCALE: 1/4

NOTE 2 ADDED

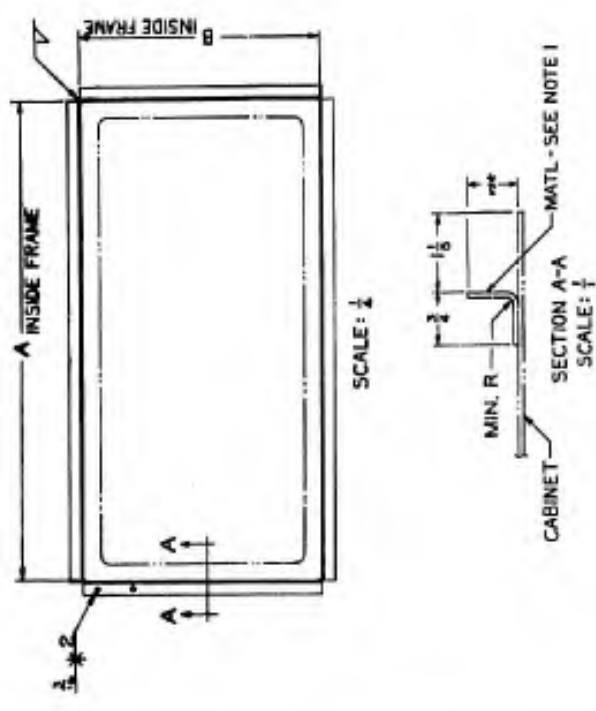
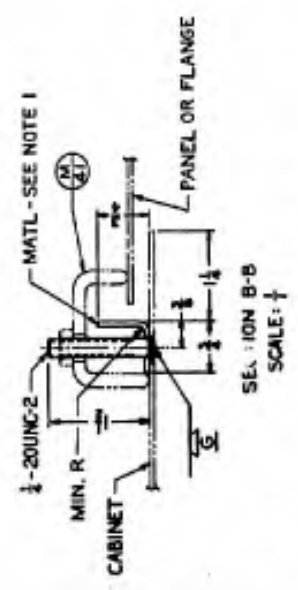
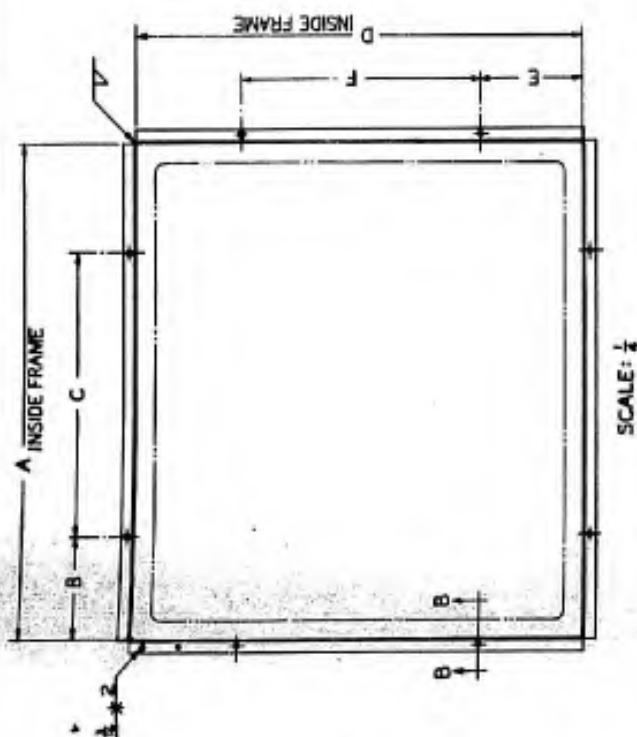
U.S. ARMY
 DEPARTMENT OF THE ARMY
 ENGINEERING CENTER, FORT BELVOIR, VIRGINIA

DESIGNED BY: [Signature]
 DATE: [Blank]
 CHECKED BY: [Signature]
 DATE: [Blank]

PROJECT: SAFETY CABINET, BIOLOGICAL STANDS ASSEMBLY AND DETAILS
 DRAWING NO.: BWP-30-S-36
 SCALE: AS SHOWN

NOTES:
1. MATERIAL: 14 GA. (0.78) SST TYPE 304, 2B FINISH.

REFERENCE DRAWINGS:
BWP-30-S-41 DETAILS
BWP-30-S-44 OPENING DETAILS



WINDOW FRAME DETAIL

PART NO.	OPENING USE	OPENING SIZE *	FRAME DIMENSIONS		USE ON CABINET TYPE
			A	B	
A	VIEW WINDOW	25 X 23	27 1/2	25 1/2	II
B	VIEW WINDOW	25 X 12	27 1/2	14 1/2	I, III, VI, VII, VIII & IX
C	LIGHT WINDOW	25 X 5	27 1/2	7 1/2	I THRU IX

* REFERENCE

REAR AND BOTTOM OPENING FRAME DETAIL

PART NO.	OPENING LOCATION	OPENING SIZE *	DIMENSIONS						USE ON CABINET TYPE
			A	B	C	D	E	F	
D	REAR	26 X 24	28 1/2	6 1/2	16	26 1/2	6 1/2	14	I, II, X, XI, & IX
E	BOTTOM	25 X 23	25 1/2	5 1/2	14	25 1/2	5 1/2	14	II, III, X, VII, VIII & IX

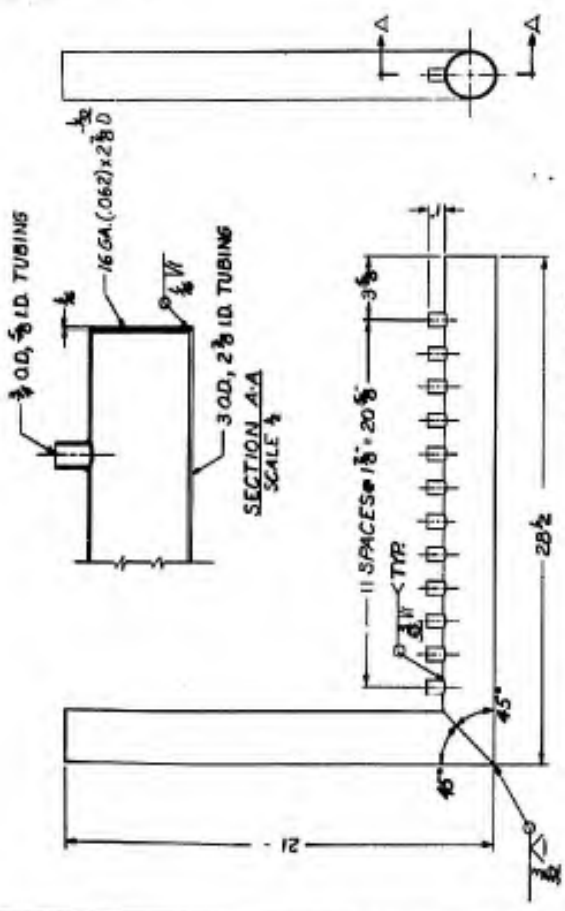
* REFERENCE

DESIGNED BY: *[Signature]*
CHECKED BY: *[Signature]*
DATE: *[Date]*

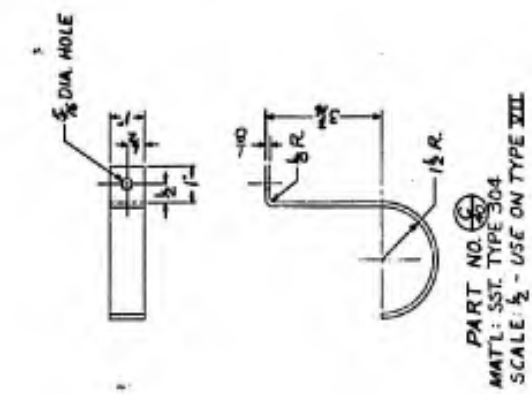
LOGICAL PLANTS & PROCESSES BRANCH
FORT DETROCK, PERSIMMON, MARYLAND
C. C. G. C.

U.S. ARMY
CORPORATION
BOSTON, MASSACHUSETTS

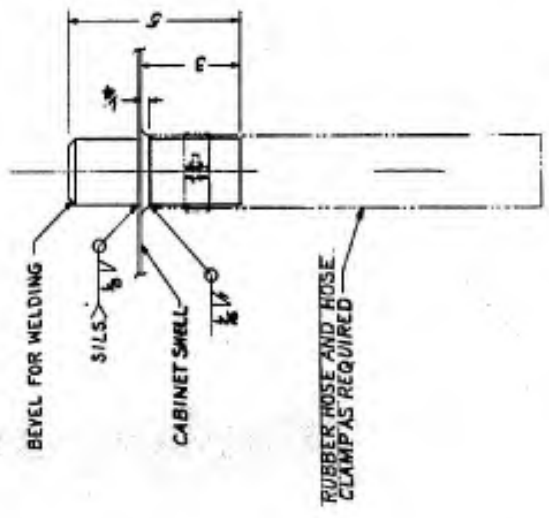
PROJ. IDENT. NO. *[Number]*
BWP-30-S-39



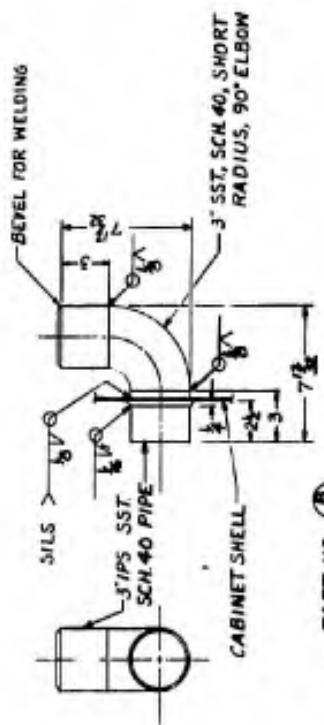
PART NO. **A**
 MATL: SST. TYPE 304
 SCALE: 1/4" = 1"



PART NO. **B**
 MATL: SST. TYPE 304
 SCALE: 1/2" = 1"

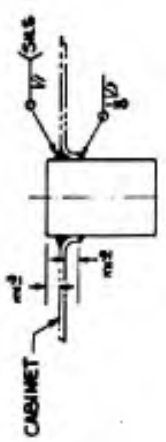


PART NO. **B**
 MATL: 1/2 SST. TYPE 304, SCH. 40 PIPE
 SCALE: 1/2" = 1"

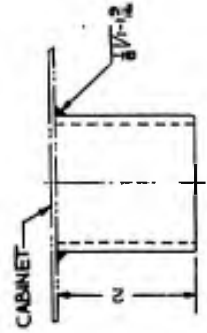


PART NO. **B**
 MATL: SST. TYPE 304
 SCALE: 1/4" = 1"

DESIGNED BY	DATE	REV.
CHECKED BY		
APPROVED BY		
U.S. ARMY MEDICAL PLANTS & PROCESSES BRANCH PORT DETROIT, MIAMI, MARYLAND		
SAFETY CABINET, BIOLOGICAL DETAILS VENTILATION		
PROJ. IDENT. NO.	DATE	SCALE
BWP-30-S-40		



PART NO. (A)
 MATL - 1/2 IPS COUPLING, SST TYPE 304
 SCALE ↑

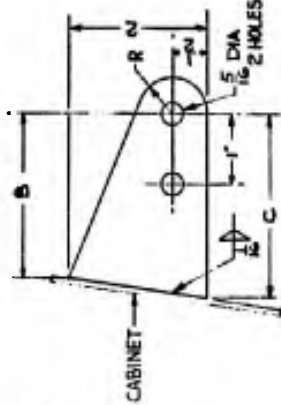


PART NO. (B)
 MATL - 2" O.D. x 11 GA. (120) SST TYPE 304, TUBING
 SCALE ↑



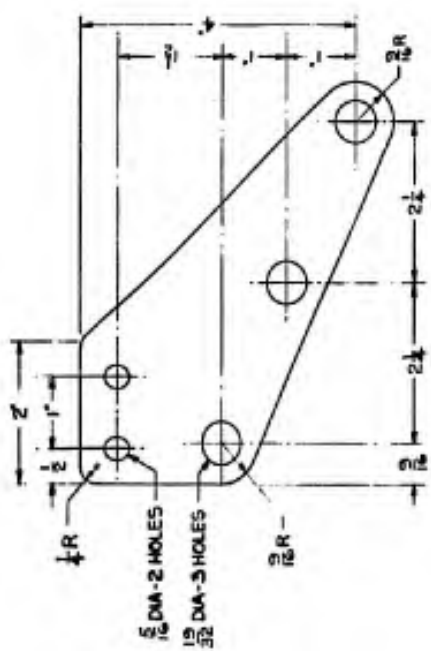
PART NO.	ANGLE	USE ON CAB. TYPE
C	71°34'	I, III, IV, IX
D	81°52'	II
E	90°00'	I THRU IX

PART NO. (C)
 MATL - 14 GA. (078) SST, TYPE 304, 2 B FIN.
 SCALE ↑

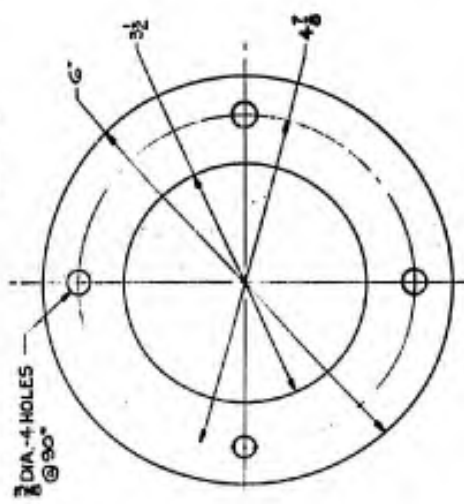


PART NO.	DIM.	USE ON CAB. TYPE
F	1 1/2	I, III, IV, IX
G	2 1/2	II
H	2 3/4	VI & VII

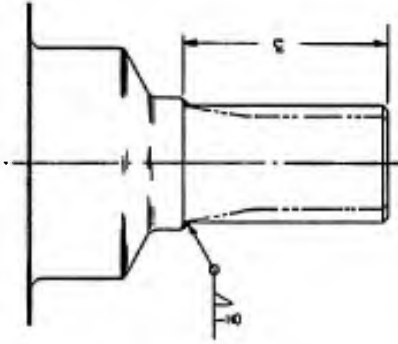
PART NO. (D)
 MATL - 11 GA. (125) SST, TYPE 304, 2 B FIN.
 SCALE ↑



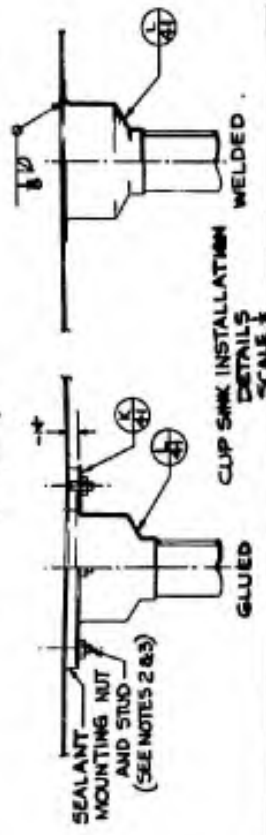
PART NO. (E)
 MATL - 11 GA. (125) SST, TYPE 304, 2 B FINISH
 SCALE ↑



PART NO. (F)
 MATL - 16 GA. (063) SST, TYPE 304, 2 B FINISH
 SCALE ↑



PART NO. (G)
 MATL - CARBON STEEL, AISI C1018
 FED. SPEC. QQ-S-633
 Ø REQD PER PANEL OR FLANGE
 SCALE ↑



CLIP SINK INSTALLATION
 DETAILS
 SCALE ↑

PART NO. (H)
 MATL - BASKET STRAINER, IDEAL NO. 100 W/ BASKET, SST TAIL PIPE, 1/2 SCH. 40 PIPE OR 1" SCH. 40 PIPE (SEE NOTE 1)
 SST, TYPE 304.
 SCALE ↑

NOTES:

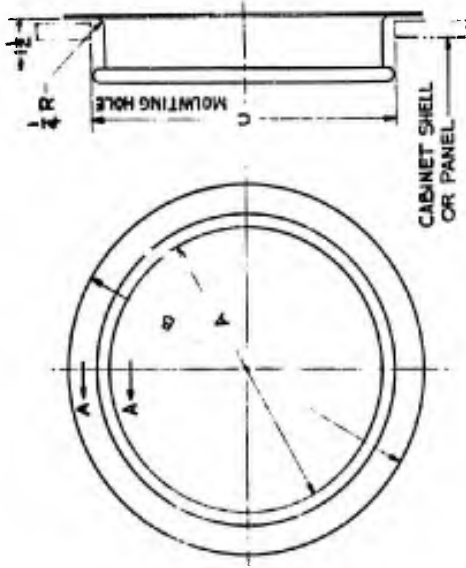
1. THE 1" SCH. 40 PIPE SHALL BE SWAGED TO 1.39 O.D. OR USE A STANDARD SCH. 40 CONCENTRIC REDUCER, 1 1/2" TO 1" - REDUCER LENGTH - 2".
2. THE SEALANT FOR SEALING THE CLIP SINK SHALL BE PR-14-22 Q-02 (ASSEMBLY PROCEDURE, PAGE NO. 11)
3. THE STUDS FOR ATTACHING THE CLIP SINK SHALL BE 1-20 UNC-2 SST WELDING STUDS, 1/2" LONG.
4. STUDS ARE REQD LOCATED AT 90° ON A 4 1/2" DIA B.C. CONCENTRIC WITH THE DRAIN OPENING IN THE CABINET SHELL.
4. MARK ALL PARTS NOT TO BE SECURED BY WELDING WITH THE PART NO. (G-9, H) USING A FELT TIPPED PEN OR MARKER WITH WATERPROOF INK.

DESIGNED BY	DATE	SCALE
CHECKED BY	DATE	SCALE
BIOLOGICAL PLANTS & PROCESSES BRANCH PORT DETROIT, FREDERICK, MARYLAND EDWARD G. MANNING		
SAFETY CABINET, BIOLOGICAL DETAILS MISCELLANEOUS		
PROJECT ORG. NO.	DATE	SCALE
U.S. ARMY EDWARD G. MANNING		
BWP-50-S-41		

NOTES:

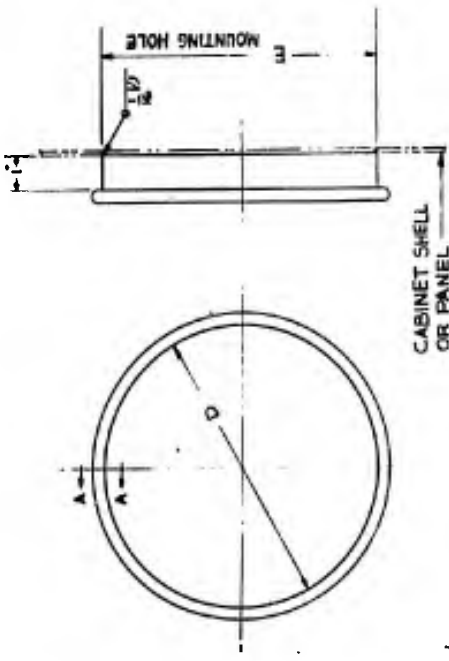
1. MARK ALL PARTS NOT TO BE SECURED BY WELDING WITH THE PART NO. (69, 70, 71) USING A FELT TIPPED PEN OR MARKER WITH WATERPROOF INK.

REFERENCE DRAWINGS:



PART NO.	DIM. A	DIM. B	DIM. C
A	10 3/8	7 7/8	8 7/8
B	11 3/8	7	9 7/8

MATL - 16 GA. (.062) SST, TYPE 304
SCALE 1/2



PART NO.	DIM. C	DIM. D	DIM. E
C	8	8 1/8	8 1/8
D	9	9	9 1/8

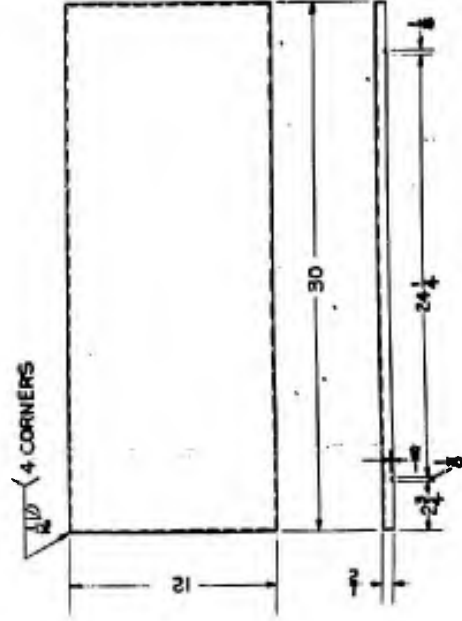
MATL - 16 GA. (.062) SST, TYPE 304
SCALE 1/2



PART NO. 65
MATL - SST OR CHROME PLATED STEEL, REGULAR DUTY (COMMERCIAL ITEM)
SCALE 1/2



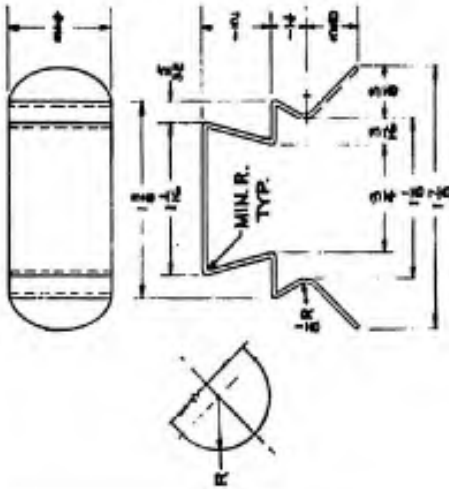
PART NO. 67
MATL - SST OR CHROME PLATED STEEL, REGULAR DUTY (COMMERCIAL ITEM)
SCALE 1/2



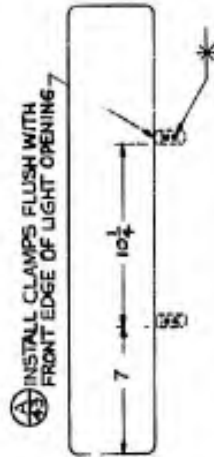
PART NO. 69
MATL - 16 GA. (.062) SST, TYPE 304, 2B FINISH
SCALE 1/4

REV	DESCRIPTION	DATE	BY
BIOLOGICAL PLANTS & PROCESSES BRANCH PORT DETROIT, FREEDRICK, MARYLAND US ARMY BENTONVILLE, ARKANSAS			
SAFETY CABINET, BIOLOGICAL DETAILS MISCELLANEOUS		DATE 2/27/54	BY C.E.
PROJECT (ENT. NO.)		DESIGNED BY C.E.	CHECKED BY C.E.
PROJECT (ENT. NO.)		DRAWING NO. BWP-30-S-42	SCALE NOTED

PART NO. 36 DRAFT GAGE, MAGNETIC TYPE, CAT. NO. 1060.
 0'-6" H₂O, STYLE (-4) VACUUM - PRESSURE.
 SOURCE - F.W. DWYER MFG. CO.
 P.O. BOX 375 T
 MICHIGAN CITY, INDIANA



PART NO. 37
 MATL - 22 GA (031) SST., TYPE 304
 2 REQD PER UV FIXTURE
 SCALE 1/2" = 1"



UV FIXTURE CLAMP -
 TYPICAL INSTALLATION
 PLAN VIEW

NOTES:

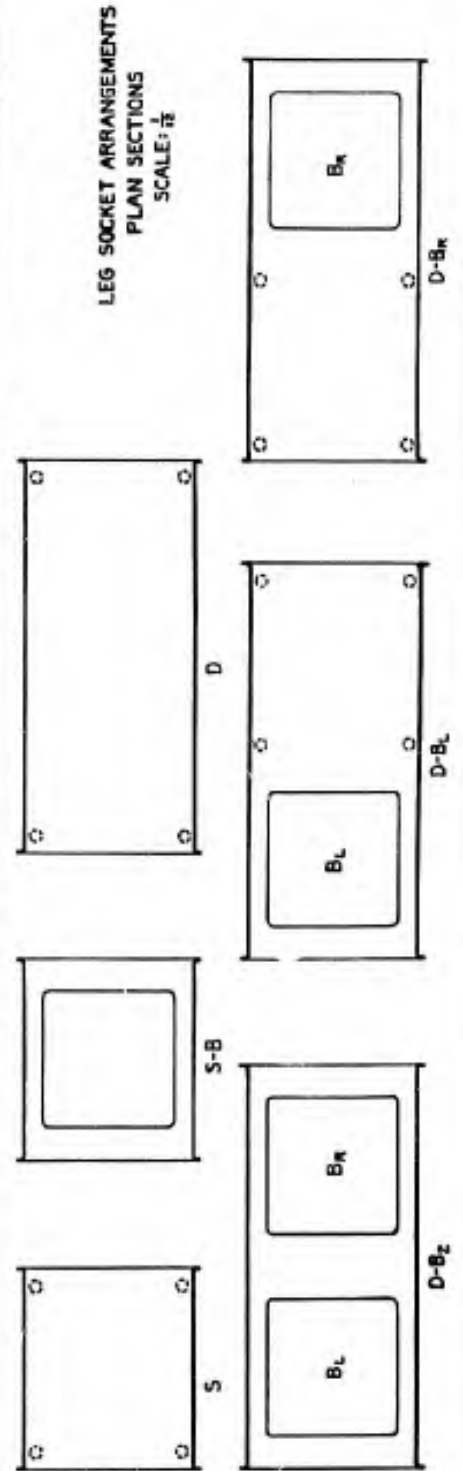
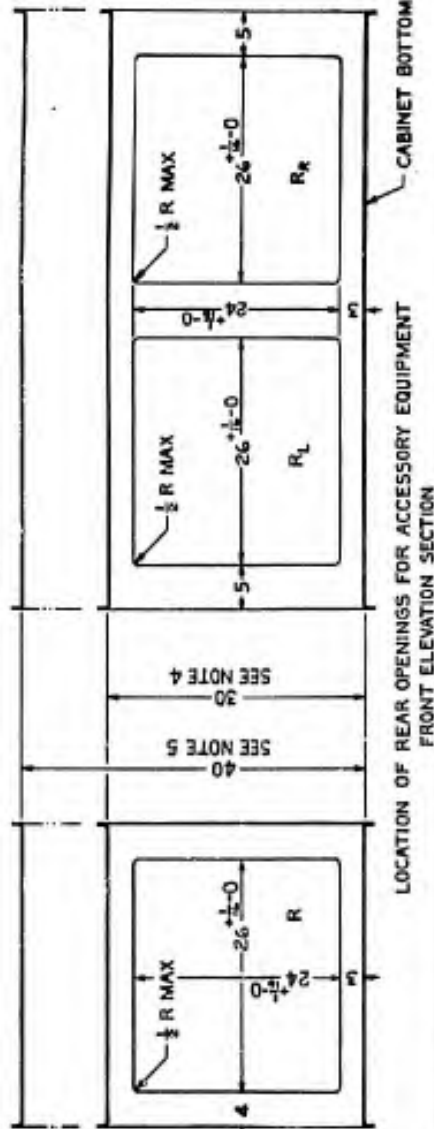
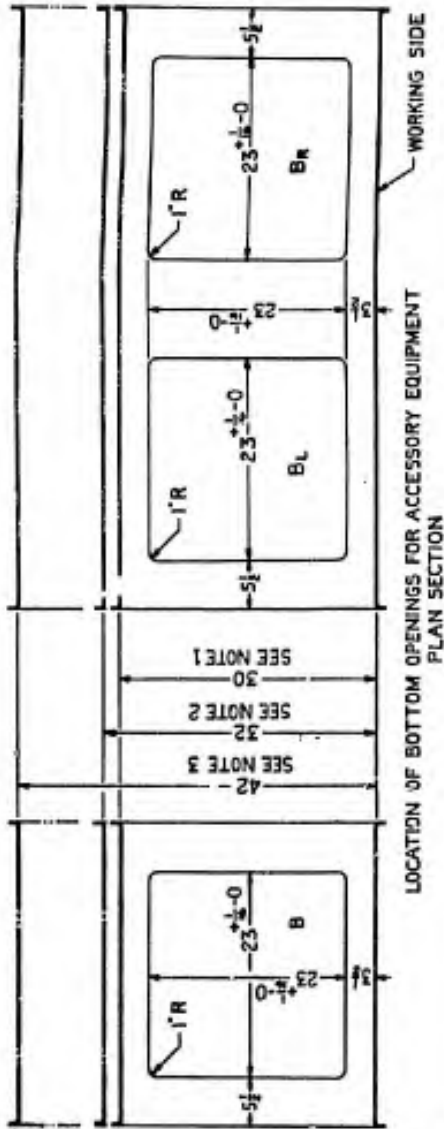
REFERENCE DRAWINGS:

BIOLOGICAL PLANTS & PROCESSES BRANCH FORT DETRICK, FREDERICK, MARYLAND		U.S. ARMY OFFICE OF THE MCG BARNSWOOD FARM, MARYLAND	
DESIGNED BY DATE 2/28 2-19-57	DRAWN BY DATE 2/28 2-19-57	SAFETY CABINET, BIOLOGICAL DETAILS MISCELLANEOUS	
PROJECT IDENT. NO.		DATE AS NOTED	
BWP-90-3-43		BWP-90-3-43	

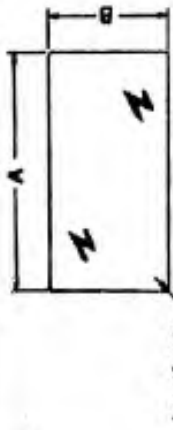
NOTES:

1. BOTTOM OPENINGS IN CABINET TYPES II-S, II-D, III-S, III-D, V-S, IX-S & IX-D.
2. BOTTOM OPENINGS IN CABINET TYPES VII-S & VII-D.
3. BOTTOM OPENINGS IN CABINET TYPES VIII-S & VIII-D.
4. REAR OPENINGS IN CABINET TYPES I-S, I-D, V-S, VI-S, VI-D, IX-S & IX-D.
5. REAR OPENINGS IN CABINET TYPES II-S & II-D.

REFERENCE DRAWINGS:



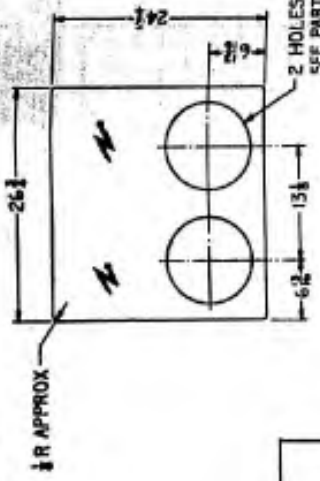
NO.	REVISION	DATE	BY
BIOLOGICAL PLANTS & PROCESSES BRANCH PORT DETROIT, PIERCEBURGH, MARYLAND EASTWOOD INDUSTRIAL, MARYLAND			
US ARMY SAFETY CABINET, BIOLOGICAL BOTTOM & REAR OPENING DETAILS & LEG SOCKET ARRANGEMENTS			
DESIGNED BY	DATE	SCALE	NO.
CHECKED BY	DATE		
PROJECT IDENT. NO.	BWP-30-S-44		



1/8 R APPROX MATL - SEE CABINET SCHED.

WINDOW & LIGHT PANELS

PART NO.	PANEL USE	DIMENSIONS		USE ON CABINET TYPE
		A	B	
A	VIEW WINDOW	26 1/2	24 1/2	II
B	7/8 VIEW WINDOW	26 1/2	13 1/2	I, III, VI, VII, VIII & IX
C	LIGHT WINDOW	26 1/2	6 1/2	I THRU IX

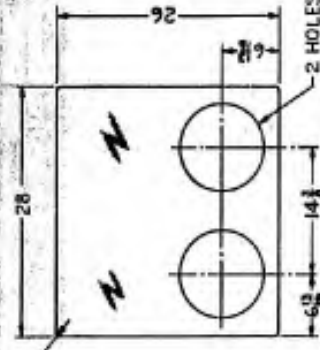


FRONT PANEL

PART NO. 304

MATL - SEE CABINET SCHED.

2 HOLES SEE PART NO. 304 OR 305



REAR PANEL

PART NO. 304

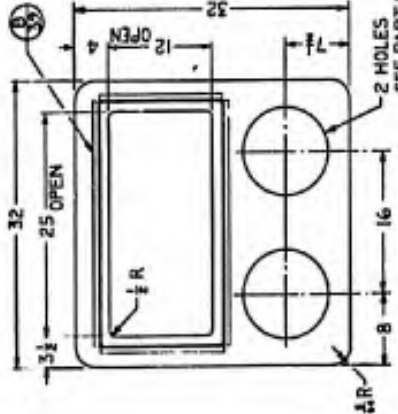
MATL - SEE CABINET SCHED.

2 HOLES SEE PART NO. 304 OR 305

- NOTES:
1. EACH PANEL SHALL BE MARKED WITH A PART NO.
 2. PLATE 35 SHALL BE MARKED WITH AN EQUIPMENT NO. AS SHOWN ON THE CABINET SCHEDULE DWG. BWP-30-46
 3. ALL SST SHEET SHALL HAVE A 2B FINISH.
 4. PLATES 35 THRU 38 SHALL BE SECURED TO THE STERILIZER AND SHALL HAVE THE SAME EQUIPMENT NO.
 5. IT IS RECOMMENDED THAT A SIMPLE ISOMETRIC DRAWING BE PREPARED FOR EACH STERILIZER INSTALLATION, SHOWING THE EQUIPMENT NUMBER, THE DOOR SWING, AND TYPE OF MOUNTING PLATE REQUIRED.
 6. ALL STERILIZERS REFERRED TO ON THIS DRAWING ARE 16" X 16" RECTANGULAR, HAND OPERATED STYLE. LARGER SIZES, AND STERILIZERS WITH POWER OPERATED DOORS, REQUIRE SPECIAL PLATE DESIGN.

REFERENCE DRAWINGS:

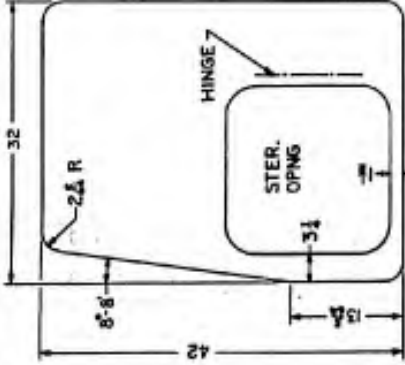
- BWP-30-S-39 FRAME DETAILS
- BWP-30-S-42 DETAILS
- BWP-30-S-46 CABINET SCHEDULE



PART NO. 304

MATL - 14 GA. (078) SST TYPE 304

2 HOLES SEE PART NO. 304 OR 305



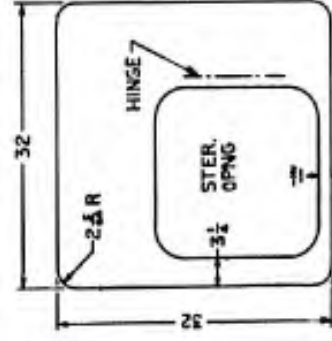
PART NO. 304

MATL - 14 GA. (078) SST TYPE 304



PART NO. 304

MATL - 14 GA. (078) SST TYPE 304



PART NO. 304

MATL - 14 GA. (078) SST TYPE 304



PART NO. 304

MATL - 14 GA. (078) SST TYPE 304

US ARMY
BIOLOGICAL PLANTS & PROCESSES BRANCH
FORT DETRICK, FREDERICK, MARYLAND
SAFETY CABINET, BIOLOGICAL
PANELS & CLOSURE PLATES
MISCELLANEOUS

PROJ. IDENT. NO.

BWP-30-S-45

Equipment Number	Type	Manufacturer	Cabinet Panels		Switch Panels		Circuit Breaker		Voltage		Current		Power		Remarks	
			A	B	C	D	1	2	3	4	5	6	7	8		9

1. SEE PLATE SELECTION TABLE, DWG BMP-30-S-36, FOR SELECTING PROPER JUNCTION PLATES.
2. 2. CHECK FOR "C" PROJECT SHALL BE "NO" FOR 11/24/47, SEE DWG BMP-30-S-36

IN 01 AREA: 1 FLUORESCENT LIGHT (BMP-30-S-34)
2 SUSPENDED OUTLET (BMP-30-S-33)
SW-417- 1 WITH PINK AND BLACK (BMP-30-S-37)
2 SW-417- 1 WITH PINK AND BLACK (BMP-30-S-37)
SW- 1 PRESSURE GAUGE (BMP-30-S-43)
2 SW- 2 W/PAPE PLUG (BMP-30-S-43)

4 W SEC BMP-30-S-44

DATE: 7/29/47
BY: WAS 38

DESCRIPTION: BIOLOGICAL PLANTS & PROCESSES BRANCH
FORT DETRICK, FREDERICK, MARYLAND

US ARMY
ENGINEERING CENTER, WASHINGTON, D.C.

PROJECT NO. 5172

PROJ. IDENT. NO. _____

BMP-30-S-46

WHEN PLANNING A CABINET SYSTEM SPECIAL ATTENTION SHOULD BE GIVEN TO THE LOCATION OF SERVICE VALVES AND ELECTRICAL BOXES TO AVOID INTERFERENCE WITH ANY INTERIOR COMPONENTS.